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# The Urgent Need for Effective Trash Management in Tuljapur Pilgrim Town

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## Abstract

Tuljapur, a significant pilgrimage town in Maharashtra, India. It faces a critical challenge in managing the increasing solid waste generated by its influx of visitors, particularly during religious festivals. This article examines the urgent need for effective trash management in Tuljapur, highlighting the current inadequacies of the waste management system, which has led to severe environmental degradation, public health risks, and damage to historic monuments. Despite substantial investments in waste disposal, the town's infrastructure remains insufficient, resulting in unsightly littering and contamination of local water bodies. The consequences of poor waste management are multifaceted, including health hazards from stray animals scavenging through waste, soil contamination from leachate, and the disrespectful disposal of temple waste (Nirmalya). To address these pressing challenges, the article proposes a comprehensive Solid Waste Management Model tailored to Tuljapur's unique socio-religious context. Key components of this model include community engagement, innovative waste management systems, and respect for cultural practices. By fostering local ownership and responsibility, the model aims to enhance awareness of cleanliness and proper waste disposal among residents and visitors alike. Furthermore, improvements to waste management infrastructure, such as strategic placement of dustbins and regular collection schedules, are essential for creating a cleaner and healthier environment. Ultimately, this article underscores the necessity of recognizing effective trash management as a vital public health and cultural preservation issue, advocating for immediate action to safeguard Tuljapur's rich heritage and ensure a sustainable future for its residents and visitors.

**Key Words:** Trash Management, Pilgrim Town, temple waste, Religious Offerings, Historic Monuments

## Introduction

Tuljapur, a revered pilgrimage town in Maharashtra, India, is known for its rich cultural heritage and spiritual significance (Rocher, L. 1997). As a destination for thousands of devotees, the town attracts a heavy influx of visitors, especially during religious festivals and special occasions. However, this surge in population brings with it a significant challenge: the management of solid waste. A clean environment is essential for enhancing the quality of life for residents and visitors alike, providing both physical and social satisfaction (Kumar & Singh, 2019). Unfortunately, the prevailing attitude towards waste management often resembles the "Not in my Backyard" mentality, where the growing bulk of garbage is ignored until it becomes an unbearable problem (Joshi & Ahmed, 2016). This article explores the pressing need for effective trash management in Tuljapur, the challenges faced, and the potential solutions to create a sustainable waste management model.

## The Current State of Waste Management in Tuljapur

The accumulation of solid waste in Tuljapur has reached alarming levels, particularly during peak visitation periods. The town's waste management system has struggled to cope with the increasing volume of garbage, leading to unsightly littering and environmental degradation ((MoUD, 2013).. Despite significant investments—over 28 million rupees—into waste disposal efforts, the city has not been able to establish a comprehensive solid waste management service that meets the needs of its growing population.

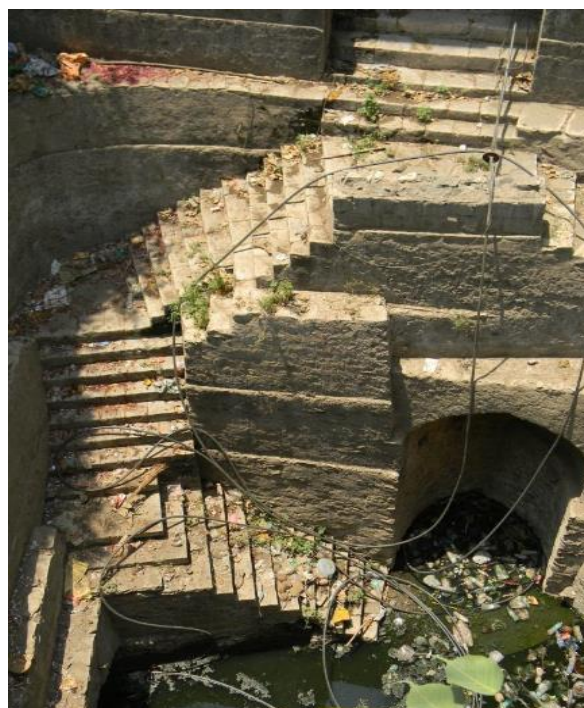
## The Impact of Poor Waste Management

The consequences of inadequate waste management in Tuljapur are multifaceted:

1. **Environmental Degradation:** The improper disposal of waste has led to the contamination of local water bodies, affecting the quality of drinking water and harming aquatic ecosystems (World Health Organization, 2020). Stagnation of waste in these bodies has resulted in increased microbial counts, posing health risks to residents and visitors. (JnNURM,2012)
2. **Health Hazards:** The presence of open garbage bins attracts stray animals, such as dogs, cows, and pigs, which often consume plastic along with food. This not only endangers the animals but also poses health risks to humans, as these animals can transmit diseases (Rao & Desai, 2022).



3. **Damage to Historic Monuments:** Tuljapur is home to several historic monuments and sacred sites. The lack of a proper garbage collection system has led to waste being disposed of in and around these sites, causing physical damage and degrading their cultural significance (Gupta, 2018).



4. **Soil Contamination:** The leachate from waste disposal sites, particularly those located on contoured land, has contaminated the soil in surrounding agricultural areas. This poses a risk to local farmers and the broader ecosystem (Kumar & Singh, 2019).





5. **Public Health Concerns:** The need for mosquito fogging twice a year highlights the public health risks associated with stagnant waste and poor sanitation. The presence of waste creates breeding grounds for disease-carrying insects, further endangering the health of the community (World Health Organization, 2020).



#### **The Need for a Comprehensive Waste Management Model**

Given the social and religious importance of Tuljapur, it is crucial to develop a solid waste management model that is sustainable and effective. This model should be designed to address the unique challenges faced by the town while respecting the cultural sentiments of its residents and visitors. (Naik, A. 2007).

#### **Objectives of the Proposed Model**

1. **Contextual Understanding:** The model will be developed through a thorough understanding of the local context, including the specific needs and challenges faced by the community. This bottom-up approach will ensure that the solutions are relevant and effective (Joshi & Ahmed, 2016).
2. **Innovative Waste Management Systems:** The research will explore innovative systems for managing waste in temple towns, drawing on successful practices from other regions. This could include the implementation of waste segregation at the source, composting of organic waste, and recycling initiatives (Rao & Desai, 2022).
3. **Respect for Cultural Practices:** A key component of the model will be the respectful treatment of Nirmalya (temple waste). Instead of disposing of this sacred waste alongside other garbage, the model will propose dedicated systems for its collection and treatment, honoring the sentiments of devotees (Gupta, 2018).
4. **Community Engagement:** Engaging the local community in the planning and implementation of waste management practices will foster a sense of ownership and responsibility. Educational campaigns can raise awareness about the importance of cleanliness and proper waste disposal (Ministry of Environment, Forest and Climate Change, 2021).

5. **Infrastructure Improvement:** The model will recommend improvements to the existing waste management infrastructure, including the strategic placement of dustbins, regular waste collection schedules, and the establishment of waste processing facilities (World Health Organization, 2020).

#### **Challenges in Current Waste Management Practices**

The existing waste management practices in Tuljapur face numerous challenges that significantly hinder effective waste disposal and management:

1. **Inconsistent Waste Bin Placement:** The irregular and inadequate placement of solid waste bins throughout the town leads to unsanitary conditions. Many neighborhoods lack sufficient dustbins, resulting in littering and the accumulation of unsightly garbage on streets, which detracts from the town's aesthetic appeal and poses health risks (Kumar & Singh, 2019).
2. **Inappropriate Location of Garbage Bins:** A significant number of garbage bins are situated atop gutters, causing solid waste to flow directly into drainage systems. This misplacement leads to the clogging of nallas (drainage channels), exacerbating issues of water stagnation and pollution, particularly during the monsoon season when runoff increases (Rao & Desai, 2022).
3. **Attraction of Stray Animals:** Open waste bins attract stray animals such as dogs, cows, and pigs, which often scavenge for food. This behavior not only poses health hazards to the animals—who may ingest harmful plastics and other waste—but also increases the risk of zoonotic diseases being transmitted to humans (World Health Organization, 2020).
4. **Disposal of Religious Offerings (Nirmalya):** The current practice of disposing of Nirmalya, or temple waste, in dump yards alongside other refuse disregards the sentiments of pilgrims and devotees. This practice not only disrespects cultural and religious values but also contributes to the overall pollution of the area (Gupta, 2018).



5. **Hazardous Waste Burning:** Rag pickers often resort to burning waste to recover valuable metal objects, releasing toxic fumes and pollutants into the air. This practice poses serious health risks to both the rag pickers and the surrounding community, contributing to air quality deterioration (Kumar & Singh, 2019).





6. **Contoured Dump Yard Locations:** The disposal of waste in dump yards situated on contoured land leads to leachate runoff, which can flow into nearby agricultural fields during the monsoon. This not only contaminates the soil but also poses a risk to local crops and the health of farmers (Rao & Desai, 2022).



7. **Soil Contamination:** The lack of proper containment for waste in dump yards results in garbage spreading beyond designated areas, leading to soil adulteration. This contamination can have long-term effects on local agriculture and the ecosystem (World Health Organization, 2020).



8. **Saturation of Dumping Yards:** Over the past 25 years, the town has relied on only three dumping yards, all of which have become completely saturated. This saturation limits the town's capacity to manage waste effectively and necessitates urgent action to develop alternative solutions (Ministry of Environment, Forest and Climate Change, 2021).



9. **Legacy of Plastic Waste:** The Old Apsinga Road dump yard, which was active from 1986 to 2000, still shows remnants of plastic waste. This long-term accumulation highlights the failure to implement effective waste management practices and the need for a more sustainable approach (Kumar & Singh, 2019).



10. **Water Quality Deterioration:** The stagnation of waste in local water bodies has led to an increase in the Most Probable Number (MPN) count in drinking water sources. This deterioration poses significant health risks to the community, particularly vulnerable populations such as children and the elderly (World Health Organization, 2020).





11. **Public Health Interventions:** The necessity for mosquito fogging twice a year underscores the public health challenges posed by poor waste management. Stagnant waste creates breeding grounds for disease-carrying mosquitoes, necessitating costly and ongoing interventions to protect community health (Rao & Desai, 2022).

### **Conclusion**

The pressing need for effective trash management in Tuljapur cannot be overstated. As a significant pilgrimage town, Tuljapur holds immense cultural and religious importance, attracting thousands of devotees who seek spiritual solace and connection. However, the current waste management practices are inadequate, leading to severe environmental degradation, public health risks, and damage to the town's historic monuments. The accumulation of waste not only tarnishes the town's aesthetic appeal but also poses a direct threat to the health and well-being of its residents and visitors.

To address these challenges, it is essential to develop a comprehensive Solid Waste Management Model that is tailored to the unique socio-religious context of Tuljapur. This model should prioritize community engagement, innovative waste management systems, and respect for cultural practices, particularly concerning the disposal of temple waste (Nirmalya). By adopting a bottom-up approach, the proposed model can ensure that the solutions are relevant, effective, and sustainable.

Moreover, the implementation of this model will require a concerted effort from local authorities, community members, and stakeholders. It is crucial to raise awareness about the importance of cleanliness and proper waste disposal, fostering a sense of ownership and responsibility among residents. Improvements to the existing waste management infrastructure, including the strategic placement of dustbins and regular waste collection schedules, will also be vital in creating a cleaner and healthier environment.

In conclusion, the path forward for Tuljapur lies in recognizing the urgent need for effective trash management as not just an environmental issue, but as a matter of public health, cultural preservation, and community pride. By taking decisive action now, Tuljapur can safeguard its heritage, enhance the quality of life for its residents, and ensure that it remains a welcoming and sacred space for future generations of pilgrims. The time for change is now, and with a collaborative effort, Tuljapur can transform its waste management practices into a model of sustainability and respect for its rich cultural legacy.

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### **Conflicts of Interest**

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