



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

Food sustainability, international relations
Farm to fork strategy

SUMMARY REPORT

EU PLATFORM ON FOOD LOSSES & FOOD WASTE (FLW) SUB-GROUP ON FOOD LOSS AND WASTE MONITORING

DG HEALTH AND FOOD SAFETY (SANTE)

2nd meeting via Teams

11 May 2023 – From 9:30 to 16:00

Co-chairs: DG SANTE, Ms Carola Fabi, FAO and Ms Hilke Bos-Brouwers, WUR

Commission (4): DG SANTE, ESTAT, JRC, RTD

Member States represented (18): BE, CY, DE, DK, EE, FI, FR, HR, HU, IE, IT, LU, LT, LV, RO, SE, SI, SK

Private sector organisations (20): CONSORZIO BESTACK, COPA-COGECA, DUH - Deutsche Umwelthilfe e.V., ECSLA - European Cold Storage and Logistics Association, EUCOFEL, EUPPA - European Potato Processors' Association, EUROPATAT – European Potato Trade Association, FEBA - European Food Banks Federation, FOODDRINKEUROPE, FOODSERVICEEUROPE, FUNDACIÓN AZTI – AZTI Foundation, HAROKOPIO UNIVERSITY, HOTREC, IFWC - International Food Waste Coalition, Les Restaurants du Coeur, RISE RESEARCH INSTITUTES OF SWEDEN AB, THÜNEN-INSTITUT - Federal Research Institute for Rural Areas, Forestry and Fisheries, TOO GOOD TO GO, Venturis Horeca, WUR - Wageningen University & Research, ZERO WASTE SCOTLAND

Public entities (2): FAO, UNEP

Observers: NO, EFTA

Invited (4): ACR+ the Association of Cities and Regions for Sustainable Resource Management; Department of Climate Action, Food and Rural Agenda Catalunya (DACC); Universitat Central de Catalunya; Universidade de Trás-os-Montes e Alto Douro (UTAD); Espigoladors; ISEKI-Food Association; GH hotel Costa Adeje.

1. Introduction

The SANTE co-chair opened the meeting by introducing the co-chairs from FAO and WUR and presenting the main points on the agenda. The morning session was dedicated to a discussion on monitoring food waste in the hospitality and food services sector, focussing on the solutions to the challenges identified in the first meeting (overview of discussion [here](#)). This was followed by an update from EU-funded projects FOLOU and WASTELESS on their work and a discussion on food waste reporting at EU and global levels.

2. Solutions for monitoring food waste in the hospitality and food services sector: panel discussion

Venturis Horeca, HOTREC, IFWC, LUKE and Norsus presented their experiences with monitoring food waste in the food services and hospitality sector, focussing on solutions to the issues encountered, opportunities and link with national food waste reporting.

Below is an overview of **the main solutions** highlighted by the presenters as well as **enabling factors, key takeaways and examples of good practices**. Overproduction is one of the main reasons for food waste in hotels and canteens. A solution can be better **data-based planning using information such as the average consumption indexes (ACIs)** for each dish served. The ACIs are calculated using the following formula: data on food served but not eaten and plate leftovers is subtracted from data on food served and the result is divided by the number of guests. Such calculations would allow to adjust food production to demand, based on each dish recipe. Data on food waste collected over time can also help other type of establishments, such as restaurants, better predict the number of guests and their needs.

- Raising awareness of both staff and customers, demand forecasting, extending product shelf life and monitoring are all important solutions to prevent food waste.
- Solutions to reduce consumer plate waste involve effective communications with customers and transmitting messages in a way that consumers pay attention to them.
- Food businesses should **reconsider their business models in order to prevent food waste and save resources**: for example, hotel buffets with very rich offers generate more food waste and incentivise consumers to put more food on their plates.
- **The critical success factors for any food waste measurement methodology**:
 - ✓ To be clear and specific to the sector (with granular data based on the type of establishment and its operations);
 - ✓ To be evolutive (starting with minimum requirements and aiming for higher quality data as work evolves);
 - ✓ To track progress and feedback (engaging kitchen staff through feedback, benchmarks and reporting on progress made);
 - ✓ To be action oriented (using granular data to identify the right solutions e.g. split food waste data per cover into data on preparation, service and plate waste).

By implementing a common measurement methodology, IFWC noted an average food waste reduction of 23% across their member establishments, as compared to the initial baselines (2019).

- **Good practice examples**:
 - A [pilot project](#) developed by the GF Hotel Costa Adeje on the island of Tenerife, Spain, monitors buffet waste using AI technology to understand variations in consumer habits, with the goal of reducing buffet waste by 50%. The first step was a learning process, where staff were required to feed the software images of plate leftovers, based on which food waste data would be collected. The implementation cost for the software was 50.000€. The hotel kitchen adapted their buffet offer on a

weekly basis depending on the most wasted foods and the type of guests. As a second step, guest profiles would be created using data from the software to understand their preferences and food habits. Surplus food from the hotel buffet was provided to local farmers for composting, in collaboration with the local municipality.

- The [Lukeloki monitoring application](#), developed by the Natural Resources Institute Finland, can be used for free by food services in Finland to measure food waste and complete a food waste diagnosis, for a period of two weeks. After this period, a monthly fee is applied. The application can be installed on various devices (tablets, PCs, mobile phones). Kitchen staff encode data on food waste according to its type: kitchen, serving or plate waste. Menus are imported in the application to make daily measuring and logging easier. The data collected feeds into the total food waste data for this sector, calculated by the Institute at national level for the purpose of reporting it to the EU. The Lukeloki application is flexible in terms of menus and type of establishments and could be translated into English and transferred to other countries.
 - To ensure data quality and completeness as well as correct reporting formats, Norsus collaborated with Matvett to develop guidance, templates, a tool for data management, online courses and an online games and portal (targeting staff and management of establishments) and workshops for the sector. In order to recruit more businesses to start monitoring their food waste levels, Norsus developed campaigns and communication materials in collaboration with food services and communication experts, a ‘get started kit’ for monitoring, a product catalogue for monitoring tools, a certification system (the CutFoodWaste certificate) and awards for the companies with the best results. The staff training is composed of different modules that would take a few minutes each to complete.
- **Database of solutions:** IFWC established an [Innovation lab](#) of 50+ solutions to reduce food waste according to focus areas: buffet, demand forecasting, extending shelf life, measuring and reporting, organic waste valorisation, secondary markets, smart labels and packaging and sustainable packaging.
 - **Reporting on national food waste data:** the data collected using the Lukeloki application developed in Finland show differences in the type of food waste according to the type of establishment, with highest amounts occurring in nursing homes and a la carte restaurants, and lowest amounts in catering services. The data collected feeds into the total food waste data for this sector, calculated by the Natural Resources Institute Finland at national level for the purpose of reporting it to the EU. Finland estimated the total amount of food waste by supplementing the Lukeloki data with statistics on the number of prepared portions for each category of food services, obtaining the average food waste percentage for each category.
 - In order to promote further uptake of monitoring solutions by food services and hospitality establishments, public authorities and their partner organisations should **standardise monitoring**, ensuring a common food waste measurement methodology and reporting format.
 - **Regulatory measures:** Food waste reporting is mandatory for food businesses in Finland, where all food supply chain actors are required to keep records about their food waste since January 2022. This is also an obligation in Greece for hotels of over 100 beds and restaurants with a turnover over €500k since January 2022.
 - **Public food services should lead the way by example**, including when it comes to testing different food waste prevention solutions (e.g. in some French schools, students’ parents can pre-order meals a few days in advance from the school canteens).

- Public authorities could **include food waste criteria in public procurement** and ensure that such criteria do not clash with others (e.g. maintaining a wide range of options for dishes in buffets and avoiding food waste at the same time). Food waste criteria could also be included in existing certification schemes for restaurants and food services (e.g. Michelin stars). In a Norwegian chefs' competition, food waste prevention is a criterion in the scoring of chefs.
- There is **no one-size-fits-all solution**: policymakers must adapt food waste prevention measures according to the capacity and capability of businesses.

Other takeaways:

The **FOODRUS project** would prepare information on public procurement for food waste reduction as part of their work to share best practices, this would become available by the end of 2023.

3.1 Presentation of the Horizon Europe project FOLOU by Universitat Central de Catalunya (PDF)

The main objective of the EU-funded project FOLOU is to set up the necessary mechanisms to measure and estimate, monitor and report, and assess the magnitude and impact of food losses across the EU. The project aims to set up a food losses repository and to collaborate with key stakeholders in order to improve such measurement. The presenter invited all Platform members to fill out a [questionnaire](#) in order to receive information about the project outputs and to contribute to the project deliverables (e.g. defining food losses, developing a methodology for measuring food losses etc.). **Europatat** suggested an important area of study would be the impact of private marketing standards for fresh produce on food losses and waste and offered to share information with FOLOU on an internal study ran among their members on this issue.

3.2 Presentation of the Horizon Europe project WASTELESS by ISEKI-Food Association (PDF)

The main objectives of the EU-funded project WASTELESS are to develop and test a mix of innovative tools and methodologies for food loss and waste measurement and monitoring; to recommend a harmonized methodological framework for quantification and to develop a decision support systemic toolbox targeting all food supply chain stakeholders. The project will also look into research activities concerning innovative processes and streams to valorise unavoidable food loss and waste.

4. Reporting on food waste at EU and global levels

4.1 Reporting on food waste at EU level, presentation by Eurostat (PDF)

Eurostat presented the results from the first EU food waste data reporting in 2022, focusing on the data quality and analysis.

ACR+ pointed out that the COVID-19 pandemic might have negatively affected the HORECA sector due to closing of establishments, and inquired whether the data for the retail and wholesale sector is representative in statistical terms, given the fact that this sector experienced larger volumes of food trade during the same period. **Hungary** and **Italy** suggested that the pandemic had a diverse effect on households, as people cooked more at home (increasing unavoidable food waste levels) while paying more attention to their leftovers (decreasing avoidable food waste). **Eurostat** replied that the chosen measurement methods for food waste at retail level differ across countries (e.g. direct measurement, surveys etc.), while the final aggregates were estimated by comparing the data reported by food business operators with waste composition analysis, providing stable and reliable data.

FAO inquired about the national coverage of data across the EU; **Eurostat** explained there is no uniform information on this as it depends on how each country organised their measurement process.

EUPPA asked for detailed information per food products and according to NACE codes; **Eurostat** confirmed that JRC is doing a [material flow analysis](#) of the data reported and would publish a report on this soon. **EUPPA** noted that countries with high exports (for example Denmark or the Netherlands) might have higher waste at manufacturing level, depending also on the type of food products and their avoidable/unavoidable parts. **FoodDrinkEurope** pointed out that Germany is also a high exporter although data indicate less food waste for the processing sector. **Eurostat** explained that the data is calculated per capita, which drives the differences between countries.

4.2.1 Towards reporting on SDG 12.3 – the Food Loss Index, presentation by FAO ([PDF](#))

FAO presented an overview of the SDG 12.3.1a Food Loss Index (FLI), including estimates by region. **FAO** also referred to the availability and sources of food loss and waste data across EU countries; explained the FLI conceptual framework and options that countries could use to compile data for the FLI.

4.2.2 Pilot data collection on food waste, presentation by UNEP ([PDF](#))

UNEP presented the recently completed Food Waste Index (FWI) Pilot Data Collection exercise, offering information about the questionnaire used, participating countries, feedback received, challenges in the data collection exercise and next steps for the Food Waste Index reporting.

Italy asked about the reporting organisations in each Member State. **FAO** explained that the annual agricultural production questionnaire (which includes a section on losses) is sent to the institutions in charge of agricultural production statistics (national statistic offices or ministries of agriculture), while the new questionnaire on the FLI will be sent to SDG focal points across countries. In the case of EU data, Eurostat replied that respondents might be statistical institutions or ministries, depending on each country.

4.3 Reporting on food waste, the experience of Member States

4.3.1 Food Waste policies, data and perspectives, presentation by Italy ([PDF](#))

Italy presented an overview of the national food waste prevention policy framework, including the round table established by the Gadda Law, and the work of the Observatory on food losses and waste. Italy also presented the results of several food waste measurement studies carried out at different levels of the food supply chain.

4.3.2 Household food waste measurement, presentation by Hungary ([PDF](#))

Hungary presented an overview of their national reporting system, offering details on their measurement food waste methodology for households and the results of monitoring at this stage of the food supply chain.

FAO asked about studies that would establish a minimum threshold beyond which reducing food waste at household level would not be feasible. **Hungary** recommended to consider only the avoidable food waste, rather than the total food waste at household level.

5. Conclusions and wrap up

The **Commission** concluded the meeting by thanking all participants for their participation and interest in the topics of the meeting. The Commission reminded members about the deliverable that would be put together following the two sub-group meetings on the challenges and solutions to monitoring food waste in the food services and hospitality sector. In terms of future actions, **FAO** will inform the Platform about the launch of their pilot questionnaire for countries to report data towards the SDG 12.3.1 Food Loss Index and ask for volunteers among Member States to report on such data.