

# SOURCES OF FOOD WASTE IN THE HOSPITALITY INDUSTRY: SOCIAL, ECONOMIC AND ENVIRONMENTAL CONSEQUENCES

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**Abstract:** Designing and implementing a monitoring strategy to reduce the amount of food wastage in the entire food sector is a pressing and topical global challenge for both producers and authorities. The present study aimed to identify the largest and most common sources of food waste in the hospitality industry. The reasons impacting the three dimensions of food waste: economic, social and environmental were presented. The cost of raw materials, energy consumption, employee wages, water footprint, production waste quantities, energy wastage and food donation were analysed from this point of view. It was also assessed: life-cycle of served meals, carbon, water and soil footprints, respectively negative environmental impacts expressed in eco-points in the hospitality sector. The study highlights the imperative of responsible use of resources in the preparation of meals in the hospitality industry and the importance of reducing the waste resulting from their processing in order to facilitate the sustainable development of businesses in this sector and contribute to the protection of the environment.

## • Introduction

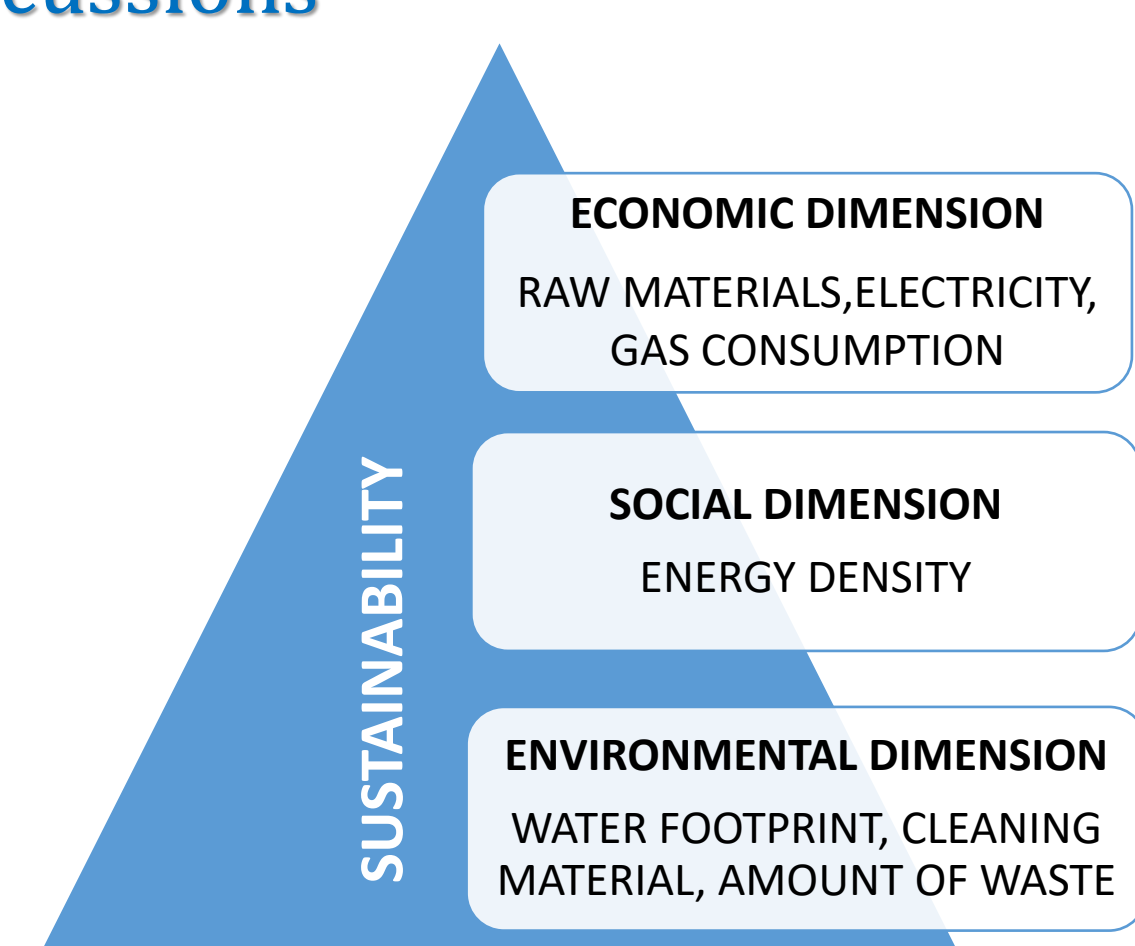
The World Resources Institute considers food losses and waste "the unintended result of an agricultural process". Another definition associates them with a technical limitation of storage, packaging or marketing conditions. They are considered "food of good quality and suitable for human consumption" but which is discarded. On the other hand, the European Union (EU) defines food waste as "fractions of food and inedible parts thereof that are excluded from the food supply chain for subsequent recovery or disposal. In recent decades, the amount of processed food has grown faster than the rate of human population growth, so that today, enough food is produced to feed 10 billion people, which is the projected world population for 2050. However, it is estimated that one third of food is lost or wasted as it passes through the supply chain, causing major environmental, social and economic problems. Nowadays, finding solutions to quantify the social, environmental and economic impact of food service waste is a real challenge. This requires considering a range of factors along the food production chain that impact the economy, the environment and the health of consumers who dine out and at home.

Addressing food waste in food services from a sustainable dimensions is a possibility to solve the problem as a whole.

## • Material and method

The bibliographic study carried out in order to prepare this study takes into account the scientific aspects reported in papers, magazines and scientific books in a time interval between the years 2014 and 2019. The investigations were carried out using the operators "Food AND Supply Chain AND Waste AND Recovery" , resulting in the identification of 50 scientific works, of which 25 were taken into account, considered to be the most relevant for the subject addressed.

## • Results and discussions



Impact of food waste in food services

## Economic Dimension

Understanding the economic dimension is vital to drive waste reduction in food production. Businesses must be substantiated and managed in such a way that the equipment and tools used bring financial profits without generating food losses.

The cost of wasted raw materials is essential and reveals the financial value spent on food that was thrown away. Other elements related to the economic dimension must also be taken into account, such as the costs of increasing the number of products, energy, transport, distribution, processing and labor.

## Environmental Dimension

It aims at reducing polluting gases, minimizing waste and reusing production surplus. One of the basic ways in which the impact of waste generation can be assessed is the amount wasted, expressed in volume or weight. This waste can affect the soil and stimulate the evening effect generated by polluting gases caused by the accumulation of organic waste. Cumulative environmental damage can be irreversible and affect many future generations

## Social Dimension

The social dimension can be perceived internally and externally. In this dimension, management responsibilities and good practices are considered with companies' employment and community impact with actions that reduce hunger and encourage local trade, for example. A healthy, organized work environment must be guaranteed, with adequate remuneration and actions that value and encourage the well-being of the population and the environment.

The social dimension also stands out for the destination of the surplus of food suitable for human consumption.

## • Conclusions

In the tertiary sector, specifically in food services, combating waste actions are essential given the large number of meals prepared. Although there are several strategies to minimize the cost of FW, there are numerous causes that influence this impact. The causes of wastage need to be identified within every single activity and process of the foodservice chain identifying its critical points.

