



# Drivers of food waste generation and best practice towards sustainable food waste management in the hotel sector: a systematic review

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## Abstract

The growing volumes of food globally are lost or wasted along the entire food chain. However, a high effort in investigating why food waste (FW) occurs remains scattered for each subsector in detail, particularly in the hotel sector. Therefore, this systematic review focuses on FW issues in the hotel sector to identify FW generation drivers and good business practices towards mitigating FW. The review compiled literature from 25 related studies and adopted the PRISMA statement, utilising two leading journal databases: Scopus and Web of Science. This review shows that hoteliers initially feel guilty about wasting food, primarily based on financial loss rather than concerns about the social and environmental footprint. Based on the review, hotel staff from various internal departments faced conflicts between good intentions with reducing FW and the guests' unsustainable food consumption patterns. Within the scope of this review, we suggest that further research is necessary with a focus on procedures and regulations (hotel policy) to encourage guests to minimise plate waste and redistribute unsold hotel food to charities or food banks. Overall, this review offers some interesting guidelines and actionable inferences to reduce FW generation in the hotel sector.

**Keywords** Hoteliers · Hotel management · Buffet leftover · Plate waste · Preparation of food · Serving food

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## Introduction

Food waste (FW) occurs along the entire food supply chain, starting from farm to fork. According to a report by the United Nations Food and Agriculture Organization (FAO), nearly 1.3 billion tonnes of edible food never gets eaten annually. These uneaten edible food usually ends up as waste on a global scale, the value of which is approximately equivalent to US \$750 billion (Gustavsson et al. 2011; Heidari et al. 2019). Globally, 820 million people still suffer from hunger and malnutrition, while one third of the total food for human consumption is lost and wasted (FAO et al. 2019). FW leads to loss of life-supporting nutrition and affects food security, especially for feeding the growing global population (Loke and Leung 2015; Zhang et al. 2018). When each kilogram of edible food goes to a landfill, every resource that has been invested in it is lost and wasted, including fertiliser, water, land, labour, and energy used in the food harvest, manufacturing, processing, distribution, serving, and consumption (Thyberg and Tonjes 2016; Kasavan et al. 2021).

The hotel sector generates a more significant amount of FW both in developed and developing countries due to the