

The recommendations for the reduction and prevention of food waste in restaurants in Novi Sad

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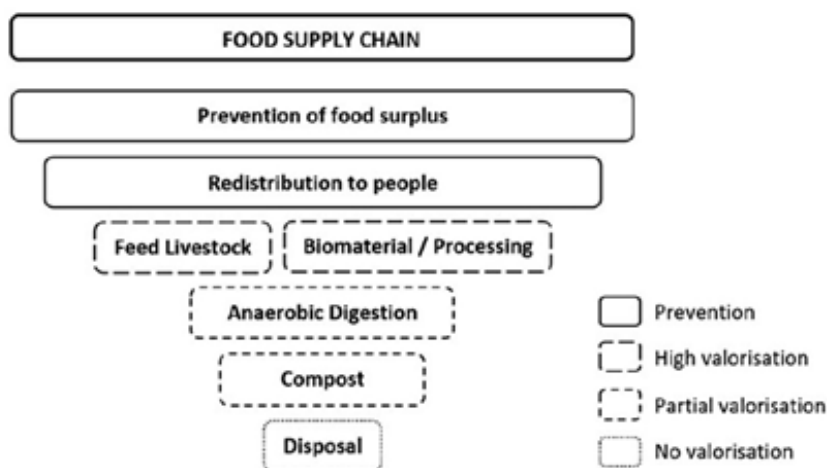
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Abstract

In modern and sustainable waste management systems, food waste has been marked as one of the most important waste streams, since its inappropriate management can have high potential negative impact on the environment and human health. The situation is compounded even further if it is taking into account the natural resources used to produce food that is never actually consumed, and the greenhouse gases emitted across the food lifecycle. In Serbia, as a transition country, with a relatively undeveloped waste management system, the majority of generated food waste ends up at non-compliant landfills, causing high environmental problems. Apart from food waste in households, the significant amounts of this waste flow are generated from the commercial and hospitality sector sources, including restaurants. The main objective of the paper was to define recommendations for the reduction and prevention of food waste in restaurants.

In line with the waste prevention hierarchy and circular economy principles, the focus in this research was on the prevention of food waste, i.e. limiting the generation of surplus food at the source. In such strategies, prevention of food waste needs to have advantage over its management and better valorisation.

Figures 1. The food waste hierarchy in context of circular economy (Treutwein et al., 2021)



This is particularly evident considering that about 75% of generated food waste within the foodservice sector represent the part of food flow which was edible at the point of its disposal (e.g. surplus dishes and leftovers from guest's plates) (Filimonau et al., 2021). Kasavan et al., 2021 further emphasized that minimizing and prevention of food waste allows economic, social and environmental benefits, by reducing costs and GHG emissions and improving food security and better efficiency of natural resource use, on the other hand.

The canteens against food waste action aims at reducing food waste in canteens and at increasing customer awareness about their food choices: choices that directly affect their lunch but that may become a useful tool for the prevention also in the consumption of food at home. For this reason, part of the tool refers to the planning of their food consumption choices and awareness of reduction of food waste and the consumption of leftovers.

In line with aforementioned, recommendations for the reduction and prevention of food waste in studied restaurants can firstly go into direction of conduction of large-scale consumer advocacy campaigns in order to raise awareness and educate consumers about ways to save money and reduce wasted food. First phase

could be based on placing of simple posters above the static tray slide, and/or questionnaire and flyers to be printed out and distributed to costumers at the entrance to the restaurants. Also, due to noticed overproduction and big portions in most restaurants, optimizing themass of the main meal components and adaption of portions could contribute to prevention of food wastage. Furthermore, food waste from the kitchen could be used in value-added processing, i.e. to extended the usable life of wasted food components through processing methods such as: making soups, sauces, and other recipes that include fruit or vegetables (e.g. to use fruits to make fruit salads and/or cakes; to use old bread to make cookies or bread crumbs, etc). Redistributing surplus of edible food to different organizations such as: Red Cross, food banks, vulnerable organizations an others, cloud also be part of food prevention strategy.

Republic of Serbia is currently in process of preparing for the EU membership, in corporating and implementing key EU Directives in the field of waste management. In terms of biodegradable municipal waste, the most important is Landfill Directive which required from the member states to set up national strategies for the implementation of the reduction of biodegradable municipal waste going to landfills in a specific interval of time by means of recycling, composting, biogas production or materials/energy recovery. Serbian legislation related to management of biodegradable waste is harmonized with objectives defined in the EU Landfill Directive, with note that time frame for achievement of goals for reducing the quantities of biodegradable waste deviate in comparison to current EU member states (Vujic et al., 2017, Batinic et al., 2011). Observing this at the local level, where city or municipal departments taking complete responsibility for generated waste and its management, one of the most important tasks for city of Novi Sad in the future will be reduction of direct landfilling of biodegradable waste.

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