

SDG 12.3: Food Waste Index

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SDG Target 12.3

By 2030 halve per capita global food waste at the retail and consumer level, and reduce food losses along production and supply chains including post-harvest losses



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12.3: A target with two indicators

Focuses on supply
(FAO lead)

“By 2030, ...



Food Loss Index

“...reduce **food losses** along **production and supply chains**, including post-harvest losses.”



Food Waste Index

“...halve per capita global **food waste** at the **retail** and **consumer levels**.”

Focuses on
demand end of
supply chain
(UN-E lead)

Overall custodian: FAO

Indicator status

Current Status of 12.3.2 (Food Waste): Tier III Indicator

- No internationally established methodology or standards are yet available for the indicator...
- ...but methodology or standards are being developed or tested

Goal: Food Waste Index to become a Tier II Indicator

- An indicator that is conceptually clear, has an internationally established methodology and standards are available...
- ...but data are not regularly produced by countries



Timescales and Approach

- Project to develop Food Waste Index methodology started in January 2018
- Involves UN-E, UN-FAO, World Resources Institute (WRI), WRAP
- Builds on existing methodologies e.g. Food Loss and Waste Standard, FUSIONS manual
- This is the first pilot
- Aiming to present piloted approach to Inter-Agency Expert Group on SDGs (IAEG-SDG) November 2018



Overlap with other SDG indicators

- Following two indicators both cover waste
- Opportunities to collect related data for multiple indicators
 - 11.6.1: Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities (Tier II, UN-Habitat, UNSD)
 - 12.5.1 National recycling rate, tons of material recycled (Tier III, UNSD, UNEP)



SDG 12.3: Food Waste Index

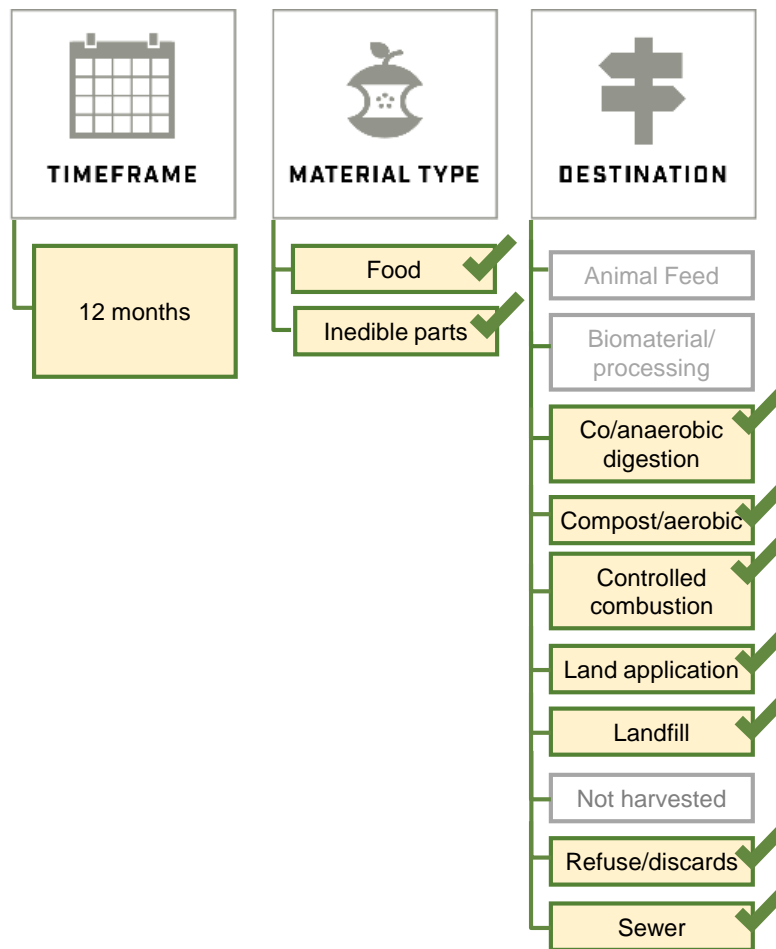
Food Waste Index Details



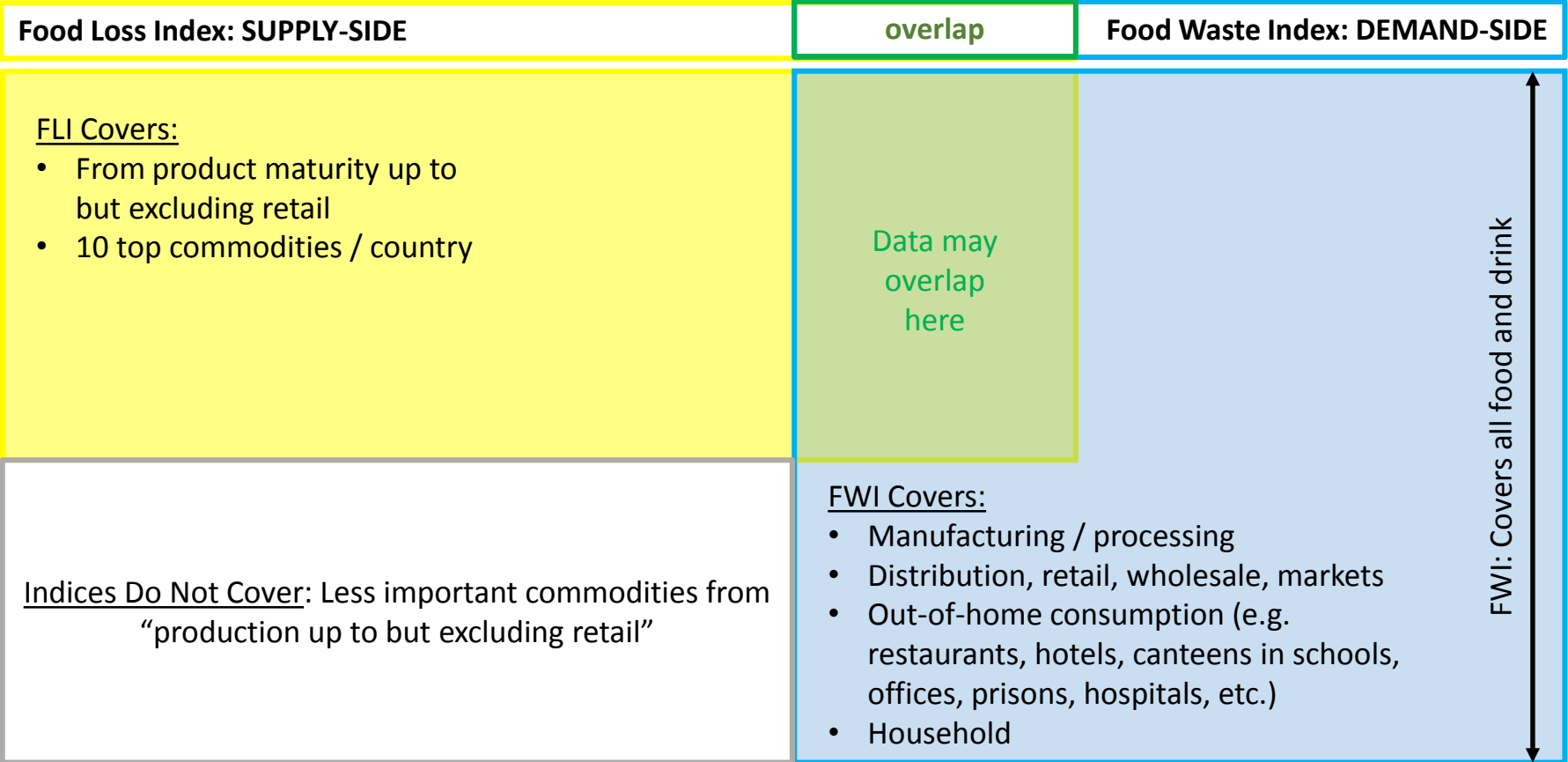
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(Partial) scope of indices in comparison to FLWS



All possible food loss and waste in a nation



FWI: Covers all food and drink

Food Waste Index – Equations



The FW Index tracks progress as kg / capita / year.

$$\text{Food waste per capita} = \frac{\text{Total food waste}}{\text{Population}}$$

Where total food waste is the sum of that in the four sectors:

$$\text{Total food waste} = \text{FW}_{\text{Household}} + \text{FW}_{\text{Out of home consumption}} + \text{FW}_{\text{Retail}} + \text{FW}_{\text{Manufacture}}$$

The **Food Waste Index** compares food waste per capita in year t with a baseline year:

$$\text{Food Waste Index} = \frac{\text{Food waste per capita in year } t}{\text{Food waste per capita in base year}} \times 100$$

Example based on hypothetical country



Year	Weight of FW (tonnes)	Country population	FW (kg per person)	Comparison <i>with base year</i>	FW INDEX
2018	360,000	3,000,000	120	1	100
2020	324,000	3,200,000	101	0.84	84
2022	291,600	3,400,000	86	0.71	71
2025	262,440	3,700,000	71	0.59	59
2030	254,000	4,200,000	60	0.50	50

Steps for FW quantification

Review existing data

Purpose:

Understand what data already exists

Develop quantification plan

Purpose: create a quantification plan for FW Index for baseline and subsequent years

Can use existing data or undertake new measurement

Quantify FW

Purpose: to quantify food waste in relevant sectors

- To analyze above information to obtain information for FW Index

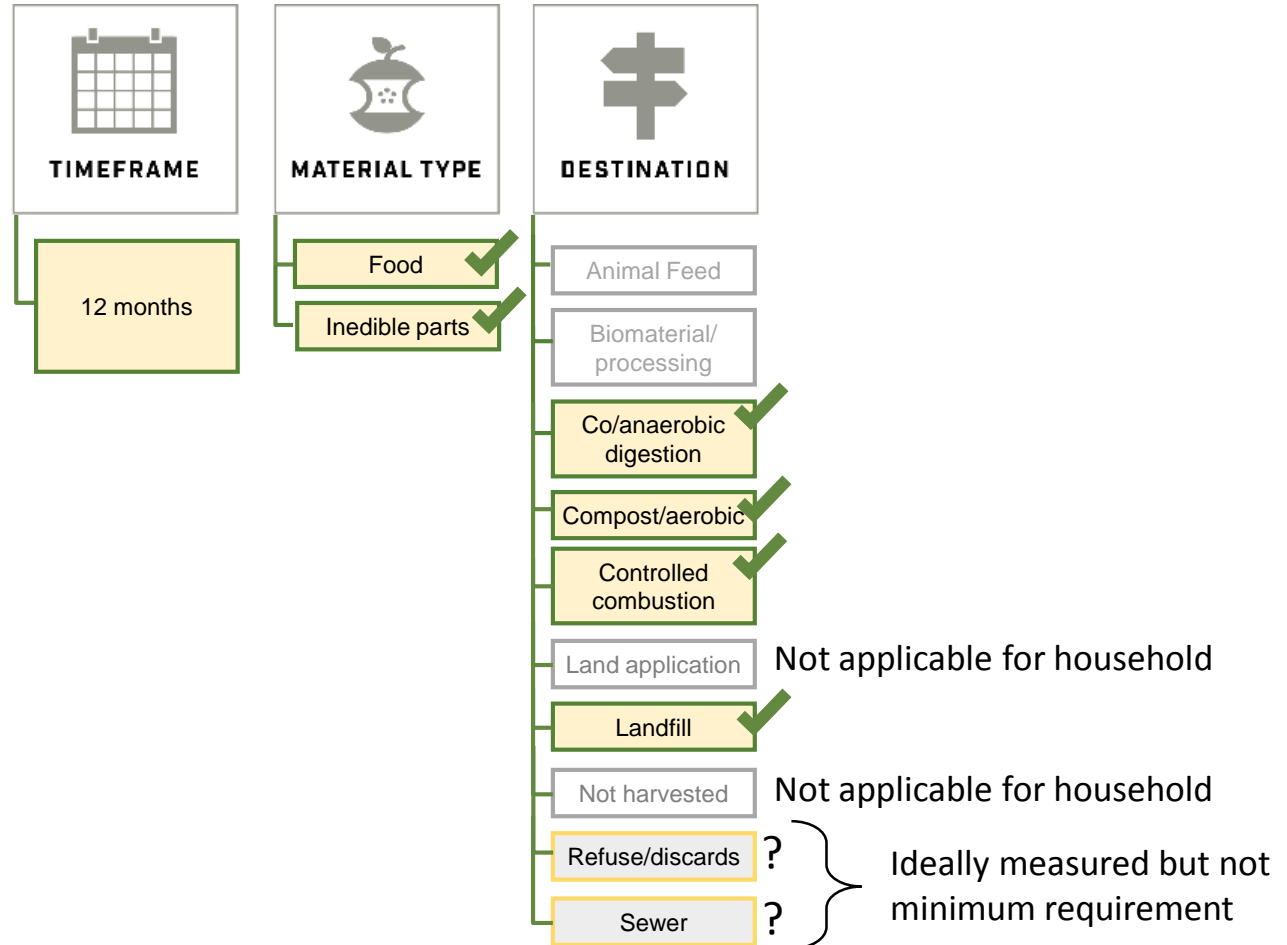
Report FW

Purpose: to report FW data and metadata to allow the FW Index to be created

Quantification plan – household example

Review existing data	Develop quantification plan
<p>Find out what data is collected on waste coming from households: e.g.</p> <ul style="list-style-type: none">▪ Municipal waste statistics?▪ Waste compositional studies?▪ Diaries or surveys? <p>Determine accuracy and likely biases in existing estimates</p> <p>Determine coverage of waste streams, destinations, 'informal' sector</p>	<p>Determine if existing estimates can be used for the baseline:</p> <ul style="list-style-type: none">▪ Degree of accuracy?▪ Coverage of waste streams?▪ Replicable for future years? <p>If further measurement required, consider:</p> <ul style="list-style-type: none">▪ Where to intercept waste to accurately quantify (at entrance to waste treatment / disposal facility or at kerbside?)▪ Sampling design, including geography, time frame, seasonality▪ Measurement methods

(Partial) scope for household food waste under FLWS



Quantification plan – retail, wholesale, markets

Review existing data	Develop quantification plan
<p>Find out what data is collected on food waste in sector. Is measurement undertaken by</p> <ul style="list-style-type: none">▪ Retailers▪ Markets▪ Wholesalers▪ Trade bodies▪ Government surveys of commercial / industrial waste <p>If information exists, how is it measured:</p> <ul style="list-style-type: none">▪ Measurement methods▪ Coverage of food waste destinations (e.g. landfill only, or a wider range of destination)	<p>How could food waste be measured accurately and cost effectively?</p> <p>Could companies measure and share data regularly, e.g. via a voluntary agreement or legislation?</p> <p>Is a Government survey of food waste in company waste streams feasible?</p> <ul style="list-style-type: none">▪ Cost?▪ Access to waste?

Summary

- SDG12.3: split into two parts – food loss and food waste
- Methodology for Food Waste Index recently developed for piloting
- Four sectors covered by Food Waste Index
- Definition of which material and destinations are included
- Process for quantification of food waste outlined
- Examples of process given for two sectors

Discussion points

- Level of existing information in four sectors?
 - Manufacturing / processing
 - Distribution, retail, wholesale, markets
 - Out-of-home consumption (e.g. restaurants, hotels, canteens in schools, offices, prisons, hospitals, etc.)
 - Household
- For the first three sectors, do businesses measure food waste?
- Do businesses or trade bodies report / share this information?
- Are any of these sectors covered by measurement of municipal solid waste (MSW)?