In Confidence

Office of the Minister for the Environment

Cabinet Environment, Energy and Climate Committee

The option of a beverage container return scheme to increase resource recovery and reduce litter in Aotearoa New Zealand

Proposal

1 This paper introduces the option of a beverage container return scheme (CRS) for Aotearoa New Zealand. It is the first in a series of four papers (Table 1 refers) to support Cabinet's consideration of a New Zealand CRS (NZ CRS). Pending Cabinet's consideration of the scheme design, I intend to seek Cabinet agreement to publicly consult on a NZ CRS later this year.

Relation to government priorities

2 The Labour Party's 2020 Election Manifesto noted a commitment to investigate a NZ CRS. Implementing a NZ CRS is a recommendation of the Prime Minister's Chief Science Advisor's 2019 *Rethinking Plastics* report. Further, work on a CRS aligns with the New Zealand Labour Party and Green Party of Aotearoa's Cooperation Agreement.

3 A NZ CRS would contribute to the Government's objective to transition to a climate-resilient, sustainable and low-emissions economy.

Executive Summary

4 In Aotearoa New Zealand, beverage container recovery rates remain low compared to many countries with container return schemes (CRS). Over 2 billion beverage containers were sold into the New Zealand market in 2019. By weight, approximately 54 per cent of these beverage containers were recovered for recycling. Beverage containers are also a significant source of litter.

5 Currently, container recovery primarily occurs through council-funded kerbside recycling, but this does not capture the large proportion of beverage containers consumed and disposed of away from home - a significant lost opportunity for recycling. It is estimated that approximately 950 million containers are stockpiled, littered or landfilled annually in Aotearoa New Zealand.

6 A CRS is a recycling scheme that incentivises people to return beverage containers for recycling or refilling in exchange for a refundable deposit. This incentive on the individual is what distinguishes a CRS from other approaches to increase container recovery. A form of product stewardship, a CRS also shifts the costs of recycling away from councils and ratepayers to the responsible supply chain (i.e. manufacturers, retailers and consumers).

7 Globally, CRS use has grown significantly over the past 10 years. There are now approximately 50 schemes in operation, with several more expected by 2023. Notably, every Australian state has, or is in the process of implementing, a CRS. These schemes typically operate alongside kerbside collection systems.

8 The underlying objective of CRS worldwide is to increase resource recovery and reduce litter. However, individual scheme outcomes vary considerably. Scheme performance is influenced significantly by key design choices. Modelling and the international evidence

suggests a NZ CRS could increase container recovery to 85 per cent, or higher, pending key design choices.

9 Reflecting the growth in CRS internationally, a Government-funded NZ CRS investigation and co-design process was undertaken in 2020. This project involved a wide range of industry, local government and sector stakeholders and was supported by a Technical Advisory Group.

10 The co-design project produced substantial research, modelling, cost-benefit analysis and identified key design options for a NZ CRS. It also showed split stakeholder views on key issues. Building on the momentum of the co-design, the Ministry for the Environment has undertaken further analysis and engagement with stakeholders to develop comprehensive advice and options for Ministers.

11 The key judgments for Ministers centre on ensuring a high-performing scheme (i.e. recovery, recycling and litter outcomes), whilst balancing potential scheme costs to business and consumers. It will be important to consider the relative potential of alternative and complementary approaches to increasing recovery rates, the markets for different materials and emissions implications.

12 This initial paper does not seek decisions on a NZ CRS. The suite of four CRS Cabinet papers (Table 1 refers) will support Cabinet in decisions on:

12.1 key scheme design considerations such as the deposit level, collection network arrangements, and scope of container types;

12.2 moving to public consultation on a NZ CRS.

13 Subject to timing, Cabinet's approval to consult and the outcome of the process, I intend to present a recommended approach to a NZ CRS in 2022.

Table 1: Indicative timeline for suite of CRS Cabinet papers

CRS Cabinet paper scope	Committee timeline
Paper 1 (this paper): Problem definition and overview of a CRS	**Early August**
Paper 2a: Design considerations: driving recovery	**Early September**
Paper 2b: Design considerations: scope of containers	**Early September**
Paper 3: Agreement to consult on a CRS for New Zealand (including a consultation document)	**Late November**

14 Consideration of a NZ CRS is one of several workstreams planned, or currently underway, that will support increased resource recovery and recycling and reduce litter. Other related workstreams include: the phase out of certain single-use plastic items and hard-to-recycle plastics; the introduction of six mandatory product stewardship schemes; national kerbside recycling standardisation; upcoming work on recycling labelling; expansion of the waste disposal levy; investment in recycling infrastructure; and an intended review of the Litter Act 1979 alongside the review of the Waste Minimisation Act 2008.

Background

Away-from-home beverage container resource recovery rates are low and beverage containers are a significant source of litter

15 In Aotearoa New Zealand, beverage container recovery rates remain low compared to many schemes internationally, especially Europe. Of the over 2 billion beverage containers sold in 2019, by weight, approximately 54 per cent were recovered for recycling[1].

16 Beverage containers are a significant source of litter, constituting 66 per cent of recognisable branded litter and 24 per cent of all litter in Aotearoa New Zealand. It is estimated that approximately 950 million containers are stockpiled, littered or landfilled annually in Aotearoa New Zealand.

17 Currently, container recovery mainly occurs through council-funded kerbside recycling, and to a lesser degree, commercial recycling and public place recycling. Our existing resource recovery systems do not incentivise nor enable individuals to properly dispose of beverage containers away from home[2], and therefore, do not capture a large proportion of beverage container waste. This is a significant lost opportunity for recycling.

CRS as an increasingly favoured option for container recovery and litter reduction

18 A CRS is a recycling scheme and type of product stewardship that incentivises consumers and businesses to recycle through the application of a refundable deposit at purchase. Containers are 'redeemed' in exchange for the deposit refund at designated collection points (Figure 1 illustrates). Similar bottle drives and local refund schemes were commonplace in Aotearoa New Zealand for decades until the 1980s, dating back to 1916.

Figure 1: basic operation of a CRS[3]

[1] This represents a range of recovery from 3 per cent for liquid paperboard containers, to 60 per cent for glass bottles. By count, the range of beverage containers recovered has previously been estimated at 45 to 58 per cent using available data, with the lower end as more likely (46 per cent recovery by count). The Ministry is updating beverage container sales data from 2019 (referenced in this paper) and will provide updated numbers to inform Cabinet's decision on a CRS (paper 3).

[2] 'Away-from-home' refers to beverage containers consumed and/or disposed of outside of the household, i.e. in public places and via businesses. In Aotearoa New Zealand, nearly half of all beverage containers are consumed and disposed of away from home.

[3] Image source: *Happy Returns* 2019 report. An RVM or Reverse Vending Machine receives and verifies scheme containers, refunding the customer their deposit via voucher, app or donation to charities. RVMs are common in Europe and are the basis for some Australian schemes.

19 Container return schemes are used to:

19.1 increase beverage container recovery rates, mainly away-from-home;

19.2 reduce litter;

19.3 change the public's wider mind-set towards recycling and litter;

19.4 shift the costs of resource recovery and waste minimisation to consumers and producers of beverage containers[4].

20 Globally, approximately 50 schemes operate, with more expected by 2023. Every Australian state has, or is in the process of implementing, a CRS. However, schemes vary significantly in terms of their design and requirements, as does scheme performance (e.g. Germany and Connecticut's schemes have a 98 and 51.5 per cent return rate, respectively).

21 A NZ CRS could increase beverage container recovery rates to 85 per cent, or higher, depending on design options. Using 2019 data, this represents an increase in the recovery of over 780 million containers.

Work so far on a potential NZ CRS

22 Reflecting the global uptake of schemes, many stakeholders have called for a NZ CRS. This is further supported by recommendations from Local Government New Zealand[5] and the Prime Minister's Chief Science Advisor. A 2020 Consumer New Zealand poll showed 78 per cent public support for a CRS, with 10 per cent undecided.

23 In 2019, the former Associate Minister for the Environment approved funding for Auckland and Marlborough District Councils to work with stakeholders to investigate and provide recommendations on a potential NZ CRS.

24 The project team developed its recommendations through an iterative co-design process. This involved review and input from a multi-stakeholder Scheme Design Working Group[6] and a Technical Advisory Group (TAG), as well as extensive global research.

25 The project produced substantial research, modelling, cost-benefit analysis, research and identified key design options. It also produced split stakeholder views on several key issues. Building on the momentum and outputs from this co-design process, the Ministry for the Environment has undertaken further analysis and engagement with stakeholders to develop comprehensive advice and options for Ministers.

26 I have also met with the TAG Chair, Dave Brash, and a range of NZ CRS stakeholders over the past few months. These meetings reinforced support for a NZ CRS, but also reflected divergent views on key design considerations. Cabinet papers 2a and 2b will further detail stakeholder views (Table 2 refers) on scheme design elements and scope of containers, where relevant.

27 Advice to date has further highlighted the complexity in determining the most optimal design. Therefore, I am seeking Cabinet's agreement on key design considerations prior to seeking agreement to publicly consult on a NZ CRS.

[4] A CRS enacts the 'polluter pays principle': it requires all involved in the product's lifecycle (i.e. manufacturers, retailers, consumers and recyclers) to take greater responsibility for its end-of-life.
[5] In 2018, 96 per cent of local government mayors were in favour of a NZ CRS.
[6] The working group included a number of stakeholders representing the beverage industry, retailers, along with local government, recyclers/waste collectors, and non-government organisations.

Table 2: Stakeholder group positions on a NZ CRS (as at June 2021)

Stakeholder group	Overall position on a NZ CRS
Local Government	Support an effective and convenient scheme that shifts costs for recycling beverage containers from councils and ratepayers to the consumers and producers of beverage containers.
Large beverage producers (non-alcohol)	Support an industry-led scheme based on the Queensland and Western Australia models.
Large beverage producers (alcohol/glass)	Opposed to the inclusion of glass in a CRS and have proposed a separate scheme for glass containers (to be discussed in upcoming CRS Cabinet paper). Not opposed to a CRS for other materials.
Commercial recyclers (collectors and processors)	Support aspects in principle, in favour of an 'all materials included' scheme. Some concerns regarding impacts on existing services/facilities and advocate that the "unclaimed deposit" value placed in kerbside be allocated to offset the loss of scheme material revenues.
Product stewardship groups and the zero waste network	Support an ambitious scheme that is a 'mixed model' with convenient (mandated retailer take back options) while also providing opportunities for community participation through the operation of return point depots.
Retailers and supermarkets	Support in principle, concerns regarding cost and requirements for return points and likely to oppose a mandatory take-back option.

Analysis

Key design considerations for a NZ CRS

28 Detailed analysis of NZ CRS design options will be provided in the following two Cabinet papers (2a and 2b). Based on the earlier co-design work, advice from officials and discussions with stakeholders, the key design choices that Ministers will need to consider in relation to a potential CRS relate to:

28.1 the deposit/incentive level (e.g. 10, 15 or 20c);

28.2 the scope of containers to be included (e.g. material types);

28.3 the scheme financial model (in particular, the choice between a refund or deposit model);

28.4 the collection network (including choices about mandatory retail participation);

28.5 scheme targets and the potential role of incentives and penalties in relation to those targets;

28.6 the model for governing, managing, and operating the scheme (e.g. industry-led or involving other stakeholder interests);

28.7 fraud mitigation;

28.8 whether to integrate and/or incentivise a refillables market.

29 There are a range of other important issues that require Cabinet's consideration, such as the strength and nature of respective markets for different container materials and the likely interaction between a NZ CRS and kerbside collections.

Weighing up overall outcomes of a NZ CRS

30 Introducing a NZ CRS would improve litter and recycling outcomes, strengthen supply chain responsibility, enable behaviour change, create jobs and support our transition to a circular economy. However, it would also disrupt the status quo and have cost implications for consumers and some businesses. Scheme design elements must be considered carefully to strike the right balance between minimising costs and maximising opportunity to improve outcomes.

31 An updated cost-benefit analysis (CBA) commissioned for the CRS co-design project shows a net positive benefit-cost ratio (BCR) of 1.49 under an 'all materials included' scenario, compared to the status quo.

32 Pending scheme design decisions, a NZ CRS could increase beverage container recovery rates from 45-58 to 85 per cent or higher. Globally, implementing a CRS reduces beverage container litter by 61 per cent on average.

33 Pending scheme design decisions, a NZ CRS could reduce greenhouse gas emissions to the value of $38.5 million over 30 years, through increased recycling and reduced volumes going to landfill[7].

34 Despite its benefits, a NZ CRS on its own will not address all of the underlying issues associated with beverage container recycling. For example, some materials such as plastic PET 1 and aluminium have good markets, whereas others, such as glass and liquid paperboard, are more problematic. Material types and market issues will be further discussed in CRS Cabinet paper 2b.

35 Costs of a NZ CRS are outlined in this paper's Financial Implications section.

Relationship to kerbside collection

36 The current cost of recycling largely sits with councils and ratepayers, through the provision of kerbside recycling services, public place recycling and litter enforcement. Work is already underway to improve the outcomes of kerbside recycling, to make it easier for households to participate in resource recovery.

37 While a NZ CRS would primarily increase away-from-home resource recovery, it would also supplement kerbside recycling by:

37.1 addressing the portion of people who are unable or insufficiently incentivised to recycle at home;

37.2 reducing volumes managed at kerbside (reducing costs to ratepayers/councils);

37.3 increasing the value of beverage containers collected at kerbside.

38 At the same time, beverage containers are currently some of the more valuable materials collected in kerbside bins. The introduction of a NZ CRS would see most of those containers lost to the kerbside system. This risk would need to be managed through the implementation of a NZ CRS (e.g. through cost-sharing arrangements between councils and recycling collectors).

Other options for improving away-from-home container recovery and litter reduction

39 Other options have been considered with a view to increasing container recovery, recycling and litter reduction. Individually, these options are useful but lack the power of

[7] Most of the benefit is from increased recycling tonnage replacing virgin material in production (32,000 tonnes of CO2).

the deposit incentive and therefore are largely complementary rather than alternative options to a NZ CRS.

40 Option 1 - Increasing powers under the New Zealand Litter Act 1979:

40.1 The Litter Act 1979 has not been substantively amended since its enactment. New legislation could include: stronger penalties; more enforcement options; clearer responsibilities for monitoring and enforcement; and regular reporting and data collection provisions.

40.2 Such amendments would not prevent minor litter offences from occurring. Minor littering offences (e.g. cigarette butts and beverage containers) are intensive to monitor, enforce and prosecute. A comprehensive response requires broader system change that also promotes, enables and incentivises good behaviour.

41 Option 2 - Increasing the accessibility of public place recycling (PPR):

41.1 PPR is recycling infrastructure (bins) provided in public places aimed to reduce litter and increase the recovery of away-from-home packaging.

41.2 The waste diversion benefits of PPR generally do not outweigh councils' service costs; materials collected through PPR can cost up to 17 times[8] more per tonne of material otherwise diverted through kerbside. Creating more PPR bin sites does not guarantee litter reduction or greater away-from-home recovery. PPR would be enhanced by behaviour change education campaigns and system-level change.

42 Option 3 - Regulated enforcement of commercial recycling:

42.5 Commercial recycling is a form of away-from-home recycling associated with small businesses and larger commercial activities, including the hospitality sector, multi-unit developments and apartment complexes (i.e. those not serviced by rates-funded kerbside collections).

42.7 Depending on how it is enacted, regulated enforcement of away-from-home recycling activities (including commercial recycling) could help to increase the recovery of beverage containers and other recyclables.

42.8 However, compliance and enforcement is costly. Auckland Council reported limited effect of enforcement on beverage container recovery, relative to the scale of away-from-home beverage container recovery.

43 Option 4 - Applying Product Stewardship Fees (PSF):

43.1 A PSF can be applied to materials or products to fund end-of-life waste management costs. An advanced materials recycling fee is a type of PSF that could fund the costs of different beverage packaging formats being successfully recycled or, at a minimum, beneficially reused.

43.2 While a PSF may help shift costs and could be complementary to, and embedded within, a CRS, a PSF without the refundable deposit incentive would not directly incentivise consumers to recycle or reduce litter.

44 The Glass Packaging Forum (which predominantly represents large companies in the alcohol sector) has advocated for an Extended Producer Responsibility scheme for glass containers, as an alternative to glass containers being included in a NZ CRS. This would involve additional industry investment in the recovery of glass containers but would not

[8] Councils' recycling costs vary. Wellington City Council reported that the cost to divert material through kerbside recycling is approximately $600 per tonne (one of the most expensive in the country), whereas material diverted through its PPR trial cost $10,250 per tonne of material diverted from landfill.

incentivise individuals to return containers. Further analysis will be provided in upcoming Cabinet papers.

Further advice to come on Te Tiriti ō Waitangi implications

45 Noting the system-level change a NZ CRS would bring, further Treaty analysis and plans to consult with iwi/Māori will be included in CRS Cabinet paper 3.

Further advice to come on international obligations

46 Consideration of how a NZ CRS would interact with international trade obligations is required. Upcoming CRS Cabinet papers will provide further analysis.

Next steps

47 The suite of all four CRS Cabinet papers (Table 1 refers) will support Cabinet in its decisions on:

47.1 key scheme design considerations, such as the deposit level, network arrangements, scheme financial model and scope of container types;

47.2 moving to public consultation on a NZ CRS.

48 Cabinet papers 2a and 2b will be submitted jointly to support Cabinet decisions on key design options. Guided by these decisions, Cabinet paper 3 will present a CRS design in the form of a discussion document for public consultation.

49 Subject to Cabinet's approval to consult and the outcome of the process, I intend to present a recommended approach to a NZ CRS in 2022.

Implementation

50 Implementing a NZ CRS would require system-level change. CRS Cabinet paper 3 will outline project implementation details, subject to design decisions.

Financial Implications

51 Introducing an additional, albeit largely refundable, face-value cost increase (e.g. 10, 15, 20 cent deposit) at the point of purchase will impact consumers and beverage producers. Financial modelling necessarily assumes total pass-through of scheme costs to consumers (including the deposit and scheme fee). However, once a scheme is up and running, the deposit is largely circular within scheme finances and those who recycle get the deposit back, significantly reducing the net cost on participating households and businesses.

52 Scheme fees are also proportional to the number of containers returned. A substantive variable cost is the handling fee, which is paid per container to return point operators. The net cost to consumers who recycle through the scheme could be as little as 2-3 cents per container, however this assumes a combination of scheme design choices and return rate. Further detail on options and scheme financials will be provided in upcoming Cabinet papers.

53 Pending scheme design decisions, beverage producers pay either the entire or partial deposit fee per container when selling or importing product into the market. While costs usually pass onto consumers, there are up-front costs for industry in the establishment of any CRS. There is an opportunity to leverage funding through the Waste Disposal Levy to support the initial implementation costs of a NZ CRS.

54 CRS Cabinet papers 2a and 2b will include further analysis on financial implications on the public, councils and industry, as applicable. Paper 3 will require Treasury's review and include a Regulatory Impact Analysis (RIA).

Legislative Implications

55 Introducing a NZ CRS will likely require legislative amendments. The Ministry is progressing a substantive review of the WMA. This presents a timely opportunity for any legislative changes required to implement a NZ CRS. Cabinet paper 3 will provide final advice on legislative implications of a NZ CRS.

Impact Analysis

Regulatory Impact Statement

56 A RIA will be prepared and attached to CRS Cabinet paper 3.

Climate Implications of Policy Assessment

57 A Climate Implications of Policy Assessment may be provided alongside the RIA.

Population Implications

58 Upcoming CRS Cabinet papers will include further analysis on population group implications, as applicable.

Human Rights

59 The option of a NZ CRS as discussed in this paper is consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Consultation

60 The Department of Prime Minister and Cabinet, the Ministry of Foreign Affairs and Trade, Department of Conservation, Treasury, Inland Revenue Department and the Ministry of Business, Innovation and Employment have been consulted on this paper. Te Puni Kōkiri, the Ministry for Primary Industries and the Department of Internal Affairs have been informed.

Communications

61 Subject to Cabinet approval, I intend to announce decisions about public consultation on a NZ CRS later this year. Upcoming papers will detail further.

Proactive Release

62 Consideration of proactive release of this paper will be delayed to coincide with consideration of subsequent CRS Cabinet papers, and public consultation. Release is subject to redactions under the Official Information Act 1982.

Recommendations

The Minister for the Environment recommends that the Committee:

1 note that investigating a NZ CRS is a Labour Party Manifesto commitment, was recommended to be implemented by the Prime Minister's Chief Science Advisor in 2019 and aligns with the New Zealand Labour Party and Green Party of Aotearoa's Cooperation Agreement;

2 note that New Zealand's beverage container recovery rate is relatively low (54 per cent, by weight) and that beverage containers are a significant source of litter in New Zealand;

3 note that a CRS reduces litter and incentivises the return of beverage containers to a level unlikely to be achieved through other methods alone;

4 note that a CRS is a form of product stewardship that enacts the polluter pays principle by shifting the costs of recycling away from councils and ratepayers, to beverage producers and consumers;

5 note that a NZ CRS aligns with wider Government work on regulated product stewardship, kerbside standardisation and plastic phase-outs;

6 agree in principle to progress the development of a NZ CRS, subject to further advice to Cabinet on key design considerations;

7 invite the Minister for the Environment to prepare further advice on the design considerations of a NZ CRS, prior to seeking Cabinet's agreement to consult on a NZ CRS.

Authorised for lodgement

Hon David Parker

Minister for the Environment