



**Queensland  
Government**

Department of Environment  
and Science



**STOP  
FOOD WASTE  
AUSTRALIA**



**FIGHT FOOD WASTE**  
Cooperative Research Centre

REDUCE - TRANSFORM - ENGAGE

# Positioning Australian Horticulture for the Future:

## No Time to Waste!

Carolyn Cameron

**Stop Food Waste Australia**

[carolyn.cameron@fightfoodwastecrc.com.au](mailto:carolyn.cameron@fightfoodwastecrc.com.au)



# Tackling food waste: a global issue



**1/3** of all food  
produced  
is wasted

We waste a third of the food we  
produce globally, while nearly



people are  
going to  
bed hungry  
every night

A huge proportion of this food is dumped  
in landfill where it releases methane into  
the atmosphere, a greenhouse gas



**25x**  
more  
powerful  
than carbon  
dioxide (CO<sub>2</sub>)

**3rd** largest emitter  
is food waste

All the food we waste requires an area  
the size of 1.25 Australias to grow.



**Food waste feeds climate change,**  
if food waste was a country, it would be the  
third largest GHG emitter after the US and  
China. Our food system is causing up to

**80%** of global  
biodiversity loss

and we're devastating our remaining  
pristine habitats to grow more food,  
a third of which will get wasted.

## Global problem

This is happening in every  
country, at every stage of the  
supply chain, from farm to fork.



**People at home  
are throwing away**



**Businesses are wasting food  
in their own operations** and all  
along their supply chains.

# Food loss and waste in Australia

Food waste is a monumental challenge that affects everyone in the food value chain.

We all need to act now to deliver Australia's target to halve food waste by 2030.

## Other food waste impacts:

- **25.73M ha of land** is used to grow food that is then wasted - **bigger than the landmass of the UK** (24.2M Ha)<sup>1</sup> or **4x the size of Tasmania**
- **2,628 Giga litres of water per year** is used to grow food that is then wasted, **equivalent to 284 litres per person per day**<sup>1</sup> in a country where the average annual rainfall is 470mm, well below the global average<sup>2</sup>.

This means that, every year,



**tonnes of food**

(enough to fill the Melbourne Cricket Ground to the brim almost nine times) never makes it to a table, costing our economy



It also has massive environmental impacts. By wasting food, we're wasting the resources such as land, water, energy and fuel used to produce and distribute it; and generating around

A grey cloud icon with '17.5M tonnes of CO<sub>2</sub>' in white inside.

**17.5M tonnes of CO<sub>2</sub>**

Three grey downward-pointing arrows.

3% of Australia's national GHG emissions

These shocking statistics were announced at a time when



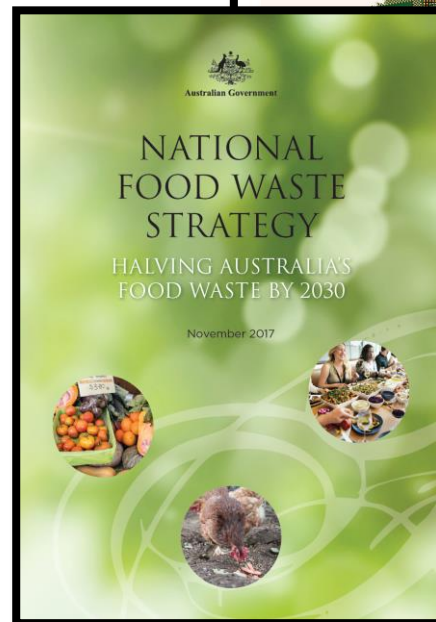
(over 5 million people) were food insecure. Since then, food insecurity has increased, with food charities struggling to meet an average



increase in demand for food relief in 2020.



# The policy context



# Stop Food Waste Australia (SFWA)



## A unique public - private partnership

- Established by the Commonwealth government in December 2020 to lead the delivery of the Australia's National Food Waste Strategy to halve food waste by 2030.
- The partnership includes:
  - All levels of government;
  - Peak industry bodies from across the food supply chain;
  - The four major food rescue organisations; and
  - Two of the world's leading organisations in the food waste space: our sister organisation, the Fight Food Waste CRC (FFW CRC) and the UK's Waste and Resources Action Programme (WRAP).

## Our partners



# Stop Food Waste Australia: Making it happen



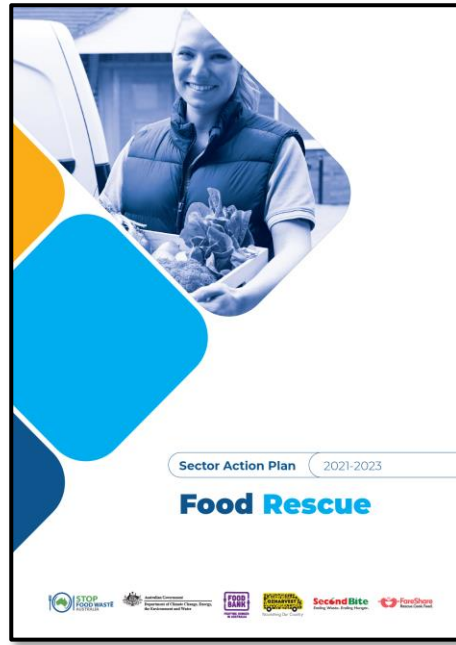


# What are Sector Action Plans?

Sector Action Plans (SAPs) provide a laser-like focus on major food waste 'hotspots' in our food system, supercharging action in high priority areas.

Hotspots are areas where many factors combine to create circumstances where high amounts of food are wasted and/or high environmental impact or high value foods are wasted.

Our SAPs are designed to bring multiple stakeholders together in pre-competitive collaborations to solve specific food waste challenges that are too big for individual organisations to solve alone.



## Our first two SAPs are:

- **Food cold chain** – addressing the 2.3 million tonnes of food that is lost or wasted because of failures and the need for improvements in our cold food supply chain.



- **Food rescue** - making sure every bit of good food that is safe to eat can get to the people who need it.

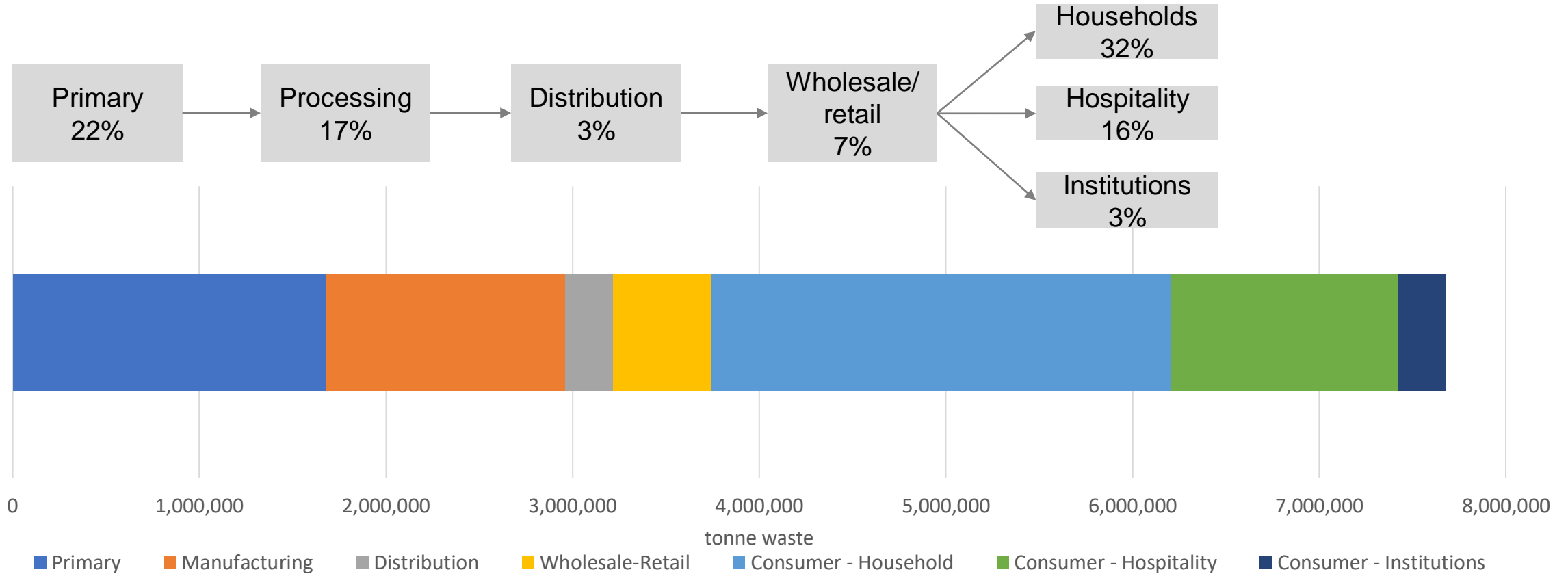


We'll develop up to five more SAPs based on what the evidence tells us are the high impact areas.

# Halving food loss and waste in Australia

**Fruit and vegetables constitute two thirds of all primary on-farm food loss**

Circa 80% of this lost produce was edible

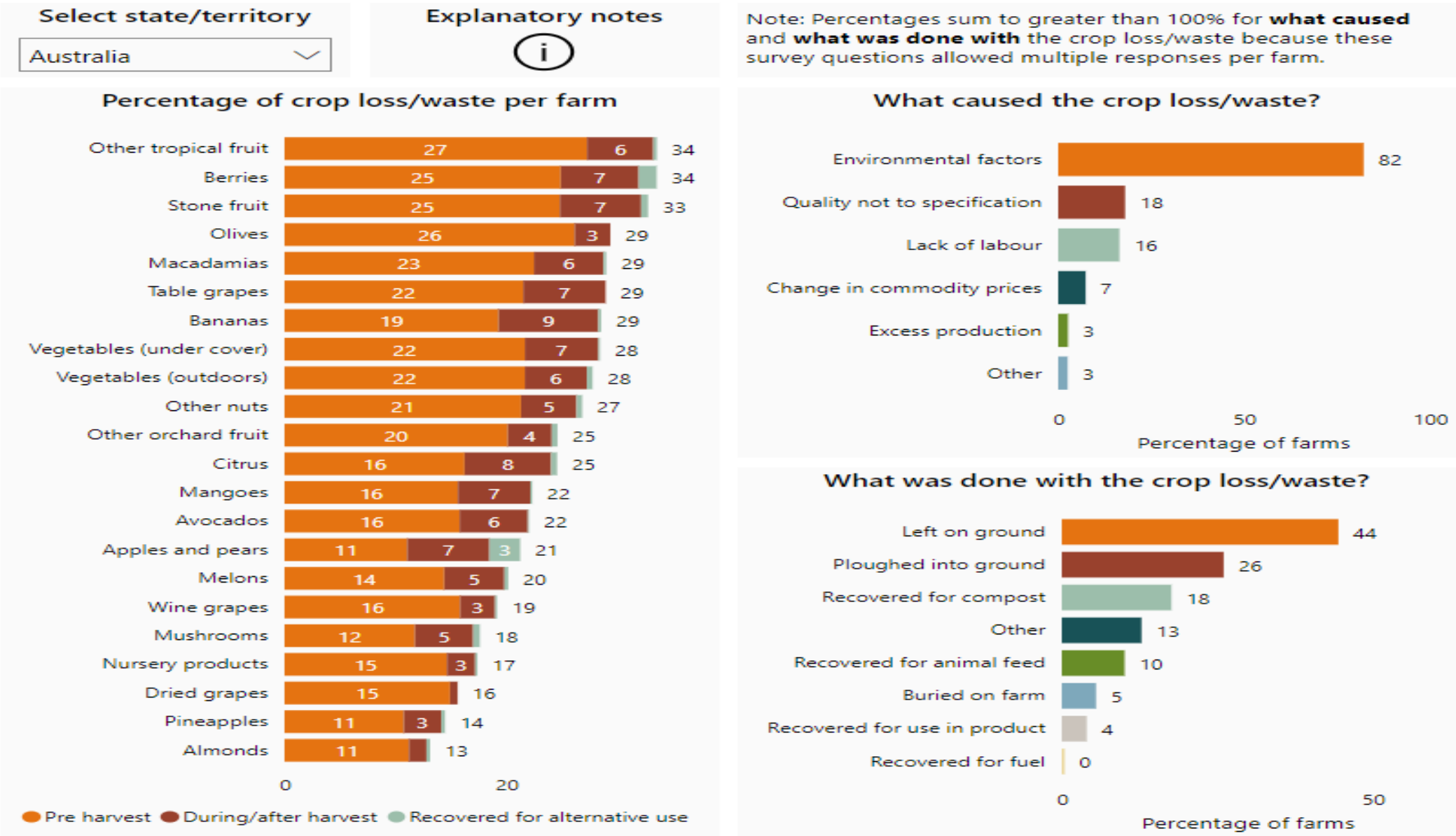


**For every dollar invested in food waste prevention in Australia the average return on investment is over \$7-10.**





Crop loss/waste on Australian horticulture farms, 2021–22



Source: ABARES, Downham (Crop loss/waste on Australian horticulture farms 2021–22 - DAFF (agriculture.gov.au))

Primary Production -  
Scale of the Opportunity

Waste by tonnage within each Australian state/territory



NSW & SA

TAS, VIC & SA

QLD, WA & NT

Top product wasted by tonnage

- 1. Melons 18,480 t
- 2. Mangoes 10,780 t

NT/QLD  
Mangoes  
\$27.8m/yr

Top product wasted by tonnage

- 1. Melons 47,079 t
- 2. Sweet Corn 35,495 t

QLD Melons \$13-\$27m/yr

Top product wasted by tonnage

- 1. Melon 11,612,908 t
- 2. Carrots 114,721 t

Top product wasted by tonnage

- 1. Oranges 124,281 t
- 2. Cucumbers 43,951 t

SA  
Tomatoes  
\$24-30m/yr

Top product wasted by tonnage

- 1. Potatoes 82,523 t
- 2. Oranges 60,693 t

Top product wasted by tonnage

- 1. Tomatoes 87,077 t
- 2. Potatoes 76,148 t


Top product wasted by tonnage

- 1. Potatoes 66,690 t
- 2. Onions 39,940 t

Vic Stone fruit  
\$37-\$44m/yr

# Horticulture Sector Action Plan



Project partners: 



Supported by



Department of Environment and Science



Australian Government  
Department of Climate Change, Energy, the Environment and Water



- SFWA will collaborate with key stakeholders across the horticulture supply chain to **design a broad framework plan** with separate 'chapters' for various horticultural commodities or regions.
- For each chapter complete **quantification and root cause analysis for priority hotspots**; applying WRAP UK's tried and tested Whole Chain Food Waste Reduction Plan Toolkit
- **Co-design solutions** to address identified hotspots and root causes to create an action plan; applying international best practice, emerging technologies, and solutions from comparable industries.

## Objectives

- To reduce food loss and waste in the horticulture sector
- To improve crop utilisation and profitability and supply chain resilience
- To reduce environmental impact
- To increase opportunities for food donation.
- To tap into a global market for upcycled food products forecast by Forbes in 2019 to be worth A\$65.3 billion by 2025.

## Outcomes

- Horticulture businesses across the supply chain are informed and able to undertake cost effective food loss and waste reduction measures.
- Improved management of loss and waste in fresh produce reflects the food recovery hierarchy and contributes to organic waste reduction in line with States' and businesses' objectives.
- Project insights enable the donation of additional fresh produce to the food rescue sector.
- Creation of new food ingredients from horticultural surplus deliver new income to growers and new value through healthy food ingredients to the food industry.



# Horticulture SAP: Initial high-level Framework



Project partners:  



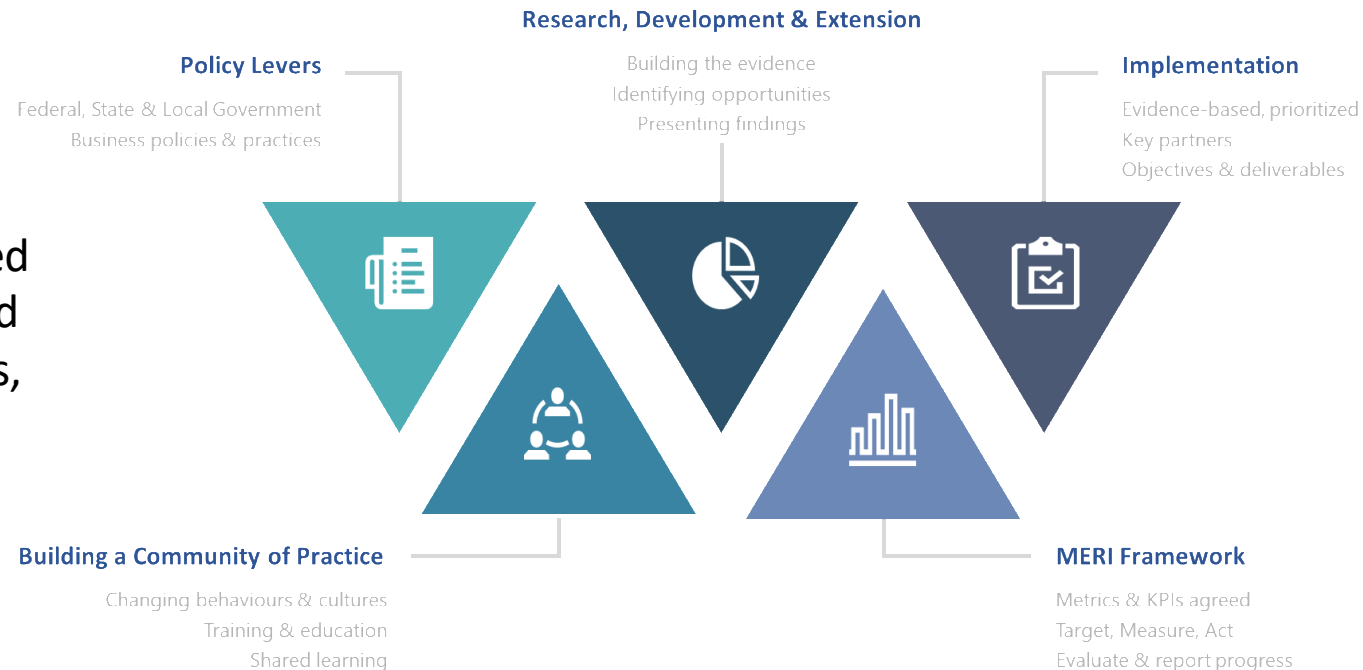
Department of  
Environment and Science

- Address trading practices; specifications review
- Tax incentive reform for food donation
- The Australian Food Pact

- Improve forecasting, IT and develop AgriTech
- Explore upcycling opportunities across the supply chain

- Improve and trial technologies
- Whole crop harvest / purchase trials
- Pilot BMPs for Processing and Cold Chain

Providing a concentrated focus on significant food loss and waste hotspots, with five pillars of activity



- Develop and implement BMPs for Processing and Cold Chain (Code)
- Work with Pact signatories to improve supply chain outcomes

- Establish accurate on-farm measurement techniques
- Develop a monitoring and evaluation framework for SAP linked to ABARES Survey