



September 2023  
Summary Information for Stakeholders



Ministry for the  
**Environment**  
*Manatū Mō Te Taiao*



**WHETŪ**  
Consultancy Group

BRINGING TWO WORLDS TOGETHER



**MASSEY UNIVERSITY**  
TE KUNENGA KI PŪREHUROA  
UNIVERSITY OF NEW ZEALAND

# Organic waste contamination study



# Introduction

The project aims to understand and address the challenges posed by contaminants in our organic waste material streams. It is seeking to determine the best way to mitigate, and ultimately avoid, risks to soil, water, human and animal health and to expand end markets for processed organic waste, so that we can recover organic material to the highest value use and reduce greenhouse gas emissions.

It will develop recommendations for a holistic management framework that could include policy, regulation, investment, standards, and guidance.

The project outputs are intended to be practical and build on existing tools and standards.

Inherent in the holistic approach is working towards integration of te ao Māori and mātauranga Māori into the framework. The framework should provide a pathway forward that seeks to avoid harm and create value in all its different forms.

This document contains high level summaries of the work undertaken so far, sets out some questions for stakeholders to consider prior to formally responding, and provides information on how to engage.

Copies of the full project reports are also available from [here](#)

## Project Phases

### Phase 1: Background Review (completed)

- Review of NZ standards, legislation, regulation and guidelines
- Review of international approaches
- Map the value chain to determine points for intervention
- Develop framework to make clear what we are aiming to do

### Phase 2: Iwi and Stakeholder Engagement (Sept-Oct)

- Seeks input on issues and potential solutions
- Multiple ways to engage: Online message boards, online workshops, one-one engagement with key stakeholders, Technical Advisory Group(s)

### Phase 3: Synthesis and Reporting (Nov-Dec)

- Recommendations will be reviewed by stakeholders before final presentation to the Ministry



# What Will Success Look Like

✔ Organic waste contamination issues identified

We have a clear picture of what the key contaminants of concern are and what the key issues are to be addressed in how they are managed.

✔ Tangata whenua and other stakeholder are engaged

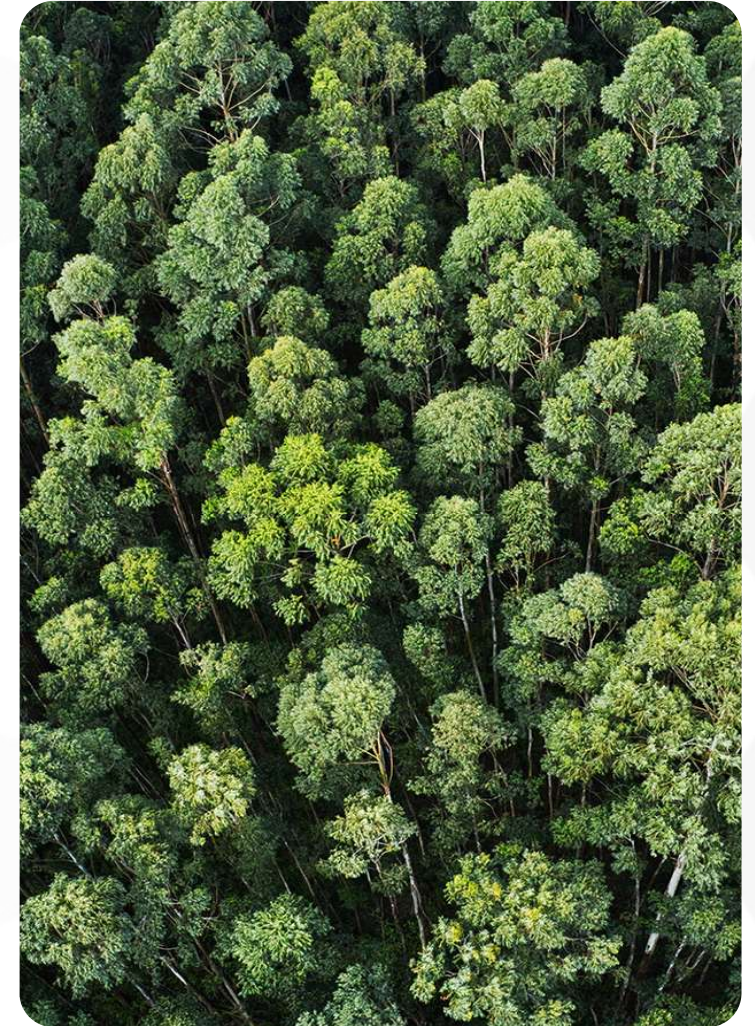
The outcomes reflect the views of stakeholders and rights holders.

✔ A framework for addressing contaminants in organic wastes is agreed

We have a clear, widely agreed, idea of what we want to achieve and how to go about it.

✔ A set of practical recommendations

Recommendations enable actions to be put in place both immediately and as we work towards longer term goals.





# Background Information



# Context

The proposed frame to address organic waste contamination is in the context of a circular economy enriched by te ao Māori, as set out in Te rautaki para | Waste strategy. This is a significant shift from our previous linear approach which views the environment as a sink for wastes. Removing organic waste from landfill and reducing emissions is central to this.

To achieve a circular bioeconomy for organic wastes, progressive detoxification of organic waste will be required. This will in turn be dependent on broader moves towards a circular economy. This means that the implications of controlling contamination in organic waste streams extend beyond those directly involved in the organic waste value chain.

A three-phase approach based on Te rautaki para | Waste strategy is proposed. This recognises that there are immediate issues which require addressing - and which can be addressed, but that this should be done while working towards a circular economy. Some parties will have greater interest in the immediate issues and how these are addressed, while other parties will be affected by longer term changes.

Contamination is essentially 'substances and materials out of place', which may or may not be harmful. Pollution is where the contamination reaches a level of adverse change. The degree to which contamination is an issue (i.e., the degree to which it becomes pollution), is dependent on the contaminants involved, the use of products made from organic waste, and the concentration of the contaminants.





## Context (continued)

Determining the thresholds for potential harm is the role of science in coordination with mātauranga Māori. That is, it needs to be based on robust evidence and systematic understanding and application of Aotearoa's community values.

Contamination can arise across the value chain. It is not just the concern of organic waste processors and users of products. (A stakeholder analysis below identifies the key groups)

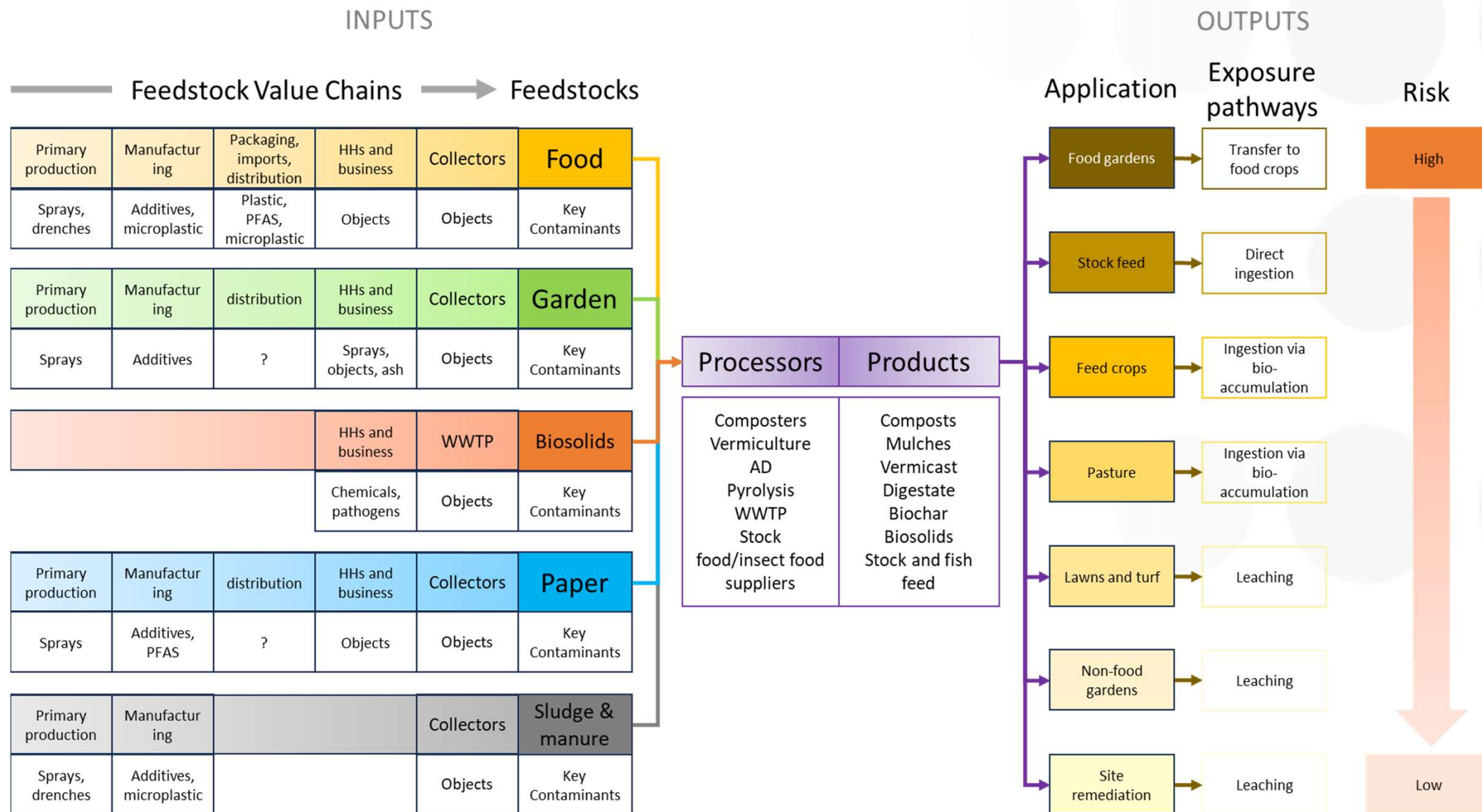
Identifying the most appropriate types of interventions and how they may be applied depends on correctly identifying the part(s) of the value chain where controls can most effectively and efficiently be applied. There may be multiple tools that can be applied (and may need to be applied) to achieve the desired outcome. For example, addressing plastic waste in organics may include, international treaties, restrictions on use of certain products or materials, education of householders, decontamination at a processing facility, and testing and certification of a final product. Stakeholders and rights holders have a vital role to play in this regard.

Solutions will need to be developed in the context of an evolving landscape as new information, new materials, and new practices emerge. Stakeholders and rights holders from various parts of the sector will be able to provide valuable input on emerging trends and issues and possible approaches to address these.



# Value Chain Map

Below is a simplified version of a value chain map. It allows identification of where key contaminants arise, where they can become an issue and, the potential points for intervention





*The Ministry for the Environment indicates that the focus of the work should be broadly on sources of household, business, commercial and industrial organic waste that:*

- is often/predominantly being disposed to some class of landfill (forestry slash for instance is not typically disposed to landfill); and*
- has potential valuable end uses and markets in a processed form.*

## **Indicative Waste Streams**

### **Food wastes:**

- Household food scraps
- Commercial catering wastes
- Food manufacturing wastes

### **Paper and cardboard**

- Incidental paper and card from households
- Paper or card used as mulches or

### **Garden and green wastes**

- Household garden wastes
- Ashes
- Charcoal
- Landscaping
- Sports fields and parks
- Bark, woodchip and sawdust

### **Carcasses, sludges, and manures**

- Wastewater Treatment Plant effluent
- Farm/production wastes
- Food processing wastes



# New Zealand Legislation, Regulation, Standards, and Guidelines

## Legislation and Regulation

- Natural and Built Environment Bill 2023
- Animal Products Act 1999
- Animal Products Amendment Act 2012
- Food Act 2014
- Environment Act 1986
- Conservation Act 1987
- Crown Pastoral Land Act 2022
- Hazardous Substances and New Organisms Act 1996
- Agricultural Compounds and Veterinary Medicines Act 1997
- Agricultural Compounds and Veterinary Medicines (Exemptions and Prohibited Substances) Regulations 2011
- Waste Minimisation Act 2008
- Responsibility for Reducing Waste Bill

## Standards

- NZS4454 for Composts, soil conditioners and mulches
- Assure Quality – Organics Standard
- BioGro Certification Modules
- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Protect Human Health

## Guidelines

- Guidelines for beneficial use of organic materials on productive land
- WASTEMINZ- technical guidelines for disposal to land
- Compost New Zealand consent guide
- Technical Guide 08: The production and use of digestate as biofertilizer
- Organic Materials Guidelines – organic contaminants review
- Organic production protocols – green waste composting and vermiculture
- Working towards New Zealand risk-based soil guideline values for the management of cadmium accumulation on productive land
- It's complicated: A guide to biodegradable & compostable plastic products and packaging

## Position statements

- Organic Waste: A position statement from the Zero Waste Network
- Position statement from New Zealand composters on compostable packaging
- Road Derived Sediments (RDS) and Vegetative Material Reuse Feasibility Study (2010)
- MfE: Compostable packaging position statement
- MfE: Kerbside materials factsheet
- Packaging Forum Position Statement on PFAS

# International Good Practice

Internationally, it is common to set statutory limits for potentially toxic elements (PTEs). The aim of this is to protect soil quality. They should be set with tolerances in place which can be determined by the strictness of the standard. The standards set should be achievable using good practice methods and they should be set in such a way that they can be standardised (e.g., with reference to organic matter content). Different standards are likely to be needed for different feedstocks and/or applications.

Contamination limits may need to be considered alongside nutrient loading levels. There are typically controls on the amount of key nutrients that can be spread on land – this is particularly the case with nitrogen. This, in turn, may limit the amount of soil products that can be spread within a certain time frame

The precautionary principle is needed as far as physical impurities is concerned - for example in respect of microplastic pollution.

Statutory standards, which can be reviewed over time, provide a baseline minimum standard. These can then be supplemented by voluntary standards and assurance systems which focus more on product quality

If statutory contamination limits are too strict this can constrain the production of soil products. A hybrid approach can help market development by setting standards that go beyond what is controlled by the regulator, so that the quality achieved conforms to that demanded by the market

At a higher level, international treaties around pollutants such as the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Stockholm Convention on Persistent Organic Pollutants, Rotterdam Convention on the importation of hazardous chemicals, and the proposed United Nation treaty on plastic pollution, will serve to constrain inputs of certain contaminants into the system.

# Common International Tools

## **Tackling contamination by defining product standards.** This includes:

- Regulation and voluntary approaches
- Chemical material and biological contamination controls
- Distinguishing between different compost classes
- Setting contamination limits for different feedstocks
- Establishing sampling and testing regimes for different products

## **Tackling contamination via process controls.**

- This is typically regimes controlling temperature over specified time periods (i.e., pasteurisation or hygienisation).

## **Tackling contamination through collection and other upstream controls.** These have included:

- Restrictions on what can be put in bins
- Visual inspections
- Wide ranging restrictions on plastic bags (to avoid them being used as liners)





# Consultation Information

# Opportunities to Contribute



## Workshops

We will be running 3 online workshops to seek input.

Workshop 1 will be for suppliers /Generators

Workshop 2 will be for processors

Workshop 3 will be for product users

*See next slide for more information*



## Research

Copies of the reports completed to date are available from [here](#).

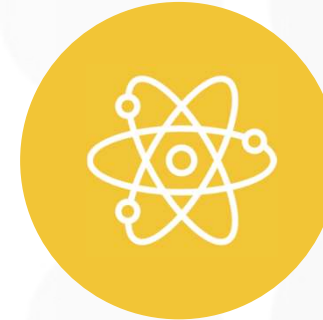
If you are aware of other information that is relevant, please feel free to send to [anita.lewis@eunomia.nz](mailto:anita.lewis@eunomia.nz)



## Message Boards

We have set up [message boards](#) where you can post responses to consultation questions (or add anything else you want to say) and see and interact with other contributions.

If you prefer you can provide responses privately via a [feedback form](#).



## Technical Advisory Group

We are seeking volunteers and nominations for people who would like to review and input into recommendations.

If you are interested in being involved or would like to have one to one input, please contact [duncan.wilson@eunomia.nz](mailto:duncan.wilson@eunomia.nz)



# Online Workshop Timetable



## Workshop 1: Suppliers/Generators

Wednesday 4 October 11:00am 12:45pm

Teams link:



## Workshop 2: Organic Waste Processors

Thursday 5 October 11:00am 12:45pm

Teams link:



## Workshop 3: Organic Waste Product Users

Thursday 5 October 2:00pm 3:45pm

Teams link:

Please contact [anita.lewis@eunomia.nz](mailto:anita.lewis@eunomia.nz) to register for the workshops.

You may register for and attend more than one workshop.

Please indicate which workshops you wish to attend.

Workshop participants will receive an invite and an agenda following registration.



# Questions to Respond to

To help focus responses from stakeholders we have framed a series of consultation questions which we invite everyone to consider and respond to. Variations of these questions will be discussed in the workshops as well as on the online message boards. If you have other things to say that don't fit under these headings we still want to hear your views.

## Suppliers/Generators



1. What are the most common and problematic contaminants for each waste stream? Why?
2. What are the challenges of keeping feedstocks free of contaminants?
3. What practical measures have you found effective?
4. What are the challenges with monitoring and measuring contamination?
5. What changes would you like to see in legislation, standards, guidelines?

## Organic Waste Processors



1. What are the most common and problematic contaminants for each organic waste stream? Why?
2. What practical measures have you found effective?
3. What are the challenges with monitoring and measuring contamination?
4. What changes would you like to see in legislation, standards, guidelines? Should any be mandatory?
5. How important are customer/community expectations in determining how you respond to contaminant issues?

## Organic Waste Product Users



1. How important are contaminant levels in selecting product?
2. How easy is it to determine contaminant levels when selecting product?
3. Are there any feedstocks you would not want to see in product you use? Which ones? Why?
4. Do you monitor contaminant levels in soils/te Taiao?
5. Do you seek out product that is certified or produced to standards or guidelines?





# For more information

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