# A study on the Perception of Tour Operators on Sustainable Ecotourism with Special Reference to Wayanad District, Kerala State.

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***Abstract:*** **This study evaluates the economic, socio-cultural and environmental sustainability of ecotourism in Wayanad, focusing on the key factors influencing sustainable ecotourism development in the region. The primary objective of this study is to analyse the impact of sustainable ecotourism on economy, society and on environment of Wayanad on the perception of Tour operators. A total of 200 samples were randomly selected from the Tour operators those who are providing their services in the ecotourism destinations in Wayanad. The ecotourism destinations were chosen using judgment sampling based on their prominence in both domestic and international tourism markets. Primary data was collected from these selected Tour operators through a structured and standardized questionnaire encompassing tourism governance, economic, socio-cultural and environmental aspects of sustainability. Simple percentage analysis and Descriptive statistics were employed to analyse the data. The study results show that economic and environmental sustainability indicators proved that ecotourism development is ensuring sustainability of economy and environment, but socio-cultural sustainability got hampered. The study concluded that ecotourism development positively contributes to Wayanad's economic and environmental sustainability. However, it also highlights adverse impacts on the region's social and cultural environment, underscoring the need for balanced and inclusive tourism policies.**

***Keywords*** **– Sustainability, Economic, Environment, Social, Development.**

## INTRODUCTION

The tourism industry plays a significant role in generating foreign exchange, creating employment opportunities, and contributing to infrastructure development, thereby aiding poverty eradication. Wayanad, nestled in the Western Ghats of Kerala and often referred to as 'the green paradise,' exemplifies the essence of ecotourism. Renowned for its rich biodiversity, ancient tribal heritage, and scenic trails winding through hills and forests, the region offers a natural haven for sustainable travel. Visitors to Wayanad have the unique opportunity to immerse themselves in its abundant natural beauty while actively contributing to its preservation, exploring the diverse flora and fauna, engaging with the cultural heritage of indigenous tribes, or participating in conservation efforts, Wayanad's ecotourism initiatives provide a meaningful and responsible travel experience. However, the rapid development of ecotourism has also introduced various challenges, particularly concerning its social and environmental impacts on ecotourism destinations. The fast-paced growth of tourism activities in certain areas has placed a noticeable strain on local communities and resources.

Sustainable ecotourism aims to address these challenges by focusing on the balanced development of three key pillars: economic sustainability, socio-cultural preservation, and environmental conservation. The primary challenge for the ecotourism sector is to harmonize these dimensions to ensure continued growth without compromising the integrity of the destinations. Sustainable ecotourism is regarded as a holistic approach to achieving sustainable development by mitigating the unfavourable impacts of ecotourism. It encompasses tourism strategies that not only meet the needs of current tourists, local communities, and industry stakeholders but also safeguard opportunities for future generations. This approach emphasizes an optimal balance between economic, social and environmental aspects while addressing the expectations of visitors, the tourism industry, local communities, and the natural environment. Sustainable ecotourism holds the potential to alleviate poverty and address gender inequalities by enhancing maximum its benefits through appropriate

sustainable practices. This includes integrating the interests of all stakeholders, particularly local residents and indigenous communities. Nonetheless, the development of ecotourism presents several issues, such as maintaining a balance between economic, socio-cultural, and environmental factors, which remain critical for its sustainable evolution.

## STATEMENT OF THE PROBLEM

Ecotourism development has introduced numerous challenges that threaten for the economic, socio-cultural and environmental sustainability of tourist places. While tourism programmes and plans aim to drive economic growth, their implementation often disproportionately benefits tourism business operators, hotel and restaurant promoters, and large corporations, leaving local communities marginalized. Recognizing these disparities, both Central and State Governments have adopted sustainability as a guiding principle for ecotourism development, with sustainable ecotourism being a key objective.

However, despite efforts to achieve sustainable economic benefits for local communities, ecotourism has been found to generate unintended negative impacts, particularly on the socio-cultural environment. This research paper examines the adverse effects of ecotourism on the socio-cultural environment of the study area and explores strategies to mitigate these challenges to promote truly sustainable eco-friendly practices.

## OBJECTIVES OF THE STUDY

1. To study the impact of sustainable ecotourism on economy, society and environment in Wayanad.
2. To offer suggestions for promotion and development of sustainable ecotourism for its future upliftment.

## HYPOTHESIS

1. There is strong evidence that the Tourism governance is effectively implemented in Wayanad
2. There is favourable contribution to sustainable economy and sustainable environment by the Ecotourism development in Wayanad.
3. Ecotourism development has caused unfavourable impact on socio-cultural environment in the study area.

## REVIEW OF LITERATURE

Gumede and Nzama (2021) focus on enhancing community participation in ecotourism, exploring strategies that can empower local populations to engage in and benefit from tourism development. The research highlights the importance of community involvement in the planning and management of ecotourism sites to ensure that the benefits are distributed equitably, and that environmental preservation is prioritized. The authors suggest that an effective marketing and promotion strategy is essential for raising awareness about ecotourism opportunities while ensuring that local communities are well-integrated into the tourism process. This approach not only strengthens the sustainability of ecotourism but also contributes to the socioeconomic development of local communities by creating job opportunities and promoting cultural heritage.

Kumavat (2021) explores the concept and promotion of ecotourism in Kerala, highlighting its significance in driving sustainable development while preserving local culture and the environment. Recognizing ecotourism as a relatively new field, the study identifies a gap in the effectiveness of existing marketing strategies implemented by the Kerala Tourism Department. Using a descriptive research design and secondary data sources, the study evaluates current promotional approaches and their implications for ecotourism growth. The findings underscore the need for innovative and effective marketing strategies to promote Kerala's ecotourism destinations, emphasizing their potential to benefit local communities and the tourism industry. The study advocates for refining governmental initiatives to foster sustainable tourism development.

Salam and Thattil (2023) delve into the development and promotion of forest ecotourism in Kerala, a state celebrated for its rich biodiversity and lush ecosystems. The study emphasizes the importance of customizing marketing strategies and product offerings to align with the preferences of eco-conscious travellers. By analysing Kerala's approach to forest ecotourism, the research highlights the state’s efforts to balance ecological preservation with tourism development. Key findings suggest that targeted marketing, community involvement, and sustainable practices are crucial for enhancing the appeal of forest ecotourism products. The study underscores the need for innovation in tourism offerings to attract niche markets while ensuring conservation and cultural integrity.

Singh and Saxena (2023) investigate the role of homestays in enhancing tourism experiences across Madhya Pradesh, India, with a focus on diverse tourism segments such as ecotourism, cultural tourism, and festival-based tourism. The study evaluates the opportunities presented by homestays as an alternative to conventional accommodation, emphasizing their potential to deliver authentic cultural experiences and support local economies. However, the research also identifies key limitations, including inadequate infrastructure, lack of marketing initiatives, and challenges in maintaining quality standards. The findings suggest that targeted strategies integrating marketing, stakeholder collaboration, and training programs are essential to realize the full potential of homestays as a sustainable tourism option in the region.

## RESEARCH METHODOLOGY

The study is descriptive in nature. The study focuses on the three aspects of sustainability of ecotourism ie. economic, environmental and socio-cultural sustainability. This section deals with Research design, Sampling techniques, Data collection methods and Data analysis tools. Tour operators operating their services in the ecotourism destinations in Wayanad are the target population for the study. A sample size for the study is considered as 200 Tour operators selected from different popular destinations randomly to ensure adequate representation. The sample size has been determined to provide sufficient data for statistical analysis considering time and source. Ten Ecotourist destinations were selected throughout Wayanad based on judgment sampling, based on their popularity in tourism markets, such as Banasur Sagar Dam, Chembra Peak, Kuruva Island, Edakkal Caves, Pookot Lake, Tholpetty Wildlife Sanctuary, Muthanga Wildlife Sanctuary, Soochipara Waterfalls, Lakkidi Viewpoint and Kanthanpara Waterfalls.

A structured questionnaire was prepared containing 30 statements representing 30 sustainable factors on tourism governance, economy, society and culture, and environment. A non-comparative scaling technique specifically 5-point Likert scale has been used for designing the questionnaire. Simple percentage analysis is used to summarize and standardize the demographic characteristics of the respondents for the purpose of comparison and descriptive statistics is used for assessing the perception of Tour operators on tourism governance, economic, socio-cultural and environmental sustainability.

## DATA ANALYSIS, INTERPRETATION, FINDINGS & SUGGESTIONS

The following statistical tools were employed to organize, modify, tabulate, and analyse the data in a master table:

- Simple Percentage Analysis
- Descriptive Statistics

Simple Percentage Analysis:

Simple Percentage Analysis is performed to summarize and standardize the demographic characteristics of the respondents for the purpose of comparison of categories falling under each variable.

Table 1: Demographic profile of respondents

| Sl.No. | Variables | Category | No. of respondents | Percentage |
|---|---|---|---|---|
| 1 | Gender | Male | 130 | 65.0 |
| | | Female | 70 | 35.0 |
| | | Total | 200 | 100.0 |
| 2 | Age | 18-25 years | 17 | 8.5 |
| | | 25-40 years | 97 | 48.5 |
| | | 40-60 years | 42 | 21.0 |
| | | Above 60 years | 44 | 22.0 |
| | | Total | 200 | 100.0 |
| 3 | Educational Qualification | Upto SSLC | 17 | 8.5 |
| | | Undergraduate | 70 | 35.0 |
| | | Graduate | 68 | 34.0 |
| | | Postgraduate | 45 | 22.5 |

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|---|---|---|---|---|
| | | Total | 200 | 100.0 |
| 4 | Monthly Income | Up to 100000 | 68 | 34.0 |
| | | 100000-500000 | 98 | 49.0 |
| | | Above 500000 | 34 | 17.0 |
| | | Total | 200 | 100.0 |
| 5 | Status of Respondents | Individual | 50 | 25.0 |
| | | Proprietorship firm | 80 | 40.0 |
| | | Partnership firm | 32 | 16.0 |
| | | Private company | 20 | 10.0 |
| | | Government Dept | 18 | 9.0 |
| | | Total | 200 | 100.0 |
| 6 | Nature of Services | Planning & Coordination | 26 | 13.0 |
| | | Food & Accommodation | 40 | 20.0 |
| | | Transportation | 96 | 48.0 |
| | | Travel guidance | 38 | 19.0 |
| | | Total | 200 | 100.0 |

(Source: Computed data)

Interpretation: This study has used demographic analysis to assess the pattern of data. The demographic variables used for data analysis are gender, age, education, income, status of Tour operators and nature of services. The total number of Tour operators responded in the survey was 200 and majority are male 65%. The most of Tour operators who participated in the survey represents 48.5% from 25-40 years age group. As far as educational qualification is concerned, the majority of Tour operators in the sample consisted of 35% undergraduates. The sample is also represented by Tour operators from different income groups. The income group data shows that most of the Tour operators with income between Rs.1,00,000 to 5,00,000 represent 49%. The status of Tour operators who participated in the survey were predominantly proprietorship firms consisting of 40% of total Tour operators participated from Wayanad. As far as the nature of services rendered by Tour operators is concerned, majority of them ie. 48% are rendering Transportation services.

Descriptive Statistics:

Descriptive statistics such as mean and standard deviation have been considered for examining the perception of Tour operators about the sustainability of Wayanad Ecotourism. The study examined how Ecotourism development is supporting economic, environmental and socio-cultural sustainability in Wayanad.

Table 2: Descriptive Statistics

| Sl.No. | Pillers of Sustainability | Variables | Mean | SD |
|---|---|---|---|---|
| 1 | Tourism Governance | Ecotourism policy | 3.67 | 1.08 |
| | | Safety & Security | 3.70 | 1.05 |
| | | Legal System | 3.50 | 1.01 |
| | | Positive Behaviour of officials | 3.82 | 0.86 |
| | | Managed tourist destinations | 3.59 | 0.97 |
| | | Tourists follow sustainable practices | 3.45 | 0.98 |
| 2 | Economic Sustainability | High inflation cost | 3.94 | 1.09 |
| | | Trained and educated guides | 3.10 | 1.10 |
| | | Poverty reduction | 3.84 | 0.99 |
| | | Employment generation | 4.12 | 0.85 |
| | | Preferred locally made products | 3.65 | 1.10 |
| 3 | Environmental Sustainability | Pressure on water resources | 3.60 | 1.18 |
| | | High demand on land | 3.68 | 1.06 |
| | | Inadequate transportation | 3.65 | 1.29 |
| | | Pressure on natural vegetation and wildlife | 3.36 | 1.12 |
| | | Water management | 3.29 | 0.98 |

| | | | | |
|---|---|---|---|---|
| | | Land management | 3.13 | 1.01 |
| | | Transportation management | 3.24 | 1.01 |
| | | Management of natural vegetation and wildlife | 3.36 | 1.12 |
| | | Waste management | 3.17 | 1.21 |
| | | Energy conservation | 3.10 | 1.05 |
| | | Community management of environment | 3.49 | 1.01 |
| 4 | Socio-cultural Sustainability | Promote Socio-cultural heritages | 3.64 | 1.02 |
| | | Commercialization of culture | 3.17 | 0.85 |
| | | Revive festivals and Folklores | 3.10 | 0.95 |
| | | Cultural clashes | 3.28 | 1.14 |
| | | Anti-social activities | 3.49 | 1.18 |
| | | Loss of habitat | 3.79 | 1.06 |
| | | Bad habit on children | 3.83 | 1.29 |
| | | Local residents behavior | 3.76 | 0.90 |

(Source: computed data)

Interpretation: The above table 2 indicates the perceived value of respondents on tourism governance, economic, environmental and socio-cultural sustainability of ecotourism in Wayanad.

1. Tourism Governance: Respondents have given a mean score of 3.67 for the Tourism Policy, indicating that the District Tourism Promotion Council (DTPC) of Wayanad's plans and programs positively support the sustainability of ecotourism destinations. Tour operators rated Safety and Security with an average score of 3.70, emphasizing its critical role for tourists and confirming that Wayanad's tourist destinations offer a secure environment. A mean score of 3.50 for the Legal System highlights that DTPC, Wayanad, ensures sufficient safety and legal measures for tourists across all destinations The high mean score of 3.82 for the Positive Behaviour of Officials demonstrates that the tourism department and its officials maintain a friendly and welcoming approach towards visitors. A mean score of 3.45 for the indicator, Tourists Follow Sustainable Tourism Practices, shows that tourists accept and adhere to sustainable practices during their visits. An average score of 3.59 for Managed Tourist Destinations reflects effective and efficient planning and management of these sites. Overall, the scores for tourism governance indicators confirm that Tourism governance plays a vital role in ensuring the sustainability of Wayanad's ecotourism. Therefore, the findings on sustainability indicators support the hypothesis that tourism governance directly promotes the sustainability of Wayanad Ecotourism.

Findings and suggestions: From the above discussion, it is evident that Tourism governance positively contributes to the sustainability of Wayanad Ecotourism. Government must strengthen existing policies to address emerging challenges and further improve ecotourism sustainability. Government must further promote sustainability practices more consistently by providing safety and security measures, awareness campaigns, advanced planning tools and eco-friendly technologies. Regular monitoring and feedback systems may also be implemented at the tourist destinations.

2. Economic Sustainability: Table-2 highlights the assessment of variables are critical for analysing the economic sustainability of Wayanad's tourism sector. The high mean score of Poverty Reduction (3.84) and Employment Generation (4.12) establish that tourism-driven employment opportunities are significantly reducing poverty and enhancing the standard of living for local residents. The high mean score for High Inflation Cost (3.94), as rated by tour operators, indicates that Wayanad experiences a notable rate of inflation, leading to elevated prices for goods and services. A majority of tour operators expressed a preference for Locally Made Products (3.65) when organizing tour packages for Wayanad. The average score for Trained Guides (3.10) reflects that guides in Wayanad are well-trained, adequately educated, and deliver quality services to tourists.

The above analysis strongly validates and support with the empirical hypothesis that there is favourable contribution to sustainable economy by the Ecotourism development in Wayanad.

Findings and suggestions: The analysis confirms that economic sustainability indicators demonstrate how ecotourism development is fostering economic sustainability in Wayanad. It is evident that ecotourism development plays a direct and significant role in sustaining the local economy. However, the high inflation rate and the escalating prices of goods, services, land, housing, and other commercial properties pose challenges for the local community. These factors may negatively impact the affordability and overall well-being of residents.

The government must develop strategies to further expand employment opportunities through tourism to amplify its impact on poverty reduction, address inflation by promoting cost-efficient practices in the tourism supply chain, encourage and support local artisans to produce high-quality products for inclusion in tour packages, fostering local economic growth and continue investing in training programs for guides to ensure consistent and enhanced service quality.

3. Environmental Sustainability: The above Table-2 reveals the assessment of variables are important for analysing the sustainability of resource usage in Wayanad's tourism sector. Tour operators agree that tourism exerts significant Pressure on Water Resources (3.60), leading to water shortages, contamination, and groundwater depletion. The rapid growth of ecotourism has also driven a High Land demand (3.68) in the tourist area. The enhanced requirement for Transportation (3.65), with inadequate government transportation services forced the tourists to depend on private operators. Furthermore, a mean score of 3.36 for Pressure on Natural Vegetation and Wildlife underscores concerns about the negative impact of ecotourism development on biodiversity and ecological integrity, particularly in forests, coastal, and protected areas.

The respondents acknowledged that mechanisms implemented by the Wayanad Authority are helping to address these challenges. For instance, Water Management received a mean score of 3.29, indicating that there is a functional system to meet water resource demands. Land Management (3.13) and Transportation Management (3.24) reflect ongoing efforts to mitigate the demand for land and resolve transportation shortages. The Management of Vegetation and Wildlife (3.36) score highlights measures aimed at conserving wildlife and reducing vegetation degradation.

The table further indicates that respondents believe that there is an efficient Waste Disposal and Recycling System (3.17) to manage and dispose of waste produced by tourists. In terms of Energy Conservation (3.10), the government is supporting sustainable usage of both conventional and non-conventional energy. Additionally, the score of 3.49 for Community Management of Environment emphasizes the active participation of the local community in ensuring sustainable environmental management in ecotourism destinations.

The descriptive statistics on environmental sustainability indicators demonstrate that ecotourism development is effectively supporting the environmental sustainability of tourist destinations in Wayanad. These findings strongly support the empirical hypothesis that ecotourism development contributes positively to a sustainable environment in Wayanad.

Findings and suggestions: The findings of the study are Tourism activities create significant pressure on land, transportation, water resources, and wildlife conservation. Waste disposal systems are efficient and energy conservation initiatives are in order and local communities are actively contributing to environmental sustainability.

The government must take initiative to strengthen water management systems to prevent water shortages, depletion and ensuring long term resources availability, improve transportation infrastructure and services to reduce reliance on private operators and enhance tourist satisfaction, promote sustainable land use practices to balance tourism growth and land conservation, expand community engagement programmes to further involve local residents in sustainable tourism practices.

4. Socio-cultural Sustainability: The above table 2 discloses that respondents largely agree that Ecotourism Development in Wayanad supports the Promotion, Protection, and Conservation of Socio-cultural Heritages (3.64). Similarly, tourism is seen as fostering the Revival of Festivals and Folklores (3.10) within the local community. However, tourism has also contributed to the Commercialization of Culture (3.17), where local traditions are increasingly commodified. Furthermore, a score of 3.28 for

Cultural Clashes indicates that tensions arise between tourists and the local community.

Respondents strongly feel that the rapid growth of ecotourism in Wayanad has contributed to increased Anti-social Activities (3.49) such as crime, alcoholism, and other social issues. Additionally, they report significant Loss of Habitat (3.79) for humans, animals, and natural vegetation due to tourism expansion. A high mean score of 3.83 for Bad Habits on Children reflects concerns over the adverse influence of tourism on children's attitudes and behaviour. Contrarily, the Behaviour of Local Residents (3.76) scored positively, showing that the local community maintains good behaviour and a welcoming attitude toward tourists.

The descriptive statistics on social and cultural sustainability indicators reveal that ecotourism development is not adequately supporting the socio-cultural sustainability of tourist spots in Wayanad District. Hence the hypothesis that Ecotourism development has caused unfavourable impact on society and its cultural environment is accepted.

Findings and Suggestions: The findings of the study are Tourism promotes socio-cultural heritage and revives traditional festivals and folklores but also leads to cultural commercialization and occasional clashes between tourists and local residents. It is also revealed that ecotourism growth is associated with rising anti-social activities and notable loss of habitat for humans, animals and vegetation.

Government must strengthen measures to curb anti-social activities including strict law enforcement in the tourist destinations. It is also suggested to educate children and families to manage the negative impacts of ecotourism. Conservation focused policies to mitigate habitat loss and promote sustainable tourism practices also may be implemented. Mutual understanding may be developed between tourists and local residents by promoting cultural exchange programmes.

## CONCLUSION

The primary objective of this study was to evaluate the impact of sustainable ecotourism on economy, society and on environment of Wayanad on the perception of Tour operators. The impact of ecotourism development on the local community has been examined with different dimensions such as economic, environmental and socio-cultural sustainability. The findings reveal that while ecotourism has significantly contributed to economic growth and environmental preservation, it has also led to certain unfavourable effects on the social and cultural fabric of local residents of Wayanad. Furthermore, the analysis of tourism governance indicators highlights their strong alignment with sustainable tourism development in the region. These results provide valuable insights for ecotourism stakeholders, offering a foundation to enhance economic and environmental sustainability while addressing the socio-cultural challenges created by ecotourism activities. The study emphasizes the need for multifaceted strategies to prevent unfavourable threats to the society due to fast growth of ecotourism. By implementing targeted strategies, stakeholders can ensure a more balanced and holistic approach to Sustainable Ecotourism development in Wayanad.

While this research provides valuable insights, it has certain limitations that may affect the reliability and validity of its findings. The tourism sector encompasses a wide range of stakeholders, each with distinct interests, objectives, and perspectives. This study did not incorporate the viewpoints of all these stakeholders such as local communities, other tourism business operators, government agencies, and non-governmental organizations. Future research could address these limitations by adopting more inclusive and comprehensive methodologies, such as structural equation modelling, to analyse the economic, environmental, and socio-cultural aspects of sustainability from the perspectives of different ecotourism stakeholders. Such an approach would support the development of balanced and sustainable tourism policies aimed at promoting and advancing ecotourism.

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