



Proposed priority products and priority product stewardship scheme guidelines

Consultation Document
2019

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Agrecovery Foundation: agrichemicals (legacy chemicals to be collected for safe disposal)

Environment Canterbury: farm plastic (silage wrap being collected for recycling)

Ministry for the Environment: e-waste (circuit boards separated for recycling), plastic packaging (PET bottles collected and baled for recycling) and tyres

NZ Recovery (refrigerants in containers being collected for safe treatment)

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Message from the Associate Minister for the Environment



The Government wants to reduce the risk of harm from waste and increase economic and social benefits from more circular use of resources. We want to reverse the current trend of ever-increasing waste to landfill and aspire to reductions in multiple waste classes by 2020.

This is part of a longer-term goal of moving to a low-emissions, sustainable and inclusive economy for New Zealand.

Over the first 10 years of the Waste Minimisation Act 2008 (WMA), we have seen exemplary efforts by industry and community leaders to minimise waste within a completely voluntary framework. Local councils have used their half share of the waste disposal levy to actively support local waste diversion, and some businesses have used accredited product stewardship schemes to divert their end-of-life products from waste or harm. Good results have been achieved, and I commend all who have worked to make improvements.

On balance, however, this has diverted only a minority of waste from landfill and we are still losing the war on waste. This is a particular problem where the waste products, such as agrichemicals, refrigerants, tyres, electrical and electronic products (e-waste) and plastics, risk harming the community and the environment. Business and community voices are telling us it is time for more decisive action.

Regulated product stewardship is one of the tools available under the WMA to help design waste out of our economy. New Zealand has not yet used this tool, but we now intend to explore it in partnership with stakeholders. It is important that whatever we create not only benefits from the best overseas experience but is designed to suit New Zealand's situation and needs.

Development of co-designed and regulated product stewardship schemes must go hand-in-hand with improved onshore recycling infrastructure, an expanded waste disposal levy, improved waste data, improved controls on the burning of farm waste, and proactive government procurement. These supportive measures are all being discussed with stakeholders.

This consultation (stage one) sets the framework for the co-design of regulated product stewardship schemes. The proposed framework has two parts. The first declares the priority products being targeted (tyres, agrichemicals, refrigerants, e-waste, farm plastics and packaging). The second sets common guidelines for schemes dealing with those products.

Future consultation (stage two) will outline details of the schemes co-designed with stakeholders. It will also cover any potential regulations to 'level the playing field' and provide appropriate waste reduction incentives, on a priority product-by-product basis.

I encourage you to let us know your views on these proposals.

A handwritten signature in black ink that reads "E M Sage". The signature is written in a cursive, flowing style.

Hon Eugenie Sage
Associate Minister for the Environment

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Abbreviations

BFRs	brominated flame retardants
CDS	container deposit systems
CFCs	chlorofluorocarbons
EPR	extended producer responsibility
ETS	Emissions Trading Scheme
e-waste	waste electrical and electronic equipment (also WEEE)
GWP	global warming potential
HCFCs	hydrochlorofluorocarbons
HFCs	hydrofluorocarbons
OECD	Organisation for Economic Co-operation and Development
PFCs	perfluorocarbons
POPs	persistent organic pollutants
PROs	producer responsibility organisations
SGG	synthetic greenhouse gases
TDF	tyre-derived fuel
USA	United States of America
WMA	Waste Minimisation Act 2008
WasteMINZ	Waste Management Institute of New Zealand
WEEE	waste electrical and electronic equipment (also e-waste)
WMF	Waste Minimisation Fund

Executive summary

The Government wants New Zealand to have a productive, sustainable, inclusive and low emissions economy. The aim is for a more prosperous and fairer society, and economic growth within environmental limits. Part of this process is designing waste out of the system by transitioning from a linear 'throw-away culture' (take–make–dispose) to a circular economy (make–use–return).

The Waste Minimisation Act 2008 (WMA) has various tools to support this. One of the strongest tools for reversing linear resource use is regulated product stewardship.

Product stewardship is when people and businesses take responsibility for the life-cycle impacts of their products, either voluntarily or in response to regulatory tools.

The Government proposes to take a co-design approach to establishing regulated product stewardship schemes for priority products.

Once something is declared a priority product under the WMA, a product stewardship scheme for the defined product must be developed and accredited as soon as practicable, and a regulatory option to require participation in such a scheme becomes available.

Regulated product stewardship under the WMA is an option for managing classes of products that can cause environmental harm on disposal. When effectively designed and implemented, such systems can shift the costs of minimising harm from products away from the wider community and environment to product designers, producers and users. This can help create market incentives for better product design, reduce environmental impacts, increase materials recovery from products at the end of their life and encourage waste minimisation and resource efficiency.

Regulated product stewardship schemes are used extensively in other jurisdictions to reduce waste. For New Zealand, any such schemes would need to be designed and assessed for their potential effects in local conditions.

A two-stage process is proposed:

- stage one consults on the proposed declaration of six priority products and ministerial guidelines to clarify expected outcomes and attributes of accredited priority product schemes
- stage two will consult progressively by product group through 2019–21 on proposed WMA regulations.

1 Introduction

The Government wants to reduce the risk of harm from waste and increase economic and social benefits from a more circular use of resources. This is part of a longer-term goal of moving to a sustainable, productive, inclusive and low emissions economy for New Zealand. Product stewardship is one of the tools available under the Waste Minimisation Act 2008 (WMA) to help design waste out of the economy thereby making it more efficient.

The Government is proposing a co-design approach to establishing regulated product stewardship schemes for priority products.

Consultation will involve a two-stage process for product stewardship using tools under the WMA.

- Stage one (this consultation) – ‘the framework’ and declaration by notice in the *Gazette*:
 - ‘priority product’ status for six product groups under the WMA (section 9)
 - ministerial guidelines for the contents and expected effects of product stewardship schemes for priority products under the WMA (section 12)
- Stage two (subsequent design and consultation) – ‘priority product scheme detail’:
 - work with stakeholders to design product stewardship schemes for accreditation for each priority product group
 - consider, and as appropriate consult on, regulations under the WMA that may be required to implement those schemes.

Five of the six proposed priority product groups were the subject of public consultation in 2014: tyres, electrical and electronic products; refrigerants and other synthetic greenhouse gases; agrichemicals and their containers; and farm plastics. However, ministerial priority product stewardship scheme guidelines were not proposed in 2014 and, due to the passage of time, the Government is consulting again to update this information with current views.

The sixth proposed priority product group, packaging, was proposed by submitters in 2005, 2009 and 2014 as a product group that should be included. It is now proposed as a priority product.

We welcome your views. Information on the proposals is in section 3, and information on how to make a submission is in section 4.

Submissions close at 5.00 pm on Friday 4 October 2019.

2 Product stewardship under the Waste Minimisation Act 2008

The Government wants New Zealand to have a productive, sustainable, inclusive and low emissions economy. The aim is for a more prosperous and fairer society, and economic growth within environmental limits.

Designing out waste: ‘circular economy’ approach

A ‘linear’ economy (take–make–dispose, figure 1) is the dominant system globally. Many countries, including several of New Zealand’s trading partners, are now challenging this model as unsustainable. Symptoms of market failure for the linear system include: pollution to air, water and land; climate change; release of persistent toxic substances; unsustainable rates of harvest for food and materials; and loss of species, habitats and ecosystems.

The Earth’s capacity is finite, while the human population and our aspirations for material consumption continue to grow. As a result, global consumption of raw materials and natural ecosystem services is increasing rapidly in a degrading environment. Current evidence indicates we have already stepped over several safe planetary boundaries (Steffen et al, 2015).

The ‘circular’ economy (figure 1) is an alternative model for creating prosperity. The model:

- values resources for their intrinsic worth
- respects and restores the natural cycles for biological materials (make–consume–enrich)
- creates nature-inspired cycles for redesigned human-made materials (make–use–return).
- is restorative and regenerative by design and aims to keep products, components and materials at their highest utility and value (Ellen MacArthur Foundation, 2013).

Figure 1: Comparing ‘linear’ and ‘circular’ economies



Actions to phase out aspects of a linear ‘throw-away culture’ are an essential part of a transition to a circular economy. The WMA has various tools to support this.

Bans can be appropriate for specific products that cause environmental harm when disposed of by users, especially when less harmful alternatives are available. New Zealand has taken two steps under the WMA to address the environmental harms of microplastics and marine plastics: it banned plastic microbeads in certain wash-off products (as at 7 June 2018) and single-use plastic shopping bags (as at 1 July 2019).

Regulated product stewardship under the WMA is an option for managing classes of products that can cause environmental harm on disposal, but where market incentives to design more benign alternatives are not strong. When effectively designed and implemented, such systems can shift the cost of minimising harm from products away from the wider community and environment to product designers, producers and users. This can help create market incentives for better product design to reduce environmental harm and ensure products are appropriately disposed of when they become waste.

What is product stewardship?

Product stewardship is when people and businesses take responsibility for the life-cycle impacts of their products, either voluntarily or in response to regulatory tools.

In a linear economy, the people who design and sell products generally do not pay for the disposal costs and environmental harm when their products become waste, nor in most cases do their direct customers. These costs are largely borne by the wider community and future generations.

In a circular economy, the full life-cycle cost and legal signals would directly inform product design and resource cycling. During the transition to a circular economy in New Zealand, these signals can be improved through voluntary or regulated product stewardship tools under the WMA.

The purpose of WMA product stewardship provisions is twofold:

- to encourage (or require) people and organisations involved in the life of a product to share responsibility for ensuring its effective waste minimisation
- to manage environmental harm when it becomes waste (WMA section 8).

Product stewardship scheme participants can include producers, brand owners, importers, retailers, consumers, collectors and reprocessors.

Section 5 of the WMA defines ‘producer’ as a person who:

- (a) manufactures a product and sells it in New Zealand under the person’s own brand; or
- (b) is the owner or licence holder of a trademark under which a product is sold in New Zealand; or
- (c) imports a product for sale in New Zealand; or
- (d) manufactures or imports a product for use in trade by the person or the persons.

A ‘product’ is defined as including both packaging and a class of product.

Voluntary product stewardship

Since the passage of the WMA in 2008, the Government has encouraged the development of voluntary product stewardship schemes. New Zealand now has 10 years' experience of the effectiveness of this approach. This adds to many decades of voluntary experience before the passage of the WMA.

Fourteen voluntary schemes are in operation that have been accredited under the WMA. These encourage voluntary action by producers and consumers to reduce waste and risk of harm for a range of products, for example: packaging, electrical and electronic equipment (e-waste), paint, agrichemicals, lubricating oil, refrigerants, farm plastics, carpet and concrete.

Most voluntary product stewardship schemes (whether accredited or not) experience problems with participation and product recovery rates. For example:

- schemes that set a voluntary levy or fee for responsible end-of-life waste product management discourage participation by producers and consumers, lead to low rates of collection for recycling or treatment, and often do not collect enough levies or fees to cover a full service
- non-members of a voluntary scheme with a levy can charge less for their product and have a market advantage over participating brand owners
- accredited voluntary schemes that deal with only one company's products (as do seven of the 14 accredited schemes) can have excellent results but will not influence most of that product group.

A summary of voluntary accredited schemes and their success to date is in appendix 2.

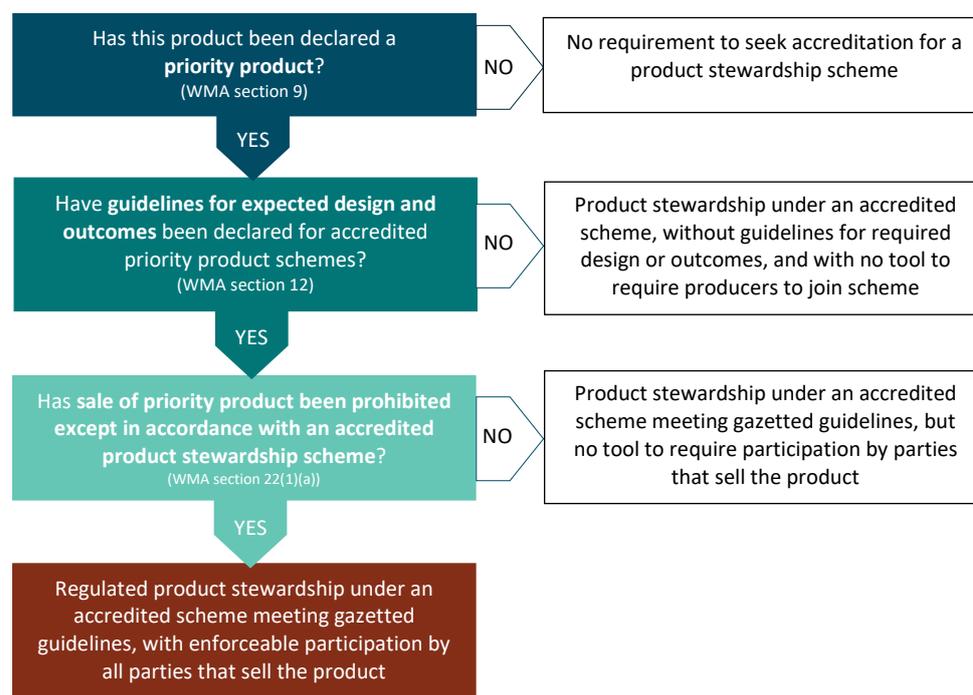
Regulated product stewardship

At present, New Zealand has no regulated product stewardship schemes. Numerous examples overseas include: e-waste, tyres, packaging, batteries, vehicles, oil, medicines, paint, agrichemicals, solvents, products with mercury and graphic paper. These schemes typically work by requiring product fees on entry to market and reallocating the funds to ensure products are recycled or safely treated (appendix 3).

To 'level the playing field', the WMA offers the option of a 'priority product' declaration (section 9) and regulation that prohibits the sale of a priority product except in accordance with an accredited product stewardship scheme (section 22(1)(a)). Without this regulation, participation in an accredited scheme is not enforceable, and the section 22(1)(a) option is only available for declared priority products. Figure 2 summarises the inter-relationship of WMA sections 9, 12 and 22(1)(a).

Other potential regulatory options under the WMA that would help to 'level the playing field' for activities include advance product management fees, deposit–return systems and labelling requirements (section 23).

Figure 2: Inter-relationship and effect of actions under Waste Minimisation Act 2008 sections 9, 12 and 22(1)(a)



Various terms are used overseas to describe regulated government approaches to product stewardship, including ‘co-regulatory’ (eg, Australia) and ‘extended producer responsibility’ (eg, Europe and North America). Definitions for ‘voluntary’, ‘regulated’ or ‘mandatory’ are not set out in the WMA.

We have chosen the terms ‘regulated’ and ‘co-design’ for this report. ‘Regulated’ relates to priority product stewardship schemes that will need one or more WMA regulations for effective operation. ‘Co-design’ refers to the development of schemes and proposals for regulations with stakeholders.

This consultation is about setting a framework for regulated product stewardship under the WMA, within which co-design of effective product stewardship schemes for priority products can proceed. The framework proposed is to identify priority products, which triggers a requirement to prepare and accredit product stewardship schemes for them, then set guidelines that such schemes would be expected to meet to be accredited.

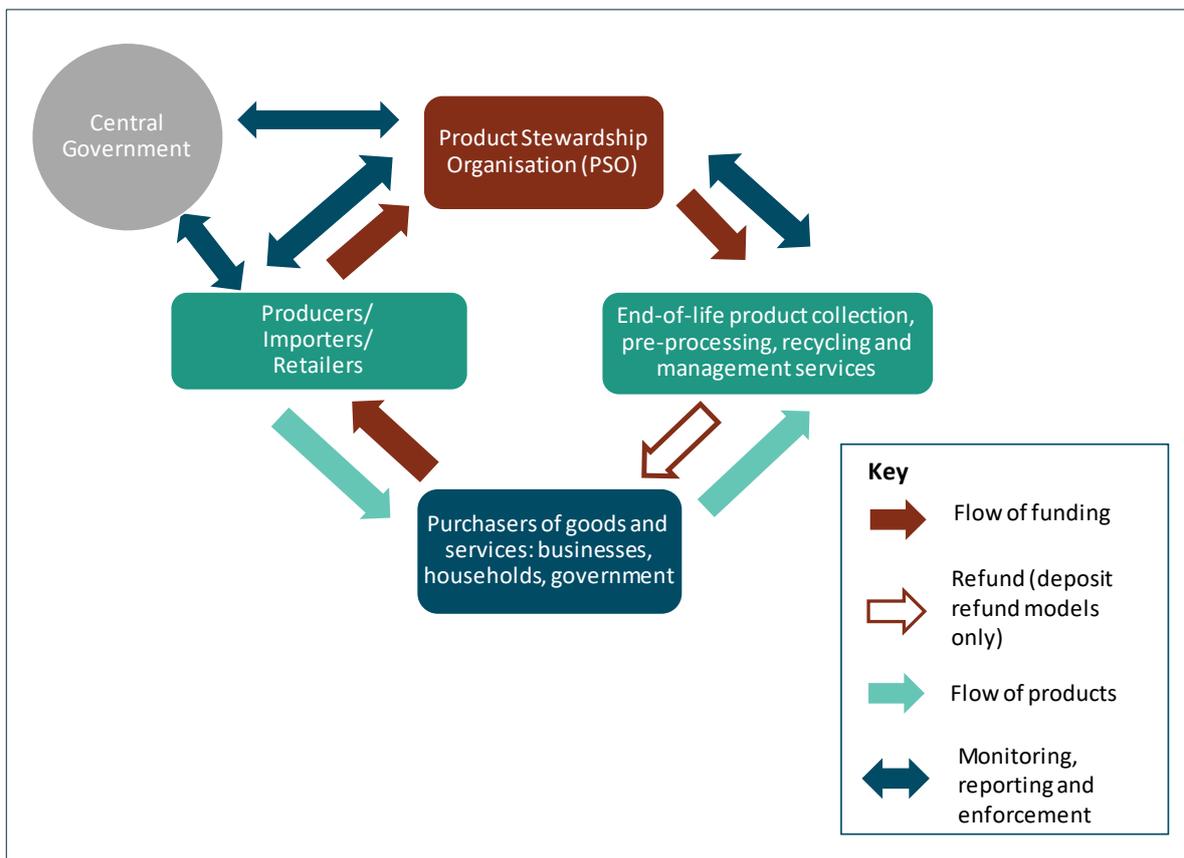
What would a regulated product stewardship scheme look like?

New Zealand has not yet used the WMA provisions to regulate product stewardship so must look to overseas models to understand how this might work in practice. Hundreds of regulated product stewardship schemes have been designed worldwide, with the most common being product take-back, advance fees, and deposit–refund (appendix 3). Figure 3 shows a high-level indicative design of how an advance disposal fee or deposit–refund system might work in New Zealand.

International experience is that regulated product stewardship schemes are typically managed by a not-for-profit entity (product stewardship organisation or PSO) that represents all

producers of that product group. The PSO manages funds, contracts for services, operates any funding and take-back system, and reports to government and stakeholders. The role of government is to accredit, monitor and enforce. Indicative relationships between the participants is shown in figure 3. The proposed Stage two would involve co-design of the detail for suitable schemes for New Zealand and consultation on any regulations necessary for effective operation.

Figure 3: Indicative regulated product stewardship scheme design



Priority product declaration

The Minister for the Environment may declare a ‘priority product’ by issuing a Gazette notice under section 9 of the WMA. Once a product is declared, a product stewardship scheme must be developed and accredited as soon as practicable (section 10).

This declaration power has not yet been exercised and is now being proposed (chapter 3).

Guidelines for priority product stewardship schemes

Sections 13 to 15 of the WMA provide requirements for an application for ministerial accreditation of a product stewardship scheme.

The WMA also provides an option for the Minister for the Environment to gazette guidelines about the contents and expected effects of product stewardship schemes for priority products (section 12). Proposed product stewardship schemes must be consistent with any such guidelines, to obtain accreditation, unless the Minister determines the scheme should

nevertheless be accredited. Section 12 may apply to one or more products, and may include, but is not limited to:

- **timeframe:** how long a scheme would last
- **targets:**
 - the expected reduction in harm to the environment from a scheme’s implementation or the expected benefits from reduction, reuse, recycling, recovery or treatment of the product
 - the time within which these are expected to occur
 - the expected waste minimisation, treatment or disposal objectives and when these would be achieved.
- **transparency:** reporting and information requirements, including information to be provided to purchasers, users and handlers of the product
- **timeliness:** when an application for accreditation of the priority product scheme is expected to be made.

This power to set priority product stewardship scheme guidelines has not yet been exercised but is now being proposed (chapter 3).

Well-designed guidelines, while not a statutory requirement, have the potential to significantly improve waste minimisation, harm reduction, resource efficiency and improve incentives for more circular product design. OECD recommendations (OECD, 2016) and others on best practise have been considered in preparing the proposed guidelines.

3 What we are proposing

The Government proposes using several tools under the WMA to increase incentives for people and businesses to take responsibility for the life-cycle impacts of their products. The aim is to reduce the harm posed by certain end-of-life products and design waste out of the system. A two-stage process is proposed (figure 4).

- stage one consults on the proposed declaration of six priority products and ministerial guidelines to clarify expected outcomes and attributes of accredited priority product schemes
- stage two will consult progressively by product group through 2019–21 on proposed WMA regulations.

Six proposed priority products have been selected as a start of the declaration of priority products. They are considered to meet the requirements under the WMA for declaring a priority product. It is proposed to declare six priority products under the WMA:

- tyres
- electrical and electronic products
- agrichemicals and their containers
- refrigerants and other synthetic greenhouse gases
- farm plastics
- packaging.

Timing

Subject to feedback on this consultation, the Government proposes completing the declaration of priority products and ministerial guidelines for accreditation of product stewardship schemes in 2019.

The intent of the proposed approach is to signal to businesses, councils and other stakeholders the Government's direction and encourage co-designed product stewardship schemes for priority product under the WMA.

The declaration of priority products triggers a requirement for a scheme to be accredited for that product. The ministerial guidelines currently proposed address timing for applications for accreditation as follows (see table 1).

Figure 4: Proposed stage one and stage two consultations for product stewardship schemes under the Waste Minimisation Act 2008 (WMA)

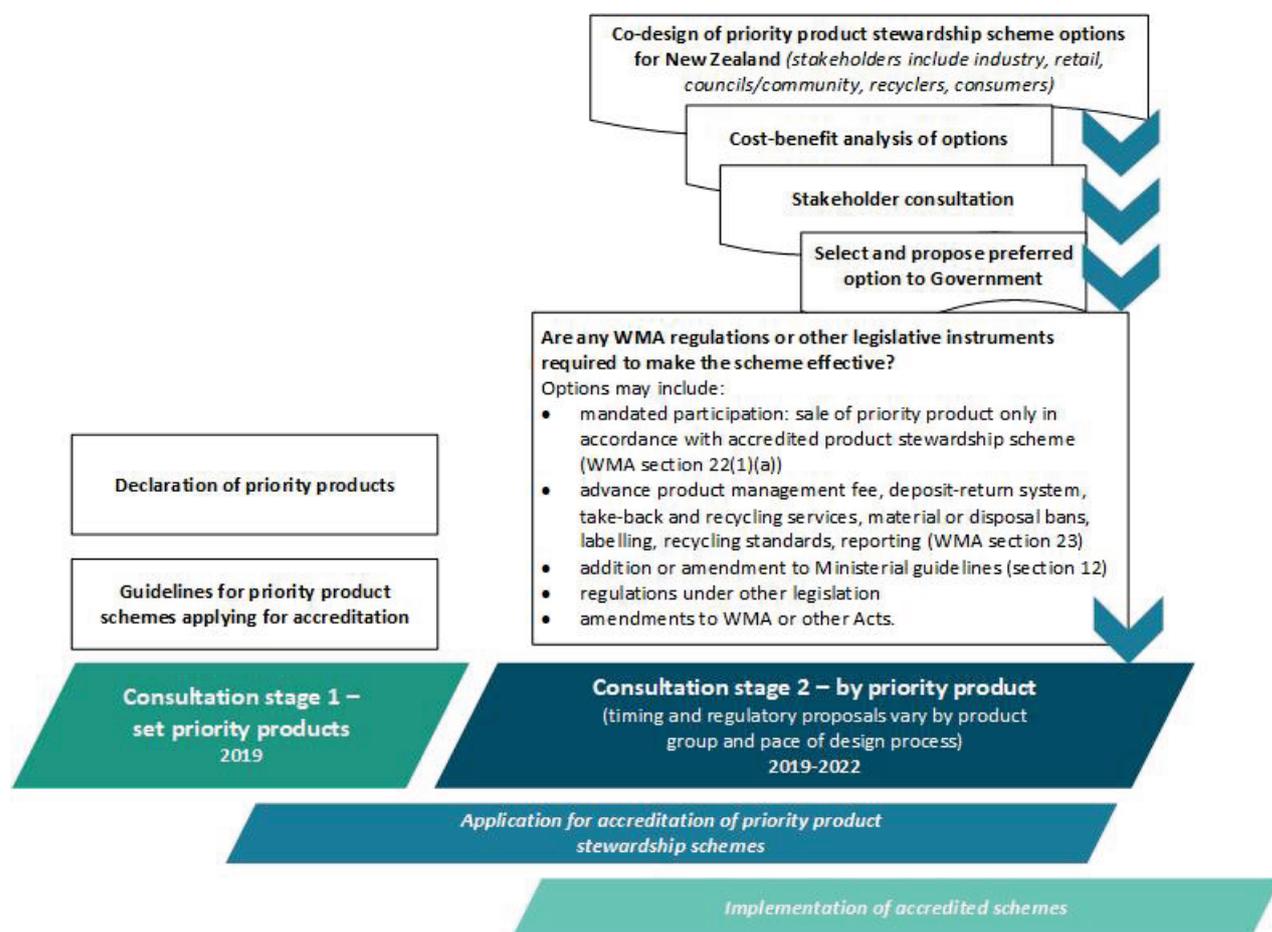


Table 1: Proposed timing for applications for priority product scheme accreditation

Stage of scheme design for the priority product	When application for accreditation (or reaccreditation) is expected
Existing accredited voluntary schemes (eg, refrigerants, agrichemicals, farm plastics)	Within one year from the date of priority product declaration
Schemes developed with a multi-stakeholder consultation process including, as a minimum, producers, local authorities, major users and existing collectors and recyclers (eg, tyres and potentially e-waste and some packaging types)	Within one year from the date of priority product declaration or the date of proposal completion, whichever comes later
No scheme in place or being developed	Within three years from the date of priority product declaration

Timing for implementation of a scheme and its roll-out to all regions will depend on the product group. Details will be expected as part of the accreditation application.

A co-design regulated approach

The Government proposes taking the following co-design approach to establishing regulated product stewardship schemes for priority products:

- setting a framework for regulated product stewardship, by declaring certain products as ‘priority products’
- issuing guidelines that product stewardship schemes applying for accreditation for priority products will be expected to meet
- working with stakeholders to design:
 - appropriate schemes for accreditation under the WMA
 - ways to ‘level the playing field’ (potentially using the WMA or other regulations)
- monitoring scheme outcomes
- making and enforcing any necessary regulations.

Producers of priority products, stakeholders involved in a product’s life cycle, and other interested parties would, as appropriate to their circumstances:

- make submissions on this consultation document
- participate in subsequent co-design processes
- participate in accredited schemes for priority products, including any requirements such as membership or advance disposal fees and provision of data.

This approach should mean the Government can act more quickly and bring in business and social enterprise experience as required. Reasons for this include that government intervention can be slow and business can be far more agile in leading innovation in areas of expertise. Unlike the Government, business can bring to the design process a deep understanding of supply chains, cost-effective logistics, product design, and stakeholder and customer expectations. For example, rather than specifying exactly how producers should get their products back from consumers and process them at end-of-life, the Government can specify broad requirements for convenient and safe product take-back and management. Producers (with their supply and retail chains) and other stakeholders can then design cost-effective methods to deliver these outcomes.

A co-design process will also benefit from including wider stakeholders. Collectors, recyclers and territorial authorities can inform practical sustainable solutions, and advocates for consumers and environmental and community health can highlight non-monetary costs and benefits. Māori must also be part of the co-design process as kaitiaki of the environment with responsibility to protect mauri and as partners with the Crown in good environmental management. This can help strengthen the ‘social licence to operate’ for producers and regulated product stewardship schemes, as well as deliver sustainable outcomes for future generations.

Co-design progress so far

Co-design has begun for some proposed priority products (eg, tyres, agrichemicals, refrigerants) and is under discussion for others. Each product group will have particular design requirements and will need to be co-designed with the relevant stakeholders. However, consistency can be

improved by declared ministerial guidelines on contents and expected effects of product stewardship schemes for priority products. Proposed guidelines are outlined later in the chapter and more detail can be found in appendix 3.

The Government will promote and monitor these processes, and facilitate an appropriate policy response. Waste Minimisation Fund (WMF) support for stakeholder processes is under way for tyres, agrichemicals and refrigerants and is an option for other priority product groups.

Proposed 'priority product' groups

The Government proposes declaring six groups as priority products (for an explanation of priority product declarations, see [chapter 2](#)). Further priority products may be declared later.

This consultation covers proposed priority product declarations for tyres, electrical and electronic products,¹ refrigerants and other synthetic greenhouse gases, agrichemicals and their containers, farm plastics and packaging. Table 2 summarises the reasons these products were selected from among the many in the market, and further details are given in appendices 1 to 3. It is considered that requiring product stewardship schemes for these products will offer significant net benefits for minimising waste and environmental harm and improve economic and employment opportunities.

Five of the six proposed priority product groups were the subject of public consultation in 2014: tyres, electrical and electronic products, refrigerants and other synthetic greenhouse gases, agrichemicals and their containers, and farm plastics. Most submissions supported declaring these groups as priority products. The Minister for the Environment at that time chose not to progress this option.

Packaging has not previously been proposed by the Government as a priority product under the WMA. Submitters on consultations in 2005, 2009 and 2014 commonly recommended that packaging be a priority product. Local authorities have advocated for increased packaging controls, including a container deposit scheme, to reduce the waste management burden on communities and improve the quality of materials, economic return and local employment opportunities. In recent years, increased understanding of the global risks of marine plastics and microplastics in the food chain and ecosystems has strongly contributed to growing community demand for better controls on plastic packaging in particular.

Local Government New Zealand remit

Local Government New Zealand provided a remit to the Government in 2016 supported by most local authorities (90 per cent) calling for a nationally mandated beverage deposit system to be implemented within two years.² This was reconfirmed in 2018 with a 96 per cent majority and also called for a declaration of priority product under the WMA for tyres, e-waste, agricultural chemicals and plastics. A further 2018 remit requesting the Government to urgently implement

¹ Called 'e-waste' or 'WEEE' (waste electrical and electronic equipment) when entering the waste stream.

² *Scoop*. 25 July 2016. Eight important issues debated at LGNZ AGM. Retrieved from www.scoop.co.nz/stories/AK1607/S00696/eight-important-issues-debated-at-lgnz-agm.htm (June 2019).

a comprehensive and mandatory product stewardship programme for tyres attracted 99 per cent sector support.³

The 2018 Local Government Waste Manifesto, issued by the Waste Management Institute of New Zealand (WasteMINZ), also called for priority product declaration for tyres, e-waste and agrichemicals, and the introduction of a container deposit scheme to reduce litter and marine pollution (WasteMINZ, no date).

Proposed scope of priority products

Waste data in New Zealand is incomplete, and the identification of priority products has been based on information currently available to the Government. Information to improve this assessment is welcome.

The Government is also seeking feedback on the possible scope for these product groups as listed below.

1. Tyres

Potential scope:

- (a) all pneumatic (air-filled) tyres and certain solid tyres for use on motorised vehicles (for cars, trucks, buses, motorcycles, all-terrain vehicles, tractors, forklifts, aircraft and off-road vehicles)
- (b) all pneumatic and solid tyres for use on bicycles (manual or motorised) and non-motorised equipment.⁴

2. Electrical and electronic products

Potential scope:

- (a) large rechargeable batteries designed for use in electric vehicles, household-scale and industrial renewable energy power systems including but not limited to lithium-ion batteries⁵
- (b) all other batteries (eg, batteries designed for use in hand-held tools and devices)
- (c) all categories of waste electrical and electronic equipment (WEEE) defined in Annex II of European Directive 2012/19/EU (eg, 'anything that requires a plug or a battery to operate').

³ Local Government New Zealand. 15 July 2018. *Local government debates key issues at annual conference*. Retrieved from www.lgnz.co.nz/news-and-media/2018-media-releases/local-government-debates-key-issues-at-annual-conference/ (June 2019).

⁴ Tyres used on bicycles (manual or electric), wheelbarrows and trolleys are not covered by the current Tyrewise proposal. These tyres involve other stakeholders and may require a separate scheme. However, the lack of current recycling infrastructure and likely end-of-life processing technologies and markets are similar.

⁵ Lead-acid batteries are not currently an issue because the market value for lead creates adequate incentive for effective, commercial post-consumer collection and recycling. However, as technologies change so may this situation, and because lead is a heavy-metal toxin of significance these batteries have not been excluded.

3. Agrichemicals and their containers (packaging)

Potential scope:

Chemicals in plastic containers up to and including 1000 litres in size that are used for:

- (a) any horticulture, agricultural and livestock production, including veterinary medicines
- (b) industrial, utility, infrastructure and recreational pest and weed control
- (c) forestry
- (d) household pest and weed control operations
- (e) similar activities conducted or contracted by local and central government authorities.

This includes but is not limited to all substances that require registration under the Agricultural Compounds and Veterinary Medicines Act 1997, whether current or expired, and their containers (packaging), which are considered hazardous until they have been triple-rinsed.

Packaging for veterinary medicines, which includes syringes, tubes and flexible bags, must be phased in under the accredited scheme.

4. Refrigerants and other synthetic greenhouse gases

Potential scope:

- (a) refrigerants: all gases used for heating, cooling and air conditioning that are ozone depleting substances under the Ozone Layer Protection Act 1996 and/or synthetic greenhouse gases under the Climate Change Response Act 2002, and products containing these gases⁶
- (b) methyl bromide and products containing this gas.

5. Farm plastics

Potential scope:

- (a) plastic wrapping materials for silage or hay including, but not limited to, baleage wrap, hay bale netting, baling twine and covers for silage pits
- (b) plastic sacks for packaging agricultural and horticultural commodities including, but not limited to, fertiliser sacks, feed sacks and bulk tonne bags of woven polypropylene and/or polyethylene
- (c) other plastic packaging and products used for agriculture and horticulture including, but not limited to, protective nets, reflective ground covers, and rigid plastic containers other than containers for agrichemicals, detergents, lubricants or solvents.

6. Packaging (some packaging may be in both categories)

Beverage packaging – potential scope:

- (a) Packaging used to hold any beverage for retail sale that has more than 50 millilitres and less than 4 litres of capacity, made of any material singly or in combination with other materials (eg, plastic, glass, metal, paperboard or mixed laminated materials).

⁶ For example, ozone-depleting substances such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), and gases contributing to climate change such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).

Single-use plastic consumer goods packaging – potential scope:

- (b) Packaging used for consumer goods at retail or wholesale level made of plastic resin codes 1, 2, 3, 4, 5, 6 or 7, singly or in combination with one or more of these plastics or any non-plastic material, and not designed to be refilled.⁷

Consultation questions on the proposed priority products are listed in chapter 4.

WMA criteria for priority product declaration

Box 1 (below) lists the tests that must be met under the WMA before a priority product declaration is made.

Box 1: Requirements in Waste Minimisation Act 2008 for ministerial use of power to declare priority products

Under section 9 of the WMA the Minister must not make a priority product declaration unless he or she:

- is satisfied that either (a) the product will or may cause significant environmental harm when it becomes waste, or (b) there are significant benefits from reduction, reuse, recycling, recovery, or treatment of the product (section 9(2)(a))
- is satisfied that the product can be effectively managed under a product stewardship scheme (section 9(2)(b))
- has considered the effectiveness of any voluntary product stewardship schemes in relation to these matters (section 9(3)(d))
- has considered public concerns about environmental harm associated with the product when it becomes waste (including concerns about its disposal) and provided the public with an opportunity to comment on the proposal (section 9(3)(b) and (c))
- has obtained and considered the advice of the Waste Advisory Board (section 9(3)(a)).

Information relating to the first two of these tests, on which the Minister must be satisfied, is summarised below. Information about the next two tests, which the Minister must consider, is summarised in appendices 1 and 2.

The results of this consultation and a parallel consideration by the Waste Advisory Board will provide the balance of information.

⁷ Plastic resin codes are defined at: www.plastics.org.nz/images/documents/PDFs/pnz-id-code-web-2009-1.pdf

Table 2: Summary information relating to Waste Minimisation Act 2008 section 9(2) criteria for declaring priority products

Legend: Does it meet the statutory test? ✓ – meets ≈ – partially meets ✗ – does not meet

WMA 9(2) statutory tests		Summary information to address the statutory test
Tyres		
Risk of harm (WMA 9(2)(a)(i))	✓	<p>Tyre dumping and stockpiling can increase the risk of harm from fire and toxic materials entering air, soil and water.</p> <p>Tyres contain about 1.5 per cent by weight of hazardous compounds bound into the rubber. Tyres are designed to be long-lasting. Leaching of toxic material from tyres is more likely if the tyres are cut into small pieces (exposing more surface area) and/or are submerged in water over time. The materials most often found entering water from tyres are manganese, iron, aluminium, zinc, cadmium, lead and volatile organic compounds (eg, benzene, benzothiazole). Tyre wear on roads also contributes pollutants to the environment when fine tyre fragments are washed by stormwater into waterways.</p>
Waste minimisation benefits (WMA 9(2)(a)(ii))	✓	<p>Tyres contain significant energy (greater than coal) and can be converted to crumb rubber and engineering products. The most common uses of waste tyres overseas are tyre-derived fuel (TDF) and products made with rubber crumb, such as roading, roofing and flooring. Emerging technologies include pyrolysis (extraction of liquid fuels, steel and carbon black) and de-vulcanisation (recovery of flexible rubber for new products). Expanded recovery systems have the potential to create new income streams and industry onshore. Increased diversion would reduce incentives for dumping and stockpiling, reducing the risk of fire and environmental pollution. Infrastructure for conversion of tyres to TDF, and use of TDF for cement manufacture, is being established with co-funding from the Waste Minimisation Fund (WMF). Full economic operation will require a regulated framework to incentivise recycling.</p>
Product stewardship effectiveness (WMA 9(2)(b))	✓	<p>Overseas regulated product stewardship schemes obtain much higher diversion rates from landfill than do New Zealand's: 30 per cent, for example, over 80 per cent in Europe, Japan and the United States of America (USA), and over 90 per cent in Canada and South Korea. New Zealand tyre stakeholders developed the 'Tyrewise' proposal in 2012 based on such schemes. This is being refreshed by stakeholders in 2019. The model proposes a per-tyre advance fee that is redistributed to registered tyre collectors and processors on proof of delivery to approved tyre-recovery destinations. The projected cost per car tyre would be around \$5.50, while legacy stockpiles are dealt with. This would replace the current ad hoc disposal fee of \$2 to \$7 per passenger tyre equivalent levied by retailers, which is not necessarily used to fund appropriate tyre disposal.</p>
Electric and electronic products (including lamps and batteries)		
<i>Called 'e-waste' or waste electric and electronic equipment (WEEE) when disposed</i>		
Risk of harm (WMA 9(2)(a)(i))	✓	<p>E-waste can contain toxic substances, including lead, cadmium, mercury and brominated flame retardants (BFRs), posing a risk to the environment and human health. These are bio-accumulative toxins, which means they do not biodegrade and accumulate up the food chain. When e-waste is landfilled, toxic substances will leach out over time and mix with any water in the landfill, creating toxic leachate that potentially lasts over hundreds of years. Modern landfill engineering techniques contain leachate but not indefinitely, and</p>

WMA 9(2) statutory tests	Summary information to address the statutory test	
		leachate cycling ⁸ increases concentrations. The risk is thus postponed and a potential burden for future generations. E-waste can also contain refrigerants (eg, refrigerators, freezers, heat pumps) – see below.
Waste minimisation benefits (WMA 9(2)(a)(ii))	√	E-waste contains valuable materials in trace amounts, such as gold and ‘rare earth’ metals, as well as larger amounts of resources, such as steel, aluminium, copper, plastic resins and glass. Globally, less than 1 per cent of the most economically critical metals is recovered, including ‘rare earth’ metals needed for many technologies, from touch screens to wind turbines. For most e-waste, the environmental benefits of recycling are not reflected in the market value of e-products at end of life, resulting in a low recovery rate under voluntary systems. Expanded recovery systems have the potential to create new income streams and industry onshore, including greater opportunity for social enterprises.
Product stewardship effectiveness (WMA 9(2)(b))	√	Regulated e-waste product stewardship is effectively diverting significant volumes of e-waste from landfill in the European Union, Scandinavia, Switzerland, several USA states, most Canadian provinces, Australia, Japan, Korea, South America and Taiwan. The European average is 49 per cent, compared with less than 2 per cent in New Zealand. The Government sought advice from computer and television brand owners and e-waste recyclers in 2006–08. Two models were proposed, both requiring regulated participation to succeed.

Agrichemicals and their containers

Risk of harm (WMA 9(2)(a)(i))	√	Agrichemicals are, by intent, toxic and pose a risk to human health and the environment if inappropriately used, stored or disposed of. The packaging used to supply and mix agrichemicals is also potentially toxic, until adequately cleaned, and is generated regularly with product use. Farm waste surveys indicate that most of these wastes are going into unlined farm dumps or landfills, being burnt on-farm or stored. Over time, stored waste agrichemicals can enter the environment from perished containers or during natural disasters, in both rural and urban catchments. Some agrichemicals, particularly older ones, contain persistent organic pollutants (POPs). POPs do not degrade in plants, animals or the physical environment and thus accumulate up the food chain, posing a long-term health risk to humans and ecosystems. The most serious of these have been deregistered for use in New Zealand, but they still arise from farm agrichemical collections, particularly when properties change farming systems or farms and homes change ownership.
Waste minimisation benefits (WMA 9(2)(a)(ii))	√	Unused or unwanted agrichemicals cannot be recycled. If they cannot be used legally for their intended purpose, they need to be safely neutralised or destroyed to reduce the risk of environmental harm. This problem is compounded if the original packaging or labelling is no longer able to be deciphered and the highest category of disposal for the contents must be taken. Some packaging containing agrichemicals can be recovered and recycled, if triple-rinsed to remove chemical residue (exceptions are oil-based products and POPs or unknowns).
Product stewardship	√	Effective regulated rural agrichemical schemes are in place overseas, for example, in Brazil, Canada and the European Union. The current voluntary accredited scheme in New Zealand could significantly increase waste

⁸ Leachate cycling is when leachate captured from an installed collection system is reintroduced to the landfill rather than be allowed to enter the environment at that time.

WMA 9(2) statutory tests		Summary information to address the statutory test
effectiveness (WMA 9(2)(b))		minimisation benefits, if all producers were required to participate. The stakeholder-led Agrichemical Review 2012 recommended to the Minister for the Environment that 'priority product' should be declared for agrichemicals and their containers, links made to registration under the Agricultural Compounds and Veterinary Medicines Act 1997, and attention given to improving incentives for consumer participation. Calculations at the time projected costs on agrichemical products under a comprehensive regulated scheme would be about 35 cents per litre for 100 per cent collection of packaging and typical disposal of unused or unwanted agrichemicals, compared with the then voluntary levy of 12 cents. The higher rate would equate to \$7 per 20 litre container or about 2 per cent of the product price.
Refrigerants and other synthetic gases		
Risk of harm (WMA 9(2)(a)(i))	√	Poorly managed refrigerants and other synthetic greenhouse gases are a significant contributor to depletion of the ozone layer and climate change. The risk of fire also increases from the use of flammable hydrocarbon refrigerants to replace some ozone-depleting gases. Under law, it is an offence to knowingly release refrigerants and other synthetic greenhouse gases into the atmosphere, but this is nearly impossible to monitor or enforce. Most losses to the environment are system leaks from poor design and poorly trained maintenance staff.
Waste minimisation benefits (WMA 9(2)(a)(ii))	√	Reduction of harm is the primary rationale for selecting this waste stream as a priority. Some waste refrigerants and other synthetic greenhouse gases, as well as canisters used for gas storage, can be recovered for reuse. However, product stewardship would primarily ensure that certain refrigerants are safely destroyed and only lower global warming potential (GWP) gases are recycled back into circulation. Lower GWP refrigerants have both the potential to be captured for recycling and economic benefits as the cost of virgin imported refrigerants increases.
Product stewardship effectiveness (WMA 9(2)(b))	√	Refrigerant and synthetic greenhouse gas recovery programmes are in place in Australia, Europe, Japan and the USA. These have much higher recovery rates compared with 20 per cent here (eg, Norway has 40 per cent, Japan 56 per cent and Australia over 60 per cent). The current voluntary accredited scheme in New Zealand could significantly increase waste minimisation benefits, if all producers were required to participate. In 2014, the estimated costs per product passed on to consumers in a regulated New Zealand scheme were estimated to range from \$2 per domestic refrigerator to \$133 per refrigerated truck (about 0.3 per cent to 0.5 per cent price increase).
Packaging		
Risk of harm (WMA 9(2)(a)(i))	√	Incorrectly disposed plastic packaging can cause direct harm, such as to marine wildlife, when plastic is ingested or releases toxins to the atmosphere when burnt at low temperatures. Plastics disposed to landfill can enter the environment over time if the landfill is sited so as to be subject to stormwater or sea level rise. Once in the environment, plastics eventually break down into microplastics (small pieces of less than 5 millimetres in size). The risk of microplastics and the toxins they can bring into the food chain is of growing concern. The build up of plastic waste in freshwater and marine environments is a global issue, and plastics make up an estimated 80 per cent to 85 per cent of marine litter. The effect of non-plastic packaging on the environment is connected to the embodied energy, toxicity and ecosystem impacts of continual resource extraction and processing for single-use designs. These are significant for metals and paper, less so for glass and highest for aluminium, unless high

WMA 9(2) statutory tests		Summary information to address the statutory test
		recycling rates can be achieved. Litter also imposes clean-up and amenity value costs. Packaging makes up most of the litter in New Zealand urban areas (56 per cent by count) and five of the top 10 items in beach clean ups. Drinks packaging is about 20 per cent of all litter items by count and three of the top 10 beach clean-up items (plastic drink bottles, caps and lids, and glass bottle pieces).
Waste minimisation benefits (WMA 9(2)(a)(ii))	√	The costs to collect and manage post-consumer packaging are borne by councils and the wider community, rather than the people who are making packaging, purchasing and disposal decisions. These costs are exacerbated by packaging design and lower cost (eg, co-mingling) recycling systems, which frequently reduce the recyclability and commodity value of collected material. These costs include collection, litter control, sorting and recycling, and disposal of non-recyclable material. Increasingly lower grade post-consumer plastic packaging is unable to be sold into the global market, further increasing costs. Realignment of responsibility for these costs, targeted price incentives, and coordinated product design, collection and recovery systems have the potential to create new income streams and industry onshore, including greater opportunity for social enterprises. Focusing on plastic packaging targets the reduction of major litter contributors.
Product stewardship effectiveness (WMA 9(2)(b))	√	Regulated packaging product stewardship is effectively diverting significant volumes of post-consumer waste from landfill (recovery rates above 80 per cent for the best-performing packaging types) and driving the uptake of reusable designs overseas (eg, Asia, Australia, Europe and North America). While some schemes have added significant costs, design has evolved over the past decade and cost-effective scheme models are now available (eg, Fostplus in Belgium). Container deposit systems (CDS) for beverage containers typically use 'deposit-return' to pay for scheme costs and incentivise return by consumers and communities.
Farm plastics		
Risk of harm (WMA 9(2)(a)(i))	√	Risks from the long-term contribution of microplastics to the environment and food chain relate equally to farm plastics as those from urban catchments. Rural waste studies show burning and burial are the most common methods of farm plastic waste disposal. This risks the release of toxic chemicals to air and soil, creates leachate (which can enter waterways, affecting aquatic life and livestock) and increases health and safety issues.
Waste minimisation benefits (WMA 9(2)(a)(ii))	√	Expanded recovery systems have the potential to reduce the risk of harm from current disposal practices and create new income streams and industry onshore.
Product stewardship effectiveness WMA 9(2)(b)	√	A regulated farm plastics recovery scheme is present in Ireland but could be better structured for cost effectiveness. Similar schemes are being investigated by some Australian states. The current voluntarily accredited scheme in New Zealand could significantly increase waste minimisation benefits, if all producers were required to participate.

Proposed guidelines for priority product stewardship schemes

Well-designed product stewardship frameworks can significantly improve waste minimisation, harm reduction, resource efficiency and incentives for more circular product design as New Zealand transitions to a circular economy. Poorly designed frameworks could add cost without delivering expected benefits. These could be from poor oversight and accountability for fees and outcomes, a lack of competition in providing services or by allowing the opportunity for producers⁹ to evade participation.

A well-designed scheme in the New Zealand context requires careful planning to transition from low-recovery rates and limited markets to high-recovery rates and enhanced onshore processing in the longer term. A staged approach is essential for:

- matching and managing the collected material
- supporting and developing markets to avoid stockpiling
- reducing risks of market volatility if dependent on offshore markets.

Outcomes and targets at the time of accreditation need to take into account the first accreditation period will contain unanticipated results and adjustments. Co-design and alignment with regional multi-material collection and processing infrastructure offer benefits in this regard.

Requirements in the WMA relating to accreditation application and approval are general in nature to suit both voluntary and regulated schemes. Additional guidelines to ensure robust priority product stewardship schemes are proposed, including greater safeguards for public accountability on producer fees, expenditure and waste minimisation outcomes.

The Associate Minister for the Environment is proposing to gazette guidelines for product stewardship schemes under section 12 of the WMA (for an explanation of section 12 guidelines, see [chapter 2](#)). These guidelines would apply to each of the six proposed priority product groups described. Under section 15 of the WMA, before accrediting a scheme, the Minister must be satisfied that it is consistent with any guidelines. The Minister may accredit a product stewardship scheme that is not consistent with any section 12 guideline if Waste Advisory Board advice has been obtained and considered before accreditation.

Box 2 lists the tests that must be met before section 12 guidelines can be gazetted.

Box 2: Requirements in Waste Minimisation Act 2008 for ministerial use of power to declare guidelines for accredited priority product schemes

Under section 12 of the WMA, before the Minister for the Environment publishes any guidelines, he or she must:

⁹ As noted in chapter 2, the WMA defines producers to include people who manufacture a product and sell it in New Zealand under their own brand; are the owner or licence holder of a trademark under which a product is sold in New Zealand; import a product for sale in New Zealand; or manufacture or import a product for use in trade by them or their agent.

- obtain and consider the advice of the Waste Advisory Board
- be satisfied adequate consultation has been undertaken with people or organisations that may be significantly affected by the guidelines.

Table 3 outlines the guidelines proposed for gazettal under section 12 of the WMA, and further information on overseas product stewardship schemes is available in appendix 3.

We have considered recommendations from comparative analysis of overseas experience of regulated product stewardship schemes (eg, European Commission, 2014; OECD, 2016) in preparing proposed section 12 guidelines.

Consultation questions on the proposed ministerial guidelines are listed in the next chapter.

Table 3: Proposed guidelines for priority product stewardship scheme design

Design feature	Proposed Waste Minimisation Act 2008 (WMA) section 12 guidelines for priority product scheme accreditation
1. Intended objectives and outcomes	<ul style="list-style-type: none"> a) Specify the expected reduction in harm to the environment from the implementation of a scheme and/or the expected benefits from reduction, reuse, recycling, recovery or treatment of the product to which a scheme relates. b) Specify the expected quantifiable waste minimisation and management objectives for the product to which a scheme relates, and the plan to achieve significant, timely and continuous improvement. c) All schemes will be designed to incentivise product management higher up the waste hierarchy in priority order: waste prevention, reuse, recycling, recovery (materials and energy), treatment and disposal. d) For products containing hazardous materials: industry certification and compliance with other legislation for installation or use, maintenance, collection, transport, storage and disposal pathways. e) All schemes will be designed and financed to manage orphaned and legacy products,¹⁰ as well as current products entering the market.
2. Fees, funding and cost effectiveness	<ul style="list-style-type: none"> a) The full net costs of collection and management of the priority product (reuse, recycling, processing, treatment or disposal) will be covered by producer and product fees associated with the scheme (eg, 'producer pays' or 'advance disposal fee').¹¹ b) The impact of more than one accredited scheme and opportunities for maintaining competition should be considered in terms of net cost effectiveness (including monetary and non-monetary costs and benefits). c) Specify plans to manage risk to sustainable scheme income, such as price volatility and leakage of materials into other markets.

¹⁰ Legacy products include those sold into the market in earlier years that are now obsolete or banned (eg, agrichemicals containing POPs). Orphaned products include current or recent products for which a liable producer is no longer present (eg, e-waste marketed by companies no longer in business).

¹¹ The WMA defines producers to include people who: manufacture and sell a product in New Zealand under their own brand; are the owner or licence holder of a trademark under which a product is sold in New Zealand; import a product for sale in New Zealand; or manufacture or import a product for use in trade by them or their agent.

Proposed Waste Minimisation Act 2008 (WMA) section 12 guidelines for priority product scheme accreditation	
Design feature	
	d) Specify how existing and emerging technologies will be used to help track and manage product or waste throughout the supply chain (eg, bar codes, radio frequency identification (RFID), and block chain).
3. Governance	<p>a) The scheme governance entity will be independent, non-profit and represent producers and wider stakeholders, including public interest.</p> <p>b) Governance should include wider stakeholders in two types of advisory groups: those including product producers and recipients of product management fees who have technical or supply chain knowledge, and other stakeholders who represent wider community and consumer interests.</p> <p>c) Structure and accountability of the scheme governance entity will be specified. Clear mechanisms will be implemented to fully control scheme operation, manage non-compliance and report on outcomes.</p> <p>d) The selection process for scheme directors will be transparent, and scheme governance provisions will follow best practice guidelines for New Zealand.¹²</p> <p>e) Given the size of New Zealand’s population and market, the default expectation will be that either a single accredited scheme per priority product, or a clear platform for cooperation between schemes for efficient materials handling, will be part of the design.</p>
4. Non-profit status	a) Given the prominence of expected net public good outcomes, the default expectation is that all priority product stewardship schemes will be operated by non-profit entities representing key stakeholders.
5. Competition	<p>a) The scheme will clearly provide for transparent, non-discriminatory and competitive procurement processes for downstream services, such as collection, sorting, material recovery and disposal.</p> <p>b) The scheme will ensure that no collectors and recyclers (whether existing, new entrant or social enterprise) are unfairly excluded from participation. This includes making service packages of suitable scale (whether geographically, by material or other measure) to allow both large and small providers to compete fairly.</p> <p>c) Multiple accredited schemes will be considered if the net community and environmental benefit (including cost-effectiveness and non-monetary impacts) is likely to be improved.</p> <p>d) Provision will be made for regular independent audit of agreements among competitors.</p> <p>e) The design process for the scheme will have adhered to guidelines on collaborative activities between competitors as issued by the Commerce Commission, including, but not limited to, applying for collaborative activity clearance from that commission (eg, Commerce Commission, 2018a, 2018b, 2018c and 2019).</p>
6. Stakeholder engagement and collaboration	<p>a) The scheme will specify how wider stakeholders will be involved in decision-making by governance group (eg, use of stakeholder advisory groups).</p> <p>b) The scheme will have been designed with the active engagement of stakeholders currently involved in the product end of life (eg, collectors and recyclers).</p>

¹² For example, the Institute of Directors of New Zealand *Code of Practice for Directors* (www.iod.org.nz/Portals/0/Publications/Founding%20Docs/Code%20of%20Practice.pdf).

Proposed Waste Minimisation Act 2008 (WMA) section 12 guidelines for priority product scheme accreditation	
Design feature	c) The scheme will specify how use of existing collection and processing infrastructure and networks will be maximised and new infrastructure and networks co-designed and integrated between product groups.
7. Compliance	<p>a) The scheme will have a clear means of enforcing compliance of all participants and reporting liable non-participants to the government enforcement agency.</p> <p>b) The scheme will have strategies to reduce 'leakage' of higher value end-of-life products (eg, 'cherry picking' of e-waste components by informal collectors).</p>
8. Targets	<p>a) All schemes will be expected to set and report on targets that have the following characteristics:</p> <ul style="list-style-type: none"> • significant, timely and continuous improvement • benchmarked against and aspiring to attain best practice recovery and recycling or treatment rates for the same product type in high-performing jurisdictions • a clear time bound and measurable path to move toward attaining best practice • targets for new product and market development to accommodate collected materials. <p>b) Results against targets will be publicly reported at least annually.</p> <p>c) Material collection, recovery and disposal rates will be measured against one of the following:</p> <ul style="list-style-type: none"> • actual trend data, if the scheme has pre-existed as a voluntary scheme • the average aggregate weight or count of products sold into the market in the previous three reported years • another specified method where market entry information does not yet exist. <p>d) Plans will be specified for review, adjustment and reporting on performance targets preferably annually and no less than every three years, taking account of changes in the market, natural events and technology.</p> <p>e) A clear distinction will be made between funding arrangements and market capacity to manage both potential high volume legacy and orphaned product collections in earlier years and ongoing continuous improvement of collection rates.</p> <p>f) Performance targets will include measures for public awareness of scheme participant satisfaction and a record of response by the scheme to concerns raised. This will be made available to scheme auditors.</p>
9. Timeframes	<p>a) The timeframe within which an application for accreditation or reaccreditation of the priority product scheme is expected to be made after declaration of priority product is as follows:</p> <ul style="list-style-type: none"> • priority product categories with existing accredited voluntary schemes (eg, refrigerants, agrichemicals, farm plastics, packaging): within one year from the date of priority product declaration • priority product categories with accreditation proposals that have been developed through a multi-stakeholder consultation process including, as a minimum, producers, local authorities, major users, existing collectors and recyclers (eg, tyres): within one year from the date of priority product declaration or the date of proposal completion, whichever comes later

Proposed Waste Minimisation Act 2008 (WMA) section 12 guidelines for priority product scheme accreditation	
Design feature	<ul style="list-style-type: none"> • other priority product categories: within three years from the date of priority product declaration. <p>b) Within the accredited seven-year period, at least one full review will be undertaken of scheme costs and effectiveness. The results of reviews and proposed scheme amendments to improve cost effectiveness will be reported via the annual reporting process.</p>
10. Market development	<p>a) The scheme will have a research and development budget to develop new recycled products, encourage transition to circular product and recycled product materials design, and cooperate with other stakeholders to enhance onshore infrastructure.</p>
11. Performance standards, training and certification	<p>a) The scheme will have clear means for ensuring adequate training and certification of all people recovering and managing a product throughout its life cycle, to ensure best practice in prevention and reduction of harm to people and the environment.</p> <p>b) Any relevant standards for best practice will be referenced in training, supplier accreditation and monitoring (eg, AS/NZS 5377 for e-waste collection and processing). The scheme will participate in the development and revision of relevant standards.</p> <p>c) The scheme will have clear chain of custody arrangements for monitoring processing of materials and reduction of harm, both onshore and offshore, including annual reporting of findings.</p>
12. Liability and insurance	<p>a) The scheme will have clear chain of custody arrangements for monitoring receipt and processing of materials and reduction of harm, both onshore and offshore, including annual reporting of findings.</p> <p>b) The scheme will ensure that liability of parties is clear for each stage of product and materials handling, and adequate insurance for liability is in place at each stage of the process.</p>
13. Design for environment	<p>a) The scheme will contain financial or other incentives for diversion of collected products to highest and best resource use, weighted for applications higher up the 'waste hierarchy' (in priority order: reduction, reuse, recycling or composting, energy recovery, safe treatment and disposal).</p> <p>b) The fees paid by a producer to a collective scheme will, as far as possible, be linked to actual end-of-life treatment costs of their products, such as through variable or modulated fees.</p> <p>c) The scheme will facilitate good communication, feedback and incentives between designers, manufacturers, sales and marketing teams, distributors, retailers, consumers, collectors, recyclers and end disposal operators, to inform improved design of products and systems.</p> <p>d) The scheme will fund initiatives to improve circular resource use by reducing the 'end-of-life' components of the product(s) and improving design for reusability and recyclability of the priority product(s).</p>

Design feature	Proposed Waste Minimisation Act 2008 (WMA) section 12 guidelines for priority product scheme accreditation
14. Reporting and public accountability	<ul style="list-style-type: none"> a) The scheme will provide for clear, regular and open reporting and communication with stakeholders. b) Annual reports will be made public. These will include measurement of outcomes and achievement of targets, fees collected and disbursed, and net cash reserves held as contingency. c) Provision will be made for regular independent financial, compliance, enforcement and environmental audits of scheme performance. d) Scheme plans will address the following: data availability, especially when several PROs are in competition; materials' traceability; precise definition for data collection and reporting (eg, recycling rates and operational costs). e) The scheme will have mechanisms in place to protect competitive information relating to detailed operational costs (eg, 'black box' data collection by third party with aggregate reporting). f) Scheme performance measures will be harmonised between schemes as far as possible.
15. Public awareness	<ul style="list-style-type: none"> a) Branding and clear information on how and why the scheme operates will be easily available at point of distribution (intercompany) and purchase (consumer), point of waste product collection and online, and a link to the online information will be on the product or product packaging. b) The scheme will provide for transparent product stewardship fees at point of purchase. c) The scheme will ensure that consumer labelling standards for the product are complied with (eg, under the Hazardous Substances and New Organisms Act 1996 for hazardous substances). d) The scheme will regularly measure and report on public awareness and scheme participant satisfaction, and improvements made accordingly.
16. Monitoring, compliance and enforcement	<ul style="list-style-type: none"> a) The scheme will have a clear means of enforcing compliance of all participants and reporting liable non-participants to the government enforcement agency. b) The scheme will have strategies to reduce 'leakage' of higher value end-of-life products (eg, 'cherry picking' of e-waste components by informal collectors). c) The Government will enforce WMA regulations. d) Revocation of accreditation is possible under WMA section 18 if reasonable steps are not being taken to implement the scheme, and the scheme's objectives are not being met or are not likely to be met within the timeframes outlined in the scheme.
17. Accessible collection networks	<ul style="list-style-type: none"> a) The scheme will provide for an end-of-life product collection system that is reasonably accessible for all communities generating that waste product, whether metropolitan, provincial or rural. b) Collection will be free to the public (fully funded by the scheme) for all products covered by the scheme. c) Collection will be based on the product, not proof of purchase. d) Collections will, as far as possible, share infrastructure and public information with other collection schemes in the area.

Next steps

This consultation does not cover potential regulations under sections 22 or 23 of the WMA, or other regulations under other legislation, to support the effective operation of a priority product stewardship scheme.

Under the WMA, regulations to support the effective management of a proposed priority product stewardship scheme may include:

- requiring the sale of priority products only in accordance with accredited product stewardship schemes
- prescribing advance environmental disposal fees
- deposit–return frameworks
- labelling or material controls.

The timing of any regulations will vary by priority product group, and will occur once stakeholder working groups have identified scheme option details, including expected costs and benefits.

4 Consultation process

How to make a submission

The Government welcomes your feedback on this consultation document. The questions summarised here are a guide, and all comments are welcome. You do not have to answer all the questions.

To ensure others clearly understand your point of view, you should explain the reasons for your views and provide supporting evidence where appropriate.

You can make a submission in two ways.

- Use our online submission tool, available at www.mfe.govt.nz/consultations/priorityproducts. **This is our preferred way to receive submissions.**
- Write your own submission.

If you are posting your submission, send it to: Proposed Priority Products and Guidelines, Ministry for the Environment, PO Box 10362, Wellington 6143. Include:

- the title of the consultation (Proposed priority products and guidelines)
- your name or organisation
- your postal address
- your telephone number
- your email address.

If you are emailing your submission, send it to priorityproducts.submissions@mfe.govt.nz as a:

- PDF
- Microsoft Word document (2003 or later version).

Submissions close at **5.00 pm on Friday 4 October 2019**.

For more information

Please direct any queries to:

Email: regulated_product_stewardship@mfe.govt.nz

Postal: Proposed Priority Products and Guidelines, Ministry for the Environment,
PO Box 10362, Wellington 6143

Publishing and releasing submissions

All or part of any written submission (including names of submitters) may be published on the Ministry for the Environment's website, www.mfe.govt.nz. Unless you clearly specify otherwise in your submission, we will consider that you have agreed to have your submission and your name posted on our website.

Contents of submissions may be released to the public under the Official Information Act 1982, if requested. Please let us know if you do not want some or all of your submission released, stating which part(s) you consider should be withheld and the reason(s) for withholding the information.

Under the Privacy Act 1993, people have access to information held by agencies about them. Any personal information you send to the Ministry with your submission will only be used in relation to matters covered by this document. In your submission, please indicate if you prefer we do not include your name in the published summary of submissions.

Priority products

Do you agree with the proposed scope for priority product declarations for the following six product groups?

Q1: End-of-life tyres

- (a) All pneumatic (air-filled) tyres and certain solid tyres for use on motorised vehicles (for cars, trucks, buses, motorcycles, all-terrain vehicles, tractors, forklifts, aircraft and off-road vehicles).
- (b) All pneumatic and solid tyres for use on bicycles (manual or motorised) and non-motorised equipment.

Yes / No / Not sure / Why / Why not?

Q2: Electrical and electronic products

- (a) Large rechargeable batteries designed for use in electric vehicles, household-scale and industrial renewable energy power systems, including but not limited to lithium-ion batteries.
- (b) All other batteries (eg, batteries designed for use in hand-held tools and devices).
- (c) All categories of waste electrical and electronic equipment (WEEE) defined in Annex II of European Directive 2012/19/EU (eg, 'anything that requires a plug or a battery to operate').

Yes / No / Not sure / Why / Why not?

Q3: Agricultural chemicals and their containers

Chemicals in plastic containers up to and including 1000 litres in size that are used for:

- (a) any horticulture, agricultural and livestock production, including veterinary medicines
- (b) industrial, utility, infrastructure and recreational pest and weed control
- (c) forestry
- (d) household pest and weed control operations
- (e) similar activities conducted by or contracted by local and central government authorities.

This includes but is not limited to all substances that require registration under the Agricultural Compounds and Veterinary Medicines Act 1997, whether current or expired, and their containers (packaging), which are deemed hazardous until such time as triple-rinsed.

Packaging for veterinary medicines, which includes syringes, tubes and flexible bags, must be phased in under the accredited scheme.

Yes / No / Not sure / Why / Why not?

Q4: Refrigerants and other synthetic greenhouse gases

- (a) Refrigerants: all gases used for heating, cooling and air conditioning that are ozone-depleting substances under the Ozone Layer Protection Act 1996 and/or synthetic greenhouse gases under the Climate Change Response Act 2002, and products containing these gases.
- (b) Methyl bromide and products containing this gas.

Yes / No / Not sure / Why / Why not?

Consultation questions

Q5: Packaging

- (a) Beverage packaging: used to hold any beverage for retail sale that has more than 50 millilitres and less than 4 litres of capacity, made of any material singly or in combination with other materials (eg, plastic, glass, metal, paperboard or mixed laminated materials).
- (b) Single-use plastic consumer goods packaging: used for consumer goods at retail or wholesale level made of plastic resin codes 1, 2, 3, 4, 5, 6 or 7, singly or in combination with one or more of these plastics or any non-plastic material, and not designed to be refilled.

Yes / No / Not sure / Why / Why not?

Q6: Farm plastics

- (a) Plastic wrapping materials used for silage or hay, including but not limited to baleage wrap, hay bale netting, baling twine, and covers for silage pits.
- (b) Plastic packaging used for agricultural and horticultural commodities including but not limited to fertiliser sacks, feed sacks, and bulk tonne bags made from woven polypropylene and/or polyethylene.
- (c) Other plastic packaging and products used for agriculture and horticulture including, but not limited to, protective nets, reflective ground covers, and rigid plastic containers other than containers for agrichemicals, detergents, lubricants or solvents.

Yes / No / Not sure / Why / Why not?

Ministerial guidelines for priority product stewardship schemes

Q7: Proposed guidelines

Do you agree with the proposed guidelines for priority product stewardship schemes outlined in table 3?

Yes / No / Not sure / Why / Why not?

Q8: Changes to guidelines

What changes would you make to the proposed guidelines for priority product stewardship schemes?

Appendix 1: Results of prior public consultation on product stewardship priorities

Public consultation has been held on potential product waste streams for priority action three times: in 2005, 2009 and 2014. Table 4 summarises the results. More detail is available in the published consultation documents and summaries of submissions (Ministry for the Environment 2005, 2006, 2009, 2010, 2014 and 2015).

Table 4: Results of public consultation on priority products for enhanced product stewardship: 2005, 2009 and 2014

Product group	2005	2009	2014	2019
End-of-life tyres	+	+	○●	○
E-waste	+	+	○●	○
– batteries	+			<i>(lithium-ion)</i>
Refrigerants		○●	○●	○
Agrichemicals		○●	○●	○
Farm plastics			○●	○
Waste oil	+	○●		
End-of-life vehicles	+			
Packaging	+	+	+	○
Plastic bags			+	

- Proposed by government
 - Endorsed by most submissions
 - +
- Most common additional priority products proposed by submitters

The 2014 consultation focused specifically on the potential declaration of four proposed priority products under the WMA (farm plastics was combined with agrichemicals and their containers). Submissions were particularly sought from key stakeholders, and 216 submissions were received. The spectrum of responses was: 28 per cent industry (non-waste); 17 per cent local government; 14 per cent individuals; 9 per cent waste industry; 15 per cent representative bodies; 5 per cent community recycling organisations; 6 per cent other non-governmental organisations; 3 per cent consultants; 1 per cent academic; and 2 per cent other.

- Industry submissions (waste services, industry-specific representative bodies) primarily commented on their areas of expertise and most were supportive of both proposed priorities and government intervention.
- All the local government submissions were positive for prompt action on the four proposed – and other – waste streams. Submitters expressed a view that regulatory intervention from central government could achieve benefits that outweigh the costs.

Results of the 2014 consultation on priority products are summarised by product group below.

Figure 5: Summary of 2014 submissions: priority product declaration for end-of-life tyres

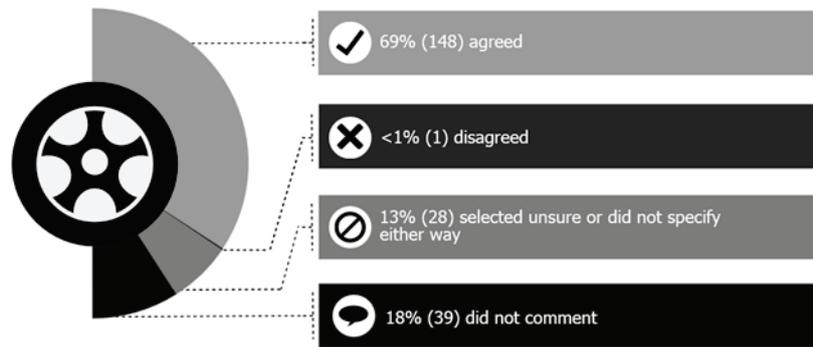


Figure 6: Summary of 2014 submissions: priority product declaration for e-waste



Figure 7: Summary of 2014 submissions: priority product declaration for refrigerants and other synthetic greenhouse gases

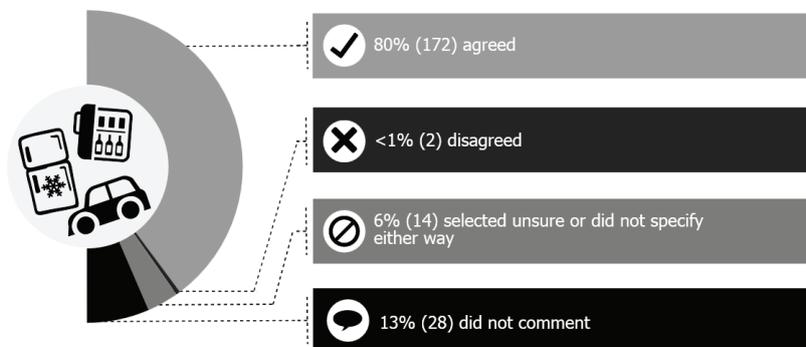
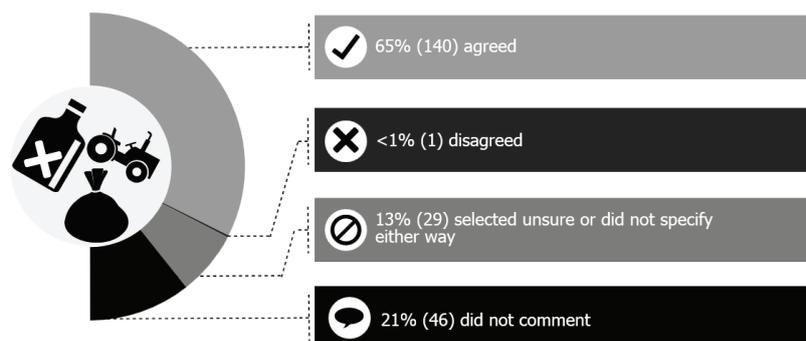


Figure 8: Summary of 2014 submissions: priority product declaration for agrichemicals and farm plastics



Appendix 2: Waste minimisation by voluntary product stewardship schemes

One of the matters the Minister for the Environment must consider before declaring a priority product is the effectiveness of any relevant voluntary product stewardship schemes. This effectiveness is to be considered in terms of WMA section 9(2) criteria: reduction of environmental harm from the product when it becomes waste and/or creation benefits from reduction, reuse, recycling, recovery or treatment, and ability to manage the product effectively under a product stewardship scheme. Information in this regard is summarised in table 5.

Recycling data in New Zealand is extremely limited, both by product group and in aggregate. This situation was recognised in the 2017 waste levy review (Ministry for the Environment, 2017b) and the recommendations to improve data collection are currently being given effect.

Recycling rates from landfill sites subject to the waste disposal levy must be reported by the levied landfills. However, the data do not allow accurate measurement of actual recycling rates for New Zealand as a whole. This is because the data omit recycling at unlevied landfills and materials diverted for recycling before the landfill gate.

A small number of product groups have voluntary product stewardship schemes, and data are reported annually for the accredited schemes. However, the data are provided on a commercial-in-confidence basis, so details are not available for public reporting (except as schemes choose to do themselves). In addition, the data from most accredited voluntary schemes are reported without the context of the total waste generated for the target product group or the total of the collected waste product actually recycled. Thus, efficacy is difficult to assess.

Table 5: Voluntary scheme effectiveness in relation to the criteria set out in subsection 9(2) of the Waste Minimisation Act 2008

Product group	Effectiveness of voluntary product stewardship schemes
Tyres	<p>An estimated third of end-of-life tyres are currently diverted from disposal (an estimated 14 per cent are exported whole for reuse and recovery, 13 per cent are processed onshore, 4 per cent are used as silage covers and 1 per cent are used in pyrolysis trials). Data updates are being prepared by several entities in 2019.</p> <p>The voluntary Tyre Track scheme, co-sponsored by the Motor Trade Association and Ministry for the Environment (2004–09), fostered trading between registered tyre generators and collectors and tracked the fate of the registered tyres. By the end of the programme, about a third of waste tyres were registered but national rates of recycling and illegal dumping were not affected.</p>
Electrical and electronic products (e-waste)	<p>Several limited user-pays and council-pays schemes are in place. The total estimated recycling rate is less than 2 per cent of e-waste. Voluntary schemes include the following.</p> <p>eDay: This was an annual national free collection of e-waste (2007–10), supported by volunteer labour and government subsidy. Despite good public participation, estimated diversion was only about 1 per cent.</p> <p>TV TakeBack: This was subsidised by the Government in 2012 to minimise e-waste generated by the digital switchover. From October 2012 to March 2014, over</p>

Product group	Effectiveness of voluntary product stewardship schemes
	<p>222,000 unwanted televisions were diverted from landfill for recycling, which equalled over 4,000 tonnes of waste. Failure of a major recycler led to a significant inflation of costs to the Government to ensure a complete, safe clean up.</p> <p>Voluntary WMA-accredited schemes: RE:MOBILE (accredited 2014) for all mobile phones, over 72,000 tonnes diverted; Fuji Xerox Zero Landfill Scheme (accredited 2015) for Fuji-Xerox products, over 1,230 tonnes diverted; and Sharp Comprehensive Recycling and Waste Reduction Scheme (accredited 2016) for Sharp products; TechCollect/Croxley pilot e-waste scheme started in late 2018. Data have not been reported.</p>
Agrichemicals and their containers	<p>Regional councils and the Government co-funded the collection of legacy unused and/or unwanted agrichemicals (2003–09). Taxpayer costs were \$4 million for 640 tonnes. Estimates that most regions would be ‘substantially cleared’ by 2009 led the Government to ask industry and councils to form a product stewardship scheme: the voluntary Agrecovery Rural Recycling Programme was accredited under the WMA in 2010. The Government subsidised export and destruction of chemicals unable to be treated onshore from 2009–13. Agrecovery has built a large producer membership but free-rider and non-participation issues remain. User-pays charges for non-member brands or legacy agrichemicals and POPs discourage users, and the levy does not cover a comprehensive and convenient collection. Recovery of containers is estimated to be at 45 per cent to 50 per cent of current agrichemical packaging from members’ levied products.</p> <p>The DDT Muster (Waste Minimisation Fund co-funded) in both urban and rural catchments could not service many bookings due to user-pays requirements at disposal. Although DDT has been banned for decades, products containing it left in storage are still discovered when properties change ownership.</p>
Refrigerants and other synthetic greenhouse gases (SGGs)	<p>The Refrigerant Recovery voluntary product stewardship scheme started in 1993 and was accredited under the WMA in 2010. It is funded by a voluntary levy on imported bulk refrigerants paid by the major importers. Importers of smaller bulk amounts or pre-charged gas canisters have not joined and do not pay. While these importers pay the SGG levy, these funds are not directly available for collection of SGGs for treatment. Emissions Trading Scheme (ETS) credits received by the Refrigerant Recovery programme for exported SGGs cover some programme costs. An estimated 20 per cent of available eligible refrigerants are being collected for safe disposal.</p> <p>Most imported refrigerants are thought to be used to replace leakages caused by poor design and maintenance. The scheme actively promotes an industry code of good practice to reduce risks of harm but has found poor uptake and low levels of training in the industry. Requiring participation in the national scheme would enable enforcement of training standards for refrigerant technicians. The potential risk from poor training is likely to increase as high global warming gases are phased out and flammable non-SGG refrigerants (eg, ammonia) increase.</p>
Packaging	<p>Council kerbside recycling services are the main diverter of post-consumer packaging waste, funded by ratepayers either through council or private contracts. Product sales rarely cover collection costs and services are vulnerable to market fluctuations in commodity prices, as highlighted recently with the implementation of China’s National Sword ban on imports of certain recyclables. A recent recycling sector estimate shows that about a third of recycled packaging comes from households and most packaging commodities are exported except glass. National mass balance (tonnage placed on market compared with tonnage recycled) or aggregate diversion data for packaging is not formally reported. In due course, this should improve through implementation of the recommendations of the 2017 waste levy review and the National Resource Recovery working group.</p>

Product group	Effectiveness of voluntary product stewardship schemes
	<p>The 1999 and 2004 voluntary Packaging Accords collected mass balance data estimates and encouraged proactive industry response.</p> <p>Under the WMA, several packaging schemes have been accredited:</p> <ul style="list-style-type: none"> • The Glass Packaging Forum scheme (accredited 2010) created a fund from member contributions to support glass container recycling infrastructure. Since accreditation, total collection for recycling has contributed 1.9 million tonnes. • The Public Place Recycling Scheme (accredited 2013) was built on a government co-funded collection network and works with councils. Since accreditation, total collection for recycling has been over 16,000 tonnes. • The Fonterra Milk for Schools (accredited 2013) addresses a new waste stream created by use of small-serve single-use packaging to deliver milk to schools. Total waste prevention since accreditation has been over 660 tonnes. • The Soft Plastics Recycling Scheme (accredited 2018) was Waste Minimisation Fund-subsidised to establish a national collection network. National collection was suspended in 2018 due to lack of viable markets for the collected materials, but a small catchment was re-established in 2019.
Farm plastics	<p>The Plasback voluntary product stewardship scheme was accredited in 2010 and, since then, has diverted over 9500 tonnes of plastics (11,600 since the scheme started). This comprised:</p> <ul style="list-style-type: none"> • 8600 tonnes of stretch film silage wrap • 570 tonnes of polypropylene (bags, twine, tree guards and packaging) • 300 tonnes of high-density polyethylene containers and vine nets • 75 tonnes of medium-density polyethylene irrigation pipes. <p>It is a user-pays system for farmers using pre-paid collection bags. The scheme is run by a single agricultural plastic supplier and the rest are free-riders. An estimated 70 per cent of bale wrap and nearly 100 per cent of twine, feed bags and crop protection netting are not being collected for recycling.</p>

Further information on accredited voluntary product stewardship schemes in New Zealand is on the Ministry for the Environment website.¹³

¹³ See www.mfe.govt.nz/waste/we-all-have-role-play/responsible-product-management/businesses-taking-responsibility-their for further information.

Appendix 3: Overseas product stewardship case study guidance

More than 400 regulated product stewardship or ‘extended producer responsibility’ (EPR) schemes exist worldwide, primarily in Australia, Europe, North America and Northeast Asia. Regulated schemes most commonly cover electrical and electronic products (e-waste), tyres, packaging, batteries, vehicles and oil, followed by medicines, paint, agrichemicals and their containers, products containing mercury (mercury thermostats, auto switches and fluorescent lamps) and graphic paper.

The most common form of scheme is product take-back, followed by advance disposal fees and deposit–refund (Peterson, 2014). Within these are many variations in the level of competition between product stewardship organisations, accountability and reporting, government oversight, and targets. Some generic models have been shown in figure 3 on page 13.

Comparative data, especially concerning scheme costs, is not widely available, which limits the opportunity for a fully comprehensive study of best practice. Even when performance measurement is available, methods can vary between countries (for example, in Europe, recycling rates measure tonnage *delivered to* reprocessors, whereas in Australia these rates measure *output from* the reprocessor).

The most comprehensive study identified was carried out for the European Commission. It looked at 175 EPR product stewardship programmes in member countries, and conducted 36 in-depth case studies where the best data were available (European Commission, 2014). The European Commission found EPRs appeared to have reduced the burden on public budgets and that the best performing schemes in most cases were not the most expensive ones.

Both this study and an earlier study of 11 European and North American schemes (MS2 and Perchards, 2009) found no single EPR or regulated product stewardship model emerged as the best performing or most cost effective.

The 2014 European Commission study offered eight main design principles for effective, regulated product stewardship programmes:

1. clarify intent of regulations
2. clarify roles of sectors
3. ensure system covers full net costs
4. producer fees should be differentiated by end-of-life costs of their products
5. competition framework needs equal rules and adequate surveillance and enforcement
6. ensure transparency of performance and cost data
7. harmonise definitions and reporting between schemes and countries
8. monitoring and enforcement framework must be adequately resourced and involve both government and producers.

The Organisation for Economic Co-operation and Development (OECD) considered this evidence base, combined with other research and case studies, and made recommendations to member states on the improvement of outcomes in four areas (OECD, 2016):

1. scheme design and governance
2. competition
3. design for environment
4. informal recycling sector.

These recommendations are combined in table 6, with supplementary information provided where available.

Table 6: Analysis for proposed guidelines for priority product stewardship scheme design: existing Waste Minimisation Act 2008 (WMA) criteria, recommendations from overseas case studies and proposed guidelines

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴	Proposed guidelines for priority product scheme accreditation (using WMA section 12)
<p>Intended objectives and outcomes</p>	<p>WMA section 15(1) The Minister must accredit a product stewardship scheme if he or she is satisfied that the scheme—</p> <p>(a) meets the requirements of section 14; and</p> <p>(b) is likely to meet the scheme’s objectives within the timeframes set in the scheme; and</p> <p>(c) is likely to promote waste minimisation or reduce the environmental harm from disposing of the product to which the scheme relates without, in either case, causing greater environmental harm over the life cycle of the product; and</p> <p>(d) is consistent with New Zealand’s international obligations; and</p> <p>(e) if the scheme relates to a priority product, is consistent with any guidelines published under section 12.</p>	<ul style="list-style-type: none"> • Clarify intent of regulation. • Clearly articulate objectives of proposed programmes. 	<ul style="list-style-type: none"> • Specify the expected reduction in harm to the environment from the implementing a scheme and/or the expected benefits from reduction, reuse, recycling, recovery or treatment of the product to which a scheme relates. • Specify the expected quantifiable waste minimisation and management objectives for the product to which a scheme relates, and the plan to achieve significant, timely and continuous improvement. • All schemes will be designed to incentivise product management higher up the waste hierarchy; in priority order: waste prevention, reuse, recycling, recovery (materials and energy), treatment and disposal. • For products containing hazardous materials: industry certification and compliance with other legislation for installation or use, maintenance, collection, transport, storage and disposal pathways. • All schemes will be designed and financed to manage orphaned and legacy products,¹⁵ as well as current products entering the market.

¹⁴ Sources include: Australian Continuous Improvement Group, 2017; European Commission, 2014; Green and Trebilcock, 2010; MS2 and Perchards, 2009; OECD, 2016; Peterson, 2014.

¹⁵ Legacy products include those that were sold into the market in earlier years but are now obsolete or banned (eg, agrichemicals containing persistent organic pollutants). Orphaned products include current or recent products for which a liable producer is no longer present (eg, e-waste marketed by companies no longer in business).

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴	Proposed guidelines for priority product scheme accreditation (using WMA section 12)
Fees, funding and cost effectiveness		<ul style="list-style-type: none"> Producers should be responsible for financing the end-of-life costs of their products. Producer and product fees should cover full net costs of collection and treatment. The cost of end-of-life treatment ideally should be internalised into the price of the product and paid for by consumers. Consider ways to manage risks to sustainable scheme income, such as price volatility and leakage. Design fee structures with a robust process and facilitate regular reassessment. 	<ul style="list-style-type: none"> The full net costs of collection and management of the priority product (reuse, recycling, processing, treatment or disposal) will be covered by producer and product fees associated with the scheme (eg, 'producer pays' or 'advance disposal fee').¹⁶ The impact of more than one accredited scheme and opportunities for maintaining competition should be considered in terms of net cost effectiveness (including monetary and non-monetary costs and benefits). Specify plans to manage risk to sustainable scheme income, such as price volatility and leakage of materials into other markets. Specify how existing and emerging technologies will be used to help track and manage product or waste throughout the supply chain (eg, bar codes, radio frequency identification (RFID), and block chain).

¹⁶ The WMA defines producers as people who: manufacture a product and sell it in New Zealand under their own brand; are the owner or licence holder of a trademark under which a product is sold in New Zealand; import a product for sale in New Zealand; or manufacture or import a product for use in trade by them or their agent.

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴	Proposed guidelines for priority product scheme accreditation (using WMA section 12)
Governance		<ul style="list-style-type: none"> Ensure that stakeholders other than industry are involved in governance eg, local authorities, government appointees. 	<ul style="list-style-type: none"> The scheme governance entity will be independent, non-profit and represent producers and wider stakeholders, including public interest. Governance should include wider stakeholders in two types of advisory groups: those including product producers and recipients of product management fees who have technical and supply chain knowledge, and other stakeholders who represent wider community and consumer interests. Structure and accountability of the scheme’s governance entity will be specified. Clear mechanisms will be in place to fully control the scheme’s operation, manage non-compliance and report on outcomes. The selection process for scheme directors will be transparent, and scheme governance provisions will follow best practice guidelines for New Zealand.¹⁷ Given the size of New Zealand’s population and market, the default expectation will be that either a single accredited scheme per priority product, or a clear platform for cooperation between schemes for efficient materials handling, will be part of the design.
Non-profit status			<ul style="list-style-type: none"> Given the prominence of expected net public good outcomes, the default expectation is that all priority product stewardship schemes will be operated by non-profit entities representing key stakeholders.

¹⁷ For example, Institute of Directors of New Zealand *Code of Practice for Directors* (www.iod.org.nz/Portals/0/Publications/Founding%20Docs/Code%20of%20Practice.pdf).

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴	Proposed guidelines for priority product scheme accreditation (using WMA section 12)
Competition		<ul style="list-style-type: none"> • Competition framework needs equal rules and adequate surveillance and enforcement. • Product stewardship policies should be as pro-competition as possible. • Waste collection, sorting, and disposal and treatment services should be procured by transparent and competitive tender. • Agreements among competitors to establish producer responsibility organisations (PROs) should be assessed externally. • Monopoly should not be the default structure for PROs. Single product stewardship organisations should be allowed only when the benefits outweigh the costs of less competition. <p>Stakeholders need to see that proposed interventions are justified, fair and supportive of competition. Redistribution of</p>	<ul style="list-style-type: none"> • The scheme will clearly provide for transparent, non-discriminatory and competitive procurement processes for downstream services such as collection, sorting, material recovery and disposal. • The scheme will ensure that no collectors and recyclers (whether existing, new entrant or social enterprise) are unfairly excluded from participation. This includes making service packages of suitable scale (whether geographically, by material or other measure) to allow both large and small providers to compete fairly. • Multiple accredited schemes will be considered if the net community and environmental benefit (including cost effectiveness and non-monetary impacts) is likely to be improved. • Provision will be made for regular independent audit of agreements among competitors. • The process for designing the scheme will have adhered to guidelines on collaborative activities between competitors as issued by the Commerce Commission, including but not limited to applying for collaborative activity clearance from that Commission (eg, Commerce Commission, 2018a, 2018b, 2018c, and 2019).

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴	Proposed guidelines for priority product scheme accreditation (using WMA section 12)
		market share and ‘picking winners’ will be of concern.	
Role of sectors	<p>WMA section 14</p> <p>To qualify for accreditation, a product stewardship scheme must:</p> <p>(d) list the classes of person involved in the design, manufacture, sale, use, servicing, collection, recovery, recycling, treatment and disposal of the product</p> <p>(e) list the persons who have agreed to participate in the scheme and assign responsibility to them for meeting the scheme’s objectives.</p>	<ul style="list-style-type: none"> Clarify roles of sectors. 	Already covered in WMA.
Stakeholder engagement and collaboration		<ul style="list-style-type: none"> Effectively engage with stakeholders – use a collaborative approach, address concerns. Build on the strength of existing systems, infrastructure and networks (eg, sharing resources between product types). 	<ul style="list-style-type: none"> The scheme will specify how wider stakeholders will be involved in decision-making by governance group (eg, use of stakeholder advisory groups). The scheme will have been designed with active engagement of the stakeholders currently involved in the product end of life (eg, collectors and recyclers). The scheme will specify how existing collection and processing infrastructure and networks will be maximised and new infrastructure and networks co-designed and integrated between product groups.

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴
Targets	<p>WMA section 14</p> <p>To qualify for accreditation, a product stewardship scheme must:</p> <p>(c) set measurable waste minimisation, treatment, or disposal objectives for the product, and timeframes for meeting the objectives.</p>	<p>Targets should be regularly reviewed and adjusted, taking account of changes in the market and technology.</p>

Proposed guidelines for priority product scheme accreditation (using WMA section 12)
<ul style="list-style-type: none"> • All schemes will be expected to set and report on targets that have the following characteristics: <ul style="list-style-type: none"> – significant, timely and continuous improvement – benchmarked against and aspiring to attain best practice recovery and recycling and treatment rates for the same product type in high-performing jurisdictions – a clear time bound and measurable path to move toward attaining best practice – targets for new product and market development to accommodate collected materials. • Results against targets will be publicly reported at least annually. • Material collection, recovery and disposal rates will be measured against one of the following: <ul style="list-style-type: none"> – actual trend data if the scheme has pre-existed as a voluntary scheme – the average aggregate weight or count of products sold into the market in the previous three reported years – another specified method where market entry information does not yet exist. • Plans will be specified for review, adjustment and reporting on performance targets, preferably annually and no less than every three years, taking account of changes in the market, natural events and technology.
<ul style="list-style-type: none"> • A clear distinction will be made between funding arrangements and market capacity to manage both potential high volume legacy

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴
Timeframes		
Market development		

Proposed guidelines for priority product scheme accreditation (using WMA section 12)
<p>and orphaned product collections in earlier years and ongoing continuous improvement of collection rates.</p> <ul style="list-style-type: none"> Performance targets will include measures for public awareness of scheme participant satisfaction and a record of response by the scheme to concerns raised. This will be made available to scheme auditors.
<ul style="list-style-type: none"> The timeframe within which an application for accreditation or reaccreditation of the priority product scheme is expected to be made after declaration of priority product is as follows: <ul style="list-style-type: none"> priority product categories with existing accredited voluntary schemes (eg, refrigerants, agrichemicals, farm plastics, packaging): within one year from the date of priority product declaration priority product categories with accreditation proposals that have been developed with a multi-stakeholder consultation process, including as a minimum producers, local authorities, major users and existing collectors and recyclers (eg, tyres): within one year from the date of priority product declaration or the date of proposal completion, whichever comes later other priority product categories: within three years from the date of priority product declaration. Within the accredited seven-year period, at least one full review of scheme costs and effectiveness will be undertaken. The result of reviews and proposed scheme amendments to improve cost-effectiveness will be reported via the annual reporting process.
<ul style="list-style-type: none"> The scheme will have a research and development budget to develop new recycled products, encourage transition to circular

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴
Design for environment		<ul style="list-style-type: none"> • Producer fees should be differentiated by end-of-life costs of their products. • Provide supplementary incentives for eco-design elsewhere in the system (eg, procurement criteria, material content constraints).
Performance standards, training and certification		<ul style="list-style-type: none"> • Assure quality of resource recovery to assure net benefit (both domestic and overseas).

Proposed guidelines for priority product scheme accreditation (using WMA section 12)
<p>product and recycled product materials design, and cooperate with other stakeholders to enhance onshore infrastructure.</p>
<ul style="list-style-type: none"> • The scheme will contain financial or other incentives for diversion of collected products to highest and best resource use, weighted for applications higher up the ‘waste hierarchy’ (in priority order: reduction, reuse, recycling or composting, energy recovery, safe treatment and disposal). • The fees paid by a producer to a collective scheme will, as far as possible, be linked to actual end-of-life treatment costs of their products, such as through variable or modulated fees. • The scheme will facilitate good communication, feedback and incentives between designers, manufacturers, sales and marketing teams, distributors, retailers, consumers, collectors, recyclers and end disposal operators, to inform improved design of products and systems. • The scheme will fund initiatives to improve circular resource use by reducing the ‘end-of-life’ components of the product(s) and improving design for reusability and recyclability of the priority product(s).
<ul style="list-style-type: none"> • The scheme will have clear means for ensuring adequate training and certification of all people recovering and managing that product throughout its life cycle in New Zealand, to ensure best practice in prevention and reduction of harm to people and the environment. • Any relevant standards for best practice will be referenced in training, supplier accreditation and monitoring (eg, AS/NZS 5377 for e-waste collection and processing). The scheme will participate in the development and revision of relevant standards.

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴
Reporting and public accountability	<p>WMA section 14</p> <p>To qualify for accreditation, a product stewardship scheme must:</p> <ul style="list-style-type: none"> (i) provide for assessing the scheme’s performance and for reporting on its performance to the Minister (j) set out a strategy for publication of the scheme (k) set out how information will be provided to purchasers, users and handlers of the product to which the scheme relates. 	<ul style="list-style-type: none"> • Ensure transparency of performance and cost data. • Transparency is required for scheme participants, consumers and the public on the performances and costs of the scheme. • Ensure regular, preferably independent, audits of scheme performance. • Harmonise definitions and reporting between schemes and countries.
Public awareness		

Proposed guidelines for priority product scheme accreditation (using WMA section 12)
<ul style="list-style-type: none"> • The scheme will have clear chain of custody arrangements to monitor processing of materials and reduction of harm both onshore and offshore, including annual reporting of findings. • The scheme will provide for clear, regular and open reporting and communication with stakeholders. • Annual reports will be made public. These will include measurement of outcomes and achievement of targets, fees collected and disbursed, and net cash reserves held as contingency. • Provision will be made for regular independent financial, compliance, enforcement and environmental audits of scheme performance. • Scheme plans will address the following: data availability (especially when several product stewardship organisations are in competition); materials’ traceability; and precise definition for data collection and reporting (eg, recycling rates and operational costs). • The scheme will have mechanisms to protect competitive information relating to detailed operational costs (eg, ‘black box’ data collection by third party with aggregate reporting). • Scheme performance measures will be harmonised between schemes, as far as possible.
<ul style="list-style-type: none"> • Branding and clear information on how and why the scheme operates will be easily available at the point of distribution (intercompany) and purchase (consumer), point of waste product collection and online, and a link to the online information will be on the product or product packaging. • The scheme will provide for transparent product stewardship fees at point of purchase.

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴
Accessible collection networks		
Monitoring, compliance and enforcement	<p>WMA section 14(h) Identify the processes for compliance and enforcement of any agreements between participants to the scheme.</p>	<ul style="list-style-type: none"> • The Government and obligated industry should be co-responsible for the monitoring and surveillance of extended producer responsibility schemes, and should ensure that adequate means for enforcement are in place. • Monitoring and enforcement framework must be adequately resourced and involve both government and producers. • For mandatory systems, the Government should establish a

Proposed guidelines for priority product scheme accreditation (using WMA section 12)
<ul style="list-style-type: none"> • The scheme will ensure that consumer labelling standards for the product are complied with (eg, Hazardous Substances and New Organisms Act 1996 for hazardous substances). • The scheme will regularly measure and report on public awareness and scheme participant satisfaction, and improvements will be made accordingly.
<ul style="list-style-type: none"> • The scheme will provide for an end-of-life product collection system that is reasonably accessible for all communities generating that waste product, whether metropolitan, provincial and rural. • Collection will be free to the public (fully funded by the scheme) for all products covered by the scheme. • Collection will be based on the product, not proof of purchase. • Collections will, as far as possible, share infrastructure and public information with other collection schemes in the area.
<ul style="list-style-type: none"> • The scheme will have a clear means of enforcing compliance of all participants and reporting liable non-participants to the government enforcement agency. • The scheme will have strategies to reduce 'leakage' of higher value end-of-life products (eg, 'cherry-picking' of e-waste components by informal collectors). • Enforcement of WMA regulations will be by the Government. • Revocation of accreditation is possible under WMA section 18, if reasonable steps are not being taken to implement the scheme and the scheme's objectives are not being met or are not likely to be met within the timeframes set out in the scheme.

Design feature	Existing WMA requirements for product stewardship scheme accreditation (sections 13, 14 and 15)	Recommendations in published overseas analysis of case studies ¹⁴
		<p>credible and consistent enforcement framework including, in addition to official accreditation of schemes, registers of producers and appropriate sanctions.</p> <ul style="list-style-type: none"> Free-riding should be addressed through peer pressure and strict enforcement with suitable sanctions.
Liability and insurance		
Complementary policies		<ul style="list-style-type: none"> Provide incentives for waste minimisation elsewhere in the system (eg, 'pay as you throw' municipal systems, disposal levies, landfill bans, public procurement).

Proposed guidelines for priority product scheme accreditation (using WMA section 12)
<p>Note: the overseas case study recommendations are about resourcing by the Government, which is not a criterion that product stewardship schemes need to meet for accreditation.</p>
<ul style="list-style-type: none"> The scheme will have clear chain of custody arrangements to monitor receipt and processing of materials and reduction of harm both onshore and offshore, including annual reporting of findings. The scheme will ensure liability of parties is clear for each stage of product and materials handling and adequate insurance for liability is in place at each stage.
<p>Overseas case study recommendations are about other action by the Government, which is not a criterion that product stewardship schemes need to meet for accreditation.</p>

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