



IFC Food Loss and Waste Prevention Advisory for

# Transport & Logistics



## What is Food Loss and Waste (FLW)?

**Food Loss and Waste (FLW)** – the decrease in the quantity or quality of food intended for human consumption, of either edible or inedible status, caused by actions and decisions of all actors along the food supply chain.

**Food Loss (FL)** – the decrease in the quantity or quality of food resulting from decisions and actions by food suppliers in the chain, excluding retailers, food service providers and consumers.

**Food Waste (FW)** – the decrease in the quantity or quality of food resulting from decisions and actions by retailers, food service providers and consumers.

**Food Surplus (FS)** – food and inedible parts that are sent to the following: redistribution to people (e.g. through a charity or commercial redistributor), animal feed or bio-based materials/biochemical processing (e.g. feedstock for other industrial products).

As applicable to the Transport & Logistics stage of the Food Supply Chain, both Food Loss and Food Waste are applicable depending on where in the FSC the specific activity takes place, i.e. in the stages from farm to processing, or stages from retail to households.

## Why is FLW important?

- Approximately one-third of all food produced globally by weight is lost or wasted along the food supply chain annually (FAO, 2013).
- Despite producing enough food to feed everyone, 733 million people still face hunger globally (FAO, 2024).
- Of all municipal solid waste generated globally, organic waste represents 40% (World Bank, 2018).
- The cost of global food loss and waste (FLW) is estimated at \$1 trillion (UNEP, 2024).
- Concerning impacts to the environment, FLW causes about 8-10% of global Greenhouse Gas (GHG) emissions (UNFCCC, 2024).

Focusing on transport and logistics:

- Approximately 7-15% of food loss and waste in the production chain happens during the transportation stage. Often, this is due to temperature control or refrigeration issues during transport. This can affect the edibility of the food and make it unacceptable for human consumption.
- The transportation stage of the food supply chain is relatively simple in terms of operations but given that produce at this stage is nearing its highest value, there is much to be gained from avoiding any waste occurrence here.





## The FLW Reduction Journey

Here are some of the actions transport & logistics businesses can consider when tackling FLW generation.



## What are the challenges transport & logistics businesses might be facing?

The following challenges are to be considered in transport & logistics when tackling FLW:

- Poor planning of inventory; aspects such as orders to forecast, transport routing and the time which the produce is travelling.
- Inefficient temperature control (excessive heat or cold).
- Contamination.
- Shock during transport.
- Poor condition of roads and infrastructure.
- Mechanical damage due to compression, abrasion or rough handling during operations.
- Inefficient cold chain / frozen food storage facilities in warehouses and in transport vehicles.
- Damages from mishandling of food or poor packaging being unable to protect the product if it is moved around in transport.
- Transport delays.
- Refused orders.
- Product safety alerts / recalls.
- Customer returns policy / reject policy.







## Collecting FLW Data

- The scope of the FLW inventory should include all food and associated inedible parts, covering all operations the business owns or directly controls.
- The measurement method does not need to be highly technical or fully comprehensive, but must be consistent and reliable, and focused on the objectives agreed.
- Transport & logistics businesses will be motivated to think about FLW solutions, but data collection can be challenging.
- The FLW inventory must be reported in weight.

In this stage of the food supply chain there is a need for a clear sorting of FLW and general / residual waste to get to an accurate estimation of FLW tonnage. To determine this, the following points should be considered.

- There is no specific method to quantify the FLW, but the main quantification approaches are:
  - **Bottom-up scanning:** It is an effective way to ascertain the above as it is a very reliable method of collecting information and provides granular SKU level data and can avoid packaging content that adds to the weights. This method helps companies gain detailed insights into inventory management, enabling them to reduce FLW effectively.
  - **Top-down weights approach:** This method refers to measurements or estimations of FLW taken at the highest level of aggregation, typically including entire categories of products or waste streams. This method involves measuring or estimating the total amount of FLW generated. For example, rather than tracking the waste of each specific product or SKU through bottom-up scanning, top-down weights may involve weighing the total amount of unsold produce generated or expired goods generated over a certain period.

## What are the benefits for transport & logistics businesses?

Here are some of the benefits that transport & logistics businesses can obtain from beginning their FLW reduction journey.

Environmental (including Climate)	<ul style="list-style-type: none"><li>• Reducing FLW during transportation and logistics reduces the use of inputs (i.e. energy, water and land), and ultimately reduces the carbon footprint of food production.</li><li>• Engagement in FLW reduction can help deliver climate goals both for own operations and supplier base.</li></ul>
Social	<ul style="list-style-type: none"><li>• FLW reduction may enhance food availability and accessibility, and therefore improve food security.</li><li>• Increasing employee and customer awareness on the impact of FLW and benefits of reduction.</li><li>• Increasing positive local community engagement by creating partnerships with charities, food banks for donation of food surplus.</li></ul>
Financial	<ul style="list-style-type: none"><li>• Improving efficiency in operations when FLW is taken into account and managed responsibly. This will reduce hidden costs which are associated with improper FLW management.</li><li>• Reducing FLW means reducing costs as wasted materials need to be processed and/or lose value.</li><li>• Being aware of the FLW that occurs and knowing how to prevent it can increase operational functionality and effectiveness of the company.</li></ul>
Legislative	<ul style="list-style-type: none"><li>• Reducing FLW ensures ahead of time adherence to emerging FLW legislations obliging actors from the food industry to report and monitor their FLW generation.</li><li>• Accounting for FLW generation allows companies to be prepared for voluntary FLW agreements i.e., Waste and Resources Action Programme (WRAP) / Champions 12.3 / 10x20x30 / 10x20x30.</li></ul>
Reputational (Brand)	<ul style="list-style-type: none"><li>• Improving corporate responsibility.</li><li>• Meeting customer expectations of companies to deliver sustainability measures in their operations, in the products that they sell, and in their supply chains.</li><li>• Inspiring more conscious marketplace and positive change.</li></ul>



## Sample questions for transport & logistics businesses

Understanding where business is on its FLW journey is essential before taking any steps setting reduction targets and developing roadmaps. Asking questions such as the ones below helps establish the current status and define the next steps accordingly.

- Is the company familiar with the definition of FLW?
- Does the company have an estimated volume of its FLW generation?
- Has the company estimated the economic cost associated with its FLW generation?
- Does the company already have KPIs for FLW monitoring?
- Is the company considering the role of FLW as part of its GHG emissions reductions roadmap / net zero journey?
- Is the company signatory to voluntary FLW agreements and needs support in following these i.e., WRAP / Champions 12.3 / 10x20x30?
- Does impending legislation in FLW impact the company? (please note this question is country specific – i.e., France and Spain have legislation and mandatory requirements with regards to FLW measurement and reporting).
- Does the company have a process set up to prevent / reuse FLW thus avoiding FLW?
- Does the company have a process set up to donate / re-distribute surplus food, thus avoiding FLW?
- Is the company prepared for the growing demands on sustainability measures in their operations?
- Has the company already identified any hotspots of FLW generation in its operations? But doesn't know the cause of it?
- Are there policies and procedures on how to minimize FLW from operational procedures?
- Are there measurement systems across the operations to identify main drivers of FLW — warehouse vs. transport?
- Are staff trained to understand and mitigate FLW in all stages of the operation?

Insights gathered from these questions will help in designing measurement procedures, reporting standards, and site metrics which can be tailored to the company's needs and amenities.

## Potential Interventions

Interventions can be done by:

- a. **The company directly** – either before IFC disbursement or after with appropriate reporting back to IFC;
- b. **The company works in partnership with IFC**, potentially through Advisory Services engagement.

Examples:

- Initial assessment of status quo.
- FLW measurement and monitoring.
- Impact evaluation of actions and interventions.
- Engagement with suppliers.
- Efficient handling and packaging.
- Good physical infrastructure.
- Efficient trade logistics.
- Extra care when working with perishable and fragile food produce.
- Maintaining good hygiene.
- Creation of a culture on FLW inside the company through employee awareness and training for FLW prevention/reduction.
- Packaging optimization.
- Improving inventory management.
- Introduce energy-efficient, low-carbon cold chains.
- Improve food handling to reduce damage.
- Ensuring optimum storage facilities and functioning thereof for various categories of food products to avoid waste / damages.
- Ensuring vehicles / fleet maintain optimum conditions to preserve quality and freshness of food avoiding waste.
- Staff training in food handling to avoid damages and spoilage.
- Efficient stock inventory management systems to accurately order, store and ship the right amount of product in the best condition with the longest shelf life.
- Set up of partnerships / destinations for redistribution of surplus food.
- Digitization of processes.



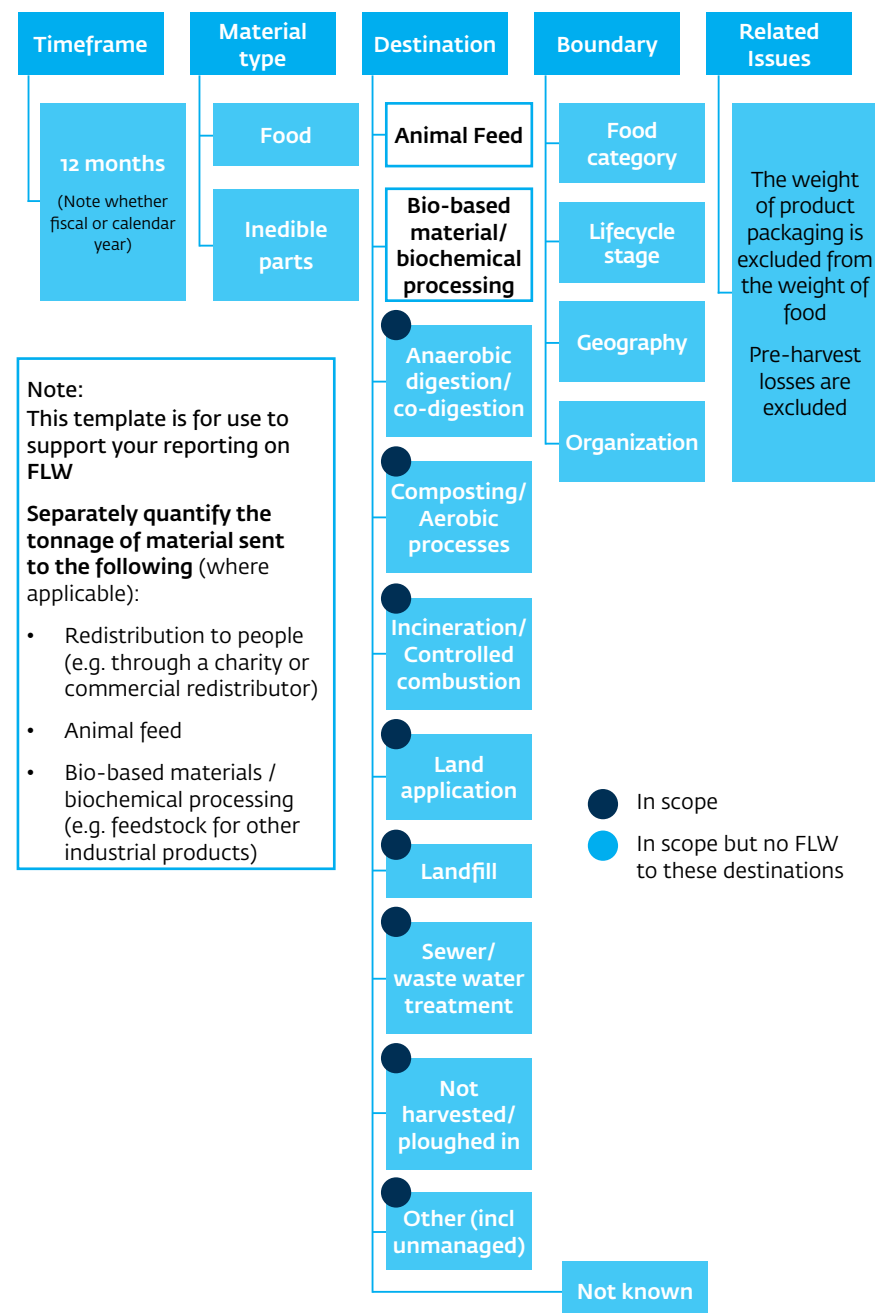


## IFC FLW Advisory Tools

- **Assessment Tool** permits verification of current FLW status of client and review of existing practices.
- **Training course** introduces key issues on food loss and waste (FLW) in the food supply chains. It is designed to help IFC clients understand the importance of FLW and the need to act. In this regard, this course builds on the global Food Loss and Waste Standard, the most widely system to quantify and report FLW, and guidance on how to set targets and a roadmap.
- **Data Capture Sheet (WRAP)** supports the FLW data analysis and monitoring process. The tool is in line with the principles to Target, Measure and Act in support of UN Sustainable Development Goal 12.3, and it complies with the FLW Standard.
- **Progress Tool** allows to track year on year reductions in FLW and give a monetary value to FLW and food surplus.
- **Data Validation Checklist** enables IFC to check over any data that clients have entered. This is a very high-level checklist, that allows IFC to ensure the key information has been included.
- **Client Tool Checklist** goes into detail about each step of the reporting process and assists with the reporting process for both the WRAP data sheet and the Progress Tool.
- **IFC Food Loss Climate Impact Tool** assists in quantification of FLW in terms of avoided GHG emissions.

**NB:** IFC FLW Advisory Tools encompass both Food Loss and Food Waste, therefore the terminology used in reference to IFC Tools includes FLW.

## Scope of the FLW Inventory



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