

**Contemporary issue of food waste in the hospitality industry, hotels and food
and beverage department**

Student: Viktoriya Nikolaeva Tudor ID 1816229

Module: Contemporary Themes in the Hotel and Hospitality Sector (BMIH6001)

Lecturer: Lisa Knight

Executive Summary

This research paper has clarified the contemporary theme which is the issue of food waste in the hospitality industry, hotels and food and beverage department. This paper has used several key theories and concepts, such as Waste Hierarchy and Corporate Social Responsibility. Statistics for the impacts of food waste has been provided to critically analyse the issue. Examples of how the management have addressed the impact of food waste at various hotels, such as Hilton and Accor, have been given, along with limitations. Furthermore, future policy and waste management alternative solutions have been considered for addressing this problem by making appropriate recommendations.

Table of content

Introduction.....	1
Overview of literature.....	2
Waste hierarchy.....	2.1
Corporate social responsibility.....	2.2
Application to hotels and hospitality sector.....	3
Impacts of food waste.....	3.1
Hotel responses to food waste.....	3.2
Limitations.....	3.3
Policies and recommendations.....	4
Policies.....	4.1
Recommendations.....	4.2

1. Introduction

The term "food waste" refers to the act of utilising food that is intended for human consumption for non-consumption purposes, redirecting food towards animal feed, or discarding edible food. The term encompasses both the consumable and non-consumable components of food that are eliminated from the food supply chain and can be either recovered or appropriately handled through disposal methods. The categorization of food waste can be classified into three types: (a) preventable waste, (b) inevitable waste, and (c) possibly preventable food waste (Dhir, A. *et al.* 2020).

The issue of food waste has been identified as a significant global challenge in the current century. The subject matter has emerged as an important policy concern owing to raised acknowledgement of the unfavourable societal, financial, and environmental consequences associated with the production and management of waste. Regardless of the raised acknowledgement, the waste of edible food has persisted. The hospitality industry, which includes diverse food services that operate independently or as supporting components of bigger businesses such as hotels, has frequently been subject to criticism for its wastefulness in operations and for its serious role in generating overall food wastage (Chawla, *et al.* 2022).

This research paper will give examples of how the management have addressed the impact of food waste at hotels such as Hilton and Accor.

Hilton Hotels is one of the biggest and most rapidly expanding hospitality companies in the world operating in 122 countries and territories. Travel with Purpose is Hilton's Environmental, Social, and Governance (ESG) approach to encouraging responsible national and international travel and tourism (Hilton, 2023).

The other example is Accor Hotels which are operating in 110 countries and are continually expanding their global presence and leadership. According to Accor, they are entirely committed to minimising their activity's negative impacts and providing tangible benefits for the employees, customers, suppliers, partners, and local communities (Accor, 2023).

2. Overview of literature

2.1. Waste hierarchy

The principles that underlie the waste management hierarchy were put into effect as a component of the European Union's waste management policies in the beginning of the 1970s and have since become widely utilised as an essential waste management framework worldwide (Duquennoi and Martinez, 2022). The predominant methods of managing food waste conventionally involve animal feed, anaerobic digestion, composting, energy recovery, and landfill disposal, with comparatively fewer focuses on the prevention of food waste. These practices have significant impacts on the natural environment. The primary objective of the waste hierarchy is to establish straightforward guidelines that allow for improving waste reduction and the adoption of sustainable waste management practices. The food waste hierarchy outlines food management stages for preventing food waste and reusing wasted food. According to the waste hierarchy, each stage implements a different set of management techniques establishing waste management options with the most favourable environmental outcomes. The first thing that should be taken into consideration is how to minimise the amount of food that is wasted during production by using most of the food that is available in order to minimise the negative effects on the environment and the

economy. On the other hand, throwing food waste away in a landfill is generally regarded as the least desirable disposal method (Srijuntrapun, *et al.*, 2022).



Figure 1

The concept of the 'Food Waste Hierarchy' suggests that organisations need to prioritise the reuse of edible food that has not been served to guests by means of redistribution, rather than taking to disposal. The Food Waste Hierarchy provides straightforward directions for waste management, prioritising alternatives that result in favourable social and environmental consequences an important topic of discussion in recent years. Without a doubt, waste prevention has been situated at the highest level of the hierarchy, as preventative measures can eliminate the need for waste disposal and considerably decrease food costs. The hotel industry has frequently considered food waste management as a marketing strategy. Food redistribution strategies include selling it at a reduced cost, donating it to poor individuals, reusing it for staff consumption, or repackaging it as pet food. Surplus food that is no longer suitable for human consumption has been transformed into the production of fish feed (Chawla *et al.* 2021).

2.2. Corporate social responsibility

The concept of "Corporate Social Responsibility," (CSR), was first established by the European Commission in the year 2001. According to this model, businesses voluntarily incorporate social and environmental implications into their operations and their interactions with their stakeholders (Morea, *et al.* 2021). The CSR may be implemented via a variety of methods some of which include carrying out a range of activities. Before choosing the suitable methods, a company must first evaluate its distinguishing characteristics, which may include its size, the number of employees, the number of markets it serves, and the number of products and services it provides. In addition to this, it is essential to establish the stakeholder groups and objectives that the company hopes to achieve as a result of putting the CSR idea into practice (Abram and Jarzabek, 2016). The authors Forsman-Hugg *et al.* have identified seven fundamental dimensions of CSR in the food industry. These dimensions include the environment, product safety, corporate nutritional responsibility, animal welfare, local market presence and economic responsibility, and occupational welfare. The authors argue that CSR practices are connected and include various initiatives. These include enhancing transparency in food control, adopting cost-efficient technologies for cleaner production, ensuring traceability along the supply chain for responsible consumption, and reducing environmental impacts on local communities (Moggi, *et al.* 2018).



Figure 2

By determining points of intersection within the business, stakeholder groups, and society, these new concepts could help hotels integrate their mission and social contribution. This strategy boosts economic development and improves people's lives. Additionally, hotels manage societal concerns relevant to their goal. Food waste management by using hierarchy benefits society, the environment, and business. The environment benefits from CSR and it supports organisations' operational strategies and promotes strategic philanthropy that gives them a social benefit. It comes from society-business relationships and social influences on the value chain, while minimising the negative effects of hotel operations on society. These factors can be summarised in Figure 2's model of food waste management for supporting Corporate Social Responsibility (Chawla *et al.* 2021).

The implementation of sustainable food waste practises needs additional labour with specialised expertise, as well as the investment of time and the adoption of new operating procedures. These factors imply that organisations with bigger sizes will

have less difficulty allocating adequate resources to carry out such efforts (Ng, Y. and Sia, J.2023).

Researchers highlight the insufficiency of knowledge regarding management practises and underlying attitudes in the production domain, thereby urging for additional research to better understand the causes and drivers of food waste in various food service environments (Chawla *et al.* 2021).

3. Application to hotels and hospitality sector

3.1. Impacts of food waste

The growing awareness of environmental issues among travellers has brought the subject of sustainability in the hospitality industry to the centre of discussion (Oakly, 2022). There is also an increasing awareness among customers regarding sustainability concerns, leading them to prefer companies that show a strong dedication towards sustainable practices. A significant proportion of reimagined customers, specifically 65%, prefer engaging with brands that prioritise environmental sustainability (Buarque, 2022).

The disposal of food waste in landfills has been found to result in the production of methane, occupation of land mass, and the possibility of groundwater contamination upstream. Additionally, it has been observed that it generates up to 10% of emissions (Cook *et al.* 2022). In accordance with the report published by the World Bank, the global annual waste production is expected to reach 3.4 billion tonnes by 2050, which is a significant increase from the current value of 2.01 billion tonnes per year. According to the International Hotels Environment Initiative, it appears that on average, a single hotel guest generates approximately 1 kg of waste per day. This accumulation of waste results in the generation of thousands of tonnes of waste on an annual basis. Hence, the rise in the quantity of food waste presents significant fears for the hospitality sector.

Hotels generate a significant quantity of waste. The reality is that hotels in the United Kingdom generate a total of 289,700 metric tonnes of waste annually. Therefore, waste management is one of the most widespread sustainability measures (Localle, 2021). The food and beverage service industry has been recognised as the third most significant contributor to food waste including restaurants, pubs, quick service restaurants, staff catering and so on. (Oliveira, *et al.* 2016). Restaurants, out of all the many kinds of hospitality and food service companies, are responsible for the biggest amount of wasted food; for example, in the United Kingdom, restaurants are responsible for 22 per cent of the overall food waste in the industry. As a result, restaurants should be the primary focus of efforts to reduce food waste.

The factors that are connected to business include various business formats; for instance, buffet food service results in a higher quantity of wasted food compared to a la carte food service. The factors that are connected to the restaurant's business also relate to the restaurant's size and specialisation. For example, smaller, independent restaurants create more food waste per visitor served than bigger enterprises that are affiliated with chains. In addition, the character of restaurant managers and owners, as well as their attitude towards environmental responsibility, are factors that determine the amount of food that is wasted in restaurants and how this waste is handled (Filimonau, *et al.* 2023). According to research, 70% of waste management practices are implemented by large hotels, compared to 30% by smaller hotels (Azarmi *et al.* 2020).

3.2 Hotel responses to food waste

The first and most significant step a hotel can take to become more socially responsible is to implement practices that will lower the amount of food that is wasted (Questrmg, 2018). The concept of sustainable development in the hospitality industry encompasses a range of managerial strategies, such as preserving natural resources (e.g., water and energy), reduction of environmental impact (e.g., waste reduction), fulfilment of the ecological needs of the local community and society, and dedication to environmental, social, and corporate governance principles within the hospitality sector (Prof.Dr. Wu,K.-S. 2023). For example, Accor Hotels located in Eastern Europe started measures to lower food waste by implementing two strategies. Initially, the

organisation raised the understanding and involvement of its workforce by doing workshops and presentations. After that, the organisation employed an external digital system to measure the weight of food waste and required its kitchen staff to periodically review where it came from. Initially, the organisation was collecting approximately 700 kilogrammes of food waste on a weekly basis. There was a 30% reduction observed after a period of three months (Hospitality ON, 2023).

Initiatives to reduce the amount of food that is wasted in restaurants are an essential part of restaurants meeting their CSR obligations since they contribute to the improvement of food and environmental sustainability (Ding and Jiang, 2023). For example, Winnow is a technology that tracks avoidable food waste precisely, and it is used by the chefs at the Hilton Dubai Jumeirah. They will be able to change the kind of meals and the quantity that is produced at the hotel based on the results. In addition to that, the hotel does all in its ability to cope with surplus food. For instance, any leftover pastries from the morning buffet are repurposed into Om Ali, a local Arabic dessert (Stories Hilton, 2020). Another example is that Hilton Hotels is highlighting its new Green Ramadan project across its properties in Qatar, the United Arab Emirates, and Saudi Arabia. The goal of the campaign is to improve local sourcing and cut down on food waste. During the holy month of Ramadan this year (2023), Hilton Hotels implemented new waste reduction practices to raise awareness about local sourcing and the issue of food waste. This project will help Hilton achieve one of its Travel with Purpose 2030 Goals, which is to minimise the amount of food waste that is shipped to landfills by 50 per cent Stories (Hilton, 2020).

3.3 Limitations

The use of a management approach might result in the establishment of strict internal policies (for example food safety), which all managers and personnel are required to adhere to. For example, corporate policies regarding buffet products often require that food that has not been eaten during one mealtime cannot be utilised during another mealtime and should, be discarded away if it has not been consumed. Instead, the company's policy might allow for this food to be reused or put to use in the preparation of meals for employees. Overall, since corporate policies in the hospitality industry are often focused on ensuring the health and happiness of customers, it may be difficult

for management and personnel to reduce the amount of food that is wasted. For instance, putting into effect sustainable practises for the disposal of food waste require more labourers with specialised competence, time and new operational processes (Mensah, 2020).

4. Policies and recommendations

4.1 Policies

Hotels use their websites to distribute information to their stakeholders about themselves, their services and products; however, the information that these websites provide concerning environmentally sustainable policies and practices (ESPPs) are a developing field that is deserving more further study (Khatter, 2019).

Hilton Hotels is committed to continually advancing in their environmental, social, and governance (ESG) actions, and in 2022, they updated their ESG strategic framework in order to better focus and communicate their ESG approach across all three ESG pillars: (i) *environmental*, with the goal of reaching net zero in the future and having clear targets for carbon and energy, water, and waste; (ii) *social*, with the goal of supporting and advancing careers, communities, and responsible actions; and (iii) *governance*, with the goal of improving and measuring their goals with an emphasis on honesty and maximising the impact of their engagement in public affairs and advocacy, as well as the relationships, policies and reports they have developed (Nassetta, 2023).

4.2 Recommendations

Bringing attention to the issue of food waste in food service settings and keeping track of the volume of waste that is generated enables managers to determine the primary factors contributing to its accumulation, the types of foods which generate that waste, and the tactics that can be used to cut it down. Future academic studies should focus on integrating the many approaches to measuring and characterising food waste generated by the hotel industry. This is to identify the most effective evaluation approach and to examine the viability of its application (Azarmi *et al.* 2020).

It is recommended to reduce the negative effects of tourism, by accurately predicting how much food waste from the hospitality industry will be produced. This will allow for the creation of an integrated waste management and utilisation system. The prevention of waste is one of the methods for avoiding the bad aspects of tourist activities, and certain waste management practices are necessary. The Food Waste Hierarchy gives clear guidelines for waste management, giving priority to options that have positive effects on both society and the environment (Srijuntrapun, 2022).

The implementation of sustainable waste management practises in small hotels can be encouraged through the adoption of smaller-scale sustainability strategies. These may include environmental education initiatives aimed to encouraging awareness of environmental issues and developing appropriate environmental values in hotel managers, thus changing their perception of the environment. In addition, given that small hotels have less resources and capacity required to train management and staff, managers of small hotels should work together with hotel trade associations and regulatory agencies to arrange training courses (Mensah, 2021).

5. Reference list

Abram and Jarzabek, (2016) 'Corporate social responsibility in hotel industry - environmental implications', *Ecocycles*, 2(1) pp. 9-16 Available at: DOI: 10.19040/ecocycles.v2i2.51 (Accessed 12th May 2023).

Azarmi, S., Vaziri, R. and CİZRELİOĞULLARI, M.N. (2020) 'Comparison of waste generation rate in different size of hotels case study of north Cyprus.' *Business & Management Studies: An International Journal*. 8(4), pp. 701–722. Available at: <http://dx.doi.org/10.15295/bmij.v8i4.1581>. (Accessed: 19th May 2023).

Buarque, K. (2022). *Sustainability and reducing food waste in hotels and restaurants*. Available at: <https://mapal-os.com/en/resources/blog/sustainability-and-reducing-food-waste-in-hotels-and-restaurants>. (Accessed 7th May 2023).

Chawla, G., Lugosi, P. and Hawkins, R. (2022a) 'Factors Influencing Hospitality Employees' Pro-Environmental Behaviours toward Food Waste', *Sustainability*, MDPI AG, vol. 14, no. 15, p. 9015 [Online]. DOI: 10.3390/su14159015. (Accessed 6th May 2023).

Chawla, G., Lugosi, P. and Hawkins, R. (2021b) Food Waste Drivers in Corporate Luxury Hotels: Competing Perceptions and Priorities across the Service Cycle. *Tourism and Hospitality* 2(3), pp. 302–318. Available at: <http://dx.doi.org/10.3390/tourhosp2030019>. (Accessed 7th May 2023).

Cook, N., Goodwin, D., Porter, J. and Collins, J. 2022. 'Food and food-related waste management strategies in hospital food services: A systematic review'. *Nutrition & Dietetics*. 80(2), pp. 116–142. Available at: <http://dx.doi.org/10.1111/1747-0080.12768>. (Accessed: 15th May 2023).

Duquennoi, C. and Martinez, J. (2022) *European Union's policymaking on sustainable waste management and circularity in agroecosystems: The potential for*

innovative interactions between science and decision-making. Available at: <https://www.frontiersin.org/articles/10.3389/fsufs.2022.937802/full>. (Accessed 12th May 2023).

Ding, L. and Jiang, C. (2023) 'The effect of perceived collective efficacy and self-efficacy on generation Z restaurant customers' food waste reduction intentions'. *Journal of Global Responsibility*. Available at: <http://dx.doi.org/10.1108/jgr-08-2022-0079>. (Accessed 12th May 2023).

Dhir, A. *et al.* (2020) 'Food waste in hospitality and food services: A systematic literature review and framework development approach'. *Journal of Cleaner Production*. 270, pp. 122861 Available at: <https://www.sciencedirect.com/science/article/pii/S0959652620329061>. (Accessed 13th May 2023).

Filimonau, V. *et al.* (2023) 'Resourcefulness of chefs and food waste prevention in fine dining restaurants'. *International Journal of Hospitality Management*. 108, pp.103368 Available at: <https://www.sciencedirect.com/science/article/pii/S0278431922002341>. (Accessed 14th May 2023).

Hilton, (2023) *History and heritage*. Available at: <https://www.hilton.com/en/corporate/> (Accessed 31st May 2023).

Hospitality ON. (2023) *Accor Hotels*. Available at: <https://hospitality-on.com/en/worldwide-hospitality-awards/accorhotels/accorhotels-food-waste-reduction> (Accessed 13th May 2023).

Jackson, D. (2023) *Winnow partners with Hilton, UNEP and Goumbook for Green Ramadan*. Available at: <https://blog.winnowsolutions.com/winnow-partners-with-hilton-unep-and-goumbook-for-green-ramadan>. (Accessed: 16th May 2023).

Khatte, A. (2019) 'Analysis of hotels' environmentally sustainable policies and practices'. *Sustainability and corporate social responsibility in hospitality and tourism*. Available at: <https://www.emerald.com/insight/content/doi/10.1108/IJCHM-08-2018-0670/full/html>. (Accessed: 16th May 2023).

Localle, E. (2021) *The best sustainability practices in hotels*. Available at: <https://www.mews.com/en/blog/sustainability-in-hotels>. (Accessed 14th May 2023).

Mensah, I. (2020a) 'Waste management practices of small hotels in Accra: An application of the waste management hierarchy model'. *Journal of Global Business Insights*. 5(1), pp.33-46. Available at: <https://digitalcommons.usf.edu/cgi/viewcontent.cgi?article=1081&context=globe>. (Accessed: 16th May 2023).

Mensah, I. and Ampofo, E. T. (2021b) Effects of managers' environmental attitudes on waste management practices in small hotels in Accra *International Hospitality Review*. 35(1). Available at: <https://www.emerald.com/insight/content/doi/10.1108/IHR-08-2020-0032/full/html>. (Accessed: 20th May 2023).

Moggi, S., Bonomi, S. and Ricciardi, F. (2018) 'Against Food Waste: CSR for the Social and Environmental Impact through a Network-Based Organizational Model'. *Sustainability*. 10(10), p. 3515. Available at: <http://dx.doi.org/10.3390/su10103515>. (Accessed 13th May 2023).

Morea, et al. (2021) 'Circular economy and corporate social responsibility: Towards an integrated strategic approach in the multinational cosmetics industry', *Journal of Cleaner Production*, 315 pp. 128232 Available at: <https://doi.org/10.1016/j.jclepro.2021.128232> (Accessed 12th May 2023).

Nassetta, J. C. (2023) *Hilton Worldwide Holdings*. Available at: https://stories-editor.hilton.com/wp-content/uploads/2023/04/HILTON-WORLDWIDE-INC_10K_2023_V1.pdf (Accessed: 16th May 2023).

Ng, Y. and Sia, J. (2023) 'Managers' perspectives on restaurant food waste separation intention: The roles of institutional pressures and internal forces'. *International Journal of Hospitality Management*. 108, pp. 103362 Available at: <https://www.sciencedirect.com/science/article/pii/S0278431922002286>. (Accessed: 16th May 2023).

Oaky, (2022) *Sustainability in the hospitality industry: 9 ideas to adopt*. Available at: <https://oaky.com/en/blog/sustainability-in-the-hospitality-industry>. (Accessed 14th May 2023).

Oliveira, B. et al. (2016). Reducing Food Waste in the Food Service Sector as a Way to Promote Public Health and Environmental Sustainability. [Book]10.1007/978-3-319-24660-4_8.

Prof.Dr. Wu,K.-S. (2023) Special Issue “Contemporary Issues and Future Trends in Sustainability Hospitality.” *Sustainability* Available at: https://www.mdpi.com/journal/sustainability/special_issues/contemporary_issues_future_trends_sustainability_hospitality#info (Accessed: 14th May 2023).

Questrmg, (2018) *2019 Restaurant Trends # 2: Corporate Social Responsibility*. Available at: <https://www.questrmg.com/2018/10/19/2019-restaurant-trends-2-social-responsibility/>. (Accessed 12th May 2023).

Salama, W. and Abdelsalam, E. (2021) ‘Impact of Hotel Guests’ Trends to Recycle Food Waste to Obtain Bioenergy’. *Sustainability*. 13(6), pp.3094 Available at: <https://www.mdpi.com/2071-1050/13/6/3094>. (Accessed 14th May 2023).

Srijuntrapun, P., Sukwong P., and Marshall, A. (2022) The role of food waste hierarchy as Thai hotels seek to fulfill their corporate social responsibility. *Heliyon* 8(10) pp. E11201. Available at: <https://www.sciencedirect.com/science/article/pii/S2405844022024896#fig2>. (Accessed 8th May 2023).

Stories Hilton. (2020) *Reduce and Reuse: Tackling the Global Food Waste Challenge*. Available at: <https://stories.hilton.com/emea/releases/reduce-and-reuse-tackling-the-global-food-waste-challenge>. (Accessed: 16th May 2023).