

Defining food loss and waste in NZ

Food loss and waste issue:

FAO estimates one third of all food produced globally is lost or wasted.

- **Economic costs** - \$1.17 billion of avoidable food waste from NZ households alone. Inefficiencies in food supply chain (FSC).
- **Environmental costs** – Organics to landfill make up 12% of biogenic methane emissions (5% of total emissions). Embodied emissions and inefficient use of natural resources.
- **Social costs** - Opportunities to improve food security through redistribution of surplus food. One in five children in NZ experience severe to moderate food insecurity.

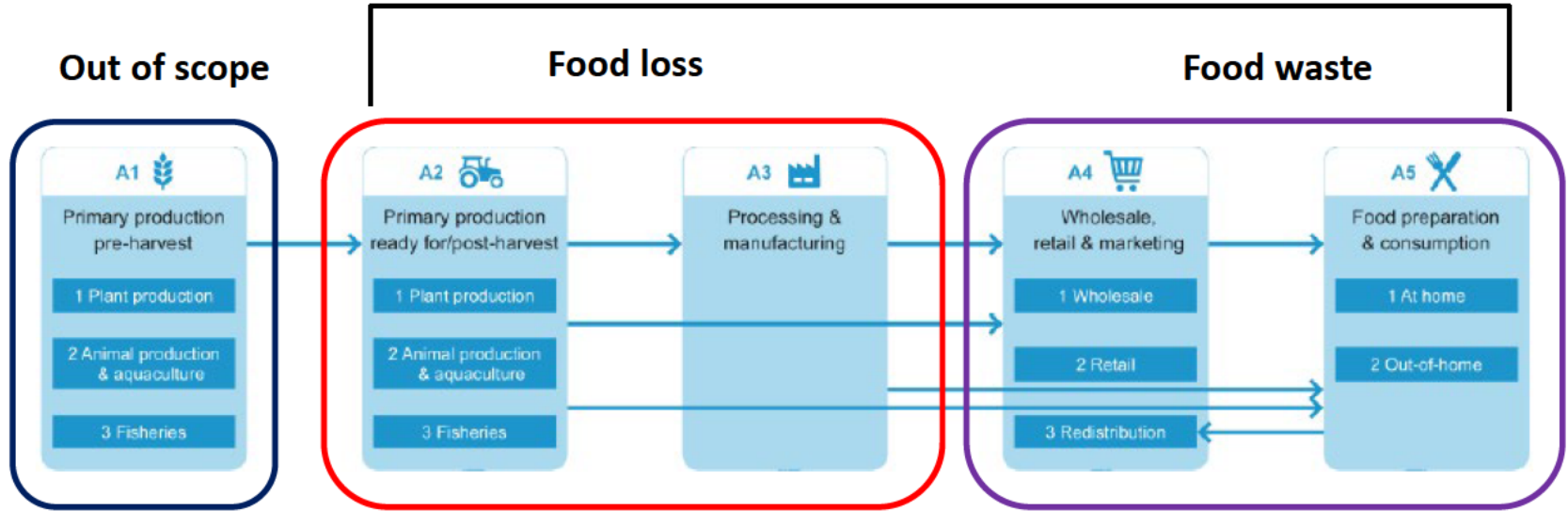
Why do we need a definition?

1. Build common understanding of what is considered food waste;
2. Provide a basis for measurement; and
3. To set clear reduction targets.

Proposed definition for food loss and waste:

- i. Imported or domestically produced **food, including inedible parts of food, that is removed from any part of the food supply chain** to be recycled, recovered or disposed of in New Zealand.

Food loss and waste

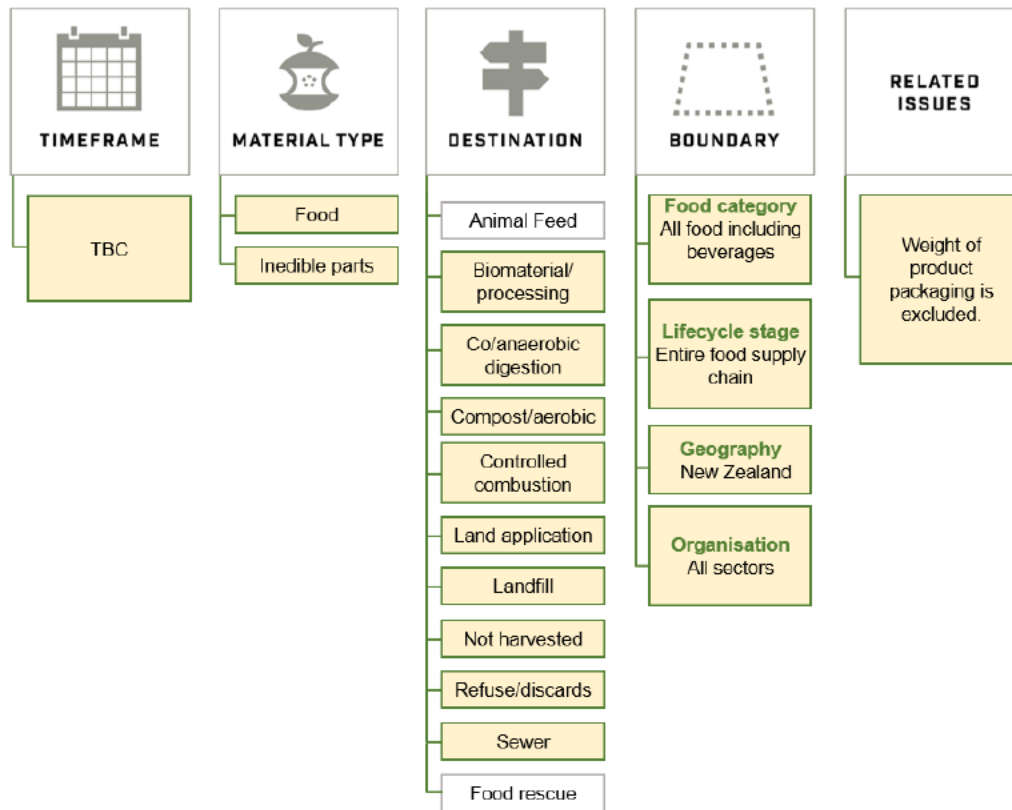


EU Fusions Definitional Framework

*Transportation and storage prior to the retail stage is considered food loss.



Scope of definition



'Food' is defined as:

- i. Any substance (whether processed, semi-processed, or raw) that is **intended for human consumption**.
- ii. 'Food' includes drink, and any substance that has been used in the manufacture, preparation, or treatment of food. 'Food' also includes material that has spoiled and is therefore no longer fit for human consumption. Food does not include cosmetics, tobacco, or substances used only as drugs. It does not include processing agents used along the food supply chain, for example, water to clean or cook raw materials in factories or at home.

- Food Loss and Waste Accounting and Reporting Standard, 2016.

‘Inedible parts of food’ are defined as:

- i. Components associated with a food that, in a particular food supply chain, are not intended to be consumed by humans.
- ii. Examples of inedible parts associated with food could include bones, rinds, and pits/stones. What is considered inedible varies among users (e.g., chicken feet are consumed in some food supply chains but not others), changes over time, and is influenced by a range of variables including culture, socio-economic factors, availability, price, technological advances, international trade, and geography.

- Food Loss and Waste Accounting and Reporting Standard, 2016

‘Food supply chain’ is defined as:

- i. The connected series of activities used to produce, process, distribute and consume food, beginning **from the point that crops and livestock are ready for harvest or slaughter, through to the point where food is consumed by humans.**

- Adapted from FUSIONS Definitional Framework for Food Waste, 2014.

What does recycled, recovered or disposed of include?

- ✓ All food waste destinations outside of the food supply chain (e.g. landfill, compost and anaerobic digestion);
- ✓ Food rescue and animal feed are considered part of the food supply chain, and therefore not considered food waste;
- ✓ Some destinations that are considered waste have an indirect relationship with the food supply chain (e.g. compost and land application).

Food waste hierarchy – Australia



Changes to the EU Fusions definition

- **Bio-based materials and biochemicals considered food waste.**
 - Consistent with Australian baseline methodology.
- **Food supply chain separated into food loss and food waste.**

Issues for further consideration:

Issue	Rationale	Cons
Loss of food that is ready for harvest/slaughter considered FLW.	<ul style="list-style-type: none">• In line with international definitions.• Considers loss of crops that could have been eaten but were not harvested for market reasons.• Covers food losses that occur during harvest.• Gives us a better picture of on-farm losses.	<ul style="list-style-type: none">• Includes unavoidable losses, e.g., frost, pest and disease.• Hard to quantify and measure.• Potentially arbitrary distinction between food that is ready and not ready for harvest, e.g., loss of same crop a week a part considered differently.
Food used to produce bio-based materials and biochemicals considered FLW.	<ul style="list-style-type: none">• Food that exits the FSC to be used to produce biomaterials and chemicals does not necessarily re-enter the FSC.• Therefore should be considered FLW with high valorisation potential.	<ul style="list-style-type: none">• Inconsistent with most international approaches.• Provides one less avenue to meet food waste reduction targets.



Worked examples:

Households

Example	Food waste?
Half-eaten apple	✓
Banana skin	✓
Spoiled yoghurt	✓
Container the spoiled yoghurt came in	✗
Food that is home composted	✓
Paracetamol and other pills	✗
Food sent down the drain	✓

Retail

Item	Food waste?
Unsold food that is donated to food rescue groups	✗
Expired produce that goes to landfill	✓
Produce trays that go to landfill	✗
Plate waste that goes to landfill	✓
Plate waste that goes to commercial composting	✓



Worked examples:

Primary production

Example	Food waste?
Unharvested vegetables that are ploughed back into the soil	✓
Crops that are destroyed by disease before they are ready for harvest	✗
Unsold vegetables used to feed pigs	✗
Crops that are harvested but spoil in storage/transport	✓
Crops that are ready for harvest but subsequently destroyed by weather	✓
Maize grown specifically for animal feed that is subsequently destroyed	✗

Manufacturing

Item	Food waste?
Food that is used for energy or biochemical processing	✓
Processing agents used in food production	✗
Food that is used to produce bio-based packaging	✓
Residual sludge from production process	✓





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