

Chapter 17

Sustainable Waste Disposal Systems in the Hotel Industry Innovations, Challenges, and Opportunities: A Case Study of Guwahati, India

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ABSTRACT

The hotel industry, a significant contributor to economic growth in Guwahati, Assam, faces mounting pressure to implement sustainable waste disposal systems to mitigate its environmental impact. This study examines the innovative practices, challenges, and opportunities associated with sustainable waste management in nine hotels across Guwahati. Through a combination of case studies, interviews, and data analysis, this research explores how these establishments address waste generation, segregation, recycling, and disposal. The findings reveal a diverse range of practices, from advanced recycling programs and composting initiatives to collaborations with local waste management firms. . This study highlights the potential for hotels in Guwahati to lead the way in sustainability, offering insights into scalable practices that can be adopted industry-wide. By addressing both local and global environmental concerns, the hotel industry in Guwahati can enhance its sustainability profile and contribute to a cleaner, more sustainable future.

INTRODUCTION

The hotel industry, as a significant contributor to global tourism and economic growth, also plays a substantial role in environmental sustainability. With increasing awareness of climate change and environmental degradation, the focus on sustainable waste disposal systems has intensified. This chapter

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explores the innovations, challenges, and opportunities in implementing sustainable waste management practices within the hotel industry, using Guwahati, India, as a case study.

Guwahati, the largest city in the northeastern region of India, serves as a major gateway to the area, attracting tourists and business travelers alike. The rapid growth of the hospitality sector in Guwahati has led to increased waste generation, necessitating effective waste management solutions. Hotels, as high-impact entities, have a unique opportunity to lead the way in sustainability initiatives.

This chapter begins by examining the current state of waste disposal systems in the hotel industry, highlighting traditional practices and their environmental impact. It then delves into innovative strategies that hotels in Guwahati are adopting to manage waste more sustainably. These innovations include the adoption of circular economy principles, the use of technology to enhance waste segregation, and the implementation of zero-waste policies.

The challenges faced by the hotel industry in transitioning to sustainable waste management are also discussed. These challenges include regulatory hurdles, the cost of implementing new technologies, and the need for staff training and guest education. Despite these challenges, there are numerous opportunities for hotels to enhance their sustainability practices, such as collaborating with local waste management companies, investing in renewable energy sources, and participating in community-based environmental initiatives.

Through this case study of Guwahati, the chapter aims to provide insights into the practical application of sustainable waste disposal systems in the hotel industry. It highlights the importance of a holistic approach that involves stakeholders at all levels, from hotel management to guests and local communities. By adopting sustainable practices, hotels can not only reduce their environmental footprint but also enhance their brand reputation and contribute to the broader goals of sustainable development.

Literature Review

The hotel industry, as a critical component of the global tourism sector, has been increasingly scrutinized for its environmental impact, particularly in terms of waste generation and management. This literature review examines existing research on sustainable waste disposal systems within the hotel industry, focusing on innovations, challenges, and opportunities. It also contextualizes these findings within the specific setting of Guwahati, India, to understand how local factors influence the adoption of sustainable practices.

Waste Management in the Hotel Industry

Research indicates that hotels are significant contributors to urban waste, producing large quantities of solid waste, water waste, and greenhouse gas emissions (Zorpas et al., 2015). The waste generated typically includes food waste, packaging, paper, plastic, glass, and hazardous materials (Kasim, 2009). Traditional waste management practices in hotels often involve landfill disposal, which poses environmental and health risks. The shift toward sustainable waste management has become imperative, driven by regulatory pressures and consumer demand for eco-friendly practices (Erdogan & Baris, 2007).

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