

# Food waste management in the hotel industry



This essay explores the issue of food waste within the hotel industry focusing upon, the causes of this and how hospitality organisations have responded to this problem and the solutions that have been implemented so far to address it. A brief introduction of global food waste, along with an historical background of the hospitality industry will be discussed as well, concluding with solutions and reported case studies from the industry.

A report by Provost (2011) states that the Food and Agriculture Organization of the United Nations (FAO) have estimated that one third of the global food produced for consumption is wasted every year. A big portion comes from industrialised countries where people can afford it, for instance by mentioning restaurants where, for a fixed price, customers can eat as much as they want and ultimately they end up filling ' their plates with more food than they can actually eat' (Gustavsson et al., 2011: 14). A few years before, Sloan et al. (2009) asserted that the food service industry was responsible for one third of the 1. 3 billion tonnes of waste, generated every year within the European Union.

To clarify, food waste represents all edible food not consumed by humans, (Okazaki et al., 2008; Butzy & Hyman, 2012). Buzzy & Hyman (2012) also emphasise the three main reasons for food loss and waste:

Global population increase, which means in turn an increase in food production to feed more people;

The relevancy of food waste costs, considering also the expenses of the food lifecycle stages;

The involvement of other important resources in food production such as water, lands etc.

In 1992, the Rio Earth Summit Conference discussed topics regarding environmental issues, in order to point out possible recovery solutions (Cummings, 1992; Shanklin, 1993; Kirk, 1995, 1998; Chan & Lam, 2001; Hsieh, 2012). Kirk (1998) points out the wish for change shown by several agreements signed between the end of the 80s and early 90s, but he critically adds that such agreements are irrelevant without strong support from local government and authorities. However, due to legislative pressure and government-provided environmental strategies and plans, the majority of companies have shown pro-activeness, since then (Kirk, 1995, 1998; Enz & Siguaw, 1999; Bohdanowicz et al., 2004; Bohdanowicz, 2006).

Before the Rio Summit, Cummings & Cummings (1991) talked about sensitivity regarding waste management in the food service sector, but with a strong collision between the industry and the governments; however Solid Waste Management (SWM) programs had already been requested of hotel managers (Shanklin et al., 1991). It was not a coincidence then, that in 1992, the cooperation of some international hotel companies founded the International Hotel Environment Initiatives (IHEI) (Kirk, 1998; Hsieh, 2012). As such, Kirk (1998) reports the Environmental Action Pack for Hotels, developed in mid 1990s and endorsed by associations from which the IHEI and IHA (International Hotel Association) can be found; to be a guide supporting hoteliers in making their hotel(s) more environmentally friendly. This guide could be regarded as a response to those issues forecasted by Shanklin (1993), who threatened that most of the environmental problems, <https://assignbuster.com/food-waste-management-in-the-hotel-industry/>

predicted at the Rio Summit, will have occurred in the hospitality industry in the years to come. It is well documented that awareness within the international hotel industry had started to expand (Shanklin, 1993; Chan & Lam, 2001; Bohdanowicz et al. 2004; Bohdanowicz, 2006; Mensah, 2006; Hsieh, 2012), even though it had not been regarded as the principal cause of environmental pollution (Cummings & Cummings, 1991; Kirk, 1995, 1998).

The largest portion of waste generated by the industry is food, which is regarded as part of solid waste (Cummings, 1992; Alexander 2002; Sloan et al., 2009; Buzby & Hyman, 2012). Shankling (1993) reports findings in the US, from the late 1980s, where mid-class and first-class hotels previously wasted in between 1. 2 and 2. 0 pounds of waste per served meal, respectively. Estimates, regarding UK, between the 1970s and early 1980s provide evidence that 15. 5% of edible food generated by the hotel industry was wasted (Kirk, 1995).

Although Shankling et al. (1991) and Shanklin (1993) had argued that across the '80s and '90s food represented only a small percentage of solid waste, changes during the next decade have been shown by Alexander (2002), who did research amongst 25 hotels which show how food has become a major source of waste (Graph 1). Accordingly Bohdanowicz et al. (2004) and Bohdanowicz (2006) showed concern for the fact that the amount of waste generated by this industry has a far worse impact on the environment than others.

According to Youngs et al. (1983) studies and investigations regarding food wastage have existed since the late 1800s. Even though these studies

referred both to food-at-home and food-away-from-home, they identified that food is wasted in three different steps: during preparation, during cooking and when this is left in the plate. Similarities can be seen in Sloan et al. (2009), even though they identify only two ways of wasting food: pre-consumer, which comprises that food that is thrown out during preparations, and post-consumer, which is the customer leftover. In agreement, Buzby & Hyman (2012) also discuss more various reasons why food is lost and thus wasted; their argument blames the manufacturing sector, retail, foodservice and consumer. As regards the retail sector most waste comes from raw material, whereas in the food and beverage sector from cooked food (Hyde et al., 2003; Henningsson et al., 2004). A very common way of wasting food, which occurs in the foodservice sector, is mentioned by Trung & Kumar (2005), who accuse those chefs responsible to not pay much attention to the amount of food left in the stock before issuing an order to suppliers.

In terms of solid waste, it is a matter of fact that hospitality companies want to get rid of it (Shankling et al., 1991; Cummings, 1992; Erdogan & Baris, 2007). For this reason hospitality customers show more interest for those hotels that environmentally friendly (Kirk, 1995; Bohdanowicz, 2006; Sloan et al., 2009; Han et al., 2010). Reinforcement is given by Alexander (2002), who argues that concern about food waste in the hotel industry has led to develop strategies whose outcome will lead into an increase in cost savings.

Despite the importance of reducing solid waste, previous research has highlighted that this procedure is not convenient, in terms of costs, for hospitality managers, since only some programs can increase profit, whereas the majority only allow costs slash (Cummings, 1992; Bohdanowicz, 2006).

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Sort of disagreement is conveyed by Hyde et al. (2003), who quote that waste reduction leads 'to lower costs, improved profitability and enhanced environmental performance' (p. 327). According to research conducted in a UK region, a well-done waste minimisation can reduce losses by 25% and that in some cases most of paybacks occurred within the first four months since the implementation of the new strategy (Hyde et al., 2003; Henningsson et al., 2004).

Moreover previous research has stressed how sending wasted food to landfill is recognised as a very expensive and non-environmental process (Shanklin et al., 1991; Cummings & Cummings, 1991; Cummings, 1992; Shanklin, 1993; Kirk, 1995; Alexander, 2002; Butler, 2008; Sloan et al., 2009; Radwan et al., 2010; BBC, 2011; Buzby & Hyman, 2012). In addition, more than one author proclaim that this procedure is becoming even more expensive, due to the fuel used for the transportation and the fact that landfills are being closed in terms of capacity, which in turn means longer transportations to farther landfills and higher costs (Shanklin et al., 1991; Hammond, 2007; Butler, 2008).

BBC (2011) highlights how 77% of 130, 000 tons of food wasted by the UK hospitality industry could have actually been recycled. Consequently the Environment Secretary of Scotland, Richard Lochhead, supports the reimplementation of such wastage as energy or fertilizer (BBC, 2011). It has also been discussed that the reduction of food waste would benefit the reduction of pollution (Henningsson et al., 2004; Sloan et al., 2009; Radwan et al., 2010; Kuhn, 2011). Indeed, research conducted by the Waste & Resources Action Program (WRAP) claims that only 48% of the UK hospitality <https://assignbuster.com/food-waste-management-in-the-hotel-industry/>

industry food wastage is recycled (whereas the rest is sent to landfills), whose 77% could be re-used, thus reducing 950, 000 tons of CO2 emissions (Kuhn, 2011). Very recently a new agreement was signed by 60 hospitality businesses within the UK, which entails an extreme cut in food waste, which in turn will reduce CO2 emissions in the atmosphere (Stamford, 2012).

Henningsson et al. (2004) discuss how the landfilling system has evolved in the UK, with the introduction of a strict control procedure of the food sent for disposal, by using organic and biodegradable items for compost feedstock. In reference to what said above, Hammond (2007) evidences how the Hilton Worldwide has started waste reduction a few years ago, through an experiment in their hotel in Glasgow, which cut the solid waste sent to landfills roughly by 30%. Similar results were accomplished by the Hotel Bel Air years before (Enz & Siguaw, 1999).

Several strategies for food waste management have been developed (Cummings, 1992; Shanklin, 1993; Alexander, 2002; Baker, 2005; Trung & Kumar, 2005; Bohdanowicz, 2006; Erdogan & Baris, 2007; Sloan et al., 2009; Radwan et al., 2010).

Very similar between each other are the waste minimisation hierarchies developed by Cummings & Cummings (1991) and Kirk (1995), the latter's shown in Table 1.

More lately, Radwan et al. (2010) mentioned a more updated hierarchy developed by Waste on Line (2006), as shown in Figure 1. However they critically argue that composting should have been included too.

Hyde et al. (2003) and Henningsson et al. (2004) introduce the business club approach, firstly implemented in the UK region of East Anglian. Such a method encompassed members of club (both businesses and government institutions), who came up and proposed new ideas in order to minimise wastage. They provided training and consultancy to the East Anglian regional food and drink businesses, in order to help them cut operational costs and achieve waste minimisation. This method resulted in allowing businesses to save lots of money annually.

A similar approach to Kirk's (1995) is argued by Hammond (2007) and Sloan et al. (2009), better known as the three 'R': reduce, reuse and recycle. In terms of food, Sloan et al. (2009) describe only the first two, as recycling refers to other materials such paper or plastic.

As regards reduction, Sloan et al. (2009) report restaurants that charge customers for leftovers from buffets; they also suggest avoiding an excessive food preparation, but rather cook when ordered. Moreover, they advise restaurant managers to remunerate those staff members that generate less waste. Another method of reduction is identified by Cummings (1992), who suggests refilling condiments containers, when this is permissible. However Alexander (2002) asserts that the reduction of food waste is not so simple; by mentioning head chefs from two workplaces in Minnesota, three different steps had to be followed such as monitoring the food inventory, the amount of food per meal, and the percent of waste per meal; despite hard work, good results were achieved.



When it comes to reuse, Trung & Kumar (2005) discuss a study conducted in Vietnam revealed that a great number of hotels sell part of their wasted food to local collectors, who use it to feed animals, whereas another part is sold for recycling. The reimplementation of wasted food as compost is also cited by other authors (Shanklin, 1993; Enz & Siguaw, 1999; Alexander, 2002; Bohdanowicz, 2006; Mensah, 2006; Erdogan & Baris, 2007; Radwan et al., 2010).

A further way to reusing wasted food is to use it as diesel fuel (Sloan et al., 2009). This had already been reported by Baker (2005), that mentions the pick-up trucks run by used vegetable oil implemented by the 3 Rivers Eco Logde Hotel, in Dominica, and which additionally uses kitchen composts to till organic fruits and vegetables, which had already been implemented by the Colony Hotel a few years in advance (Enz & Siguaw, 1999). A very similar reusing solution is introduced by Bohdanowicz (2006), by recommending the transformation of food into biogas.

Although food donation is somewhere forbidden by sanitary law and local health departments, food can be donated either to local charities or farmers (Bohdanowicz, 2006; Erdogan & Baris, 2007; Sloan et al., 2009). It is not a coincidence that in early 2012, London hospitality firms allied to donate leftover foods for charity (Zuhn, 2012), which was also implemented by the International Hotel Groups (IHG) a few years in advance (Murray, 2008) and very recently by Hilton Worldwide (Tuppen, 2012).

Due to the fact the hospitality industry mainly comprises small and independent businesses, which are not willing to implement environmental

because of their high costs, it can be said that if taken individually they do not have a big environmental impact, but they do if put altogether (Kirk, 1995; Radwan et al., 2010). Furthermore Kirk (1995) adds four reasons which supposedly should push owners and managers to embrace the green market: customer pressure, legislation pressure, cost savings and waste reduction. In agreement, Chan (2009) adds market share increase and reputation improvement.

It is a management duty to set the standards to be met, in terms of environmental policies (Kirk, 1995; Dittmer & Keefe III, 2003; Dopson & Hayes, 2010) along with training both for customers and personnel, necessary in order to achieve results (Cummings & Cummings, 1991; Kirk, 1995, 1998; Enz & Siguaw, 1999; Bohdanowicz et al., 2004; Bohdanowicz, 2006), not without being monitored, controlled and communicated (Kirk, 1995); some hotels, for instance, created committees (Enz & Siguaw, 1999). Support is given by Chan (2009), who discusses the importance of an Environmental Management System (EMS) within a company, which investigates and sets goals to benefit the environment through the implementation of ISO14001, an environment policy guide for companies. According to Chan (2009) such a strategy has already helped hotels achieve good financial results.

## **Conclusions**

This literature has strongly stressed that food waste is a global issue and that the hospitality industry is highly involved as a cause. Despite incomprehension in the past, government institutions and firms should work and cooperate closely together, with a particular support for small and

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independent businesses, which are encountering difficulties in terms of costs and time.

It is a matter of fact that food waste can be easily eliminated or minimised and many strategies have already proven that it can be beneficial both for companies, in terms of costs saving and profit achievement, and the environment, by reducing pollution.

To conclude, support for a change must be displayed by consumers, employees and managers as well. It is necessary to train and monitor staff member, in order to achieve results, strongly supported by the management. The consumer must be involved too and for this reason the majority is already showing interest for green hotels, which are widely expanding.