Ministry for the Environment
PO Box 10362
Wellington 6143
New Zealand

10 May 2022

Re: Transforming Recycling Submission

Container Return Scheme: An Opportunity for a Reuse Scheme

1. Introduction

We, the undersigned Global and National Environmental Leaders and New Zealand Food and Beverage companies, submit that the Ministry for the Environment Manatū Mō Te Taiao (MfE) should use the opportunity presented by the proposed Container Return Scheme (CRS) to implement a centralised reuse scheme for beverage containers.

The CRS as currently proposed will decrease littering in New Zealand and increase recycling rates. It will also start to internalise the costs of single-use beverage packaging.[1] This is an important step given New Zealand has low recycling rates compared to other countries.[2] However, simply managing single-use containers is the worst of the environmentally friendly options available in a circular economy. Implementing a return scheme without incorporating clear measures to provide for a reuse scheme – a centralised system to wash, sanitise, de-label and return bottles to producers – is a missed opportunity.

We submit that a reuse scheme that would provide for washing, sanitising, de-labeling and returning bottles to beverage producers for refilling will complement and enhance the CRS. It could also provide for reusable food containers. Supporting the development and establishment of a reuse scheme should be a required role of the scheme Managing Agency to enable producers and retailers to achieve the proposed refill targets in the CRS. We propose that those targets should be fifty percent or higher of all returned containers.

This submission relates solely to questions thirteen and fourteen of the MfE Consultation Document, because we believe these are the most important, namely:

- Should there be a requirement for the proposed NZ CRS to support the New Zealand refillables market (e.g., a refillable target)?

- Do you have any suggestions on how the Government could promote and incentivise the uptake of refillable beverage containers and other refillable containers more broadly?

This submission sets out three core benefits of implementing a reuse scheme alongside the CRS. First a reuse scheme will provide economic advantages when the true costs of beverage containers including the cost of disposal, recycling and damage to the environment are considered. Second, a container return scheme that includes and incentivizes reuse over recycling better aligns with core goals for Aotearoa, including:

[1] Ministry for the Environment, *Transforming Recycling Consultation document*, 2022 at 8. https://environment.govt.nz/assets/publications/Transforming-recycling-consultation-document.pdf
[2] *Ibid.*

- a circular economy;[3]
- a net-zero carbon economy as set out in the Climate Change Response (Zero Carbon) Amendment Act 2019;[4] and
- reducing plastic in accordance with the Government Response to the Rethinking Plastics Report and international agreements.[5]

Third, a reuse scheme can be extended beyond beverage containers for the benefit of food companies (as seen in Germany where standardised glass jars for food products are reused and can be accepted at container return points). Finally, if New Zealand implements a reuse scheme alongside the CRS it can be used as a blueprint on the world stage, amplifying New Zealand's green image.

2. What is a reuse scheme?

A reuse scheme provides centralised infrastructure for cleaning, sanitising and de-labelling used glass and plastic bottles and returning them to producers for refilling.

New Zealanders born before 1990 are familiar with a reuse scheme that operated nationally for a traditional staple: milk. In just 30 years we have transitioned to single-use. A similar trend from reusable packaging towards single-use has occurred in all countries due to strong industry lobbying efforts opposing reuse legislation.[6] The proposed CRS could be an important opportunity to transition back if it provides for and incentivises reusing containers over recycling. The proposed CRS incorporates most of the fundamentals to get a reuse scheme off the ground:

- funding for operations from beverage producers;
- infrastructure for beverage container collection and sorting;
- financial incentives for beverage producers to consider options beyond single-use; and
- higher rates of return, which increases pressure for New Zealand to take responsibility for our used containers, particularly as offshore recycling regulations tighten.

Building on these fundamentals, we support binding refillables targets in the CRS legislation, to support New Zealand's transition from a country with a very small market share for refillables, to global leader in refillables. In light of growing awareness of the need to reverse the decline of the reusables market share in beverage packaging,[7] a number of countries have started to implement ambitious and binding refillables targets that apply to producers, retailers and the hospitality sectors alike.[8] When considering refillables targets for the CRS, the Government should avoid a global target for the beverage sector as a whole, and instead ensure targets apply to different sectors and individual beverage producers. Well-designed targets

[3] *Ibid.* at 16.
[4] Ministry for the Environment, Climate Change Response (Zero Carbon) Amendment Act 2019, https://environment.govt.nz/acts-and-regulations/acts/climate-change-response-amendment-act-2019/
[5] Ministry for the Environment, *Rethinking Plastics in Aotearoa New Zealand,* 2020 https://environment.govt.nz/assets/Publications/Files/Government-response-to-the-Rethinking-Plastics-report.pdf; United Nations Environment Assembly of the United Nations Environment Programme, *End plastic pollution: Towards an international legally binding Instrument*, 2022 https://wedocs.unep.org/bitstream/handle/20.500.11822/38522/k2200647_-_unep-ea-5-l-23-rev-1_-_advance.pdf?sequence=1&isAllowed=y
[6] Patricia Megale Coelho, Blanca Corona, Roland ten Klooster, Ernst Worrell, *Sustainability of reusable packaging–Current situation and trends, Resources, Conservation & Recycling:* 2020, https://doi.org/10.1016/j.rcrx.2020.100037. (https://www.sciencedirect.com/science/article/pii/S2590289X20300086)
[7] Reloop, *What We Waste, 2021* https://www.reloopplatform.org/what-we-waste/
[8] World Economic Forum, *Davos Agenda* 2022 https://www.weforum.org/agenda/2022/01/how-national-policies-can-accelerate-the-transition-to-a-reuse-economy; WeChooseReuse, *Effective Targets,* 2022 https://rethinkplasticalliance.eu/wp-content/uploads/2022/04/WeChooseReuse_EffectiveTargets_def.pdf

will be a strong motivator for the beverage industry's participation in the reuse scheme proposed in this submission. We propose that targets should be set at least at 50% of all returned containers. Similar targets could also be set for certain food types like yoghurts and spreads.

3. Economic advantages of a reuse scheme

A reuse scheme provides economic advantages for New Zealand beverage producers and New Zealand tax payers when the true cost of beverage containers is considered.

We propose that reusable containers should be included in the scheme with lower scheme fees applied. This could be achieved through a malus applied to single-use that is reinvested in developing and operating reuse. A fee like this would have the twin goal of disincentivising single-use and cross-subsidising reuse.

Including reusables in the CRS will be the most cost-effective way for beverage producers opting for reusables to secure high return rates of their reusable bottles, they will be able to access the highly convenient national returns network, and it will ensure that beverage producers are contributing to the cost of developing and operating the reuse scheme through the scheme fee.

As it stands, the CRS provides no incentive or opportunity for small beverage or food producers to shift to reusables without investing in a return and washing system. This is unaffordable for most small players.

Incorporating reusables into the CRS and thus enabling the reusable beverage packaging market share to grow provides several economic advantages:

- A reuse scheme will be cheaper for New Zealand beverage producers in the long term because:
    - Containers can be reused rather than purchased. For many beverage producers, bottles are more than 20% of the total cost of goods. This is only set to increase as the cost of resources, and in particular plastic, made from fossil fuels, increases.
    - Recycling regulations are tightening, meaning that it will become more expensive to ship recycling offshore as New Zealand presently does.
    - Recycling is fossil fuel intensive due to the high-infrastructure and high-energy processes. The cost of washing and sanitising bottles will become proportionately cheaper in the next decade as the cost of fossil fuels increases.
- Participating beverage producers will own a sustainability story to share with consumers. Increasingly consumers, employees and investors are attracted to purchasing from, working with and investing in sustainable companies.[9]
- Participating beverage producers will enjoy long-term savings as the true cost to the environment, including the carbon and resources associated with recycling and manufacturing new bottles, is incorporated into container costs.

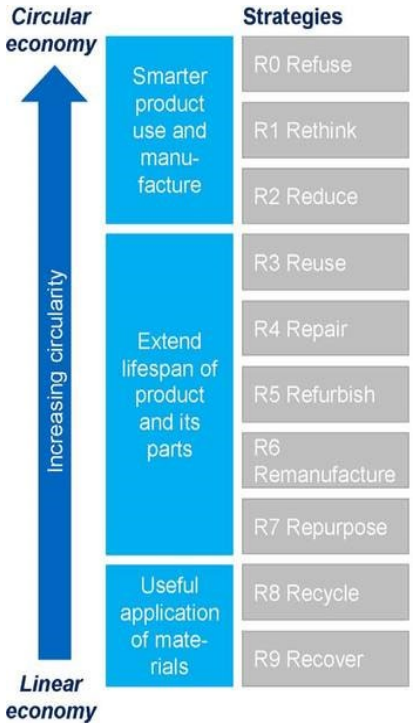
[9] Bothello, T. R. (2020). *Why "Degrowth" Shouldn't Scare Businesses. The insights you need on Climate Change.* Harvard Business Review, 83-93.

- A centralised reuse scheme can be used as a blueprint for best practice beverage container schemes globally. This will attract positive PR that participating beverage companies can leverage and will ultimately lift New Zealand's green image on the world stage.[10]

4. Environmental advantages of a container reuse scheme.

a. A reuse scheme is consistent with a circular economy.

There are significant environmental advantages of introducing a container reuse scheme. First, the primary goal of the Container Return Scheme is to support New Zealand's transition to a circular economy. A circular economy is an economy where products and materials are reused at their highest value.[11] The 9 r's framework set out in the diagram to the right is the common method of understanding the circular economy used by academics globally. Reuse is one of the best options while recycling is one of the worst.[12]



The 9 R's Framework

Recycling is misaligned with a circular economy because it begins at the end: recycling is the best way to 'get rid' of a product at the end of its lifecycle. By contrast, a circular economy starts at the beginning - how can we avoid the waste and pollution from being created in the first place. In the current environmental crisis faced by Earth, recycling is not enough to overcome the amount of waste produced.[13] As provided by the World Economic Forum:

> *"In a properly built circular economy, one should rather focus on avoiding the recycling stage at all costs. It may sound straightforward but preventing waste from being created in the first place is the only realistic strategy."*[14]

The proposed CRS will improve recycling rates. However, this does little to prevent waste from being created in the first place. As provided in the Global Commitment 2021 Progress Report from the United Nations Environment Programme and the MacArthur Foundation:

> *"progress has largely been driven by recycling, but that is not enough to solve plastic pollution – much more focus is urgently needed on eliminating single-use packaging."*[15]

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[10] See, for example, the positive PR garnered from the refillables component of the Oregon CRS: Cassandra Profita*, Oregon Launches First Statewide Refillable Bottle System in U.S.,* 2018, https://www.npr.org/sections/thesalt/2018/09/17/645548896/oregon-launches-first-statewide-refillable-bottle-system-in-u-s

[11] Ellen MacArthur Foundation, *What is a Circular Economy, https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview*

[12] Julian Kirchherr, Denise Reike, Marko Hekkert, *Conceptualizing the circular economy: An analysis of 114 definitions*, Resources, Conservation and Recycling, Volume 127, 2017, p. 221-232, https://doi.org/10.1016/j.resconrec.2017.09.005.

[13] Ellen MacArthur Foundation *supra* note 10.

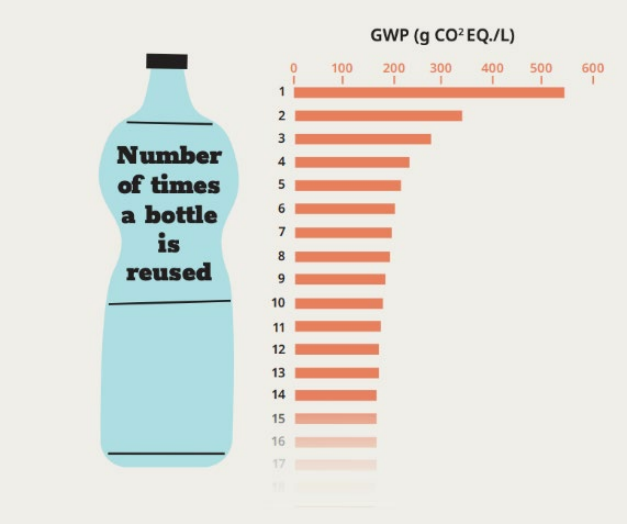
[14] World Economic Forum, *For a true circular economy, we must redefine waste,* SDG 12: Responsible Consumption and Production, 2019, https://www.weforum.org/agenda/2019/11/build-circular-economy-stop-recycling/.

[15] United Nations Environment Programme and Ellen MacArthur Foundation, *The Global Commitment 2021 Progress Report, https://emf.thirdlight.com/link/n1ipti7a089d-ekf9l1/@/preview/1?o*

New Zealand ships most of its recycling offshore which adds multiple environmental and financial impacts that are on track to intensify for a number of reasons:

- Shipping recyclables offshore adds significant carbon miles.

- Recycling offshore lacks transparency and is increasingly being perceived, on the world stage, as shifting responsibility.[16] The Consultation Document demonstrates that a significant amount of collected recyclable material is exported to Malaysia, Indonesia, Vietnam and Thailand.[17] Investigative reports show that massive amounts of material imported for recycling in Southeast Asia are discarded or burned. [18] For example, in Malaysia and Indonesia, various investigations have evidenced that plastic imported for recycling is mis-managed through being burned or disposed in landfill at rates between 25% and 75% of the time.[19] In Vietnam, reports show that 64% of plastic waste imported for recycling is mis-managed. [20] Similarly in Thailand, 61% of plastic waste imported for recycling is mismanaged.[21] While these statistics do not apply to all recycling they are a reflection of the lack of transparency in global recycling systems.



The percentages shown in this image are based on the average results of the LCAs analysed in the reusable vs single-use packaging study. They represent the relationship between CO2 emissions of one entire life cycle of a reusable glass bottle (on top) compared with other single-use packaging types.

- Global supply chains are becoming increasingly complex. These issues began with Covid-19 but are expected to continue and will make exporting recyclables and importing containers more expensive. Reusing containers within New Zealand will become proportionately cheaper over time.

In summary, a reuse scheme that provides for bottles to be returned for refill better aligns with a circular model. We submit that the CRS should provide and incentivise reuse over recycling.

b. A reuse scheme aligns with New Zealand's goal to reduce greenhouse gas emissions

A second goal of the CRS is to transition to a low carbon economy. A reuse scheme will reduce greenhouse gas emissions to a far greater extent than the proposed return scheme.

[16] Eskeland, G. S., & Ann E. Harrison. (2003). *Moving to Greener Pastures? Multinationals and the Pollution Haven Hypothesis*. Journal of Development Economics, 1–23.
[17] Ministry for the Environment, *supra* note 1.
[18] Kara Lavendar Law, *The United States' contribution of plastic waste to land and ocean,* 2020, Science Advances, https://www.science.org/doi/10.1126/sciadv.abd0288
[19] *Ibid.*
[20] *Ibid.*
[21] *Ibid.*

Significant research has been conducted on the life-cycle analysis (**LCA**) of beverage containers.[22] An executive outline summarizing reusable packaging vs single-use packaging (including packaging that is recycled) across 32 LCAs shows that the carbon emissions of a reusable glass bottle are 85% less than single-use glass. The CO2 emissions of an HDPE bottle are 65% less than a single-use HDPE bottle.[23] As provided in the *"Number of times a bottle is reduced"* diagram to the right, the more times a bottle is used, the more CO2 emissions decrease.

Glass has an important role to play. The Container Return Scheme Interim Regulatory Impact Statement incorrectly states that glass packaging is carbon intensive.[24] This statement fails to consider a systems view. Producing new glass is more energy intensive than producing new plastic, and glass is much heavier to transport than plastic or aluminum. However, when refilled or reused three times, glass is more carbon-friendly than any container packaging options available in New Zealand and has been labeled by waste experts internationally as the 'hidden gem' in a carbon neutral future.[25] This sentiment is reiterated by waste reduction experts in New Zealand.[26]

Number of times a glass bottle is reused and the decrease in Global Warming Potential g CE eq/l

As it currently stands the CRS provides no incentive for beverage producers to choose recycled material containers over virgin material containers. Given the CRS will increase costs to beverage producers; it could even encourage producers to use higher rates of cheap virgin materials like plastic. Further, eco-modulation suggested in the CRS financially incentivises beverage producers to shift from glass to plastic.

[22] Patricia Coelho, Blanca Corona, Ernst Worrell, *Reusable vs Single-Use Packaging: A Review of Environmental Impacts,* 2020 https://zerowasteeurope.eu/wp-content/uploads/2020/12/zwe_reloop_executive-summary_reusable-vs-single-use-packaging_-a-review-of-environmental-impact_en.pdf

[23] *Ibid.*

[24] Ministry for the Environment, *Interim Regulatory Impact Statement,* 2022, https://environment.govt.nz/assets/publications/Interim-regulatory-impact-statement-A-container-return-scheme-for-Aotearoa-New-Zealand.pdf

[25] Nature Editorial, *Glass is the hidden gem in a carbon-neutral future,* The international journal of science, 4 November 2021 https://www.nature.com/articles/d41586-021-02992-8, and Patricia Coelho, Blanca Corona, Ernst Worrell, *Reusable vs Single-Use Packaging: A Review of Environmental Impacts,* 2020 https://zerowasteeurope.eu/wp-content/uploads/2020/12/zwe_reloop_executive-summary_reusable-vs-single-use-packaging_-a-review-of-environmental-impact_en.pdf

[26] Hannah Blundhardt, Liam Prince, *The Rubbish Trip: Helping humans walk the talk on zero waste,* 2018 http://therubbishtrip.co.nz/be-a-tirading-kiwi/sometimes-smashing-sometimes-crushing-the-story-of-glass-in-new-zealand/; Hannah Blumhardt (2020) *Reusable Beverage Packaging and Refillable Beverage Delivery Systems in New Zealand: Discussion Document* (commissioned by Greenpeace New Zealand). Accessible at https://www.greenpeace.org/aotearoa/publication/reusable-beverage-packaging-and-refillable-beverage-delivery-systems-in-new-zealand-discussion-document.

For these reasons we submit that the CRS should provide for and financially incentivise a reuse scheme so that the environmental benefits of glass containers can be realised. This better aligns with the CRS goal to transition to a low carbon economy.

c. A reuse scheme aligns with New Zealand's' goal to reduce plastics.

Third, a reuse scheme is better aligned with New Zealand's goals to reduce plastic. The MOE's 2020 *Rethinking Plastic Report* laments that recycling plastic is not enough. The plastic waste crisis requires:

> *"that we reduce the generation of plastic waste at source, rather than focus all of our attention towards improving our recycling."*[27]

This standpoint mirrors New Zealand's international response to the plastic waste crisis.[28] Alongside 175 nations New Zealand recently committed to ending plastic pollution. As part of the proposed agreement, it may become illegal to send plastic offshore for recycling. This could leave New Zealand with masses of used plastic and limited options.

For this reason, we propose that the eco-modulation suggested in the CRS should be reconsidered so that beverage producers are not incentivized to transition to plastic packaging. As provided above, we submit that the CRS should provide for and financially incentivise a reuse scheme so that the environmental benefits of glass containers can be realised. This better aligns with New Zealand's' goals to reduce plastic.

d. There is an opportunity for a reuse scheme to extend to food jars and other containers

A reuse scheme can be extended beyond beverage containers for the benefit of food companies. Food manufacturers in New Zealand including Raglan Food Co, Fix & Fogg and Ecostore see the benefits of transitioning to a circular economy that supports reuse, and are eager to take part in the scheme. More funding will be available for operational costs if food manufacturers participating in the scheme contribute in a similar way to beverage producers. This will make a reuse scheme more efficient.

e. Other nations are shifting away from single-use to reuse

Internationally, many countries are implementing reuse packaging legislation to reduce single-use.[29] The European Union has enacted legislation to limit single-use packaging and many countries have implemented producer responsibility schemes.[30] These schemes go beyond recycling by mandating that producers account for a full LCA.[31] Environmental regulations in the European Union will shape global best practice.[32] If New Zealand is a leader in implementing a reuse scheme, it can be used as an example on the world stage, amplifying our green image.

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[27] Ministry for the Environment, *Rethinking Plastics in Aotearoa New Zealand: Government Response to the Rethinking Plastics Report,* 2020 https://environment.govt.nz/assets/Publications/Files/Government-response-to-the-Rethinking-Plastics-report.pdf

[28] New Zealand is a signatory United Nations Environment Protection Agency "*End Plastic Pollution: Towards a legally binding instrument"* which encourages plastic reduction and circular economy approaches.

[29] Patricia Megale Coelho, Blanca Corona, Roland ten Klooster, Ernst Worrell, *Sustainability of reusable packaging–Current situation and trends*, Resources, Conservation & Recycling: X, Volume 6, 2020, https://doi.org/10.1016/j.rcrx.2020.100037

[30] OECD, *Extended Producer Responsibility: A Guidance Manual for Governments,* 2001, *https://www.oecd-ilibrary.org/environment/extended-producer-responsibility_9789264189867-en*

[31] *Margaret Walls,* Working Group on Waste Prevention and Recycling: EPR Policies and Product Design: Economic Theory and Selected Case Studies, OECD, 2006 https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/EPOC/WGWPR(2005)9/FINAL&doclanguage=en

[32] Anu Bradford, *The Brussels Effect: How the European Union Rules the World,* 5, Oxford Scholarship Online, 2019.

5. Costs and other negative impacts of a reuse scheme

A reuse scheme has several limiting factors that need to be considered.

- The costs of a reuse scheme could be substantial. They will include both upfront capital expenditure for centralised infrastructure and ongoing operational infrastructure to sanitise, de-label and wash bottles. Today the playing field between single-use and reuse is not level. CRS goes some way to levelling the field by internalising the cost of recovering single-use containers. However, tipping the balance is likely to require additional economic incentives and subsidies. Given that significant resources are being invested in the CRS and returns infrastructure developed, now is the opportune time to implement a centralised system for reuse that future-proofs the CRS.

- Careful regulation will need to be implemented to ensure that washing and sanitising bottles meets health and safety standards. Regulations in successful schemes internationally, such as Oregon, should be used as standards alongside local examples such as Oaklands Milk that uses glass bottles 'hundreds of times' before they reach end of life.[33]

- A reuse scheme would use water and energy, as water will need to be heated as part of the washing and sanitising process. Processes should be implemented to reduce water and energy, for example, by utilizing recycled wastewater where appropriate, and powering a reuse plant through solar or other renewable energy sources. More research is required to understand the exact quantities of water and energy that will be used. However, these should be compared to the water and energy used to manufacture new containers which are significant.[34]

- Beverage manufacturers will need to align their bottle shapes to reduce costs associated with sorting. Preferred bottle shapes could reflect recycled glass bottle options produced by Visy Glass to encourage producers to purchase recycled, New Zealand glass rather than virgin glass produced offshore. Companies that choose specialty bottle shapes could pay an extra fee to have those bottles sorted and separated.

- Labelling specifications will be required to ensure use of labels that are efficient to remove and environmentally benign to compost.

- Reuse containers will need to be transported from a container deposit to a washing centre, and back to producers, which will add carbon miles. However, these pale in comparison to the CO2 associated with the proposed CRS where most containers will be freighted from a container deposit to a recycling centre and then freighted to an offshore pollution haven. Additionally, using low- or no-emissions vehicles in the transport structure reduces the overall carbon footprint of the operation.

6. Conclusion

Reuse needs to be an integral part of the proposed CRS for the Government's low-carbon, low-waste circular economy vision for Aotearoa to be realised. A reuse scheme will provide better economic outcomes

[33] Esther Taunton, *Milking it: boutique producers ditch plastic for glass bottles,*2018, https://www.stuff.co.nz/business/farming/106213934/milking-it-boutique-producers-ditch-plastic

[34] Water Footprint Calculator, *Recycle Plastic,* 2017, https://www.watercalculator.org/posts/recycle-plastic/

in the long-term as the true cost to the environment is incorporated into the life cycle of a single-use bottle. In addition, a CRS implemented with a reuse scheme better aligns with core environmental objectives including:

- a circular economy;
- a net-zero carbon economy; and
- reducing plastic in accordance with the Government Response to the Rethinking Plastics Report and international agreements.

There are some limitations to a reuse scheme including standardising bottle sizes and labelling requirements, extra infrastructure associated with sorting and washing bottles and cleaning containers to meet health and safety standards. However, these pale in comparison to the economic and environmental benefits that a container reuse scheme will bring to Aotearoa. Further, through implementing a reuse scheme, New Zealand will be positioned as a world leader in combatting the global waste crisis.

For these reasons we submit that the MfE should integrate a centralised reuse scheme into the CRS in a way that financially incentivise beverage producers and food producers to prioritise reusable packaging.

Florence Van Dyke
Chia Sisters

Signed by:

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Fix & Fogg

Josepha Harawira
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Raglan Food Co

Jeremy Friend
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