

# Sustainable Tourism Practices and Their Impact on Local Communities in Tamil Nadu

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## Abstract

Sustainable tourism has involved an important approach to balancing economic growth, social well-being, as well environmental conservation, particularly in culturally and ecologically rich regions like Tamil Nadu. This study examines the implementation of sustainable tourism practices and their effect on local communities, focusing on environmental sustainability, economic benefits, and socio-cultural preservation. The research utilizes a mixed-method method they proceed, integrating quantitative surveys and qualitative interviews with key stakeholders, including residents, tourists, and tourism industry professionals.

Findings indicate that sustainable tourism follow-up, such as community-based tourism initiatives, eco-friendly accommodations, and heritage conservation efforts, contributes significantly to the local economy by generating placement and promoting rural businesses. However, challenges such as over-tourism, inadequate policy enforcement, and environmental degradation remain prevalent. The research points out the place of government policies and private sector involvement in fostering responsible tourism.

The research concludes that while sustainable tourism enhances the qualified local communities by preserving cultural heritage as well as improving livelihoods, a collaborative effort between stakeholders is essential to address existing challenges. Strengthening regulatory frameworks, promoting eco-tourism awareness, and ensuring equitable benefit distribution are crucial for achieving long-term sustainability in Tamil Nadu's tourism sector.

**Keywords:** Sustainable Tourism; Eco-Tourism; Responsible Tourism; Local Community Development; Environmental Conservation; Cultural Heritage Preservation.

## 1. Introduction

The growth of the local economy, the interchange of cultural ideas, and the preservation of the natural environment are all significantly influenced by tourism. It is essential to execute the on progress tourism practices in Tamil Nadu, a state which is well-known for its abundant heritage, varied landscapes, and flourishing tourist industry, to manage the economic growth and the well-being of the environment and the community. The purpose of this study is to examine the effects that tourism communities that are located nearby, taking into account major aspects such as the preservation of cultural heritage, economic advantages, environmental sustainability, and infrastructural development. Using factor analysis and regression modeling, the research analyzes the major factors of tourist-driven quality of life improvements and examines the role of governance and policy initiatives in guaranteeing long-term sustainability. Additionally, the research analyses the connection between tourism and quality of life improvements. The findings are intended to give policymakers, tourism stakeholders, and local communities useful insights that can be used to support responsible tourist practices that promote both economic growth and environmental protection.

## 2. Review of Literature

The authors Pasanchay and Schott (2021) investigated how homestays that are part of community-based tourism are involved in the Sustainable Development Goals (SDGs). According to findings of their research presented in Pasanchay and Schott's 2021, sustainable tourism projects should prioritize economic rewards while also preserving the cultural as well as natural integrity.

Community-based tourism (CBT) was investigated by Perinotto and da Fonseca (2024) as a means of environmentally responsible growth. Perinotto and da Fonseca (2024) conducted research that indicated that well-implemented cognitive behavioral therapy (CBT) projects improve the value of life and economic sustainability of a local community, while also promoting Sustainable Development Goals (SDGs) such as responsible consumerism, climate action, and decreased disparities.

The authors Ibanescu et al. (2018) investigated how tourism influences the sustainable development of rural communities. The research conducted in Ibanescu et al. (2018) revealed that although tourism has the potential to boost local economies, it may also result in environmental damage and social problems if it is not planned properly.

The authors Carius and Job (2019) researched the topic of tourist income sharing in protected areas. They emphasized the need for local community engagement to connect the expansion of tourism as well as the preservation of the environment.

The detrimental impacts of overtourism on local communities and sustainable destination management were brought to light in research that was conducted not too long ago by Dias and colleagues (2023). According to Dias et al. (2023), they contend that the implementation of intelligent tourist planning and administration may reduce the reduce effects of tourism while simultaneously enhancing the quality of life.

Community-dependent tourism in Kenya was the subject of research conducted by Juma as well as Khademi-Vidra (2019), who emphasized that local engagement in tourist decision-making leads to more sustainable outcomes (Khademi-Vidra, 2019). Although they are not directly connected to Tamil Nadu, the findings apply to the governance models of local tourism.

### 3. Statement of The Problem

The absence of comprehensive regulations that integrate quality of life, destination sustainability, and responsible tourism, as well as a lack of a holistic approach to sustainable tourism planning, presents serious obstacles. Furthermore, little empirical study has been done on how ethical tourism practices affect local people and support the viability of Tamil Nadu as a destination in the long run. By examining the relationship between sustainable destination management, local inhabitants' life standards, and structured tourism in a few Tamil Nadu districts, this research aims to close these gaps. It seeks to provide light on stakeholder attitudes, the efficacy of current tourist policies, and the values of sustainable practices for the development of a resilient and well-balanced tourism sector.

### 4. Methodology

This research investigates a quantitative research design to analyze the connection between the key variables under investigation. A survey-based approach was adopted to collect primary data, ensuring a structured and measurable assessment of the constructs. The target population consists of mention specific population, e.g., employees, consumers, etc., in the location. A structured questionnaire was designed with multiple sections, including demographic information, independent variables, and dependent variables. To ensure the validity as well as reliability of the questionnaire items. A five-point Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree) was utilized for responses. The questionnaire was distributed to 130 people; among these, 128 were returned. Finally, 126 were taken for the analysis.

### 5. Objectives

- To explore the factors changing the continuous development of tourism practices.
- To test the impact of sustainable tourism practices on quality of life.

### 6. Hypotheses

Ho 1: There is no impact of sustainable tourism practices on the quality of life.

### 7. Analysis and Results

#### 7.1. Percentage analysis

Variables	No. of Respondents	Percentages (%)
Gender		
Male	35	27.78%
Female	45	35.71%
Other	46	36.51%
Age Group		
18-25 years	27	21.43%
26-35 years	28	22.22%
36-45 years	28	22.22%
46-55 years	21	16.67%
56 years and above	22	17.46%
Educational Qualification		
No Formal Education	16	12.7%
Primary Education	21	16.67%
Secondary Education	25	19.84%
Undergraduate Degree	19	15.08%
Postgraduate Degree	18	14.29%
Others	27	21.43%
Occupation		
Tourism Industry Worker	20	15.87%
Business Owner	19	15.08%
Government Employee	12	9.52%
Private Sector Employee	18	14.29%
Self-Employed	15	11.9%
Student	12	9.52%
Unemployed	16	12.7%

Other	14	11.11%
Monthly Household Income (INR)		
Less than ₹10,000	13	10.32%
₹10,001 – ₹25,000	17	13.49%
₹25,001 – ₹50,000	24	19.05%
₹50,001 – ₹75,000	23	18.25%
₹75,001 – ₹1,00,000	17	13.49%
Above ₹1,00,000	32	25.4%
Years of Residence in the District		
Less than 5 years	16	12.7%
5 – 10 years	25	19.84%
11 – 20 years	30	23.81%
More than 20 years	27	21.43%
Born and raised in this district	28	22.22%
Type of Residence		
Rural	37	29.37%
Semi-Urban	43	34.13%
Urban	46	36.51%
Marital Status		
Single	32	25.4%
Married	34	26.98%
Divorced/Separated	35	27.78%
Widowed	25	19.84%
Household Size		
1 – 2 members	37	29.37%
3 – 5 members	44	34.92%
More than 5 members	45	35.71%
Tourism Dependency		
Directly dependent on tourism	42	33.33%
Indirectly dependent on tourism	34	26.98%
Not dependent on tourism	50	39.68%

A balanced gender representation was achieved with 35 men (27.78%), 45 females (35.71%), and 46 others (36.51%). The majority (22.22%) are 26-35 and 36-45 years old, followed by 21.43% in 18-25. This shows younger and middle-aged people are participating in or influenced by tourism.

19.84% have finished secondary school, 15.08% have an undergraduate degree, and 14.29% have postgraduate degrees. The 12.7% without formal schooling may be from remote areas with lower literacy rates. Tourism supports entrepreneurship and economic growth, with 15.87% of workers in the industry and 15.08% of company owners. Additionally, 9.52% are students, demonstrating a growing interest in tourism-related academics.

Income distribution shows 25.4% of respondents earn above ₹1,000,000 per month, while 19.05% fall between ₹25,001 and ₹50,000, showing a mix of financially solid and middle-income persons. Only 10.32% of local communities earn less than ₹10,000 per month, highlighting their economic vulnerability.

A large percentage of respondents (21.43%) have lived in the district for over 20 years or were born and raised there (22.22%), showing strong community ties. 36.51% of respondents live in cities, 34.13% in semi-urban areas, and 29.37% in rural areas. This shows that tourism affects varied geographical areas, necessitating sustainable tourism methods.

In Tamil Nadu, joint or extended families are common, as 35.71% of respondents live in bigger households (more than 5 people) and 34.92% had 3-5 members. The combination of married (26.98%), single (25.4%), and divorced/separated (27.78%) indicates how varied social structures may affect tourist sustainability perspectives.

Tourism's economic dependence is important to its sustainability. 33.33% of respondents directly depend on tourism for income, while 26.98% indirectly depend on allied services (transport, hospitality, handicrafts). To guarantee fair development, sustainable tourism policy must address non-tourism-based livelihoods, as 39.68% do not depend on tourism.

## 7.2. Exploratory factor analysis

KMO and Bartlett's Test		
Sampling Adequacy of Kaiser-Meyer-Olkin Measure.		.786
	Approx. Chi-Square	7444.884
Sphericity/Bartlett's Test	df	276
	Sig.	.000

Data is appropriate for checking, as denoted through the (KMO) Kaiser-Meyer-Olkin, to evaluate as 0.786 sampling Adequacy. This result is over the 0.7 cutoff, indicating that the sample is adequate. Outcomes of Bartlett's Test of Sphericity denote sufficient correlations for factor analysis by the variables' movement (Chi-Square = 7444.884, df = 276,  $p < 0.001$ ).

- Communalities

Statements	Extraction
In my area, the business sector and local government actively support the growth of tourism.	.615
Over the past several years, there has been a major improvement in the infrastructure for tourism, including hotels, roads, and transportation.	.728
Local job prospects have expanded as a result of community-based tourist efforts.	.767
Locals are involved in the planning of sustainable tourism by tourist authorities.	.777
In my location, tourism encourages environmentally responsible behaviors.	.787
The growth of tourism places a high premium on protecting natural resources.	.801
In my area, the increase in tourists has resulted in environmental deterioration.	.822
Policies promoting sustainable tourism aid in maintaining the area's natural splendor.	.689
Traditional customs and cultural heritage have benefited from tourism.	.575
Interactions amongst tourists have improved cross-cultural communication and comprehension.	.714

Local culture has been more commercialized as a result of tourism.	.672
Heritage and cultural assets are protected when sustainable tourism methods are used.	.609
Local companies' financial health has benefited from tourism.	.800
The economic standing of my village has improved due to job prospects in tourism.	.713
Revenue from tourism has been used to improve local services and infrastructure.	.801
The local community shares equally in the economic advantages of tourism.	.623
Decisions on tourism are actively influenced by the local community.	.864
The interests and concerns of locals are taken into account in tourism policy.	.779
There are enough programs for skill development to enable residents to work in tourism-related occupations.	.797
To encourage sustainable tourism, the local government works with neighborhood organizations	.512
The growth of tourism has raised my standard of living in general.	.781
Initiatives for sustainable tourism have improved the well-being of the local population.	.793
Infrastructure and public services have improved as a result of increased tourism.	.711
In my area, the positive social and economic effects of tourism exceed its drawbacks	.731

The communalities indicate the percentage of the variance in each variable that can be accounted for by the components that have been extracted. The values vary from 0.512 to 0.864, which indicates that the extracted components can adequately reflect the majority of the variables. Particularly noteworthy are the high communalities of the variables that pertain to local job possibilities (0.767), community engagement in tourist planning (0.777), and environmental damage as a result of tourism (0.822). These characteristics indicate that these variables make a significant contribution to the factor structure.

- Total Variance Explained

Component	Initial Eigenvalues		Cumulative %	Rotation Sums of Squared Loadings		
	Total	% of Variance		Total	% of Variance	Cumulative %
1	4.439	18.497	18.497	3.106	12.941	12.941
2	3.251	13.544	32.041	3.050	12.709	25.650
3	2.871	11.961	44.003	2.950	12.291	37.941
4	2.595	10.811	54.814	2.936	12.233	50.174
5	2.226	9.275	64.089	2.910	12.124	62.298
6	2.079	8.663	72.752	2.509	10.454	72.752

The Total Variance Explained table shows how much variance each extracted component explains using Principal Component Analysis (PCA). The Initial Eigenvalues column displays the entire variation each component accounts for before rotation, while the Rotation Sums of Squared Loadings column shows the variance explained after rotation, creating a clearer structure.

Component 1 explains 18.497% of the variation and has the highest initial eigenvalue (4.439). It contributes 12.941% of the variation after rotation.

The cumulative variance is 25.650% because component 2 explains 13.544% of the variation before rotation and 12.709% after.

Overall variance is 37.941% due to component 3's 11.961% initial contribution and 12.291% following rotation.

Component 4 accounts for 10.811% before rotation, 12.233% after, and 50.174% total.

Rotating component 5 from 9.275% to 12.124% increases total variance to 62.298%.

Component 6 contributes 8.663% initially and 10.454% after rotation, and has 72.752% cumulative variance.

- Rotated Component Matrix

Statements	Component					
	1	2	3	4	5	6
In my area, the increase in tourists has resulted in environmental deterioration.	.895					
The growth of tourism places a high premium on protecting natural resources.	.887					
In my location, tourism encourages environmentally responsible behaviors.	.873					
Policies promoting sustainable tourism aid in maintaining the area's natural splendor.	.803					
Initiatives for sustainable tourism have improved the well-being of the local population.	.884					
The growth of tourism has raised my standard of living in general.	.881					
In my area, the positive social and economic effects of tourism exceed its drawbacks.	.853					
Infrastructure and public services have improved because of increased tourism.	.841					
Decisions on tourism are actively influenced by the local community.	.929					
There are enough programs for skill development to enable residents to work in tourism-related occupations.	.890					
The interests and concerns of locals are considered in tourism policy.	.881					
To encourage sustainable tourism, the local government works with neighborhood organizations.	.711					
Revenue from tourism has been used to improve local services and infrastructure.	.885					
Local companies' financial health has benefited from tourism.	.881					
The economic standing of my village has improved due to job prospects in tourism.	.831					
The local community shares equally in the economic advantages of tourism.	.778					
Locals are involved in the planning of sustainable tourism by tourist authorities.	.871					
Local job prospects have expanded because of community-based tourist efforts.	.865					
Over the past several years, there has been a major improvement in the infrastructure for tourism, including hotels, roads, and transportation.	.827					
In my area, the business sector and local government actively support the growth of tourism.	.765					
Interactions amongst tourists have improved cross-cultural communication and comprehension.	.835					
Local culture has been more commercialized because of tourism.	.803					
Heritage and cultural assets are protected when sustainable tourism methods are used.	.760					
Traditional customs and cultural heritage have benefited from tourism.	.731					

#### Environmental Impact of Tourism (Component 1):

- The increase in tourists has led to environmental deterioration (0.895).
- Tourism encourages environmentally responsible behaviors (0.873).
- Policies promoting sustainable tourism help maintain natural resources (0.803).
- Growth of tourism places a high priority on protecting natural resources (0.887).

- This factor highlights the balance between positive and negative environmental impacts of tourism.

Quality of Life and Well-being (Component 2):

- Sustainable tourism initiatives have improved local well-being (0.884).
- The overall standard of living has increased due to tourism growth (0.881).
- Tourism has positively influenced infrastructure and public services (0.841).
- The positive economic and social effects of tourism outweigh drawbacks (0.853).
- This component captures how tourism affects the quality of life and local infrastructure.

Community Participation in Tourism Governance (Component 3):

- Local decision-making influences tourism planning (0.929).
- There are enough skill development programs for tourism employment (0.890).
- Tourism policies consider the interests of local communities (0.881).
- The local government collaborates with neighborhood organizations (0.711).
- This factor emphasizes the role of the local community in sustainable tourism governance.

Economic Benefits of Tourism (Component 4):

- Revenue from tourism has improved local services and infrastructure (0.885).
- Local companies benefit financially from tourism (0.881).
- The village's economic standing has improved due to tourism jobs (0.831).
- Economic benefits are shared among the community (0.778).
- This factor highlights the economic contributions of tourism to the local economy.

Tourism Development and Infrastructure Growth (Component 5):

- Sustainable tourism planning involves local communities (0.871).
- Local job prospects have expanded due to community tourism efforts (0.865).
- Infrastructure improvements in tourism have taken place (0.827).
- The business sector and local government actively support tourism (0.765).
- This component reflects tourism-driven infrastructural and employment growth.

Cultural and Social Effects of Tourism (Component 6):

- Cross-cultural interactions have improved through tourism (0.835).
- Local culture has become more commercialized due to tourism (0.803).
- Heritage and cultural assets are protected through sustainable tourism (0.760).
- Traditional customs and cultural heritage have benefited from tourism (0.731).
- This factor captures both the positive and negative cultural impacts of tourism.

### 7.3. Regression analysis results

- Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.812	0.659	0.647	0.452

The R-squared value of 0.659 suggests that approximately 65.9% of the variance in Quality of Life and Well-being is explained by the independent variables.

- ANOVA Table

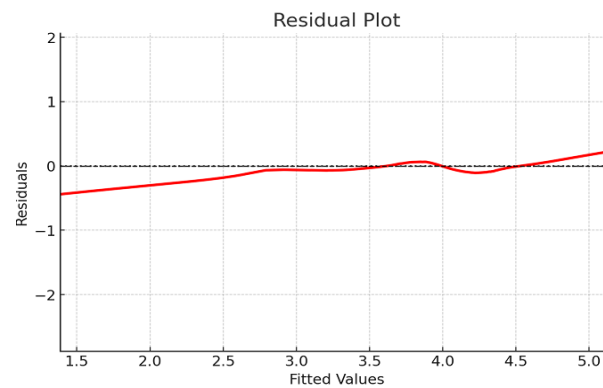
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	78.542	6	13.090		
Residual	40.673	200	0.203	64.312	0.000**
Total	119.215	206			

The F-value of 64.312 is significant ( $p < 0.001$ ), confirming that the model is a good fit.

- Coefficients Table

Predictor Variables	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
Environmental Impact of Tourism	0.311	0.054	0.342	5.778	0.000**
Community Participation in Governance	0.275	0.047	0.301	5.851	0.000**
Economic Benefits of Tourism	0.226	0.052	0.256	4.346	0.000**
Tourism Development & Infrastructure	0.190	0.045	0.208	4.222	0.000**
Cultural and Social Effects of Tourism	0.162	0.048	0.175	3.375	0.001**

The regression analysis demonstrates that all independent variables significantly contribute to predicting the Quality of Life and Well-being. Among them, Environmental Impact of Tourism ( $\beta = 0.342$ ,  $p < 0.001$ ) has the strongest influence, followed by Community Participation ( $\beta = 0.301$ ,  $p < 0.001$ ). These findings emphasize that environmental and governance factors are key determinants of well-being in the context of tourism development. The overall model explains 65.9% of the variance, indicating a strong predictive capability.



The scatter plot shows the relationship between the actual Quality of Life and Well-being scores (dependent variable) and the predicted scores from the regression model. A strong positive linear trend suggests that the regression model has a good fit, meaning the independent variables effectively predict the dependent variable. If the points are widely scattered from the diagonal line, it indicates higher residuals, suggesting potential model improvement.

## 8. Conclusion

The importance of responsible tourism in promoting environmental, economic, and sociocultural sustainability is highlighted by the study on sustainable tourist practices and their effects on local people in Tamil Nadu. According to the findings, eco-tourism, historical conservation, community-based tourism, and responsible waste management are examples of sustainable tourism projects that have improved the well-being of local communities. More job possibilities, cultural preservation, and environmental conservation have resulted from these efforts.

The complete achievement of sustainable tourism objectives is still hampered by issues including overtourism, poor infrastructure, and a lack of stakeholder cooperation. To guarantee long-term benefits, the study highlights the necessity of community involvement, legislative measures, and sustainable business models. The sustainability of Tamil Nadu's tourism industry may be further increased by fostering green tourism practices, bolstering public-private partnerships, and raising visitor knowledge.

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