

The Challenges of Waste Management in Tourist Destinations: A Sociological Study

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Abstract

This study examines the growing challenge of waste generation in tourist destinations, focusing on Udupi district, known for its diverse landscapes and high tourist inflow. Tourism significantly increases waste especially, plastics and food waste leading to pollution, health risks, pressure on local waste systems, and conflicts between tourists and residents. Using a descriptive research design and simple random sampling of 150 respondents, the study found widespread negligence among tourists regarding waste disposal, even among the educated. All surveyed tourist spots face major recycling and reuse challenges. Despite efforts by the Department of Municipal and Panchayat Administration, diverse cultural behaviors, business activities, and inadequate amenities contribute to rising waste levels. The research highlights how convenience-seeking and limited awareness of local waste norms worsen the problem. It recommends promoting sustainable practices, strengthening waste infrastructure, and encouraging responsible tourist behavior to reduce environmental impacts and support effective waste management.

Keywords

Waste Generation, Waste Management, Impact on Society, Tourists Behaviors,
Tourist Places

Introduction

Many stakeholders lack knowledge and improper waste disposal practices pose a challenge to waste management in the tourism industry. India's rapidly expanding tourism industry has intensified waste management challenges, especially in ecologically sensitive hill stations, coastal regions, and heritage sites. Seasonal tourist surges overwhelm local waste systems, resulting in littering, plastic pollution, and illegal dumping. India generates around 62 million tons of waste annually, growing at 4 per cent each year. Cities like Surat and Delhi

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recorded alarming MSW growth rates of 2172 per cent and 1036 per cent between 1971 and 2015, while Mumbai and Delhi currently produce 11,000 and 8,700 tons of waste per day. Tourists' transient nature, lack of accountability, and diverse cultural attitudes further aggravate the problem. Weak enforcement of waste regulations, inadequate infrastructure, and limited municipal resources hinder effective waste management in tourist regions. Addressing these issues requires coordinated efforts among government, businesses, and tourists. Strengthening regulation, enhancing waste infrastructure, and promoting awareness are essential for sustaining India's major tourist destinations.

Review of Literature

With a market value of USD 100 million and four to five lakh visitors annually, it is the primary hub for the tourism sector (Prasid Gurung et al., 2025). Cheremisinoff and Cheremisinoff (1995) worked on hazardous materials and waste management, defines discarded material resulting from industrial, commercial, agricultural, or community activity. Blackman (2001) discussed on basic hazardous waste management, public's need for a clean, safe environment develops, so does the public's desire for protection against the health risks and environmental horrors associated with hazardous waste mismanagement.

Kasemir *et al.* (2003) his study made critical analysis on how we have used knowledge to address the challenge of climate change is crucial not only for its specific findings but also for the pioneering role it plays in shedding light on more general issues regarding how science and technology can be used to support a sustainability transition. Nasrabadi *et al.* (2008) this article focused on Tehran city policies and municipal solid waste management are becoming more and more complex. This study measures how concerned people are about what happens to the rubbish they produce. Coenen (2009) worked on public participation and better environmental decision that, effective environmental decision-making depends on public participation and emphasized that individuals should participate in environmental conservation since doing so aids in the development of decisions and policies. Eugenio, (2020), this case study article presented that, mainly residents and tourist's consumptions are contributes to waste generation in the Island.

Objectives of the study:

1. To study the challenges of waste management in tourist areas.
2. To understand and analyses tourist behaviour regarding waste disposal.

Research Methodology

This study employs a descriptive research design to examine waste management challenges in tourist areas, focusing on causes, tourist behaviors, and sustainable control measures. A simple random sampling method was used to select 150 respondents across various Udupi district tourist sites, ensuring diverse perspectives. Primary data were gathered through semi-structured interviews, capturing qualitative insights into waste-related behaviors and attitudes. Secondary data, including literature and reports, supplemented the findings, providing a broader context. The combination of qualitative and quantitative data offers a comprehensive understanding of waste management issues in tourism.

Waste management challenges faced by the tourist in tourist destinations

Table 1

Challenges	Frequency (n=150)	Percentage
High volume of waste	128	85.33
Limited infrastructure	133	88.66
Seasonal waste peaks	145	96.66
Diverse type of waste	111	74.00
Tourist behavior and awareness	125	83.33
Environmental sensitivity	115	76.66
Strain on local resources	88	58.66
Inconsistence of rules and enforcement	140	93.33
Cost of waste management	51	34.00
Recycling and reuse challenges	150	100.00
Health and sanitation concerns	137	91.33

Analysis:

Tourist destinations in India face significant challenges in managing waste, particularly due to seasonal peaks, inadequate infrastructure, weak enforcement, and diverse tourist behaviors. This study highlights that India continues to experience waste peaks and limited recycling facilities, with respondents noting a complete lack of comprehensive recycling units near tourist sites. Seasonal surges—especially on weekends, school holidays, and during summer lead to increased consumption and improper disposal, resulting in substantial waste accumulation. Respondents opined that, about 100 per cent lack of recycling industries. Nearly 96.66 per cent of tourists reported experiencing these seasonal waste peaks. Weak enforcement also contributes to mismanaged waste. Although Solid Waste Management (SWM) Rules 2016 exist, 93.33 per cent of respondents observed poor rule implementation, resulting in littering, improper disposal, and deteriorating sanitation standards. Limited infrastructure remains a major concern as 88.66 per cent of respondents identified outdated or insufficient facilities at popular sites like Malpe Beach, St. Mary's Island, Maravante, and Urbi Falls. High tourist inflow further aggravates the issue, with 85.33 per cent noting the excessive volume of waste generated. Although India's waste processing capacity has risen to 76 per cent in 2023, increasing construction of treatment plants indicates a continued struggle to keep pace with rising waste generation.

Local administrative systems also face strain. About 58.66 per cent of respondents stated that local governments lack sufficient finances, manpower, and technical resources to manage tourist waste effectively. Tourists' behavior and awareness further complicate the situation. Despite being educated, many tourists display negligence in waste disposal. 83.33 per cent were unaware of illegal disposal practices, while 76.66 per cent showed low environmental sensitivity. Behavioral habits, lack of facilities, and a poor sense of responsibility lead to environmental degradation and societal discomfort. Tourist areas face diverse waste types—food waste, bottles, covers, and liquid waste—with 74 per cent of respondents identifying these as major challenges. Financial constraints also emerge, with 34 per cent reporting that waste management becomes costly without proper infrastructure. Environmental awareness varies, and although eco-conscious tourists exist, they remain a minority. Seasonal studies, such as those in Dal Lake and Uttarakhand, show drastic variations in waste generation across seasons, highlighting the connection between tourist flow and waste

levels. The informal sector, especially rag-pickers, continues to play a crucial role in India's waste segregation efforts.

Tourists' transient nature also contributes to poor accountability, leading to careless waste behavior. Cultural differences and knowledge gaps further complicate adherence to local waste rules. Although eco-tourism is promoted, inadequate systems often result in superficial or ineffective sustainability claims. In Udupi district, economic priorities like tourism-based businesses often overshadow environmental considerations. Environmental impacts include pollution of beaches, forests, and water bodies, harming ecosystems and reducing aesthetic appeal. Lack of coordination among multiple stakeholders, weak regulatory frameworks, and fragmented responsibilities further hinder sustainable solutions. Over tourism intensifies resource pressure, making waste management even more challenging and threatening the long-term sustainability of tourist destinations.

Tourist Behavior regarding Waste Disposal During Tours:

This study reveals that waste littering is a serious issue in tourist areas, caused by limited disposal facilities, lack of awareness, and the belief that municipal workers will clean up the mess. In India, only about 75 per cent of solid waste is collected, and just 25 per cent is systematically recycled, leaving large amounts to pollute public spaces and waterways. Littering clogs drainage systems, increases mosquitoes and flies, and contributes to diseases such as dengue and malaria, as noted by Udupi's Deputy Commissioner in 2024. Spitting is another major concern, especially due to the use of tobacco-based products like gutka and panparag, which creates unhygienic conditions and spreads infections such as flu, TB, COVID-19, and pneumonia.

Tourists also generate large quantities of waste through single-use plastics and packaged food, especially during religious gatherings and beach visits. Improper disposal of plastics, despite regulations such as the G-20's ban on items below 75 microns, remains widespread. Even when bins are available, many tourists misuse them or leave waste that harms local ecosystems. Tourism contributes nearly 30 per cent of India's total waste, reflecting a lack of strategic industry planning. Cultural differences and negligent attitudes observed among 36 per cent of educated respondents further worsen pollution. Residents of Udupi's coastal villages have expressed frustration over these disturbances, highlighting the urgent need for environmentally responsible tourist behaviour.

Findings of the Study:

Tourists show high negligence toward waste disposal, and all locations lack effective recycling systems. Seasonal tourism causes a 96.66 per cent surge in waste, overwhelming facilities. Tourists frequently dump waste in ditches, rivers, and along NH-66, causing pollution and disease risks. About 93.33 per cent reported inconsistent enforcement of rules, with issues like open urination persisting. Poor waste management leads to sanitation problems, higher dengue and malaria cases, and inadequate infrastructure at major sites like Malpe Beach, St. Mary's Island, and Kollur. High waste volumes, diverse waste types, and financial constraints further strain local administrations.

Solutions from a Sociological Perspective:

Communities should actively participate in waste management and promote eco-friendly tourism through awareness campaigns that encourage responsible tourist behavior.

Local authorities must adopt waste-sucking machines, install adequate toilets, and ensure regular maintenance with NGO support. Increasing CCTV coverage at tourist sites can reduce littering, while fast recycling plants and sufficient waste bins will strengthen a circular economy. Strict monitoring and fines for highway littering are essential. Government, municipal bodies, tourism boards, and businesses must work together to implement sustainable practices. Collaborative efforts are crucial to reducing waste generation and ensuring environmentally responsible tourism in the long term.

Conclusion

India is emerging as a major tourism destination, yet many tourists' spots lack of essential facilities, leading to irresponsible waste disposal by visitors. Tourists frequently litter waste in public places, highways, and natural areas, while waste management falls on students, communities, sanitation workers, municipal and local authorities. Promoting responsible tourism and shared waste management efforts is crucial for maintaining a healthy environment in tourist destinations.

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