FOOD WASTE TOOL KIT

Food Waste and Climate Impact

The risk and opportunity for businesses

Kai Commitment
LEADING ACTION ON FOOD WASTE

Food waste and climate change

A third of the food produced globally is wasted, costing the economy USD 1 trillion annually while exacerbating resource depletion and methane emissions. Food systems contribute 34% of global GHG emissions, when accounting for land use, energy and disposal. Food loss and waste (FLW) disposal alone responsible for 8–10% of global emissions (9.3 gigatons CO_2e). Current climate policies are projected to lead to a 2.7°C temperature rise by 2100, significantly exceeding Paris Agreement targets.

The UN, IPCC, and Project Drawdown consider FLW reduction a top climate action – reducing methane emissions, alleviating wasted resources, energy and land clearing for food that is never eaten. Despite this, FLW reduction remains underrepresented in national climate strategies and corporate emissions frameworks and climate plans.

Impact in New Zealand

In New Zealand, FLW in landfill accounts for 17% of Class 1 landfill waste and 9% of biogenic methane emissions yet remains largely unmeasured at national and corporate levels.

Risks of unmeasured food waste

Unmanaged FLW presents a risk to your business in terms of cost, reputation or climate impact. Unless FLW is being measured, this is a potential governance gap.

- **Financial loss:** Untracked waste equals lost labour, resources, and profits.
- **Compliance costs:** Unprepared for mandatory waste reporting requirements.
- **Supply chain vulnerability:** Increased risk of product loss and disruptions.
- **Consumer/Investor relations:** Growing negative attention from stakeholders.
- **Climate impact:** Wasted food means wasted emissions. Damages environmental performance and sustainability goals.

The food waste advantage for businesses

Organisations prioritising FLW management can achieve operational efficiencies while contributing to circular economy models, consumer food waste reduction and environmental and climate goals. For net zero projects or climate goals, FLW reduction presents significant emissions abatement potential through decreased wasted emissions from overproduction of food that is wasted, ingredients lost through manufacturing and low-carbon waste management options.

- **Efficiency:** Studies show up to $14 return per $1 invested.
- **New revenue:** Potential from circular products and surplus food innovations.
- **Market access:** Transparency is increasingly demanded by international markets.
- **Reputation:** Alignment with SDG 12.3 attracts consumers and investors.
- **Decarbonisation:** Meets disclosure requirements and climate goals.

Global megatrends driving food loss and waste measurement

Globally, measurement and management of FLW is gaining momentum as a key driver for a more sustainable global and local food systems for the future, to ensure all food that is produced reaches people, then animals, and any inedible food is managed in a way that maximises value from nutrients or energy. Globally, FLW is the subject of several food system mega-trends driving an increasing number of large businesses to measure their food waste to meet regulatory requirements.

- Mandatory FLW reporting for food companies (Japan, Australia, UK).
- Mandatory climate disclosures such as the NZ CRD are increasing regulatory scrutiny of corporate emissions.
- Net zero emissions targets and frameworks require increasingly stringent emissions measurement, disclosure and reduction projects.
- Consumer sustainability preferences are moving away from high emissions products.
- Voluntary agreements to reduce FLW to achieve low-carbon supply chains from farm to fork.

"Our global food system is broken and is wrecking the environment. If FLW were a country, it would be the world's third-largest emitter after China and the USA. The fact that so few countries are addressing this critical situation in their NDCs is shocking."

Harriet Lamb, CEO of WRAP, at COP29

Recommendations for businesses

Food sector businesses have the opportunity to prioritise FLW measurement and reduction projects within ESG and climate strategies to enhance sustainability credentials, mitigate emerging risks, and capture the social, economic, and environmental benefits that flow from food waste reduction. Determining the potential and actual extent of emissions abatement potential through food waste reduction is challenging but starts with collecting accurate food waste data.

The UN's Food Loss and Waste Protocol provides standardised measurement frameworks, to assist businesses in measuring their food waste, identifying hotspots for action and making a plan, based on global best practice, to address FLW within a business and across supply chains. This measurement is the first step in understanding how food waste reduction can help you achieve your climate goals.

Streamlined supply chains: Optimising production and inventory management reduces excess emissions from inputs, surplus ingredients or stock as well as transport, and disposal of surplus.

Efficient operations: Less wasted production use means less purchased inputs (Scope 3) and less demand for water, energy, and raw materials used in manufacturing food that is then wasted, lowering overall greenhouse gas emissions of your own operations.

Improved waste management: Composting and waste-to-energy practices reduce landfill methane and support a circular economy by reusing organic materials.

Consumer education: Helping consumers reduce food waste and its emissions reduces downstream emissions of a company's products.