

# **Possibilities for the Prevention of Food Waste in the Hospitality Sector - Case Study of Hotels in Heraklion, Greece**

<sup>1</sup>Philipp Fuchs, <sup>1</sup>Dominik Leverenz, <sup>1</sup>Gerold Hafner, <sup>1</sup>Detlef Clauß, <sup>2</sup>Nikolaos Papastefanakis and <sup>1</sup>Martin Kranert

<sup>1</sup>*University of Stuttgart, Institute for Sanitary Engineering, Water Quality and Solid Waste Management, Bandtäle 2, 70569 Stuttgart, Germany*

<sup>2</sup>*Hellenic Mediterranean University, Department of Agriculture, Heraklion, 71410, Greece*

## **Abstract**

For Greece with a population of 10.5 million, it is estimated that more than 25 million tourists visit the country each year. Additionally, an extra number of 5 million domestic tourists are estimated (OECD, 2016). According to a study conducted in the region of Crete by Gidarakos et al. (2006), food waste is the main fraction of the municipal solid waste during the high tourism season, most of it arising in hospitality units. This fact provides an excellent opportunity for implementing kitchen based waste prevention systems. Large volumes of food, handled by professionals, with an explicit desire to reduce the amount of food that is thrown away, not just for environmental, but mostly for economic reasons. In order to reduce the amount of food waste, it is essential to know where, why and how much food is discarded. For this aim the "RESOURCEMANAGER-FOOD" (RMF) is applied in different hospitality units in Heraklion, Crete, Greece. The RMF is a hardware-software tool for the recording, analysis and reduction of food waste. By including evaluation parameters like costs or greenhouse emissions, the user gets direct feedback about the impacts of the discarded food, which rises awareness towards this issue. The measurement of the food waste quantities in different categories, as well as the reasons for the discard are conducted with the RMF by the kitchen staff. After analysis and evaluation, the kitchen managers receive feedback about the avoidance potential and possible reduction measures. The daily food waste generation due to overproduction show that some hotels generate many times more food waste per guest than others. When it comes to the composition of food waste, the hotels have in common that a large amount of the total food waste is salad, mainly mixed salad. Furthermore, the main courses and supplements are a large part, as well. A comparison of the plate leftovers per guest between the main restaurant (buffet style) in one hotel and the *a la carte* restaurant in two others showed that the amount of plate leftovers per guest is significantly lower in the buffet style restaurant. The measurements showed the daily food waste generation, the food categories with highest saving potential and theoretical

possibilities to reduce food waste. The practical implementation of reduction measures is the responsibility of the hotels. They decide to what extent they want to and are able to implement these actions.

**Keywords:** food waste, prevention, hospitality sector, digital tool

### **References**

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