

Conserving World Heritage Buffer Zone of North-East Sinharaja for Tourism Promotion in the Present Sri Lanka

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Abstract: *The North-East Sinharaja buffer zone, situated within the lush Rakwana mountain range and spanning approximately 60 square kilometers, is a moist montane tropical forest with significant ecological and cultural value. This area is not only a biodiversity hotspot but also home to a variety of religious and cultural landmarks, including the Ubhayatilakarama Buddhist Shrine, St. Anthony's Catholic Church, Sri Muthumariamman Temple, Jumma Muslim Mosque, and other meditation and retreat centers. These sites contribute to the region's rich cultural tapestry and present opportunities for culturally immersive tourism experiences. However, the buffer zone faces increasing threats from human activities such as deforestation for cardamom and tea cultivation, illegal gem mining, and resource extraction. These activities are accelerating land degradation and habitat loss, jeopardizing the area's ecological balance and long-term viability as a tourist destination. Given the urgency of these issues, immediate conservation actions are recommended. To promote sustainable tourism and protect this unique region, restoration and eco-friendly infrastructure, cable car project, golf course and wetland park, shopping mall development are recommended. These initiatives aim to create a sustainable tourism zone in the North-East Sinharaja buffer that preserves the area's biodiversity and rich cultural heritage while promoting responsible tourism. By integrating conservation with infrastructure, these developments could position North-East Sinharaja as a model for sustainable tourism in Sri Lanka, enhancing its appeal as a diverse, eco-friendly destination.*

Keywords: Sinharaja, biodiversity, tourism, Sri Lanka

1. Introduction

The Sinharaja Forest Reserve, a UNESCO World Heritage site, holds incredible tourism potential given its rich biodiversity and pristine ecosystem (Gunatilleke et al, 1994). The boundaries of Sinharaja (Selcuk et al, 2023) extend through the Sabaragamuwa, Southern, and Western Provinces of Sri Lanka, and it is accessible through the small towns of Rakwana, Suriyakanda, and Kalawana in the Ratnapura District. These towns offer a variety of natural attractions, from high-altitude views at around 2,000 feet above sea level to notable landmarks like Bulutota Rock Mountain. Major access routes include the A17 road, which stretches from Madampe to Galle, known for its scenic "ten bends," and the Rakwana-Kalawana B181 road. With careful planning, the area's infrastructure can be enhanced to support eco-friendly tourism while preserving the fragile ecosystems within Sinharaja, offering an enriched experience for both locals and tourists. Key aspects of the development would include sustainable lodging, guided eco-tours, and educational programs on biodiversity, ensuring that the unique flora and fauna of Sinharaja are celebrated and protected (Gössling, 2000).

The objectives of this research on Sinharaja Forest's sustainable tourism development are multifaceted and aim to establish a model that prioritizes environmental conservation while enhancing the tourism experience. Assessing Tourism Potential involves evaluating Sinharaja Forest's unique biodiversity, its cultural and historical significance, and its suitability for recreational activities. Understanding these factors is key to identifying how Sinharaja can attract and

sustain a diverse tourist demographic (Barathie, K., & Widanapathirana, 1993). The research aims to build infrastructure and facilities designed to enhance the visitor experience without compromising the environment. This includes eco-friendly accommodations, pathways, and interpretive centers that allow visitors to enjoy the forest while minimizing their environmental footprint. Engaging Local Communities will be actively involved in the tourism development process to ensure that they benefit economically and socially. This includes creating job opportunities, supporting local businesses, and fostering cultural exchange that can enrich the tourism experience. Implementing sustainable management practices focuses on strategies that protect the forest's biodiversity and fragile ecosystems. Practices may include regulated visitor access, controlled waste management, and habitat conservation efforts that ensure long-term sustainability. Educating visitors on responsible tourism practices will help build environmental awareness and encourage conservation. This includes promoting a "leave no trace" approach, educating on the significance of biodiversity, and instilling a sense of stewardship for Sinharaja's natural and cultural heritage (Wijesooriya, 2003).

Collectively, these objectives aim to transform Sinharaja into a model of sustainable tourism that serves both ecological and community interests, fostering a tourism experience that is enriching, respectful, and ecologically sound. Finally, this research proposes developing a sustainable tourism zone in the region, aiming to balance conservation with responsible tourism, allowing for an immersive yet respectful interaction with the forest's ecosystem (Lai, 2002).



Figure 1: The map of North-East Sinharaja

Issues and Problems on Tourism Promotion in North-East Sinharaja

The North-East Sinharaja, despite its small land area, is remarkably rich in biodiversity and endemism, making it an essential component of Sri Lanka's natural heritage. The Morningside area, in particular, supports unique habitats and fragile ecosystems that are critical for biodiversity. However, this section of Sinharaja has historically been overlooked in conservation efforts, leaving it vulnerable to increasing human impacts. Unchecked activities like deforestation, agricultural encroachment, and illegal resource extraction are causing significant ecological degradation, driven largely by a lack of effective governance.

The Forest Department, responsible for managing the entire Sinharaja reserve as a World Heritage Site, has not implemented specific protections for the North-East Sinharaja area, leaving it without the regulatory oversight needed to prevent ecological damage. Conservation studies, such as those by Wijesinghe and Dayawansa (2002), have highlighted this gap, stressing the urgent need for protective measures. Additionally, Bahir and Surasinghe (2005) noted that while there was a destructive program initially planned for the area, it was eventually halted, providing a temporary reprieve for this critical habitat.

For North-East Sinharaja to truly benefit from conservation initiatives, a governing authority or dedicated management plan focusing on this specific area is essential. This plan should prioritize biodiversity protection, habitat restoration, and sustainable resource management. With targeted conservation attention, the North-East Sinharaja could become a cornerstone for both biodiversity conservation and eco-tourism, showcasing Sri Lanka's commitment to preserving its unique natural heritage (Zoysa & Simon, 1999).

The North-East Sinharaja forest, a biologically and culturally rich area, has not received adequate attention for its tourism potential. Despite its diversity and significance, there has been no comprehensive assessment of the area's tourism

possibilities, nor has infrastructure been developed to support eco-tourism that minimizes environmental impact and enhances visitor experience. Additionally, previous efforts have lacked sufficient engagement with local communities, who could benefit from socio-economic opportunities and contribute to cultural exchange with visitors. Without responsible tourism practices, visitors to the region miss opportunities to foster environmental awareness and promote conservation efforts.

The ecological balance of North-East Sinharaja faces significant threats due to the excessive use of pesticides on surrounding tea, cardamom, and cinnamon plantations (Bishop and Gendron, 1998). This practice has led to the mass loss of insect populations and wildlife, disrupting the food web and threatening the health of ecosystems (Bambaradeniya & Edirisinghe 2001). Furthermore, the extraction of forest resources by nearby communities has reached unsustainable levels. Villagers frequently harvest materials from the forest for various uses—such as tapping Kitul palms (*Caryota urens*), collecting edible fruits, illicit timber, and non-woody products like mushrooms, resins, oils, medicinal plants, and firewood—leading to overexploitation and severe habitat disturbance (Bandaratillake, 2001).

Addressing these issues would require a sustainable tourism plan that includes:

- 1) **Ecotourism Infrastructure Development:** Creating eco-friendly visitor facilities that preserve the natural environment while enhancing visitor experiences (Halvitigala Ihala Gamage, 2016).
- 2) **Community Engagement:** Actively involving local communities in tourism development to share economic benefits and cultural knowledge, fostering a sense of shared responsibility for conservation.
- 3) **Responsible Tourism Practices:** Educating visitors about the ecological significance of North-East Sinharaja, promoting behaviors that respect and protect the environment.

- 4) Conservation-Focused Management: Implementing strict conservation measures to control pesticide use, prevent overharvesting, and protect native wildlife and plants.
- 5) By implementing a comprehensive and sustainable approach, the North-East Sinharaja forest could transform into a valuable model of responsible tourism, benefiting local communities while preserving its ecological and cultural heritage.

General Analysis for Tourism Promotion of North-East Sinharaja

To ensure effective conservation of the North-East Sinharaja and promote sustainable tourism, the following analytical methods have been recommended:

- 1) Market Analysis: Conducting surveys and comprehensive market research will be essential to understand the demand for ecotourism experiences in Sinharaja. This analysis will help identify target demographics, visitor expectations, and the types of experiences that will appeal to ecotourists, guiding the development of tourism offerings tailored to environmentally conscious travellers.
- 2) Stakeholder Engagement: Collaboration with local communities, government agencies, NGOs, and tourism operators will foster inclusive decision-making. Engaging these stakeholders from the beginning will help garner local support, ensure the sharing of benefits, and maintain a transparent approach to tourism development that reflects local needs and values.
- 3) Ecotourism Planning: Ecologically sensitive infrastructure such as trails, viewing platforms, and visitor centers can be strategically designed to provide access while minimizing the impact on wildlife and natural habitats. Careful planning of these facilities will enable visitors to experience the forest's biodiversity without disrupting its ecosystems.
- 4) Capacity Building: Training and educational programs for local guides, hospitality staff, and community members will help raise the standard of service and encourage environmentally responsible practices. Empowering locals with the skills and knowledge to manage and guide tourism activities can also instil a sense of pride and stewardship for the forest.
- 5) Monitoring and Evaluation: Establishing monitoring protocols to track visitor numbers, behaviours, and environmental impacts is vital for adaptive management. Regular assessments will enable conservation authorities to adjust strategies as needed, ensuring that tourism activities remain aligned with conservation goals and continually improve over time.

These methods together create a holistic framework for sustainable tourism in North-East Sinharaja, balancing the needs of conservation, community development, and visitor satisfaction. Through this approach, the region can become a model for eco-friendly tourism that protects biodiversity while supporting local livelihoods and environmental stewardship.

Conservation Actions and Recommendations for Tourism Promotion

The proposed tourism promotion actions for the North-East Sinharaja region aim to develop the area as a sustainable and appealing tourist destination. However, these recommendations must balance visitor engagement with environmental protection. Here's a breakdown of the proposed actions with considerations for responsible implementation:

- 1) Lake Boating and Jogging Path: Filling the central paddy in Rakwana with water for a boating lake and adding a jogging path around it could provide recreational activities in an environmentally friendly way. Sustainable water management and careful design of the path would minimize ecological disruption.
- 2) Cable Car Project: A cable car system from the 99 km post on the Rakwana-Kalawana Road to Handapan Falls would give tourists panoramic views without creating extensive foot traffic in sensitive areas. It's crucial that construction avoids disturbing local wildlife habitats and uses eco-friendly materials.
- 3) Golf Course Development: Establishing a golf course at Boatyard Allington Estate requires careful planning to prevent land degradation and excessive water use. Native vegetation and responsible landscaping techniques can help create a low-impact course.
- 4) Wetland Park Creation: Transforming part of Allerton Estate into a Wetland Park can highlight local flora and fauna while preserving natural water systems. Interpretive signage and educational programs could further enrich the experience for eco-tourists.
- 5) Hot Air Balloon Sport: Air balloon rides could offer a unique perspective on Sinharaja's landscapes with minimal environmental impact, provided launch areas and flight paths avoid disrupting wildlife.
- 6) Trekking and Camping Sites: Designated trekking trails and campsites near Handapan Falls would enable tourists to experience Sinharaja's natural beauty up close. Proper waste management, clearly marked paths, and controlled access are essential to protect the environment.
- 7) Mountain Biking: Mountain biking trails at Pera Mount can attract adventure tourists while minimizing environmental disturbance if paths are constructed responsibly, avoiding erosion and habitat fragmentation.
- 8) Shopping mall in Botiyatenna: A shopping mall could support local artisans and businesses if it emphasizes eco-friendly products and sustainable building practices.
- 9) Helicopter Yard and Emergency Base: A helicopter yard and emergency response base could improve safety for tourists and locals alike. However, strict guidelines are necessary to prevent unnecessary noise pollution and ecological disturbance.
- 10) Access Roads to Waterfalls: Developing access roads to area waterfalls can make the sites more accessible, but it is essential to use minimal-impact construction methods to preserve the surrounding landscape.
- 11) Domesticated Elephants: Adding domesticated elephants to the Botiyathenna area raises ethical and environmental concerns. Alternatives, such as viewing wild elephants in their natural habitats with limited

human interference, would better align with sustainable and ethical tourism practices.

- 12) Gem Complex at Rajawatta (Dipdeen Estate): Setting up a gem complex could offer tourists insight into Sri Lanka's gem industry while promoting local crafts. Responsible mining practices and educational tours could enhance awareness of sustainable resource use.
- 13) Tourist Housing Project: Developing a 25-acre tourist housing project near the hospital could accommodate visitors without overloading existing infrastructure. Eco-friendly designs, waste management, and energy-efficient practices should be central to this development.

These initiatives could significantly boost tourism while preserving the unique environment of North-East Sinharaja. Prioritizing sustainability, community involvement, and ecological responsibility at every stage of development will be key to creating a tourism model that protects Sinharaja's biodiversity and cultural richness for future generations.

Furthermore, to enhance the tourism infrastructure and visitor experience in the Rakwana and Suriyakanda areas, the following actions focus on creating a cohesive, aesthetically pleasing, and functional environment that promotes local culture and sustainability. Here are the specific recommendations:

- 1) Standardizing Hotel Rooms and Services: Establish guidelines for local hotels, focusing on sustainable practices, quality of amenities, and hospitality standards. This could include eco-friendly accommodations, staff training on responsible tourism, and high-quality service that reflects the unique charm of the area.
- 2) Floral Planting from Madampe to Kalawana and Rakwana to Suriyakanda: Planting blooming flowers along these routes would enhance the natural beauty and create a welcoming, vibrant atmosphere. Selecting native, pollinator-friendly flowering plants would also support local biodiversity.
- 3) Development of a Youth Village: Establishing a 35-acre model tourist village in Suriyakanda's Poddana area could provide immersive experiences for tourists. The village could include eco-friendly homestays, where each house offers two guest units, allowing visitors to experience local culture while supporting the community through sustainable tourism.
- 4) Historical Stone Culverts on Suriyakanda-Deniaya Road: Adding stone plates to the culverts along the 10 bends of this road would create an ancient, rustic appearance that enhances the cultural aesthetic of the area. Marking each bend with numbered stone pillars would give visitors a unique experience as they journey through this scenic route.
- 5) Planting Kumbuk Trees Along the River: Planting Kumbuk trees along the river from Handapan Falls to Godakawela would support riverbank stability, help prevent erosion, and contribute to the area's lush greenery. These trees would provide shade and enhance the aesthetic appeal of the riverside while benefiting the local ecosystem.
- 6) Construction of a New Bus Stand: Developing a new bus stand in the fallow field behind the existing Rakwana Bus Stand would alleviate congestion and improve accessibility. The design should include shelters, seating,

and clear signage to enhance the experience for both tourists and residents.

- 7) Improvement of Mihidu Mawatha (Perahera Mawatha) and Deniaya Road: Expanding Mihidu Mawatha and carpeting Deniaya Road would improve traffic flow and accessibility to major attractions. Incorporating pedestrian pathways and green spaces along these roads would enhance the city's appeal and make it more walkable for visitors.
- 8) Upgrading Rakwana Hospital to a Base Hospital: Developing Rakwana Hospital as a base hospital would improve healthcare access for tourists and residents alike. This upgrade would provide essential medical services, emergency facilities, and support for increased tourist activity in the area.

Implementing these initiatives can transform the Rakwana and Suriyakanda areas into a model of sustainable and culturally enriching tourism. Prioritizing eco-friendly designs, community involvement, and aesthetic enhancement will create a unique travel destination that resonates with visitors while safeguarding the region's natural and cultural heritage.

Expected Outcomes of Tourism Promotion

The proposed sustainable tourism development in the North-East Sinharaja forest aims to yield several impactful outcomes, each contributing to both conservation and local socio-economic growth. Here are the anticipated results:

- 1) Creation of a Sustainable Tourism Zone: Establishing North-East Sinharaja as a tourism zone that highlights its natural and cultural assets will balance visitor experiences with ecosystem preservation. This initiative will position North-East Sinharaja as a prime destination where tourism coexists with conservation, preserving its biodiversity and ecological integrity.
- 2) Economic Opportunities for Local Communities: The development of tourism-related enterprises will empower local communities by creating income-generating activities. Homestays, handicraft sales, guided nature tours, and small businesses will offer sustainable livelihoods while keeping financial benefits within the region.
- 3) Increased Conservation Awareness: By fostering an appreciation for the region's unique ecology, visitors will become more supportive of conservation initiatives. Their increased environmental awareness could lead to direct contributions to preservation efforts and increased funding through eco-tourism channels, benefiting North-East Sinharaja's long-term sustainability.
- 4) Establishment of Partnerships for Sustainable Tourism: Creating networks and partnerships with government bodies, NGOs, and tourism operators will ensure the longevity and consistency of conservation efforts. Collaborative efforts will facilitate continuous improvement in tourism management and foster regional and international support.
- 5) Positioning North-East Sinharaja as a Model for Sustainable Ecotourism: Showcasing North-East Sinharaja Forest as an exemplar of sustainable ecotourism in Sri Lanka can inspire similar efforts both locally and globally. As a model project, it could set standards for eco-friendly tourism development,

emphasizing conservation-focused strategies that can be replicated in other biodiverse regions.

Through these outcomes, the North-East Sinharaja Forest will not only serve as a popular tourist destination but also as a beacon for responsible tourism, balancing ecological protection with cultural and economic enrichment for the local community.

2. Discussion

The North-East Sinharaja forest reserve is a remarkable testament to Sri Lanka's unparalleled natural beauty and biodiversity, offering an experience that transcends traditional sightseeing. It provides visitors—both Sri Lankans and international travelers—with an immersive journey into one of the world's most pristine wilderness areas. This unique eco-tourism destination captivates nature enthusiasts and conservationists alike, as it combines breathtaking biodiversity, an intricate ecosystem, and a rich cultural backdrop that heightens its allure.

As conservation awareness grows, North-East Sinharaja's role as a beacon of biodiversity and ecological stewardship only strengthens. The region's conservation initiatives ensure that its remarkable ecosystems and rare species are preserved for future generations, while also fostering a deeper connection between visitors and nature. The forest's natural charm and its importance as a biodiversity hotspot make it a compelling destination for eco-tourism, offering tourists the chance to witness and appreciate nature in its most unspoiled form.

North-East Sinharaja's appeal lies in its ability to engage travelers in meaningful, conservation-focused experiences. Its designation as a sustainable tourism zone not only safeguards its biodiversity but also allows visitors to become advocates for environmental preservation, further cementing Sinharaja's legacy as a sanctuary of ecological wonder and a model of sustainable tourism. This captivating allure continues to draw people from around the world to experience and support the conservation of Sri Lanka's natural heritage.

3. Conclusion

The proposed tourism promotion presents a visionary approach to integrating conservation with cultural heritage and community-driven tourism. By leveraging the unique presence of buffaloes as symbols of ecological harmony and cultural legacy, this project aims to highlight the profound interconnectedness between the people and the natural landscape of the North-East Sinharaja Forest Reserve. This initiative is a holistic effort to balance environmental protection with socio-economic upliftment, positioning the region as an ecotourism destination that celebrates both its biodiversity and cultural depth.

The research proposal outlined here aspires to explore and document the comprehensive value of the North-East Sinharaja Forest for ecotourism in Sri Lanka. Through an in-depth examination of its biodiversity, ecosystems, ecotourism potential, conservation challenges, and cultural significance, this study aims to contribute actionable insights to the fields of ecology, conservation, and sustainable tourism. Employing

diverse research methodologies—such as field surveys, data analysis, and consultations with local stakeholders—this doctoral research will analyze ecosystem dynamics, visitor perceptions, and the socio-economic impacts of tourism on local communities.

Interdisciplinary collaboration is central to this proposal, recognizing that effective conservation and sustainable development require input from multiple sectors. By fostering partnerships between academia, government bodies, NGOs, local communities, and tourism enterprises, this research seeks to create a shared framework for managing North-East Sinharaja's resources sustainably. It will synthesize empirical data with theoretical models from environmental science, anthropology, and tourism studies to formulate evidence-based recommendations. These insights will support policymakers, conservationists, and tourism stakeholders in making informed decisions that protect the forest's integrity while promoting responsible tourism.

Ultimately, this research aims to contribute to real-world applications that enhance the sustainable management of North-East Sinharaja Forest. By amplifying the perspectives of diverse stakeholders and emphasizing evidence-based policy recommendations, the study will work toward ensuring that this exceptional region remains a symbol of biodiversity, ecological resilience, and cultural heritage for future generations. Through such integrative efforts, the North-East Sinharaja Forest can serve as a global model of conservation and ecotourism, inspiring similar initiatives in other ecologically sensitive regions around the world.

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