



Sustainability in Terms of Food Waste and Its Efficacy

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Introduction



Contemporary Theme: Sustainability, specifically food waste management, is a growing priority in the hospitality sector.



Relevance: Hotels and restaurants produce large volumes of waste, estimated at up to 10% of purchased food (Costa & Costa, 2022). Minimising this waste is essential to achieving environmental, economic, and social sustainability.



Industry Context: Global hospitality brands such as Marriott and Accor have committed to net-zero goals, integrating smart inventory systems, composting, and local sourcing into operations (Batabyal & Das, 2019). However, smaller hotels face financial strain balancing eco-initiatives with profitability.

Literature Review



Sustainability Theory: The **Triple Bottom Line (TBL)** framework (people, planet, profit) guides sustainable hospitality, stressing the need for environmental protection while maintaining economic viability (Costa & Costa, 2022).



Circular Economy Concept: Encourages resource efficiency and waste reduction through reuse and recycling systems (Ford & Sturman, 2020).



Impact on Hospitality: Food waste management reduces costs, enhances brand image, and meets guest expectations for ethical practices (Sharma, Singh & Tyagi, 2024). Conversely, implementation challenges include high initial costs and lack of skilled staff.



Recent Findings: Studies highlight digital tracking tools and AI-driven inventory management as effective in reducing food waste by up to 30% (Ivanov & Webster, 2019).

Method (& Industry Response)

PESTEL Summary

- **Political:** Regulations on waste disposal and sustainability reporting are tightening globally (Cooper & Hall, 2019).
- **Economic:** Waste reduction lowers operational costs but requires capital investment in green technologies (Batabyal & Das, 2019).
- **Social:** Rising consumer preference for eco-friendly hotels encourages adoption of visible green initiatives.
- **Technological:** Smart kitchen sensors, composting units, and AI-based inventory tools optimise resource use (Ivanov & Webster, 2019).
- **Environmental:** Reducing food waste directly decreases carbon emissions and landfill use (Costa & Costa, 2022).
- **Legal:** Compliance with food safety and waste regulations is mandatory, influencing operations and supplier contracts.

Method (& Industry Response) Cont..

Industry Examples:

- *Hilton's "Food Waste to Value"* program converts waste into biogas, exemplifying circularity (Sharma *et al.*, 2024).
- *Accor's "Planet 21"* initiative emphasises local sourcing and staff training.

Critical Reflection:

- While large chains achieve scale efficiencies, small hotels struggle with high setup costs and limited technical capacity, indicating unequal progress within the sector.

Conclusion

Sustainability in food waste management is crucial for environmental stewardship and competitive advantage. The hospitality sector's transition to circular and data-driven systems shows promise but requires stronger policy support and equitable access to sustainable technologies. The journey reflects an evolving commitment to balancing eco-efficiency with economic resilience.



Recommendations

Implement

Implement Smart Food Waste Monitoring Systems

- Hotels should invest in AI-driven inventory and waste tracking tools to monitor food usage, expiration, and disposal in real time.
- Such systems can reduce waste by up to 30% while improving cost efficiency and menu planning (Ivanov & Webster, 2019).

Adopt

Adopt Circular Economy Practices

- Introduce composting, food donation, and waste-to-energy initiatives to ensure resources are reused rather than discarded.
- Partnerships with local farms and food banks can enhance sustainability credentials and community engagement (Costa & Costa, 2022).

Enhance

Enhance Staff Training and Sustainability Culture

- Continuous staff education on portion control, inventory handling, and waste segregation is essential for effective implementation.
- Embedding sustainability in employee values increases long-term commitment and accountability (Ford & Sturman, 2020).

Strengthen

Strengthen Collaboration and Policy Support

- Collaborate with government agencies and industry associations to access incentives for green technology adoption.
- Establish clear sustainability reporting frameworks to promote transparency and compliance (Batabyal & Das, 2019; Cooper & Hall, 2019).

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