Levegő Munkacsoport

Food Waste Management in Hungary and Areas of Improvement

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Globally, food insecurity affects hundreds of millions of people, while at the same time, enormous quantities of food are wasted. In 2022, 1.05 billion tons of food were estimated to be wasted in the retail, food service and household sectors combined. This corresponds to 19 percent of food available to consumers being wasted, at the retail, food service, and household level.[1] This mismatch is not only a social and humanitarian concern but also an inefficiency that puts pressure on critical resources such as energy, land, and water. Furthermore, when food waste decomposes in landfills, it generates methane, a potent greenhouse gas contributing to climate change. In Hungary, household food waste amounts to 66 kg per capita per year, which is slightly below the EU average of 70 kg[2].

Reducing food waste has become a priority on the Hungarian government's agenda, with a target to halve household food waste by 2030[3]. A key national initiative is the "Wasteless" Project, organized by the National Food Chain Safety Office (Nébih)[4]. This program focuses on education, awareness campaigns, data collection, and sharing best practices to prevent food waste.

Currently, Hungary has structured rules and obligations for certain aspects of food waste management, such as donation, along with voluntary guidelines that provide useful frameworks for stakeholders. However, establishing clear and consistent rules for remaining gaps is crucial to ensure coherence, reduce confusion, and streamline efforts nationwide.

It is vital to follow the food waste hierarchy, giving top priority to preventing waste at its source. Prevention includes various measures, with awareness-raising and education as primary actions. Additional good practices can be implemented in the retail sector, such as better regulations on "best before" and "use by" labelling, and price reductions for products nearing expiry. In Hungary, producers often assign shorter shelf lives to products as a risk-avoidance

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[1] United Nations Environment Programme (2024). *Food Waste Index Report 2024. Think Eat Save: Tracking Progress to Halve Global Food Waste ,* https://www.unep.org/resources/publication/food-waste-index-report-2024

[2] https://maradeknelkul.hu/en/hungarians-throw-away-less-food-than-the-eu-average/

[3] https://wayback.archive-it.org/12090/20250412082714/https://hungarian-presidency.consilium.europa.eu/media/32nhoe0p/programme-and-priorities-of-the-hungarian-presidency.pdf

[4] https://maradeknelkul.hu/en/about-wasteless/

measure, which can lead to premature disposal. To address this, Hungary bans retailers from discarding food before the "best before" date and requires them to offer it for free for up to two days past expiration. Standardizing shelf-life determinations nationwide and providing clear storage instructions on packaging—drawing on resources like the UK's 2019 Food Labelling Guidance Toolkit by WRAP[5]—would help consumers make better-informed choices. Furthermore, introducing government-mandated dynamic pricing systems, using 2D barcode scanning to adjust prices of products approaching expiry, could incentivize customers to purchase these items, further reducing waste.

Following prevention, the next step in the food waste management hierarchy is redistribution. In Hungary, the Hungarian National Food Bank acts as a central hub, providing logistical support for food donations. With its know-how in working with large multinational companies, it is the preferred partner for many actors in the retail sector. For the largest retailers with annual revenues above a certain threshold—such as Lidl, Aldi, Tesco, Penny, and Spar—it is mandatory to donate surplus food and to submit a food waste prevention plan.

The Hungarian National Food Bank also coordinates with smaller donors and manages the distribution of donations. In addition to the National Food Bank, municipal charities, local non-profits, and religious organizations play an important role in supporting food donations on a smaller scale. According to Dr. Gyula Kasza, head of the Food Economics Research Group at the University of Veterinary Medicine Budapest, large stakeholders such as event caterers and big retailers already have established mechanisms for donating surplus food and are experienced in managing these processes. However, for small and medium-sized enterprises (SMEs), food donation remains more demanding in terms of time, effort, and resources. An impactful next step for Hungary's donation system could therefore be a stronger focus on engaging small shops, cafes, and local businesses, as well as promoting shorter, more flexible donation chains. A crucial initiative for SMEs would be the development of tailored systems for measuring food waste, designed to fit their specific capacities and constraints. Simplifying administrative requirements for small donations and expanding the range of acceptable donated foods would further encourage wider participation.

Additionally, a digital platform that matches donors and recipients in real time could optimize logistics by enabling coordinated pickups and route planning, reducing barriers for local food recovery organizations. In addition, platforms like the MUNCH App also offer a practical solution for SMEs and local businesses, enabling restaurants and shops to sell unsold yet good-quality food at significant discounts[6].

From a business perspective, many retailers and companies still perceive food waste management as an additional cost rather than an opportunity. To help shift this mindset, the government could promote cost-benefit transparency by providing impact calculators that demonstrate the financial and environmental benefits of donation and waste reduction. In parallel, increasing the cost of food loss through measures such as organic waste landfill bans and taxes—similar to policies already implemented in Germany[7] and Finland[8]—would create stronger economic incentives for businesses to take action.

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[5] https://food.ec.europa.eu/system/files/2021-05/fw_lib_dm_labelling-guide_wrap.pdf
[6] https://munch.eco/hu/fooldal/?lang=en_US
[7] https://www.bmuv.de/fileadmin/Daten_BMU/Pools/Broschueren/abfallwirtschaft_2023_en_bf.pdf
[8] https://www.oecd.org/en/publications/oecd-environmental-performance-reviews-finland-2021_d73547b7-en.html

As a material recovery step, composting is an important way of managing biowaste. In Hungary, following the promotion of composting efforts, this practice has increased in recent years. There is a Community Composting Project[9] with a focus on air quality in place to promote composting rather than burning the waste and aiming to make the connection between food waste and emissions in people's minds. Budapest Municipality is also encouraging people to urban gardening, growing their vegetables and fruits. According to the Hungarian Compost Association, currently the landfill tax is below of operational costs of composting plants[10]. Incentives such as the education of farmers and the provision of subsidies to farmers who use compost can encourage the biowaste recovery and make it profitable. An interesting opportunity can be a small-scale industrial symbiosis between food services and farmers to exchange biowaste, which can be turned into compost, followed by discounted products offered by farmers to restaurants and cafes. This initiative can also further lead to establishing of a measurement and management system for small scale stakeholders.

Effective food waste reduction requires coordinated infrastructural, technological, and behavioral changes across the entire supply chain involving producers, retailers, food service providers, consumers, and policymakers. By implementing these measures in a coordinated, digitized food waste management system, Hungary can engage all relevant stakeholders. This approach would not only reduce social and environmental pressures but also enhance economic efficiency and resource sustainability.

[9] https://welovebudapest.com/en/article/2020/11/18/communal-composting-initiative-opens-in-taban

[10] ENT, CIC, ECN, ZWE & ACR+. (2024, January). *LIFE BIOBEST: Guiding the mainstreaming of best bio-waste recycling practices in Europe. D5.2: Policy brief including the regulatory barriers* (Deliverable No. 5.2). European Commission. https://ent.cat/en/

Food Waste Management in Hungary

Strategy	In Place	Challenges Arising from Lacking Strategy & Opportunities	Strategies & Suggestions In Place	Reference
Definition of Food Waste & National Strategy	Yes		• Hungary has a National Plan aligned with EU Waste Directive and follows the definition that EU has set[1,2] Wasteless[3] is the national food waste prevention programme that supports the prevention, management, and classification of food waste in Hungary, maintained by NÉBIH (the Hungarian National Food Chain Safety Office) and Wasteless Foundation.	1. https://leap.unep.org/en/countries/hu/national-legislation/national-waste-management-plan-2021-2027 2. https://www.eea.europa.eu/publications/many-eu-member-states/hungary/view 3. https://technical-regulation-information-system.ec.europa.eu/en/notification/24328 4. https://www.researchgate.net/publication/369794808_The_state_of_food_waste_in_Hungary_A_Report_by_the_Agricultural_Team_of_the_Embassy_of_the_Kingdom_of_the_Netherlands_in_Budapest_Hungary 5. Kasza, G., Dorkó, A., Kunszabó, A., & Szakos, D. (2020). Quantification of household food waste in Hungary: A replication study using the FUSIONS methodology. *Sustainability*, *12*(8), 3069. 6. Kasza, G., Szabó-Bódi, B., Lakner, Z., & Izsó, T. (2019). Balancing the desire to decrease food waste with

				requirements of food safety. *Trends in Food Science & Technology*, *84*, 74-76. 7. Szabó-Bódi, B., Kasza, G., & Szakos, D. (2018). Assessment of household food waste in Hungary. *British Food Journal*, *120*(3), 625-638. 8. Kunszabó, A., Szakos, D., Dorkó, A., Farkas, C., & Kasza, G. (2022). Household food waste composting habits and behaviours in Hungary: A segmentation study. *Sustainable Chemistry and Pharmacy*, *30*, 100839. 9. Kasza, G. (2025). Háztartási élelmiszer-hulladékok mennyisége Magyarországon. *Gazdálkodás*, *69*(3). 10. Kasza, G., Kunszabó, A., Mikulás, V., Dorkó, A., & Szakos, D. (2023). Fogyasztói élelmiszerhulladék-csökkentési programok Európában. *Élelmiszervizsgálati Közlemények*, *69*(2), 4435-4450. 11. Szakos, D., Szabó-Bódi, B., & Kasza, G. (2021). Consumer awareness campaign to reduce household food waste based on structural equation behavior modeling in Hungary. *Environmental Science and Pollution Research*, *28*(19), 24580-24589. 12. Vittuari, M., Herrero, L. G., Masotti, M., Iori, E., Caldeira, C., Qian, Z., ... & Sala, S. (2023). How to reduce consumer food waste at household level: A literature review on drivers

				and levers for behavioural change. *Sustainable Production and Consumption, 38*, 104-114. 13.
Price Reduction : Discounts on food close to the expiration date	No	• Use of 2D Codes and Dynamic Pricing can be implemented		
Strategies for Restaurants & Event Catering	Yes	• Suggestions, not an official regulation • Distribution of doggy bags can be introduced	Suggestions include : • The principle of FIFO (First In First Out) or FEFO (First Expired First Out) • Careful use of cooking oil • Smaller portions, smaller quantities of appetizers, children menu if possible • Employee training In catering sector, big stakeholders learned to work with donations.	https://maradeknelkul.hu/wp-content/uploads/2023/05/MN_good_practices_catering_2.pdf
Revaluation of Food	Yes	• A significant portion of companies either don't track their losses or consider investing in reduction technologies too costly. Even among more proactive firms, financial motives dominate, as there is little social pressure or market for by-products[2]. Better understanding of private benefits and costs in food waste and loss management would improve this barrier[3]. Private benefits could include things like cost savings from reducing	• In Hungary, the total cost of food waste is estimated at approximately 7,770 billion Hungarian Forints per year. This figure is based on an average cost of 465,000 HUF per tonne of wasted food, considering the high resource input in the food production and processing sector. *The cost of food waste refers to the total economic value lost when food is produced but not consumed. This includes not only the direct cost of raw materials and*	1. https://maradeknelkul.hu/wp-content/uploads/2023/05/MN_good_practices_food_industry_2.pdf 2. Kurthy, G., Darvasne Ordog, E., Dudas, G., Radoczne Kocsis, T., Szekelyhidi, K., & Takacs, E. (n.d.). *Food loss in the Hungarian food industry – Examining quantification problems and attitudes of managers and their impact on policy*. 3. Cattaneo, A., Sánchez, M. V., Torero, M., & Vos, R. (n.d.). *Reducing food loss and*

		waste, improved efficiency, or new revenue from byproducts. Private costs might involve expenses related to waste collection, processing, or investments in technology or training to reduce food waste • Impact calculator platform. Example: US Impact Calculator[4]	*production but also the added value from processing, packaging, transportation, energy, and labor.* • JRC Impact Calculator is used to measure natural resource savings by food waste prevention[5]	*waste: Five challenges for policy and research*. 4. https://insights-engine.refed.org/impact-calculator 5. https://publications.jrc.ec.europa.eu/repository/handle/JRC129382
Better Labelling & Innovative Packaging	Yes	• Suggestions, not an official regulation • The stores can be informed better with examplatory visuals on cost-effective solutions • Optimization of shelf life • Use of 2D Codes and Dynamic Pricing	• Producers often promise shorter shelf-life than what the product would actually require, as they try to take less risks. The shelf-life of a given product can be more accurately determined. • "Smart" labels: labels that get harder as the product goes bad, color based labels • Extending the information content of barcodes to sell older products first	https://maradeknelkul.hu/wp-content/uploads/2023/05/MN_good_practices_food_industry_2.pdf
Measurement & Monitoring of Food Waste	Yes	• SMEs dont have a food waste measurement system in place • Biowaste reporting above a certain financial level is obligatory, however, there is no 3rd party verification and no established fines. It reduces the reliability of the reporting system.	• Household waste is measured and monitored,it is planned to be carried out every year in Hungary [1] . • Examplatory table for retail, catering, and supermarkets, groceries to measure food waste weekly[2] • Diary based measurement where logging is done by households which enables high resolution • AI based image recognition is also in plan to detect what is wasted and eliminate burden of measuring • Obligated food waste reporting and prevention plan for retail companies above a certain annual revenue	1. https://maradeknelkul.hu/wp-content/uploads/2023/05/Project-Wasteless-Laymans-Report-final.pdf 2. https://maradeknelkul.hu/wp-content/uploads/2023/05/MN_good_practices_food_industry_2.pdf

Primary Production	Yes	• Guidelines/ good practices rather than mandatory rules	• Guideline on gleaning practice	https://maradeknelkul.hu/wp-content/uploads/2023/05/MN_good_practices_community_2.pdf
Landfill ban on organic waste	No	• Transportation to landfill is in third place for management of organic waste, retail sector states "waste is being transported by contract, but I do not know exactly what is happening to the biological material transferred[1] • Full ban on organic waste	• Hungary has only partially banned the landfilling of organic waste[2]	1. https://www.researchgate.net/publication/362911894_An_assessment_of_food_loss_and_waste_in_the_Hungarian_agri-food_supply_chain_Encouraging_sustainable_and_conscious_consumption 2. https://www.eea.europa.eu/publications/many-eu-member-states/hungary/view
Improvement of logistics and infrastructure in food supply chain	Yes	• Logistical problems of donation has been mentioned as a challenge by retailers, the logistic help from Hungarian Food Bank Association can be more visible • Logistic support for "direct donations" should be established. Short-distance and small load donations are costly compared to long haul transportation. • Lack of funds for logistics is considered as the most limiting factor for food donation[2]	• Logistics are handled by Hungarian Food Bank Association if in a partnership with them[1] • National Food Bank acts a hub for donations. It is the most popular choice for retail sector as they have know how in working with multinational companies. They also have hot line with smaller donations. • Municipal and local charities, and religious charities support the bank in smaller donations. • The newly established Food Rescue Center helps to collect all food with 24h+ best before date marking type that had been not offered to charity organisations earlier to prevent food waste (by the modification of the Food chain control law XLVI of 2018)	1. https://www.elelmiszerbank.hu/en/for_companies/food_donations.html 2. https://www.safefoodadvocacy.eu/wp-content/uploads/2023/01/FOOD-DONATION-POLICY-REPORT.pdf

Guidelines and Regulations on Redistribution	Yes	• A framework agreement can be established to standardize the process • Targeted communication to companies not yet active in the transfer of surplus food.	• Guidelines on what can be donated, responsibilites of both side, packaging, transportation • It is obligatory to donate food for biggest retailers like Lidl,Aldi, Tesco, Penny and Spar • Big retailers can not throw food before “best before” and “use by” dates. 2 days before expiration date, they can offer the food for free. • Guidelines for charitable donation of food surpluses from catering[1]	1. https://food.ec.europa.eu/document/download/3a26a6f9-3c57-4700-9ced-43686513407b_en?filename=fw_lib_gfd_hun_guide_hospitality_eng.pdf 2. https://portal.nebih.gov.hu/-/mire-figyeljunk-elelmiszer-adomanyozaskor
Financial incentives for donation	Yes		• There are tax benefits associated with the transfer of food surpluses for charitable purposes, which affect VAT and corporate tax[1]. - the book value of the food being donated can be fully expensed (tax deductible) and an additional 20% (of the book value) is a tax benefit[2]- • Donations in Hungary have been VAT-free since 2011, so donors are not liable to pay VAT on donations. • If the donation is made to a non-profit organization, the donor is entitled to a corporate tax credit, for which the relevant certificate is issued by the non-profit organization, for the net value of the donation declared by the donor.	1. https://food.ec.europa.eu/document/download/3a26a6f9-3c57-4700-9ced-43686513407b_en?filename=fw_lib_gfd_hun_guide_hospitality_eng.pdf 2. https://www.elelmiszerbank.hu/en/for_companies/food_donations.html
	Yes	• Retail owners state strict standards for charitable donations as the main factor	• Requirements for donation are estabilshed[1].	1. https://food.ec.europa.eu/document/download/1ddc7c28-994c-4a90-ac9c-8e84cea42ef6_en?filename=fw_lib_gfd

Enlarging the Range and Easing the Process of Donation		hindering the better utilisation of food losses. • Example from Italy : Donations of easily perishable food are exempt from communication obligations • Donation Platform that can connect donors and reciever, including a agreement framework. Example : US[2] An IT system is in place for donations in Hungary, but it is not used much by the retail side • Small size donors like cafes and shops require higher energy for donation, they are now the focus as retail sector got used to working with donations.	• "Munch" : An application where people can register through national food bank, established for micro donations.	_hun_guide_food-proc-retail-sect_eng.pdf 2. https://insights-engine.refed.org/solution-database/donation-coordination-matching

Budapest, 08.2025