



## **Sub-Regional Capacity Development: Workshop series on Food Losses and Food Waste Measurement and Reporting**

1<sup>st</sup> meeting: *online*, 9 December 2020

2<sup>nd</sup> meeting: *online*, end January/February 2021

3<sup>rd</sup> meeting: *face-to-face* or *online*, Spring/Summer 2021

Organized by the  
FAO Regional Office for Europe and Central Asia (REU) in  
collaboration with the FAO-HQ Statistics Division (ESS)

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## CONTEXT

The capacity development workshops are an activity of the FAO Regional Technical Cooperation Project "Strategies for Food Loss and Waste Reduction" (TCP/RER/3702) and the FAO Multipartner Programme Support Mechanism (FMM) Project "Sustainable, resilient and inclusive food systems development" (FMM/GLO/131/MUL). These two projects are part of the comprehensive Europe and Central Asia regional programme on FLW reduction, under the umbrella of the Global Initiative on Food Loss and Waste Reduction (SAVE FOOD).

The collection and analysis of data on food losses is crucial to set policy priorities, monitor the effectiveness of selected measures for implementation and quantify the socio-economic impacts. National statistical officers and value chain actors can work towards strengthening the evidence base required for the development of a solid national strategy for prevention and reduction of food losses that focuses on critical loss points. Better data support the identification of best practices and enable countries to allocate resources optimally.

## RATIONALE

Reliable data facilitate the development of FLW prevention and reduction strategies that can have a long-term scope, adapted to local geographic and socio-economic conditions. Existing tools to quantify and analyse FLW are statistical (e.g., sample surveys, Supply Utilization Accounts and Food Balance Sheets<sup>1</sup>, Food Loss Index<sup>2</sup>) and non-statistical (e.g., field case study methodology for FLW analysis<sup>3</sup>).

It is recommended to monitor SDG 12.3 through country-level food loss estimates and use a combination of tools best suited for different critical food loss points (e.g., farm, transport, storage, distribution), data availability, as well as resources and capacities in place. A data collection strategy is a central piece to coordinate and optimize data collection efforts, and requires an integration and aggregation mechanism that generates supply chain and country food loss estimates.

In this regard, FAO recent developments for the SDG 12.3.1.a methodology aim at providing guidance on how to: (i) cost-effectively collect and estimate; (ii) select methods and tools for the different data collection points; (iii) achieve representative and robust data suited for monitoring purposes, (iv) combine data sources and prioritize efforts, and (v) aggregate food losses at the farm, transport, storage, industry and wholesale stages.

The three capacity development workshop sessions (two digital and one face-to-face) represent an opportunity to increase awareness of Indicator 12.3.1.a (i.e., the Global Food Loss Index) and enhance the capacities of government representatives from selected countries on the indicator's methodology and underlying data needs. While the focus will be on this statistical methodology, the training will also be an opportunity to present and discuss other tools available to measure, monitor and report on food losses as well as food waste, and understand how they could relate to each other at country level.

The trainings targets to bring together a group of fifteen participants from four countries (Albania, Armenia, Moldova, North Macedonia and Ukraine), with three representatives from each country - in particular from the National Statistics Office and the Ministry of Agriculture, ideally with expertise on post-harvest losses, value chains and/or sample surveys. Invitations to participate are also extended to Georgia (part of another FAO project).

## OBJECTIVE

The three capacity development workshops will provide tools on measurement, monitoring, and analysis of FLW to key national stakeholders, including government representatives and statisticians, to support participating countries familiarize with data collection strategies from farm to consumption, design data-driven policies and interventions, and build a monitoring and reporting system for the SDG 12.3.1.a Indicator (the

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<sup>1</sup> <http://www.fao.org/economic/ess/fbs/en/>

<sup>2</sup> <http://www.fao.org/sustainable-development-goals/indicators/12.3.1/en/>

<sup>3</sup> FAO, 2016. Food loss analysis: causes and solutions, case studies in the small-scale agriculture and fisheries subsectors. Methodology, November 2016. Rome, Food and Agriculture Organization of the United Nations. (Unpublished)

Global Food Loss Index). At the end of the **first digital training**, participants will be expected to apply the gained expertise and propagate the acquired knowledge within their own organizations. The **second digital workshop** foresees an interactive revision of the implemented work, given the first training received. The **third meeting (digital or face-to-face)** is foreseen to complete the SDG 12.3.1.a monitoring and reporting method.

## TECHNICAL FOCUS

### *The Food Loss Index*

Goal 12 of the Sustainable Development Goals (SDGs) “to ensure sustainable consumption and production patterns” recognizes the fundamental role of sustainable farm, business practices, as well as responsible consumer’s behavior as essential elements for reducing poverty and ecological footprint on one hand and increasing food security and nutrition in a growing world population on the other hand. Goal 12 is composed of 11 targets. Among these, target 12.3, aims to “by 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.”

Two indicators - 12.3.1.a and 12.3.1.b - have been proposed to track achievements. One (12.3.1.a), led by FAO, is focused on ‘reduction of losses along the food production and supply chains’ (supply oriented) and another (12.3.1.b), led by UN Environment, is focused on ‘halving per capita global food waste at the retail and consumer level’ (demand oriented).

These two trainings will focus on the food loss indicator 12.3.1.a and will provide information on the food waste indicator 12.3.1.b.

Indicator 12.3.1.a - Food Loss Index (FLI) and the aggregate Global Food Loss Index (GFLI) - is a statistical indicator measuring food losses from farm up to and excluding the retail level. The indicator’s methodology includes a tested data collection mechanism. FAO developed the methodology, guidelines and tools that help countries through step-by-step approach for the entire reporting process, including data collection, assessment and computation of results<sup>4</sup>. Indicator 12.3.1.a is an index with base 100 which measures the changes over time in structural losses along the food supply chain, for a basket of 10 main commodities, compared to a base period.

In 2019 the FLI has been re-classified from Tier III to Tier II because of the progress in defining a methodology for national data and international comparison, but it still confronts the dire lack of consistent national food loss estimates. The main challenge is not in the calculation of the index per se, but in obtaining the loss factors of a commodity for the various stages of the supply chain and in aggregating them into a National Food Loss Percentage of that commodity.

*FAO has developed a two-pronged approach to address data scarcity by providing:*

(i) a complete methodological and technical assistance package with a set of guidelines and training material on loss data collection and estimation

(ii) a food loss imputation model to estimate food losses in the absence of measured data. The econometric model was developed first for estimating losses internationally using the few loss data in FAO’s Food Balance Sheets as reported by countries and factors found in the specialized literature. The estimation model is meant to be a placeholder, while countries improve data collection on food losses for the Country Food Loss Index (FLI).

*The other tools for which the training will provide an overview are:*

(i) The “*Food Loss Analysis*” case study methodology - developed by FAO. It identifies the critical loss points in the selected food chains (i.e., the supply chain stages at which most loss occurs), why loss occurs, and the economic, social and environmental implications. It also includes assessing the feasibility of potential interventions to reduce the loss at the identified critical loss points.

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<sup>4</sup> The 12.3.1 methodology has been proposed at the Seventh International Conference on Agricultural Statistics (ICAS-VII) in Rome in October 2016, at the FAO External consultation on the Measurement of Food Losses and Waste in September 2017 and has been further refined in collaboration with experts and stakeholders.

(ii) Food waste from retail to consumer: UNEP (2014) *Guidance Document - Prevention and Reduction of Food and Drink Waste in Businesses and Households*<sup>5</sup> that provides tools for surveys.

(iii) The *World Resources Institute* (2016) *Protocol- Food loss and waste accounting and reporting standard*<sup>6</sup>: a standard that provides requirements and guidance for quantifying and reporting on the weight of food and/or associated inedible parts removed from the food supply chain. Using the standard enables companies, and other entities to develop inventories of how much FLW is generated and its destination.

(iv) The European Union (EU) *methodology for quantifying food waste* is part of the EU action plan for the circular economy (i.e., maintain the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimizing waste). It aims to generate reliable data that can be compared over time and between EU countries.<sup>7</sup>

## EXPECTED RESULTS

***Overall, the first digital workshop will provide support for:***

- Strengthened comprehension of SDG 12.3, its definitional framework and methodology
- General overview on the steps to implement data collection efforts at country level (data collection strategy)

Understanding data collection strategies:

- Increased awareness about the importance and rationale of target 12.3
- Acquire the main terms and concepts used for the indicator
  - Familiarize with the Food Loss Percentage (FLP), the Food Loss Index (FLI) & Global Food Loss Index (GFLI) rationale and interpretation
- Understand the current state of the methodological development for the Global Food Loss Index
  - Be able to identify and implement the main steps for countries to prioritize, plan and design data collection efforts

***Overall, the second digital workshop will provide support for:***

- Strengthened comprehension of how to define the method and design instruments for food loss data collection on and off farm

Understanding data collection methods and instruments:

- Increased knowledge on methods to collect data on food losses (by inquiry, by physical measurement, combined with other methods) on and off farm
- Expertise on how to formulate questionnaires for food loss data collection on and off farm
- Examples on how to integrate food loss modules in existing surveys and data collection instruments

***Overall, the third (face-to-face) workshop will provide support for:***

- Strengthened comprehension on how to integrate and compile the Country Food Loss Index and report and monitor towards SDG 12.3.1 (a)

More into detail regarding Indicator 12.3.1.a, the audience will obtain:

- Understanding on how to integrate FL data from different sources

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<sup>5</sup> UNEP, 2014. Prevention and reduction of food and drink waste in businesses and households - Guidance for governments, local authorities, businesses and other organisations, Version 1.0. Available at: [http://www.fao.org/fileadmin/user\\_upload/save-food/PDF/Guidance-content.pdf](http://www.fao.org/fileadmin/user_upload/save-food/PDF/Guidance-content.pdf)

<sup>6</sup> World Resource Institute, 2016. Food Loss and Waste Accounting and Reporting Standard. Available at: <https://www.flwprotocol.org/>

<sup>7</sup> [https://ec.europa.eu/food/safety/food\\_waste/eu\\_actions/food-waste-measurement\\_en](https://ec.europa.eu/food/safety/food_waste/eu_actions/food-waste-measurement_en)

- Be able to aggregate food loss at stage level, along the supply chain and compute the Country Food Loss Index (FLI)
- Comprehension of how target 12.3 is monitored through indicator 12.3.1 and how to report Country FLI on a regular basis

## FORMAT

The training workshops will be held in three sessions from October 2020 to April 2021. Each session will cover a specific component of SDG 12.3.1.a and is meant to help countries step by step to prioritize, plan, design and integrate food loss data collection efforts.

FAO will provide the latest developments of tools and instruments used in each step. Countries will be given the opportunity to implement first steps towards measuring and reporting SDG 12.3.1.a, draft country work-plans and initiate the first country exercises. This is especially useful as most doubts and queries arise when applying the tools to concrete food loss points. Countries are invited to actively participate in the proposed exercises between the sessions.

**1<sup>st</sup> digital session on 09 December 2020:** Provide training on SDG 12.3.1 (a) Food Loss Indicator and how to build and implement data collection at country level;

**2<sup>nd</sup> digital session in January/February 2021:** Provide training on: (i) review the country level work implemented by the participating countries since the training held in December 2020; (ii) present guidelines on methods and instruments for food loss data collection on and off the farm.

**3<sup>rd</sup> digital or face-to-face session in Spring/Summer 2021:** Held a digital or face-to-face training on: (i) present and discuss the country level work implemented by the participating countries since the training held in January/February 2020; (ii) present and conduct exercises on how to compile Country Food Loss Index, monitor process towards SDG 12.3 and prioritize context-based-national-level interventions.

## PARTICIPANTS

The primary target audience is staff responsible for monitoring food losses and/or responsible for data collection, analysis and dissemination from Albania, Armenia, Moldova, North Macedonia, Ukraine, and Georgia. In addition, representatives from the private sector as well as civil society are invited to the digital meeting(s).

For each country participants could be:

- Two officers from the National Statistical Office (NSO) (from the directorate / division / unit in charge of national agricultural statistics).
- One officer from the Ministry of Agriculture (from the unit in charge of farm surveys, post-harvest losses surveys, value chain analyses, etc.).
- Two to three participants representing the private sector and civil society, for the digital meeting(s).

**PROGRAMME ONLINE MEETING  
09 December 2020 (One-day meeting)**

Time	Sessions	
<b>DAY 1</b>		
9:15 – 9.30	<b>Registration</b>	
<b>Group photo ONLINE</b>		
9:30 – 10:00	<b>Opening remarks and introduction to SDG 12.3</b> <ul style="list-style-type: none"> <li>- Opening remarks key speakers</li> <li>- Current state of food loss and waste information and reduction in the region</li> <li>- Results from the regional project on food loss and waste</li> </ul>	FAO REU
10:00 – 11:00	<b>Country food loss and waste perspectives and agendas</b> <ul style="list-style-type: none"> <li>- Country presentations from Albania, Armenia, Moldova, North Macedonia, Ukraine, Georgia</li> <li>- Focus on policy questions and information needs for food loss reduction</li> </ul> <p>N.B. A set of 5 questions will be sent before the event to be filled in by the participants and to guide their presentation.</p>	Moderation FAO REU  Country Focal Points
11.00 – 12.00	<b>SDG 12.3.1 Country Food Loss Index (FLI) – Introduction</b> <ul style="list-style-type: none"> <li>- Understand SDG target 12.3 and indicator 12.3.1</li> <li>- Conceptual and definitional frameworks of food loss and waste</li> <li>- Methodology for the Food Loss Index and interpretation</li> <li>- Current state of the methodological development</li> <li>- Brief reference to other tools for Food waste</li> <li>- Questions and Answers</li> </ul>	FAO ESS  Carola Fabi
<b>Lunch break</b>		
14:00 – 15:00	<b>SDG 12.3.1 Country Food Loss Index (FLI) - Strategy for data collection</b> <ul style="list-style-type: none"> <li>- Need for a data collection strategy</li> <li>- Selection and priorities (clustering of commodities, setting scope)</li> <li>- Introduction of the entire data cycle: from data collection, compilation up to the aggregation and the construction of the country FLI</li> </ul> <p>Steps:</p> <ul style="list-style-type: none"> <li>- Analysing supply chains and assessing food losses</li> <li>- Revising existing data sources for the various stages of the value chain</li> <li>- Analysing information gaps and data collection instruments in place</li> <li>- Designing the strategy for data collection &amp; integration</li> <li>- Questions and Answers</li> </ul>	FAO ESS  Daniela Ruehl
15:00 – 15:30	<b>Country workplans: First steps for SDG target 12.3.1 a</b> <ul style="list-style-type: none"> <li>- Define the country's commodities basket for SDG 12.3.1</li> <li>- Analyse the selected supply chains and prioritize critical food loss points</li> <li>- Define first elements of the countries data collection strategy (where to collect data, what instruments are in place)</li> </ul>	FAO ESS  Daniela Ruehl FAO REU

**PROGRAMME ONLINE MEETING**  
**END JANUARY/FEBRUARY 2021 (One-day digital meeting)**

Time	Session	
<b>DAY 1</b>		
9.00 – 9.30	<b>Registration</b>	
<b>Group photo ONLINE</b>		
9.30 – 10.00	<b>Introduction and brief recap of previous meeting</b> <ul style="list-style-type: none"> <li>- Brief recap of the previous meeting</li> <li>- Objectives of the second meeting</li> </ul>	FAO REU
10:00 – 12:00	<b>Country presentations of the first steps to measure SDG 12.3.1 a</b> <ul style="list-style-type: none"> <li>- Commodities basket for SDG 12.3.1 and policy priorities</li> <li>- Critical food loss points prioritized for food loss measurement</li> <li>- Data collection instruments in place</li> </ul>	Moderation FAO REU and FAO ESS Country Focal Points
<b>Lunch break</b>		
14.00 – 16.00	<b>SDG 12.3.1 Country Food Loss Index (FLI) - Guidelines for food loss data collection methods</b> <ul style="list-style-type: none"> <li>- General introduction on how to design FL data collection effort</li> <li>- Sampling strategies, national representativeness and timeliness</li> <li>- Overview on available methods and tools for FL data collection</li> <li>- Introduction to on-farm data collection methods and instruments</li> <li>- Introduction to off-farm data collection methods and instruments</li> <li>- Complementarity with other data collection methods</li> </ul>	FAO ESS  Franck Cachia
16.00 – 17.00	<b>Country workplans : First steps to define data collection methods and design instruments</b> <ul style="list-style-type: none"> <li>- Analyse the data collection instruments in place (information captured, population and territory covered, sampling design, etc.)</li> <li>- Define the method and design the module to introduce food loss indicators and collect data</li> <li>- Establish a coordinated data collection workplan (when, how frequent is the data collected, what is covered, what FL definition applied, etc.)</li> </ul>	FAO ESS Franck Cachia Daniela Ruehl FAO REU

**PROGRAMME ONLINE/FACE-TO-FACE\* MEETING  
Spring/Summer 2021 (two-day meeting)**

Time	Sessions	
<b>DAY 1</b>		
9.00 – 9:15	<b>Registration</b>	
<b>Group photo and coffee/tea break</b>		
9.30 – 10.00	<b>Opening remarks</b>	FAO REU Key speakers
10.00 – 10.30	<b>Introduction and detailed recap of previous meeting</b>	FAO REU, ESS
10:30 – 12:30	<b>Country presentations on the design of concrete data collection efforts</b> <ul style="list-style-type: none"> <li>- Results from analysing data collection instruments in place</li> <li>- Methods and instruments designed for FL data collection</li> <li>- Country workplan for coordinated data collection efforts</li> </ul>	Moderation FAO REU and FAO ESS Country Focal Points
<b>Lunch break</b>		
13:30 – 15:30	<b>Group discussion on the design of concrete data collection efforts</b> <ul style="list-style-type: none"> <li>- Review and feedback on the data collection instruments analysed</li> <li>- Review and feedback on the methods and instruments proposed for FL data collection</li> </ul>	Moderation FAO REU and FAO ESS Country Focal Points
15.30 – 16.30	<b>Group discussion on country workplans for coordinated data collection efforts and country priorities</b> <ul style="list-style-type: none"> <li>- Review and feedback on the country implementation workplans</li> <li>- Discussion on institutional settings for coordinated and sustainable data collection</li> </ul>	Moderation FAO REU and FAO ESS Country Focal Points

<b>DAY 2</b>		
9.00 – 9:30	<b>Registration</b>	
<b>Coffee/tea break</b>		
9:30 – 10:30	<b>SDG 12.3.1 Country Food Loss Index (FLI) – Compilation and reporting</b> <ul style="list-style-type: none"> <li>- Compilation of the country FLI</li> <li>- Country reporting of SDG indicator 12.3.1 a</li> <li>- FAO effort to fill data gaps (global estimation model, FL database)</li> </ul>	FAO ESS
10.30 – 12.30	<b>Country exercise on compiling the country FLI</b> <ul style="list-style-type: none"> <li>- Integrate data from different data sources (quality assessment, data coherence) and fill data gaps</li> <li>- Aggregate food loss percentages at stage level, along the supply chain, and across commodities</li> <li>- Calculate commodity weights and compile the FLI</li> </ul>	FAO ESS Country Focal Points
<b>Lunch break</b>		
13:30 – 14:30	<b>Country roadmaps</b> <ul style="list-style-type: none"> <li>- Discuss further steps for FL data collection and reduction</li> <li>- Identify country needs for technical assistance</li> </ul>	FAO REU, ESS, Country Focal Points
14:30 – 15.00	<b>Closing remarks</b>	FAO REU