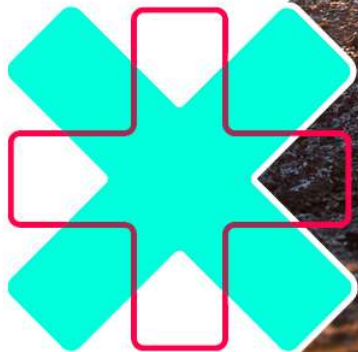
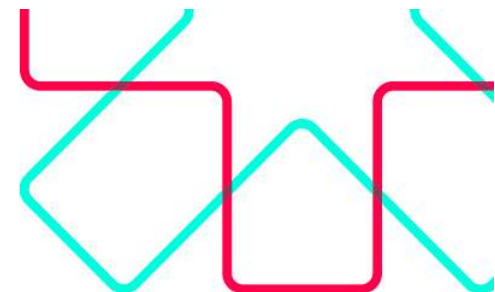


RECYCLING LABELLING – OPTIONS FOR NEW ZEALAND

Final Report

5 August 2020





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PREFACE

This report has been prepared for the Ministry for the Environment by Andrew Millar, Andrew Horwood and Olga Batura from MartinJenkins (Martin, Jenkins & Associates Limited).

MartinJenkins advises clients in the public, private and not-for-profit sectors. Our work in the public sector spans a wide range of central and local government agencies. We provide advice and support to clients in the following areas:

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- performance improvement and monitoring
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- organisational improvement
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Our aim is to provide an integrated and comprehensive response to client needs – connecting our skill sets and applying fresh thinking to lift performance.

MartinJenkins is a privately owned New Zealand limited liability company. We have offices in Wellington and Auckland. The company was established in 1993 and is governed by a Board made up of executive directors Kevin Jenkins, Michael Mills, Nick Davis, Allana Coulon and Richard Tait, plus independent director Sophia Gunn and chair David Prentice.



EXECUTIVE SUMMARY

Increasing recycling can support a circular economy

A circular economy seeks to decouple economic activity from the consumption of finite resources, including designing waste and pollution out of our economic system.

Increasing recycling recovery rates is an important part of supporting a circular economy. Current New Zealand recovery rates for recyclables are not as high as they could be. Too many recyclables end up in the waste stream, and much of the material that is collected for recycling is contaminated with food or unrecyclable components.

Clear and accurate on-product recycling information can support consumers to recycle 'better' and maximise their recycling. It can also enable consumers to make more informed purchasing decisions to buy products that are recyclable.

Key research insights

There are a range of possible options that the government could pursue to improve recycling labelling in New Zealand. Through our research we have identified the following key insights which can help inform future policy development.



1. There is support for increased recycling labelling from businesses, territorial authorities, and the public

The problems that consumers face when making decisions about recycling are well known. There is general agreement from businesses, territorial authorities, and the public that improved recycling labelling would help address these problems: however, there are varying views as to the best solution.

Many stakeholders expressed a desire for greater government leadership in progressing recycling labelling.






2. Recycling labelling is only one part of a wider approach to a circular economy

While stakeholders described recycling labelling as important, they also noted that it was only one part of a systematic approach to a circular economy, and that it needed to be supported by the right waste infrastructure.

This includes enhanced product stewardship that favours more recyclable packaging, a phasing out of hard-to-recycle plastics, and suitable recycling collection and processing infrastructure.



	<p>The move towards more standardised kerbside collection in particular was identified as a key waste initiative that should be progressed. This could support a binary 'Recycle-Don't' recycle label without regional variation.</p>
	<p>3. Kerbside standardisation is not a prerequisite to start work on recycling labelling</p> <p>Despite the importance of standardising kerbside collection, it is not necessary to wait until this work is completed to progress recycling labelling.</p> <p>There are options to proceed with this work in parallel with kerbside standardisations in such a way that that two projects will not conflict. This also speaks to the importance of having an approach to recycling labelling that is flexible and responsive to change over time.</p>
	<p>4. The PREP design tool should underpin any labelling approach in New Zealand</p> <p>The Packaging Recyclability Evaluation Portal (PREP) is an online tool which helps manufacturers and packaging designers to understand the recyclability of their products. The PREP tool is also integrated into kerbside collection practices, which means it can reflect regional variation across New Zealand.</p> <p>The PREP tool underpins both the Australasian Recycling Label (ARL) and the On-Pack Recycling</p>

	<p>Label (OPRL) scheme in the UK, both of which rate highly in terms of their accuracy and effectiveness.</p>
	<p>5. The ARL should form the basis of a New Zealand recycling label</p> <p>Increasing the use of the ARL is likely to be the quickest, easiest and lowest cost option to improve recycling labelling in New Zealand.</p> <p>The ARL already reflects New Zealand's regional recycling practices and is highly regarded internationally. It is already being used on New Zealand shelves, and has the support of some significant industry groups. It is also fully integrated with the PREP tool.</p> <p>These factors point to building on the ARL as the most effective recycling label option for New Zealand, as opposed to building one from the ground up.</p>
	<p>6. A voluntary approach to recycling labelling would be quicker and less costly to implement</p> <p>A voluntary recycling labelling scheme, with a high level of industry support, is likely to achieve the same benefits as a mandatory labelling scheme. It could also be implemented more quickly and at less cost than a mandatory approach.</p> <p>Taking a voluntary approach to recycling labelling also does not prevent the government from moving to a mandatory approach later if needed.</p>





7. Support tools and other measures are required to support the uptake of recycling labelling

International experience shows that a recycling label by itself will not drive uptake. Additional tools and measures are required.

The government could look to underpin a voluntary approach to recycling labelling with a joint government-industry agreement.



8. COVID-19 presents both a challenge and an opportunity for recycling labelling

The impacts of COVID-19 continue to be felt both in New Zealand and globally. International recycling markets have been distressed, with restrictions on international exports and low prices for some recyclable commodities. A reduction in economic activity has also affected businesses, and has made them wary of any additional costs.

However, COVID-19 also creates an opportunity to rethink 'business-as-usual' for New Zealand, including its approach to waste. Environmental concerns will still be important to consumers, and a more circular economy could form part of a strong economic response in the post-COVID-19 period.

Recommendations

We have developed a range of recommendations that may help to take forward recycling labelling as a policy priority for the Ministry for the Environment (the Ministry).

Our recommendations are summarised below and covered in more detail in the body of our report.



1. Proceed with recycling labelling as part of the Ministry's work priorities

Recycling labelling is a widely supported solution to an acknowledged problem. This agreement on both the problem and the solution provides the Ministry with a strong opportunity to advance recycling labelling as part of its circular economy work programme.

Recycling labelling can also form part of a wider package of waste initiatives.



2. Discuss with PREP Design Ltd options and costs for using the PREP tool within New Zealand

As noted above, the accuracy and coverage of the PREP tool means that it should underpin any New Zealand recycling label.

Further discussions are needed directly with PREP Design Ltd to discuss how to increase access to the PREP tool in New Zealand, either as part of the ARL or separate from it. These discussions should also include licensing agreements and costs.





3. Explore further options to increase the use of the ARL within New Zealand

The ARL is highly regarded internationally and is supported by significant industry groups within New Zealand. It has been designed to reflect the New Zealand context, and already features on supermarket shelves.

Using the ARL as the basis for a future recycling label will allow faster uptake, at potentially lower cost. Consistency between labelling approaches in Australia and New Zealand are also important.

Increasing the ARL in New Zealand does not necessarily mean simply importing the Australian model. There are a range of options to consider, and further conversations are needed with APCO and stakeholders to determine the most suitable option for New Zealand.



4. Proceed with a national approach to recycling labelling on a voluntary basis initially

A voluntary approach could allow work on recycling labelling to proceed quickly and at lower cost to the government than a mandatory approach, and without the need for regulations.

Proceeding on a voluntary basis could also support a collaborative model with the industry to co-design a labelling approach that maximises uptake.

To be most effective a voluntary approach requires the credible threat of mandatory regulation. Taking a

voluntary approach allows the government time to work through the challenges of mandatory regulation, while at the same time learning from the voluntary experience.

A voluntary approach to labelling could also be aligned with ongoing work on potential packaging standards for beverage containers as part of a container return scheme (CRS). These opportunities for alignment should be explored further as part of future work on recycling labelling.



5. Initiate a joint government, industry and sector technical advisory group to support the development of a labelling approach

Initiating a technical advisory group for recycling labelling, including manufacturers, industry bodies, retailers and NGOs could provide these key stakeholders with the opportunity to collaborate with government on a recycling labelling approach.

This approach may help find or build champions within the sector to support labelling. The more invested in the development of New Zealand approach to recycling labelling the sector feels, the more they are likely to support and potentially co-fund its implementation.

A similar co-design approach with industry has been trialled in the development of CRS, and the lessons from this process could be used to inform a collaborative approach to recycling labelling.





6. Develop a package of tools and measures to support uptake

Tools and measures are required to support a labelling scheme and to drive its uptake by manufacturers, retailers, and consumers.

These tools could include:

- a regular process for making user-identified changes to labelling
- a communication and awareness campaign for consumers to encourage them to seek out and use a recycling label that is aligned with other waste initiatives
- information for producers and manufacturers on how to use the recycling labelling (such as educational workshops)
- resources to help councils and retailers understand how to support the use of recycling labelling in their communities and in their supply chain
- financial support for small and medium enterprises that might otherwise struggle to afford a recycling label.



7. Carry out consultation to test views more widely on labelling options and support mechanisms

Wider engagement with stakeholders, either as part of a technical advisory group or separately, on design details of recycling labelling is also recommended.

This could be used to test specific design options and the proposed implementation of a recycling label (including support tools) once the fundamental policy development has occurred.



8. Look at mandating the use of the Plastic Identification Codes

While not the recommended option for a consumer-facing label, mandating the use of the Plastic Identification (ID) Codes could support effective sorting and processing of plastics for recycling, particularly for manually operated Material Recovery Facilities, and so increase resource recovery.



INTRODUCTION

What we were asked to do

Consumers rely on good information in order to make decisions around recycling. However, unlike many countries, New Zealand does not have national approach on how to categorise or label recyclable material.

This means it can be unclear for consumers whether a product can be recycled. This can result in:

- recyclable material being diverted to landfill
- non-recyclable material contaminating recyclable material and preventing it being recycled
- consumers not being able to make informed purchasing decisions that take account of whether products and packaging are recyclable.

While there is some existing information available to consumers, such as the Plastic ID Codes this existing information was not designed as a means of informing consumers about recycling.

This problem is exacerbated by an inconsistent approach across regions to the materials that are accepted in the kerbside recycling system.

The Ministry has asked MartinJenkins to develop recommendations, with supporting impact analysis, to help the Ministry decide whether to adopt a national labelling standard for packaging to indicate recyclability.

This work complements several of the recommendations in the 'Rethinking Plastics' report prepared by the Prime Minister's Chief Science Advisor, particularly recommendation 2c: to "[i]ncentivise labelling of plastic type by manufacturers".

Structure of this Report

This report has the following sections:

1. Overview of domestic recycling in New Zealand
2. Defining the problem
3. International comparisons
4. Objectives and options for a national labelling approach
5. Assessing the different labelling options
6. Recommendations

Appendix 1: Initial impact analysis

Appendix 2: Implications of COVID-19 for recycling labelling

Appendix 3: Labelling case studies



Our approach to this project

Our review and assessment of recycling labelling options for New Zealand included:

- a desktop review of background documents
- an international comparison of different approaches to recycling labelling
- interviews with key stakeholders
- an assessment and analysis of options

Interviews

The MartinJenkins team conducted semi-structured one-hour interviews with the following key stakeholders:

- Brooke Donnelly and Lilly Barnett, Australian Packaging Covenant Organisation (APCO)
- Christian Abbound, Margaret Rhodes and Karunia Adhiputra, Nestlé
- James Muir, Crunch & Flourish
- Janine Brisdon and Sarah Pritchard, WasteMINZ
- Lyn Mayes, Mad World Ltd
- Margaret Bates, OPRL
- Niamh Perren, Thumbs Up New Zealand

- Nick Allison and Linden Eagles, GS1
- Rachel Barker, Plastics New Zealand
- Phillippa Hawthorne and Rebecca Doonan, Ministry for Primary Industry
- Rob Langford, Packaging Forum
- Sharon Humphreys, Packaging New Zealand

We thank all the interview participants for their time and insights.



1. OVERVIEW OF DOMESTIC RECYCLING IN NEW ZEALAND

New Zealand has a variable approach to domestic recycling

Recycled material in New Zealand comes from both commercial and domestic sources. The recycling commodities sector manages around 1.295 million tonnes of material annually, of which roughly a quarter (343,500 tonnes) is collected from households.¹

Domestic recycling in New Zealand differs by product material and region. Around 97% of the country's population has access to kerbside collection or is able to drop off recycling at a transfer station or similar site. Most household recycling comes from kerbside collection.

Responsibility for collecting, managing, and minimising waste rests with New Zealand's 67 territorial authorities under the Waste Minimisation Act 2008 and the Local Government Act 2002.

The approach that each territorial authority takes to waste collection and recycling reflects the needs of its particular community, its waste infrastructure (including its material recovery facilities), and its contractual arrangements.

The quantity and quality of recycled material can vary according to different kerbside collection schemes. There is also some variation in what materials are collected in different regions: the main variation is in which types of plastics are accepted, with other variations including whether pizza boxes, lids, tetra paks, aerosol cans, and soft plastics are accepted.

The material that typically makes up domestic recycling in New Zealand includes:

- plastics
- mixed paper
- glass
- metals (aluminium and steel cans).

¹ Euonmia Research & Consulting Ltd (NZ), *National Resource Recovery Project – Situational Analysis Report*, (20 September 2018)



Recycling – by material type

Plastics`

Plastic products and packaging make up around 8% of kerbside recycling. Food, beverage, and bathroom products are the most common form of plastic material found in kerbside collections.

When plastics are recycled, they are collected and then sorted by plastic type, for sale on international commodity markets.





The more easily a particular plastic type can be recycled into another product, the greater the demand for it.

Types of plastic



Many plastic products are labelled with a Plastic ID Code that indicates the type of plastic they are made from. Commonly known as a 'resin code', it reflects the chemical nature of the product.


The Plastic ID Code is a number inside three arrows that form a triangle (a 'chasing arrows' symbol). There are seven categories as shown in the table below.

Figure 1. Plastic Identification Codes

Symbol	Type of plastic	Properties	Common uses
	PET or PETE Polyethylene Terephthalate	Clear, tough, solvent resistant, barrier to gas and moisture, softens at 70°C	Soft drink and water bottles, salad domes, biscuit trays, salad dressing and peanut butter containers, fleece clothing and geotextiles.
	HDPE High Density Polyethylene	Hard to semi-flexible, resistant to chemicals and moisture, waxy surface, opaque, softens at 135°C, easily coloured, processed and formed	Crinkly shopping bags, freezer bags, milk bottles, ice cream containers, juice bottles, shampoo, chemical and detergent bottles, buckets, rigid agricultural pipe, milk crates.
	PVC or V Unplasticised Polyvinyl Chloride PVC-U Plasticised Polyvinyl Chloride PVC-P	PVC-U: Strong, tough, can be clear, can be solvent welded, softens at 75°C PVC-P: Flexible, clear, elastic, can be solvent welded	PVC-U: cosmetic containers, electrical conduit, plumbing pipes and fittings, blister packs, wall cladding, roof sheeting, bottles. PVC-P: Garden hose, shoe soles, cable sheathing, blood bags and tubing, watch straps, commercial cling wrap.
	LDPE Low Density Polyethylene LLDPE Linear Low Density Polyethylene	Soft, flexible, waxy surface, translucent, softens at 80°C, scratches easily	Cling wrap, rubbish bags, squeeze bottles, black irrigation tube, black mulch film, rubbish bins, shrink wrap.



Symbol	Type of plastic	Properties	Common uses
	PP Polypropylene	Hard but still flexible, waxy surface, softens at 145°C, translucent, withstands solvents, versatile	Dip pottles and ice cream tubs, potato chip bags, straws, microwave dishes, kettles, garden furniture, lunch boxes, blue packing tape, automotive parts.
	PS Polystyrene EPS Expanded Polystyrene	PS: Clear, glassy, rigid, brittle, opaque, semi-tough, softens at 95°C, affected by fats and solvents EPS: Foamed, lightweight, energy absorbing, heat insulating	PS: CD cases, plastic cutlery, imitation 'crystal glassware', low-cost brittle toys, video cases, water station cups, safety helmets. EPS: Foamed polystyrene hot drink cups, hamburger takeaway clamshells, foamed meat trays, protective packaging for fragile items, insulation, insulation panels.

Symbol	Type of plastic	Properties	Common uses
	Other Letters below indicate the ISO code for the plastic type including SAN (styrene, acrylonitrile), ABS (Acrylonitrile butadiene styrene), PC (polycarbonate), Nylon, degradable plastic, e.g. PLA	Includes all other resins, multi-materials (e.g. laminates) and degradable plastics. Properties dependent on plastic or combination of plastics.	Packaging, car parts, appliance parts, computers, electronics, water cooler bottles, medical devices.

Plastic recycling

The easiest plastics to recycle are clear PET (type 1) and opaque or natural/uncoloured HDPE (type 2).² Generally, there is a reasonable market for these materials both in New Zealand and offshore, including coloured type 2 plastics, as they are easily turned into useful products. Type 1 and 2 plastics can be recycled up to seven times.

Types 3, 6 and 7 plastics are the most difficult to recycle, with type 7 being the hardest of all. This is because a type 7 label often indicates that different plastic types are mixed together, or that plastic is mixed with other materials. For example, till receipts that use thermal imaging instead of ink are made of a mixture of plastic and paper, meaning they cannot be recycled as either plastic or paper, and must go into landfill.

² Royal Society, *Plastics in the Environment*, (July 2019)



Currently, these plastics are difficult to recycle so have limited market value. New Zealand's distance from international markets and our relatively small, dispersed population makes it harder to collect plastic of a single type in sufficient quantities to be sold economically to international markets. The international recycling markets for PVC and polystyrene are particularly limited.

Higher-value plastic (such as type 2, HDPE) is added to batches of those other types to achieve sales and recover the cost of collection.

Type 4 and 5 plastics can be recycled in some parts of New Zealand. There is likely more global demand for type 5 plastics than type 4.

In total, around 90% of domestically collected recyclable plastic material is exported.³

Plastic ID Codes as proxy for recycling labels

The Plastic ID Codes are generally used as a proxy by territorial authorities in New Zealand to indicate for their communities the recyclability of different plastic products. Most territorial authorities advise their communities to recycle plastics based on the Plastic ID Code numbers.

The Plastic ID Codes are also helpful for the recycling processing industry, making the sorting of plastics easier.

Although including Plastic ID Codes on products is encouraged as good industry practice, it is not a requirement.

Mixed paper and cardboard

Together mixed paper and recycled cardboard make up around 51% of average total domestic recycling.

Mixed paper (38%) includes general fibre material of various grades and inks. It can include paper and cardboard packaging, as well as advertising material and magazines.

Recycled cardboard (13%) is mostly made up of corrugated cardboard, cardboard boxes, or paper of a higher grade

Approximately 60% of paper and cardboard is exported for recycling. Mixed paper tends to have the lowest market value, while cardboard is more highly sought after.

Mixed paper and cardboard are collected in most of our regions, but there is still some variation. For example, while most territorial authorities accept pizza boxes free of food, some only accept them in organics collection, and some do not accept them at all.

Mixed paper does not generally feature any specific recycling labelling, although it may include an encouragement to recycle, or the 'chasing arrows' symbol.

³ Euonmia Research & Consulting Ltd (NZ), *National Resource Recovery Project – Situational Analysis Report*, (20 September 2018)



Glass

Glass makes up around 38% of average total domestic recycling collection. In some regions glass is colour sorted at the kerbside, while in others it is collected together and sorted later.

Domestic glass typically includes food containers (such as glass jars) and beverage containers (such as wine and beer bottles). Other forms of glass, such as glassware, window glass and mirrors cannot be recycled through kerbside collection.

Glass recycling in New Zealand is purely domestic. Recycled glass is often turned into new glasses and bottles. Otherwise it is generally crushed and used as an input into roading material, or for other landscaping purposes.

However, the Glass Packaging Forum estimates that 27% of recyclable glass is being sent to landfill. Part of the challenge of glass recycling is that the cost of shipping it internally for processing can be prohibitive, particularly in the lower South Island.

Although glass collection and recycling have a long history in New Zealand, there is no specific recycling labelling for glass products beyond a generic statement encouraging people to recycle.

Metals

Metals make up a comparatively small and quite discrete component of domestic recycling collection. It predominantly includes aluminium cans (such as beverage containers), which makes up approximately 1% of domestic recycling, and steels (for example, tins for tinned food), which make up 2%.

While most territorial authorities collect aluminium and steel cans, there is considerable variation in the collection of other metal products, including aluminium trays and foils and aerosol cans.

Most metals are exported for recycling.

Again, there is no specific metal recycling labelling.

A range of factors can affect recyclability

As well as the material that a product is made from, a number of other factors can also affect its recyclability.

Contamination

This can include both:

- contamination from waste residue (for example, food waste stuck to pizza boxes and other containers)
- contamination from chemicals or other materials that compromises the value of the recycled material (for example, lids and labels attached to easily recyclable PET plastic bottles compromise the purity of the plastic).



Amount and type of use

Recyclability can also be affected by how much use an item had before it was recycled. For example, plastic bottles in good condition are most easily recycled into new plastic bottles.

Other times recyclable material from products must be 'downcycled' into a material of lower quality of because of use. Recyclable material in the construction sector is often inseparable from other products, such as steel scrap coated in tin.

Human error and lack of understanding

As well as ordinary human error when sorting recycling into different streams, recyclability can also be affected by a lack of understanding about what materials can and cannot be recycled – which in turn can be caused by poor labelling.

Design issues

These include, for example:

- poor labelling, which makes it difficult to know whether a product can be recycled
- plastic sleeves that are hard to remove from easily recyclable PET bottles – these increase the risk of PET recycling being contaminated with other plastics
- colouring of plastic containers – these can only be recycled into grey or black items, thus limiting demand compared with more versatile clear

recyclables (coloured plastic is likely to be downcycled into bins and pallets that cannot be recycled again.)



2. DEFINING THE PROBLEM

Introduction

Consumers are a key part of New Zealand's recycling system, particularly domestic recycling. The system relies on consumers making correct decisions about whether and how to recycle items, in order to maximise resource recovery.

However, our recycling system faces challenges:

- recyclable items are being sent to landfill unnecessarily
- non-recyclable products are contaminating material that could otherwise be recycled
- some items that are otherwise recyclable are not able to be recycled because of how households are preparing them for recycling
- consumers lack good information for making decisions that involve the recyclability of products.

Consumers rely on good information to make decisions around recycling – both when they first buy an item, and later when they dispose of it and prepare it for recycling or the waste stream. Currently there is no consistent or clear basis for consumers to make informed decisions about recycling or to compare products for their recyclability.

Instead, households generally rely on information from territorial authorities about which items can or cannot be collected.

While some recyclable products do not have a recycling label at all (for example, fibre and glass), other products contain information that is not designed as a measure to inform consumers about recycling (for example the Plastic Identification Codes on plastic items).

These problems are discussed in more detail below.

Recycling and the circular economy

A linear economy involves taking resources, making something out of them, using the product, and then discarding it as waste. This is shown in the figure below. Many of our products are made, used, and discarded in a way that reflects this model.

Figure 2: The linear economy

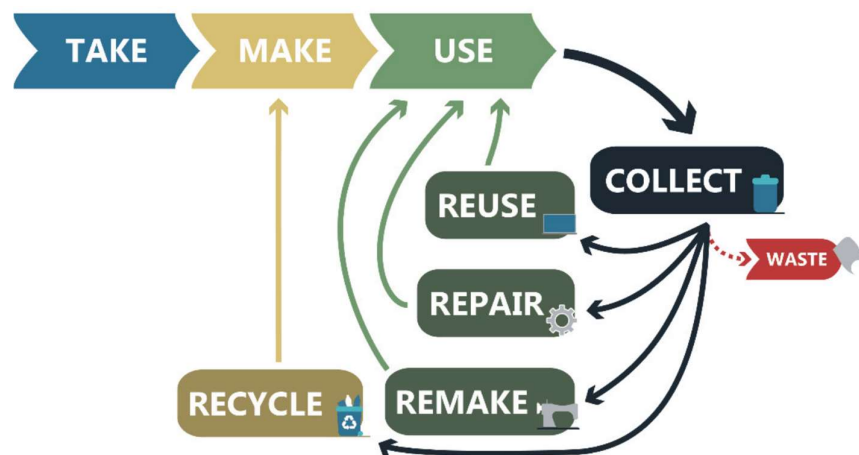


Source: Prime Minister's Chief Science Adviser, Rethinking Plastics in Aotearoa New Zealand



By contrast, the New Zealand government is aiming to “transition towards a sustainable economy taking a circular economy approach”.⁴ In a circular economy (see Figure 2), after goods have been used they are returned to the system through reuse, repair, remaking or recycling, rather than being sent to waste.

Figure 3: The circular economy



Source: Prime Minister's Chief Science Adviser, Rethinking Plastics in Aotearoa New Zealand

Unnecessarily sending recyclable material to landfill undermines the objective of the circular economy, which is to maximise resource recovery.

In addition, limited labelling information about whether a product is recyclable, or is made of recycled material, makes it harder for consumers to make informed decisions about what they buy.

This includes preferential purchasing of recyclable products over non-recyclable products.

Recyclables are being sent to landfill unnecessarily

There is limited national level information on the number of recyclables being unnecessarily sent to landfill, although the volume is potentially very significant.⁵

According to research based on an audit of 867 households, WasteMINZ estimates that New Zealand households use an average of 941 plastic containers or bottles per year. In addition, 41% of these items could potentially be recycled, but instead end up in landfill.⁶

⁴ <https://www.beehive.govt.nz/release/no-ceiling-recycling-opportunity>

⁵ Research was commissioned on the number of beverage containers (e.g. glass, plastic, aluminium, liquid paper board), sold in New Zealand annually, to inform the design for a potential Container Return Scheme (CRS). The research and the CRS design itself have not been finalised at this time.

⁶ WasteMINZ, *The Truth about Plastic Recycling in Aotearoa New Zealand in 2020*, (WasteMINZ TAO Forum 2020)



The Glass Packaging Forum estimated that around 60,000 tonnes of glass containers ended up in landfill in 2016. This equates to 27% of all glass containers that otherwise could have potentially been recycled.

Warren Snow suggested the amount of glass containers that are not recycled could be much higher, and potentially over 50%.⁷

Recyclables going to landfill puts unnecessary pressure of waste infrastructure

Landfills in New Zealand are filling up and/or expanding to allow more capacity. This makes it even more important that recyclables are diverted from landfill wherever possible.

Waste accumulates in landfills much faster than it can decompose, degrade, or otherwise break down. This is particularly true for most plastics, which can remain largely unchanged for centuries. Further, in the breakdown process waste can leach chemicals that need to be carefully managed. Sending recyclables, especially plastics, to recycling facilities is vital to help alleviate pressure on New Zealand's landfills.

Wellington City Council is aiming to expand the city's Southern Landfill. The existing disposal area is expected to reach capacity as early as 2023. The proposed expansion is being progressed with some reluctance, after other

options were investigated but rejected. Ultimately, the city needs to generate less waste. Resource consents will be applied for in 2020.

Similar scenarios are likely to arise around New Zealand if the amount of waste Kiwis produce is not reduced. In recent years it has been increasing with New Zealand one of the highest per capita generators of waste.⁸

In March 2019, a storm hit the West Coast and washed out the closed Fox River landfill near Fox Glacier. Huge amounts of pollution leaked into the pristine surrounding natural environment. Volunteers and specialist teams began clean-up efforts immediately, led by the local council. After several weeks, the Department of Conservation took over the clean-up, working with the Defence Force and hundreds of volunteers. Recovery faced delays due to resourcing and funding issues. An estimated 135,000 kgs of rubbish was retrieved over 21 kms of river and 64 kms of coastline. It filled over 11,000 rubbish bags.⁹

In New Zealand 112 landfills are at risk from sea level rise of half a metre, as expected under some climate change scenarios.¹⁰ Two of these landfills are still active. Dozens are at risk from sea level rise of only 25 cms.

⁷ <https://www.scoop.co.nz/stories/PO1707/S00173/glass-recycling-scheme-fails-to-deliver.htm>

⁸ <https://www.mfe.govt.nz/sites/default/files/media/Consultations/reducing-waste-a-more-effective-landfill-levy-summary-document.pdf>

⁹ Prime Minister's Chief Science Adviser, *Rethinking Plastics in Aotearoa New Zealand*, (December 2019)

¹⁰ <https://www.rnz.co.nz/news/national/386757/we-need-to-make-plans-auckland-landfills-at-risk-from-sea-level-rise>



Climate change impacts of recycling being sent to landfill

It is generally accepted that products contribute to climate change through greenhouse gas (GHG) emissions at every stage of their life cycle, including at the end-of-life stage.

For example, as plastic degrades it emits carbon dioxide and methane – two prominent greenhouse gases. Hence, some plastics will contribute to climate change simply by degrading in landfill.

However, many plastic items will not degrade in landfill conditions, except over a very long time. With this in mind, the Centre for International Environmental Law has argued that:

“...emissions relating to landfilling plastic packaging result primarily from the fossil fuel use associated with the sorting and handling of the wastes prior to landfilling and the transportation of the waste from the collection point to the landfill. This does not exclude the possibility of greenhouse gas emissions from fires in the landfills, however, as an average of 8,300 fires are reported from landfills in the US alone each year”.¹¹

With the largely linear economic systems we have currently, landfilling plastic also creates demand for new virgin plastic, which entails emissions from upstream petroleum and plastic manufacturing processes.

Similarly, according to the Glass Packaging Forum, every tonne of glass recycled saves approximately 670 kgs of CO₂ compared to making glass from virgin materials.¹²

Increased resource recovery rates can help avoid these emissions and reduce the pressure on landfills.

Non-recyclable products can contaminate recycling

Contamination causes problems for the recycling process. This includes recyclable items that have non-recyclable components, which are hard to separate.¹³

It also includes cross-contamination, whereby two types of material that are recyclable when separate become mixed – for example, standard takeaway coffee cups have a paper body and also plastic lining for waterproofing.

Once recycling is collected it is taken to material recovery facilities (MRFs). MRFs generally aim to make money by selling bundles of recycled goods separated into type. Some low value plastics are often left unseparated as the cost of sorting is higher than the market value of the materials, even when separated.

To this end, they attempt to minimise contamination using automated or manual processes. In practice, it is difficult to do this cost-effectively. For

¹¹ <https://www.ciel.org/wp-content/uploads/2019/05/Plastic-and-Climate-FINAL-2019.pdf>.

¹² <https://www.glassforum.org.nz/the-glass-story/>

¹³ Royal Society of New Zealand – Te Āparangi, *Plastics in the Environment*, (2019)



example, to sort material accurately an MRF may need to employ more staff, slow sort lines down, and/or invest in new equipment. All of these options come at a cost. Removing and disposing of contaminants also comes at a cost.¹⁴

MRFs will try to incur as little cost as possible to meet the minimum standards for which a buyer will pay for a batch of material. Recycled material competes with virgin inputs (for example, recycled plastic competes with virgin resin) to be turned into new products.

If the cost of removing or minimising contamination is too high, recyclable material will be landfilled as the most economically viable option.¹⁵ This is particularly true at times when virgin material is cheap – for example, when oil prices are low.

The costs of contamination can be high. The Glass Packaging Forum estimates that co-mingling of collections reduces glass recycling rates by 40 to 45%. Glass co-mingling also contaminates other materials, such as fibre.¹⁶

In January 2018, the *Herald* reported that every year Aucklanders send 18,000 tonnes of ‘incorrect’ recycling to landfill – the equivalent of 13% of all recycling collected across the city.¹⁷

Better labelling can help reduce contamination and cross-contamination, resulting in more collected recyclables being recycled rather than landfilled.

Recent research from Sunshine Yates Consulting based on a rubbish and recycling audit of New Zealand households estimates that out the 235 kg of material that a household recycles in a year, 14.9% (or 35 kg) is contaminated. Soft plastics, non-recyclable fibre, Tetra Pak drink containers and paper cups were the most common items contaminating recycling.¹⁸

Incorrect preparation can also affect recycling

Recycling can also be contaminated by waste residue, such as food or other organic matter.

Recycling resource recovery is maximised when recyclables materials are prepared appropriately by washing it, removing non-recyclable elements (such as caps and labels), and placing it in the correct recycling stream.

¹⁴ <https://www.mfe.govt.nz/sites/default/files/media/Waste/national-resource-recovery-project-redacted.pdf>

¹⁵ It is important to note that recycled material from New Zealand faces other cost pressures when competing against virgin material. For example, New Zealand exports recycled material so there is a cost to shipping that material to a country where it can be processed. This cost includes freight, but

also port costs, costs involved with being admitted to a market and compliant with any regulations, and the cost of uncertainties that can arise with attempting to gain entry.

¹⁶ <https://www.glassforum.org.nz/glass-packaging-forum-welcomes-governments-decisive-action-to-reduce-waste-to-landfill/>

¹⁷ https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11957595

¹⁸ Sunshine Yates Consulting Ltd, *Rethinking Rubbish and Recycling*, (May 2020)



Consumers are not able to make informed recycling decisions

Part of the reason recyclable items are entering the waste stream is that consumers lack good information.

A research survey from Planet Ark and Nestlé indicates that the vast majority of New Zealanders (97%) want to recycle, and that most (76%) are worried about the effect that waste has on the environment. However, 94% of New Zealanders are still placing some non-recyclable items in their recycling.¹⁹

There are several reasons for this consumer confusion – these are set out below.

Not all products are labelled

As discussed in the previous section, some plastic items are labelled with a Plastic Identification Code (from 1 to 7), while others are not. This means some recyclable plastic items are ending up in landfill.

The WasteMINZ Territorial Authorities' Officers Forum audited domestic kerbside rubbish and recycling at 867 households in eight locations across New Zealand, gathering data on recyclables being sent to landfill and placed

in recycling.²⁰ The study aimed to 'reduce contamination in household kerbside recycling and to promote resource reuse and reduction messages'.²¹

The study found that the average New Zealand household discards 941 plastic containers or bottles each year, which equates to 1.76 billion for the whole country. Of those 1.76 billion plastic bottles and containers, an estimated 182 million (10.3%) do not have a Plastic Identification Code on them.²²

However, in order for the Plastic Identification Codes to be effective, consumers also need to understand what they mean.

Current labelling can be confusing

The WasteMINZ TAO Forum conducted research in 2018 on the public's understanding of recyclability labelling. This research included asking respondents what the following symbol (Figure 3) indicated on packaging.

¹⁹ <https://www.nestle.co.nz/media/newsandfeatures/new-zealanders-keen-but-overconfident-and-confused-about-recycling>

²⁰ The eight locations were Whangārei, Auckland, Lower Hutt, Dunedin, Clutha, Gore, Southland and Invercargill.

²¹ WasteMINZ Territorial Authorities' Officers Forum, *The Truth about Plastic Recycling in Aotearoa New Zealand in 2020*, (January 2020)

²² WasteMINZ Territorial Authorities' Officers Forum, *The Truth about Plastic Recycling in Aotearoa New Zealand in 2020*, (January 2020)



Figure 4: Label for type 1 plastic (PET) as shown to survey respondents



Out of 1,005 respondents, only 40% knew that this symbol referred to the type of plastic from which the item was made. Of the incorrect answers:

- 39% answered that it referred to whether an item was recyclable
- 25% did not know what the symbol meant
- 17% thought it meant the packaged item was made from recycled materials.

Respondents were also shown the international recycling symbol.

Figure 5: International recycling symbol



Only 58% of respondents knew that this symbol indicated whether an item was recyclable. Of the incorrect answers, 31% believed that the symbol

indicated that an item was made from recycled material and 14% said that they did not know.

These figures suggest that the current labelling is confusing and that there is an opportunity here in New Zealand to make changes to better achieve its circular economy objectives.

There are also a range of other symbols that can be included on packaging in New Zealand including:



International Recycling Symbol (Mobius Loop) – This indicates that a product has recycled content and/or can be recycled. Its use is governed by ISO 14021.



Compostable – This seedling logo is used to identify certified compostable packaging. The Australian Bioplastics Association (ABA) has licensed the use of the logo in Australia and New Zealand from the European Bioplastics Association.



Biodegradable – This means an item can be broken down by microbes or other living organisms. The time required can vary, depending on the particular microbial environment.





Green Dot – This is a trademark displayed on packaging in many European countries to signify that the manufacturer has joined a compliance organisation established under the European Packaging & Packaging Waste Directive, and has paid a licence fee to use the green dot. It is not a recycling symbol.



Australasian Recycling Label (ARL) – This is a voluntary label that identifies the recyclability of packaging components. Some items that are supplied to stores in both Australia and New Zealand (such as supermarkets) may include this information.²³

This variety of symbols and lack of standardisation can also exacerbate consumer confusion.

Consumers cannot make informed purchasing decisions

Confusing and unprescribed information about the recyclability of a product also means that consumers struggle to make informed purchasing decisions.

Many consumers are willing to base their purchasing decisions on environmental factors. In the Colmar Brunton Better Futures 2020 survey,

²³ Both the Green Dot and the ARL are discussed in more detail later in this report.

²⁴ Colmar Brunton, *Better Futures – Presentation*, (2020)

48% of respondents reported having deliberately switched to a more sustainable brand or service provider.²⁴ This report also identified that 69% of adult respondents and 61% of youth respondents are highly concerned about the accumulation of plastics in the environment.

These are similar to findings in the UK that indicate that packing information is the second most important source of information about recycling to households after a council leaflet.²⁵

However, New Zealand's confusing and inconsistent regime for recycling labelling may mean that consumers who would like to preferentially buy items they know can be recycled, or avoid buying something they know cannot be recycled, are unable to do so.

Inconsistent approaches to recycling can exacerbate these problems

The information problem for consumers is also exacerbated by the inconsistent approach to recycling itself.

For example, in the case of plastic recycling:

- all 67 territorial authorities in New Zealand accept type 1 plastic (with one council accepting bottles only)

²⁵ WRAP, *Recycling Tracking Survey 2018 Behaviours, attitudes and awareness around recycling – key findings*, (2018)



- all 67 territorial authorities except one accept type 2 plastic (with one council accepting bottles only)
- 44 territorial authorities accept type 5 plastic
- 42 accept type 3 and 4 plastic
- 36 accept type 6 and 7 plastics.

Further, not all kerbside recycling programmes take glass, and of those that do, some collect glass placed in separate bins and some use one bin for all recyclables. Practices also diverge across the country for particular items such as empty aerosol cans and metal jar lids.²⁶ Paper and cardboard are usually collected.

This problem is also not restricted to New Zealand. In the UK the main cause of contamination in recycling relates to households presuming that the labelling and guidance that appears on their products applies to their local collection (recognised by 46% of households).²⁷

This is relevant because if different items are recyclable in different parts of New Zealand, it is harder to design a nationwide labelling scheme.

The inconsistency in kerbside collection is a recognised barrier to better recycling in New Zealand. WasteMINZ's Territorial Authority Forum is currently investigating opportunities to standardise what is collected for recycling at kerbside. The implications are covered further in sections 5 and 6.

²⁶ <https://www.consumer.org.nz/articles/what-you-can-and-can-t-recycle>

²⁷ WRAP, *Recycling Tracking Survey 2018 Behaviours, attitudes and awareness around recycling – key findings*, (2018)



3. INTERNATIONAL COMPARISONS

Introduction

A range of other countries have developed or are developing more consistent approaches to recycling labelling. Their experiences are a useful starting point for exploring what labelling options New Zealand might develop.

Another form of product labelling is that required for a beverage or container return scheme. These schemes commonly instruct consumers to return beverage containers to their place of purchase, a collection depot or other drop-off point.

There is a close relationship between the objectives of recycling labelling and those of a CRS (for example, removing products from the waste stream; instructing consumers what to do with a product at the end of its life). Due to this alignment, we have noted which countries have a CRS as part of this overview of international experiences of recycling labelling.

Australia

The Australasian Recycling Label (ARL) was launched in September 2018 to help make recycling easier for consumers and to help producers design recyclable packaging. It was created by the Australian Packaging Covenant Organisation (APCO),²⁸ Planet Ark²⁹ and Packaging Recyclability Evaluation Portal (PREP Design).³⁰

The scheme was designed based on the experience of the On-Pack Recycling Label (OPRL – UK) and How 2 Recycle (USA), both discussed below in this section.

The ARL is a voluntary scheme. Manufacturers, brand owners and packaging producers join APCO and then have free access to the ARL. When it began, the ARL had 28 members; in 2020 this has now grown to over 230.

²⁸ APCO is a non-profit organisation working in partnership with government and industry to reduce the environmental impact of packaging in Australian communities.

²⁹ Planet Ark is an Australian non-profit, describes itself as an “environmental behaviour change organisations with a focus on working collaboratively and positively”:

<https://planetark.org/about/index.cfm> . Planet Ark owns the trademark for the ARL in Australia and New Zealand.

³⁰ PREP was originally started by the APCO to forward its objectives of reducing impact of packaging by industry: <https://prep.org.au/main/content/about> .

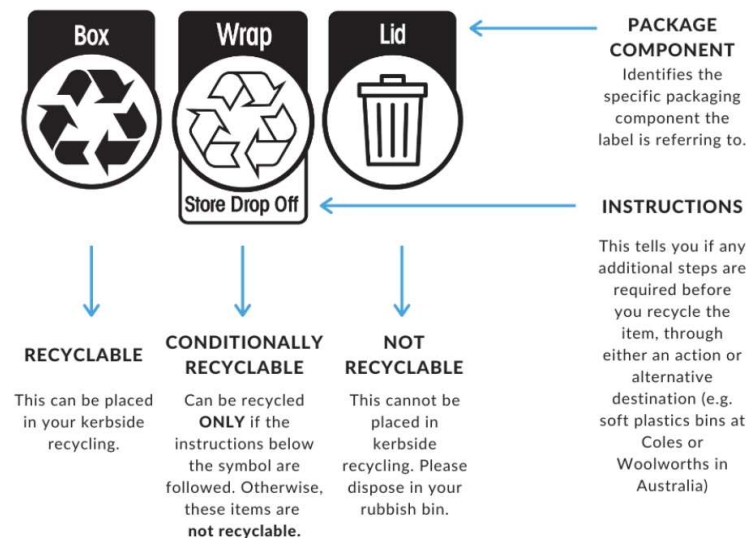


The membership costs vary, and depend on the member's annual turnover. In May 2019, APCO received AU\$1.1 million from the Australian federal government to support consumer education for the ARL.³¹

The ARL applies to all packaging. The label informs consumers about the recyclability of packaging in the following ways:

- it indicates the different packaging components of the particular product
- It indicates the recyclability of these different components, and
- it indicates, if applicable, whether additional steps are needed to recycle a specific part of the packaging (such as checking locally whether it is accepted, or returning it to the store).

Figure 6: Example of the ARL



³¹ Australian Packaging Covenant Organisation, 2018-19 Annual Report, (2020)



The ARL is also accompanied by the online PREP tool, which is available for all business members of APCO.

The PREP tool is designed to support packaging manufacturers, designers, and brand owners. It can help them assess whether intended packaging would be recyclable in different communities in Australia and New Zealand and provides recommendations to improve the recyclability of packaging.

PREP pulls relevant information from all local authorities and available recycling facilities in Australia and New Zealand.

The PREP tool is a key component of the ARL as the information it generates forms the basis of the on-pack label.

Australia does not have a nationwide container deposit scheme, but a majority of Australian states and territories (Northern Territory, South Australia, Queensland, NSW and ACT) have implemented their own container deposit scheme. Of the others, Tasmania is planning one for 2022, Western Australia's will start on 2 June 2020, and Victoria has committed to developing a container return scheme by 2022-23.

There have not yet been any formal evaluations of the ARL (one is planned for 2021–22).

France

France has a mandatory 'Triman' label that is used for almost all recyclable products, including household packaging for food and non-food products.³² The only exceptions are glass packaging, electronics, batteries and accumulators, and some other specific forms of waste that have separate obligatory EU-wide markings and regulation.

The Triman scheme was deployed in stages over five years, being rolled out in full in 2015. It is administered by the Agency for Environment and Energy Management (ADEME). France has many Extended Producer Responsibility schemes for a variety of household waste, all of which used to have different product and packaging markings.

Triman was designed as universal signage to replace all previous markings. The aim was to reduce confusion among consumers and inform them clearly about the recyclability of products and packaging.

The Triman label tells consumers that the product and its packaging are collected separately in order to be recycled. The Triman human figure can be used alone or with a message (in word or pictogram form) specifying what should be separately collected and how.

³² ADEM, *User's Handbook TRIMAN: Unified recycling signage and marking system*, (2015)



Figure 7: Types of Triman labels



Responsibility for putting the Triman label on the product/package or online (on the manufacturer's website) lies with the producer or importer of the product. The obligation captures "any marketer of products that may be subject to recycling effectively in view of the technical and economic conditions at the time, subject to a system of Extended Producer Responsibility".^{33 34} However, there are no sanctions if the manufacturer or importer does not comply.

The Triman label is accompanied by a web tool for consumers that helps them sort and dispose of items. Consumers enter the type of object, and get information and instructions on: the best way to prepare the item for recycling or the waste stream; where the nearest collection point is; what happens after the item is disposed of; and ideas for how to minimise waste in the product's design.

A 2016 study commissioned by the regulator ADEME found very modest rates of label usage except for packaging: the usage rate for packaging was 24% (on packages) and 43% (online information).³⁵ One of the problems was that producers and importers have been allowed to put other labels (such as the Green Dot, or a crossed-out rubbish bin) on the packaging, not all of which indicate recyclability – these risk confusing the consumer.

An impact evaluation in 2019³⁶ also found that Triman is not used systematically and that many producers use other labels.³⁷ To avoid confusion, the use of all recycling labels other than Triman will be prohibited starting in 2021. The option of providing the information only online will also be removed, so that everything will instead have to be on the packaging.

³³ Decree Nr 2014-1577 of 23 December 2014 on the common signage for recyclable products which fall under a sorting instruction: <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000029958108&categorieLien=id>

³⁴ There is a legal framework on the waste reduction and recycling that is common for all members of the European Economic Area (EEA, all EU countries + Norway and Iceland). Within the EEA, most of EU single market legislation is applicable to Norway and Iceland. The main documents of this common framework are the Extended Producer Responsibility (EPR) agreement, EU Packaging and Packaging Waste Directive (PPWD) which introduces minimum requirements to recyclability of packaging. It is a part of EU Circular Economy Package that set legally-binding EU recycling targets for all packaging materials (glass, metal, plastics, and paper). Overall, Member States have to achieve a 75% packaging recycling target by 2030: https://ec.europa.eu/environment/waste/target_review.htm. They implement

it by passing various laws and regulations encouraging recycling within the industry (e.g. by introducing recycling quotas and recycling targets for various industry sectors and types of companies).

³⁵ Philgea et Moringa, *Enquête relative au déploiement de la signalétique de tri Triman sur les produits*, (2016)

³⁶ The document can be retrieved from: <https://www.senat.fr/leg/etudes-impact/pj118-660-ei/pj118-660-ei.html>

³⁷ The roadmap can be retrieved from: <https://www.ecologique-solidaire.gouv.fr/sites/default/files/FREC%20anglais.pdf>



Germany

While Germany does not have a uniform national plastics recycling labelling system, the Grüner Punkt (Green Dot) label is found on many products. The label was introduced in 1991 and belongs to a pioneer recycling company, Duales System Deutschland GmbH (DSD).

Recycling labelling in Germany is voluntary, and there are now several different labels on the market, with the Grüner Punkt the most recognisable one. The German Grüner Punkt is a founding member of the European Green Dot group,³⁸ whose members operate based on similar principles across the European Union.

The Grüner Punkt and most other labels in Germany are not recycling labels. They are not intended to inform the consumer about the recyclability of packaging, but rather to confirm that the particular company participates in a waste utilisation scheme.

These schemes do include recycling, but also other forms of waste use, like incineration to generate energy.

Figure 8: The Grüner Punkt symbol



In Germany, all companies that use or bring products to market with packaging must participate in and pay fees into a utilisation scheme.³⁹ Participation is enforced by requiring certain types of packaging to be certified as complying with waste utilisation standards.⁴⁰ Companies will be fined if they sell their products without that certification.

Companies are free to choose the company or scheme to certify their packaging and to obtain the certificate and label. Certification fees (which also include the licensing fees for the use of the label) depend on the types of materials used for packaging and on the amount of packaging the company introduces to the market yearly.

³⁸ International Green Dot and country presence: <https://www.gruener-punkt.de/en/packaging-licensing/sales-packaging/international.html> .

³⁹ Press release by the Federal Ministry for Environment: <https://www.bmu.de/meldung/das-bmu-klaert-auf-zum-thema-plastikrecycling/> .

⁴⁰ The Grüner Punkt offer: <https://www.gruener-punkt.de/de/verpackungslizenzierung/verkaufsverpackungen.html>



Based on the certification fees collected, each certifying company (Grüner Punkt or another) is obliged to collect the respective quantities of waste using yellow bins and bags. Special companies then sort the plastic waste into recyclable and otherwise reusable items.

Germany has had a well-regarded and mandatory container deposit scheme since 2003.⁴¹

Norway

Grøntpunkt Norge (Green Dot Norway) labelling of packaging is the equivalent of a national labelling scheme for Norway.⁴² The system has been in place since the mid-1990s and is part of the Green Dot group.

All manufacturers and importers who supply at least 1,000 kg of a packaging type per year to the market must become members of Grøntpunkt Norge. They have a statutory responsibility to recycle the packaging, as in France and Germany.

The use of labels on packaging is voluntary. Membership fees are based on how much packaging (by weight or by piece) a company introduces to the Norwegian market. There are different rates for the different types of materials.

There is a long-standing and highly efficient container deposit scheme in Norway.⁴³

United Kingdom

There is no single national recycling labelling scheme in the UK, although the On-Pack Recycling Label (OPRL) is the most commonly used, and applies to packaging in all sectors of economy.

The OPRL scheme was launched in 2009, and is administered by a non-for-profit company of the same name.⁴⁴ Technical support for the OPRL is provided by the Waste and Resources Action Programme (WRAP).

The OPRL is a voluntary membership-based scheme: manufacturers, brand owners or retailers need to join the scheme and pay a fee for the right to use the label. Membership fees are between £299 and £3,700 per year, with the fee based on the size of the company and how many products it puts on the market yearly. The OPRL currently features on over 400 brands in the UK.

Until 2020 the OPRL had three label types: 'Widely recycled', 'Check locally', and 'Not yet recycled'. The 'Check locally' label reflects the variable approach to recycling collection in the UK.

⁴¹ Press release by the Federal Ministry for Environment of 16.02.2002: <https://www.bmu.de/pressemitteilung/dosenpfand-kommt-ab-1-januar-2003/>.

⁴² Types of labels: <https://www.grontpunkt.no/emballasjemerking>

⁴³ Administrator of the container deposit scheme: <https://infinitem.no/english/about-us>.

⁴⁴ The official website: <https://www.oprl.org.uk/about-oprl/>.



Figure 9: OPRL label (2009–19)



In 2020 the OPRL moved to using a binary 'Recycle' / 'Don't recycle' label whenever possible due to both manufacturer and consumer demand.

This was the result of a labelling rules review conducted by OPRL in 2016–17, and was also in response to the UK government's proposal, after consultation on Extended Producer Responsibility reforms, to move to a mandatory binary labelling system.⁴⁵

While moving to a binary label provides greater clarity for consumers, it has also created some administrative challenges, particularly for those items where collection coverage might not be extensive.

⁴⁵ OPRL LTD, *On-Pack Recycling Labelling Rules – Evidence Base*, (January 2020)

Figure 10: OPRL label (2020)



Since 2017, the OPRL has also been supported by the use of the PREP tool in order to meet ISO 14021 requirements on self-evaluated environmental claims.

In February 2019, United Kingdom governments began consulting on a series of proposals that would significantly change the packaging system within the UK. These include reforms to the packaging producer responsibility system, introducing a deposit return scheme in England, Wales and Northern Ireland, and increased consistency in household and business recycling collection in England.⁴⁶ In 2020, the Scottish government

⁴⁶ Department for Environment Food & Rural Affairs, et. al., *Consultation on reforming the UK packaging producer responsibility system*, (February 2019)



separately passed regulations for a deposit return scheme, with implementation planned for 2022.

The reforms to the packaging producer responsibility system include a proposal to introduce mandatory UK-wide labelling, which was strongly supported by feedback from consultation. The details of the mandatory labelling scheme are still being developed.

United States

'How2Recycle' is a nationwide labelling scheme launched in the US in 2012. It aims to clearly communicate recycling instructions for packaging to the public, and to help companies track, measure and improve the recyclability of their packaging.

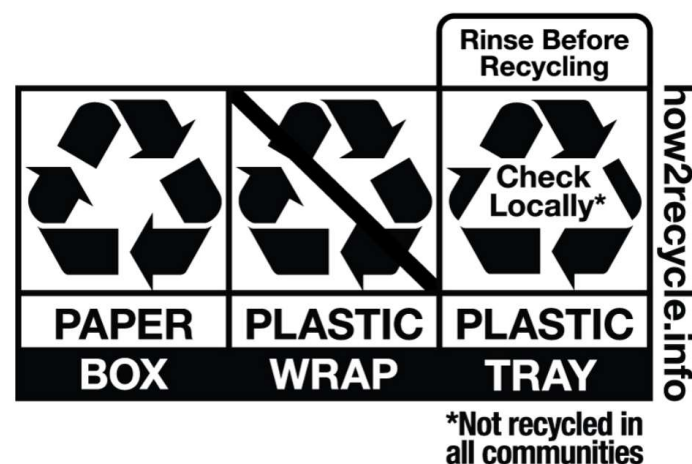
A business platform was added to the scheme in 2017 to help businesses track their performance and to advise them on how to improve.

How2Recycle is a voluntary membership-based scheme, open to any manufacturers and retailers. Membership fees are based on the company's revenue and whether it is a member of the Sustainable Packaging Coalition.⁴⁷ Fees range from US\$2,000 to US\$6,000, plus a one-time set-up fee of US\$1,500. In 2019, the scheme celebrated having 200 members.

How2Recycle has four categories of labels: 'Widely recycled', 'Check locally', 'Store drop-off', and 'Not yet recycled'. The labels contain information on the different parts of the packaging, what they are made of,

and instructions for what to do with them (for example, 'Glass' and 'Empty and rinse' for a jar).

Figure 11: Types of How2Recycle labels



In assessing recyclability, How2Recycle follows the US Federal Trade Commission's 'Green Guides' for environmental marketing. These assess the packaging for compatibility with the entire recycling process – this

⁴⁷ See <https://how2recycle.info/join>



includes acceptance in collection programmes, but also considers sorting, reprocessing, and end-market demand.⁴⁸

At a soft launch of How2Recycle in 2012, a survey confirmed that the label is understandable by consumers.⁴⁹ There have been no formal reviews or evaluations of the scheme, but How2Recycle constantly runs short consumer surveys to monitor consumer awareness and label recognition: this monitoring shows a continuing upward trend in recognition and awareness.⁵⁰

Some concerns have been raised that How2Recycle may be misleading, because 'recyclable' does not mean that the item will in fact be recycled.⁵¹ Also, Greenpeace has claimed that businesses are misleading consumers by not using the labels properly. This includes not taking local recycling capacities into account and not following Federal Trade Commission guidelines.⁵²

Only 10 states in the US have container deposit schemes.⁵³

Guidance from the UNEP and Consumers International

The United Nations Environment Programme (UNEP) and Consumers International recently published an assessment of standards, labels and claims on plastic packaging.⁵⁴

The assessment, which included international cross-sector consultation, revealed five key insights and recommendations for clearer and more effective consumer communication on plastic packaging:

- businesses should follow the Guidelines for Providing Product Sustainability Information (UN Environment and ITC 2017) in their plastic packaging communications
- definitions about the content and reusability of plastic packaging need to be harmonised at a global level
- standards, labels, and claims need to better reflect actual conditions
- the use of the 'chasing arrows' symbol should be restricted to indicating recyclability

⁴⁸ Plastics Recycling Update of 04.03.2020: <https://resource-recycling.com/plastics/2020/03/04/in-our-opinion-consider-nuance-in-recent-labeling-changes/> .

⁴⁹ How2Recycle, *How2Recycle Label Soft Launch report*, (2013)

⁵⁰ See the latest results: <https://how2recycle.info/news/2019/see-what-consumers-are-saying-about-how2recycle>

⁵¹ Greenpeace, *Throwing away the future: how companies still have it wrong on plastic pollution "solutions"*, (2019)

⁵² Greenpeace, *Circular Claims Fall Flat: Comprehensive U.S. Survey of Plastics Recyclability*, (2020)

⁵³ Information on container deposit schemes: <http://www.bottlebill.org/index.php/current-and-proposed-laws/usa/additional-links>

⁵⁴ United Nations Environment Programme & Consumers International, *"Can I Recycle This?" A Global Mapping and Assessment of Standards, Labels and Claims on Plastic Packaging*, (2020)



- informative and verified recycling labels should be adopted and their proper use enforced.

Ten recycling guidance labels were also assessed, including the ARL, the Triman, the OPRL and the How2Recycle label. The assessment ranked the ARL and the OPRL highest, with the How2Recycle label and the Triman scoring lower.

The ARL scored highly for the clear, specific, relevant information it provides for consumers. The OPRL scored highly based on its new binary design (which omitted the 'Check locally' option).

In contrast, the How2Recycle label, while seen as having a good, helpful design, was criticised for being widely misused by industry.

- they are the only label used to indicate recyclability
- they provide supporting tools to ensure that labels are used accurately (for example, the ARL's use of the PREP tool or Triman label's webtools).

Summary

Internationally, the recycling labels that feature the following elements appear to be the most highly regarded:

- they describe the different components of a product or packaging item (for example, lid, cap, sleeve, or film)
- they provide specific instructions about what to do with each component (for example 'Recycle' or 'Put in rubbish')
- they provide specific information about any additional steps that are needed (for example 'Return to store', or 'Check locally')
- they avoid ambiguity where possible in terms of instructions (for example, binary 'Recycle / Don't recycle' instructions)



4. OBJECTIVES AND OPTIONS FOR A NATIONAL LABELLING APPROACH

A nationally consistent approach to recycling labelling

Consumers require better information in order to make informed decisions about purchasing recyclable products, and how to dispose of these products appropriately at the end-of-life stage.

As part of a recent survey by Colmar Brunton, respondents were asked to select (from a list) how they might most usefully access information about recycling. Those who selected more than one option were then asked which of those they would find the most useful.

The majority of respondents (60 percent) selected a recycling label as a useful means to access information, and 31 percent identified it as the most means.⁵⁵

Recycling labelling is not a new concept. In her 'Rethinking Plastics' report, The Prime Minister's Chief Science Adviser also proposed a new approach to the physical labelling of plastics, including implementing the ARL.

The report points out that in order to maximise opportunities for resource recovery and reuse at end-of-life, it is important that all types of plastics can be clearly identified and allocated to the system: recycling or waste.⁵⁶

The Sustainable Business Network also believes that information provided to consumers and businesses is inadequate and unclear. It calls for a standardised approach to identifying and labelling recycled content as an important part of boosting New Zealand's circular economy.⁵⁷

As covered in Section 3, recycling labelling also has a long history in other countries. The overseas experience indicates that recycling labelling is most effective when it is clear, detailed, and does not conflict with other on-product labels.

All of the stakeholders we engaged with for this research supported better recycling labelling, and saw a need for a consistent, New Zealand-wide

⁵⁵ Colmar Brunton, *Rethinking Rubbish and Recycling*, (May 2020)

⁵⁶ Prime Minister's Chief Science Adviser, *Rethinking Plastics in Aotearoa New Zealand*, (December 2019)

⁵⁷ Sustainable Business Network, *New Zealand's Plastic Packaging System: An Initial Circular Economy Diagnosis*, (2018)



approach to better inform consumers. This perspective was shared by industry groups, businesses, and label providers alike.

There was also a clear desire for greater government leadership in the development and implementation of a recycling labelling scheme.

Design principles for recycling labelling

According to the United Nations Environment Programme, the fundamental principles for product sustainability information include:

- reliability (build your claims on a reliable basis)
- relevance (talk about major improvements, in areas that matter)
- clarity (make the information useful for the consumer)
- transparency (satisfy the consumer's appetite for information, and do not hide)
- accessibility (let the information get to the consumer, not the other way around).⁵⁸

Recycling labelling is one element of product sustainability information. These principles are useful to keep in mind when assessing labelling options in New Zealand.

Objectives and assessment criteria for recycling labelling options

Having a clear understanding of what the government is trying to achieve through a national approach to recycling labelling is an essential prerequisite to identifying the best option.

Ultimately, the main objective of a successful recycling labelling scheme is an increase in rates of recycling and resource recovery. However, effectiveness needs to be traded off against other considerations, such as costs and flexibility.

Developing a range of objectives for recycling labelling can help capture all the different elements that a scheme needs to feature to be successful. These objectives can also act as assessment criteria to compare different recycling label options against one another.

Below is a range of potential key objectives. These objectives have been developed based on the government's policy objectives and international experience. They have also been influenced by interviews with key stakeholders.

⁵⁸ United National Environment Programme, *Guidelines for Providing Product Sustainability Information*, (2017)



Primary objectives

Primary objectives are the fundamental things that a recycling labelling scheme would seek to achieve, and the areas where there are likely to be the most significant trade-offs.

Increases the recycling recovery rate

The purpose of providing better recycling information to consumers is to enable and encourage them to make more accurate and more effective recycling decisions so that more recycling is recovered.

Increasing the recycling recovery rate has two elements. The first is an increase in the volume of material going into the recycling stream rather than the waste stream as consumers make more informed end-of-life decisions about products through better labelling information.

The second is a reduction in the volume of non-recyclable material entering the recycling stream. Combining recyclables with non-recyclable materials in recycling processing can lead to contamination, which can mean that all the material is transferred to the waste stream.

More accurate decision-making by consumers about what they put into the recycling stream can help to reduce overall contamination levels.

Can be implemented without placing undue costs on businesses, the community, or public funds

The costs of implementing a recycling labelling scheme for businesses, the community, and government is also an important consideration.

Some costs are to be expected with any policy change, but this objective would seek to ensure that costs are proportionate to the benefit the policy might create.

Businesses are the most likely party to face costs from a labelling scheme as they would need to change their packaging design and manufacture. These costs will vary depending on the design of any scheme (e.g. a phased approach to updating labels would be cheaper than a single start date).

Consumers could face higher prices through costs passed-on from businesses. Communities and central government may also face increased costs from a labelling scheme due to the need to change national and local recycling information.

Flexible enough to accommodate regional variation and future changes in national recycling practices

As noted above, New Zealand has considerable regional variation in its recycling practices. Work is underway to explore more standardised kerbside collection.

This regional variation could mean that any labelling scheme may start with a limited number of recyclable plastics that are collected across all regions (for example clear PET (type 1) and opaque or natural/uncoloured HDPE (type 2) plastics).

This is likely to require a labelling scheme that is flexible enough to accommodate regional variation, while having the ability to change over time as regional variation reduces due to greater nationwide consistency in kerbside collection or improved recycling technology.



Secondary objectives

There are a range of secondary objectives which are important in considering a national plastics recycling labelling scheme.

While not as significant as the primary objectives, these secondary objectives can also reflect some necessary design features.

Increases confidence in the recycling system

Effective recycling requires public confidence that products entering the recycling stream are in fact recycled. Without this confidence, the consumers are likely to be less careful or accurate with their recycling.

This objective is closely linked with the need to have good, independently verifiable information about the what happens to recycling once it enters the recycling stream.

Administrative simplicity

An overly-complex scheme that businesses, the community, and government find difficult to administer has the potential to reduce levels of participation and the scheme's overall effectiveness.

Can be progressed under existing legislation

In order to support the government's policy objectives and to meet Ministerial expectations, any labelling scheme would need to be progressed under existing legislation, specifically the Waste Minimisation Act 2008.

Supports independent review and assessment

The design labelling scheme would need to be able to be audited and independently reviewed in order to support confidence in the recycling system.

There are a range of potential labelling options

There are a range of existing and new options that the government could consider for a nationally consistent approach to recycling labelling.

Increase the use of the current international Plastic Identification Codes

The Plastic ID Codes are currently voluntary within New Zealand. Although Plastics New Zealand encourages all companies in the plastics industry to clearly label their plastic products, this is not a requirement.

One option to improve recycling labelling would be to increase the use of the Plastic ID Codes, so that they are used for all plastic products and packaging sold in New Zealand.

Although there is no quantifiable data around use of the Plastic ID Codes, an estimated 20% of packaging in supermarkets and department stores do not



include Plastic ID Codes. This rate is estimated to be higher at hardware stores.⁵⁹

While it is often the imported products that are missing a Plastic ID Code, there are also New Zealand and Australian brands that do not include them.

Increasing the use of the Codes would build on the approach commonly used by territorial authorities to inform consumers in their region about which plastic items are recycled.

This could potentially be applied to plastic products manufactured domestically, as well as imported products, and could be applied on either a mandatory or voluntary basis.

Use of the Plastic ID Codes would provide a consistent set of information for consumers for one material type. As it has been designed for use in the plastics industry, it would also be unsuitable for use in a wider range of recyclable products.

While the Plastic ID Code is used globally, it is a mandatory requirement in only a few states in the USA, and only with certain products.⁶⁰

This option alone is unlikely to solve the existing problems of consumer confusion associated with the current use of the Plastic ID Code, as it still relies on the consumer interpreting the Codes correctly.

Adopt or adapt an existing recycling labelling scheme

New Zealand could also adopt or adapt an existing recycling labelling scheme from another jurisdiction.

Several schemes internationally are based on similar principles of providing the consumer with end-of-life information about different elements of a product, and whether they should be recycled or put in the rubbish. This common design can be seen across the ARL, the OPRL and the How2Recycle label (see the previous section).

Adopting an existing recycling labelling scheme would avoid the need to design a domestic scheme for New Zealand from the ground up. An existing scheme could be adapted to reflect New Zealand's specific circumstances, using the lessons learned from its implementation overseas to adopt the scheme domestically.

Adopting the ARL

The existing labelling scheme most likely to be adopted by New Zealand is the ARL created by APCO and Planet Ark. As outlined in section 3 above, the ARL is a voluntary on-pack recycling labelling scheme used in Australia.

Integral to the ARL is the Packaging Recyclability Evaluation Portal (PREP) tool. The PREP is an online tool that allow packaging designers to assess how a piece of packaging will perform in the Australian and New Zealand

⁵⁹ These figure estimates are based on conversations with Plastics New Zealand.

⁶⁰ Thirty-nine states in the US have enacted legislation on the use of these codes. Specifically, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma,

Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Virginia, Washington and Wisconsin have adopted legislation regarding the use of the resin identification codes on bottles of 16 ounces or more and rigid containers of 8 ounces (Wisconsin requires use of the code on bottles of 8 ounces or more.)



resource recovery systems based on its material composition, size and shape, among other factors.

The PREP tool is also designed to meet ISO 14021 requirements on self-evaluated environmental claims. The results of the PREP tool can be used to generate an on-pack label that provides information to the consumer about how to dispose of the packaging.

The ARL operates on a coverage model to determine whether a product is recyclable. For it to get a 'Recycle' label, 80% of the population must have kerbside recycling. If 60-80% of the population have access to recycling, then a conditional 'Check locally' label is applied.

The ARL is popular in Australia and used by many significant retailers and manufacturers. As at 30 April 2020, 382 APCO members are using the PREP tool, with 323 also using the ARL.⁶¹

The food and beverage industry is the largest user of the ARL, and includes some significant market participants, including Nestlé Australia, Campbell Arnott's Australia, and Fonterra Brands (Australia).⁶²

The ARL is also used in New Zealand by some manufacturers who supply products to both Australian and New Zealand suppliers. For example, it is commonly found in Countdown supermarkets as part of their in-house product brand.

The ARL is the most likely candidate for application in New Zealand domestically, as the PREP tool already contains information about the recyclability of products in New Zealand. From its inception the ARL has been intended as an Australasian recycling labelling scheme and has found some support in New Zealand from industry-based organisations such as Packaging New Zealand and Plastics New Zealand.

If the ARL were to be adopted more widely in New Zealand, changes to the design of the label may be required to reflect whether the recycling information was applicable in New Zealand or Australia (or both).⁶³ This will depend on the degree of divergence in recycling practices in the two countries.

Develop a new domestic recycling labelling scheme

Another option is for New Zealand to develop its own domestic recycling labelling scheme.

This could be an entirely new labelling system along the same lines as the OPRL or the ARL. Alternatively, some packaging sector stakeholders have suggested that such a labelling system could potentially be integrated into the existing information-gathering process used to generate product barcodes.

Below are a range of domestic labelling options that could be suitable as part of a nationally consistent labelling scheme.

⁶¹ Not all APCO members have consumer facing packaging and therefore assessment of their packaging through PREP, and application of the ARL, is not applicable to their business.

⁶² Australian Packaging Covenant Organisation, *2018-19 Annual Report*, (2020)

⁶³ Currently country information is not required to be included as part of the design of the ARL, but it is encouraged to be included as best practice.



Thumbs Up New Zealand

Other potential domestic recycling labelling options include 'Thumbs Up New Zealand' which uses a system of coloured thumbs to indicate the recyclability of food and beverage products and whether these products themselves are made of recycled material.

Under this system:

- two green 'thumbs up' would mean the packaging was recyclable in New Zealand and made from recyclable materials
- one horizontal yellow thumb would mean it was recyclable in New Zealand but not made from recycled product
- two red 'thumbs down' would indicate it was not recyclable in New Zealand (see Figure 11).⁶⁴

Figure 12: Thumbs Up New Zealand label



The Thumbs Up New Zealand label has the benefit of informing consumers of whether the product itself is made of recycled material, which supports the government's circular economy objectives.

It is also a binary system; in that it informs the consumer whether a product is recyclable or not. It does not allow for any conditional recyclability (for

⁶⁴ The campaign to support the Thumbs Up New Zealand system is led by Niamh Peren who collected 46,000 signatures from the public in support of the labelling system. Several councils have also expressed support for Thumbs Up New Zealand.



example, 'Check locally') to reflect the variable approach to kerbside collection in New Zealand.

It also provides a single label for all the packaging on a product. This means that it could struggle to provide accurate information about products made from multiple materials.

Packaging Star

Another potential option is the Packaging Star label designed by technology business Crunch & Flourish.⁶⁵

The Packaging Star is a digital-first voluntary approach to labelling which creates a star rating out of five for different products online based on the sustainability of its packaging (including whether it is made of recycled material) and whether the product can be recycled.

The Packaging Star does not provide region-specific information about the recyclability of packaging or instruct consumers on what steps to take to dispose of the packaging.

As a digital approach, the Packaging Start could complement another physical labelling approach, as it mainly assists online consumers.

Figure 13: The Packaging Star label



Barcode information

A third potential option that has been suggested as a domestic labelling scheme is one based on the information collected by GS1 to create a barcode.

A barcode is required in order to sell a product in a store in New Zealand. Most consumers only associate a barcode with price information, but a

⁶⁵ For more information in the Packaging Star, visit <https://www.crunchandflourish.com/solutions>.



barcode can contain significantly more information about a product, including nutritional information, weight, and hazardous material information.

A barcode can contain over 200 descriptive attributes about a product, but the minimum requirement is 7 attributes before barcode can be issued.⁶⁶

GS1 is a global, not-for-profit member-owned organisation that manages the global standards for barcodes. GS1 New Zealand represents GS1 domestically.

It would be technically possible to generate a recycling label through the information provided to GS1 as part of the process of registering a barcode. This would require product owners to complete the necessary recyclability information (for example, packaging type, type of plastic resin) at the point of registration. Product owners or packaging designers would need to determine the recyclability of their products themselves.

It is worth noting that GS1 is a conduit for data only, and while it can capture product information via the barcode system, it does not by itself offer a labelling solution for recycling. It would require the development of a separate on-pack label to turn this information into something for use on product.

A combination of the above options

New Zealand is not necessarily limited to a single labelling approach. There could be opportunities to adopt an existing recycling labelling system for

some manufacturers, while developing a new scheme for other manufacturers.

While this may have some benefits in the form of flexibility for packaging designers, brand owners and manufacturers, it needs to be balanced against the need to provide clear and effective information to consumers.

⁶⁶ These attributes are: The product's functional description, target markets, global location number, brand, licence number, and global classification system number.



5. ASSESSING DIFFERENT LABELLING OPTIONS

Introduction

This section contains an assessment of the different potential recycling labelling options against the key objectives outlined in Section 4.

The purpose of this assessment is to support future policy development by indicating which option best meets the objectives, and what some of the important trade-offs might be.

This section compares three high-level options for recycling labelling:

- increase the use of the Plastic Identification Codes
- adopt or adapt an existing recycling labelling scheme
- develop a new domestic labelling scheme.

We have not compared sub-options withing these main options (for example, How2Recycle vs Thumbs Up New Zealand). Instead we have focused on the fundamental higher-level question of whether New Zealand needs to develop a new labelling scheme from first principles.

It is also worth noting that these options are not entirely mutually exclusive. As discussed below, there may be some benefit from pursuing multiple labelling options.

The format for the assessment of the primary objectives consists of two elements:

- key insights that we have identified about that particular objective, that are important when considering a labelling scheme
- an options analysis where the different high-level options are compared.

This analysis reflects our desktop research and interviews with key stakeholders.

This section is also supported by the draft multi-criteria impact analysis in Appendix One, which summarises the key difference between the different options.

At the end of this section we also discuss the relative merits of voluntary and mandatory labelling.

Primary criteria: Assessing the options

Increases the recycling recovery rate

Insights

Any of the labelling options outlined in Section 4 could potentially increase recycling recovery rates compared to the status quo, but some options are likely to be more successful at this than others.



Below are some key insights from desktop research and from stakeholders on the efficacy of recycling labelling.

Labelling is only one part of the solution

While labelling is a key part of increasing recycling recovery rates, particularly through increasing consumer awareness, it will not by itself lead to better recycling.

It needs to be supported by the right infrastructure, including collection, processing, and end use. So far, the kerbside standardisation of recycling collection across regions has been seen as a key prerequisite for a national approach to recycling labelling (kerbside standardisation is covered in more detail below).

Stakeholders also commented that raising awareness of – and demand for – labelling among consumers and businesses (including manufacturers and retailers) was also an important part of the success of any labelling initiative.

Recycling labelling is one of a range of product stewardship policies that the government is exploring to reduce waste and to support a more circular economy.

Labelling needs to be nested within this wider programme in order to be most effective. This can also help avoid giving conflicting messages to businesses and other stakeholders.

However, it is clear that there is significant support from the waste industry for better recycling labelling. While policy-makers need to be mindful of these other waste reduction initiatives, developing them should not be a precondition for a recycling labelling system.

Think more widely than just recycling labelling

Another key insight from the interviews was that it is important to think of product labelling for environment purposes broadly – not necessarily just recycling labelling but also end-of-life disposal decisions generally.

Consumers need to know whether an object should be recycled, placed into the waste stream, or treated in some other way (for example, returned to the point of purchase).

This information is also important for informing purchaser decisions, reducing contamination in the waste stream, and reflecting other labelling initiatives that government might require.

For example, several interview participants noted that any New Zealand product labelling scheme should also be able to accommodate the labelling requirements for a container return scheme, should one be adopted here.

A binary label is best (if possible)

A binary recycling label that clearly states whether a product is recyclable or not is ideal, as this removes ambiguity for the consumer. This is part of the success of labels overseas.

Most interview participants noted that a conditional status ('Check locally') may be necessary because of regional variation in kerbside recycling collection in New Zealand.

However, they did not consider it necessary to wait until kerbside recycling had been standardised, as this could take several years. They saw more value in starting with a conditional element and moving to a binary model over time.



Any labelling design should also include information about the different parts of the packaging (for example, cardboard sleeve, plastic film) to further help remove ambiguity. It should also include instructions about whether any preparatory steps are required (for example, washing and removing food waste, or removing a non-recyclable plastic sleeve from an otherwise recyclable bottle).

'Recycled' not 'recyclable'

Most interview participants agreed that recycling labelling should indicate whether the product or packaging is actually recycled (whether in New Zealand or overseas) and not merely whether it is 'recyclable' (that is, **can** be recycled). This was seen as important to the efficacy and integrity of the labelling scheme, as consumers will want to know that their recycling decisions matter.

This is supported by the international evidence, which notes that recycling labels like the Triman or more general environmental labels like the Grüner Punkt can be misleading, and give the impression to consumer that a product is recycled when it is not.⁶⁷

There were more mixed views on whether a product should only be labelled as recycled if it is recycled onshore in New Zealand. Some interview participants objected to exporting recycling on the grounds that New Zealand should manage its own waste domestically.

Other interview participants thought that approach was impracticable, given the high proportion of New Zealand recycling that is currently exported.

There is a legitimate question about how much 'proof' of a product actually being recycled should be required when market intermediaries and different jurisdictions are involved.

Several participants also referred to the upcoming Basel Convention requirements for permits for the importing and exporting of most mixed plastic waste, as a response to concerns about recycling exports.

Options analysis

Plastic ID Codes

Increasing the use of the Plastic Identification Codes is unlikely to make a significant difference to the recycling recovery rate.

While making the Codes mandatory on all plastics could reduce contamination of plastic recycling by helping customers make more accurate plastic recycling choices, the inherent consumer confusion about the Codes would remain.

Making the Plastic ID Codes mandatory would also not provide consumers with comprehensive end-of-life information for products (for example, when to recycle and when not to recycle).

⁶⁷ United Nations Environment Programme & Consumers International, *"Can I Recycle This?" A Global Mapping and Assessment of Standards, Labels and Claims on Plastic Packaging*, (2020)



This approach would also of course be limited by type of material – that is, to plastics only. The Codes are not appropriate for glass, paper, or other recyclable materials.

Stakeholders also noted that the benefits of increased use of the Codes could probably only be realised by making their use mandatory rather than voluntary.

An existing label

Depending on the specifics of their design, both an existing recycling label or a new domestic label could increase recycling recovery rates.

Among the stakeholders we interviewed, **the ARL** was the most widely supported existing scheme, and it already features on some New Zealand products.

Part of this popularity is because the associated PREP tool already contains information about the recyclability of products in New Zealand. The tool could be applied to the New Zealand environment with limited disruption.

The ARL is also favoured by larger New Zealand manufacturers and brand owners who operate in both Australia and New Zealand and who already use it for their products in the Australian market. This suggests that it would be more likely used than other recycling labelling options.

The design of the ARL meets the UNEP’s fundamental principles for product sustainability information. As noted in Section 3, the ARL received the highest assessment rating, from the UNEP and Consumers International, among global labels for recycling guidance.

There was no support from interview participants for adopting any other international recycling label since the ARL is set up for New Zealand. Other labels that are well regarded, like the OPRL or the How2Recycle label, are essentially variants of the ARL.

If New Zealand were to adopt or adapt the ARL and use identical labels, changes to the ARL may be needed so that consumers are able to tell whether recycling instructions apply in Australia or New Zealand, or in both countries. Currently this country-specific information is ‘best practice’ for use of the ARL but is not a requirement.

A new domestic label

A domestically developed label could also lead to an increase in resource recovery, as long as it is designed with best practice in mind (that is, it provides consumers with information on how to dispose of the different packaging elements correctly, and covers all recyclables), and businesses and consumers have the right support.

While the existing New Zealand labelling options such as Thumbs Up New Zealand all have their own advantages, none of them are ready to be applied to New Zealand in a way that would lift recycling recovery rates.

The **Thumbs Up New Zealand** label has the benefit of being a binary system, which would avoid ambiguity for consumers. It also supports the government’s circular economy objectives by informing consumers whether a product is made of recycled material. However, there are also a number of challenges with this model.



The variable approach to kerbside collection in New Zealand means that a labelling system will likely need a conditional instruction (such as 'Check locally') for some recyclable material.

Under Thumbs Up New Zealand, products would also only be listed as recyclable if they are recyclable in New Zealand. Given the high rates of recycling currently exporting, it is likely a significant amount of recycled material would achieve the lowest, 'red thumbs down' rating. Consumers could interpret this to mean that a recyclable product was not recyclable, leading them to incorrectly place it in the waste stream.

Use of the Thumbs Up New Zealand label as a national labelling approach would need to be supported by a comprehensive, New Zealand-wide waste and recycling strategy in order for it to be effectively implemented. The strategy would ensure standardised kerbside collection across New Zealand, and a domestic-only approach to recycling.

Developing such a strategy would take some time, and implementing it (if it is possible at all) would take some years. It would be a missed opportunity to wait until this strategy was implemented to improve recycling labelling.

The Packaging Star and or a barcode-based label would also require further development in order to meet best practice for recycling labelling.

The **Packaging Star** is designed to provide consumers with information about recyclability at a general level, so that they can compare products. It does not provide specific instructions to consumers about how to dispose of their recycling, or whether a product is recyclable in different areas or not. The Packaging Star is deliberately designed to influence behaviour at the point of purchase, not at the point of disposal.

A **barcode-based solution** could be designed along best practice lines, but is only at the early concept stage. Further work would be required to develop a model for how it might work.

On balance, if New Zealand wanted to pursue a domestic recycling labelling option that maximised recycling recovery, then it would need to effectively build one from the 'ground up'.

Can be implemented without placing undue costs on businesses, the community, or public funds

Insights

The distribution of costs between businesses, the community and government is largely a reflection of labelling scheme design, including coverage (that is, some products or all products), point of obligation, and whether the scheme is mandatory or voluntary.

Below are some key insights from desktop research and from stakeholders about the costs of a recycling labelling scheme.

Costs to businesses will vary

Increasing recycling labelling would result in increased costs to businesses, but this would need to be traded off against the benefits to New Zealand from less waste and increased levels of recycling.

As well as total costs to businesses, the distributional impact of a labelling scheme between different businesses is also important. These costs will



vary depending on the nature of the business and the design of any labelling scheme.

Some manufacturers would face high costs if more of their products required labelling. Food, beverage and bathroom products are the most likely to face these costs given they make up a significant proportion of kerbside recycling.

These costs would largely come from the need for manufacturers and packaging designers to assess their products to identify what label they would receive, and then the cost of applying that design to their label.

The extent to which companies take up a voluntary labelling approach, or are required to include labelling under a mandatory approach, would in part determine these costs.

Some larger businesses would be able to absorb these additional costs or pass them on to consumers without any issues. Others, particularly small and medium-sized enterprises (SMEs), may struggle with these additional costs, particularly in already highly competitive product categories.⁶⁸

There are options to address these costs in the regulatory design of a labelling scheme. A *de minimis* threshold could be applied, meaning that manufacturers under a certain revenue or production size would not be included in any mandatory scheme.

Similarly, a rolling process whereby new labels would only be required once existing product labels are updated would help to spread these costs.

Business and industry stakeholders did not raise the issue of cost as a significant barrier to recycling labelling, although further consultation with business is needed. They did note that anything that would reduce costs to businesses from labelling would be well received.

There would also likely be some benefits to businesses from including recycling labelling information. Some consumers would probably seek out products with this information, particularly if they are concerned about their environmental impacts.

A labelling process could also help manufacturing and packaging designers to better understand their packaging costs, and how they could reduce these.

The timeframe for implementing the scheme will also affect the cost. It is likely to require a two to three-year phase-in period in order for businesses to understand their obligations and update their labelling.

Costs to the government and public funds are also relevant

The costs to the government and public funds would come from the establishment and ongoing management cost of any labelling scheme. Again, these costs would vary depending on the design of the scheme.

A key insight from the stakeholder interviews was the importance of ongoing resourcing to support the delivery of a labelling scheme. Through recycling labelling the government is trying to change behaviour, and implementing a recycling labelling scheme is likely to involve significant

⁶⁸ This also reinforces the need to ensure that if labeling is mandatory then it applies equally to domestic manufacturers and importers to ensure a level playing field.



resourcing in an information and awareness campaign for businesses and consumers, as well as ongoing maintenance of the scheme to ensure information is accurate. One interviewee noted that most people underestimate the work required to set up and maintain a labelling scheme.

There could also be cost to the government in terms of investigating misleading labelling and enforcing compliance. The government would not necessarily need to take on these functions itself and could instead transfer these to a third party (such as an industry grouping), but then that third party would also need additional resourcing.

This resourcing does not just need to come from government. For example, in the UK, under a proposal to make recycling labelling mandatory, producers would be liable to pay towards national and local communication programmes to help encourage uptake. In Australia APCO takes on this role, using a combination of membership fees as well as grants from the federal government.

The key point is that in order for a recycling labelling scheme to be effective, ongoing resourcing is needed in order to ensure that the scheme is regularly updated and that it is promoted to consumers and businesses.

There would also be potential benefits for New Zealand central and local government from recycling labelling. This could include lower greenhouse gas emissions as more waste is diverted to the recycling stream.

Options analysis

Plastic ID Codes

Increasing the use of the Plastic Identification Codes is likely to be the least expensive option to implement. If this were done on a voluntary basis, the marginal cost would likely be minimal for many businesses.

The biggest cost to businesses would likely be in lost production time rather than direct cost, as it would require the injection tool that manufactures a product to be pulled out of service while the engraving is done to add the Plastic ID Code.

There would likely be some costs from additional consumer and business outreach by government and industry groups, but this would be comparatively minor.

There would be greater cost to manufacturers and producers if the Plastic Identification Code were made mandatory. Similarly, there would be additional costs to the government in enforcing compliance.

An existing label

Accessing the ARL would come at a cost for businesses. Currently APCO membership is required in order to have access to the ARL and the PREP tool.⁶⁹ Some countries that already operate in both Australia and New Zealand will likely already have an APCO membership.

⁶⁹ In addition to access to the PREP tool and the ARL, there are a range of other benefits to APCO membership. However, these are largely relevant for Australian based companies.



New Zealand businesses that do not have an APCO membership would be required to become an International Affiliate member. Currently the cost for this ranges from AU\$12,500 for companies with an annual revenue of more than \$750 million, to AU\$1,020 for companies with an annual revenue of up to \$5 million.⁷⁰

However, APCO are currently considering creating a new form of membership that would provide access to the PREP tool and the ARL. The proposed fee for this access is not yet known, but this could provide a more cost-effective option for New Zealand businesses.

Moreover, the ARL is already the preferred option for many larger New Zealand product manufacturers and industry groups, largely because it is already in use. As noted above, some companies are already using it.

This would provide a reduction in cost for those participants in New Zealand should the ARL, or a recycling label compatible with the ARL, be adopted domestically.

APCO have also made it clear they are keen to increase their presence in New Zealand and grow the use of the ARL here. They are actively looking for partners domestically.

The existing infrastructure that supports the ARL may also help keep costs down for businesses (and the government). These include an effective existing label design; the PREP tool, which helps packaging designers

determine the recyclability of their products; and existing knowledge of how to use it within Australia and New Zealand.

While the ARL would likely suit larger producers who already operate in both Australia and New Zealand, it may be less attractive to New Zealand SMEs, as they may find the concept of paying for access to an Australian scheme less appealing. Depending on the level of access fee, the cost for them may also be prohibitive.

The government could help to manage the cost to New Zealand businesses by exploring options to buy a countrywide licence for the ARL, or buy access to the PREP tool directly (like the OPRL in the UK). This could also help to drive uptake by SMEs.

A new domestic label

If New Zealand were to develop a domestic alternative, then businesses would likely face similar costs in terms of identifying how well their products perform and updating their labelling. Some larger trans-Tasman producers may end up duplicating costs if they were required to label their products differently in New Zealand and Australia.

The most significant difference in cost between adopting the ARL or developing a domestic labelling scheme relates to the PREP tool. Manufacturers would require some way of determining the total recyclability of their product (including its different elements) before they can give their products a recycling label.

⁷⁰ Industry bodies like WasteMINZ have expressed concern about the idea of New Zealand businesses needing to join APCO as it could result in lower membership and a loss of representation.



One option the government has is to build a tool like the PREP tool for New Zealand domestic audiences. This would be necessary for both a label using the Thumbs Up New Zealand design, or one based on the data used to create barcodes.

Developing a tool would come at some cost. It would also create an ongoing cost to keep the tool updated, even if the responsibility for the tool belonged to a third party such as an NGO.

As noted above, another option is for the government to explore buying a licence to provide access to the PREP tool for New Zealand businesses. This could be used as a way either to provide equitable access to the ARL for New Zealand businesses, or to underpin the development of a domestic scheme.

The cost to government of taking this approach is unknown, and is one area to be explored further.

Regardless of whether New Zealand adopts an existing international labelling scheme or develops its own domestic version, use of the ARL in New Zealand is only likely to grow. This suggests that even if New Zealand were to develop a domestic scheme, it may need to look at options to recognise the ARL in some form.

Flexible enough to accommodate regional variation and future changes in national recycling practices

Insights

Any labelling scheme in New Zealand would need to be flexible enough to reflect changes to recycling practices or other waste disposal decisions.

Below are some key insights from desktop research and from stakeholders about building flexibility into a recycling labelling scheme.

Recycling standardisation is important – but don't wait for it

Several interviewees referred to work on kerbside standardisation as an import precursor to effective recycling labelling. In effect the more standardisation of kerbside collection there is, the less consumers are required to check locally what can or cannot be collected. More standardisation leads to more effective recycling decisions.

This raises the question of whether the government should progress kerbside collection standardisation or recycling labelling first, or progress them both in parallel.

If New Zealand were to move to standardised kerbside collection quickly (one to two years), then labelling could follow it. However, if standardisation is probably still some years away (three or more), then labelling could begin based on existing kerbside collection.

The reality is that both kerbside standardisation and recycling labelling will need to adapt and change over time, and will likely be developed together.



There is also enough commonality across regions for some recyclable products to progress labelling, such as plastics 1 and 2, as well as glass.

Most interviewees emphasised that it is more important to start moving towards recycling labelling now than wait for the perfect scheme.

A New Zealand recycling label should be able to accommodate a range of end-of-life processes

Interviewees were clear that a New Zealand recycling labelling scheme should also be able to reflect other waste policies, such as a container return scheme or a soft plastics collection scheme.

An all-in-one label is preferable from both a clarity and cost perspective. One label that contains all the necessary information avoids ambiguity and confusion for consumers. It also means less physical space on the label itself.

A label might start with certain materials or products and expand over time

Recycling labelling could start with particular materials, for example plastics and paper, and expand to include others over time. This might be because some materials are more amenable to labelling than others.

Similarly, recycling labelling could apply to certain products and expand to include others over time. Some stakeholders suggested that food, beverage and bathroom products would be a logical place to start labelling because of their prominence in kerbside recycling.

Options analysis

Plastic ID Codes

The Plastic Identification Codes reflect the chemical composition of the plastic product. They still require the consumer to interpret what they mean locally for recycling, and would not reflect any changes to regional kerbside collection.

They also do not allow for any additional information for product end of life, such as a container return scheme.

An existing label

Existing international labelling schemes do have the ability to reflect changes over time. For example, APCO has a technical subcommittee that annually updates the PREP tool, including to reflect changes in kerbside collection practices. The OPRL in the UK carries out similar regular methodological reviews.

These changes in the kerbside recycling practices can take some time to be reflected in the PREP tool. In New Zealand WasteMINZ provides updates on kerbside collection changes.

If New Zealand were to adopt the ARL or the PREP tool, it may be more difficult to make changes given the potential need to align with practices in Australia. This would depend on the specifics of any alignment.

This could also be a problem if the government bought a license to use the ARL or the PREP tool and wanted to make more fundamental changes to either the label design or its operation.



A domestic label

In contrast a domestic labelling scheme could reflect changes more quickly, depending on its design and delivery model.

A fully New Zealand owned model would not require agreement from other parties, and this would potentially streamline decision making and allow it to reflect domestic changes and additional information more easily.

There would still be some delay in reflecting any changes due to the need to systematically update the label over time.

Even if a domestic label were underpinned by the PREP tool for a licensing agreement, there is still likely to be more room to make changes with a domestic label than the ARL.

Interviewees did not have a strong view on whether an existing label or a domestic label would provide greater flexibility, but all agreed that flexibility was important.

Secondary criteria – assessment

Increases confidence in the recycling system

All of the three options assessed in this section have the potential to increase confidence in the recycling system. Interviewees noted that the most important factor for confidence in the recycling system is consumer trust that what they are sending to the recycling stream is in fact recycled and does not become part of the waste stream.

This becomes a question of scheme and label design. Almost all interviewees agreed that on-label recycling information should reflect whether a product is recycled or not.

There were differing views on whether a label should reflect recycling that is exported, or only recycling that is processed here in New Zealand. Including exported recycling would make sense, given the global nature of recycling and resource recovery.⁷¹ However, it would require confidence on the part of those issuing the label that exported recycling is in fact being recycled. This may require some form of traceability requirement.⁷²

For a product to be labelled as 'recyclable' using the PREP tool, it is required to be collected, to be technically recyclable, and to have an end market.⁷³

⁷¹ Although the impacts of COVID-19 have disrupted this (see Appendix 3).

⁷² Traceability requirements of recyclable material exported overseas in recently implemented amendments to the Basel Convention are designed to make the global trade in plastic waste more transparent and better regulated.

⁷³ ISO 14021:2016 requires that all self-declared environmental claims must be: accurate, verifiable, not misleading, substantiated, specific, unlikely to result in misinterpretation or misunderstanding, true to the final product and takes into account the entire product life cycle.



New Zealand would likely want to adopt a similar standard to provide this trust and confidence.

The government may also want to consider going further and requiring evidence that at the end market (whether domestic or international), these products have been recycled.

Internationally labelling scheme also reflect ongoing changes to the export of recycling. For example, APCO and Planet Ark Ltd regularly review the ARL to ensure that products can readily be recycled internationally, and in 2019 both PVC and rigid polystyrene were reclassified as not recyclable.

Similarly, as the UK's proposed Environment Bill⁷⁴ enables the UK government to ban or restrict the export of plastic waste to non-OECD countries, the OPRL is also considering how to reflect these restrictions in its approach to labelling.

Regular reviews and assessments of any labelling scheme are also an important part of ensuring confidence in the recycling system (see below).

Administrative simplicity

Increasing the use of the Plastic Identification Codes could be comparatively simple, as fewer manufacturers would be included. The Codes are also common already and familiar to the plastics industry.

With the adoption of an existing recycling label or the development of a new domestic label, a comprehensive recycling labelling scheme would be more

complex. Just how complex would depend on the specific design of the scheme.

The design issues would include scheme coverage (some products or all products), point of obligation, and whether the labelling scheme is mandatory or voluntary. For example, a mandatory scheme would require a larger compliance role for government.

There may also be some advantages to the government from either adopting an existing scheme or basing the design of a domestic scheme on an existing scheme. Existing schemes have gone through a trial-and-error process of implementation, which helps to highlight areas of administrative complexity.

They may also have structures in place, such as specific technical subcommittees, that can reduce the complexity for participants.

Can be progressed under existing legislation

All three options outlined above could theoretically be progressed under existing legislation, though regulations may not be required if a voluntary approach to labelling is adopted.

The Waste Minimisation Act 2008 (section 23(1)) specifies a range of purposes for which regulations can be made. This includes prescribing labelling requirements for a product (23(1)(f)).

⁷⁴ Bill 009 2019-21



Before recommending the making of regulations under the Act, the Minister must:

- 1) obtain and consider the advice of the Waste Advisory Board; and
- 2) be satisfied that
 - a) there has been adequate consultation with persons or organisations who may be significantly affected by the regulations; and
 - b) the benefits expected from implementing the regulations exceed the costs expected from implementing the regulations; and
 - c) the regulations are consistent with New Zealand's international obligations.⁷⁵

Previous governments have not made regulations under section 23(1)(f), so further legal analysis would be required for any of the options outlined above.

Further analysis would be required to understand whether there are legal implications from imported products under a mandatory approach. This include New Zealand's international free trade obligations.

Supports independent review and assessment

The ability to support independent review and assessment is another aspect of scheme design. It requires ensuring that there is a clear monitoring and evaluation framework in place before the scheme is implemented, and that data is readily accessible and accurate. It may also require the use of agreed international standards, such as ISO 14021:2016 for environmental labels.⁷⁶

The OPRL has recently carried out a 10-year review using a combination of data, industry feedback and expert opinion. This review has led to several changes to the OPRL, including the move to a binary 'Recyclable' / 'Not recyclable' labelling system.⁷⁷

APCO carries out annual audits to make sure all labelled products are correct in relation to PREP and the ARL. All participating companies agreed to this when they agreed to the Terms and Conditions of both.

It would be beneficial to look at international recycling schemes, and well as product labelling schemes more broadly, to identify core assessment elements to build into the scheme's design.

⁷⁵ Section 23(3) of the Waste Minimisation Act 2003.

⁷⁶ ISO 14021:2016 requires that all self-declare environmental claims must be: accurate, verifiable, not misleading, substantiated, specific, unlikely to result in misinterpretation or misunderstanding, true to the final product and takes into account the entire product life cycle.

⁷⁷ OPRL Ltd, *On-Pack Recycling Labelling Rules 2019*, (2019)



Mandatory versus voluntary labelling

A key question for the government is whether recycling labelling should be mandatory or voluntary. This is relevant for the efficacy, cost and flexibility of a labelling scheme.

Although most recycling schemes globally are voluntary, some jurisdictions are looking at moving to mandatory participation, most notably the UK.⁷⁸

A mandatory labelling scheme would mean that consumers would have much better information both for purchasing decisions (for example, preferentially buying recyclable products) and for decisions about end-of-life product disposal.

This would likely lead to increased levels of recycling, and lower levels of contamination in recycling. This in turn would lead to less material going into the waste stream.

Benefits of a voluntary approach

However, in our assessment there are also some significant benefits for taking a voluntary approach, at least initially.

A government-sponsored, voluntary regulatory scheme, with a high level of industry support and the ability to move to a mandatory approach if required, may be able to achieve the same benefits as a mandatory

scheme. It could also achieve the government's objectives more quickly and at less cost than a mandatory approach.

Significant support from industry

It is unclear whether a mandatory approach is needed given the high level of support for recycling labelling from groups like Packaging New Zealand, the Packaging Forum and Plastics New Zealand. There was a high degree of support among all the interviewees, and a willingness to participate in any scheme.⁷⁹

There was also widespread agreement with both the problem (consumers need better information) and the solution (better on-pack recycling labels).

Faster implementation

Further, a voluntary approach would allow for a labelling scheme to be set up and implemented more quickly, without the need to make regulations. It also provides an opportunity to more easily fine-tune the scheme's design in its early implementation period without the need to make or amend regulations. This was a key insight from the experience of the Health Star (see Appendix 2).

⁷⁸ Department for Environment Food & Rural Affairs, *Consultation on reforming the UK packaging producer responsibility system*, (February 2019)

⁷⁹ Further engagement with potential participants is required to see if this view is held more widely.



Less cost to government and less regulatory machinery

Taking a voluntary approach to recycling labelling could also reduce the overall cost to the government. It would require less regulatory machinery (such as a mature compliance function) and could potentially create a platform for a joint government-industry funding model.

Avoiding trade competitiveness issues

A voluntary approach could also help to avoid potential international trade competitiveness issues. Requiring importers to comply with mandatory labelling could potentially conflict with New Zealand's international commitment to free trade.

While international trade agreements are not necessarily a barrier to mandating product labelling, initially taking a voluntary approach while monitoring any competitiveness impacts could help in the future to justify the decision to move to a mandatory approach. It is worth noting that under international trade law, voluntary labelling schemes are more likely to be considered consistent with World Trade Organisation rules than mandatory schemes.⁸⁰

In addition, the government is currently exploring other packaging related policy interventions that will affect imported products, such as a phase-out of single use plastic items and enhanced product stewardship. Starting with

a voluntary approach to recycling labelling would avoid cutting across the work already underway.

Consistent with expectations of good regulatory practice

A voluntary approach is also consistent with the government's 'Expectations for Good Regulatory Practice', specifically the expectation that clear policy objectives should be achieved in the way with the least cost and the least adverse impact on market competition, property rights and individual autonomy.⁸¹

While these government expectations do not require a voluntary approach for interventions such as recycling labelling, they do suggest that the voluntary approach should be the starting point, with that approach then being tested against its ability to meet government policy objectives.

Impact of COVID-19

Finally, a voluntary approach to recycling labelling may be more appropriate given the potential impacts of COVID-19. While waste reduction and sustainability are still important to businesses and consumers in a post-COVID-19 world, many businesses will be dealing with the economic disruption from the pandemic and may be sensitive to additional costs.

It may also be some months or years before international recycling supply chains return to normal, during which time the recyclability of products in

⁸⁰ Vidar, M *International legal frameworks for food labelling and consumer rights - Food and Agricultural Organization of the United Nations (FAO)*, (2010)

⁸¹ The Treasury, *Government Expectations for Good Regulatory Practice*, (April 2017)



New Zealand may vary. A voluntary approach that does not rely on regulatory changes may accommodate this disruption more easily. More information on the impacts of COVID-19 on recycling labelling is available in Appendix 2.

Keep a mandatory approach as an option

Taking a voluntary approach to recycling labelling also does not prevent the government from moving to a mandatory approach later if needed. In fact, for a voluntary approach to be effective, the existence of a strong and credible prospect of regulation is needed.

The existence of an appropriate threat of regulation increases the incentive for industry to participate, and bolsters the bargaining position of regulators. It can also open the door to more co-funding between government and industry.

Starting with a voluntary approach ahead of a mandatory approach would mean that the government could focus specifically on those sectors or manufacturers who struggle with labelling, allowing it to have a more targeted with its support and compliance action.

This reflects the approach in the UK, where the move to mandatory recycling comes after a period of very high voluntary uptake.⁸²

If the government decided on a voluntary approach to labelling, strong measures would be needed to drive uptake. These could include:

- an agreed government-industry target for the uptake of recycling labelling⁸³
- a strong expectation that a mandatory approach is still on the table
- an information and awareness campaign for consumers and businesses
- an agreement with retailers to support recycling labelling through their supply chains.

The government could look to underpin a voluntary approach to recycling labelling with industry agreements, similar to the Courtauld Commitment⁸⁴ or the New Zealand Packing Accords.

Voluntary labelling was generally favoured by the interviewees, particularly those who work with industry. While this was not universal, and some interviewees were agnostic about mandatory or voluntary labelling, most interviewees recognised the challenges of moving to mandatory labelling immediately.

⁸² Part of the high level of uptake of recycling labelling in the UK is due to the prominent role of retailers, who require its use from their suppliers. These retailers include ASDA, Boots, John Lewis, Aldi and Lidl.

⁸³ There are several options for a target. These include percentage of manufactures using recycling labelling, percentage of products labelled, or a certain level of uptake in specific sectors (e.g. food and beverage). See Appendix Two for more information the role of uptake targets.

⁸⁴ The Courtauld Commitment is a voluntary agreement between grocery retailers and suppliers in the UK to reduce household food waste, packaging, and supply chain waste. The non-for-profit organisation WRAP acts as the independent convener and monitor of these agreements.



Summary

It is clear that there is both a strong case for a nationally consistent approach to recycling labelling, and a strong mandate from stakeholders to proceed with this work.

We do not advise increasing the use of the Plastic Identification Codes as the preferred option for recycling labelling. The inherent limitations of the Codes as an industry-facing label and the fact they are exclusively applied to plastics mean that they are unlikely to lead to a significant uptake in recycling.

There would be benefits to exploring further mandating the use of the Plastic ID Codes in addition to a consumer-facing recycling label. This would aid in the sorting and processing of plastics for recycling, and potentially act as a secondary source of information to some consumers.

This would also need to apply to importers as well as domestic manufacturers.

Adopting or adapting an existing recycling label, or developing a domestic recycling label, both have their advantages. Adopting an existing label like the ARL is likely to be a quicker and cheaper option, while a domestic label could more quickly reflect changes in the New Zealand waste context.

On balance, we advise exploring further options to increase the uptake of the ARL in New Zealand. The ARL is well regarded as a label both domestically and internationally, it is already being used on New Zealand shelves, and it has the support of some significant industry groups.

More significant than the ARL is the PREP tool that underpins it. While not a perfect tool, it is regarded as the industry standard in terms of providing manufacturers and packaging designers with information on the recyclability of their products.

Increasing the use of the ARL in New Zealand should be predicated on ensuring equitable access for a range of New Zealand manufacturers (especially SMEs). Further conversations with the Packaging Covenant is recommended.

The choice does not necessarily need to be a purely binary one between adopting the ARL or developing a domestic scheme. There may be other hybrid options to explore, including developing a New Zealand label that is compatible with the ARL.

These options will come with their own advantages and disadvantages, so further engagement with the sector on the best option for New Zealand is needed.

There is also a strong case for a voluntary approach to recycling labelling over a mandatory approach, at least initially. A voluntary approach provides a greater opportunity to collaborate with industry, meaning that the government can move more quickly without relying on regulation.

However, a voluntary approach requires a significant commitment from industry to apply the label within an agreed time. Research also suggests that a voluntary approach is most effective when supported by the credible threat of mandatory regulation if there is insufficient progress.



6. RECOMMENDATIONS

Introduction

Increasing recycling labelling can improve consumer information leading to increased levels of recycling, lower recycling contamination levels, and more informed purchasing decisions.

Below are some recommendations based on this research for how the Ministry for the Environment could advance recycling labelling in New Zealand.

Proceed with recycling labelling as a part of the Ministry's work priorities

There was clear agreement in both the research and amongst interviewees that a lack of information was a problem for consumers, and that recycling labelling was the best solution to this problem.

Interview participants also expressed their support for greater central government leadership to help take recycling labelling forward.

Having general agreement on both the nature of the policy problem, and the optimal solution, provides the Ministry for the Environment with a strong opportunity to advance recycling labelling as part of its work programme. This could either be part of a wider product stewardship work programme, or it could be separate.

Recycling labelling is also consistent with the Ministry's objective of moving to a world leading resource recovery and recycling system that underpins a circular economy.

Discuss with PREP Design Ltd options and costs for using the PREP tool within New Zealand

The PREP tool, which underpins both the ARL and OPRL, is recognised as the leading support mechanism for recycling labelling.

The PREP tool should underpin any future nationally consistent recycling label. It already reflects New Zealand's recycling infrastructure as part of the ARL, and would provide an effective way for New Zealand manufacturers and packaging designers to determine how to label their products.

Further discussions are needed directly with PREP Design Ltd (the company behind the PREP tool) to discuss how to increase access to the PREP tool in New Zealand, either as part of the ARL or separate from it. These discussions should also include licensing agreements and costs.

Explore further options to increase the use of the ARL within New Zealand

While there are benefits from creating a purely domestic recycling label, we recommend looking at options to increase the use of the ARL.



The ARL is highly regarded internationally and is supported by significant industry groups within New Zealand. It has been designed to reflect the New Zealand context, and already features on supermarket shelves.

Using the ARL as the basis for a future recycling label will allow faster uptake, at potentially lower cost. Consistency between labelling approach in Australia and New Zealand also feature prominently in the success of both the Health Star and Energy Star labelling schemes.

However, increasing the ARL in New Zealand does not necessarily mean simply importing the Australian model. There are a range of options to consider including:

- adopting the ARL in its current form to create a trans-Tasman label (including accessing it via APCO)
- adopting the ARL, but requiring New Zealand businesses to join via a New Zealand 'agent' (for example, WasteMINZ)
- using the PREP tool and the fundamental design of the ARL, but creating a New Zealand version that is compatible with the ARL
- formally 'recognising' the ARL in New Zealand, while also developing a New Zealand version (and allowing businesses to use either).

Some of these options might be used together.

Further conversations are needed with APCO and stakeholders to determine the most suitable option for New Zealand.

Proceed with a national approach to recycling labelling on a voluntary basis initially

While a mandatory approach to recycling labelling can potentially maximise participation, it also creates several complex issues that the government would need to work through before it could be implemented.

Given the significant stakeholder support for recycling labelling, a voluntary approach could mean that this work proceeds more quickly and at less cost to the government. It also would not require the government to develop regulations and could form part of a collaborative approach (see below).

To be most effective a voluntary approach requires the credible threat of mandatory regulation. A mandatory approach will also likely be needed in due course to capture those businesses who have no intention of ever participating voluntarily.

Taking a voluntary approach allows the government time to work through the challenges of mandatory regulation, while at the same time learning from the voluntary experience.

A voluntary approach to recycling labelling could also be part of a wider range of waste initiatives, including a phasing out of single-use plastics, a focus on priority products, and kerbside collection standardisation.

It would also make sense to align recycling labelling with the development of a CRS scheme as there is likely to be significant cross-over in the objectives and stakeholders of these two initiatives.



Initiate a joint government, industry and sector technical advisory group to support the development of a labelling approach

We recommend initiating a technical advisory group for recycling labelling, including government, manufacturers, industries bodies (such as the Packing Forum, Packaging New Zealand, Plastics New Zealand, and WasteMINZ), retailers and NGOs. This forum would enable these stakeholders to collaborate on developing a voluntary approach to recycling labelling.

There are significant benefits from working collectively in this way. For example, the group could help to work through options to increase uptake of the ARL, as well as core design elements for how labelling might work in practice. It could also focus on specific issues, such as how to treat imported goods, how to incorporate future information (such as a CRS) in a label, and how to ensure accurate monitoring and compliance.

Perhaps most importantly a collaborative approach can help to find or build champions within the sector to support labelling. For example, if the manufacturing and retail sector feel invested in the development of a New Zealand approach to recycling labelling, then they are more likely to support and potentially co-fund its implementation.

A collaborative group such as this could also explore a formal pledge or agreement that organisations could sign up to, to commit to adopting recycling labelling (similar to the Climate Leaders Coalition). This could include a revised and expanded version of the plastic packaging declaration.

The importance of a collaborative approach was emphasised in the experience of the Health Star rating (see Appendix 3).

Identify a time limit for developing and implementing a labelling approach in New Zealand, and a target for uptake

Alongside a voluntary approach to labelling and collaboration with industry, we recommend identifying a realistic time limit for developing and implementing a labelling approach. This would help to focus the minds of both the government and the manufacturing sector, and ensure progress is made.

Similarly, the government should also consider an uptake target for recycling labelling in conjunction with the technical advisory group. This would help to create a shared understanding of success for both the government and industry.

Having this time limit and target in place would help inform the government on if or when it might need to move to a mandatory approach, if sufficient progress has not been made to develop the scheme, or if voluntary uptake is unjustifiably low. It should also communicate this to the sector.

Develop a package of tools to support uptake

A reoccurring message from the experience of recycling labelling overseas was the need for support tools to drive uptake by industry and consumers.

These tools could include:

- a regular process for making user identified changes to label



- a communications and awareness campaign to educate consumers and encourage them to seek out and use a recycling label⁸⁵
- information for producers and manufacturers on how to use the recycling labelling (such as educational workshops)
- resources to help councils and retailers understand how to support the use of recycling labelling in their communities and in their supply chain
- financial support for SMEs that might otherwise struggle to afford a recycling label.

There may also be opportunities to align an awareness and communications campaign for recycling labelling with other waste related initiatives, including the standardisation of kerbside recycling and a phase-out of single use plastic items.

Carry out consultation to test views more widely on labelling options and support mechanisms

Wider engagement with stakeholders, either as part of a technical advisory group or outside of it, is also recommended to further test the design of the recycling label, once the fundamental policy development has occurred.

This would help progress policy development, by incorporating a wider range of views and perspectives. It could also include a public discussion

document, particularly if regulations are developed alongside a voluntary approach.

Look at mandating the use of the Plastic ID Codes

While increasing the use of the Plastic Identification Codes is unlikely to support better recycling outcomes to the same extent as a customer-facing label, we recommend exploring whether mandating the use of these Codes could make it easier for the recycling industry.

Mandatory use of the Plastic ID Codes would support effective sorting and processing of plastics for recycling, particularly for manually operated MRFs, and so increase resource recovery.

Even if more MRFs move to automated systems that rely on optical sorting for plastics, this is a process that is likely to take several years. Mandating the Plastic ID Codes quickly would help to bridge the time between now and when these infrastructure upgrades occur.

The Plastic ID Codes could also act as backup to a recycling label in the event that the label is separated from the plastic item.

This information could also be affixed as a label for imported products.

⁸⁵ A communication and awareness campaign is also important to ensure that a new recycling label doesn't confuse consumers, particularly when faced with other, existing labels that may relate to a product's recyclability.



APPENDIX 1. INITIAL IMPACT ANALYSIS

The following table provides an evaluative comparison of the different recycling labelling option compared to key objective. This summarises the comparison outlined earlier in the report.

While this analysis does not replicate the impact analysis that would be required for any formal regulatory impact assessment, it follows a similar format and may provide a base for subsequent analysis.

We have rated the performance of the options using the following scale:

- ++** much better than doing nothing/the status quo
- +** better than doing nothing/the status quo
- 0** about the same as doing nothing/the status quo
- worse than doing nothing/the status quo
- much worse than doing nothing/the status quo



	Option 1 – Increase the use of the current International Plastic Identification Code	Option 2 – Adopt or adapt an existing national recycling labelling scheme	Option 3 – Develop a domestic national recycling labelling scheme
	PRIMARY OBJECTIVES		
Increases the recycling recovery rate	<p>+</p> <p>Increasing the use of the current International Plastic ID Codes would likely lead to a higher recycling recovery rate for plastics as it would remove ambiguity for some consumers.</p> <p>Since these Codes apply only to plastics, and not paper or glass, these benefits would be limited to one product type.</p> <p>The full benefit of this option would also likely only be realised the through the mandatory use of these Codes.</p>	<p>++</p> <p>Depending on the design of the scheme that was adopted, this option could lead to a significant increase in recycling recovery rates.</p> <p>The Australasian Recycling Label (ARL) is the most likely option for adoption or adaption as it already reflects local recycling practices and is already in use by some local manufacturers.</p> <p>The design of the ARL meets the UNEPs fundamental principles for product sustainability information, and recently received from the UNEP and Consumers International the highest assessment rating against other global labels for recycling guidance.</p> <p>Use of the ARL in New Zealand is already supported by some significant industry groups, and trans-Tasman manufacturers. This means that it is more likely to be used by the sector than other alternatives.</p>	<p>++</p> <p>A domestic recycling labelling scheme could significantly increase recycling rates, depending on how it is designed and its coverage.</p> <p>Specifically, a domestic label that provides consumers with information on how to dispose of the different packaging elements correctly, and covers all recyclables, would likely result in the greatest increase in the recycling recovery rate.</p> <p>A domestic recycling labelling scheme could also adopt a binary ‘recycle/do not recycle’ design which is less ambiguous than a label with a conditional instruction (such as the ARL), although regional variation in New Zealand kerbside collection would make a binary system difficult to implement in the short-term.</p>
Can be implemented without placing undue costs on businesses, the community, or public funds	<p>0/-</p> <p>The cost of increasing the use of the International Plastic ID Codes on a voluntary basis is likely to be the same as the status quo.</p> <p>There would likely be some costs from additional consumer and business outreach by government and industry groups to raise awareness of the Codes, but this would be comparatively minor.</p> <p>Mandating the use of the Plastic ID Codes would require additional costs in the form of compliance and enforcement action by the government. This is because the barriers to using the Codes are already low. The plastic products that do not feature the Codes are predominately imported.</p>	<p>++</p> <p>Adopting or adapting the ARL would place additional costs on the manufacturing sector and the government.</p> <p>Membership to the Australian Packaging Covenant (APCO) is currently required in order the access the ARL and the PREP tool which underpins it.⁸⁶</p> <p>Several significant New Zealand manufacturers who operate in both Australia and New Zealand already have access to, or are using the ARL, so they would be unlikely to face additional costs.</p> <p>New Zealand SMEs without an APCO membership would either need to join at an annual cost of AUD\$1,020 to AUD\$12,500 (depending on organisational review) or find an alternative way to access the ARL. This could potentially include the government paying for a national licence for the PREP tool and the ARL and providing access to New Zealand businesses.</p> <p>Manufactures would also face costs to update their labels to include recycling information.</p> <p>The government would need to support the scheme with information and awareness to help drive uptake.</p> <p>Voluntary or mandatory implementation would also change these costs.</p>	<p>+</p> <p>A domestic-only scheme would not require membership to APCO or a fee for use from another organisation.</p> <p>While this could be less costly over time than using a scheme like the ARL, there would be a higher upfront cost for the development and design of a new labelling scheme.</p> <p>This would include the development of a tool to help manufacturers and packaging designers understand the recyclability of their products, like the role of the PREP tool in the ARL. This could incur a significant cost for the Crown to build.</p> <p>Without such a tool, businesses would face additional costs themselves to understand the recyclability of their products, which could result in lower labelling uptake.</p> <p>There may also be options to access the PREP tool separately from the ARL to underpin a domestic label, which could lower the costs to the Crown, though costs would still likely be higher than adopting or adapting the ARL.</p> <p>Overall a domestic label is likely to result in lower costs for New Zealand only SMEs, but increased costs to larger trans-Tasman manufacturers who will need to undertake different labelling for different products.</p>

⁸⁶ APCO are also currently looking at a non-membership-based agreement to provide access to the PREP tool and the ARL. The cost of this is unknown.



	Option 1 – Increase the use of the current International Plastic Identification Code	Option 2 – Adopt or adapt an existing national recycling labelling scheme	Option 3 – Develop a domestic national recycling labelling scheme
Flexible enough to accommodate regional variation and future changes in national recycling practices	<p>0</p> <p>The Plastic ID Codes reflect the chemical composition of the plastic product. They still require the consumer to interpret what they mean locally for recycling and would not reflect any changes to regional kerbside collection.</p> <p>They also do not allow for any additional information for product end of life, such as a container return scheme.</p>	<p>+</p> <p>Most existing national recycling labelling schemes, including the ARL, can incorporate changes in products and materials collected at the kerbside.</p> <p>The ARL has also been designed with the ability to incorporate additional end-of-product-life information, such as the REDcycle programme in which soft plastics are collected in store.</p> <p>If New Zealand were to adopt the ARL, it may be more difficult to make quick changes, given the need to align with practices in Australia. This would depend on the specifics of any alignment.</p>	<p>++</p> <p>A domestic labelling scheme could most easily accommodate changes to kerbside collections across regions, or include additional end-of-productive-life information, due to the more streamlined, domestic-only decision-making process.</p> <p>There would still be some delay in reflecting any changes due to the need to systematically update the label over time.</p>

SECONDARY OBJECTIVES

Increases confidence in the recycling system	<p>0</p> <p>Increasing the use of the Plastic ID Codes is unlikely to significantly increase confidence in the recycling system as they provide consumers with no additional assurance about whether a product is recycled.</p>	<p>++</p> <p>Trust and confidence in recycling increases if consumers believe that what they are recycling is recycled.</p> <p>Under the ARL, for a product to be considered recyclable its material must be widely collected, adequate sorting and processing infrastructure must be in place, and there must be a market for the resulting recyclate (meeting ISO 14021 requirements for environmental labels).</p>	<p>++</p> <p>A domestic scheme could also increase confidence in the recycling system if it were also designed to meet ISO 14021 requirements.</p>
Administrative simplicity	<p>0</p> <p>There would be minimal additional administrative complexity from increasing the use of the Plastic ID Codes.</p> <p>There would be greater complexity if this was a mandatory requirement.</p>	<p>++</p> <p>A comprehensive labelling scheme like the ARL would require additional administrative effort for both participants and the government.</p> <p>Using the PREP tool would save some administrative complexity, such as regular technical updates.</p>	<p>+</p> <p>Depending on its design, a domestic scheme could result in a higher level of administrative complexity, as the Crown or a delegated body (such as an industry group) would be solely responsible for its management.</p>
Can be progressed under existing legislation	<p>+</p> <p>Regulations under the Waste Minimisation Act 2008 could support this option if required.</p>	<p>+</p> <p>Regulations under the Waste Minimisation Act 2008 could support this option if required.</p>	<p>+</p> <p>Regulations under the Waste Minimisation Act 2008 could support this option if required.</p>
Supports independent review and assessment	<p>0</p> <p>Increasing the use of the Plastic ID Codes is unlikely to significantly change the way they are currently reviewed and assessed.</p>	<p>++</p> <p>The ARL meets ISO 14021 requirements for environmental labels, which requires self-declared environmental claims to be: accurate, verifiable, not misleading, substantiated, specific, unlikely to result in misinterpretation or misunderstanding, true to the final product and takes into account the entire product life cycle.</p>	<p>++</p> <p>A domestic scheme also supports independent review and assessment if designed in such a way as to meet ISO 14021 requirements.</p>
OVERALL ASSESSMENT	<p>While increasing the use of the Plastic ID Codes may lead to a small increase in plastic recycling, it is unlikely to make a significant difference to overall recycling levels in New Zealand.</p>	<p>Adopting or adapting an internationally labelling scheme, specially the ARL, has some significant advantages. It is an effective labelling scheme, it is supported by industry groups in New Zealand, and it is already in use in New Zealand.</p>	<p>Developing a domestic scheme does have some advantages over adopting the ARL, or another international labelling scheme.</p>



	Option 1 – Increase the use of the current International Plastic Identification Code	Option 2 – Adopt or adapt an existing national recycling labelling scheme	Option 3 – Develop a domestic national recycling labelling scheme
	<p>While mandating their use would increase likely result in more of an increase in recycling recovery rates than a voluntary approach, it would still not have the same benefits as the other options being assessed.</p> <p>There may be separate benefits outside of increasing consumer information from mandating the use of the Codes, such as making it easier for recycling processors to recover resources more accurately.</p>	<p>Significantly, the PREP tool is already set up for New Zealand, meaning that such a label could be implemented more quickly and at lower cost.</p> <p>There are a range of options to be further explored about how the ARL could be adopted. These range from adapting it as it stands, to creating a New Zealand version that is compatible with the ARL in Australia.</p> <p>Further work is required to ensure equitable access for New Zealand businesses to the PREP tool and the ARL, particularly if the government decides on a mandatory approach to recycling labelling.</p>	<p>While it allows for a more domestically-focused scheme that is more adaptable to change, is likely to be a more expensive, time-consuming and administratively-complex option.</p> <p>These downsides could be managed by using the PREP tool as the basis of a domestic label, but this may create the potential risk of duplicating the ARL.</p>



APPENDIX 2. IMPLICATIONS OF COVID-19 FOR RECYCLING LABELLING

Introduction

During this project, the impacts of COVID-19 on New Zealand and the world became apparent, including the impacts on waste and recycling systems. This section provides an overview of the main impacts of COVID-19 relevant to this work, including:

- global supply chains for post-consumer plastics are distressed and fragmented following significant falls in the price of recyclable material and the price of oil
- a renewed focus on costs to business, particularly those imposed by government policies
- a perspective that there is an opportunity to reset and/or stimulate the economy, with greater emphasis on environmental sustainability
- an increase in the use of some plastic goods.

These impacts emerged from the interviews we conducted and our own desktop research. Some of these impacts were occurring or expected to some degree prior to the widespread onset of COVID-19: however, they have been exacerbated by recent events.

Global recyclable markets are distressed and fragmented

Recycling is underpinned by a supply chain, running from collections (including kerbside collections) through to MRFs. MRFs sell recyclable material as a commodity on global markets. COVID-19 caused significant distress to these markets, and the parts of the supply chain that supply them.

As oil prices fell, so did the price of inputs for virgin plastic

As countries implemented “lockdown” restrictions, economic activity reduced significantly. This led to a dramatic fall in the price of crude oil, which was strongly influenced by severely reduced demand from aviation, logistics, tourism, and other industries.

In April 2019, Dubai crude oil cost over US\$73 per barrel. In April 2020 the price had plummeted to only US\$17.55. In some locations, crude oil had a



negative value for a short time. On 22 May 2020 it had recovered somewhat to US\$34.17 per barrel.⁸⁷

The price of crude oil is a reasonable proxy for the price of making conventional (i.e. not bio-based) “virgin” plastic. This means demand has fallen for bundles of recyclable plastic waste (or “post-consumer polymers”), as producers of plastic products turn to virgin inputs.

This trend began in late-2019, when commodity market specialists S&P Global Patts revealed that recycled plastic cost £57 per tonne more than new plastic. This was partly driven by the increased supply of raw petroleum products from the development and widespread application of techniques like hydraulic fracturing (“fracking”), and partly from growing demand from producers wanting to include recycled plastics in their products.

The recent massive drop in oil prices has exacerbated this trend. RecyclingMarkets.net has reported that in the three months to 22 May 2020 the price of post-consumer plastic fell. For example:

- HDPE fell by 42%
- polypropylene fell by 43%
- PET fell by 14%.

⁸⁷ <https://www.interest.co.nz/charts/commodities/oil-and-petrol>

⁸⁸ Euonmia Research & Consulting Ltd (NZ), *National Resource Recovery Project – Situational Analysis Report*, (20 September 2018)

The post-consumer plastic market was already affected by China’s National Sword

New Zealand exported over 41,000 tonnes of plastic waste in 2017, largely to China, Hong Kong (often en route to China), Indonesia, Thailand, Malaysia, and Vietnam. China has restricted solid waste imports, and other countries look set to follow.

China’s “National Sword” policy is the country’s latest set of restrictions on the import of solid waste to China as an input. Two main groups of material were affected in January 2018 within an outright ban on importing into China:

- mixed paper grades
- plastics scrap (covering the majority of post-consumer plastics).⁸⁸

Other recyclable grades can be imported into China subject to a maximum contamination limit of 0.5%. This limit is generally considered unattainable for most mixed grades of post-consumer material. It is possible that China will expand its bans on imports of recyclables in the future. It is also unlikely that world capacity has increased to offset the reduction in volumes taken by China.

China’s National Sword policy has decreased demand for recyclable plastic waste, adding to the downward pressure on commodity market prices for post-consumer plastics.



There has been an impact on recycling collection in New Zealand

Prior to COVID-19, MRFs around the world were struggling to operate economically given increases to the supply of oil and policies implemented by China and the governments of other export markets for post-consumer plastic. COVID-19 increased this pressure on recycling infrastructure.

In New Zealand, kerbside recycling practices vary between regions. Regional variation was even more pronounced under alert levels 3 and 4. For example:

- in some areas, MRFs stopped collecting kerbside recycling altogether
- in some areas, kerbside recycling was collected but landfilled
- in some areas, some recyclable materials were collected and processed using automated systems or manual systems where appropriate physical distancing and provision of personal protective equipment were achievable.

Many districts returned to normal recycling services under Level 2, while others waiting until Level 1. During Level 2, where recycling collections restarted, some materials continue to go to landfill where access to overseas markets where was restricted or where materials are heavily contaminated.⁸⁹

⁸⁹ <https://www.mfe.govt.nz/about-us/information-ministry-response-covid-19/frequently-asked-questions-rubbish-and-recycling>

Hence, there is disruption at several points of the supply chain

COVID-19 has clearly changed the landscape for the supply of post-consumer recyclables. In New Zealand, collecting and processing have been interrupted by precautions.

Even where material can be recycled, finding a buyer on the international market has become more difficult, exacerbating a trend that was already manifest given government policies in China and developments that increased the supply of oil.

However, the significant drop in the price of oil as a result of COVID-19 has made inputs for virgin plastic even more competitive than inputs for recycled plastic goods.

What does this mean for labelling?

As noted elsewhere in this document, labelling is directly related to kerbside collection which, in turn, is directly related to the markets that the relevant MRFs can access economically.

Approaches to labelling cannot solve the problems in global supply chains for recyclable material but it is impacted by them.



Governments are wary of imposing costs on business

Any labelling requirement would be likely to impose a cost on at least some businesses.

Generally, business has suffered as a result of COVID-19

The International Monetary Fund predicts New Zealand Gross Domestic Product (GDP) will shrink by 7.2 percent in 2020.⁹⁰ Early signs from overseas also show a significant reduction in economic production. Treasury reports:

*The economic impact of COVID-19 is becoming clearer globally, with March quarter GDP declines reported in Germany, Japan, and Thailand, and record declines in industrial production and retail sales in the United States (US). Australia's April labour force and retail sales releases supported analysts' views that GDP will fall by about 10% in the June quarter. Meanwhile, in China activity continued to improve in April, although retail spending lagged the broader recovery.*⁹¹

In New Zealand, business is hurting from reduced economic activity. Retail spending fell to around 90% below 2019 levels during Level 4 before subsequently rebounding. Total retail spending during the week of 17 May, which included three days of Alert Level 3 and four days of Level 2, was 11 percent below 2019 levels.

⁹⁰ <https://www.imf.org/en/Countries/NZL>

On 15 May, the total number of Jobseeker Support (JS) benefit recipients reached 188,000 (around 6.3 percent of the estimated working-age population), an increase of 1,600 from the week prior. While the number of JS recipients is still growing, the rate of growth has slowed since the peak number of new recipients recorded over the week ended 3 May. Some predictions of unemployment are much higher.

The BNZ-BusinessNZ Performance of Composite Index (PCI) fell 10.8 points to 25.7 in April (Figure 3), following a 15.9-point fall in March. The Performance of Manufacturing Index (PMI) fell 11.9 points to 26.1, while the Performance of Services Index (PSI) was down 11.4 points to 25.9.

The New Zealand government implemented business support measures

All of these indicators suggest the conditions for almost every business have become much less favourable since March 2020. The New Zealand government has implemented a range of measures to offset or cushion these negative impacts on businesses (and their employees). This includes:

- a wage subsidy scheme, which is available for all employers (including self-employed contractors) that have experienced a 30% (or greater) decline in revenue due to COVID-19. The scheme provides a wage subsidy to employers for a 12-week duration.
- Business Finance Guarantee Scheme whereby the government guarantees 80% of the risk

⁹¹ <https://treasury.govt.nz/publications/weu/weekly-economic-update-22-may-2020-html>



- changes to the Companies Act 1993 to allow company directors a “safe harbour” from potential adverse claims under sections 135 and 136 of the Act, the introduction of a Business Debt Hibernation regime to allow directors to manage any creditors which arise as a result of the crisis and several other related changes
- loans for small businesses to help cash flow
- the Research and Development (R&D) Tax Incentive allows qualifying businesses to claim a 15 percent tax credit on their eligible R&D costs⁹²
- existing services continuing or being expanded, e.g. Business Connect, Business.govt.nz, the Regional Business Partner network

In response to the economic climate, the New Zealand government is actively providing numerous support measures for businesses. However, this is only half the equation. Another means of supporting business is to remove regulations that entail additional cost.

Governments have delayed obligations to reduce costs to business

In New Zealand, the government has delayed the imposition of consumer information regulations that would require certain types of food to be labelled with the country of origin.⁹³

⁹² New policy changes allow more loss-making businesses to have this R&D tax credit refunded in cash. These broader refundability rules are backdated to the beginning of the RDTI scheme (the 2019/2020 income year) to help put much-needed cash back into R&D-performing businesses that are making losses.

⁹³ <https://www.stuff.co.nz/business/121625855/country-of-origin-labelling-rules-on-hold>

The Consumers’ Right to Know (Country of Origin of Food) Act 2018 (the Act) was passed in December 2018. The Act required the Minister of Commerce and Consumer Affairs to recommend a consumer information standard (to be made via regulations) within 18 months of the Act's commencement (i.e. by June 2020).⁹⁴ The regulations are now due to be recommended by June 2021 and come into effect in December 2021.

The Ministry of Business, Innovation and Employment has been clear that the delay of the regulations is to allow businesses to focus on supplying food and keeping their employees safe in the COVID-19 environment.

The government has also delayed the start date for the new financial advice regime from June 2020 to early 2021. This extension is part of the government’s response to the extraordinary circumstances brought about by the COVID-19 pandemic. It is designed to give relief to the financial advice community and to allow them to focus on helping clients, customers, and families at this difficult time.⁹⁵

The approach of removing regulatory costs is also used overseas. The City of Vancouver banned single-use plastic straws, utensils, cups, and shopping bags from 22 April 2020. However, Vancouver is suspending education, outreach, and enforcement for these by-laws until further notice. This is because the City's priority is responding to the COVID-19 pandemic and ensuring essential services continue uninterrupted.⁹⁶

⁹⁴ <https://www.mbie.govt.nz/have-your-say/exposure-draft-consultation-consumer-information-standards-origin-of-food-regulations-2019/>

⁹⁵ <https://www.fma.govt.nz/news-and-resources/covid-19/implementation-of-new-zealands-new-financial-advice-regime-has-been-delayed-until-early-2021/>

⁹⁶ <https://vancouver.ca/green-vancouver/single-use-items.aspx>



What does this mean for labelling?

This suggests the impact of new mandatory labelling obligations on businesses may be particularly heavy at a time of great economic disruption. Therefore, regulators should consider ways to cushion this impact, including by making any new obligations voluntary, or introducing a reasonable phase-in period for new mandatory obligations.

We do not consider this disruption significant enough not to proceed with recycling labelling. While interview participants noted the economic disruption caused by COVID-19, they still supported this work continuing.

There is an opportunity to “reset” the economy

The economic damage caused by COVID-19 and the government’s willingness to borrow and spend through the \$50 billion COVID-19 Response and Recovery Fund (CRRF) has reignited the discussion on how the economy should look, underpinned by a sentiment that New Zealand has a chance to “reset” and shape the economy of the future. Many New Zealanders would like the economy to be more circular, sustainable, with lower emissions.

As set out above, the economy has suffered as a result of COVID-19, with some areas expected to recover much more slowly than others. For example, the tourism industry has been hit particularly hard by border

restrictions and limitations on domestic travel. Data issued in December 2019⁹⁷ shows the value of the industry pre-COVID-19:

- total annual tourism expenditure was \$40.9 billion
- total annual expenditure from international tourists was \$17.2 billion
- total annual tourism expenditure had increased by 50% in the last six year
- tourism was New Zealand’s biggest export industry, contributing 20.4% of total exports
- tourism generated a direct contribution to GDP of \$16.2 billion, or 5.8%, and a further indirect contribution of \$11.2 billion, another 4% of New Zealand’s total GDP
- 229,566 people were directly employed in the tourism sector, with another 163,713 employed indirectly. This equated to 14.4% of the total number of people employed in New Zealand.

These very significant benefits effectively disappeared overnight when New Zealand entered alert level 4. The sector cannot fully recover until some time after the borders reopen and international travel resumes. This may be dependent on a vaccine being discovered, tested and distributed widely, and the timeframe for this is uncertain.

Few sectors of the New Zealand economy have suffered as much as tourism. However, almost every part of the economy has suffered to some degree.

⁹⁷ <https://tia.org.nz/about-the-industry/quick-facts-and-figures/>



The government's support for business is outlined above. In some ways, that support could be seen as "propping up" the status quo, i.e. existing businesses in existing industries. However, Budget 2020 included support to stimulate activity in new areas, including "green" areas. This includes \$1.1 billion provided for 11,000 "nature-based" jobs, restoring natural landscapes, native bush, waterways, and coastlines.

This builds on existing government measures, e.g. the Just Transitions Unit established within MBIE to help share and coordinate the work of transitioning New Zealand to a low emissions economy.

What does this mean for labelling?

The "new normal" is still being shaped so there is an opportunity to make the economy more circular and better reflect higher levels of the waste hierarchy.

Labelling to indicate recyclability (and/or recycled content) can play an important role in this, shaping consumer and producer choices. If changes to the labelling regime were made now, they could align with public sentiment.

Use of some plastic goods has increased

The need for maintaining cleanliness and separation to stop the spread of COVID-19 has led to an increase in some plastic products. For example:

- use of wet wipes for sanitising hands and surfaces increased to the point where by 9 April 2020, the Ministry for the Environment launched a new campaign encouraging New Zealanders to bin wet wipes rather than flush them.
- some items previously sold in bulk are sold wrapped in plastic, e.g. bundles of white button mushrooms at some supermarkets.
- many New Zealand retailers refused to fill reusable cups, meaning single-use plastic takeaway cups were the only option (the government has now made it clear that reusables can be used safely.)
- more parcels are being delivered as consumers turn to mail ordering to purchase goods without going into stores that are shut or operating with restrictions, increasing plastic packaging use.

What does this mean for labelling?

All the examples above refer to single-use plastic. Single-use plastic products may continue to play a greater role in some aspects of the "new normal" for some time yet. However as set out above, many New Zealanders see COVID-19 as an opportunity to reset the economy on a more sustainable foundation.

Labelling has an important role to play in shaping consumer and producer choices about the materials used in products in this period when the "new normal" is still being formed, and in the future when it is bedded in.



APPENDIX 3. LABELLING CASE STUDIES

Introduction

New Zealand has experience with other kinds of product labelling to help consumers make informed decisions. The lessons from other kinds of labelling can help inform the development of recycling labelling.

Below are two case studies on the Health Star rating system, and the Energy Rating Label system.

Health Star Rating system

What is the Health Star Rating system?

The Health Star Rating (HSR) system is a voluntary labelling system that rates the nutrition content and healthiness of packaged foods.

The HSR system's overall objective is to provide convenient, relevant and readily understood nutrition information and/or guidance on food packs to assist consumers to make informed food purchases and healthier eating choices.

⁹⁸ mpconsulting, *Health Star Rating System Five Year Review Report*, (May 2019)

⁹⁹ Energy, sodium, saturated fat, total sugars, protein, fibre, and fruit/vegetables/nuts/legumes ingredients

While people are generally aware of the foods that are obviously healthy or unhealthy, there are many foods – particularly packaged foods – for which it can be difficult to identify the healthier option.

Ratings are calculated using the HSR Calculator, which assigns points based on the nutrient content of 100 grams (or millilitres) of a food. Products can score from half a star (least healthy) to five stars (most healthy) in half-star increments.⁹⁸ The system considers seven components,⁹⁹ based on healthy eating recommendations in the Australian and New Zealand Dietary Guidelines. Food manufacturers and retailers are responsible for the correct and accurate use of the Health Star Rating system.¹⁰⁰

How and why was the system developed?

New Zealand and Australia began implementing the HSR system in June 2014.

The genesis of the system was the 2011 trans-Tasman review of Food Labelling Law and Policy, which recommended that an interpretive front-of-pack labelling scheme be developed for implementation in Australia and New Zealand. In response to this recommendation the HSR system was

¹⁰⁰ [Ministry of Primary Industries, Health Star Rating Industry Kit](#)



developed in Australia through a collaborative process involving public health, industry, and government experts.

Concurrently in New Zealand, a New Zealand Front of Pack Labelling Advisory Group was appointed, now known as the New Zealand Health Star Rating Advisory Group (HSRAG), which developed principles for a front-of-pack labelling system in New Zealand.

In June 2014, the Australia and New Zealand Ministerial Forum on Food Regulation agreed that the system should be implemented voluntarily over five years.¹⁰¹

The New Zealand process was intended to be inclusive of industry stakeholders and nutritional experts. It was decided that the system would be voluntary (as opposed to mandatory), to keep it flexible and to secure buy-in.

How well has the system worked?

2019 external review findings

A formal review of the Health Star Rating system was published in May 2019. It concluded that the system was performing well and that it should continue as a voluntary scheme for a further four years.

Uptake had been positive. In the first quarter of 2018, 2,997 (21%) of eligible foods in the Nutritrack database¹⁰² carried a rating, up from 37 (0.3%) in 2015. In 2017, a total of 19% of New Zealand household food purchases carried a HSR label.¹⁰³ The review also found that the system was effectively directing consumers towards foods lower in energy, saturated fats, sugars and sodium, and that consumers were finding the system easy to understand and use.

In New Zealand, 28% of surveyed consumers used the system to help choose a product, with the vast majority choosing the product with more stars. The system was also encouraging positive reformulation of foods, with New Zealand research showing that 79% of products displaying the HSR had reformulated since 2014. The review provided three key recommendations:

- *Improving the HSR Calculator*, to better align with dietary guidelines and encourage further positive reformulation. This would increase the ratings of certain healthy products, more strongly penalise total sugars, improve sodium sensitivity and recategorising certain foods to decrease their ratings.
- *Driving further uptake of the system by industry*, by removing some of the barriers to uptake, setting a clear uptake target (70% of eligible products within five years of a government decision on these recommendations) and stakeholders working together to drive uptake.

¹⁰¹ mpconsulting, *Health Star Rating System Five Year Review Report*, (May 2019)

¹⁰² Nutritrack is a database that contains annually updated nutrition information on packaged foods and beverages sold at major supermarkets and fast food chains in New Zealand.

¹⁰³ [Health Star Rating System Five Year Review Report May 2019](#)



- *Improving the management and monitoring of the system*, by ensuring that the critical infrastructure is in place to manage and monitor the system (particularly in the context of broader public health and dietary patterns), and to improve the system's responsiveness to industry queries and consumer concerns.¹⁰⁴

Independent study findings

An Australian study examining the Health Star Rating system was published in the Australian and New Zealand Journal of Public Health in May 2019. The study concluded that the system should continue and be strengthened, while making certain improvements to the HSR Calculator. The study also recommended setting clear targets with specified timelines around system uptake, and improving transparency and accountability through a regularly updated, publicly available branded food composition database.¹⁰⁵

The study also argued that, to increase its public health impact, the system could be made mandatory: however, given the potential business impact, peak industry bodies had indicated their support for the system conditional on it remaining voluntary

Energy Rating Label system

What is the Energy Rating Label?

The Energy Rating Label (ERL) is displayed on all new whiteware appliances, televisions, computer monitors and heat pumps available for sale in New Zealand. The ERL displays a simple star rating - the more stars on the label, the more energy efficient the appliance is. It also features an annual energy consumption (kWh per year), calculated based on average expected use of the appliance over a year.¹⁰⁶

The Energy Rating label is mandatory for a range of specific products in retail stores, including air conditioners, washing machines, clothes dryers, dishwashers, televisions, refrigerators, freezers, and computer monitors. There is not a mandatory requirement to provide this information when products are sold online.

A related label, the Energy Star Label, which provided a 'seal of approval' for superior energy-saving appliances, was retired in 2017, as the worst performing products had been removed from the market, and because it was deemed to be getting lost in a crowded label market.¹⁰⁷

¹⁰⁴ mpconsulting, *Health Star Rating System Five Year Review Report*, (May 2019)

¹⁰⁵ Jones, A. et, al., 'The performance and potential of the Australasian Health Star Rating system: a four-year review using the RE-AIM framework', *Australia and New Zealand Journal of Public Health*, (May 2019)

¹⁰⁶ <https://www.energywise.govt.nz/energy-labels/energy-rating-labels/>

¹⁰⁷ <https://www.eeca.govt.nz/news-and-events/media-releases/energy-star-retires/>



How and why was the system developed?

ERL was introduced in 2003 following the adoption of the New Zealand Energy Efficiency and Conservation Act (the Act), to increase energy efficiency promotion in New Zealand.

Along with labelling, the Act made mandatory Minimum Energy Performance Standards (MEPS), which establish a minimum level of energy performance that products must meet.

The Act also established the Energy Efficiency and Conservation Authority (EECA) to promote energy efficiency. The ERL was developed under the trans-Tasman Equipment Energy Efficiency (E3) programme, through which New Zealand aligns its energy-related product standards (technically, commercially, and administratively) with those of Australia.

How well has the system worked?

A 2014 review found that the ERL was almost universally recognised, and that the level of recognition had increased significantly since it was introduced.¹⁰⁸ Consumers who were surveyed interpreted the labelling scheme correctly. The majority of consumers (80%) used the ERL to compare the annual energy consumption of similar appliances when making their purchasing decisions.

Key results of the ERL and MEPS include (for both New Zealand and Australia):

- 25% less energy is used by today's dishwashers compared to those of 10 years ago.
- 27% less energy is used by households on lighting now since the phase-out of inefficient lighting began in 2009.
- small split system air conditioners are 50% more efficient now than they were in 2001.¹⁰⁹

Key insights for recycling labelling

In reviewing the experience of the HSR and the ESL, the following key insights are relevant for recycling labelling:

- using a collaborative development process, which in the case of the HSR involved public health experts, industry, and government, is important for getting widespread 'buy-in' for a programme
- the experience of both the HSR and the ESL shows how alignment across Australia and New Zealand can help gain the support of product designers and manufacturers

¹⁰⁸ The majority of studies and reviews of the ERL are from Australia or cover both Australia and New Zealand.

¹⁰⁹ <https://www.energyrating.gov.au/about-e3-program>



- setting a clear uptake target is important to create a shared understanding of success in a voluntary scheme¹¹⁰
- having a visible role for the government can help avoid the perception a scheme is industry-driven
- there is no need to 'reinvent the wheel' - labelling systems are difficult to develop and (in the case of the HSR) using an existing system improved consistency of use¹¹¹
- documenting decision processes are important, including those where industry is involved.
- having quality guidance material as part of the labelling system is important, as is having clear definitions of what products are or are not covered.

¹¹⁰ 'What success looks like' should be defined at the outset – something that had not happened with the HSR system. Consequently, despite high uptake of the system in New Zealand relative to other international voluntary labelling systems, this was not always the public perception.

¹¹¹ The Health Star Rating system had originated in Australia and was trademarked there, but this had not created issues in New Zealand. It was helpful for voluntary labelling systems to be trademarked, as there were occasions where legal enforcement was required. Trademarking provided a legal hook for how the system could be used.

