

# Combatting food waste in Aotearoa New Zealand

Context and framework for OPMCSA project

## The problem

Food that is produced for human consumption but not eaten due to waste throughout the food system has adverse environmental, social, and economic impacts.

- **Environmental:** Wasting food means accruing all the environmental harms and expending the often limited resources associated with food production without realising the benefits of nourishing the growing global population. Land and water use, soil and water contamination, and greenhouse gas emissions throughout the food lifecycle and during decomposition are among the environmental costs.<sup>1</sup> In Aotearoa New Zealand in 2020, emissions from the waste sector as a whole accounted for 4.1% of our total greenhouse gas emissions, so combatting food waste can support climate change mitigation.<sup>2</sup>
- **Social:** In a country where 12% of children live in households where food runs out sometimes and 3% live in households where food runs out often,<sup>3</sup> wasted food represents a missed opportunity to contribute to food security. The burden of food insecurity in Aotearoa New Zealand falls unevenly: it is more likely to be experienced in Māori and Pacific households and among socioeconomically deprived people,<sup>4</sup> a major equity issue for a food producing nation that earned \$31.2 billion from food and beverage exports in 2020/21.<sup>5</sup>
- **Economic:** Consumers lose money when food is wasted. In 2018, each New Zealand household wasted an average of NZ\$644 worth of edible food.<sup>6</sup> Food waste can also mean unrealised profits for businesses. A 2021 Australian study explored the return on investment (ROI) of a proposed food waste reduction scenario, calculating an ROI of 7:1 at the national level, with benefits particularly significant for industry, with an ROI of 21:1 in direct and indirect savings from food waste reduction.<sup>7</sup>

## Wider context

Recognising the wins that can be achieved by reducing food waste, national and global efforts are ramping up. To build on these efforts, OPMCSA's next major project is focused on combatting food waste in Aotearoa New Zealand. We will produce an evidence synthesis and recommendations to inform action, released as a series of interrelated reports and concluding with a summary collating the key messages and recommendations. Illustrative case studies will be used throughout.

One of the challenges associated with tackling food waste is understanding the extent of the problem. In Aotearoa New Zealand, we have some understanding of the extent of food waste at the consumer and retail levels, but less is publicly known about how much food is lost during production, processing, manufacturing, transport, and export.<sup>8</sup> While filling these data gaps is important both for understanding the nature and scale of the problem and monitoring progress, action shouldn't be delayed in the meantime.

---

<sup>1</sup> [WWF-UK The global impact of food loss and waste on farms 2021](#), accessed 21 April 2022

<sup>2</sup> [MfE New Zealand Greenhouse Gas Inventory 1990-2020](#), accessed 21 April 2022

<sup>3</sup> [MoH 2020-21 health survey](#), accessed 21 April 2022

<sup>4</sup> Ibid.

<sup>5</sup> [NZTE food and beverage exports](#), accessed 21 April 2022

<sup>6</sup> [New Zealand Food Waste Audits 2018](#), accessed 21 April 2022

<sup>7</sup> [Australia National Food Waste Strategy Feasibility Study 2021](#), accessed 21 April 2022

<sup>8</sup> [Environment Committee briefing in investigate food waste in New Zealand 2020](#), accessed 21 April 2022

Aotearoa New Zealand is already taking some action on food waste. Efforts are increasing, particularly with the food rescue sector becoming more organised and better funded with support from the Ministry for Social Development, galvanised by the evident food security needs throughout the COVID-19 pandemic. In addition, the Ministry for the Environment is working to standardise and improve waste management and recognises food waste reduction as a key component of our climate change mitigation efforts. The Love Food Hate Waste programme has also made an impact on household food waste through consumer empowerment,<sup>9</sup> but is no longer funded by central government. There remains plenty more that could be done, with untapped solutions across our food system that OPMCSA intends to explore throughout this project.

## Our framework

The following vision will guide the OPMCSA food waste project:

---

*Everyone in the food system – from producers through to consumers – works collaboratively to reduce the environmental, social, and economic costs of food waste by preventing food waste in the first instance and working to capture the value of surplus and wasted food where prevention doesn't occur.*

---

We intend to structure the project around three broad workstreams, as well as investigating the current state of knowledge about the nature and scale of the problem. We will ensure that connections are recognised and opportunities at the interface between workstreams are explored.

Our project workstreams follow:

- **Prevention during production, processing, manufacturing and distribution** – This workstream will focus on reducing waste in our food system before it reaches consumers.
- **Prevention through consumer empowerment and retail and food service practices** – This workstream will focus on ways in which consumers can be empowered to reduce food waste, and the opportunities for the retail and food service sectors to play their part too.
- **Capturing value through food rescue, upcycling, and recycling** – Where prevention doesn't occur, this workstream will focus on solutions that capture environmental, social, and economic value from surplus or wasted food and minimise environmental harms.

A wide range of stakeholders with crucial knowledge and experience will be engaged throughout the project, along with experts from the academic community whose research and insights will shape our work. We will engage with Māori experts and stakeholders throughout the project, ensuring their expertise and knowledge is embraced. We will also work to recognise and explore the diversity in our food system – for example, from large-scale farms and fishery operations through to household and community māra kai – as well as the diversity of relationships with kai and contexts in which it is consumed. There are important cultural aspects of food waste – for example, some uses of food waste may be considered tapu – and will seek specific guidance from experts as we navigate these understandings. In addition, there will be a number of thematic through lines across the workstreams, with food safety being a particularly important element.

See overleaf for a visual summary of our framework, designed to serve as a starting place for this project. We will revisit and revise the framework as necessary as the project progresses.

---

<sup>9</sup> [New Zealand Food Waste Audits 2018](#), accessed 21 April 2022

## Combatting food waste in Aotearoa New Zealand

Project framework – summary in a page

Food waste in Aotearoa New Zealand is a problem with environmental, social, and economic dimensions. OPMCSA is embarking on a project to synthesise what is known about food waste in Aotearoa New Zealand and explore solutions throughout the food system, guided by insights and evidence from experts in Aotearoa New Zealand and abroad, and through engagement with key stakeholders beyond the academic community.

### Vision:

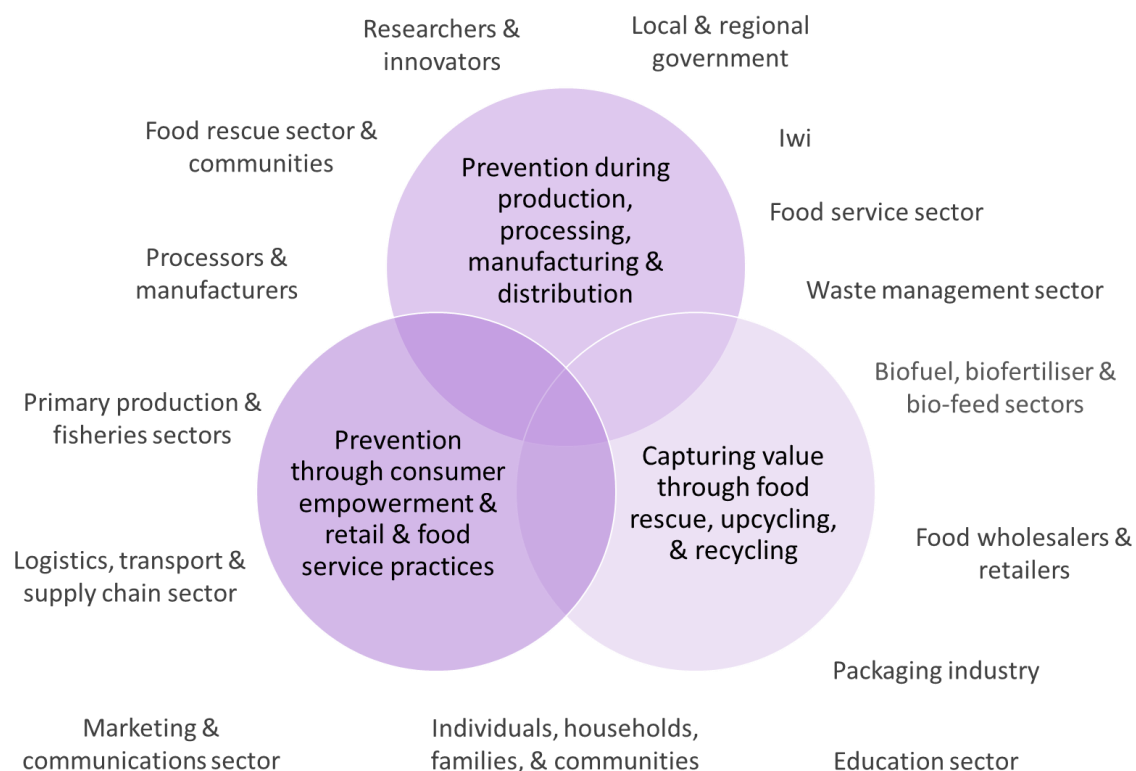
Everyone in the food system – from producers through to consumers – works collaboratively to reduce the environmental, social, and economic costs of food waste by preventing food waste in the first instance and working to capture the value of surplus and wasted food where prevention doesn't occur.

### Understanding the current state:

To begin this project, we need to explore the nature and scale of the problem. This means working out what we know about the volume of food wasted across our food systems and where our data gaps lie, as well as understanding the impacts of food waste.

### Combatting food waste:

Combatting food waste requires prevention efforts throughout the food system and through consumer empowerment. Where prevention doesn't occur, solutions to capture as much value as possible from surplus or wasted food should be leveraged. A wide range of stakeholders have crucial knowledge and important roles to play in combatting food waste in Aotearoa New Zealand.



## Project timing, sequencing, and relationship to other work

We anticipate that this project will be completed around mid-2023, with a series of reports produced in turn, but with sequencing overlaps and connections drawn between each report to create a holistic evidence base and interrelated series of recommendations. We plan to conclude the project with a summary report. We will build on existing work, including a food waste report and set of recommendations provided to the Environment Committee in 2020.<sup>10</sup>

We intend to align the delivery of our reports with relevant government milestones to ensure the work is timely and impactful. To that end, after finalising the project framework and characterising the nature and extent of the problem, we plan to begin by exploring food rescue to ensure that aspect of the project is ready in time to support the Ministry for Social Development's Food Secure Communities work, which is undergoing a strategic refresh.

Other relevant government workstreams include the Ministry for the Environment's work on waste management (including their proposal to standardise kerbside organic waste collection) and inclusion of organic waste in the Emission Reductions Plan,<sup>11</sup> as well as the joint work between the Ministry for Primary Industries and the Ministry for the Environment on sustainable food systems.

Non-government milestones and workstreams are important to bear in mind too. These include the urgent need to pursue global climate change mitigation in what has been described as the critical decade for climate action and the United Nations' work on measuring food waste to monitor progress towards Sustainable Development Goal 12.3.<sup>12</sup> With efforts to tackle food waste ramping up globally, we will ensure our work is informed by insights from abroad, including but not limited to initiatives in Australia,<sup>13</sup> the Netherlands,<sup>14</sup> and the UK.<sup>15</sup>

The intended sequence of the proposed reports is outlined below, although this may change as the project progresses:

1. Nature and scale of the problem in Aotearoa New Zealand, situated in global context.
2. Food rescue (one of two reports under the "capturing value" workstream).
3. Food upcycling and recycling (one of two reports under the "capturing value" workstream).
4. Prevention during production, processing, manufacturing and distribution.
5. Prevention through consumer empowerment and retail and food service practices.
6. Summary report collating key messages and all recommendations from the project and adding recommendations to capture opportunities at the interface between workstreams.

For each report, we intend to engage closely with a working group of experts and stakeholders from the wider reference group, whose work most closely relates to the report at hand, while also drawing on the expertise of the wider reference group for feedback on all drafts.

---

*If you'd like to be involved and we aren't already in touch, please reach out  
[info@pmcsa.ac.nz](mailto:info@pmcsa.ac.nz)*

---

<sup>10</sup> [Environment Committee briefing in investigate food waste in New Zealand 2020](#), accessed 21 April 2022

<sup>11</sup> [Aotearoa New Zealand's first Emissions Reduction Plan 2022](#), accessed 17 May 2022

<sup>12</sup> Sustainable Development Goal 12.3: "By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses."

<sup>13</sup> E.g. [Australian Government – Tackling Australia's food waste](#), accessed 4 May 2022

<sup>14</sup> E.g. [Government of the Netherlands – Cutting down on food waste](#), accessed 13 May 2022

<sup>15</sup> E.g. [WRAP UK – Food Waste Reduction Roadmap](#), accessed 4 May 2022