

Sustainable Eco-Tourism in Tinjure Hills: A Spotlight on Nepal's Rhododendron Capital

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ABSTRACT

The main foundation of tourism development in Tinjure, a hilly district of Terhathum, is the vast blooming of rhododendrons across the hills. With 28 species of rhododendrons found in this region, the Tinjure, Milke, and Jaljale areas are known as the "Rhododendron Capital" of Nepal. Among these three areas, Tinjure is the region where the highest number of rhododendrons are found. Domestic tourists visit throughout the year, while both domestic and foreign tourists are drawn to the area during the rhododendron bloom from March to April months. This initiative aims to promote this important tourist destination globally through eco-tourism. The main objective of this study is to explore the foundations of tourism development and identify the challenges of eco-tourism in Tinjure Hills. Primary data were directly taken from the local communities through interview, and self-observation in 2024. Similarly, and books, articles, bulletin, journal, and website materials were used as a secondary data. Additionally, videos produced by Purvi Blues and Entertainment MMC were used as supplementary data to enrich the study. The Tinjure hills offer significant ecotourism potential, boasting diverse attractions, such as rhododendron forests (March-April), summer retreats, panoramic autumnal mountain views, and winter snowfall. This variety caters to broad tourist preferences while showcasing rich biodiversity. Cultural landmarks, including the iconic rhododendron and Tinjure Pathivara Temple, appeal to domestic visitors. Both domestic and international tourist numbers have been increasing annually. Infrastructure improvements support ecotourism growth. To attract international tourists, strategic planning, policy development, and research on visitor behavior and service optimization are crucial for sectoral advancement.

1. INTRODUCTION

Sustainable eco-tourism refers to a form of tourism that emphasizes responsible travel to natural areas with the goal of minimizing environmental impact

and fostering ecosystem conservation. It encourages tourists to appreciate and respect the beauty of nature while ensuring that their presence does not harm local environments or wildlife. By focusing on

sustainability, eco-tourism aims to maintain the ecological balance of destinations, support biodiversity conservation, and promote resource-efficient practices. This is achieved through actions such as reducing waste, conserving water and energy, and designing tourism infrastructure with minimal impact on the natural landscape. In addition to environmental protection, sustainable eco-tourism promotes the well-being of local communities by providing economic benefits through jobs and income. It often advocates for local ownership and participation in tourism activities, ensuring that financial gains directly benefit the community. Sustainable eco-tourism also prioritizes cultural preservation by educating tourists about local customs, traditions, and heritage, creating a more enriching and respectful interaction between visitors and host communities. In doing so, it fosters a balance between enjoying natural beauty and contributing positively to the environmental and social fabric of the region.

Nepal, a landlocked Himalayan country bordered by India and China, is rich in cultural and natural diversity. Its 147,516 square kilometers (including kalapani and lipulekh) of land, which make up 0.1% of the Earth's surface, is largely mountainous, with 83% of its area covered by mountains. This geographic feature promotes nature-based and adventure tourism, such as trekking, mountaineering, rafting, paragliding, cycling, wildlife observation, and bird watching. These activities are mostly concentrated in rural regions, while cultural tourism is centered in the Kathmandu Valley, known for its art, architecture, and UNESCO-listed cultural heritage sites.

This imbalance has prompted tourism entrepreneurs and development experts to explore ways to spread tourism benefits to other parts of the country while maintaining environmental conservation. Nepal's rural areas, with their distinctive lifestyle and unspoiled culture and traditions, offer great potential for promoting village-based or rural tourism.

With innovative marketing, these regions, away from the main trekking routes, could benefit from tourism and help create off-farm employment opportunities.

Tourism in Tinjure, a region in Eastern Nepal, holds significant potential for economic growth and cultural preservation. Nestled in the scenic eastern Himalayas, Tinjure is renowned for its rich biodiversity, stunning mountain vistas, and distinct cultural heritage, attracting both local and international visitors. Ecotourism, trekking, and cultural experiences could drive economic development, providing new income sources for local residents. However, challenges such as inadequate infrastructure, environmental sustainability concerns, and limited community engagement hinder the full realization of Tinjure's tourism potential.

A government initiative declared Tinjure a protected forest area as part of a 10-year conservation program. However, the project faced resistance from Indigenous communities, who argued it would negatively impact livelihoods, biodiversity, and essential services such as hotels, public transport, and schools. Despite the protests, the government has moved forward with the forest conservation program. Indigenous communities' express concerns that the area could be designated as a protected zone in the future, potentially leading to displacement and restrictions on traditional land use and resource access.

The World Wildlife Fund supported the government's conservation efforts, contributing Rs 40 million annually to the "TMJ" Complex Conservation Project, which launched on July 1, 2018. Research suggests that well-managed ecotourism can promote environmental conservation and support rural economies, making it a potential tool for sustainable development in regions like Tinjure (Sharma, 2017).

The concept of sustainable eco-tourism in Tinjure Hills, known as the Rhododendron Capital of Nepal, revolves around promoting environmentally responsible tourism that supports conservation, community involvement, and

cultural exchange. Tinjure Hills, located in the eastern part of Nepal, is renowned for its vast rhododendron forests, which burst into vibrant bloom during spring. To protect this rich biodiversity while allowing tourists to experience the natural beauty, eco-tourism initiatives focus on minimizing environmental impact, promoting eco-friendly accommodations, and involving local communities in tourism management. These efforts ensure that tourism benefits both the environment and local populations, preserving the area's ecological and cultural heritage.

Tourism in Nepal began to develop in the early 1950s, following the successful ascent of Mount Annapurna by French climber Maurice Herzog, and three years later, the historic climb of Mount Everest, the world's highest peak, by Nepalese mountaineer Tenzing Norgay and Sir Edmund Hillary from New Zealand. However, a key issue is that tourism revenue is concentrated in a few popular areas, such as the Everest, Langtang, Annapurna, Kanchanjanga, Khumbu, Kathmandu, Pokhara, and Chitwan regions, often called the "tourism triangle."

1.1 RESEARCH GAP

Despite the growing interest in eco-tourism in Tinjure, there remains a research gap regarding the specific impacts of tourism on local ecosystems and communities. Limited studies address how tourism development can be effectively managed to balance economic benefits with environmental conservation. The socio-cultural effects of increased tourism and the role of local stakeholders in decision-making processes require further exploration to ensure sustainable practices that benefit both the environment and the community.

1.2 RESEARCH OBJECTIVE

The main objective of this study is to explore the foundations of tourism development and identify the challenges in Tinjure, located in the hilly district of Terhathum, Koshi Province.

1.3 SIGNIFICANCE OF THE STUDY

The significance of studying this topic "Sustainable Eco-Tourism in Tinjure Hills: The Natural Beauty of the Rhododendron Capital of Nepal" holds notable academic significance in tourism studies, sustainable development, and environmental conservation. Tinjure's rich biodiversity and rhododendron forests offer significant eco-tourism potential. Research can explore the economic benefits for local communities and assess environmental and socio-cultural impacts. Academically, it helps understand how sustainable tourism can be developed in fragile ecosystems. Challenges like infrastructure gaps, environmental degradation, and balancing tourism with heritage preservation offer critical insights for rural tourism management, informing policies that promote responsible tourism while preserving natural and cultural resources.

The Tinjure Rhododendron Forest, an ecologically significant region, is located in the eastern mid-hills of the country, approximately 9 kilometers from the Basantapur Bazaar in the Tehrathum District. The region is home to diverse plant and animal species, including 28 of Nepal's 32 rhododendron species and over 250 plant species, 17 of which are endemic. Wildlife includes snow leopards, clouded leopards, and red pandas. Culturally, the area is inhabited by Indigenous groups such as the Rai, Yakthung (Limbu), Sherpa, and Thaman, alongside communities like Chhetri and Brahmin. These Indigenous communities maintain traditional customs, offering visitors authentic cultural experiences.

1.4 LITERATURE REVIEW

Literature review embraces theoretical and empirical reviews.

1.4.1 THEORETICAL REVIEW

The theory of ecotourism underscores the significance of responsible travel to natural areas, emphasizing the need for environmentally sustainable practices that also provide economic benefits to local communities. Situated

within the broader context of sustainable development, ecotourism strives to harmonize environmental protection with economic advancement and social equity. In contrast to mass tourism, which often disrupts fragile ecosystems, ecotourism seeks to minimize adverse impacts on nature while fostering environmental awareness among travelers. As articulated by Fennell (1999), ecotourism focuses on nature and biodiversity experiences, motivating tourists to engage in conservation efforts and respect local cultures. This approach aligns tourism with conservation initiatives by ensuring that visitors acquire a meaningful understanding of the natural world and its preservation requirements. Unlike conventional tourism, which frequently prioritizes profit over ecological considerations, ecotourism advocates for a symbiotic relationship between tourism and nature, emphasizing low-impact travel to ecologically sensitive areas, such as national parks and nature reserves, which are vulnerable to environmental degradation if inadequately managed. Through these efforts, ecotourism aims to safeguard these precious environments for future generations. Ecotourists are attracted to these destinations for their scenic beauty, wildlife, and cultural significance, and in return, they are encouraged to adopt sustainable practices, such as minimizing waste, respecting wildlife, and supporting conservation initiatives.

Furthermore, ecotourism addresses the economic needs of local communities by ensuring that they reap direct benefits from tourism activities. A prevalent critique of traditional tourism is the phenomenon of economic "leakage," wherein profits are siphoned off to external investors rather than being reinvested in the local economy. Ecotourism seeks to rectify this by championing locally owned enterprises, such as eco-lodges, guided tours, and craft markets. Honey (2008) posits that one of the fundamental principles of ecotourism is its capacity to empower local communities by providing sustainable economic opportunities. This strategy not only

bolsters local economies but also preserves the cultural and environmental integrity of the region. Additionally, ecotourism contributes to the establishment of sustainable infrastructure within host communities. Investments in renewable energy, efficient waste management, and eco-friendly accommodations are vital components of ecotourism, as they help to mitigate tourism's environmental footprint while enhancing local infrastructure. Moreover, ecotourism facilitates the preservation and promotion of cultural traditions among communities. Through activities such as cultural tours or the sale of traditional crafts, local residents can showcase their heritage while generating income. Thus, ecotourism fosters cultural exchange and mitigates the commodification or dilution of local customs that often accompanies mass tourism. Ultimately, ecotourism illustrates that, when practiced responsibly, tourism can serve as a powerful instrument for both environmental conservation and socio-economic development. It offers a sustainable alternative to mass tourism by encouraging the responsible utilization of natural resources and nurturing a deeper connection between tourists and the environments they explore. As Honey (2008) argues, the future of tourism rests on sustainable models that safeguard the planet's natural and cultural heritage while ensuring equitable economic benefits for local communities. Consequently, ecotourism is increasingly recognized as a necessary and viable approach for the future of tourism on a global scale.

1.4.2 EMPIRICAL REVIEW

Ecotourism is a form of sustainable travel that focuses on conserving the environment, protecting local cultures, and fostering economic development in often fragile regions. The concept is rooted in the idea that tourism can have a positive impact when practiced responsibly, balancing human activities with nature preservation. The theory of ecotourism aligns with environmental ethics, aiming to minimize the ecological footprint of visitors

while maximizing their connection to and understanding of nature. According to Buckley (2009), ecotourism emphasizes low-impact travel that prioritizes environmental conservation and benefits local communities, often integrating education and interpretation to promote awareness among tourists. By engaging tourists in activities that respect natural habitats, ecotourism reduces the risks of ecosystem degradation while promoting sustainable livelihoods for local people.

In addition to environmental conservation, ecotourism supports socio-economic development. Many ecotourism projects aim to empower indigenous and local communities by involving them in decision-making and providing opportunities for employment. Weaver (2001) points out that ecotourism contributes to the local economy by generating income through eco-friendly activities such as guided nature walks, wildlife observation, and cultural tours, all of which help sustain local traditions and biodiversity. This symbiotic relationship between tourism and local development is seen as essential in creating long-term solutions to poverty and environmental degradation, provided the activities remain sustainable and well-managed.

Despite its potential, Tinjure faces significant challenges that must be overcome to achieve sustainable tourism development. A major obstacle is the region's inadequate infrastructure, which includes poorly maintained roads, limited accommodation options, and insufficient access to essential services such as healthcare and sanitation. This lack of infrastructure hampers tourist accessibility and may deter potential visitors. Furthermore, Tinjure's ecological sensitivity raises concerns about environmental degradation. Unregulated tourism could result in pollution, habitat destruction, and biodiversity loss. As noted by Acharya (2019), unmanaged tourism can severely impact fragile ecosystems, especially in regions like Tinjure where environmental protection is vital.

In addition to infrastructure and environmental concerns, community involvement and equitable distribution of tourism benefits are crucial for sustainable development in Tinjure. For tourism to have a positive impact, local communities must be actively involved in its planning and execution. This includes providing opportunities for residents to engage in tourism-related ventures such as homestays, tour guiding, and the production of handicrafts. Community-led tourism not only enriches the visitor experience with authenticity but also ensures that the economic benefits are fairly shared among the local population. However, a lack of awareness and training in sustainable tourism practices poses a barrier to realizing these advantages. Research by Gurung and Thapa (2020) suggests that empowering local communities through capacity-building initiatives can address these challenges and promote more inclusive and sustainable tourism growth.

In 2024, the tourism industry underwent significant changes, with sustainability and climate change emerging as pivotal concerns for travelers and industry stakeholders. There is a growing trend toward "slow travel" and eco-friendly alternatives, such as opting for train travel over flights to reduce the environmental impact of tourism. This shift is driven by heightened awareness of climate-related issues and travelers' increasing desire for meaningful, low-impact experiences. European destinations are promoting shoulder season travel to alleviate overcrowding during peak tourist times and to reduce the environmental pressures associated with over-tourism. Furthermore, numerous hospitality businesses are implementing wellness and sustainability initiatives to cater to the evolving preferences of eco-conscious travelers, who increasingly seek health-focused and environmentally responsible options. Technological innovations are also transforming the tourism sector, with the introduction of digital passports and biometric verification, which enhance the

efficiency and security of air travel. In hospitality, the post-pandemic emphasis on personalized, tactile experiences reflects the growing demand for human connection and thoughtfully curated amenities. Additionally, the rise of hybrid hospitality spaces, combining accommodation, co-working, and social interaction, addresses the needs of younger, tech-savvy travelers seeking flexible and adaptable travel experiences. (UN Tourism, 2024).

1.4.3 GEOGRAPHICAL LOCATION OF RESEARCH AREA

Tinjure Hills is located in the eastern part of Nepal, extending across the Tehrathum and Sankhuwasabha districts within the Koshi Province. The Tinjure Rhododendron Forest, recognized as an ecologically significant region, lies in the eastern mid-hills, approximately nine kilometers from Basantapur Bazaar in Tehrathum District. The forest spans an altitude range of 2,400 to 3,066 meters and covers an area of 22 square kilometers between Basantapur and Chauki. Basantapur, a small market situated at the border of Sankhuwasabha and Tehrathum districts, has become a trading hub for Tehrathum, Sankhuwasabha, and some parts of Dhankuta District, facilitated by infrastructure developments such as roads and communication networks. The Tinjure ridge, running between the Arun and Tamor river basins, reaches its highest point at Tinjure Danda (3,066 meters), offering spectacular panoramic views of major peaks like Mount Everest, Kanchenjunga, and Makalu on clear days.

2. MATERIALS AND METHODS

To clearly outline the objectives of this research, data were primarily collected through interviews with 20 key informants and field observation methods in 2024. The local communities were identified as the primary data sources. A purposive sampling method was employed for the qualitative research, as it allows for the selection of informants possessing specific knowledge of the subject matter. Given that the study area spans multiple districts, efforts were

made to ensure that the sample represented the diversity of the informants. Previous studies, books, articles, bulletins, journals, and online sources were utilized as secondary data. Additionally, videos produced by Purvi Blues and Entertainment MMC were employed as supplementary data to enrich the study. These videos provided visual context, showcasing the geographic and natural beauty of the area, while also capturing local perspectives that enhanced the research. A qualitative research framework was adopted, utilizing analysis methods such as thematic and content analysis to strengthen the study's findings.

3. DATA ANALYSIS AND PRESENTATION

The Tinjure eco-tourism region, located in eastern Nepal, stands as an undiscovered treasure, blending scenic beauty, rich cultural heritage, and a tranquil trekking environment. Renowned for its lush rhododendron forests, panoramic Himalayan vistas, and the warm hospitality of its inhabitants, Tinjure encapsulates the charm of Nepal's lesser-known but equally mesmerizing trekking areas. With the growth of tourism in this region, there is significant potential to boost the local economy and preserve its cultural and natural assets. Nonetheless, sustainable eco-tourism development and thoughtful planning are crucial to maintaining Tinjure's unspoiled appeal for future generations. The state of natural and man-made tourism infrastructure, as the primary foundation for tourism development in Tinjure, the capital of rhododendron in Nepal, has been presented in a fundamental manner based on primary data.

3.1 NATURAL BEAUTY OF RHODODENDRON FLOWER AND FOREST

The primary basis for tourism development in Tinjure, located in the Terhathum district of Koshi Province, is its extensive expanses of rhododendron flowers and forests. The region is home to 28 species of rhododendron, establishing Tinjure, along with the nearby Milke and

Jalajle areas, as the "Rhododendron Capital of Nepal." Among these three areas, Tinjure hosts the highest concentration of rhododendron species. The blooming season, which occurs between March and April, coincides with the onset of summer in the lower hilly and Terai regions, as well as the conclusion of school examinations. During this period, both domestic and international tourists are drawn to the region to experience its cool climate and admire the blooming rhododendrons. Results showed that TMJ was visited by approximately 80,000 internal and 6000 international tourists throughout the year in 2023. Both domestic and international tourist numbers have been increasing annually. The main purpose of visit to TMJ was to admire the beauty of rhododendron or landscape followed by religious, study and recreational purposes respectively.

Tinjure's appeal lies in its unparalleled natural beauty, where the landscape, including mountains and roadsides, is blanketed by the simultaneous bloom of 28 distinct rhododendron species. The hills are painted in vibrant shades of red, pink, and white. This seasonal spectacle, which stretches as far as the eye can see, offers a visual experience that surpasses human artistic efforts. The abundance of blooms not only enhances the region's ecological significance but also cements its status as a major destination for nature lovers and eco-tourists eager to immerse themselves in a pristine environment. The combination of the rhododendron bloom and cooler temperatures creates an especially attractive period for tourists seeking relief from the heat and an opportunity to enjoy the stunning natural scenery (Field survey, 2024).

In Stainton's 1972 book *Forest of Nepal*, 28 species of rhododendron found in the Tinjure, Milke, and Jalajle areas are listed as follows; (1) *arboreum*, (2) *falconeri* (3) *campanulatum* (4) *arboreum* ssp. *cinnamomeum* (5) *hodgsonii* (6) *lepidotum* (7) *anthopogon* (8) *macabeanum* (9) *grande* (10) *cinnabarinum* (11) *thomsonii* (12) *barbatum* (13) *dalhousiae* (14)

setosum (15) *wallichii* (16) *maddenii* (17) *lindleyi* (18) *lowndesii* (19) *lanatum* (20) *baileyi* (21) *campylocarpum* (22) *kesangiae* (23) *glaucophyllum* (24) *niveum* (25) *virgatum* (26) *triflorum* (27) *vaccinioides* (28) *leptocarpum*.

3.2 ROCK AND RHODODENDRON (R&R) GARDEN

The Rock and Rhododendron Garden is a hidden gem nestled within a forest of rhododendron. This garden features a unique combination of herbs and rocks. Upon entering from the Bashantpur route, visitors first arrive in the Tinjure area. A ticket priced at Rs 20 is required for entry. Inside the garden, there is a designated picnic spot, a small man-made pond, and rocks that have been intricately carved and painted to depict various shapes, including tigers, crocodiles, elephants, turtles, lizards, and even Mt. Everest. Furthermore, the garden boasts well-maintained pathways, a picnic space, toilet and resting areas for visitors.

The interplay between rocky landscapes and blooming rhododendrons offers a serene and captivating environment. Additionally, the garden plays a significant role in promoting eco-tourism and environmental conservation in the Tinjure area, allowing visitors to engage in eco-friendly activities such as hiking, bird watching, and botanical studies. This fosters a deeper appreciation for the natural environment and emphasizes the importance of preserving Nepal's indigenous flora while raising awareness about protecting fragile ecosystems from over-exploitation and climate change. Its integration into the local tourism sector brings economic benefits to the community while promoting sustainable practices that ensure the conservation of the region's natural heritage for future generations (Field survey, 2024).

3.3 PATHIVARA TEMPLE

After exploring the Rock and Rhododendron Garden, a scenic drive of approximately 10 minutes leads to the next phase of the journey. The road continues

upward, presenting a gradually steepening ascent, but the drive is manageable and offers beautiful views of the surrounding landscape. Once you reach a designated parking area, the journey to the Pathivara Temple transitions from driving to walking. The first portion of the walk involves an uphill climb, but the path has been carefully designed with visitors' comfort in mind. Well-constructed stone steps guide pilgrims along the way, and strategically placed shaded areas, often in the form of sheds, provide respite from the sun, ensuring a more comfortable experience during the ascent.

As you reach the top of the uphill section, the path levels out, offering a gentle, horizontal walk that leads directly to the Pathivara Temple. This revered site holds immense religious significance, and many visitors embark on the journey as part of a spiritual pilgrimage. However, the experience is not limited to its religious importance. Nature enthusiasts will appreciate the breathtaking beauty of the rhododendrons that bloom throughout the area, particularly during the spring season. The vibrant colors of the flowers add to the temple's tranquil atmosphere, creating a peaceful setting for reflection. Moreover, the Pathivara Temple is renowned for offering spectacular panoramic views. On days with clear weather, tourists are rewarded with unobstructed vistas of some of the world's most famous mountains, including Mt. Makalu, Mt. Annapurna, and Mt. Everest. These majestic peaks rise against the sky, forming an awe-inspiring backdrop that enhances the overall experience of visiting the temple (Field survey, 2024).

3.4 REVEL IN THE SNOW

Since the Tinjure area above Basantpur is situated at an altitude of 3,066 meters above sea level, its mountains and forests are covered with snow during the winter season. While snowfall makes life difficult for the local residents, people from lower mountainous regions and the eastern plains, where snow is absent, often travel by vehicle to experience the snowy landscape.

Although there are no official statistics on the number of tourists visiting snowfall playing, the informants estimate that approximately 15,000 to 20,000 tourists visit the Tinjure area annually during the three-month period from mid-November to February (Field survey, 2024).

3.5 GUPHA POKHARI

Guphapokhari, located within the picturesque landscapes of Chainpur Municipality, in the Sankhuwasabha district, has emerged as a focal point for tourists seeking both natural beauty and cultural exploration. The lake is revered for its clear, unclouded waters, which local lore suggests are cleansed by green birds. Situated at an elevation of approximately 2,890 meters, Guphapokhari is a pristine natural lake encircled by lush forests and offers a breathtaking panorama of the Himalayas. Renowned for its serene environment, it remains a hidden gem for trekkers and nature enthusiasts eager to experience the untouched beauty of Nepal's eastern landscapes.

Guphapokhari is not only beautiful but also holds great religious and cultural importance, especially for the local communities. Both Hindus and Buddhists consider the lake sacred and believe that its waters have spiritual powers. Many pilgrims visit the lake to perform rituals and pay their respects, especially during the monsoon season when the lake is at its fullest. Surrounded by alpine meadows, rhododendron forests, and hills, Guphapokhari offers visitors a chance to experience Nepal's rich natural beauty. It's a quiet escape from busy cities, with stunning views of mountain ranges like Mount Makalu and Kumbhakarna. The area is also home to many birds and wildlife, making it a popular spot for birdwatching and eco-tourism (Field survey, 2024).

(Although Guphapokhari is not located within the Tinjure region, the ease of accessibility along the route encourages tourists visiting Tinjure to extend their journey to Guphapokhari. Consequently, it has been incorporated into the region's eco-tourism initiatives.)

3.6 CHALLENGES OF ECO-TOURISM

If the environment is not adequately protected, challenges in the eco-tourism sector will emerge, overshadowing concerns about infrastructure development. While there is a motorable road leading to the Tinjure tourist area, the road from Tute Deurali, above Basantpur, remains off-road, resulting in issues such as mud during the rainy season and dust during the dry season. Despite the installation of waste bins in the Rock and Rhododendron garden, as well as the Pathivara temple area, tourists continue to discard items like noodle wrappers, biscuit packets, and water bottles at various sites. Although no significant environmental problems are evident at present, the risk of future environmental degradation looms. Furthermore, the absence of a systematic guide service for tourists hinders efforts toward sustainable tourism development. Safeguarding the rhododendron capital from the impacts of global temperature rise and climate change, while promoting sustainable tourism, presents an additional challenge (Field survey, 2024).

3.7 POSSIBILITY OF SUSTANABLE ECO-TOURISM

The Tinjure, Milke, and Jaljale region, often referred to as the "capital of rhododendrons," exhibits significant potential for eco-tourism development. The conservation of rhododendrons and other indigenous plant species in the area could attract both domestic and international tourists. Currently, mid-range accommodation is available along the route from Basantpur to Guphapokhari, and the region is experiencing gradual improvements in communication and transportation infrastructure. In addition to its natural allure, the Rock and Rhododendron Garden offers enhanced recreational and picnic facilities, while the Pathivara Temple adds religious and cultural significance to the region's appeal. Both domestic and international tourist numbers have been increasing annually. The involvement of all three tiers of government, coupled with support from

non-governmental organizations like the World Wildlife Fund in conservation initiatives, further strengthens the potential for sustainable tourism development. Consequently, the Tinjure area, along with the broader Tinjure, Milke, and Jaljale region, stands poised for considerable growth in eco-tourism (Field survey, 2024).

4. RESULT ANALYSIS AND DISCUSSION

The analysis of tourism development in Tinjure underscores its dependence on the region's rich biodiversity, particularly its rhododendron forests, which serve as a major attraction for both domestic and international tourists. The blooming season, occurring between March and April, coincides with favorable climatic conditions, making it an ideal period for visitors to experience the area's vibrant natural beauty. Known as the "Rhododendron Capital of Nepal," Tinjure boasts 28 distinct species of rhododendrons, making it a unique eco-tourism destination. The significant influx of tourists 80,000 domestic and 6000 internationals in 2023 demonstrates the growing appeal of Tinjure's natural environment. Both domestic and international tourist numbers have been increasing annually. The primary draw for visitors is the stunning visual display of the blooming rhododendrons, though many are also attracted by the region's religious, educational, and recreational opportunities.

Research by Gurung and Thapa (2020) suggests that empowering local communities through capacity-building initiatives can help address the challenges posed by tourism and foster more inclusive and sustainable growth. This highlights Tinjure's potential for eco-tourism, where promoting nature-based tourism can simultaneously drive local economic development and support environmental conservation efforts. Tinjure's landscape, adorned with vibrant red, pink, and white rhododendron blooms, offers a sensory experience that transcends human artistic creation, attracting eco-tourists and nature enthusiasts alike. The cooler climate during the blooming season, along with the

expansive views of hills and forests, further enhances the region's appeal, particularly for those seeking relief from the heat of lower-lying areas.

As Buckley (2009) notes, the environmental significance of the rhododendron forests underscores the necessity of preserving this fragile ecosystem, particularly in light of the threats posed by climate change and over-exploitation. Tinjure's model of eco-tourism, which promotes both environmental conservation and community welfare, is a key factor in its growing tourism appeal. The region exemplifies how natural beauty, when sustainably managed, can generate long-term ecological and economic benefits. However, challenges persist, including inadequate infrastructure, environmental degradation, and economic leakages, which jeopardize the sustainability of tourism in Tinjure. To address these issues, the implementation of sustainable practices, active engagement with local communities, and the promotion of responsible tourism will be essential to preserving Tinjure's ecological and cultural heritage for future generations

5. CONCLUSION

In conclusion, the Tinjure, Milke, and Jaljale region, acclaimed as Nepal's "Rhododendron Capital," is an exceptional eco-tourism destination. Its rich biodiversity, particularly the presence of 28 rhododendron species, along with its stunning landscapes, snowfall playing and cultural landmarks such as the Pathivara Temple and Guphapokhari, make it a attraction for both domestic and international tourists. In 2023, the region attracted approximately 80,000 domestic and 6000 international visitors, underscoring its growing appeal. Both domestic and international tourist numbers have been increasing annually the spectacular bloom of rhododendrons in spring offers a visually striking experience that captivates eco-tourists, nature enthusiasts, and those seeking relief from the warmer climates of lower altitudes.

However, the continued success of tourism in Tinjure is intrinsically tied to the sustainable management of its natural resources and infrastructure. Attractions such as the Rock and Rhododendron Garden, alongside religious sites like the Pathivara Temple, play a pivotal role in merging environmental conservation with tourism. This eco-friendly approach not only fosters a deeper appreciation for the natural environment but also contributes to the region's economic development. Despite these strengths, the region faces challenges, including inadequate infrastructure, waste management concerns, and the threat of environmental degradation. Furthermore, the impact of climate change poses a significant risk to this fragile ecosystem. Moving forward, tourism strategies should prioritize capacity building for local communities, the promotion of responsible tourism practices, and the enhancement of conservation initiatives. By safeguarding its ecological and cultural heritage, the TMJ region has the potential to sustain its position as a premier eco-tourism destination, generating long-term economic benefits while preserving its natural beauty for future generations.

6. RECOMMENDATIONS

Three key recommendations for promoting sustainable tourism in the Tinjure region have emerged based on insights gathered from local informants and field observations:

1. The Tinjure area is home to 28 species of rhododendrons; however, there is currently no comprehensive identification of these species. Establishing a rhododendron garden would facilitate the identification and conservation of these species.
2. The Tinjure region encompasses portions of Laligurans Municipality in Tehrathum district and Dharmadevi Municipality in Sankhuwasabha district, with the border delineated by the elevation of the surrounding mountains. Constructing a trail along this border would allow

- tourists to simultaneously enjoy panoramic views of both districts.
- To date, tourists visiting the TMJ area, including Tinjure, primarily enjoy the blooming Laligurans flowers, visit the Pathibhara Mata temple, take photos, play in the snow, and they come to enjoy the cool weather in summer season. However, as the TMJ is an extensive forested region, it hosts a wide range of plant species, wild herbs, animals, and birds, which remain largely unstudied. Researching these natural resources and promoting them globally could attract a greater number of both domestic and international tourists.

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REFERENCES

- Buckley, R.** (2009). *Ecotourism: Principles and practices*. CABI.
- Banskota, K., & Sharma, B.** (1995). *Mountain tourism in Nepal: An overview*. ICIMOD.
- Budhathoki, D.** (2024). From fields to futures: Examining the socioeconomic shifts from cardamom cultivation in Eastern Nepal. *International Research Journal of MMC*, 5(3), 170-179. <https://doi.org/10.3126/irjmmc.v5i3.68523>
- Weaver, D.** (2001). *The encyclopedia of ecotourism*. CABI.
- Fennell, D. A.** (1999). *Ecotourism: An introduction*. Routledge.
- Honey, M.** (2008). *Ecotourism and sustainable development: Who owns paradise?* Island Press.
- Sharma, K.** (2017). Eco-tourism as a tool for sustainable development in Nepal. *Kathmandu University Journal of Environmental Studies*.
- Stainton, J. D. A.** (1972). *Forest of Nepal*. London: John Murray.
- Acharya, B.** (2019). Environmental impact of tourism in the fragile ecosystems of Nepal. *Journal of Himalayan Studies*, 10(2), 45-58.
- Gurung, R., & Thapa, P.** (2020). Community-based tourism development in rural Nepal. *Journal of Tourism and Development*, 15(1), 78-94.
- UN Tourism** (2024). International tourism reached 97% of pre-pandemic levels in the first quarter of 2024.
- Kiper, T.** (2013). Role of ecotourism in sustainable development. <http://dx.doi.org/10.5772/55749>
- Nyaupane, G. P., & Thapa, B.** (2004). Evaluation of ecotourism: A comparative assessment in the Annapurna Conservation Area Project, Nepal. *Journal of Ecotourism*, 3 (1), 20-45.

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