



Environmental Concerns In Eco-Tourism: A Study Of The Erstwhile Nalgonda District.

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Abstract: Among the types of Tourism in India, ecotourism has grown recently. Eco-Tourism entails the sustainable preservation of a naturally endowed area or region. This is becoming more and more significant for the ecological development of all regions that have tourist value. Eco-tourism has emerged as a sustainable approach to promote tourism while conserving natural resources and supporting local communities. The Erstwhile Nalgonda district, now divided into Nalgonda, Yadadhri - Bhogir and Suryapet districts in Telangana, is endowed with natural landscapes, water bodies, hills, and cultural heritage sites. This study examines Environmental Concerns in Eco-Tourism at Erstwhile Nalgonda district.

Keywords: Eco-tourism, Environmental Concerns, Erstwhile Nalgonda District, Sustainable Tourism, Conservation, Landscapes, Water Bodies, Hills, Cultural Heritage.

Introduction:

Eco-tourism is a form of tourism that emphasizes environmental conservation, sustainability, and socio-economic benefits for local communities. It promotes responsible travel to natural areas while minimizing environmental impact and respecting local cultures. Eco-tourism, compared to traditional tourism, emphasizes reducing adverse environmental effects while raising awareness of cultural and natural assets. Eco-tourism is being more and more seen as a practical approach to attaining sustainable development as environmental deterioration and climate change present significant worldwide issues.

The state of Telangana's Erstwhile Nalgonda district is rich in a variety of natural resources, such as lakes, hills, forests, wildlife habitats, and culturally significant locations. These natural resources offer a great deal of promise for the growth of ecotourism. Locations like forests, reservoirs, and picturesque scenery draw tourists and support local economic development. However, the district is facing a number of environmental issues as a result of the increasing number of visitors, poor infrastructure, and ineffective environmental management.

Objectives:

1. To study eco-tourism and its major attractions in the erstwhile Nalgonda district.
2. To examine the initiatives and best practices adopted by the Telangana State Tourism Development Corporation (TGTDC) in promoting eco-tourism.
3. To assess the environmental concerns associated with eco-tourism activities in the erstwhile Nalgonda district.

Research Methodology:

This study is based on primary data on selected centers and secondary sources of data, including books, journals, websites, research articles, and other published materials.

Need For the Study:

This study is necessary to highlight environmental concerns associated with eco-tourism, evaluate the effectiveness of current conservation measures, and suggest strategies for sustainable eco-tourism development. The findings of the study will be useful for policymakers, tourism planners, environmentalists, and local stakeholders in framing eco-friendly tourism policies that promote economic growth while preserving the natural environment for future generations.

1.Eco- Tourism attractions in the Erstwhile Nalgonda district.

The Erstwhile Nalgonda district is endowed with a variety of natural and scenic resources that make it an important eco-tourism destination in Telangana. The district's diverse landscapes, including forests, hills, water bodies, and wildlife habitats, attract nature lovers and tourists seeking environmentally responsible travel experiences.

Nagarjuna Sagar: One of the prominent eco-tourism attractions in the district is **Nagarjuna Sagar**, known for its vast reservoir, surrounding forests, and rich biodiversity. The area supports eco-tourism activities such as nature sightseeing, boating, and wildlife observation while also serving as an important ecological zone.

Dindi: Dindi Reservoir and its surrounding forest area is another important eco-tourism site, offering scenic beauty and opportunities for nature-based tourism. The calm environment and natural surroundings make it suitable for eco-friendly tourism activities.

Udaya Samudram: Udaya Samudram is an important eco-tourism attraction in the erstwhile Nalgonda district, known for its scenic reservoir, surrounding natural landscape, and ecological significance. It supports activities such as nature sightseeing and bird watching while contributing to local biodiversity conservation.

Bhogir Fort: Bhogir Fort is a historic hill fort located on a massive monolithic rock in the erstwhile Nalgonda district. Surrounded by natural landscapes, it is an important eco-tourism attraction known for trekking, scenic views, and its unique geological formation.

Rachakonda Fort: Rachakonda Fort is situated amid forested hills and represents a blend of historical heritage and natural beauty. The fort and its surroundings offer eco-tourism potential while highlighting the need for conservation of the fragile ecosystem.

Undrukonda Fort: Undrukonda is a lesser-known historical site characterized by rocky terrain and natural surroundings. Its ecological setting makes it suitable for nature-based tourism and heritage exploration.

Phanigiri: Phanigiri is an ancient Buddhist site surrounded by hillocks and open landscapes. It holds archaeological and ecological importance, attracting visitors interested in history, culture, and eco-tourism.

Devarakonda Fort: Devarakonda is known for its forested areas and hilly terrain, contributing to the eco-tourism potential of the region. The area supports biodiversity and offers opportunities for sustainable nature tourism.

Nalgonda Hills: The Nalgonda Hills are characterized by rocky hill ranges and natural vegetation. These hills play an important ecological role and provide opportunities for trekking, sightseeing, and conservation-oriented eco-tourism.

The **Nagarjuna Sagar–Srisailem Tiger Reserve (Telangana region)** plays a significant role in wildlife conservation and eco-tourism promotion.

In addition, **lakes, hillocks, and rural landscapes** across the erstwhile Nalgonda district contribute to its eco-tourism potential by supporting birdlife, local ecosystems, and traditional livelihoods. These attractions highlight the importance of balancing tourism development with environmental conservation.

2. Eco-Tourism Initiatives and Best Practices by TGTDC:

Drawing on the TGTDS framework, several eco-tourism initiatives have been conceptualized and piloted in Telangana. These initiatives serve as practical examples of how policy and planning can translate into on-ground impact:

- **Adventure and Nature Walks:** Destinations like the Ananthagiri Hills are ideal for guided nature walks, bird-watching excursions, and trekking. These activities are designed to be low-impact and educational, offering Tourists insights into local biodiversity and traditional medicinal practices. Through partnerships with local experts and community organizations, these tours also create employment opportunities and foster environmental awareness.
- **Eco-Lodges and Sustainable Accommodation:** In response to the growing demand for eco-friendly travel, the TGTDS strategy includes the development of eco-lodges that blend modern amenities with sustainable practices. These lodges use renewable energy sources, implement rainwater harvesting, and maintain waste management systems that recycle and reuse materials. By reducing their ecological footprint, these accommodations become a model for sustainable hospitality in the region.
- **Cultural Eco-Tourism Circuits:** Integrating cultural heritage with eco-tourism, circuits are being developed that connect natural attractions with historical and religious centers. For instance, a circuit might link the scenic vistas of the Ananthagiri Hills with ancient temples and local craft villages. This not only enriches the visitor experience but also ensures that tourism revenues are reinvested in community development and heritage conservation.

- **Community-Based Eco-Tourism Projects:** Empowering local communities is central to the TGTDS strategy. Community-based projects involve training residents as eco-guides, setting up craft markets, and establishing community-run nature centers. These projects are designed to be self-sustaining, ensuring that economic benefits remain within the community while promoting conservation and cultural preservation.

3. Environmental Concerns at Eco- Tourism Centers:

In this table, we discussed the environmental issues in the ecotourism destinations and the implementation of eco-friendly products, etc., discussed below.

Environmental Concerns at Eco- Tourism Centers:

Sl. No	Environmental Concerns	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Total
		F	%	F	%	F	%	F	%	F	%	
1	Waste management & pollution	11	11.00%	16	16.00%	21	21.00%	23	23.00%	29	29.00%	100
2	Overcrowding management is good	18	18.00%	32	32.00%	23	23.00%	10	10.00%	17	17.00%	100
3	Deforestation due to tourism activities	14	14.00%	29	29.00%	27	27.00%	17	17.00%	13	13.00%	100
4	Lack of eco-friendly practices at tourist centers	27	27.00%	22	22.00%	22	22.00%	14	14.00%	15	15.00%	100

Source: Primary Data

The survey data highlights several environmental concerns related to tourism and how respondents perceive them. Waste management and pollution are widely recognized issues, with over half of the participants agreeing that these are significant problems. In contrast, the management of overcrowding receives largely negative feedback, as half of the respondents disagree that overcrowding is being handled well, indicating dissatisfaction in this area. When it comes to deforestation caused by tourism activities, opinions are more mixed—while a notable portion disagrees that deforestation is a major problem, a large group remains neutral, suggesting uncertainty or lack of strong opinion. Lastly, views on the presence of eco-friendly practices at tourist centers are divided; nearly half disagree that such practices are lacking, implying they believe eco-friendly efforts exist, but nearly a third feel these efforts are insufficient. Overall, the responses

reveal key areas for improvement, particularly in managing overcrowding and enhancing sustainable practices within tourism.

➤ **Descriptive Statistics of Environmental Concerns at Eco- Tourism Centers:**

Chi-square Test:

Chi-square (χ^2)	29.36
Degrees of Freedom	12
Critical Value (0.05)	21.03
p-value	< 0.05
Conclusion	Reject null hypothesis: Significant association between environmental concerns and responses

Source: Primary Data

- The **Chi-square statistic** (χ^2) is **29.36**, which measures how much the observed responses differ from what we would expect if there was no association between environmental concerns and responses.
- The **degrees of freedom (df)** for this test is **12**. This number depends on the number of categories in each variable in this case, 4 types of environmental concerns and 5 response options.
- The **critical value** at a significance level of 0.05 (meaning we accept a 5% chance of error) and 12 degrees of freedom is **21.03**. This is the threshold beyond which the observed difference is considered statistically significant.
- Since the calculated Chi-square value (29.36) is **greater than** the critical value (21.03), it means the difference between observed and expected responses is too large to be due to chance alone.
- The **p-value** is less than 0.05, confirming the result is statistically significant.

Conclusion: We reject the null hypothesis, which stated there is no relationship between the type of environmental concern and the distribution of responses. Instead, the data shows a **significant association** people's opinions vary depending on the specific environmental issue.

Findings of the Study:

Based on the analysis of eco-tourism attractions, TGTDC initiatives, and survey data on environmental concerns, the study reveals that the erstwhile Nalgonda district has significant eco-tourism potential due to its reservoirs, hills, forests, and heritage sites such as Nagarjuna Sagar, Dindi, Udaya Samudram, Bhogir, Rachakonda, Undrakonda, Phanigiri, Devarakonda, and Nalgonda Hills. The Nagarjuna Sagar–Srisailem Tiger Reserve further supports wildlife conservation while promoting eco-tourism. The Telangana State Tourism Development Corporation has implemented eco-friendly initiatives, including adventure and nature walks, eco-lodges, cultural circuits, and community-based projects, which enhance environmental awareness and provide employment opportunities to local communities. However, the survey highlights

several environmental challenges: waste management and pollution are widely recognized as major issues, overcrowding is poorly managed, deforestation due to tourism shows mixed perceptions, and nearly half of respondents feel that eco-friendly practices at tourist centers are inadequate. A Chi-square test ($\chi^2 = 29.36$, $df = 12$, $p < 0.05$) confirms a significant association between the type of environmental concern and respondents' perceptions, indicating that opinions vary depending on the specific issue. Overall, while eco-tourism offers economic and ecological benefits, there is a need to strengthen sustainable practices, improve management, and raise awareness to ensure long-term environmental conservation in the district.

Conclusion:

The study demonstrates that while the erstwhile Nalgonda district has considerable eco-tourism potential due to its natural landscapes, reservoirs, forests, and historical sites, there are serious environmental challenges that need to be addressed. The key conclusions are:

1. Eco-tourism can serve as a sustainable development tool, but its benefits are contingent on responsible planning and effective environmental management.
2. Existing TGTDC initiatives show positive impacts through sustainable accommodations, nature walks, cultural circuits, and community involvement, but there is room for improvement in implementing eco-friendly practices consistently across all sites.
3. Major environmental concerns, waste management, overcrowding, deforestation, and inadequate eco-friendly practices highlight the need for stricter regulations, improved infrastructure, and increased awareness among tourists and local stakeholders.
4. The significant association between environmental concerns and public perception underscores the importance of tailored strategies to address each type of issue effectively.

Recommendation: Sustainable tourism development in the erstwhile Nalgonda district requires **integrated planning**, combining conservation measures, community participation, and eco-friendly infrastructure, to balance economic growth with environmental preservation for future generations.

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