



equivalent greenhouse gases is generated<sup>5</sup>. Taking a whole of lifecycle approach, WasteMINZ has estimated that about 2.66 tonnes of CO<sub>2</sub>-equivalent greenhouse gases are released for every tonne of food waste produced, when factoring in the emissions from producing, processing, and distributing the food.

### ***Wider social and economic impacts of food waste***

Food going to landfill means food not going to hungry mouths. Food insecurity in Aotearoa New Zealand is a major issue, with 1 in 5 children in Aotearoa New Zealand facing food insecurity. A third of food lost or wasted globally represents a significant opportunity for food rescue.<sup>3</sup> Wasted food also has significant economic impacts for whānau – “the average family throws out three shopping trolleys of food each year – equating to \$644.”<sup>6</sup> Food loss and waste have significant economic impacts on producers, retailers and consumers. A 2015 rubbish bin audit by WASTEminz found households were wasting \$563 of food every year, or \$872 million as a country. Other surveys (e.g. by RaboDirect) have put the household cost of wasted food in the order of \$1000.

Other economic impacts of food waste include the money, labour material and natural resources, time and energy that are wasted producing food that is never used. The FAO has estimated annual global losses of \$1 trillion from resource costs of food that is lost or wasted. The cost of food loss and waste is passed on to consumers in the prices they pay for food.

### ***Select Committee report on food waste in New Zealand***

In 2020, the Environment Committee undertook an investigation into the amount of food going to waste in New Zealand, with support from the Ministry for the Environment, and Ministry for Primary Industries, and Associate Professor Miranda Miroso who served as expert advisor to the committee.

<sup>4</sup> The 3 key recommendations that were committed to by Government were to:

- Adopt a national definition of food waste;
- Measure food waste to establish a national baseline; and
- Create a national food waste reduction target.

### ***International commitments on food waste***

There exist several commitments on food waste that Aotearoa New Zealand has subscribed to, notably:

- The UN 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; and
- Coalition on food waste arising from the UN Food Systems Summit 2021.

Australia has made further progress on food waste, with a National Food Waste Strategy that embeds the UN SDG target 12.3; a 2021 feasibility study on how to meet the target; a roadmap for halving Australia’s food waste by 2030; a voluntary commitment program; and a national food waste baseline.<sup>7</sup>

### ***Domestic commitments***

The key domestic obligation is Government’s commitment of the 3 recommendations in response to the Select Committee report, as above.

<sup>5</sup> Environment Committee, [Briefing to investigate food waste in New Zealand](#)

<sup>6</sup> Love Food Hate Waste, [Don’t Let Food Go to Waste](#)

<sup>7</sup> Australian Government, Department of Agriculture, Water and the Environment. [Tackling Australia’s food waste](#)

## 2. MfE's current work on food waste

The Ministry for the Environment is progressing a range of work that will impact the future waste system and have impacts on food waste. Refer to Appendix 1 to see a visualisation of how this work will flow to a stronger waste system. This work includes:

- In response to the Select Committee report:
  - Working with 12.3 Champions to develop and consult on a **food waste definition** for Aotearoa New Zealand in mid-2022.
  - Using the definition that's developed, MfE will procure **baseline data** for food waste across the entire food supply chain. The intention is that will occur in mid to late 2022.
  - This baseline data will support a potential **food waste target** for Aotearoa New Zealand, which could appear in an **Action and Investment Plan** to be developed following the release of the Waste Strategy (described below).
- The **National Waste Strategy** provides broader context and framework for work on food waste (process, timeframe, high level areas & priorities). Sitting under it will be Action and Investment Plans (AIPs) which will set out more specific direction every 3 years. Indicative timeframes for the development of the Strategy and AIP are late 2022 and mid-2023, respectively.
- Current consultation on **improving household kerbside recycling**, including requiring councils to provide kerbside food scraps collection for urban households, and phasing in a requirement for food waste separation by businesses.
- **Increasing the waste disposal levy rate**, which will result in more food and other waste being diverted from landfill, and increase levy revenue from \$36m per annum in 2020 to around \$276 million per annum by the end of the 2024/25. Levy revenue is split 50/50 between Territorial Authorities and the Waste Minimisation Fund (below).
- **Waste infrastructure stocktake**, which describes domestic organic waste processing capacity and identifies potential infrastructure gaps related to increased amounts of organic waste diverted from landfill.
- A review of the **Waste Minimisation Fund**, which has funded a number of food waste initiatives, including looking at ways to simplify processes and better supporting longer-term projects.
- MfE has several **strategic partnerships** to support work on food waste that's happening across Aotearoa (e.g. Kai Commitment, Para Kore, Kai Ika). The Kai Commitment in particular has a lot of potential, and is a voluntary commitment by businesses to reduce food waste, with some significant players already in support. MfE also funds the Toimata Foundation to deliver the EnviroSchools programme, with many participating schools focusing on addressing food waste (e.g. via waste audits, composting, worm farms etc).

Additionally, MfE is leading the development of New Zealand's **Emissions Reduction Plan (ERP)**. The ERP (due to be published in May 2022) sets the direction for climate action for the next 15 years, across a range of areas, including energy, transport, waste, agriculture, construction and financial services. It will outline the policies and strategies Aotearoa New Zealand will take to meet our first emissions budget, helping to transition to a low-emissions future in a way that is achievable and affordable. The ERP includes a chapter on reducing emissions from waste (this focuses primarily on reducing organic waste, including food waste to landfill). The plan identifies a number of new policies/actions such as investment, regulation and programmes (to be delivered during emissions budget 1 2022-2025) targeted at preventing, reducing and diverting food waste.

It may be useful to map out the way in which these policies, plans and strategies will interact in the long term, as well as the various timeframes for development and implementation.

### 3. Role and interests of other agencies

A range of government agencies and Ministers have a role and interest in food loss and waste. These are outlined in the following table, along with current policies and work programmes that we are aware of:

Agency	Role / Interest	Relevant levers / policy settings / work programmes
<b>MPI</b> (Ministers O'Connor, Verrall and Parker)	<ul style="list-style-type: none"> <li>• Primary production food loss</li> <li>• Food safety (with food safety rules influencing food waste and food rescue)</li> <li>• Sustainable food systems</li> <li>• Food production / agriculture innovation / improvements</li> <li>• Export standards (implications for food waste / rescue?)</li> </ul>	<p><b>Work programmes:</b> Regenerative agriculture; Food and Beverage Industry Transformation Plan</p> <p><b>Support / advice:</b> Productive &amp; Sustainable Land Use (PSLU) Programme (includes extension services, Primary industry advisors, Māori agribusiness); website information to households and businesses about reducing food waste.</p> <p><b>Legislation:</b> Food Act 2014 (e.g. requirements re donating food; use of food waste for animal feed)</p> <p><b>Funding:</b> Sustainable Food and Fibres Fund (e.g. valorisation of food waste).</p>
<b>MSD</b> (Sepuloni)	<ul style="list-style-type: none"> <li>• Food rescue/ redistribution</li> <li>• Financial capability (budgeting)</li> </ul>	<p><b>Funding:</b> Food secure communities grant funding; funding for key food rescue organisations - NZ Food Network, AFRA and Kore Hiakai.</p>
<b>MBIE</b> (Nash, Woods, Robertson, Verrall)	<ul style="list-style-type: none"> <li>• Science and Innovation</li> <li>• Infrastructure</li> <li>• Govt procurement rules &amp; guidelines</li> <li>• Economy, business &amp; labour market</li> </ul>	<p><b>Funding:</b> CRIs, NSCs, Endeavour Fund, Bioresource Processing Alliance</p> <p><b>Work programmes:</b> Lead on Circular Economy Strategy, focused on designing out waste, keeping products / materials in use, and regenerating natural systems; review and advice on future of NZ's research, science and innovation system (Te Ara Paerangi - Future Pathways).</p>
<b>MoE</b> (Hipkins)	<ul style="list-style-type: none"> <li>• Ka Ora Ka Ako – 1 million lunches p.w. in schools</li> </ul>	<p><b>Funding:</b> Procurement requirements on contracted suppliers</p> <p><b>Other:</b> Data collection on waste and strategies for minimising food and packaging waste.</p>
<b>DIA</b> (Mahuta)	<ul style="list-style-type: none"> <li>• Local government</li> </ul>	<p><b>Local Government Act</b> sets out roles and functions of local authorities in managing and minimising waste (interacts with Waste Minimisation Act).</p> <p><b>Work programmes:</b> Future for Local Government review.</p>

## 4. Roles of Local and Central Government

### *Central government*

Central government (specifically MfE) is responsible for administering legislation, policies and initiatives that are relevant to food waste. Of particular note are:

- **The Waste Minimisation Act 2008 (WMA)** is the main legislation enabling the government's resource efficiency and waste portfolio. The Act is intended to encourage a reduction in the amount of waste generated and disposed of, and aims to reduce the environmental harm of waste and provide economic, social and cultural benefits. Although administered by MfE, the WMA sets out a wide range of requirements on territorial authorities (outlined below). It also provides for the Minister (by notice in the Gazette) to set performance standards for the implementation of waste management and minimisation plans. MfE proposals for transforming recycling (currently out for consultation) propose setting a minimum performance standard and a 'high performance' target for household kerbside recycling and food scraps diversion by TAs, with a timeframe of 2030 for councils to achieve the minimum performance standard. MfE is currently reviewing the WMA with a view to replacing it.
- **The Waste Disposal Levy** (the 'levy') is provided for under the WMA, and imposes a charge per tonne on waste sent to landfill. It's intended to act as a deterrent to waste (including food) going to landfill. As provided for in the WMA, MfE provides each territorial authority with a share of the total levy money collected to spend on waste minimisation activities. Additionally, 50 per cent of the revenue earned from the waste levy (minus administration costs) - currently about \$10-12 million per annum - is allocated to waste minimisation projects through the Waste Minimisation Fund. Recent changes to expand and progressively increase the levy are expected to increase levy revenue from \$36m per annum in 2020 to around \$276 million per annum by the end of the 2024/25.
- **The Waste Minimisation Fund (WMF)** provides part-funding of total project costs for waste minimisation initiatives, including projects focused on reducing food waste. Most of the funding is allocated by MfE through an annual contestable funding round. Projects supported through the WMF range from multi-million-dollar infrastructure investments to smaller community-centred projects. Reducing organic waste was one of the strategic outcome areas for the 2020 and 2021 WMF contestable funding rounds.

The WMA, the levy and the WMF are key central government mechanisms that directly influence the management of food waste in Aotearoa NZ. As indicated in the table on agency roles above, however, there are also other statutory, funding and policy levers that have direct and indirect influences on food waste practices and initiatives at different stages of the food production and consumption continuum.

### *Local government*

New Zealand's 67 territorial authorities (TAs) play a key role in providing essential services and infrastructure for the collection, management, and treatment of waste, including food waste.

Under the WMA, TAs have a statutory role in managing waste and are required to promote effective and efficient waste management and minimisation within their districts. A key part of this is the development and adoption of a Waste Management and Minimisation Plan (WMMP). WMMPs set out a TAs priorities and strategic framework for managing waste in their region. Actions in the

WMMP are carried forward by the TA into their Long Term and Annual Plan to ensure the resourcing is available to deliver the plans' goals and objectives. The WMA provides for Minister (by notice in the Gazette) to set performance standards for the implementation of waste management and minimisation plans.

Waste facilities, activities and services are generally funded via rates or user chargers (e.g. charging for rubbish bags). TAs also receive funding from the waste levy, which they must use to promote or achieve waste minimisation, in accordance with their WMMP. A TAs share of total levy funds based on their population size as a proportion of the national population.

There is wide variability in the way in which food waste is addressed by TAs. For example:

- Some TAs (e.g. Timaru District Council) have separate kerbside collection of green waste (including food waste) which is then diverted from landfill;
- Some TAs (e.g. Nelson City Council) actively promote and encourage home and / or community composting. This can include bin subsidies, free courses, and funding for community composting initiatives.
- Many TAs run educational activities to address food waste. In particular, most (about 60) councils provide funding for and participate in the 'Love Food Hate Waste' partnership, which provides information, educational and other activities to support behaviour changes to reduce food waste. Other relevant examples include TA support for the Garden to Table programme in schools, Enviroschools, and Auckland Sustainable Schools (led by a team in Auckland Council).
- Some TAs have partnered with others to support for food-focused initiatives that indirectly support food waste reduction. For example, Auckland Council is a partner in the Auckland CoDesign Lab that has collaborated with The Southern Initiative (with Eke Panuku Development Auckland – a council-controlled organisation - and Healthy Families South Auckland) to establish the Papatoetoe Food Hub to provide families with better access to healthy food. Other examples include TA support for urban farms such as OMG in Auckland, Kaicycle in Wellington, and Cultivate Christchurch.
- Some councils (e.g. Auckland City Council's Waste Minimisation and Innovation Fund) also administer their own funding schemes (separate to the MfE-administered WMF) that support local waste minimisation initiatives, including those addressing food waste. In some instances, these include funding or in-kind support (e.g. rent-free premises) for food rescue groups.

#### ***Case studies of local council work on food waste***

**Auckland Council** is implementing a four-tiered approach to managing food scraps, based on the waste hierarchy principles of reduce, rescue, re-use and recover. Specific initiatives aligned to these principles include:

- **Reduce** – Support for [Love Food Hate Waste](#) which focuses on reducing food scraps in the first instance.
- **Rescue** – supporting organisations such as [Kiwi Harvest](#) that rescue food and turn it into valuable and nutritious meals for people in need.
- **Reuse** – supporting home composting, through training, workshops and ongoing engagement provided by [The Compost Collective](#).
- **Recover** – keeping food scraps out of landfill by rolling out a food scraps kerbside collection service for urban Auckland. Kerbside food scrap collection is being trialled in Papakura and Northcote/Birkenhead. In 2019, Auckland Council entered into a 20-year partnership with NZ company Ecogas Ltd to process food scraps using anaerobic digestion to turn them into clean energy and natural fertiliser. The facility to enable

Ecogas Ltd to do this on an Auckland-wide basis is currently under construction and the roll out is expected in 2023. [Reporoa Waste to Energy Facility — Ecogas](#)

Wellington City Council has a major focus on organic waste. The [Wellington Regional Waste Management and Minimisation Plan \(RWMMP\) 2017 - 2023](#), covers all 8 TAs in the Wellington region, and outlines a collective strategy to reduce waste by one third by 2027.

Through the Para Kai initiative, around 500 households on the Miramar Peninsula are trialling a kerbside food waste collection service, while a further 450 are trying home composting options. The Council is monitoring the trial's success over 12 months and will use the results and feedback to inform a city-wide solution for food waste.

## 5. Non-government, social enterprises, commercial and research organisations

### *Non-government organisations*

There are many non-government organisations across Aotearoa New Zealand working to reduce food waste. The following table lists some of the larger and national organisations. It does not provide an exhaustive list and does not capture the large number of small-scale local initiatives and programmes. We understand there is work underway amongst food waste NGOs and social enterprises to 'map' organisations working in the food waste system to support collaboration, minimise duplication, and understand funding allocation.

12.3 Champions New Zealand	The Champions are a coalition of key players across the food waste space, including representatives from the Countdown, HorticultureNZ, Fonterra, Sustainable Business Network and NZ Food Network. The Champions advocate for accelerating progress towards achieving Sustainable Development Goal Target 12.3 to halve food waste by 2030 in NZ. In 2021, the Champions released a roadmap for food waste reduction in NZ, and are currently involved in a number of initiatives including the Kai Commitment, and work to map the food waste sector and funding streams in Aotearoa.
New Zealand Food Network	The NZFN collects quality surplus and donated bulk food from food producers, growers and wholesalers around the country and distributes it in manageable quantities to food hubs across the country to pass on to foodbanks and food rescue organisations. The aim is to address the logistical and infrastructure issues that have traditionally limited supply into food insecure communities and get food to where it's needed most.
Aotearoa Food Rescue Alliance	Working with Kore Hiakai Zero Hunger Collective, MSD and the New Zealand Food Network to help build capacity and capability of foodbanks and community food services to promote a food secure Aotearoa. Also currently working (with NZFN, MfE, Toitū, University of Otago and others) on a 'data impact project' aimed at standardising measurement across food rescue organisations, including emissions reductions from food rescue and other impacts.

Love Food Hate Waste	A community education programme for reducing food waste, funded by councils, community orgs and WasteMINZ (MfE provided funding in the period 2016-2018).
WasteMINZ	The industry body for waste and resource recovery in New Zealand. WasteMINZ provides financial support for the NZ Food Waste Champions 12.3 and has a number of key sector sub-groups including: organic materials, disposal to land, behaviour change, and the Territorial Authorities' Officers Forum/
Zero Waste Network	Represents community enterprises across Aotearoa New Zealand that are working towards zero waste. Roles include educating, enabling and connecting member organisations, and informing policy and key influencers.

### ***Academic and research organisations***

A number of CRIs and universities have specific programmes of work focused on commercialising and addressing food waste. Key amongst these are:

- **The Bioresource Processing Alliance:** Funded by MBIE, BPA co-funds and undertakes research and development projects with primary sector producers and processors to get better value out of biological by-products. Examples of solutions generated include utilising food waste and low value meat, fish, fruit and vegetables to create supplements, nutraceutical applications, pet food, functional foods, oils and extracts.
- **Food Waste Innovation Theme, University of Otago:** The aim of this research theme is to harness scientific expertise and provide robust evidence to support effective solutions to Aotearoa's food waste problem. It includes work to measure food waste, develop reduction strategies, apply innovative technology, and modify producer and consumer behaviour.
- **New Zealand Food Innovation Network:** A national network of five open-access food and beverage production facilities that work with businesses to scale up and commercialise new products, including valorisation of food waste.

### ***Social enterprises***

There are also social enterprises focused on reducing food waste whilst also supporting food access. Examples include **Foodprint** - an app that helps consumers identify where they can find food at discounted prices with the aim of reducing the amount of food that food outlets send to landfill; **Perfectly Imperfect** - which is a volunteer-based gleaning operation which introduces more edible food into the market; and **Everybody Eats** - which runs several to 'pay as you feel' community restaurants that serve meals from food that would otherwise go to waste.

## **6. Challenges, opportunities and potential areas of focus for further work**

As outlined above, the Government has made some important commitments relating to food waste and work is underway in MfE to progress these. The preceding discussion has also highlighted that food loss/waste is a complex space: TAs play a significant role in giving effect to government waste management policy; other agencies also have policies that can be leveraged; and individual attitudes and behaviours are key to achieving change.

There are key points of interaction and synergy, and potential tensions and trade-offs to consider as MfE develops its food waste work programme subsequent action and investment plan. For example, the food waste definition we adopt for NZ Aotearoa may influence how much progress we

make towards SDG 12.3. There are potential trade-offs between reducing food waste and increasing food packaging (which can help extend the shelf-life of food products). Decisions also need to be made about where in the food system (production / processing / retail / consumption) and / or the waste hierarchy to focus interventions, based on evidence of impact and relative cost-benefits.

The following sections outline a wide range of potential areas of focus for further work, by both MfE and other agencies. These need to be narrowed down, taking into account existing work, capacity, available resources and willingness of other agencies to engage in this work.

The Sustainable Food Systems team and wider Food Champions network in MfE may also be able to contribute to and support MfE's food waste work programme agenda, particularly in areas where we can demonstrate alignment with other government and organisational objectives.

### ***Potential connection points and opportunities for cross-agency collaboration***

Given the number of agencies with a role and interest in influencing food waste, there may be scope to improve policy alignment, leverage wider government levers and strengthen cross-agency collaboration. Initial ideas about possible areas for collaboration and joint work are listed below. Some of these have been discussed with relevant agencies (e.g. funding for food rescue), while others represent initial thoughts that need to be tested further.

- Cross-agency work to establish sustainable funding for food rescue (*MSD, MPI*);
- Explore end-markets for recycled food waste, including compost and anaerobic digestate, and other forms of valorisation (*MPI, MBIE*);
- Identify extent of, and opportunities to reduce primary sector food loss and scope to improve harvest practices. This could include ways to encourage / support the practice of gleaning (collecting leftover crops from farmers' fields after commercial harvest) in NZ (*MPI, MfE*);
- Opportunities to work with primary producers to increase the volume of lower cost non-export grade produce available to NZ consumers (*MPI, NZTE?*);
- Develop government procurement guidelines on waste minimisation from catering services / food procurement (could encompass both packaging and organic waste from food) (*MBIE*);
- Ka Ora Ka Ako school lunch programme as a platform for linked curriculum resources that improve ākongā awareness of food waste (e.g. development of learning resources, expanded role and focus of EnviroSchools programme in Ka Ora Ka Ako schools) (*MoE, MfE*);
- Strengthen support / advice available to Ka Ora Ka Ako suppliers on reducing food waste (*MoE, MfE*);
- Assess current food safety guidance and MfE web-based advice on food loss to ensure they reflect best practice, include up-to-date links, and support government objectives (*MPI, MfE*);
- Work with other agencies to identify opportunities to strengthen, expand or co-fund strategic partnerships with non-government organisations working to reduce food waste (*MfE, MPI, MSD, MBIE*); and
- Review current level of science and innovation funding allocated to support minimisation of food loss and waste via different agencies, and identify opportunities to increase, improve and integrate investment in key RS&I – e.g. valorisation, biofuels, organic fertiliser, waste processing (*MPI, MBIE, MfE*).

More generally, there may be scope to strengthen effectiveness of the connections across agencies in relation to food waste. The existing cross-agency food security group has been re-purposed with

a broadened food systems focus (and is now called the Cross-Agency Food Systems Group) and will provide a useful forum for stronger cross-agency linkages in the food waste space.

#### ***Opportunities to strengthen and support the central-local government interface***

Given the key role that local government plays in delivering programmes and services to reduce food waste, there may be opportunities to improve how central government enables and supports to do this effectively. Possible examples include:

- Central government investment to support TAs to implement and meet the infrastructure costs of kerbside food waste collection and diversion from landfill – particularly in more sparsely populated TAs with smaller towns and cities (on MfE work programme);
- Undertake work with the LGA to consider how TAs currently share lessons & best practice, collaborate, benchmark and assess their own performance in managing food waste. This could also consider ways that central government could support TAs to do this more effectively and ensure alignment between TA plans and actions and national objectives; and
- The *Improving household kerbside recycling* consultation includes specific actions to undertake research to increase engagement and participation in food scraps collections.

#### ***Other potential opportunities not addressed through current work programmes***

The following are initial thoughts that need to be tested further with the MfE Waste team

- Exploring whether there is the scope to use the WMF to provide sustained / ongoing funding to proven programmes (rather than or alongside the current contestable annual funding round that provides short-term funding for initiatives); and
- Valorisation – reviewing the emerging evidence, doing a stocktake of current funding mechanisms, levels of investment, and barriers and opportunities to increased commercial activity in this area.

#### ***Addressing research / knowledge gaps***

The Prime Ministers Chief Science Advisor has indicated her intention to produce a series of short reports covering aspects (environmental, economic and social) of food rescue, loss and waste across all levels of the food hierarchy. MfE will work with the PMCSA to ensure these build on and add value to existing MfE work, including identifying potential areas of focus and optimal timing of these reports to align with our work programme.

Potential areas of focus to address gaps in our existing knowledge, or to synthesise evidence as a basis for identifying potential policy and investment responses, could include:

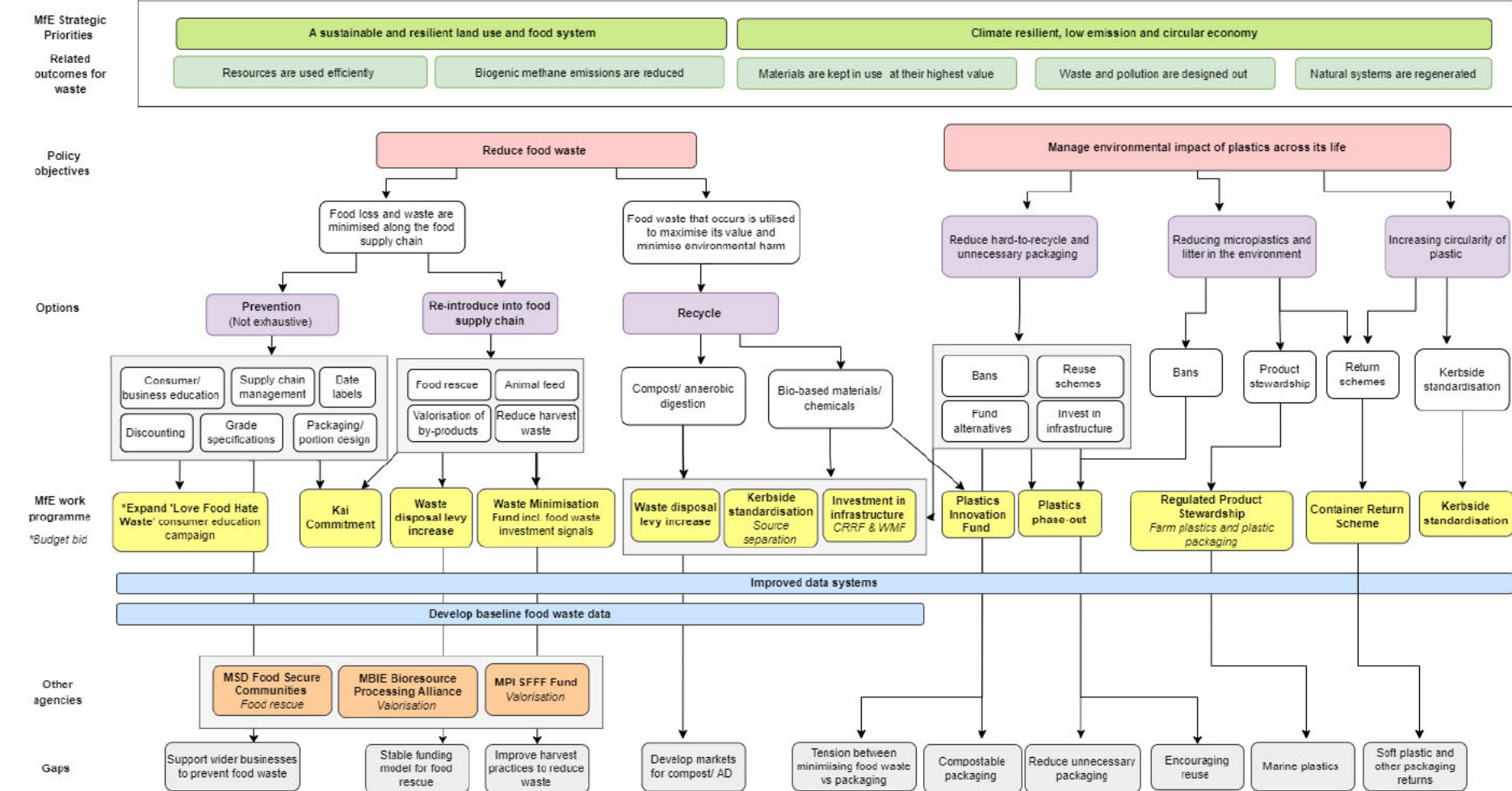
- **Assessing the costs and benefits of using compost and anaerobic digestate** as alternative to synthetic fertiliser in New Zealand, including impact on soil health, yield, most suitable land uses, business case etc. Finding suitable end-markets for organic waste diverted from landfills will be important to support our emissions objectives;
- **Options for turning food waste into animal feed, and other opportunities for valorisation in New Zealand** – animal feed is high on the food waste hierarchy and is an area that is only beginning to be explored. Existing examples include use of fish waste in pet food (e.g. Omega Plus);
- **Identifying leading causes for food waste/loss across the different segments of the food supply chain**, within a New Zealand context. Identify the barriers faced by specific sectors in taking action to reduce food loss and waste. Manufacturing in particular is a key gap; and

- **What business models exist to support food rescue organisations to be financially sustainable in the long-term?** Food rescue organisations are important from a food waste perspective as a best-use scenario for waste that does occur, however certainty around funding remains the key barrier for this sector.

#### Information Sources

- Miranda Miroso's report for the Select Committee ([Final-report-Briefing-to-investigate-food-waste-in-New-Zealand\\_edited.pdf \(otago.ac.nz\)](#))
- WasteMINZ data on supermarket and café/restaurant food waste [National Food Waste Prevention Project | WasteMINZ](#)
- Love Food Hate Waste household food waste audits in 2015 and 2018 [Waste Not Auckland \(lovefoodhatewaste.co.nz\)](#) and [Microsoft Word - Final 1.0 - New Zealand Food Waste Audit Report 2018 \(lovefoodhatewaste.co.nz\)](#)
- NZ Food Waste Champions 12.3 [Food Waste Reduction Roadmap](#)
- Rabobank and KiwiHarvest food waste research [Food Waste | Rabobank New Zealand](#)
- Central Otago District Council commissioned report on fruit loss in their region [Understanding Fruit Loss in Central Otago report final.pdf \(codc.govt.nz\)](#)
- Countdown annual reports and other documents quantifying food waste to landfill

### Appendix 1: Draft MfE Waste Diagram



Appendix 2: Food waste hierarchy

