



Office of the Prime Minister's Chief Science Advisor
Kaitohutohu Mātanga Pūtaiao Matua ki te Pirimia

Title:

PRESENTATION: OPMCSA Connecting event _ Dunedin

Author:

OPMCSA

Output type: PDF				
Pages: pp 50				
Date: Apr-2024				
Language: English				
Review: -				
Versions				
<i>Record number:</i>	<i>Version:</i>	<i>Date V1 created:</i>	<i>Date:</i>	<i>Printed version</i>
PMCSA-24-4-2-V1	V1	16-Apr-2024	16-Apr-2024	N
<i>DOI:</i>	-			
<i>ISBN:</i>	-			
Archive page link: https://dpmc.govt.nz/our-programmes/special-programmes/prime-ministers-chief-science-advisor-archives/archive/gerrard-2021-2024				
Notes: -				

Prime Minister's Chief Science Advisor Workshop

Kaitohutohu Mātanga Pūtaiao Matua ki te Pirimia



Connecting Researchers and Policymakers

Ōtepoti | Dunedin

16 April 2024

Agenda

- 1:40pm Registration
- 2:00pm Mihi whakatau
- 2:05pm Welcome
George Slim, Office of the Prime Minister's Chief Science Advisor | Kaitohutohu Mātanga Pūtaiao Matua ki te Pirimia,
Richard Barker, Welcome from University of Otago
- 2:10pm
- 2:15pm Session 1:
George Slim, Pressures facing the researchers and policymakers trying to connect
- 2:45pm Session 2:
Louise Parr-Brownlie and *David Hutchinson*, Hīkina Whakatutuki | Ministry of Business, Innovation & Employment,
Building the science base in Aotearoa New Zealand
- 3:00pm *Break*
- 3:10pm Session 3:
Panel discussion led by CSAs with a focus on learning from case studies
- 5:20pm Session 4:
Speed dating and networking with drinks and nibbles – with thanks
to the Australasian Research Managers Society
- 6:30pm Close



Haere mai

Welcome

Scene setting,
George Slim

Who is, and isn't in the room?

VISION for the role

a trusted, accessible bridge between scientists, society and government

PRINCIPLES*

Rigorous, **Inclusive**, Transparent, Accessible

* Nature, June 2018 : Four principles to make evidence synthesis more useful for policy

Session 1

George Slim

Pressures facing researchers and policymakers trying to connect

Universities
New Zealand
and DPMC
project on
knowledge
sharing
between
academics and
policymakers

Enablers

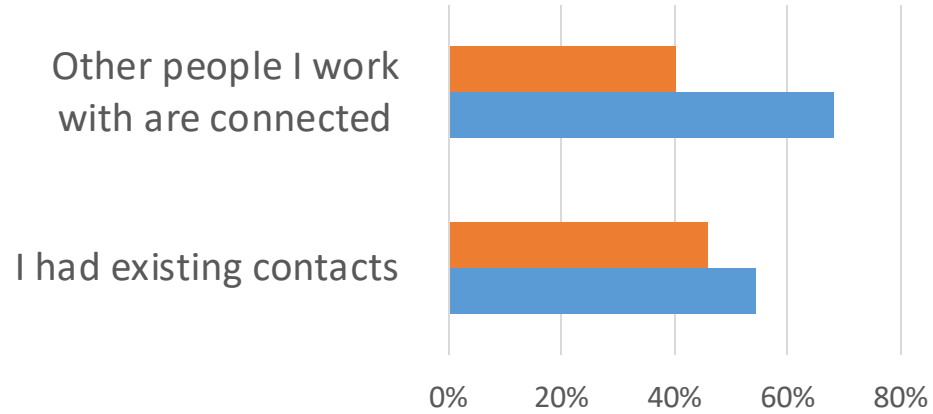
- Relationships
- Chief Science Advisors
- Conferences and other forms of knowledge exchange
- Collaborative initiatives
- Movement of staff
- Key research databases

Barriers

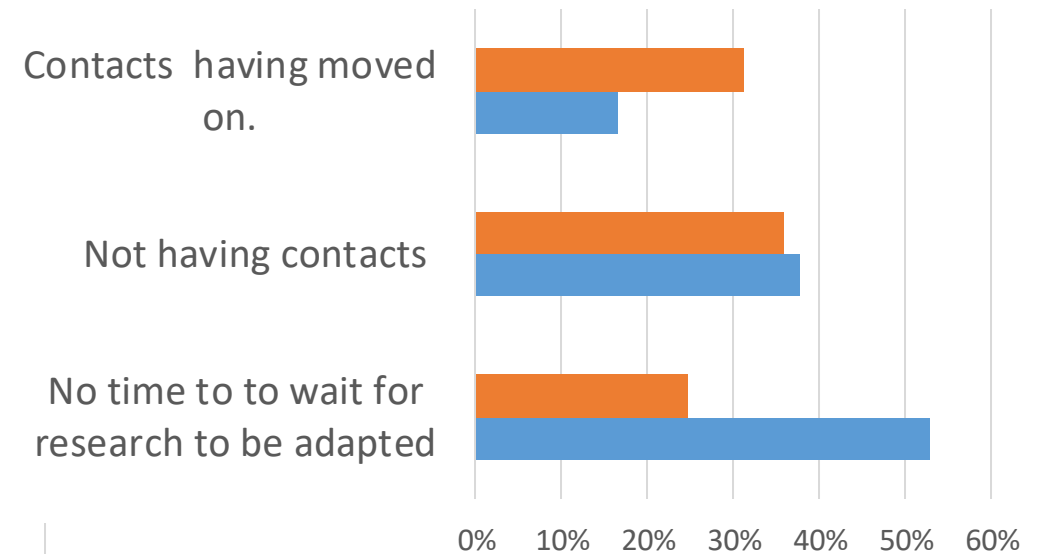
- Ways of working are not aligned
- Poor connections
- Lack of incentives
- Gaps in capacity
- Gaps in relevant research
- Commercial arrangements

OPMCSA email survey on connections

Enablers



Barriers



What would help?



Academics



Policy makers



People said:

Researchers need to be independent,
and at arms'-length from political pressures

People I know have connections

Having policy-makers trained in
how to connect to researchers

Who are the policy makers and how even would one connect with them?

I think policymakers are constrained and, despite the best of will,
are often unable to adopt recommendations.

Senior policy managers who do
not value evidence or research,
but instead prioritise
"good policy advice".

I think the answer is "I can find sufficiently good information
without connecting to researchers, and I don't know who I
should approach for more detail on particular
questions when I can't find information"

Researchers not focusing
on the key information gaps

I am an ECR, having just completed my PhD.
I have this week reached out to a policymaker

Policy makers not being open to something
that did not fit their ideas of evidence

I do not believe they would take any notice

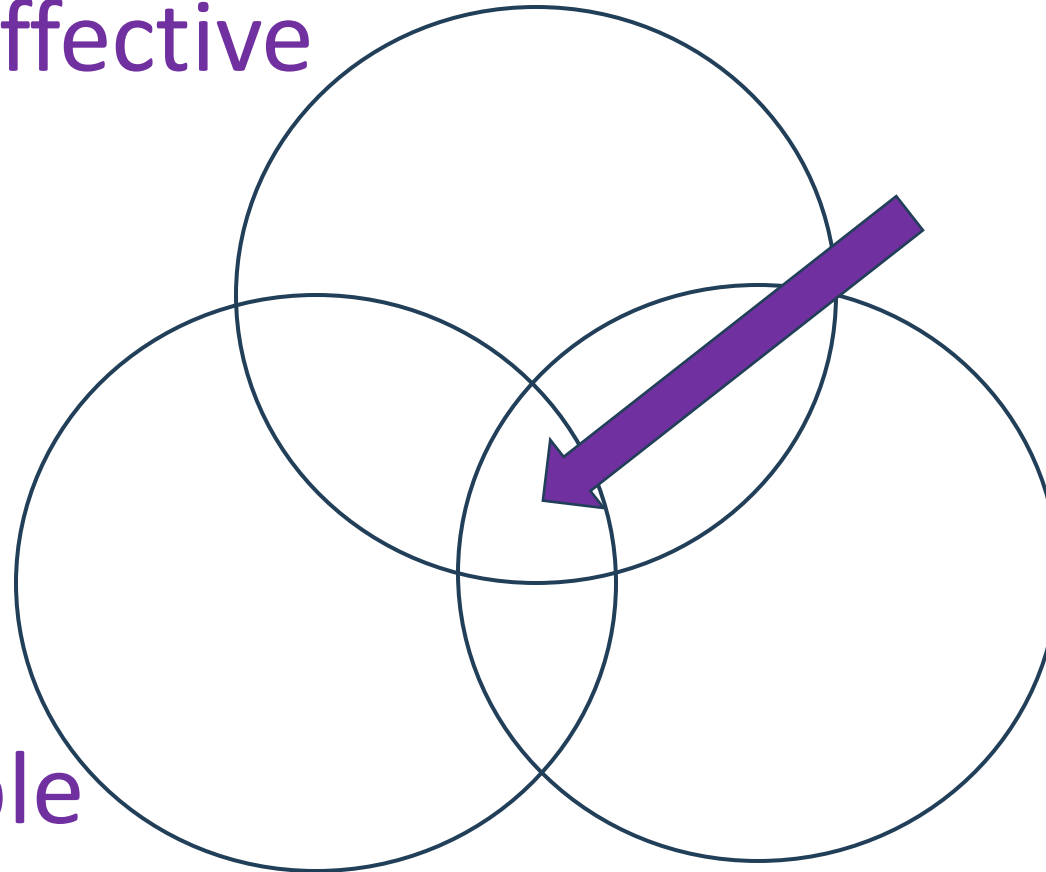
We develop relationships with academics
and keep them informed of policy interest.

Good Policy

Effective

Acceptable

Implementable



Resources: [DPMC Policy Project](#)



[Cate Roy's project on policy connections](#)



[Hannah McKerchar's resources for getting started](#)



Providing science advice into policy

- **Science is never the only advice**
- Science is good at defining the problem
- Science is good at identifying options
- Science struggles with definitive timely answers
- Politicians have to make decisions in defined timeframes
- Policy makers have to implement those decisions
- Presenting the “facts” rarely changed anyone’s mind
- Science debate should not be a proxy for values debate



The most effective science advice is delivered just ahead of the policy agenda

COVID-19

Advisory information provided to the Prime Minister as part of the ongoing COVID-19 pandemic.

October 2021: The PM requested that Juliet and Ian Town convene an expert group to provide feedback on an earlier iteration of the traffic light system for COVID-19 protection once vaccination targets are reached. The final system is significantly strengthened compared to the consultation draft which was shared with the group. You can read the feedback provided under urgency here (PDF, 309KB)

[Download the July – September 2021 advice bundle \(PDF, 3MB\)](#)

[Download the December 2020 – June 2021 advice bundle \(PDF, 410KB\)](#)

[Download the September/October/November advice bundle \(PDF, 2MB\)](#)

[Download the June/July/August 2020 advice bundle \(PDF, 4MB\)](#)

[Download the May 2020 advice bundle \(PDF, 693KB\)](#)

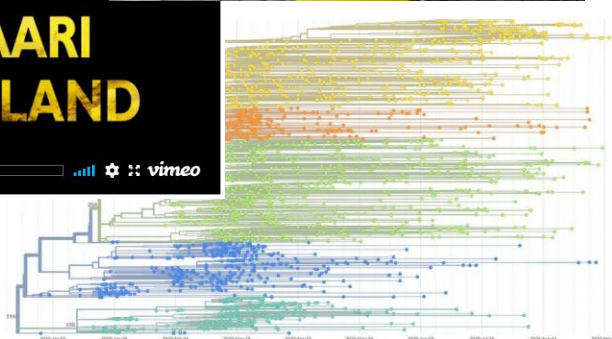
[Download the April 2020 advice bundle \(PDF, 6MB\)](#)

[Read the March 2020 advice bundle \(PDF, 611KB\)](#)

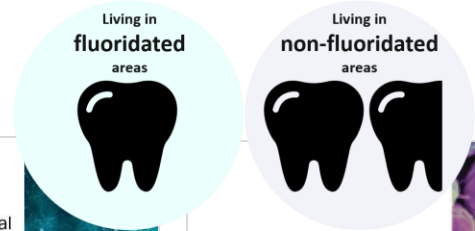
Science and Emergencies - Part 2 Whakaari White Island

Part 2 WHAKAARI WHITE ISLAND

13:52



On average, children living in non-fluoridated areas have 1.7 times as many decayed, missing or filled teeth than those in fluoridated areas



5G roll out

Trials

- Select regional towns
- Major cities
- Other areas in future

Barriers to use

- Availability in location
- 5G capable device needed

Myrtle Rust

An invader in Aotearoa New Zealand's ecosystems

Summary
Myrtle rust is an invasive alien fungal disease that affects plants in the myrtle (Myrtaceae) family. Myrtle rust attacks new plant growth which makes seedlings especially susceptible, and severe infections often kill plants. It has had considerable negative impacts internationally in the last decade. It has spread along the east coast of Australia and into South Australia, Victoria, the Northern Territory and Tasmania. Myrtle rust was first detected on Aotearoa New Zealand in May 2017. It has now been found across most parts of the North Island and in the northern and west coasts of the South Island, and it is expected to continue to spread. Species in the myrtle family provide ecological, cultural and economic benefits for Aotearoa New Zealand. Examples include native species such as mānuka, pōhūkūwae, tōka and rānana as well as exotic commercial species like eucalyptus and figs. With the current tools and level of knowledge, eradication of myrtle rust is not possible. However, a significant programme of collaborative research is underway working closely with iwi and landowners. This research aims to grow our understanding of how the disease behaves in native ecosystems and explore options to make ecosystems more resilient. Research is also examining social behaviours and public perceptions of the disease.

Background
Myrtle rust is a disease that arises from the fungus *Austropuccinia psidii*, which has several different strains. The 'Aotearoa' strain is present in Aotearoa New Zealand. Rust fungi typically form raised spots on the underside of leaves which become red-orange spore masses after some time, before turning grey or black. This causes leaves to deform and drop off the plant.

Figure 3 Various stages of myrtle rust infection on myrtle species in New Zealand. Images: (a) and (c) from the Longferry via Naturalis; (b) and (d) from the Mt. Ruapehu via E.C. H.A.C. Ltd.

Myrtle rust is thought to have originated in South and Central America, and since reaching Hawaii in 2005, the spread has increased exponentially. Recent research confirms that Aotearoa New Zealand natives are susceptible to both the

Food waste

A global and local problem

The first report in the food waste series from the Prime Minister's Chief Science Advisor, Kaitiaki Huatai Mātanga Pōhau Mātua ki te Pirimia.

Cannabis use

Yes No

- We can expect 'normalisation' of cannabis use, which may lead to increased use
- Overseas experience shows mixed evidence for use among youth and preliminary evidence of increasing cannabis use among older age groups and university students, following legalisation.
- Despite regulation, commercial cannabis will both contribute to and be impacted by the nitrogen cycle.

- Most New Zealanders try cannabis at some point.
- 15% of adults reported using cannabis at least once in the past year (2018/19 data).
- Young people are the biggest users with 29% reporting past-year use (ages 15-24, 2018/19 data).
- Current usage patterns likely to continue.

Effective science advice includes ...

- **Research other than your own**
- A broad understanding of the government context
- A detailed appreciation of who in particular would value your advice
- A broad understanding of the stakeholder landscape
- A broad understanding of what other countries do in your area at the research-policy interface



CSAs can help



Ngā mihi nui

Questions?

Session 2

Louise Parr-Brownlie and David Hutchinson

Building the science base in Aotearoa New Zealand

Ministry of Business, Innovation & Employment |

Hīkina Whakatutuki

Session 3



COASTAL PEOPLE : SOUTHERN SKIES

Centre of Research Excellence

Whakarongo ki ngā Hapori: Communities in Emergencies

co-Directors of CPSS Professors Anne-Marie Jackson and Richard Walter, Researcher Dr Losā Moata'ane, Pou Tuarā Mr Rob Hewitt and Postdoctoral Research Fellow Dr Terina Raureti, alongside Professor Tom Wilson (Chief Science Advisor National Emergency Management Agency Te Rākau Whakamarumarū)

Cyclone Gabrielle Displacement Research Collaboration with Ngā Pae o te Māramatanga

Importance of Listening to Communities

- An opportunity to coordinate research expertise within and across the Centres of Research Excellence
- Emerged from existing relationships and trust with communities
- Responsive to needs from communities



COASTAL PEOPLE :
SOUTHERN SKIES

Centre of Research Excellence



Credit: Ashley Spires



Prof. Tom Wilson

Chief Science Advisor | Kaitohutohu Mātanga Pūtaio Matua
National Emergency Management Agency (NEMA) | Te Rākau
Whakamarumarū



**National Emergency
Management Agency**
Te Rākau Whakamarumarū



HEAVY RAIN HIGH RISK
RED WARNINGS

CATEGORY 3
EX-TROPICAL

ORANGE WARNING
HIGH PROBABILITY
SIGNIFICANT & WIDESPREAD

DAMAGING SEVERE GALES

STORM SURGE

REDUCED RAIN THRESHOLDS

LARGE WAVES

SATURATED GROUND

CYCLONE 200 - 300 MM+

Forecasting Cyclone Gabrielle

Assembling Decision Makers

Cyclone Gabrielle Landslide Dam



Relationships are a critical enabler in an emergency

Trusted decisions require multiple perspectives
both from data and 'on the ground' experience

Just because it hasn't been done before doesn't
mean it can't be done now



Rotting feast of disaster science



LESSONS

Existing relationships make or break decisions in an emergency

Formal and informal preparations e.g. SAP

Wellbeing covers more than just life safety – it includes protecting environmental, built, economic and cultural / social aspects of lives and livelihoods.

The best science communication is served many ways

Emergency Management operators and policy makers are faced with a overwhelming number of ‘important and urgent’ issues – be quantitative and place advice in context

Te Mahere o te Kōrero

Talking Points for our conversation

1. Understanding Māori, Pacific and rural communities' needs
2. Utilising the pre-existing research networks, collaborations and expertise
3. Research and policy solutions to be led from within those communities
4. To build the capacity and capability of communities, and of the research/policy system to better understand each other
5. Solutions



**COASTAL PEOPLE :
SOUTHERN SKIES**

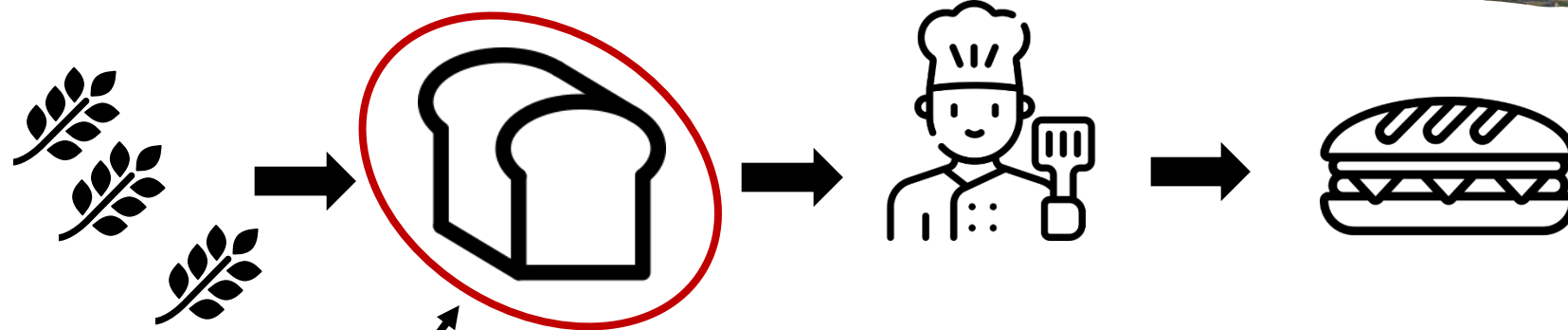
Centre of Research Excellence

Coastal People : Southern Skies Principal Partners



**COASTAL PEOPLE :
SOUTHERN SKIES**
Centre of Research Excellence

The Crisis you never heard about: 2022-23 Taupō volcano unrest



Don't forget about this step!



National decision making
(warnings)
Executive briefings
Reassurance



Enhanced Regional Planning
(known impacts)
Agency Briefings



Public communications
Reassurance

Session 3

Case Study: Food Loss and Waste

Miranda Miroso & Sheila Skeaff - Profs @UO

Kaitlin Dawson – ED @ NZFWC12.3 Charitable Trust

Nicky Solomon – GM @ BPA + BDM @ NZFIN & ‘Sustainable is Attainable’

Setting the scene - government initiatives relating to food loss and waste



Who	Initiatives relating to food loss and waste
MfE	<ul style="list-style-type: none"> • Environment Committee food waste briefing and government response. • National definition for FLW. • National FLW baseline measurement project 2024. • National food waste reduction programs. • Transforming recycling consultation 2022. • Emissions reduction plan. • Climate Change Response (Zero Carbon) Amendment Act 2019. • National waste strategy 2023. • Waste disposal levy. • <i>Waste Minimisation Act 2008</i>. • Waste Minimisation Fund.
MPI	<ul style="list-style-type: none"> • Australia New Zealand Food Standards Code. • <i>Fisheries Act 1996</i>. • <i>Food Act 2014</i>. • Legislation relating to animal feed. • Sustainable Food and Fibre Futures Fund. • Fit for a better world roadmap.
MSD	<ul style="list-style-type: none"> • Food secure communities programme.
MBIE	<ul style="list-style-type: none"> • Grocery supply code. • Bioresource Processing Alliance. • National Science Challenges.

MoE	<ul style="list-style-type: none"> • Ka Ora, Ka Ako Healthy School Lunches programme.
MoH	<ul style="list-style-type: none"> • 2008/9 NZ Nutrition Survey.
Territorial authorities	<ul style="list-style-type: none"> • Love Food Hate Waste. • Kerbside organics collections. • FLW targets. • Central Otago District Council fruit loss potential project. • Other waste minimisation activities through waste disposal levy.
Treasury	<ul style="list-style-type: none"> • Climate Emergency Response Fund (reducing emissions from waste, diverting organic waste from landfill).
Interagency	<ul style="list-style-type: none"> • Sustainable Food Systems Project. • Cross-agency food systems group.
Multinational	<ul style="list-style-type: none"> • Global Methane Pledge • Paris Agreement • Codex Alimentarius • Food Security Roadmap Towards 2030 • Champions 12.3 • C40 • FAO food loss index • SDG 12.3 • UNEP food waste index

Influencing strategies



1. Evidence-based advocacy



2. Building relationships and networks and becoming a trusted source



3. Engagement and collaboration





1. Influence through evidence-based advocacy

E.g., as an Independent Advisor

Advising: summarising evidence and making recommendations (to ‘target, measure, act’)

Example ‘actions’:

- *fund behaviour change programmes*
- *coordinate food rescue & divert large scales of waste*
- *spend on R&D for value-added FW products*
- *establish a research centre*
- *establish collaborative partnerships across the supply chain*

Key learning:

- **be propositional – make recommendations on what should happen**
- **policy change takes time – stick at it**
- **other non-governmental stakeholders might end up finding ways to action your policy recommendations**



2. Influence through building relationships and networks and becoming a trusted source

E.g., as a 'go-to' subject matter expert

'Branding' and reputation building: making myself known and networking hard

Policy influencing opportunities followed:

- invite by govt agencies to represent NZ as a researcher/speaker at various events (APEC, World Expo, ISO standards)
- help co-curate international events
- contribute to international committee work (FAO)

Key learning:

- **build a reputation and key relationships (prioritise events with government/industry/ NGO attendance)**
- **become a trusted source (say YES when asked to do something and then do it well!)**



3. Influence through communication and collaboration

e.g. by creating a 'movement'

Research coalitions: building the evidence body (by bringing together a group of researchers - FWI Research Theme)

Communicating science: making our work 'digestible' (resource hub, newsletters, other media and public events)

Non-research partnerships: collaborating with other stakeholders - industry, NGOs - to build a broader coalition for change (e.g., NZFWC12.3)

Key learning:

- **public pressure can be a powerful tool to help amplify the messages and shape the policy landscape**
- **time spent on non-typical academic activities can be well spent**



A screenshot of the United Nations Sustainable Development Goals website. At the top is the UN logo and the text "SUSTAINABLE DEVELOPMENT GOALS". Below this is a navigation menu with items: Home, Overview, The 17 Goals, Get Involved, Partnerships, News And Events, and Resources. The main heading is "Goal 12: Ensure sustainable consumption and production patterns". Below this is a large orange banner with the number "12" and the text "RESPONSIBLE CONSUMPTION AND PRODUCTION" next to an infinity symbol icon. At the bottom of the banner, it says "Goal 12 is about ensuring sustainable consumption and production patterns, which is key to sustain the livelihoods of current and future generations."

“Universities and research institutions are at the forefront of investigating the social, economic, and environmental aspects of these global challenges. By nurturing interdisciplinary studies and fostering innovation, academic institutions are crucial in providing the knowledge needed to drive sustainable development.”



Student



Academic



Science

TIMES OF CRISIS,
TIMES OF CHANGE
SCIENCE FOR ACCELERATING
TRANSFORMATIONS
TO SUSTAINABLE
DEVELOPMENT



GLOBAL SUSTAINABLE
DEVELOPMENT REPORT 2023

CHAPTER

5

Transformations through science— and in science

The scientific method, based on observations and testing hypotheses, can reduce uncertainty, identify tipping points, accelerate the uptake of innovations and lay the foundations for the next frontier of ideas.⁶³⁴ Science also provides the evidence to help dismantle negative pathways or paradigms that counter the rapid acceleration of new technologies and other solutions. While the Internet has enabled instant sharing of information and the prospect of open science, it has also opened the door for malicious actors – and the simply uninformed – to present false information as factual. In the age of multiple compounding global risks that lead to escalating social vulnerability and increased inequality, the traditional process of production, validation and dissemination of scientific knowledge is not sufficient to result in meaningful processes of change. Transformations to sustainable pathways must be rooted in “socially robust” science. Today more than ever, scientists, policymakers and multiple social actors need to work closely together at the science-policy-society interface to build trust, establish the scientific base for progress towards the Sustainable Development Goals, deliver findings and communicate these findings to society at large.

Take the “Target, Measure, Act” approach to reduce food waste? Yes, but be pragmatic about it



Target

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

Measure

We are establishing a baseline measure of food loss and waste across Aotearoa.

Act

Four organisations have so far been announced to receive a total of \$4.6 million in funding. This will contribute to reducing food waste by 10 per cent.



Measure

We have a a baseline measure of food loss and waste across Aotearoa.

Definition of food loss and waste

Data, data, data!!!

Pragmatic questions?

Hotspots

Dedicated food loss and waste team

Government collaboration

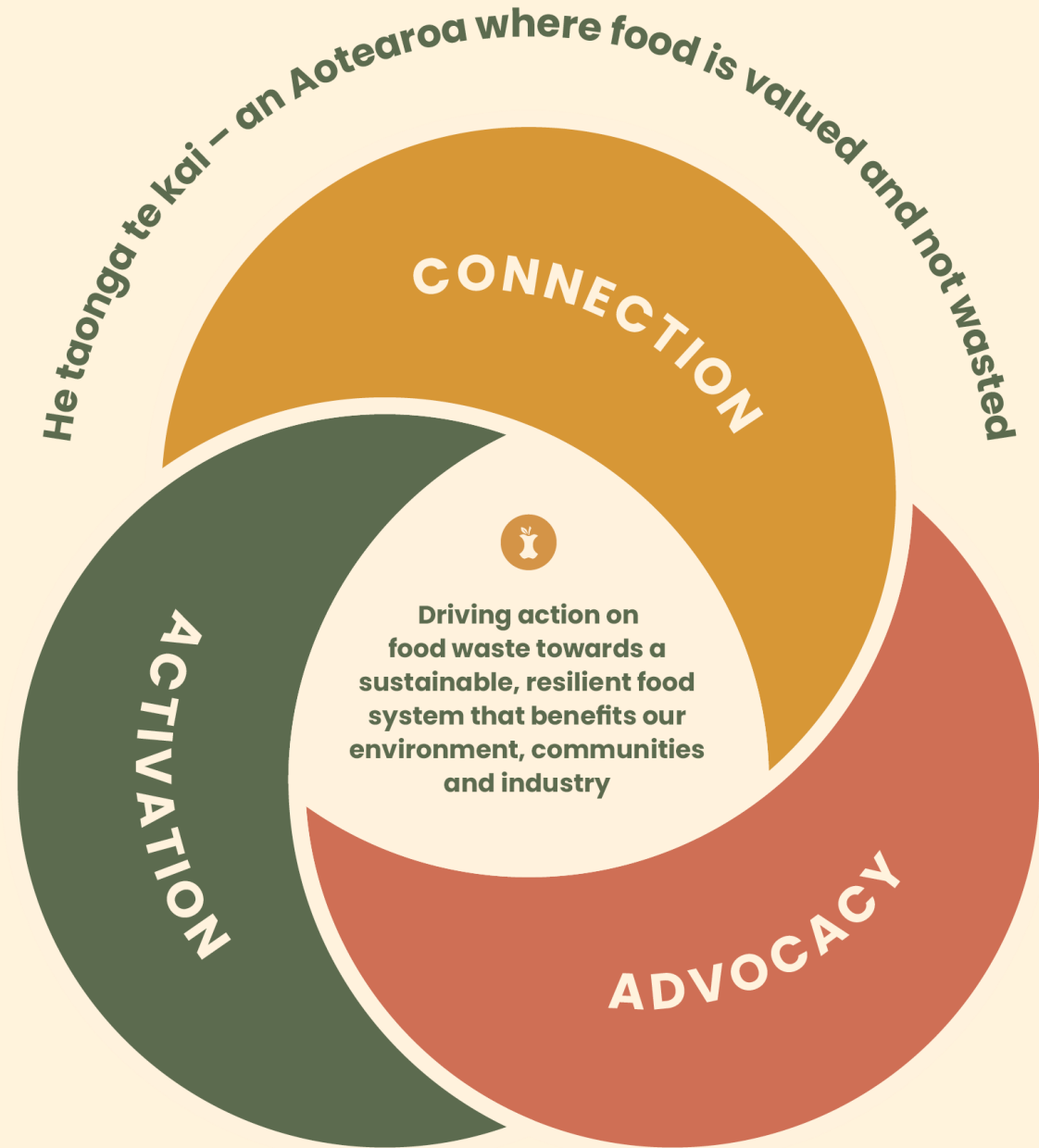
Waste Destinations

New Zealand Food Waste Champions



NZ FOOD WASTE CHAMPIONS 12.3

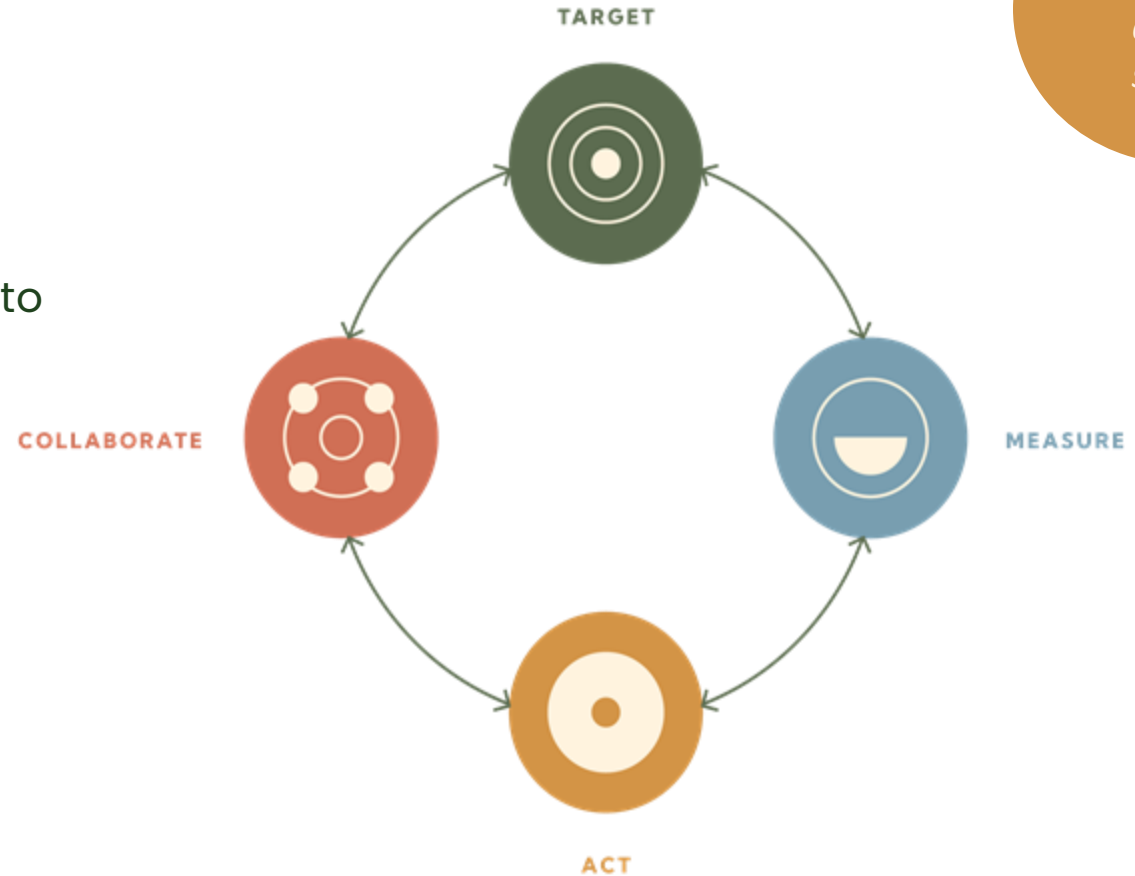
New Zealand Food Waste Champions



Policy in practice

Kai Commitment

1. **Policy transfer** from one national context to another
2. **Research was integral** to determine
 - suitability in NZ
 - critical success factors
 - business case for funders and businesses
 - context-specific factors to inform design



83%
Reduction
across
supply
chain



Stakeholder engagement & collaboration

Champions 12.3

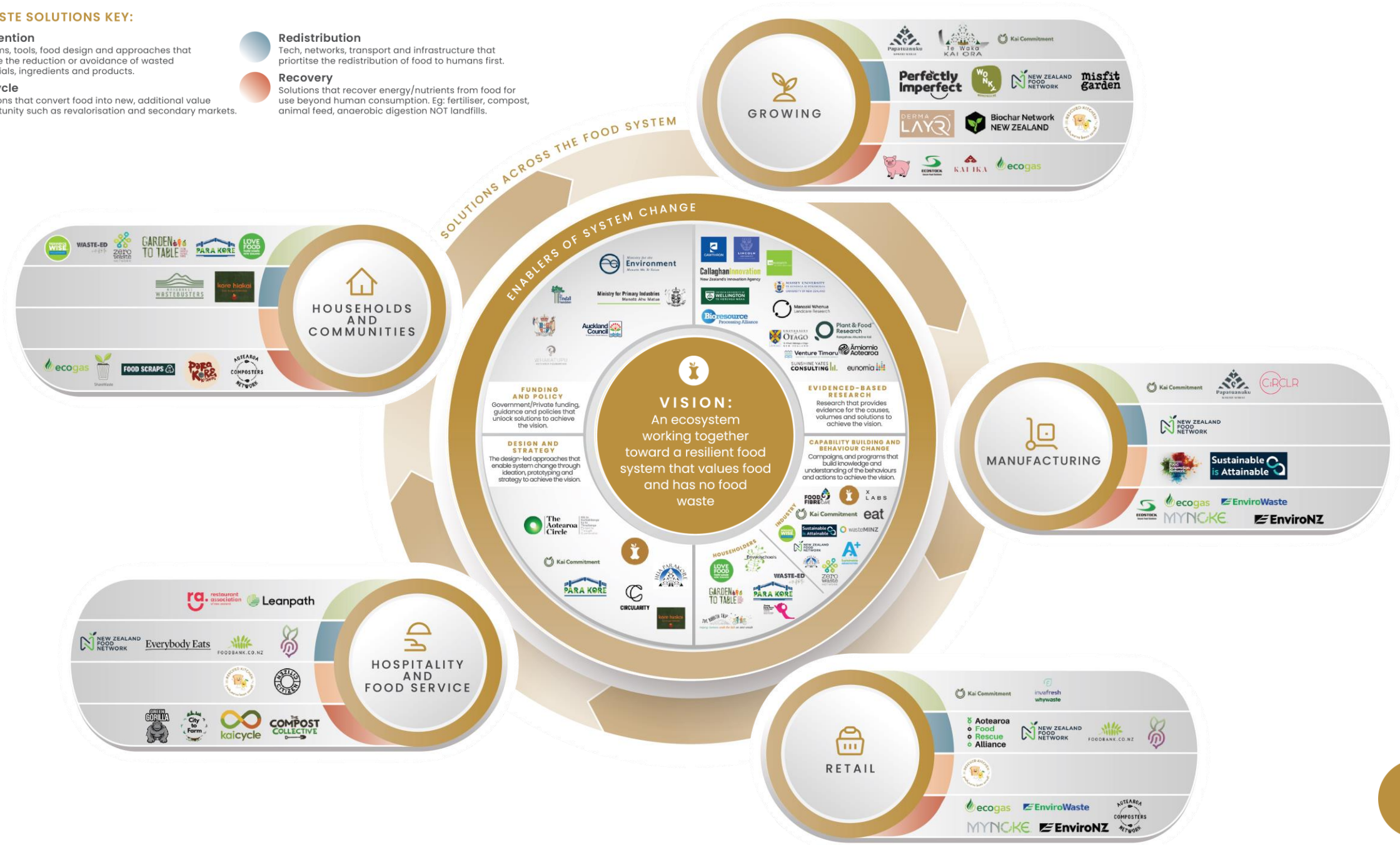
1. **Varied perspectives** to enable change
2. Bring **the sector and industry voice to policy** recommendations
3. **Aggregation and anonymity** for data collection



FOOD WASTE SOLUTIONS KEY:

- Prevention**
Systems, tools, food design and approaches that enable the reduction or avoidance of wasted materials, ingredients and products.
- Upcycle**
Solutions that convert food into new, additional value opportunity such as revalorisation and secondary markets.

- Redistribution**
Tech, networks, transport and infrastructure that prioritise the redistribution of food to humans first.
- Recovery**
Solutions that recover energy/nutrients from food for use beyond human consumption. Eg: fertiliser, compost, animal feed, anaerobic digestion NOT landfills.



**Evidence based decisions
are key to our work.**

**We also need research, policy,
industry, community and solution
providers at the table to achieve
impactful, long-term change.**





South Canterbury, Hawke's Bay & Manawatū



Could be doing better
with my waste and
am sure others are...?

Hearing some things I
should be doing but don't
have the time or resources
to progress

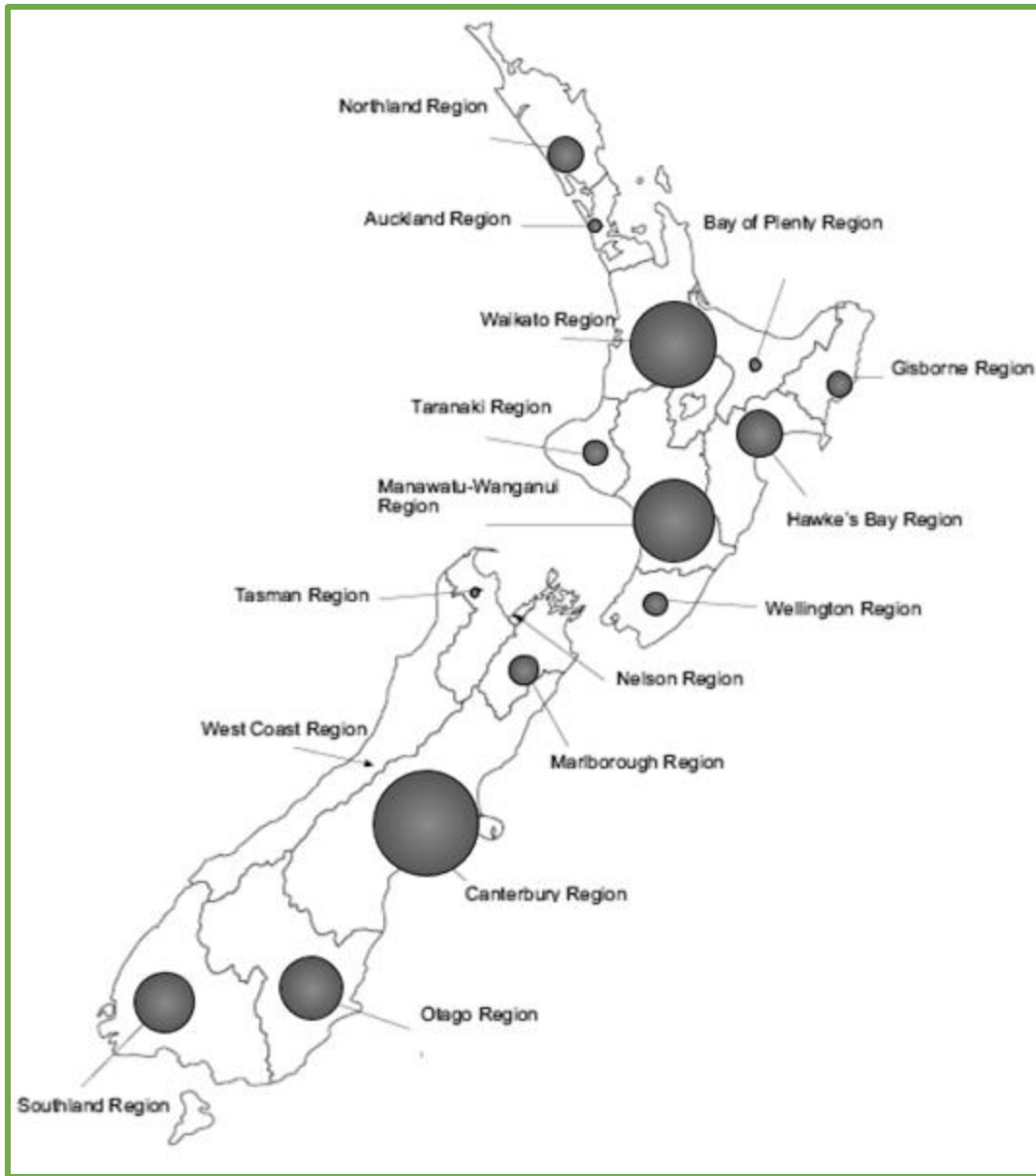
Does my A + your B + your C
= **VALUE?**

Focused on :
raw product
↓
processing
↓
market



Collaborating on promoting industry sector into secondary schools
Sharing best practice – H&S, Training, Policies & Processes etc.

Established level of trust
Commitment to “do the right thing”
Part of the community – social licence to operate
Reduced carbon footprint/EECA RETA/Renewable energy
DESIRE TO DO MORE



2.1 million t/yr



>1 million t/yr



Biosolids









Food waste

157,000 t/yr

Potential Gain from circularisation:
>US\$ 2 billion/year = 1% of GDP

STEP 1: UNDERSTAND THE ISSUE

Collate information on our waste & by-product output:

-  *What is it?*
-  *What's in it?*
-  *How much of it is there?*
-  *What are the volumes/seasonality?*
-  *What are we doing with it?*
-  *What have we heard that we could be doing with it?*








Sustainable is Attainable

South Canterbury, Hawke's Bay & Manawatū

STEP 2: FIND SOLUTIONS

Engage Academics & R&D resources to investigate sustainable opportunities and global best practices associated with:

-  *Prevention and minimisation*
-  *Value extraction*
-  *Energy recovery*
-  *Alternative uses*
-  *Environmentally friendly disposal methods*



BIOLOGICAL WASTES

PLASTICS

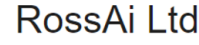


South Canterbury Food Processors & Manufacturers



Sustainable is Attainable

South Canterbury, Hawke's Bay & Manawatū



We would like your feedback, please use QR code

What would be the best next steps to connect researchers and policymakers?

- 1st | Co-operative projects
- 2nd | Help to connect the right researchers and policy people on projects
- 3rd | Theme based discussions
- 4th | Networking meetings
- 5th | Secondments of researchers into government departments (and *vice versa*)
- 6th | Nothing else is needed

Join at menti.com, use the code 4860 6956



We would like a more inclusive range of participants at follow-up events, do you have any suggestions?

Session 4

Speed dating and Networking

Ngā mihi nui

