

Office of the Associate Minister for the Environment

Chair

Cabinet Environment, Energy and Climate Committee

Improving our framework for managing environmentally harmful products in New Zealand

Proposal

1. The purpose of this paper is to seek Cabinet's approval, following recent consultation, to:
 - declare six priority products under the Waste Minimisation Act 2008 (WMA), meaning that products that are particularly harmful to the environment must be better looked after through their lifecycles (appendix 1) and
 - Publish Ministerial guidelines for how the priority products must be looked after in stewardship schemes (appendix 2).
2. The six products are tyres, electrical and electronic products (e-waste), agrichemicals, farm plastics, refrigerants, and plastic packaging.

Relation to Government priorities

3. The proposed actions will support transition to a clean, green carbon neutral New Zealand by better managing waste. As product stewardship schemes develop, improving onshore circular economy infrastructure will also support thriving and sustainable regions.¹

Executive summary

4. This Government has a priority to transition to a clean, green and carbon neutral New Zealand.² Product stewardship is a key tool to help this transition.
5. Product stewardship engages people and businesses in taking responsibility for the life-cycle impacts of the products they make, sell, use, and repurpose or dispose of. I propose opening the full WMA product stewardship toolbox so New Zealand can design and implement effective leadership in this area. To date only

¹ <https://www.beehive.govt.nz/feature/economy-growing-and-working-all-us>

² One of the priority outcomes in Government's September 2019 *Economic Plan for a productive, sustainable and inclusive society* <https://www.mbie.govt.nz/assets/economic-plan.pdf>

one regulatory tool has been used, to ban two specific products (plastic microbeads and plastic shopping bags).

6. Declaring a priority product requires a product stewardship scheme to be developed and accredited for that product. It also opens the opportunity to use regulation under WMA s 22(1)(a) to prohibit sale of a priority product except in accordance with an accredited scheme, in essence requiring participation.
7. Publishing Ministerial guidelines sets criteria for priority product stewardship scheme accreditation applications.³ The proposed guidelines are designed to raise the bar compared to the basic WMA requirements for accredited schemes.
8. Government consulted in 2019 on declaring agrichemicals, refrigerants, tyres, electrical and electronic products, farm plastics, and packaging as priority products. Public submissions showed a strong mandate in support of the proposed priority products, and proposed Ministerial guidelines to support scheme accreditation (93 per cent support in full or in part).
9. The products were selected from 24 waste streams using five criteria connected to the WMA and practical implementation factors (risk of harm, resource efficiency opportunity, sufficiency of voluntary measures, industry readiness, and current products/producers). There are other waste streams that need attention (for example, food waste), but are not amenable to a regulated product stewardship approach at this time.
10. Determining the appropriate design for each priority product will require a co-design process with stakeholders, and public consultation. Once this has occurred, I will bring further advice on proposed regulatory and non-regulatory measures for each scheme to Cabinet.
11. We consulted on a number of sub-sets of the proposed priority products. For two of these, methyl bromide and beverage packaging, I propose to postpone the decision on declaring priority products. This is to enable conclusion of co-design for a beverage container return scheme, and announcement of the Environmental Protection Authority's decision on reassessment of methyl bromide.
12. The proposals in this Cabinet Paper are aligned to a recovery from the COVID-19 pandemic that is resilient for people, the economy and the environment. The product stewardship opportunities and willingness of stakeholders to engage, identified pre-COVID, both remain and will be enabled by this decision.
13. On the basis of consultation and the advice received from the Waste Advisory Board⁴ and with the agreement of the Minister for the Environment I propose to:

³ Schemes must be consistent with any Ministerial guidelines published under section 12 to be accredited unless the Minister for the Environment determines the scheme should nevertheless be accredited and has sought the advice of the Waste Advisory Board (WMA section 15(2)).

⁴ The WMA establishes the Waste Advisory Board to advise the Minister on decisions relating to priority products, regulations and other matters, and sets out requirements to consult with the Board.

- 13.1. declare as priority products pursuant to WMA s 9(1); tyres, electrical and electronic products, agrichemicals and their containers, refrigerants and other synthetic greenhouse gases, farm plastics and plastic packaging (appendix 1);
 - 13.2. publish Ministerial guidelines pursuant to WMA s 12(1) to guide applications for accreditation of priority product stewardship schemes (appendix 2);
 - 13.3. report back to Cabinet on my proposed actions regarding beverage containers and methyl bromide.
14. I also propose to:
- 14.1. align the timing of gazettals and announcements with government priorities during the COVID-19 situation;
 - 14.2. signal to stakeholders and the public that the decision on declaration of priority product for beverage containers and methyl bromide will be made later in the year.

Background

The Government is moving to address the harm caused from waste

15. This Government has a priority to transition to a clean, green and carbon neutral New Zealand.⁵ However, New Zealanders are among the highest producers of household waste per capita in the OECD and disposal of waste to municipal landfills has steadily increased over the last decade.
16. New Zealanders are increasingly concerned about waste and its effects on the environment. For example, surveys carried out in 2018⁶ and 2019⁷ have found that New Zealanders see waste as one of the most important challenges facing New Zealand. The build-up of plastic in the environment has consistently been at the top of New Zealanders' concerns. Over half of New Zealanders express a high commitment to recycling and reducing waste.
17. I have regularly informed Cabinet of the Government's work programme to improve the waste management system in New Zealand and transition New Zealand to a circular economy. Cabinet has impressed on me the importance of this work to New Zealanders.

Product stewardship

⁵ Footnote 1 above

⁶ Colmar Brunton. 2018. *Better Futures: celebrating a decade of tracking New Zealanders' Attitudes and behaviours around sustainability*. Accessed at: <https://www.colmarbrunton.co.nz/better-futures-climate-change-concern-rising-but-plastics-top-of-mind-for-kiwis/>

⁷ Colmar Brunton. 2019. *Environmental attitudes baseline*. Accessed at: <https://www.mfe.govt.nz/more/science-and-data/understanding-new-zealanders%E2%80%99-attitudes-environment>

18. Product stewardship offers a collaborative framework to build sustainable patterns of production and consumption and thus support transition to a more resilient, productive and inclusive economy.
19. Product stewardship means producers, brand owners, importers, retailers, consumers, collectors, and re-processers take responsibility for life-cycle impacts of products and reduce environmental harm.
20. Currently, New Zealand has fifteen voluntary product stewardship schemes in operation, accredited under the Waste Minimisation Act. The schemes have had moderate success in achieving waste minimisation outcomes. In a voluntary framework a minority of industry stakeholders participate and pay fees, limiting the ability of voluntary schemes to improve collection rates and fully fund their initiatives.
21. New Zealand's use of WMA mechanisms to regulate products has to date been limited to bans.⁸ To understand how regulations to support product stewardship schemes might work in practise we must look to overseas models. Over 500 regulated product stewardship schemes have been successfully implemented worldwide, most commonly for products that cause environmental harm such as those that are the subject of this Cabinet decision. The most common models used overseas are product take-back, advance fees, and deposit–refund.⁹
22. The WMA enables regulations to establish any of these models, and appendix 3 shows a high-level indicative design of how an advance disposal fee or deposit–refund system might work in New Zealand.

Consultation on priority products to enable regulated product stewardship

23. In July 2019 Cabinet agreed to consult on a proposal to declare priority products and publish Ministerial guidelines, and invited me to report back to Cabinet on the outcomes of the consultation (DEV-19-MIN-0195 refers).
24. Public consultation on *Proposed priority products and priority product stewardship scheme guidelines* was conducted from 9 August to 4 October 2019. The proposal was to:
 - 24.1. declare six product groups as priority products under s 9 of the WMA
 - tyres
 - electrical and electronic products
 - agrichemicals and their containers
 - refrigerants and other synthetic greenhouse gases, and methyl bromide
 - farm plastics
 - packaging (beverage packaging and plastic packaging).
 - 24.2. publish Ministerial guidelines for priority product stewardship schemes under s 12 of the WMA.

⁸ Plastic microbeads in 2017 and plastic shopping bags in 2018, under section 23 of the WMA.

⁹ [OECD 2016 - Extended producer responsibility updated guidance for efficient waste management.
http://www.oecd.org/environment/waste/extended-producer-responsibility-9789264256385-en.htm](http://www.oecd.org/environment/waste/extended-producer-responsibility-9789264256385-en.htm)

25. The first five of the six proposed priority products were selected for public consultation in 2014 after comparing 24 waste streams against five criteria (risk of harm, resource efficiency opportunity, sufficiency of voluntary measures, industry readiness, and current products).¹⁰ Since then the situation has not markedly changed. The growing awareness of the potential effects of microplastics in the environment and potential economic benefits of beverage container return systems led to the addition of packaging as a proposed priority product.
26. These six proposed products offer significant reduction of harm, social and economic benefit, and active engagement from stakeholders to ensure a successful scheme. Addressing these products now does not preclude addressing others later.

A strong mandate for priority products to enable regulated product stewardship

27. We received 3,986 submissions during the consultation period. The majority were from individuals, followed by business/ industry submissions and NGO/community submissions (table 1).

¹⁰ Ministry for the Environment. 2014. *Priority waste streams for product stewardship intervention: A discussion document*, Appendix 4, <https://www.mfe.govt.nz/publications/waste/priority-waste-streams-product-stewardship-intervention-discussion-document>. Majority support was received from submissions: Ministry for the Environment. 2015. *Priority waste streams for product stewardship intervention: Summary of submissions*, <https://www.mfe.govt.nz/publications/waste/priority-waste-streams-product-stewardship-intervention-summary-submissions>.

Submitter type	Count	Percentage
Business / Industry	199	5%
Local Government	40	1%
Iwi/Maori	15	<1%
NGO/community group	80	2%
Individual	3633	91%
Academic/Research community	9	<1%
Unspecified / Other	10	<1%
TOTAL	3986	100%

Table 1: Number of submissions by type

28. The majority (93 per cent) of submitters supported the overall proposal in full or in part.¹¹ This majority support was present across all submitter types, ranging from 77 per cent for business /industry to 99 per cent for individuals and 100 per cent for submissions from the academic/ research community.
29. The majority of the 15 submissions received from respondents identifying as iwi/ Māori were in support and some submitting groups were interested in participating in product stewardship co-design. This aligns with Ministry intent to engage with Māori on individual priority product scheme proposals as they develop and before public consultation documents on any supporting regulations are finalised.
30. All of the proposed priority products are used on-farm, particularly agrichemicals, farm plastics, tyres and refrigerants. Representative bodies, major companies and individual businesses in this sector all provided submissions. A number of these representative bodies and larger companies are also active members of the co-design processes for agrichemicals and farm plastics.
31. Of those that stated a position there was very clear majority support for all of the proposed priority products and the proposed Ministerial guidelines, from 88 to 98 per cent (figure 1 - graph shows the top 20 per cent of the scale).

¹¹ 53 per cent of submitters stated 'support' and 41 per cent stated 'support in part.'

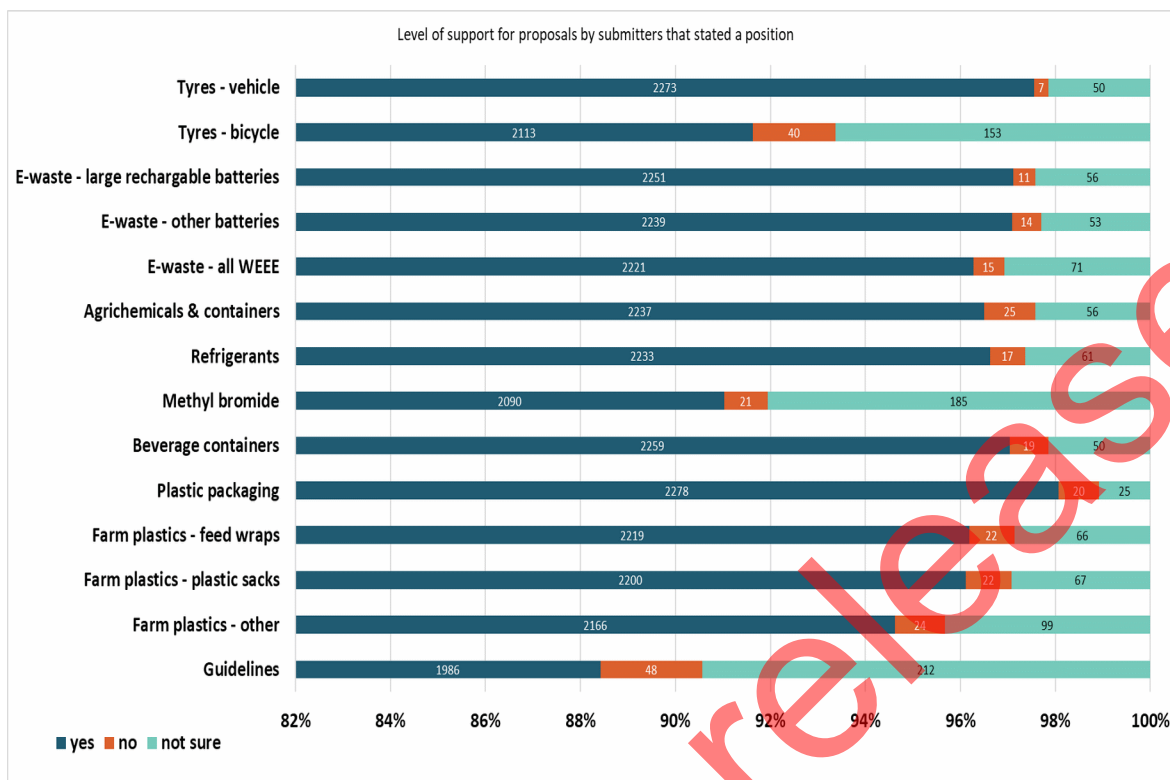


Figure 1: Level of support for proposed priority products and Ministerial guidelines among submitters that stated a position (showing upper end of scale, 82 to 100 per cent)

32. There was some disagreement from some industry groups about proposals for declaration of priority product. For example:

- A number of producers associated with the Glass Packaging Forum’s voluntary accredited product stewardship scheme argued strongly against glass being in scope for declaration of beverage containers as priority products. Other related sector groups agreed with inclusion of glass. As I propose to delay the decision on priority products for beverage containers until the concurrent beverage container co-design process is completed, further information will be available to address these issues.
- The managers of the voluntary accredited product stewardship scheme for mobile phones argued against inclusion of these products in declaration of e-waste as a priority product as they believed collection percentages could not be substantially improved. Given both the risk of harm when waste and potential economic advantage when recovered for these products, I consider on balance that other models for improved recovery need to be pursued.
- A major energy industry user of both lead-acid storage batteries and sulphur hexafluorine (SF₆) argued against these being included in scope for priority product declaration for batteries and refrigerant gases respectively. These would be later phase-in categories for the related accredited product

stewardship schemes so ample time would be available to maintain product access and improve management systems .

33. A number of submissions noted that the scope for 'plastic packaging' is wide, potentially limiting the influence of New Zealand business and the Government. Nonetheless there is a need to reduce negative impacts from these products and I consider that an appropriate pathway for domestic action can be developed in co-design with stakeholders.
34. Views expressed by submitters are set out in more detail in the summary of submissions, which I proposed to publish once an announcement of decisions can be made (appendix 5).

Analysis

The six proposed priority products

35. The public submissions provide a strong mandate to give effect to the proposed actions, as set out in the above summary (paragraphs 27 to 34). Submitters' reasons for supporting the proposal echoed the consultation document which focused on WMA tests of risk of environmental harm potential benefits (appendix 4). Strong themes in submissions included the following.
- Tyres: stockpiling and risk of fire and leaching of toxic material to land, air and water.
 - E-waste: valuable recoverable resources contained in e-waste; toxicity of components; concern about planned obsolescence, inability to repair electronic products, resulting in unnecessary waste; and non-recyclable/ toxic plastics associated with e-waste.
 - Agrichemicals and their containers: current voluntary schemes limit the safe recovery and disposal of legacy chemicals; consistency of services and cost reduction for ratepayers would improve under regulated product stewardship.
 - Farm plastics: risk of harm to the environment particularly with burning and burying on farm, waste of resources.
 - Refrigerants and other synthetic greenhouse gases: these gases pose great risk of harm to the ozone layer and climate change, and the proposal would improve alignment with New Zealand's international commitments and existing or proposed domestic legislation
 - Plastic and beverage packaging: risk of harm to the environment and food chains from microplastics, waste of resources, opportunity to current framework ineffective,

Approach to declaring priority products

36. To give effect to the public mandate, I propose to announce the following for the six products (table 2).

Proposed priority product	Declare Priority Product <i>Gazette notice</i>	Comment
Tyres	Declare now	Broad public support
Electrical and electronic products	Declare now	Broad public support
Agrichemicals and their containers	Declare now	Broad public support
Farm plastics	Declare now	Broad public support
Refrigerants and other Synthetic Greenhouse Gases <ul style="list-style-type: none"> • Refrigerants 	Declare now	Broad public support
<ul style="list-style-type: none"> • Methyl Bromide 	Do not declare now	Signal intent to make decision after the outcome of the EPA review is known and targeted consultation has been undertaken with key stakeholders
Packaging <ul style="list-style-type: none"> • Beverage containers 	Do not declare now	Signal intent to make decision after outcome of collaborative Container Return Scheme co-design process known, to ensure alignment with preferred design
<ul style="list-style-type: none"> • Plastic packaging 	Declare now	Broad public support

Beverage containers

37. Notwithstanding clear support from public submissions for declaration of beverage containers as a priority product¹², I recommend deferring the decision to declare beverage packaging as a priority product until critical design aspects are known from the Waste Minimisation Fund Container Return Scheme (CRS) co-design

¹² Level of support varied by submitter type: 75% for academic/research, 85% for business/industry, 98% for individuals and 100% for local government, iwi/Māori, NGO/community group and other.

project. This process has been running in parallel with the public consultation and analysis of submissions.¹³

38. The CRS project will produce a detailed design report and cost-benefit analysis later this year with recommendations for the best type of CRS model for beverage packaging in New Zealand. The design report will consider a range of options including declaring priority product and non-regulatory options. Best practise scheme design for beverage containers in New Zealand will be clear when the co-design process has reported.
39. I am required to accredit schemes if they meet the requirements of the WMA including consistency with any published Ministerial guidelines for priority products. Currently under a voluntary framework there has been no incentive to apply for accreditation. If priority product is declared for beverage packaging at the same time as the other products, some beverage container stakeholders may choose to apply for scheme accreditation before the current CRS co-design process has been completed. This could enable a scheme design to be accredited before the co-design project has completed and create a risk of losing the opportunity to obtain an optimal scheme for New Zealand, building on the best of overseas practise.
40. To mitigate this risk I propose to postpone the decision on priority product for beverage containers until the outcome of the co-design project is known.
41. The WMA provides for an option to publish guidelines for individual priority products. The Ministerial guidelines I propose to publish are for any declared priority product, and do not contain product-specific detail. The proposed delay in declaring priority product for beverage containers would also allow publication of additional product-specific Ministerial guidelines to support the preferred design if that is required, for example relating to definition of expected coverage and public access to beverage container collection services.

Methyl bromide

42. Methyl bromide is a powerful ozone layer depleting substance and a greenhouse gas with a climate change influence twice that of carbon dioxide.¹⁴ The majority (92 per cent) of use in New Zealand is for fumigating logs prior to export to meet biosecurity requirements.
43. A regulated product stewardship framework has the potential to support sustainable management of methyl bromide and transition to alternatives. To be effective this needs to be done in alignment with the ongoing work of agencies and industry.

¹³ The CRS co-design project actively involves stakeholders from the beverage and beverage packaging industries, local authorities, technical experts, the recycling industry and the community. It is expected to report to Government at the end of September 2020.

¹⁴ https://ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf

44. It is important for a priority product decision to be aligned with the methyl bromide reassessment decision by the Environmental Protection Authority (EPA). This reassessment has been running in parallel with the priority products consultation and submissions analysis and the EPA's decision is expected sometime after August 2020.
45. Declaring methyl bromide a priority product now would be done in the absence of feedback from industry stakeholders on potential unintended consequences, as they were not successfully engaged during the public consultation process.
46. I propose to postpone my decision on declaring methyl bromide a priority product until the EPA reassessment has been completed, provided that EPA decision occurs by 31 December 2020, and officials have had further opportunity to engage with industry and agencies about product stewardship opportunities.

Implementation

Next steps after declaring priority product – co-design, accreditation and supporting regulations

47. Under the WMA, declaring priority products triggers a requirement for a product stewardship scheme to be prepared as soon as practicable. Schemes will need to be consistent with the Ministerial guidelines that I propose to issue (appendix 2) in order to be accredited.
48. The proposed Ministerial guidelines include expected timelines for receiving applications for scheme accreditation. Different products are at different stages of product stewardship development. Some have voluntary accredited schemes that are well tested and can be upgraded (eg, refrigerants, agrichemicals, farm plastics) and others have further to go (eg, tyres, e-waste, packaging). Table 3 shows the timing by which applications are expected to be submitted for a priority product. After this, there is still considerable time for each scheme to be implemented and become operational (months to years).

Table 3: Proposed timing for priority product scheme accreditation applications

Product stewardship status	Timing for application	Product examples
Existing accredited voluntary schemes wholly or substantially cover the priority product	Within one year from the date of priority product declaration	Agrichemicals and containers, , other farm plastics, refrigerants
Priority products not substantially covered by voluntary accredited schemes and for which a co-design process has	Within one year from the date of priority product declaration or co-design recommendations to	Tyres, lithium-ion batteries ¹⁵ , other e-waste, beverage containers ¹⁶

¹⁵ This sub-category of e-waste is separated out as the stakeholders have chosen a separate co-design process

commenced	government, whichever is later	
All other priority product categories.	Within three years from the date of priority product declaration	Plastic packaging

49. In the 2019 consultation Government signalled an intent to encourage “co-design” of product stewardship schemes with stakeholders. The co-design approach involves the Government “being at the table” working with stakeholders to design:

- 49.1. appropriate schemes for accreditation under the WMA
- 49.2. ways to ‘level the playing field’ and improve resource and information flows (potentially using the WMA or other regulations).

50. The WMA enables regulations which could support a product stewardship scheme, such as mandated participation by producers, advance disposal fees, deposits and refunds, and product take-back. If made, such regulations could be enforced by way of prosecution.

51. As the co-design process develops, the Government may need to:

- 51.1. decide on accreditation of schemes
- 51.2. monitor scheme outcomes
- 51.3. make any necessary regulations.

52. A co-design process will benefit from including wider stakeholders. Businesses, waste 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.

Public consultation and accreditation of schemes

53. Once schemes are developed and proposed by stakeholders for accreditation by the Minister, I will bring to Cabinet a proposal to consult on any regulations necessary to support the effective functioning of those schemes. If a scheme requires regulations to be effective, full implementation of that scheme would not occur until such regulations were in place.

54. The WMA does not require public consultation on product stewardship schemes before they are accredited by the Minister for the Environment. There are 14

¹⁶ Co-design processes for all of these products are in train and well supported by stakeholders.

voluntary schemes that have been accredited under the WMA to date solely by Ministerial decision. If, however, regulations are required to support priority product stewardship schemes then consultation will be required on proposed regulations and the consultation document will need to describe the schemes in order to describe potential costs and benefits and inform submissions.

Supporting New Zealand's recovery from the COVID-19 pandemic

55. The proposals in this Cabinet Paper are aligned to a recovery from the COVID-19 pandemic that is resilient for people, the economy and the environment.
56. These proposals are to establish a change in the way that New Zealand deals with harmful products. This change is a powerful signal, as the economy emerges from a period of less intensity, that this Government considers the recovery to be an opportunity for change – not a reinforcement of the status quo.
57. For businesses, evidence from other jurisdictions shows that there are more economic opportunities from recovering resources than there are from sending them to landfill.¹⁷ Product stewardship will require significant expansion of voluntary schemes or development of new schemes for each of categories, generating new industry and employment opportunity.
58. The public consultation took place before the advent of COVID-19, but indications are that stakeholder willingness to engage in co-design has not waned.
59. The proposals include a timeframe for applying for scheme accreditation (table 3 above), but do not constrain the time needed for scheme implementation. In addition, schemes requiring regulation for effective operation will have a longer lead time while consultation and promulgation occurs. There is ample scope to adjust for each industry as they emerge from the COVID-19 pandemic.
60. The next phase of co-design will begin with sectors that are developing schemes already (tyres, refrigerants, agrichemicals). These proposals give more time to sectors that have not developed schemes. The plastic packaging sector, perhaps one of the more complex schemes to design, will have three years to apply for accreditation after which there will be consultation on any regulations and implementation.
61. The Waste Minimisation Fund has supported all of the co-design processes to date. Applications to the fund continue to be an option for supporting the co-design process for all product stewardship schemes.

Consultation

62. The recommended priority products and Ministerial guidelines texts reflect submissions received in the public consultation process and the advice of the Waste Advisory Board.

¹⁷ As an average across a range of studies, for every five jobs in landfilling, 15 to 20 jobs could be created in resource recovery: Ministry for the Environment. 2019. *Reducing waste: a more effective landfill levy – consultation document*, page 16.

63. Agencies consulted on this paper were: Department of Internal Affairs, Department of Conservation, Environmental Protection Agency, Ministry of Cultural Heritage, Ministry of Primary Industries, Ministry of Business Innovation and Employment, Ministry of Foreign Affairs and Trade, Te Puni Kōkiri and the Treasury. All agencies responded, and this paper has been amended to accommodate their views.

Financial implications

64. There are no immediate financial implications. The Government role in engaging in consultation and supporting co-design and scheme accreditation processes is covered by Ministry for the Environment baseline funding.
65. At this stage there are no costs implied for households, and some minor in-kind costs for some businesses, sector groups, local authorities and NGOs to participate in scheme co-design.
66. There are potential future costs for industry associated with establishing, running, and participating in the schemes. However, regulated product stewardship will shift the costs of disposing of these products from the environment and ratepayers to people and businesses producing and using the products.
67. I expect the future costs of a mandatory product stewardship scheme to be manageable for industry, especially where there are already existing voluntary industry schemes running as per Table 3 above (agrichemicals and containers, other farm plastics, refrigerants). For every scheme, new requirements and associated net costs will not be imposed except by regulation, and they will only be given effect with Cabinet approval for each individual scheme and its regulations. The scheme designs are anticipated over 2020-2022 as co-design groups report to Government. The co-design process and future Cabinet decisions provide the Government with ample choice to consider costs and benefits, and where they fall.
68. Longer term there will be financial implications for monitoring and enforcement of proposed schemes and regulations. Implications for costs above existing agency baseline will be specified as part of the next stages of consultation on proposed regulations to support effective priority product stewardship scheme operation.

Human rights, gender and disability implications

69. There are no inconsistencies between the proposal and the Human Rights Act 1993.
70. There are no gender or disability implications of this proposal.

Legislative implications

Consistency with the Waste Minimisation Act

71. I am satisfied that all of the necessary conditions have been met under s 9(2) and 9(3) of the WMA to be able to declare the proposed priority products.
- 71.1. I am satisfied that each of the proposed priority products will or may cause significant environmental harm when it becomes waste (s 9(2)(a)(i)) or there are significant benefits from reduction, reuse, recycling, recovery, or treatment of the product (s 9(2)(a)(ii)):
- 71.1.1. tyres pose risk of environmental harm when waste as well as benefit from circular resource use;
- 71.1.2. electrical and electronic products pose risk of environmental harm when waste as well as benefit from circular resource use;
- 71.1.3. agrichemicals and their containers pose risk of environmental harm when waste as well as benefit from recycling the containers;
- 71.1.4. farm plastics pose risk of environmental harm when waste as well as benefit from recycling;
- 71.1.5. refrigerants and other synthetic greenhouse gases pose both risk of harm and benefit from safely capturing and treating the gases;
- 71.1.6. packaging poses risk of environmental harm when waste as well as benefit from circular resource use;
- 71.2. I am satisfied that the proposed priority products can be effectively managed under a product stewardship scheme;
- 71.3. I have obtained and considered the advice of the Waste Advisory Board;
- 71.4. I have considered any public concerns about environmental harm associated with the product when it becomes waste (including concerns about its disposal);
- 71.5. I have provided the public with an opportunity to comment on the proposal;
- 71.6. I have considered the effectiveness of any relevant voluntary product stewardship scheme in terms of the criteria set out in WMA s 9(2).¹⁸
72. I am also satisfied that all of the necessary conditions have been met under s 12(4) of the WMA to be able to publish the proposed Ministerial guidelines:
- 72.1. I have obtained and considered the advice of the Waste Advisory Board;
- 72.2. I am satisfied that there has been adequate consultation with persons or organisations who may be significantly affected by the guidelines.

¹⁸ The relevant accredited voluntary schemes are: Refrigerant Recovery (refrigerants); Agrecovery Rural Recycling Programme (agrichemicals and containers); Plasback (farm plastics); RE:MOBILE (mobile phones); Fuji-Xerox Zero Landfill Scheme and Sharp Comprehensive Recycling and Waste Reduction Scheme (imaging devices); and Glass Packaging Forum, Fonterra Milk for Schools Recycling Programme, Soft Plastic Recycling Scheme and Public Place Recycling Scheme (packaging). Progress has been made over recent years but producer membership, collection coverage and recovery rates remain sub-optimal in voluntary frameworks.

Priority Product Declaration

73. Priority product declarations and Ministerial guideline publishing are notified by Gazette notice and do not require regulation or legislative change.

Regulatory impact analysis

74. A regulatory impact assessment is not required for the proposals in this paper. The regulatory implications at this stage of the process are:

74.1. Declaration of priority products, which would create a requirement to develop and accredit a product stewardship scheme for that product as soon as practicable

74.2. Publishing of Ministerial guidelines, which would set out expected features of such a scheme proposed for accreditation.

75. The Government is likely at a later stage to propose regulations to support effective operation of individual accredited priority product stewardship schemes, under sections 22 or 23 of the Act or other legislation, to support effective management of the majority of priority products. An impact assessment will be prepared for any proposed regulations to support the priority product stewardship schemes. A number of these co-design projects have commenced and proposals for public consultation on related regulations will be brought to Cabinet in 2020 and 2021.

Communications

76. When the declaration of priority products and publishing of Ministerial guidelines is given effect by publishing a notice in the *Gazette* I intend to publicly announce this, proactively release this paper, and publish the submissions summary and database of submissions on the Ministry website.

77. I will ensure that the timing for this aligns appropriately with the release of other policy announcements.

Proactive Release

78. I intend to release this Cabinet paper proactively in whole within 30 business days of decisions being confirmed by Cabinet.

Recommendations

On the basis of consultation and the advice received from the Waste Advisory Board, and with the agreement of the Minister for the Environment, I recommend that Cabinet:

Reducing harm from waste

1. **Note** that this Government has a priority to transition to a clean, green and carbon neutral New Zealand
2. **Note** that New Zealanders are among the highest producers of household waste per capita in the OECD and that disposing of waste has long-term environmental, economic and social costs.
3. **Note** that product stewardship means producers, brand owners, importers, retailers, consumers, collectors, and re-processors take responsibility for life-cycle impacts of products and reduce environmental harm.

Results of consultation

4. **Note** that the results of public consultation show a broad mandate for declaring priority products to enable improved product stewardship – 93 per cent of submitters supported the overall proposal in full or in part.¹⁹
5. **Note** that majority support was present across all submitter types, ranging from 77 per cent for business /industry to 99 per cent for individuals and 100 per cent for submissions from the academic/ research community.

¹⁹ 53 per cent of submitters stated 'support' and 41 per cent stated 'support in part'.

Declaring priority products and issuing guidelines

6. **Authorise** the Responsible Minister to declare as priority products, pursuant to s 9(1) of the WMA, tyres, electrical and electronic products, agrichemicals and their containers, refrigerants and other synthetic greenhouse gases (with the exception of methyl bromide, farm plastics and plastic packaging (excluding beverage containers));
7. **Authorise** the Responsible Minister to publish Ministerial guidelines pursuant to s 12(1) of the WMA;
8. **Note** that the Responsible Minister will signal to stakeholders and the public that the decision on declaration of priority product for beverage containers and methyl bromide will be made later in the year to enable alignment with other processes
9. **Note** that declaring priority products triggers a requirement for a product stewardship scheme to be prepared and accredited for each product as soon as practicable – and there will be a further implementation phase of months or years before a scheme is in place
10. **Invite** the Responsible Minister to report back to Cabinet no later than November 2020 on proposals to publicly consult on regulations to support stewardship schemes for tyres and refrigerants
11. **Invite** the Responsible Minister to report back to Cabinet on a revised approach to beverage containers and methyl bromide in December 2020
12. **Note** that the decisions in recommendations 6 and 7 above are consistent with a recovery from the COVID-19 pandemic that is resilient for people, the economy and the environment.

Authorised for lodgement.

Eugenie Sage
Associate Minister for the Environment

**Appendix 1: Recommended text for declaration of priority products under WMA
section 9**

Tyres

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

Electrical and electronic products

- (a) Rechargeable batteries designed for use in electric or hybrid electric vehicles or household-scale and industrial renewable energy power systems including but not limited to lithium-ion batteries.
- (b) All other re-chargeable and non-rechargeable batteries, including lead-acid batteries used in vehicles and stationary power systems.
- (c) All categories of waste electrical and electronic equipment (WEEE) defined in Annex II of European Directive 2012/19/EU.

Agrichemicals and their containers

Chemicals in containers up to and including 1000 litres in size or equivalent packaging for dry goods 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.

Including but 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.

Refrigerants and other synthetic greenhouse gases

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.

Farm plastics

- (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 other rigid plastic container

Plastic packaging

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 refilled by the producer for retail sale or able to be refilled by the consumer at a retail establishment.

Recommended to not declare at this time (delay decision)

Indicative text only - to reflect feedback from consultation

Beverage packaging

Packaging used to contain any beverage for retail sale that contains 150 millilitres to 3 litres of capacity, made of any material singly or in combination with other materials (eg, plastic, glass, metal, paperboard or mixed laminated materials), and including lids, caps or other seals. 'Beverage' includes any product consumed by drinking, including milk products, water, juices, alcoholic drinks, carbonated drinks, coffee, tea, and tonics or health products.

Methyl bromide

Methyl bromide and products containing this gas.

Appendix 2: Recommended revised text for publishing Ministerial guidelines under WMA section 12

The time within which an application for accreditation of the scheme is expected to be made under WMA section 13²⁰

Applications for accreditation are expected as follows.

- (a) Within one year from the date of priority product declaration: product categories with existing accredited voluntary schemes that wholly or substantially cover that priority product.
- (b) Within one year from the date of priority product declaration or co-design recommendations to government, whichever is later: product categories not substantially covered by voluntary accredited schemes for which a co-design process has commenced.
- (c) Within three years from the date of priority product declaration: all other priority product categories.

Expected scheme effects

Accreditation applications must specify how the proposed scheme will achieve the following.

1. Circular resource use
 - (a) Continuous improvement in minimising waste and harm and maximising benefit from the priority product at end-of-life.
 - (b) Increasing end-of-life management higher up the waste hierarchy²¹ to support transition to a circular economy in New Zealand. In order of priority this is waste prevention (including through product redesign), reuse, recycling, recovery of materials, and recovery of energy.
 - (c) Investment in initiatives to improve circular resource use, reusability, recyclability and new markets for the priority product.
2. *Internalised end-of-life costs*
 - (a) Full net costs for stewardship of priority products at end of life met by product or producer fees proportional to the producer's market share and ease of reuse or recyclability of their product.²²
 - (b) Free and convenient collection of the priority product for household and business consumers at end-of-life, including rural populations.

²⁰ WMA s 12(3)(f) allows for Ministerial guidelines to specify the time within which an application for accreditation of the scheme is expected to be made under section 13, and s 15(1)(e) provides for accreditation to be granted by the Minister if this and other requirements) are met.

²¹ In order of priority this is waste prevention, reuse, recycling, recovery (materials and energy), treatment and disposal.

²² 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.

- (c) Collection and management of legacy and orphaned priority products fully or substantially funded by the scheme.
- 3. *Public accountability*
 - (a) Clear information to household and business consumers on how the scheme works, how it is funded, and how to find the nearest collection point.
 - (b) Transparent chain of custody for collected and processed materials, both onshore and to offshore processors, and published mass balances showing reuse/ recycling or environmentally sound disposal rates.
 - (c) Publicly available annual reports that include measurement of outcomes and achievement of targets, fees collected and disbursed, and net cash reserves held as contingency.
- 4. *Collaboration*
 - (a) Optimal use of existing and new collection and processing infrastructure and networks, and co-design and integration between product groups.

Expected scheme contents

Accreditation applications must specify how the scheme incorporates or will provide for the following.

- 1. *Governance*
 - a. The scheme manager will be a legally registered not-for-profit entity.
 - b. Annual independent audits will be conducted on scheme performance and included in annual reports
 - i. financial performance and scheme cost-effectiveness
 - ii. environmental performance
 - iii. agreements with scheme service providers
 - c. Governance arrangements will be established for initial set up and ongoing development and operation of the scheme that are appropriate to the size and scale of the scheme.
 - d. All governance activities will adhere to Commerce Commission guidelines on collaborative activities between competitors, including but not limited to applying for collaborative activity clearance from the Commission for the scheme.
 - e. The scheme will be the only accredited scheme for that product, or
 - i. have agreements in place with other scheme managers to enable cooperation and cost-effective materials handling and to prevent confusion for consumers, and
 - ii. demonstrate how net community and environmental benefit (including cost-effectiveness and non-monetary impacts) will result from multiple schemes for that priority product.
 - f. Directors or governance boards will:
 - i. be appointed through an open and transparent process
 - ii. represent the interests of producers and consumers of the priority product and the wider community as informed by stakeholder advisory groups²³
 - iii. follow governance best practice guidelines²⁴, including for the identification and management of conflicts of interest.

²³ Community interests may include for example local councils, iwi, and environmental NGOs.

2. *Scheme operations*

- a. Services (e.g. collection, sorting, material recovery and disposal) will be procured using transparent, non-discriminatory and competitive processes open to all competent entities whether existing, new entrant or social enterprise
- b. Clear, regular and open reporting and communication will be given to scheme participants and stakeholders
- c. Processes exist to manage commercially confidential or sensitive information appropriately.
- d. All people involved in the scheme will have completed suitable training to complete their roles, including in best practice in prevention and reduction of harm to people and the environment.
- e. Ability to obtain, or existing permits held for all necessary activities in New Zealand, in relation to processing and potential export of priority products or their constituent components.

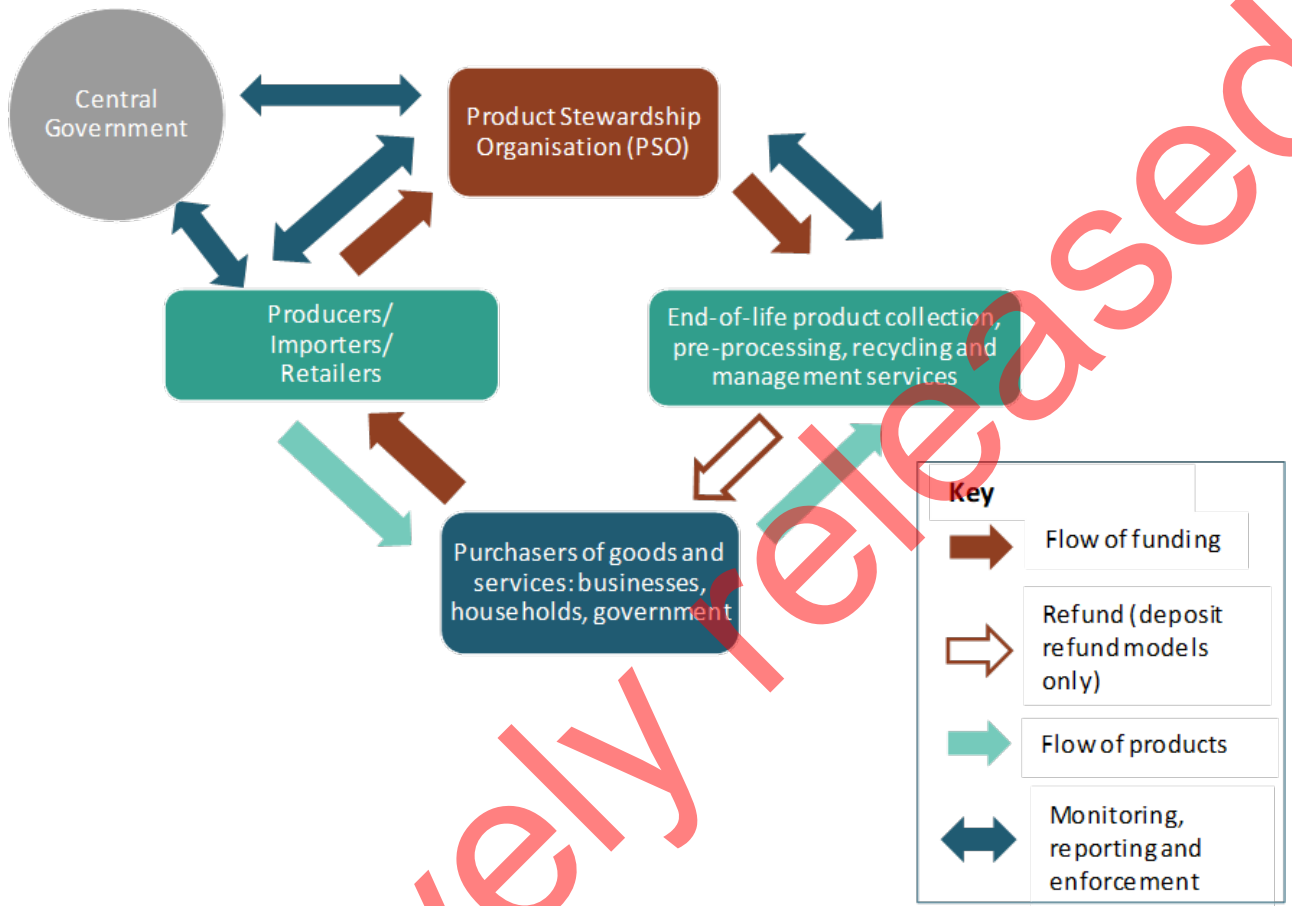
3. *Targets*

- a. All schemes will set and report annually on targets that include as a minimum:
 - i. significant, timely and continuous improvement in scheme performance
 - ii. performance against best practice recovery and recycling or treatment rates for the same product type in high-performing jurisdictions
 - iii. a clear time-bound and measurable path to attain best practice
 - iv. implementation phase-in targets to reflect availability of markets and infrastructure
 - v. new product and market development to accommodate collected materials
 - vi. measures for public awareness of scheme participant satisfaction and a record of response by the scheme to concerns raised.
- b. Targets will be reviewed and adjusted no less than every three years, taking account of changes in the market, natural events and technology.

²⁴

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).

Appendix 3: Indicative regulated product stewardship scheme design



Proactively released

Appendix 4: 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</p>

WMA 9(2) statutory tests	Summary information to address the statutory test
	potentially lasts over hundreds of years. Modern landfill engineering techniques contain leachate but not indefinitely, and leachate cycling ²⁵ 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 effectiveness	✓ 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 minimisation benefits, if all producers

²⁵ 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
(WMA 9(2)(b))		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 recycling

WMA 9(2) statutory tests		Summary information to address the statutory test
		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.