

Food Loss + Waste

PROTOCOL

TWO-PART WEBINAR

Part 1. How to Summarize an FLW Inventory

Part 2. Open Question & Answer

March 21, 2018

By Kai Robertson & Brian Lipinski
World Resources Institute

Part 1.

Summarizing a Food Loss
and Waste (FLW) Inventory

Download the FLW Standard & Resources @ www.FLWProtocol.org



Food
Loss + Waste
PROTOCOL

[Why Measure?](#)[FLW Standard ▾](#)[News & Updates](#)[About the FLW Protocol](#)

One-third of all food produced in the world is **lost or wasted** between farm and fork.

The Food Loss and Waste Accounting and Reporting Standard enables companies, countries, cities and others to quantify and report on food loss and waste so they can develop targeted reduction strategies and realize the benefits from tackling this inefficiency.

[Learn More](#)

DOWNLOADS

FLW Standard Executive Summary

📄 (PDF) – ENG | CHI | JAP | POR | SPA

FLW Standard

📄 (PDF) – ENG | JAP | SPA

Sample Reporting Template for FLW Standard

📄 (XLS) – ENG

Guidance on FLW Quantification Methods

📄 (PDF) – ENG

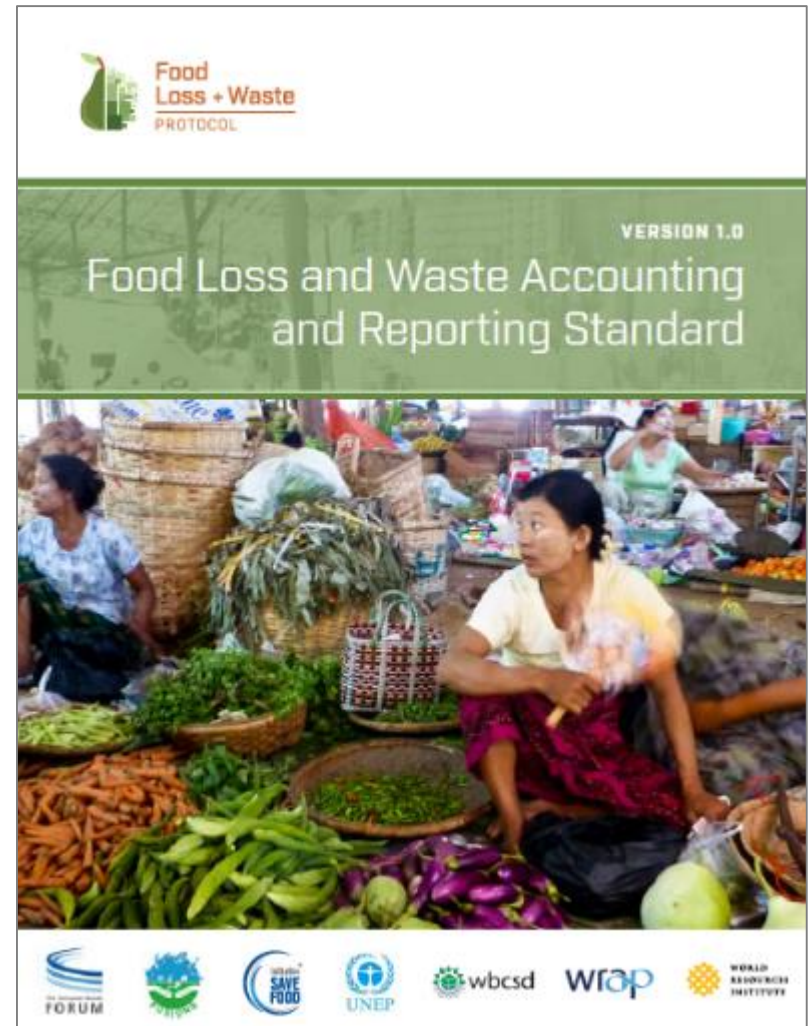
FLW Quantification Method Ranking Tool

📄 (XLS) – ENG

[Learn to Use These Resources](#)

Benefits From Using the *FLW Standard*

- ✓ **Common language**
- ✓ **Practical guidance**
- ✓ **Reporting framework**
Summarize your inventory consistently and transparently



Steps to Quantify and Report on FLW

Why quantify?



What to quantify? (January 2018 webinar)

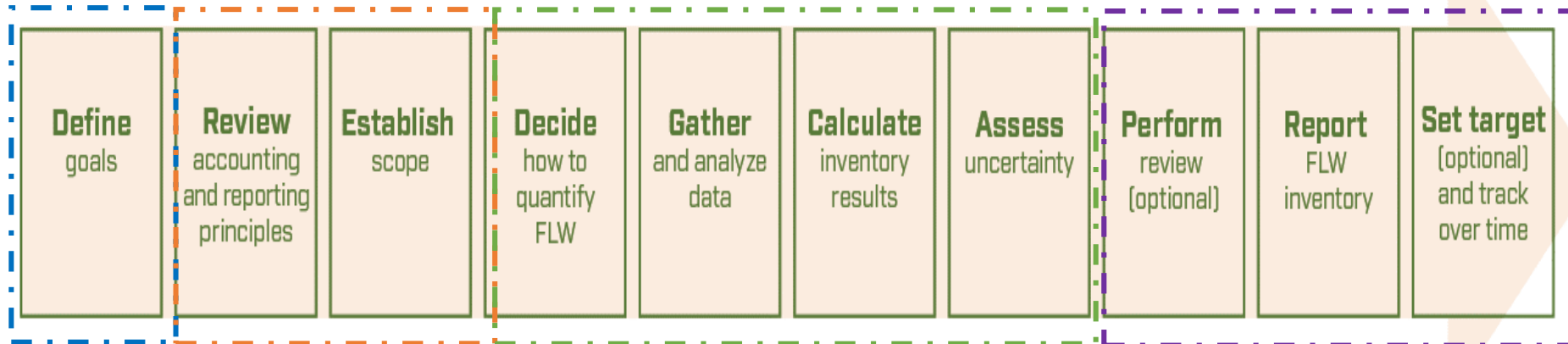


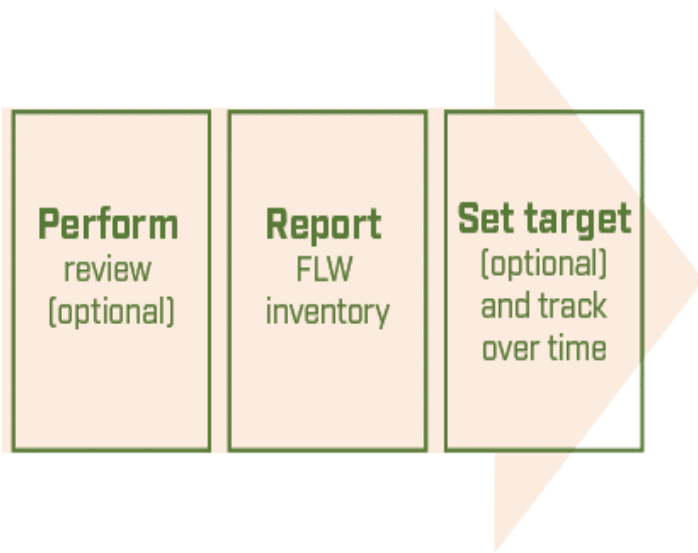
How to quantify?
(February 2018 webinar)



Focus of
this webinar

Reporting





About the Reporting Framework

Why Report Your FLW Inventory?

Facilitates communication

... with internal team

... with external stakeholders



... to understand and prioritize
sources and destinations of FLW

... and take action to address it

The Eight *FLW Standard* Accounting and Reporting Requirements

<i>Requirement</i>	<i>Guidance</i>
1. Base FLW accounting and reporting on the principles of relevance, completeness, consistency, transparency, and accuracy	Chapter 5
2. Account for and report the physical amount of FLW expressed as weight (e.g., pounds, kilograms, tons, metric tons)	Chapter 7
3. Define and report on the scope of the FLW inventory a. Timeframe c. Destination b. Material type d. Boundary (See <i>FLW Standard</i> for details, including related issues)	Chapter 6
4. Describe the quantification method(s) used. If existing studies or data are used, identify the source and scope	Chapter 7

The Eight *FLW Standard* Accounting and Reporting Requirements

<i>Requirement</i>	<i>Guidance</i>
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4. Describe the quantification method(s) used. If existing studies or data are used, identify the source and scope	Chapter 7
5. <i>If sampling and scaling of data are undertaken, describe the approach and calculation used, as well as the period of time over which sample data are collected (including starting and ending dates)</i>	Chapter 8
6. Provide a qualitative description and/or quantitative assessment of the uncertainty around FLW inventory results	Chapter 9
7. <i>If assurance of the FLW inventory is undertaken (which may include peer review, verification, validation, quality assurance, quality control, and audit), create an assurance statement</i>	Chapter 12
8. <i>If tracking the amount of FLW and/or setting an FLW reduction target, select a base year, identify the scope of the target, recalculate the base year FLW inventory when necessary</i>	Chapter 14

Chapter 4 Lists Summary of Requirements

[Why Measure?](#)[FLW Standard ▾](#)[News & Updates](#)[About the FLW](#)

Download & Explore the FLW Standard

PART I OVERVIEW

1. INTRODUCTION

- 1.1 Purpose and Vision
- 1.2 The Need for an Accounting and Reporting Standard
- 1.3 How the Standard Can be Used
- 1.4 Guiding Principles and Design of the Standard

2. DEFINITION OF TERMS AND APPLICATIONS

- 2.1 Standard Terminology: Shall, Should, and May
- 2.2 Material Types and Possible Destinations
- 2.3 Definitions of "Loss and Waste"
- 2.4 How the Standard Addresses the Environmental, Nutritional, or Financial Implications of FLW
- 2.5 How the Standard Applies to Certain Components of the

3. GOALS OF QUANTIFYING FLW

- 3.1 Mandatory and Voluntary Goals
- 3.2 The Implications of Choosing Different Goals

4. SUMMARY OF STEPS AND REQUIREMENTS

- 4.1 Accounting and Reporting Steps
- 4.2 Summary of Requirements

5. PRINCIPLES OF FLW ACCOUNTING AND REPORTING

- 5.1 Explanation of the Principles and Guidance on Their Application
- 5.2 Guidance: Disclosing and Justifying Exclusions

Also available
on last page of
FLW Standard
Executive
Summary

TIP: Hover over each box to see the table of contents; clicking on the Section of interest will take you right to that part of the FLW Standard

Tools & Resources

Case Studies

Tools & Resources

Trainings

FAQs

We've created a number of tools and resources to help you use the **FLW Standard**. You can download these below.

REQUIREMENTS IN THE FLW STANDARD

This **simple Word document** provides a summary table of the eight reporting and accounting requirements contained in the **FLW Standard (Chapter 4)**. Guidance on implementing these requirements is provided throughout the FLW Standard, with further guidance about reporting your food loss and waste inventory included in **Chapter 13**.

SAMPLE REPORTING TEMPLATE

This **sample reporting template** will help you record and report the results of inventories conducted using the FLW Standard. You can enter the items you are required to report to be in conformance with the FLW Standard, and create a summary of your food loss and waste inventory.

You are not required to use this template, and you may also modify it to best suit your needs.

Downloadable “Word” Document | Table of Requirements

Also include when reporting:

Reporting entity:

Name of person filling out report:

Date prepared:

Overall food waste amount: **xx weight**

Other details (optional):

ents-in-FLW-Standard (16) (Protected View) - Word

VIEW VIEW

A - [Icons] B I U [Icons]

's safer to stay in Protected View.

Enable Editing

3 4 5 6 7 [Icons]

TABLE OF REQUIREMENTS IN FLW STANDARD



The table below provides a summary of the eight reporting and accounting requirements contained in *FLW Standard* (see Chapter 4). Guidance on implementing these requirements is provided throughout the *FLW Standard* with guidance about reporting an FLW inventory included in Chapter 13.







The case studies on the FLW Protocol website (www.flwprotocol.org) provide examples for how some entities are using this table to describe their FLW inventory.

FLW STANDARD REQUIREMENTS (see www.FLWProtocol.org for details and guidance)	
1. Base FLW accounting and reporting on the principles of relevance, completeness, consistency, transparency, and accuracy	
• → Relevance:	
• → Completeness:	
• → Consistency:	
• → Transparency:	
• → Accuracy:	
2. Account for and report the physical amount of FLW expressed as weight	
3. Define and report on the scope of the FLW inventory	
• → Timeframe:	
• → Material type:	
• → Destination:	
• → Boundary:	
○ → Food category:	
○ → Lifecycle stage:	

Visual also available for requirement #3



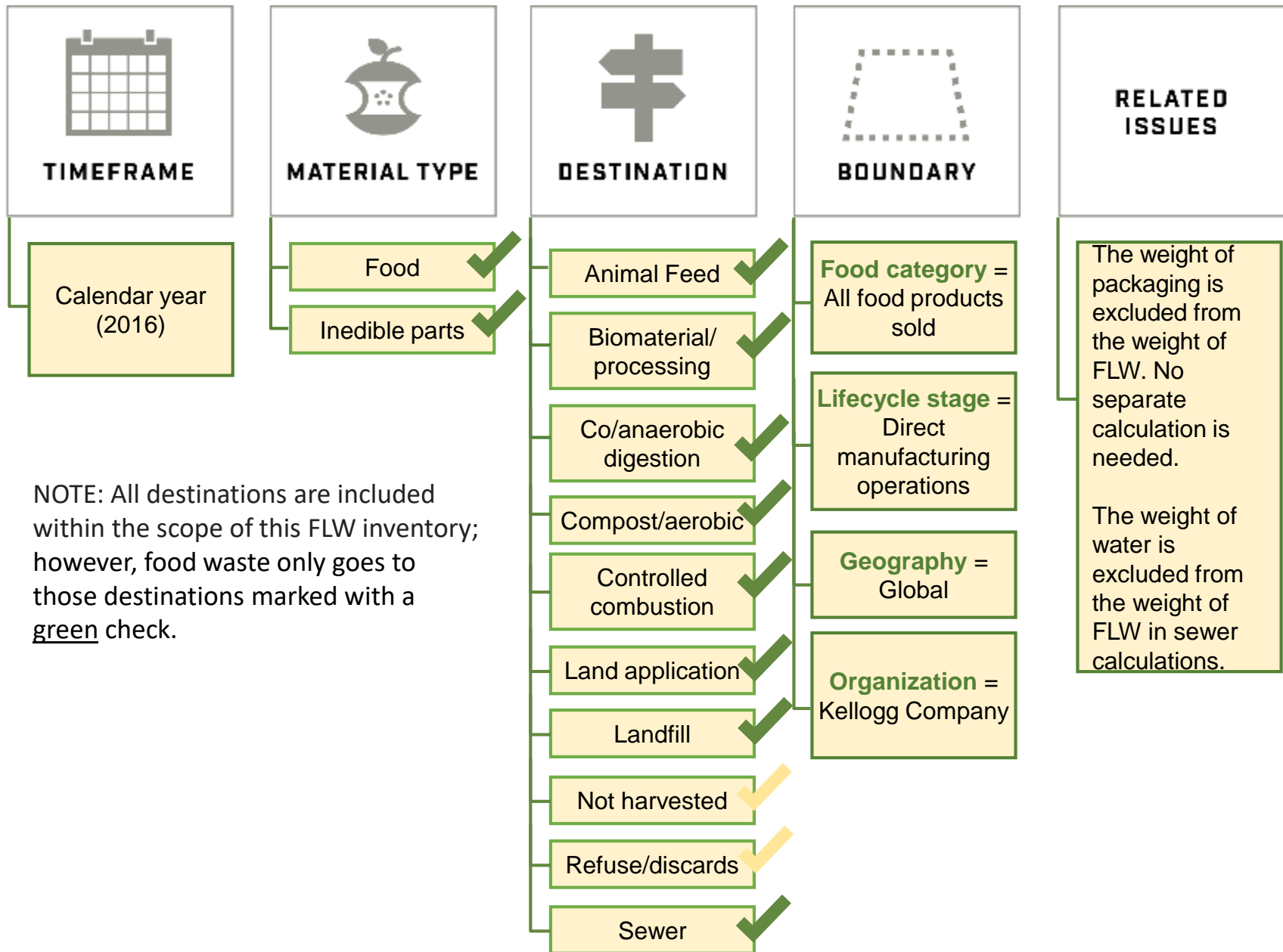
For Requirement 3: A Visual to Easily Summarize Scope

 TIMEFRAME	 MATERIAL TYPE	 DESTINATION	 BOUNDARY	RELATED ISSUES
<div>(insert timeframe)</div>	<div>Food</div> <div>Inedible parts</div>	<div>Animal Feed</div> <div>Biomaterial/ processing</div> <div>Co/anaerobic digestion</div> <div>Compost/aerobic</div> <div>Controlled combustion</div> <div>Land application</div> <div>Landfill</div> <div>Not harvested</div> <div>Refuse/discards</div> <div>Sewer</div>	<div>Food category = (insert text)</div> <div>Lifecycle stage = (insert text)</div> <div>Geography = (insert text)</div> <div>Organization = (insert text)</div>	<div>Pre-harvest losses and the weight of product packaging is excluded from the weight of FLW.</div> <div>(modify and/or insert additional relevant text)</div>

Indicate what material types and destinations are included as the scope – color in the box and add a check mark ✓

Provide details about Timeframe, Boundary, and Related Issues

Example. Manufacturer's Scope (Kellogg Company)



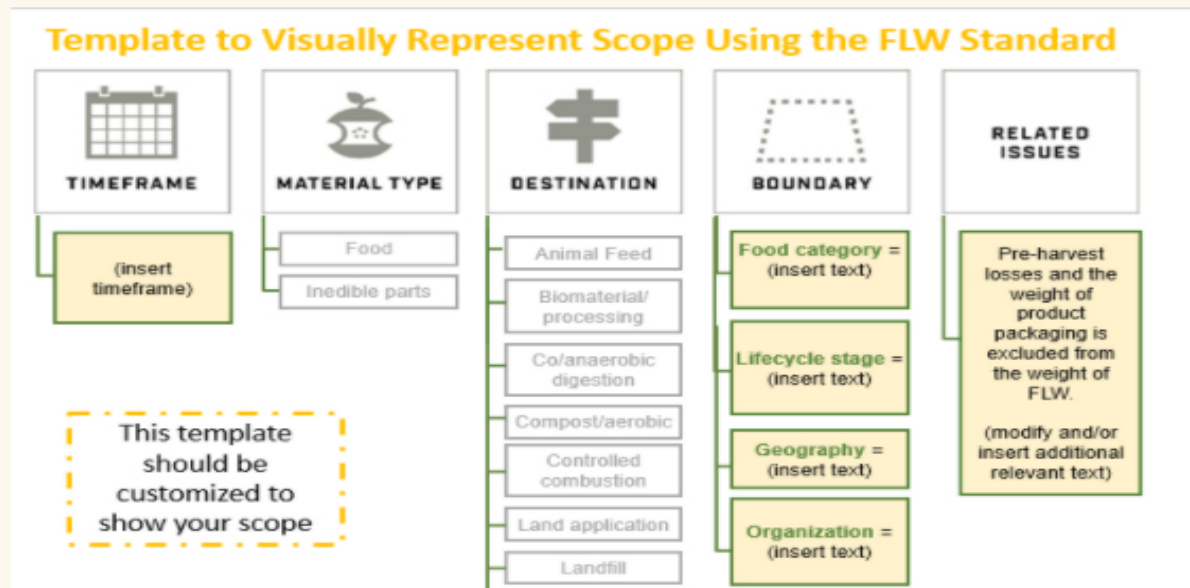
NOTE: All destinations are included within the scope of this FLW inventory; however, food waste only goes to those destinations marked with a green check.

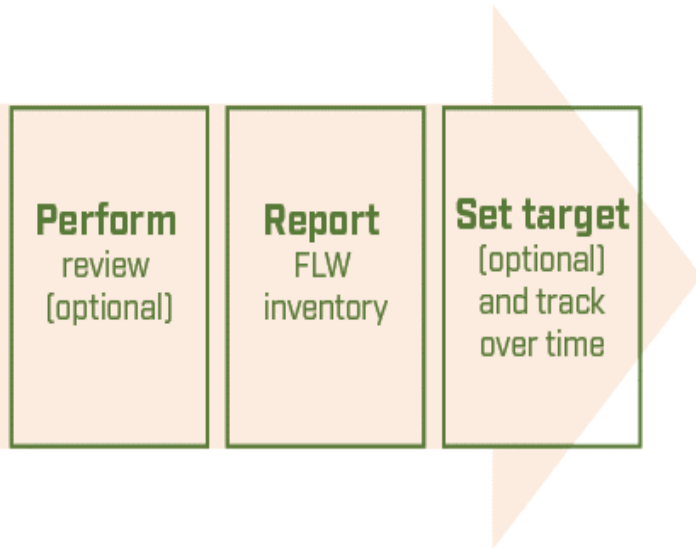
Where to Find the Customizable Visual @ www.FLWProtocol.org



SUMMARIZING THE SCOPE OF A FOOD LOSS AND WASTE INVENTORY

The FLW Standard makes it easy to describe the scope of what you're measuring. Download [a simple visual you can use in presentations or otherwise](#).






Examples of Reporting Using the FLW Standard

Examples of “Visual” and “Table” in Case Studies



Include:

- ✓ Benefits from using the FLW Standard
- ✓ Challenges faced and overcome in measuring
- ✓ How to summarize an FLW inventory using the FLW Standard
- ✓ Actions being taken to reduce FLW

TESCO'S OPERATIONS IN THE UNITED KINGDOM:
FOOD WASTE IN STORES AND DEPOTS
A Case Study 

KELLOGG COMPANY: FOOD WASTE IN
GLOBAL MANUFACTURING OPERATIONS
A Case Study 

DELHAIZE AMERICA'S OPERATIONS IN
THE UNITED STATES: FOOD WASTE IN STORES
AND DISTRIBUTION CENTERS
A Case Study 

NESTLÉ DAIRY FACTORIES IN PAKISTAN:
LOSSES ACROSS THE VALUE CHAIN
A Case Study 

More in the Pipeline:

Cranswick plc, Danone, Campbell's,
Sobey's, Walmart, UK Produce Study

FOOD WASTE IN CITIES: NRDC REPORT USING FLW
STANDARD (SEE APPENDIX A AND B)



FLW Protocol Case Study



HOW DOES THIS INVENTORY MEET THE *FLW STANDARD'S* REQUIREMENTS?

The table below provides a summary of how this FLW inventory meets the eight reporting and accounting requirements contained in the *FLW Standard*.

FLW STANDARD REQUIREMENTS & DESCRIPTION OF KELLOGG COMPANY'S FLW INVENTORY

[see www.FLWProtocol.org for details and guidance]

1. Base FLW accounting and reporting on the principles of relevance, completeness, consistency, transparency, and accuracy

- **Relevance:** Data informs waste reduction activities.
- **Completeness:** All direct global manufacturing locations are included.
- **Consistency:** Use same methodology each year.
- **Transparency:** Methodology, including assumptions, is published.
- **Accuracy:** Varies depending on destination; described in published [Methodology](#); ongoing work to reduce uncertainties.

2. Account for and report the physical amount of FLW expressed as weight

Food waste reported in metric tons

3. Define and report on the scope of the FLW inventory (see *FLW Standard* for additional details)

Timeframe: Calendar year

Material type: Food and associated inedible parts (note: mass of inedible parts is very minimal)

Destinations: All destinations fall under the definition of "food waste" for Kellogg Company, but food waste only goes to eight: animal feed, bio-based materials/biochemical processing, anaerobic digestion, compost/aerobic processes, controlled combustion (with energy recovery), land application, landfill, or sewer/wastewater treatment.

Boundary:

- **Food category:** All products sold
- **Lifecycle stage:** Direct global manufacturing operations
- **Geography:** Global
- **Organization:** All direct global manufacturing facilities

Related issues: The weight of packaging is excluded from the weight of FLW. No separate calculation is needed. The weight of water is excluded from the weight of FLW in calculations to the sewer/wastewater treatment.

4. Describe the quantification method(s) used. If existing studies or data are used, identify the source and scope

Quantification methods include: direct weighing, records, waste composition analysis, volume, and proxy data; additional details below under "About the methodology."

5. If sampling and scaling of data are undertaken, describe the approach and calculation used, as well as the period of time over which sample data are collected (including starting and ending dates)

See details below under "About the methodology."

6. Provide a qualitative description and/or quantitative assessment of the uncertainty around FLW inventory results

See details below under "About the methodology."

7. If assurance of the FLW inventory is undertaken (which may include peer review, verification, validation, quality assurance, quality control, and audit), create an assurance statement

Assurance not undertaken


8. If tracking the amount of FLW and/or setting an FLW reduction target, select a base year, identify the scope of the target, and recalculate the base year FLW inventory when necessary


- Base year is 2016
- Total waste reduction target in place; no FLW specific target
- Methodology in place to determine when baseline recalculation is necessary


Download and view online @
<http://flwprotocol.org/case-studies/>

Public Reporting by Kellogg Company

http://www.kelloggcompany.com/en_US/corporate-responsibility/positions-policies.html



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Nurturing OUR PLANET

[10 Priority Ingredients Annual Milestones](#)
[2015 Sustainability Milestones](#)
[2016 Sustainability Milestones](#)
[2017 Global Palm Milestones](#)
[2017 Mid-Year Global Sustainable Palm Oil Milestones](#)
[Climate Policy](#)
[Climate Policy Methodology](#)
[Food Loss & Waste Position Statement](#)
[Food Loss & Waste Reporting Methodology](#)
[Global Sustainable Palm Oil Policy](#)
[Global Sustainability Commitments](#)
[Greenhouse Gas Emissions Verification Statement](#)
[Kellogg Grower Survey](#)
[Responsible Sourcing: Smallholder Farmers And Women Impact](#)

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Kellogg Company Food Loss and Waste Reporting Methodology May 10, 2017

As a global food company, we believe we have a significant role to play in helping to end hunger, achieve food security, improve nutrition and promote sustainable agriculture. In doing so we are committed to supporting the United Nations Sustainable Development Goal 2. We also do our part to halve per capita global food waste at the retail and consumer level, and to reduce food losses along the production and supply chains including post-harvest losses by 2030, which supports U.N. Development Goal 12.3.

A critical element of our work to support food security and help eradicate hunger is helping to eliminate food waste from food systems. Please see our [Food Waste Position Statement](#) for more information.

The following figure visually represents the scope of Kellogg Company's food waste inventory, using the [Food Loss and Waste \(FLW\) Standard](#). The FLW Standard is a global accounting and reporting guideline for quantifying food and associated inedible parts removed from the food supply chain. It enables countries, companies and other organizations to account for and report in a credible, practical and internationally consistent manner how much food loss and waste is created and identify where it occurs, enabling the targeting of efforts to reduce it.

TIMEFRAME	MATERIAL TYPE	DESTINATION	BOUNDARY	RELATED ISSUES
Calendar year (2016)	Food Inedible parts	Animal Feed Biogas Composting Compost Controlled combustion Land application Landfill Not harvested Refused/discarded Sewer	Food category = All food products sold Lifecycle stage = Direct manufacturing operations Geography = Global Organization = Kellogg Company	The weight of packaging is excluded from the weight of FLW. No separate calculation is needed. The weight of water is excluded from the weight of FLW in sewer calculations.

NOTE: All destinations fall under the definition of "food waste" for Kellogg. However, food waste only goes to those marked with a green check.

Company Corporate Responsibility Report

set a target to ensure that 50 percent of our plants send zero waste to landfill. Going forward, we are committed to reducing total waste by 15 percent (per metric tonne of food produced) by 2020, using 2015 as our baseline.

In 2016, we saw solid progress against our waste reduction goals. Twenty-five percent of our plants sent zero waste to landfill. While this fell slightly short of our target, we are proud of our progress. Overall, we reduced our total waste to landfill by 6.1 percent in 2016 (per metric tonne of food produced).

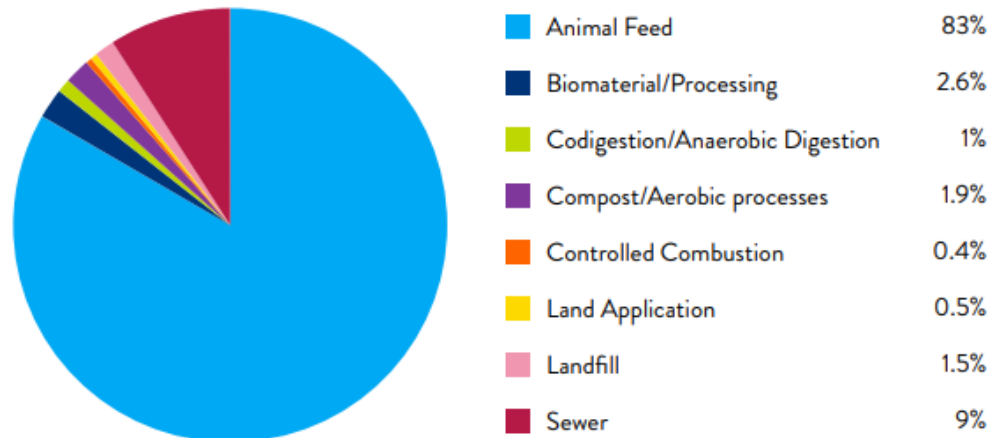


Kellogg's

and consumer level, and to reduce food losses along the production and supply chains, including post-harvest losses. To support these 2030 efforts, Kellogg was one of the first U.S.-based companies to join [Champions 12.3](#) and to become a U.S. Food Loss and Waste 2030 Champion, signing onto a joint initiative between the U.S. Environmental Protection Agency and the U.S. Department of Agriculture.

Additional information about our food loss and waste methodology and its alignment with the World Resources Institute Food Loss and Waste Standard can be found [here](#).

KELLOGG 2016 FOOD WASTE BY DESTINATION



Beyond the 8 Requirements: Sharing Methods Used & Uncertainty



Destination	Quantification Methods Used	Uncertainty*
Animal feed	<p>Material: Food</p> <p>Quantification method: Records from waste management vendors, primarily derived from direct weighing at the destination</p> <p>Assumptions: Assumes that minimal amounts of water are added for disposal as dry feed is much preferred by vendors over wet</p>	<p>7</p> <p>Minimal verification of vendor data</p>
Co/anaerobic digestion	<p>Material: Food and Sludge</p> <p>Quantification methods:</p> <ol style="list-style-type: none"> Records from waste management vendors, primarily derived from direct weighing at the destination Assumptions from sludge waste composition analysis <p>Assumptions: Assumes 15% of sludge weight represents food waste and the remaining 85% is water. Assumption based on average of 2015–2016 sludge analysis from one cereal manufacturing location in the UK. During anaerobic/aerobic digestion, some food is consumed, but bacteria also generate waste and die; this is assumed to be negligible.</p>	<p>5</p> <p>Minimal verification of vendor data</p> <p>Assumptions scaled up from limited waste composition analysis</p>

*Qualitative estimate based on a scale of 1–10, with 10 signifying very accurate data

Additional details provided in FLW Standard case study – available at:
<http://flwprotocol.org/case-studies/>

Same Table Can Be Used for Different Parts of an Entity (e.g., Just One Business Unit)



FLW STANDARD REQUIREMENTS TO DESCRIBE DELHAIZE AMERICA’S FLW INVENTORY	
1. Base FLW accounting and reporting on the principles of relevance, completeness, consistency, transparency, and accuracy	<ul style="list-style-type: none">• Relevance: Data informs waste reduction activities• Completeness: All stores and distribution centers included• Consistency: Use same methodology each year• Transparency: Methodology, including assumptions, is shared with internal decision-makers• Accuracy: Calculation is validated by internal audit. Ongoing work to reduce uncertainties
2. Account for and report the physical amount of FLW expressed as weight	Reported in US tons
3. Define and report on the scope of the FLW inventory	<ul style="list-style-type: none">• Timeframe: Calendar year (2016)• Material type: Food and associated inedible parts• Destination: All destinations fall under the definition of “food waste” for Delhaize America, but food waste only goes to some: animal feed, anaerobic digestion, bio-based materials/biochemical processing (rendering), composting, controlled combustion (incineration), or landfill• Boundary:<ul style="list-style-type: none">○ Food category: All food and beverage (UNCPC2.1 Div. 21 – 24)○ Lifecycle stage: Direct retail operation and distribution centers (DCs)○ Geography: (US, 15 states in Northeast, Southeast, Mid-Atlantic US regions)○ Organization: (Hannaford – 179 stores, 2 DCs, Food Lion – 1112 stores, 5 DCs)• Related issues: Packaging weight is excluded. Estimates of the packaging weight are based on samples in which the food waste and packaging were separately measured

Parent Company Sustainable Retailing Report



Ahold Delhaize Supplementary report on Sustainable Retailing performance 2016

07

Our focus areas

Sustainable Retailing Data

Reduce food waste

KPI Description	2016 Actuals	2020 Target
Tonnes of food waste per food sales (t/MEUR) ³	5.02	4.02 (-20%)
Tonnes of food waste sent to disposal per food sales (t/MEUR) ³	1.82	n/a
% of total food waste recycled ⁴	72%	90%
% food waste recycled for animal feed ⁵	35%	n/a
% food waste recycled for biogas generation ⁶	18%	n/a
% food waste recycled for compost ⁷	17%	n/a
% food waste recycled by rendering ⁸	30%	n/a
% of unsold food donated to feed people ⁹	21%	n/a

3 2016 data excludes Super Indo. Food waste is defined as food not sold by Ahold Delhaize brands, and not otherwise diverted to feed people. 'Food sales' includes all edible products we sell.

4 Recycling includes animal feed, biogas generation, composting, and rendering.

5 Recycling of organic waste to feed animals (e.g., diverting food scraps to feed farm, zoo or sanctuary animals).

6 Recycling of organic waste to produce biogas (e.g., anaerobic digestion, co-digestion, biomethanization).

7 Recycling of organic waste to produce compost (aerobic process), a product rich in minerals that can be used for gardening and farming as a soil conditioner.

8 Recycling of animal waste for bio-material and processing.

9 2016 data excludes Ahold USA and Albert Heijn. Food shrink donated is defined as food product inventory (in tonnes) that is no longer able to be sold, yet still is safe for consumption, which is given to hunger relief organizations. For this calculation, breakages and thefts are excluded from 'food shrink'.

Promote healthier eating

Reduce food waste

Create healthier & inclusive workplaces

Commentary

Reduce food waste

We minimize food waste in our own operations, with a target to reduce it by 20% between 2016 and 2020, while at the same time increasing recycling options for all remaining food waste. Our actions are focused on increasing efficiency, optimizing store replenishment, and maximizing the percentage of unsold food that is diverted to feed people. We increasingly identify new ways to partner with food banks in all our markets to establish ways to redistribute more unsold food to people in need. In a few locations, we partner with restaurants that use unsold food to prepare meals, such as the three Instock restaurants in the Netherlands. In addition, we offer tips to customers on reducing food waste at home.

We set 2016 baselines and 2020 targets to track our progress on two indicators: total food waste per food sales (in tonnes per millions of euros), and percentage of food waste that we recycle. We measure these in line with the newly-released Food Loss and Waste Protocol. In addition, we report total food waste sent to disposal per food sales, in line with our commitment as a board member company of the CGF to meet the Food Waste Reduction resolution. Our work also aligns with the ambition of SDG target 12.3.



For more information on our actions to reduce food waste, please visit the Ahold Delhaize website, Sustainable Retailing section.

www.aholddelhaize.com/en/sustainable-retailing

Other Company Examples

TESCO PLC

206.50p 20 Feb 2018 at 16:35

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About us Investors News **Little Helps Plan** Careers

Reports, policies and disclosure

How we calculate the food waste figure - UK

Scope and Definitions

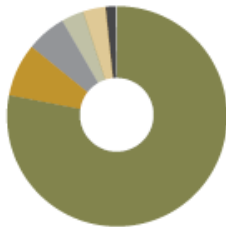
The methodology outlined below is used to calculate the total tonnes of food wasted in our UK operations in the full Tesco financial year 2016/17. The information provided is in conformance with the [Food Loss and Waste Accounting Standard \(FLW Standard\)](#).

Published @ <https://www.tescopl.com/little-helps-plan/reports-policies-and-disclosure/how-we-calculate-the-food-waste-figure/>



Has developed template food service clients can use

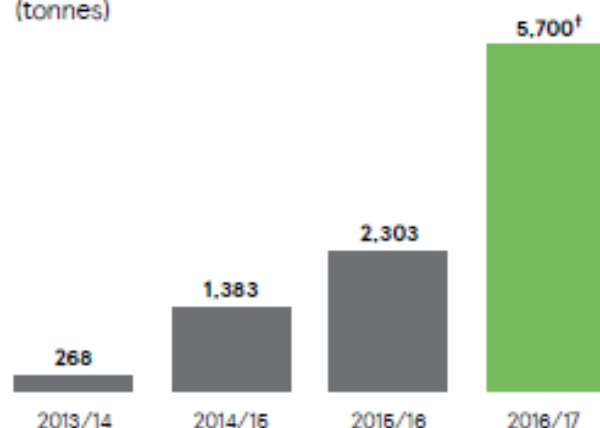
FOOD WASTE GENERATED (tonnes)



Animal Feed:	327,484
Land Application:	31,998
Anaerobic Digestion:	24,016
Aerobic Digestion:	14,722
Landfill:	13,838
Biomaterial Processing:	5,824
Controlled Combustion:	303
Total:	418,185

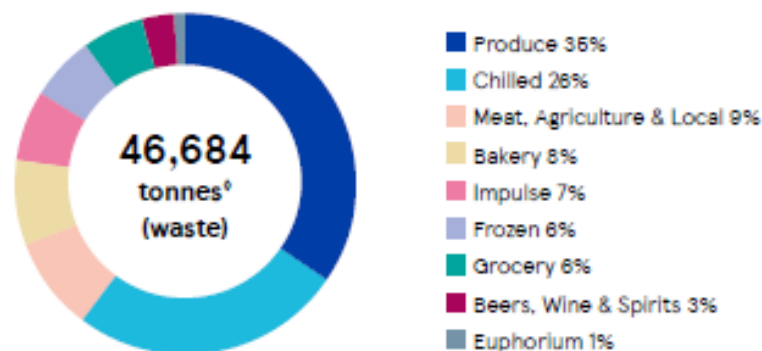
Optional Reporting: Of Donations, FLW By Category

Surplus donations since 2013/14
(tonnes)



[†] During 2016/17 our rate of donation has increased.
The projected surplus donations for 2017/18 is 11,700 tonnes.

2016/17 food waste by category
(surplus minus donations and animal feed)^(c)



Food waste recalculation^(b)
(surplus minus donations and animal feed)^(c)

Year	Food waste (tonnes)
2015/16	42,680
2014/15	42,172
2013/14	48,182

Destination of 2016/17 food surplus

Destination	Surplus tonnes	%*
Donated	5,700	8
Animal feed ^(c)	18,794	26
Anaerobic digestion ^(c)	38,653	54
Energy recovery ^(c)	8,031	11
Landfill	-	0

* % do not total 100% due to rounding.

^g Independent limited assurance for food waste data has been provided by KPMG LLP using the assurance standards ISAE 3000. KPMG has issued an unqualified opinion over the data highlighted in this report with a \diamond and the full assurance opinion is available at: www.tescopl.com/foodwastefigures.

^(a) The proportion of food wasted against the total weight of food products sold in Tesco's UK stores.

^(b) Due to our change in definition, we have restated previous years' waste figures. See www.tescopl.com/foodwastefigures for further details.

^(c) Damaged bakery products contribute to animal feed total. Other food that is damaged or not safe to donate is sent to anaerobic digestion or energy recovery. See www.tescopl.com/foodwastefigures for further details.

Summarizing City-Level FLW Inventory



OCTOBER 2017
R-17-09-B

ESTIMATING QUANTITIES AND TYPES OF FOOD WASTE AT THE CITY LEVEL: TECHNICAL APPENDICES

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Published at:
<https://www.nrdc.org/resources/food-matters-what-we-waste-and-how-we-can-expand-amount-food-we-rescue>

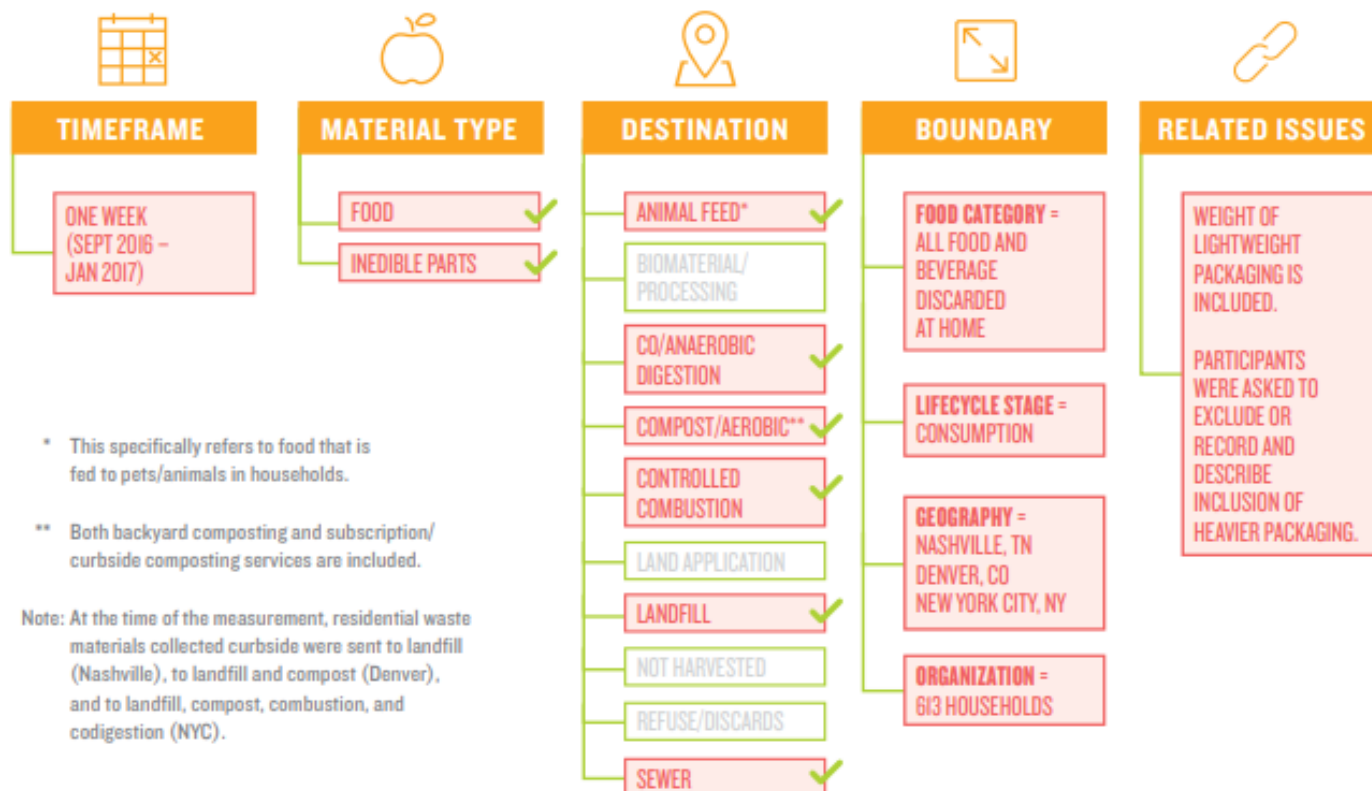
Variations on the Template



Appendix A: Conformance with Food Loss and Waste Standard—Residential

The Food Loss and Waste Accounting and Reporting Standard (FLW Standard¹) provides a framework for accounting for and reporting on food loss and waste. The graphic below describes the scope of the residential assessment using the FLW Standard.

BASELINE FOOD WASTE ASSESSMENT: RESIDENTIAL (FOOD LOSS AND WASTE ACCOUNTING AND REPORTING STANDARD)



Variations on the Template



REQUIREMENT 1: BASE FLW ACCOUNTING AND REPORTING ON THE PRINCIPLES OF RELEVANCE, COMPLETENESS, CONSISTENCY, TRANSPARENCY, AND ACCURACY

A. Relevance:

- Characterize wasted food in households by type, weight, edibility, loss reason, and discard destination
- Explore food waste-related behaviors to better understand how they relate to the amount of food wasted by households and to identify potential interventions (e.g. behavior education campaigns)
- Contribute to a working model for other cities to perform similar assessments

1 Food Loss and Waste Accounting and Reporting Standard, <http://flwprotocol.org> (accessed October 16, 2017).

B. Completeness: A total of 613 households in three cities tracked all food and beverage discarded to all destinations (including trash, home compost, curbside compost, drain disposal, feeding to pets) for one week using a kitchen diary. Additional data were derived from surveys and bin digs.

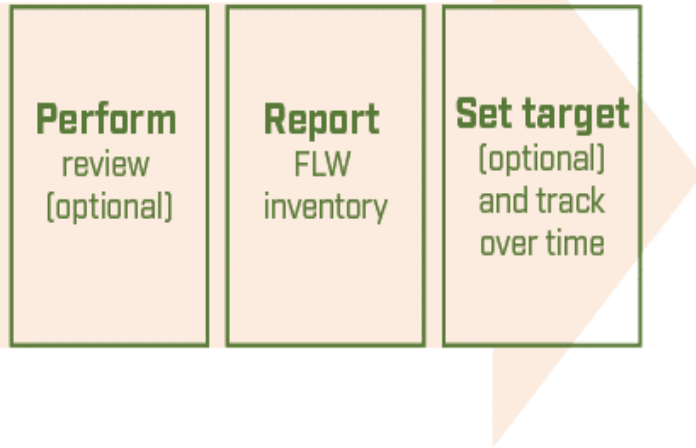
C. Consistency: Methodologies and templates used for tracking and analyzing data were identical across study cities (except for variations as noted in the detailed methodology below).

D. Transparency: Methodology, including assumptions and definitions, is available in this report (with additional details available upon request).

E. Accuracy: Analyses and calculations have been tested and verified; some accuracy of primary data cannot be assured due to inconsistencies in individual study participant tracking.

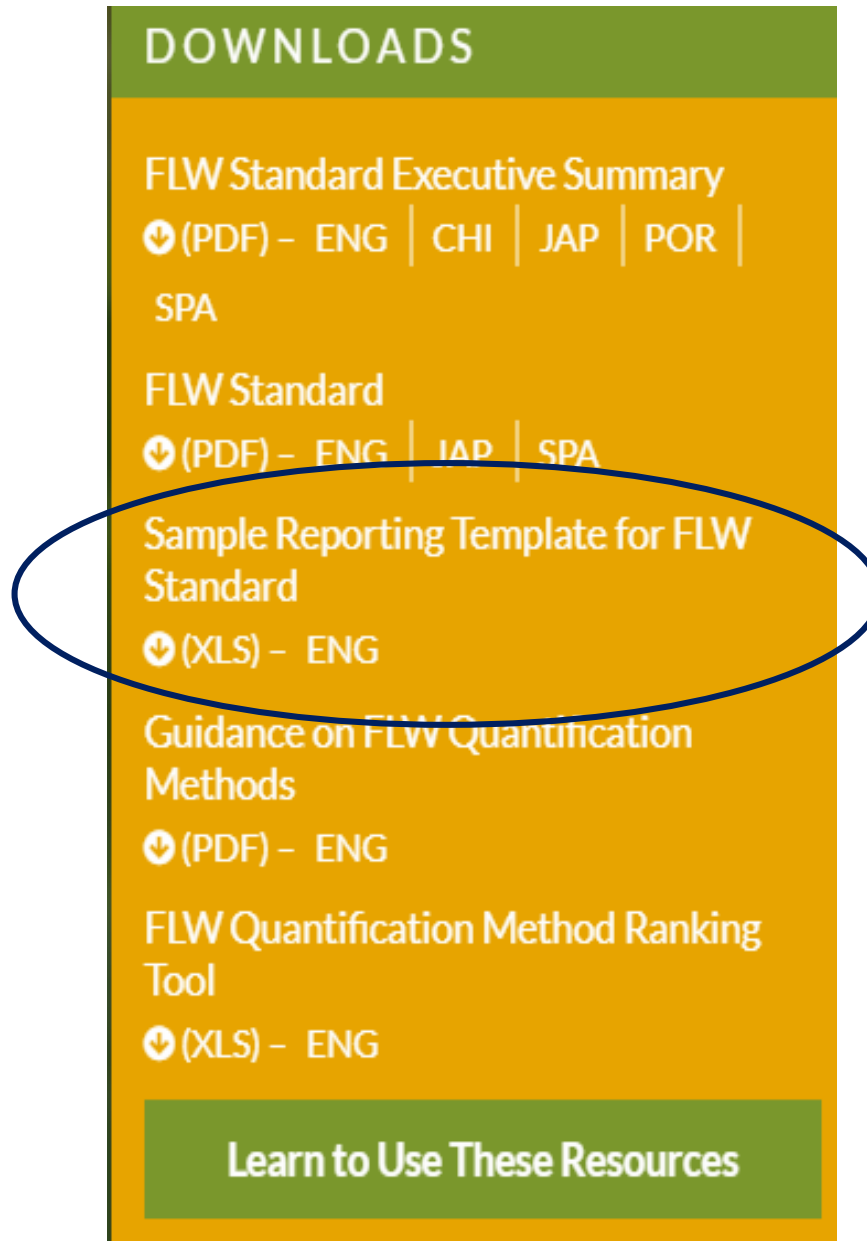
REQUIREMENT 2: ACCOUNT FOR AND REPORT THE PHYSICAL AMOUNT OF FLW EXPRESSED AS WEIGHT

Reported in pounds



Other Tools & Resources Related to Reporting

Sample Inventory Reporting Template for *FLW Standard*



DOWNLOADS

FLW Standard Executive Summary
⬇️ (PDF) – ENG | CHI | JAP | POR | SPA

FLW Standard
⬇️ (PDF) – ENG | JAP | SPA

Sample Reporting Template for FLW Standard
⬇️ (XLS) – ENG

Guidance on FLW Quantification Methods
⬇️ (PDF) – ENG

FLW Quantification Method Ranking Tool
⬇️ (XLS) – ENG

Learn to Use These Resources

Sample Inventory Reporting Template for *FLW Standard*

FLW INVENTORY SCOPE AND RESULTS		Unit of quantification	
Total weight of FLW		lbs	
1. Timeframe		Starting date	Ending date
2. Material type(s)		Is material type included? (Yes/No)	Weight of FLW by material type (if quantified separately)
Step 1. Select material type(s) included in the inventory scope.			
Step 2. If the weight of food or inedible parts has been quantified separately, record amount in column D; otherwise leave cells blank.			
Food		No	
Inedible parts		No	
If reporting the amount food or inedible parts separately, please also complete rows 48-51.			
3. Destinations		REQUIRED INFORMATION	
Step 1. Select all destinations that are part of the FLW inventory scope using column C. If "other," describe destination in cell B29. If "unknown," use rows 31-33.		Destination included in scope? (Yes/No)	Weight of FLW by destination (if known enter amount, otherwise enter 0)
Step 2. Press the HIDE button (row 34).			
Step 3. Enter amounts of FLW by destination (in column D).			
Weight of FLW (by destination or path)			
Note: Total weight known by destination may differ from total weight (shown in row 5)			
Destination categories		CLEAR ALL DESTINATION INFORMATION	
OPTIONAL (but strongly recommended) INFORMATION			
Please include information by destination (as known).			
Is FLW valorized to some degree? (Yes/No)	Weight of FLW with valorization	Weight of FLW with no valorization	Energy recovered? (Yes/No)
			Solid material recovered? (Yes/No)
			Liquid recovered? (Yes/No)

Requirement: Define and report on the scope of the FLW inventory.

Notes: Please see Chapter 6 of the FLW Standard for further guidance.

Cells with red corners contain additional information. Scroll your mouse over them and content will appear.

The pink cells in row 17 contain formulas to sum up rows. You may type directly into these cells (e.g., if you have data that are not disaggregated by destinations), but please note that the formulas will then no longer work. If you accidentally type over the formulas, pressing the "clear all destination information" button will clear out all the information and also reset the formulas.

This template is most useful for reporting FLW inventory results and other items

Legend (cell colors):

- Required field
- Optional field
- Space for user entry
- Reference information
- Formula included
- Not applicable

Sample Summary Generated

	A	B	C	D	E	F	G	H	I	J
1										
2		SUMMARY OF FLW INVENTORY SCOPE AND RESULTS								
3										
4		Reporting entity:	Company X				Date prepared:	12-Dec-17		
5		Timeframe:	1-Nov-16	to	31-Oct-17					
6										
7		Total weight of FLW reported:	100 metric tons (1,000 kg)							
8										
9						<i>Weight of FLW disaggregated by material type and destination (where relevant)</i>				
10		<i>FLW Inventory Scope</i>								
11		Material type(s):								
12		Food				n/a				
13		Inedible parts				n/a				
14										
15		Destination(s):				Valorized? (to some degree)				
16										
17		Codigestion/anaerobic digestion				100		Yes		
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31		Boundary:								
32		Food category(ies):		Baked goods for retail (GSFA04.2; GSFA07.2; GSFA08.1; GSFA15.1)						
33		Lifecycle stage(s):		Own operations (ISIC 1071 / 1075)						
34		Geography:		United Kingdom (UN Code 826)						
35		Organization:		1 business unit (1 factory)						
36										
37		Other requirements:								
38		Quantification method(s)				See Tab III				
39		Uncertainty assessment				See Tab IV				
40		Sampling and scaling of data (if applicable)				See Tab IV				
41		Assurance statement (if applicable)				See Tab V				
42		Targets and tracking (if applicable)				See Tab VI				

See Chapter 13 for Guidance on Reporting



[Why Measure?](#)

[FLW Standard ▾](#)

[News & Updates](#)

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Download & Explore the FLW Standard

0. INTRODUCTION	12. REVIEW AND ASSURANCE 12.1 Key Terms in Assurance 12.2 The Assurance Process	PART II REQUIREMENTS
1. SCOPE	13. REPORTING 13.1 Guidance on Reporting 13.2 Required Information 13.3 Optional Reporting	
2. DATA COLLECTION	14. SETTING TARGETS AND TRACKING CHANGES OVER TIME 14.1 Selecting a Base Year 14.2 Identifying the Scope of the Target 14.3 Choosing a Target 14.4 Monitoring Performance Against Targets	PART IV APPENDICES
OTHER RECOMMENDATIONS		

TIP: Hover over each box to see the table of contents; clicking on the Section of interest will take you right to that part of the FLW Standard



Download & Explore the FLW Standard

PART I OVERVIEW

PART III OTHER REQUIREMENTS AND RECOMMENDATIONS

APPENDIX C. NORMALIZING DATA

C1 Introduction

C2 Selecting a Normalization Factor

C3 Reporting and Communicating about Normalized Data

APPENDIX D. EXPRESSING WEIGHT OF FLW IN OTHER TERMS OR UNITS OF MEASUREMENT

D1 Introduction

D2 General Considerations

D3 Environmental Impacts

D4 Nutritional Content

D5 Financial Implications

TIP: Hover over each box to see the table of contents; clicking on the Section of interest will take you right to that part of the FLW Standard

Coming soon:
The Food Waste Atlas

What is the Atlas?

- The one-stop shop for viewing and submitting food loss and waste data
- Will contain both individual data points (based on geography, commodity type and stage of the supply chain) and full inventory data from companies and countries

FLW ATLAS

⋮

The Food Waste Atlas

Tracking the world's food loss and waste from
farm to fork



FLW DATABASE

Finding food loss and waste
data by location, food category,
and stage in supply chain

SUBMIT FLW DATA

SEARCH DATA



INVENTORY DATA

Tracking food waste and loss by
country and company

SUBMIT INVENTORY

SEARCH INVENTORY



DRAFT Functionality of the Atlas

FLW ATLAS

Search
Find quantitative data on food loss and waste

Showing 4

Food type, location, and/or a supply chain stage

Eggs 2010

Eggs 2010

Eggs 2010

Eggs 2010

Supply chain stage
Consumer

Location
United States

FLW amount
2.1 billion lbs.

Source type
USDA

Source link
<https://www.ers.usda.gov/data-products/food...>

Supply chain stage
Retail

Location
United States

Supply chain stage
Household

Location
Japan

Supply chain stage
Retail

Location
Canada

DRAFT Functionality of the Atlas

FLW ATLAS



1

2

3

Submit Inventory Data

Entity Name



Time Frame

to

Time Frame



Material type



Boundary

Food categories



Next

DRAFT Functionality of the Atlas

FLW ATLAS

UK, 2015
Retail [2617]



[Back to search](#)

Year



2015

Location



Household

Edible
5.7 Mt
Total
7 Mt

Inedible Food Waste
1.3 Mt

Destination

AD or composting
1.2 Mt

Landfill
3.5 Mt

Thermal and landspreading
2.3 Mt

Total
7 Mt

Hospitality and Food Service

Edible
0.7 Mt
Total
0.9 Mt

Inedible Food Waste
0.2 Mt

Destination

AD or composting
0.1 Mt

Landfill
0.6 Mt

Thermal and landspreading
0.2 Mt

Total
0.9 Mt

Retail and whole sale

Edible
0.3 Mt
Total
0.3 Mt

Inedible Food Waste
0 Mt

Manufacturing

Edible
0.9 Mt
Total
1.7 Mt

Inedible Food Waste
0.8 Mt

Total Destination - UK



AD or composting
1.95 Mt

When Will the Atlas Launch?

- **Likely launch date: September 2018**
- **More updates to come on future webinars**

Next Steps

- ✓ Sectoral guidance and other tools under development
- ✓ Monthly webinar series to continue April 21st (third Wednesdays)
 - April 21st webinar will be in Spanish (An overview of the FLW Standard)
 - Send us your thoughts on questions and topics to address
- ✓ If you aren't already signed up for the news update, do so at the bottom of any page @ FLWProtocol.org

STAY IN TOUCH AND INFORMED

Sign up to stay updated on the latest FLW news, case studies, tools, and training events.

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Company	Job Title	City
<input type="text"/>	<input type="text"/>	<input type="text"/>
State	*Country	
<input type="text"/>	<input type="text"/>	

Part 2.

Open Question & Answer



Acknowledgements | Funders of WRI's FLW Initiative



Ministry of Economic Affairs

The Netherlands Ministry of Economic Affairs



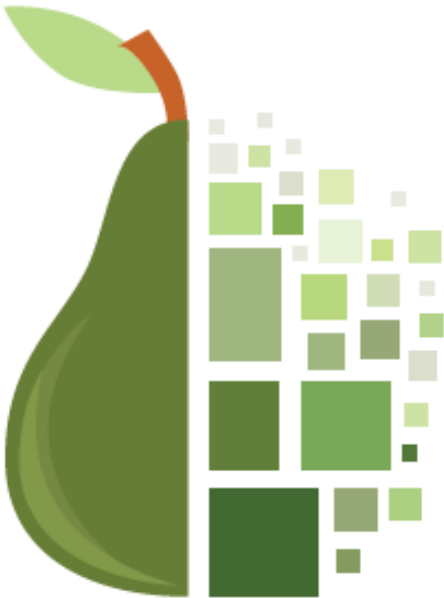
Ministry of Foreign Affairs of the
Netherlands

MINISTRY OF FOREIGN AFFAIRS OF DENMARK
DANIDA INTERNATIONAL
DEVELOPMENT COOPERATION



Note: The Ministry of Foreign Affairs of the Netherlands, the Royal Danish Ministry of Foreign Affairs, the Swedish International Development Cooperation Agency (SIDA) and the Department of Foreign Affairs and Trade of Ireland (Irish Aid) provided core funding of the World Resources Institute, which made possible the development of the Food Loss and Waste Protocol.

Contact Us With Questions



Food Loss + Waste

PROTOCOL

www.flwprotocol.org

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