WASTEWISE: A Transformative Step Towards Reducing Food Waste in Europe

Food waste prevention and reduction stand at the forefront of the European Green Deal and of the Farm-to-Fork strategy, aimed at fostering a fair, healthy, and sustainable food system. The EU is committed to reduce food waste per capita by 30% at retail and consumer level by 2030, and to reduce food losses along the food production and supply chain. The EU-funded WASTEWISE project – started on November 1st 2024 – will contribute to meet such targets. WASTEWISE project commits to design realistic pathways for food waste prevention and reduction to deliver co-benefits for climate change mitigation and biodiversity. The project also evaluates the nutritional losses and overall socio-economic rebound effects of prevention and reduction.

Food waste occurs at all levels of the agri-food supply chain, from production to consumption. According to Eurostat, in 2021 58.4 million tonnes of food waste were generated in the European Union, equivalent to 131 kilograms per person (with an associated market value of 132 billion euros) causing 252 million tonnes of CO_2 emissions, as well as wasting the environmental resources used to produce it, including land, water, fertiliser and other inputs. At the same time, more than 37 million people in the EU struggle to afford a quality meal every second day. At best, reducing and preventing food waste will help to address all these challenges, as it has an impact on changing economic inequality, poverty, and environmental damage. However, the overall impact of reduction and prevention needs to be systematically assessed. Along a duration of three years and a half, the WASTEWISE project will help to address such challenges by bridging the current data gaps in food waste and by including environmental impact assessment (Life Cycle Assessment (LCA), PEF-methodology) more holistically into food waste assessment.

Bridging data gaps in food waste management

One of the main challenges in addressing food waste is related to the quantification of the food waste due to the differences among the existing frameworks for collecting and measuring food waste data, mainly due to: 1) the use of different definitions of food loss and/or waste by EU Member States; 2) the lack of common system boundary conditions; and 3) data inconsistency due to the different quantification methods adopted. **WASTEWISE will tackle these issues by reviewing the quality of each reported data point and by tracking the actual datasets, identifying, and filling in data gaps and providing more specific food waste information within a detailed food subgroup level.**

Integrating environmental impact assessment into food waste assessment

Another critical challenge is represented by the difficulty to combine food waste data with environmental impact data. **WASTEWISE will develop methodologies to integrate environmental impact assessment into food waste assessment, by also considering rebound effects of food waste prevention and reduction**. Altogether, WASTEWISE will create a more holistic view of the environmental impact and nutrition losses of food waste, and the socio-economic and environmental implications of food waste prevention and reduction.

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Enhancing policies for food waste prevention and reduction

Current policies fail to integrate food waste in sustainable policy frameworks. First, due to the complex nature of food system, it is difficult to predict the impact of different actions. Second, the topics of food waste prevention and reduction are not addressed in national climate and energy plans to mitigate GHG emissions. **Based on the obtained results, WASTEWISE will discuss and propose policy recommendations and instruments that can serve to pursue relevant EU environmental objectives by addressing the prevention and reduction of food waste, and by always ensuring a multi-stakeholder approach**. In this way, WASTEWISE will ensure meaningful progress in the fight against food waste, enabling Europe to meet its 2030 targets and inspiring global action.

The WASTEWISE consortium

The WASTEWISE consortium involves 9 institutions in representation of 6 different countries, covering a wide range of competencies needed to achieve the project's scientific aims, whilst including also the types of institutions needed to ensure achievement of the envisaged outcomes and impacts and exploitation of results:

EU CORE CONSULTING, Italy, Project Coordinator - EUCORE

EUCORE is a consultancy that offers project design, administrative management, reporting and research services to universities, research centers, companies, public administrations, no-profit organisations wishing to participate in research and cooperation projects funded by the European Union (in particular FP7, H2020 and now Horizon Europe) or other national and international initiatives. EUCORE is involved in several ongoing projects, either directly as consortium member or indirectly by providing consultancy services. https://www.eucore.eu/

NATURAL RESOURCES INSTITUTE FINLAND, Finland, Project Scientific Coordinator - LUKE

LUKE is a research institution functioning within the Ministry of Agriculture and Forestry of Finland, whose aim is to advocate for the development of competitive enterprises that rely on the responsible utilisation of renewable natural resources, while also prioritising the overall welfare and liveliness of rural areas. LUKE is a European leading research organisation in relation to life cycle assessment development and applications, and in different activities in relation to FW (monitoring, research and innovation). https://www.luke.fi/en

UNIVERSITY OF TUSCIA, Italy - UNITUS

UNITUS, by means of the Department for Innovation in Biological, Agrofood, and Forest systems, is a leading academic institution in interdisciplinary research and education, with the goal of advancing scientific innovation and technology processes related to the utilisation, preservation, and governance of biological, forest, and agro-food systems. It conducts EU research projects focused on the spread of innovation in the agricultural industry, the examination of eco-innovation, the execution of stakeholder involvement procedures, and the economic/financial evaluation of agro-food enterprises.
https://www.unitus.it/en/

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NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY POLITEHNICA BUCHAREST, Romania - NUSTPB

NUSTPB is a Public Higher Education University in Romania striving to establish itself as a frontrunner in the fields of Operating Systems and Research Data Management, through its scientific research and educational initiatives. NUSTP mission is to foster scientific brilliance and, via participation in technological development, get access to the training of a new cohort of experts in operating systems and research data management services in the fields of Operating Systems and Research Data Management, through its scientific research and educational initiatives.
https://upb.ro/en/

SWEDISH UNIVERSITY OF AGRICULTURAL SCIENCES, Sweden - SLU

SLU is an academic organisation with extensive expertise in research, fostering innovation and providing instruction specifically focused on FW. Within the Department of Energy and Technology, a substantial cohort of researchers is engaged in environmental system analysis and agricultural engineering, with a primary emphasis on sustainable food systems and the reduction of FW. Prior studies have primarily concentrated on the quantification of FW and the evaluation of waste reduction initiatives in the retail, industrial, and hospitality sectors. The research team also possesses a robust expertise in waste quantification and analysis, in addition to LCA.
https://www.slu.se/en/

ESPIGOLADORS FOUNDATION, Spain - ESP

ESP is a not-for-profit organisation focused on action-oriented research and employing new participatory approaches to foster the creation of knowledge about sustainable agri-food systems, food sovereignty, and food losses and waste, with the goal of creating a scalable and adaptable model that effectively reduces food losses and waste. ESP has experience in engaging with policymakers, as it has been one of the primary entities contributing to the development and approval of two laws focused on the prevention of food loss and waste.
https://espigoladors.cat/en/

ELHUYAR FOUNDATION, Spain - ELH

ELH provides top-notch communication services tailored to meet the specific requirements of customers, with an extensive expertise in several knowledge fields, specifically in content generation, science and technology dissemination and communication across several media platforms. ELH has gained significant expertise in European initiatives inside the European framework, participating in several EU-funded projects.
https://www.elhuyar.eus/en

UNIVERSITY OF BOLOGNA, Italy - UNIBO

UNIBO, through the Department of Agricultural and Food Science, is a renowned academic organisation in the agry-food research, with particular reference to the management of production factors, the sustainable production chains management, the environmental, socio-economic and territorial sustainability analysis, the evaluation of policies related to local, European and international agri-food systems.
https://www.unibo.it/en/homepage

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AGROSCOPE, Switzerland - AGR

AGR is the premier institution for agricultural research in Switzerland and is associated with the Federal Office for Agriculture, which operates under the authority of the Federal Department of Economic Affairs, Education and Research. AGR strives to provide a meaningful contribution to the development of a sustainable agricultural and food industry, while also ensuring the preservation of an undisturbed environment, and is involved in several research projects devoted to solutions for waste quantification to reduce environmental stress.
https://www.agroscope.admin.ch/agroscope/en/home.html

For more information about the WASTEWISE project:
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