

GREENPEACE

Greenpeace Aotearoa

Written Evidence:

The Case for Banning Plastic Bottles and Replacing them with Reusable/Refillable Solutions

Submitted on 3 November 2022 by Juressa Lee, Campaigner, Greenpeace Aotearoa

THE SUBMISSION IN A NUTSHELL

Greenpeace Aotearoa is petitioning the Government to:

- **ban single-use plastic drink bottles** because they are a major contributor to plastic pollution, which harms human and environmental health; and
- **incentivise reusable and refillable alternatives** through targeted legislative and policy support because reuse solutions are more aligned with the circular economy concept and Te Ao Māori values, and are better for people and planet.

This petition is part of our wider campaign to address plastic pollution in the oceans, and to take a bold step towards refillable and reusable solutions. It has received massive public support, having been signed by **over 100,000 people**. The first 30,000 signatures were received within just five weeks of the petition's launch.

In addition to this written submission, Greenpeace Aotearoa requests the opportunity to make an oral submission.

“We all know there is too much plastic. On our whenua, in our moana. It is choking us and Te Taiao (our world) and if left unchecked, our kids will suffer. The most prolific plastic waste I see are bottles. Everywhere. They need to be banned and reuse and refill options made the new normal. It's a no brainer e hoa ma. If not for us, for our tamariki.” – Tajim

THE PROBLEM

Plastic pollutes our soils, waters, climate and bodies

“I am scared for my Mokopuna nui. Plastic particles are in our oceans, in our air, in our rain water and even in our bodies. What chance do our Mokos have if their health is threatened because of plastic. I grew up using refillable milk bottles. Let's bring them back and replicate them for everything.”
- Joost

The world's plastic pollution crisis continues unabated, with devastating consequences. Plastic causes environmental and human harm at **every point of its life** - from the moment oil is extracted from Papatūānuku to make plastics, to the moment a plastic product is thrown away, and every stage in-between, including the manufacturing and transporting of plastic products around the globe, and the (often short) use-time of plastics by businesses and consumers.¹

The pollution across these different life phases takes many different forms, including: greenhouse gas emissions; toxicant leaching; unintentional plastic leakage across the supply chain and during the use of plastic products (e.g. microplastic shedding); and plastic waste.

Wider environmental impacts of the plastics lifespan include resource scarcity, land use, ozone formation, eutrophication, ecotoxicity and acidification.² Emerging research also casts doubt about plastic's safety as a food or beverage contact material given it can leach hazardous substances like endocrine disruptors—a phenomenon that may be worsened by recycling.³ Plastic production is also a key driver of climate change; if the entire plastic lifecycle were a country, it would be the fifth largest emitter of greenhouse gases in the world.⁴

The social and environmental impacts of plastic production, use and waste is also profound. Plastics production has devastating impacts on human health and disproportionately occurs in (and harms) low-income and marginalised communities, while the global plastic waste trade leads to plastic being dumped on communities in the Global South.⁵ The causes and impacts of plastic waste pollution also reflect inequities and injustices. For example, Pacific Island Countries create less than 1.3% of mismanaged plastic waste, yet they are disproportionately exposed to plastic pollution and its impacts.⁶

The NZ Government's inaction on plastic and other forms of pollution ultimately amounts to a breach of Tiriti obligations and responsibilities and has permanently affected the land, water and

"I hate the idea of plastic being present in the food I eat i.e. fish. Also, I know there were great alternatives in the past like glass bottles for sodas. We have to look after our environment if we want it to sustain us. It is unsustainable to put profits before people's health and wellbeing. We know recycling is a myth and rubbish pollution is our shame. Let's change the future for our mokopuna by protecting and cleaning up our taiao."
- Puāwai

air in Aotearoa. Plastic pollution, particularly marine plastic pollution, has made its way into the food systems of Aotearoa. Coastal Māori communities are disproportionately harmed by this, as 70% of the protein intake of these communities comes from seafood,⁷ and much of the ocean is contaminated with microplastics and plastics' toxic chemical additives. Tina Ngata has noted that as these contaminants enter our bodies, they can harm fundamental biological processes, including our reproductive systems, potentially disrupting whakapapa. This undermines the rights of tangata whenua under Te Tiriti wherein, as Ngata noted, Māori rights to abundant and healthy land and ocean territories were reaffirmed.⁸

Planetary ecosystems and human societies are already struggling to cope with current rates of plastic production, consumption and pollution. And yet, the situation is getting worse, not better. Without a major new policy direction from all governments to help us change course, by 2060:⁹

- Global plastic production and consumption will **triple** to 1,231 Mt a year
- Plastic waste will **triple** to 1,014 Mt a year.
- Plastic leakage into the environment will **double** from 22 Mt to 44 Mt a year
- Plastic build-up in aquatic environments will **triple** to 493 Mt.
- GHG emissions from the plastics lifecycle will **more than double** from 1.8 gigatonnes of carbon dioxide equivalents (Gt CO₂e) of GHG emissions (or 3.7% of global emissions) to 4.3 Gt CO₂e by 2060 (or 4.5% of global emissions).
- Wider health and environmental impacts are also projected to **more than double** by 2060, mostly due to the increase in plastics use and production.

"I'm a young person and I'm going to have to deal with the consequences of plastic pollution. We need to take urgent action otherwise I will have to suffer with the consequences of microplastics, ocean pollution, and overfilled landfills." - Cadence

PLASTIC DRINK BOTTLES CONTRIBUTE DIRECTLY TO THE PLASTIC POLLUTION CRISIS

Our petition targets single-use plastic drink bottles because they are a central part of the current and future plastics story, making up a decent chunk of both plastic production and pollution. Globally, 36% of total plastic production goes to packaging or 154 million metric tonnes a year (the single biggest market for plastics).¹⁰ Of this, **13.63 million tons** is used to make single-use PET bottles (this figure does not include bottles made of other polymers, like HDPE).¹¹ In New Zealand, roughly **800 million** single-use plastic drink bottles are sold each year.¹²

Domestically and internationally, plastic bottles, caps and lids are consistently in the top 10 items found in terrestrial, marine and coastal plastic pollution surveys.¹³ About **36 billion PET bottles enter aquatic systems globally, each year.**¹⁴ In New Zealand, beverage containers make up as much as 66% of recognisable branded litter, and 24% of all litter.¹⁵ Many plastic bottles end up in our landfills, or enter the environment where they break down into microplastics, pollute our oceans, contaminate seafood and kaimoana, and kill marine life (such as the fledgling Toroa albatross found on a beach in Hawkes Bay that had swallowed a plastic water bottle).

Furthermore, **the biggest corporate plastic polluters are soft drink producers using plastic drink bottles, such as Coca-Cola, PepsiCo and Nestle.** Year after year, Break Free From Plastic's global brand audit campaigns have shown that the world's number one plastic polluter is Coca-Cola, who is also the world's number one corporate producer and user of plastic.¹⁶ In 2020, Coca-Cola produced **3 million metric tons of plastic packaging**, primarily to make the **112 billion plastic drink bottles** they put on the market that year.¹⁷

"I have worked in marine science and first hand witnessed marine wildlife damaged by the plastic bottle. In particular seabirds and turtles when I worked at SeaWorld. I am a science educator at Whangarei Girls' and we need to protect future generations' resources and single-use plastic does not fit this long-term vision of a healthy sustainable planet."

- Monique

"When I went sailing once I saw a coke bottle just bobbing around in the sea. It was too far for me to reach and get it before it would kill a precious sea creature living an innocent life. No living creature should have to die because someone couldn't be bothered to make a reusable bottle."

- Rose

The main producers of plastic beverage bottles in both New Zealand and overseas contexts are soft drink manufacturers. Many of these products have proven negative health impacts, including diabetes and tooth decay. While the industry argues that single-use plastic bottles are a convenience that consumers prefer, the same was said of plastic grocery bags. Furthermore, are the consequences of plastic pollution for the health of our people and our planet a price worth paying for these momentary conveniences?

“We had to learn the hard way that we cannot trust beverage companies nor ourselves being responsible with single-use bottles. We have to shift our approach. Maybe it even helps some of us to switch from sugary drinks to healthier options. I would.” - Oliver

The public wants to see meaningful and proactive action on plastics and packaging

Our petition attracted **more than 100,000 signatures**. This resounding support for real solutions to the plastics and packaging crises is seen, time and again, in the overwhelming public support for single-use plastics bans, container deposit schemes, and the large number of signatures on other similar petitions (e.g. the Takeaway Throwaways petition).

This support is no surprise given **the New Zealand public is deeply concerned about plastic pollution, waste and packaging**. Successive Kantar *Better Futures* reports have placed plastic waste in the environment in the top ten list of issues that most concern New Zealanders, along with the scourge of overpackaging and landfills.¹⁸ This year’s report also highlighted that New Zealanders expect industry and Government to step up and do more to address these problems, rather than putting the burden on individuals for an issue that is clearly systemic.¹⁹ This sentiment is echoed by Break Free From Plastic, who state that governments must develop and enforce effective regulation of plastic imports, production and usage to hold corporate plastic polluters to account as “personal lifestyle changes alone will not solve the plastic or climate crises”.²⁰

Our petition asks are an opportunity for the Government to step up to public expectation by taking a stand against more single-use plastic pollutants and driving real solutions focused on reuse and refill systems.

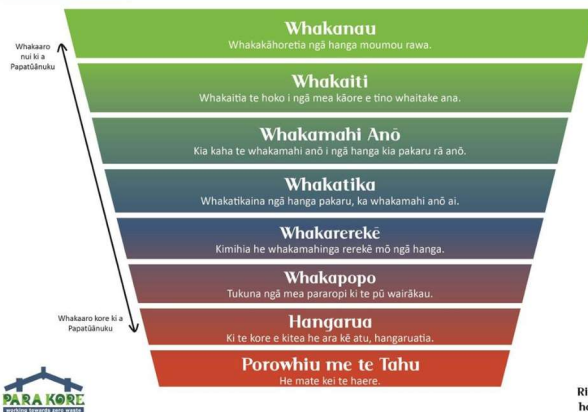
WHAT WE WANT TO SEE CHANGED AND WHAT WE WANT PARLIAMENT TO DO

We want to see the Government respond to plastic overconsumption and pollution, and the concerns New Zealanders have about these issues, by **banning single-use plastic bottles and ensuring their replacement with reuse/refill systems**

We are proposing these approaches because they are **preventative** and reduce demand for plastic in the first place. Upstream, preventative approaches are widely recognised as a necessary and vital policy response to plastic pollution.²¹ In other words, the most effective way to reduce plastic pollution is to follow the waste hierarchy (see below) and “turn off the tap” of plastic production through source reduction strategies like redesign, reduce and reuse. These strategies cut out the unnecessary products that generate waste - a common sense approach that not only reduces the most waste, but also the most GHG emissions.

“The Government has a responsibility to protect our natural resources and ecosystems for future generations. The NZ Government's environmental steps to ban plastic bags in 2019 were late but inspiring. Banning single-use plastics by 2025 ignores scientific data regarding our polluted waterways, declining native flora/fauna species and environmental climate change effects - erosion/flooding/slips etc, etc. The time to act is now! ... banning plastics will increase buyer demand to make more environmentally sustainable choices which will drive competitive pricing and affordability to all.”
- Hineaopounamu

Te Pūnaha Whakarōpū Para



The Waste Hierarchy

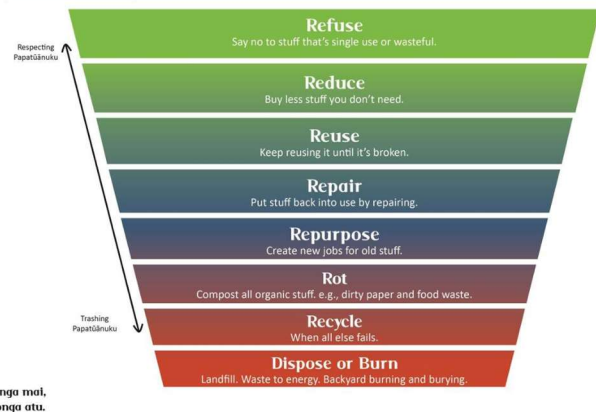


Figure 1 Te Pūnaha Whakarōpū Para - The Waste Hierarchy Source: Para Kore Marae Inc

A ban on single-use plastic bottles is a source reduction approach to plastic pollution that will instantly shut off a major source of both plastic production and pollution.

An increase in reusable packaging will also help turn off the tap because each reusable package replaces multiple single-use packages, thus eliminating the need for these packages to ever be created (and the risk of them escaping into the environment).²² For example, a study by Oceana found that increasing the market share of refillable beverage bottles by 10% or 20% in all coastal countries in place of single-use PET bottles could reduce PET bottle marine plastic pollution by 22% or 39%, respectively.²³

REQUEST 1: BAN PLASTIC DRINK BOTTLES

The continued manufacture of plastic bottles creates an ongoing demand for plastic, while plastic bottles are responsible for so much of the plastic waste that contaminates our oceans and kills

“I see banning single use plastic bottles as part of a wider crucial change - how do we transform packaging of all goods so that only sustainable, recyclable, renewable, non-carbon emitting (etc) materials are used in supermarkets, dairies, groceries, department stores, appliance outlets, service stations, pharmacies, hardware stores, etc...”
- Mark

“There is no need for single use bottles. Being old I can remember when we just had glass bottles which were either cleaned and reused and recycled. For water drinking carrying a personal, multi use bottle which you fill from taps (or fountains) is much better.” - Stuart

marine life. We don't need to tolerate this ongoing pollution because **plastic bottles are unnecessary** - reusable and refillable solutions can replace them (as discussed below).

The best step to take is to **ban plastic drink bottles**. The scope of this ban should include all 'ready-to-drink', single-use plastic beverage containers in the volume range of 0.1 litres to 3 litres, and include all plastic polymer types.

We recognise the Government has already banned plastic bags and is implementing bans on a raft of further single-use plastic products. While symbolically significant, all these items are the tip of the iceberg in terms of plastic waste - banning plastic bottles will be a much more impactful next step.

While a plastic bottle ban may seem radical, the Government should consider that:

- Banning plastic bags was also perceived as radical, but is now fully accepted.
- In our region, we wouldn't be the first country to ban plastic bottles, as Tuvalu already did so in 2019.²⁴
- The petition to ban plastic bags was strongly supported by the New Zealand public, which ultimately motivated the Government to act. The current petition to ban plastic bottles has received almost double the signatures of our petition to ban plastic bags.²⁵

REQUEST 2: COMBINE A BAN WITH POLICIES TO DRIVE UPTAKE OF REUSABLE BEVERAGE CONTAINERS

In addition to a ban on plastic drinks bottles, we call on Government to put in place laws and policies that ensure plastic bottles are replaced with reusable and refillable alternatives made of safe, non-toxic, readily recyclable materials (like returnable, NZ-made glass bottles or reusable metal kegs). As detailed in a report Greenpeace Aotearoa commissioned (see Appendix 1), these laws and policies should include:²⁶

- Binding refillable targets for individual beverage producers and different sectors (e.g. retail, hospitality etc.)
- An 'eco levy' on all single-use beverage containers and virgin material.
- Investment and other support to establish the infrastructure and distribution systems needed for a thriving reusables system (washing/sanitisation infrastructure, reverse logistics and reuse return points).
- A beverage container return scheme that includes ALL beverages and beverage container material types.
- Supporting development of standardised reusable bottles to reduce costs and logistical complexity.
- Public engagement and communications around reuse (especially once a system is up and running).

“Reusing bottles is so easy when you get used to it (again!) and when there is the right incentive. Milk in reusable glass bottles comes 120 km to our town each week. It costs \$3.80 per litre plus a \$1 deposit and is incredibly popular, and I suspect a near 100% rate of return and reuse. If all drink containers are glass with a \$1 deposit, those who don't want to return them will find there will be plenty of others eager to return them for them.”
- Roger and Sarah

For more information on New Zealand-specific policy options to drive more reusable beverage packaging see:

- The [2-page factsheet on CRS and refillables](#) by Zero Waste Network and New Zealand Product Stewardship Council (Appendix 2)
- Chapter 2.2 “[Beverages](#)” and Chapter 3.3 “[Recommended actions for central government to support the growth of reusable packaging](#)” of the Reuse Aotearoa report [Reusable Packaging in Aotearoa](#).

We are calling for policies to drive an uptake of reusable beverage packaging alternatives because **a ban on single-use plastic drink bottles alone risks incentivising businesses simply to shift to single-use cans, cartons and glass bottles**. While this would help to reduce plastic in the system, it would only be a partial win for the climate. **Using any material or product just once before throwing it away to be landfilled or recycled is a waste of embodied energy and resources**. Our petition is calling for a more elegant solution that drives the market towards reusables made of materials other than plastic (e.g. reusable kegs and reusable glass bottles).

Increasing reusable beverage packaging in non-toxic, readily recyclable materials will also bring a wider range of social, economic and environmental benefits.

First, reusable and refillable solutions not only reduce more waste than recycling single-use containers, they are also more energy and resource efficient and thus more aligned with the circular economy and efforts to decarbonise/reduce GHG emissions. This supports New Zealand’s international commitments on climate change and our Zero Carbon Act. It also supports the vision of transitioning to a circular economy, as set out in the Emissions Reduction Plan and the draft national waste strategy.

Second, the wastefulness of disposable and single-use models is incompatible with te ao Māori. Māori recognise the importance of avoiding waste and pollution as a collective responsibility, given reciprocal relationships with te Taiao are built into Māori culture and society. Reusable packaging systems and circular economic models better align with the circularity and socio-ecological protections inherent to te ao Māori. This ought to be recognised in all of the Government’s collaborative action with tangata whenua to proactively prevent plastic pollution through systemic change.

“We, on the Earth, must get rid of the disposable mindset, what gives us the right? Here, in Aotearoa, we must be careful kaitiaki of our whenua, ngahere, moana.”
- Andrea

Third, reuse/refill systems support local economies and create more circular jobs. Single-use packaging is a resource-intensive (rather than labour-intensive) business model that enables long supply chains where products are made far away from the place of purchase, often by multinational corporations that aren’t connected to the communities where they sell their goods. In contrast, reusable packaging systems work best in smaller geographic areas; they therefore promote local economies and connection. As a classic circular business model that focuses on collaboration, sharing and service-provision rather than churning out “stuff”, reusable packaging creates far more jobs than single-use packaging systems that rely on continual flow of natural resources rather than labour.

A recent, landmark report on the contribution of zero waste action to climate mitigation, adaptation and justice highlights how **reusable packaging systems are an example of an innovative and exciting new business model** that can be directly spurred by bans on single-use plastics and packaging. The report notes that “these new businesses are more likely to be local and to keep economic activity local as well”, which has further positive ripple effects in terms of community wellbeing, resilience and connection.²⁷

We note that the overall economic and environmental benefits of reusables can be further optimised by ensuring bottles are refilled a certain minimum number of times and that transport distances between uses are minimised.²⁸

WHERE OUR PETITION ASKS SIT IN RELATION TO CURRENT (AND PROPOSED) GOVERNMENT POLICY ON BEVERAGE PACKAGING

We acknowledge that the Government has a comprehensive work programme on waste. This includes several initiatives to address packaging waste, including beverage containers. However, these initiatives mostly focus on recycling. Our petition champions top of the waste hierarchy source reduction approaches, especially reuse solutions.

WHY RECYCLING CAN'T FIX THE PLASTIC POLLUTION CRISIS

For some time, recycling has been promoted as the go-to solution for managing waste, including plastic, both in New Zealand and overseas. While recycling has a place in the circular economy, the waste hierarchy places it as a lower priority. It's easy to see why. Only 9% of the plastics made have ever been recycled; under current global policy settings, this figure will increase to just 17% by 2060.²⁹

However, even with this modest growth, recycled plastic will only make up 12% of the plastic feedstock in 2060 because **rates of plastic production are growing faster than recycling rates**. We are in this situation because we are relying on recycling as the main solution to plastic pollution and waste, and ignoring source reduction approaches up the waste hierarchy that would slow down plastic production. **This is the equivalent of trying to mop up water from an overflowing bath, while the tap is still running.**

THE BEVERAGE CONTAINER RETURN SCHEME IS A NECESSARY STEP FORWARD, BUT ONLY A PARTIAL SOLUTION, NOT A PANACEA

We recognise that the Government is motivated to address beverage container waste (including plastic drink bottles) and is proposing to do so by introducing a Container Return Scheme (CRS).

“As a bluewater sailor I’ve seen firsthand the impact of plastic marine debris in NZ and South Pacific Islands. It’s easier to stem plastic pollution at source rather than expect island nations to deal with unfettered plastic production of corporates whose bottom line is money. Beach clean ups are the ambulance at the bottom of the cliff; kerbside recycling devolves the problem and responsibility to customers. Manufacturers need to be accountable for the environmental disasters they are creating. Reduction in plastic production is the only viable solution.”
- Megan

Greenpeace strongly supports a CRS. We have campaigned for many years for a CRS to be implemented in New Zealand, and we co-drafted a collective submission in support of the recent CRS policy proposal in the *Transforming Recycling* consultation.³⁰ The CRS is an ideal vehicle to accelerate a ban of plastic bottles and the growth in reusable/refillable alternatives, but it needs to be designed to achieve these outcomes. As noted in the discussion document Greenpeace Aotearoa commissioned in 2020 on refillable beverage delivery systems:³¹

While CRS is a necessary component of a reuse market, on its own it cannot create such a market. The opportunity CRS presents to boost reusables must be leveraged through additional policy (particularly in countries like New Zealand where market share for reusable packaging is very small), to ensure returned bottles are refilled, not just recycled.

The Government's proposed CRS will lift return rates of plastic bottles and reduce litter, and will therefore reduce plastic bottles going to landfill and the environment. Higher return rates of clean, sorted beverage containers will also lift real recycling rates for plastic bottles. The introduction of a deposit on all beverage containers will set the stage for more reusables.

However, **the Government's proposed CRS requires tweaking to align with what we seek through our petition.** The current proposal continues to allow plastic drink bottles on the market and it fails to incorporate binding policies to drive more reusable beverage packaging. Instead, it is overly oriented towards recycling. This is not a lasting solution to plastic bottle pollution because:

- A CRS focused on recycling will not lead to a decrease in plastic production. **Plastic pollution starts when plastic is made, not just when it is wasted.**
- The CRS will not have a 100% recovery rate. So, a percentage of the plastic bottles, e.g. 15%, will still fall through the cracks and become landfill or litter.
- New Zealand-made plastic bottles still require virgin plastic and/or imported recycled plastic because we don't have the technology to recycle plastic bottles into more plastic bottles here. New Zealand's collected plastic bottles will be made into products like meat trays and fruit punnets (if PET) or industrial or construction equipment (if HDPE). If plastic bottles made from PET are not recycled into more packaging onshore, they may be exported for recycling where we lose all control over what they are manufactured into. A common recycling pathway for PET are textiles like polar fleece that shed microplastics.
- If New Zealand does move to a more closed-loop system where collected bottles are recycled back into more bottles through new technology and recycled content laws, emerging research suggests this could have unintended health impacts.³²
- Even with an increase of recycled content in drinks bottles, this will likely have negligible impact on bottle-related plastic pollution, compared to increasing the market share of reusable/refillable bottles.³³
- Recycling isn't a perfect system and still results in plastic material loss. A 2022 report by Eunomia estimated a loss rate of 24.9% for clear/blue food contact PET.³⁴

CONCLUSION

While it should be the beverage industry's responsibility to ensure their drinks are delivered to customers in a way that doesn't create needless waste, they will not enact strategies that may cost them unless required by law. Right now, beverage companies get a free ride because the true costs of single-use plastic drink bottles are externalised on to the community, councils and the environment. For example, in 2019, the estimated global cost just to collect, sort, dispose and recycle plastic waste was US\$32billion.³⁵

"I find it mind-boggling that we are allowing the most polluting industries, and the wealthiest companies, in the world to operate in ways which we know are damaging, and directly linked to the increased use of dirty technologies. They have no reason to behave the way that they do, except that it is cheap and easy. Ban all single use plastic containers." - Malcolm

Beverage companies have a clear vested interest in the status quo economic settings. That is why Government has a responsibility to intervene, as with plastic bags, to cut the affliction of plastic beverage bottles and support the growth of reusable alternatives, which are better for both people and planet. Even once we shift to non-plastic options, beverage companies must still be responsible for the lifecycle of their packaging, whether single-use or reusable, via a CRS.

We need to be moving towards a circular economy that will give us efficient and resilient systems for the future - a ban on single-use plastic beverage bottles and active support for a reusable beverage packaging system are bold steps towards doing exactly that.

ENDNOTES

¹ Centre for International Environmental Law (2019) *Plastic and Climate: The Hidden Costs of a Plastic Planet*. Accessible at <https://www.ciel.org/plasticandclimate/>; Break Free From Plastic (2021) *Brand Audit Report 2021*. Accessible at <https://www.breakfreefromplastic.org/brandaudit2021/>.

² OECD (2022) *Global Plastics Outlook: Policy scenarios to 2060*. Accessible at <https://www.oecd-ilibrary.org/sites/aa1edf33-en/index.html?itemId=/content/publication/aa1edf33-en>.

³ Gerassimidou et al (2022) "Unpacking the complexity of the PET drink bottles value chain: A chemicals perspective" 430 *Journal of Hazardous Materials*. <https://doi.org/10.1016/j.jhazmat.2022.128410>; Geueke et al (2018) "Food packaging in the circular economy: Overview of chemical safety aspects for commonly used materials" 193 *Journal of Cleaner Production*. <https://doi.org/10.1016/j.jclepro.2018.05.005>; Muncke et al (2020) "Impacts of Food Contact Chemicals on Human Health: a consensus statement" 19 *Environmental Health*. <https://doi.org/10.1186/s12940-020-0572-5>; Greenpeace (2022) *Circular Claims Fall Flat Again: 2022 Update* (Greenpeace USA). Accessible at <https://www.greenpeace.org/usa/reports/circular-claims-fall-flat-again/>.

⁴ Break Free From Plastic (2021), above n 1, p.2.

- ⁵ Greenpeace (2021) *The Climate Emergency Unpacked: How Consumer Goods Companies are Fueling Big Oil's Plastic Expansion: Report Summary* (Greenpeace USA). Accessible at <https://www.greenpeace.org/usa/reports/the-climate-emergency-unpacked/>, p.11.
- ⁶ Trisia Farrelly, Stephanie Borrelle, and Sascha Fuller (2020) *Plastic Pollution Prevention in Pacific Island Countries: Gap analysis of current legislation, policies and plans* (Environmental Investigation Agency). Accessible at <https://reports.eia-international.org/wp-content/uploads/sites/6/2020/09/Plastic-Prevention-Gap-Analysis-2020.pdf>.
- ⁷ New Zealand Ministry of Foreign Affairs and Trade (2021) Fishing in the blue Pacific. <https://www.mfat.govt.nz/fr/aid-and-development/our-aid-partnerships-in-the-pacific/case-studies/fishing-in-the-blue-pacific/>
- ⁸ Max Liboiron & Tina Ngata (2020, July 13). Māori plastic pollution expertise and action in Aotearoa [Interview transcription]. CLEAR. <https://civiclaboratory.nl/2020/07/13/maoriplastic-pollution-expertise-and-action-in-aotearoa/>
- ⁹ OECD (2022), above n 2.
- ¹⁰ Hannah Blumhardt (2022) *Reusable Packaging in Aotearoa - getting back to the future: The state of play today, barriers to growth, opportunities for innovation, and recommendations for action* (Reuse Aotearoa). Accessible at https://reuseaotearoa.org.nz/reusable_packaging_aotearoa_report_june22/, Ch1.1, p.4.
- ¹¹ Chris Sherrington et al (2022) *Plastic Pollution Prevention Final Report: The Impact of Beverage Brand Commitments for Recycled Content on the Flow of Plastic Bottles into Aquatic Environments* (A report for Oceana). Accessible at <https://oceana.org/reports/eunomia-report-the-impact-of-beverage-brand-commitments-for-recycled-content-on-the-flow-of-plastic-bottles-into-aquatic-environments/>, p.3.
- ¹² Based on the figures compiled by the New Zealand Container Return Scheme Design Working Group. See “Appendix 1: Assumptions for deriving single-use container volumes and weights” in *The NZ CRS Final Design Appendices* document. Accessible at https://www.marlborough.govt.nz/repository/libraries/id:1w1mps0ir17q9sqxanf9/hierarchy/Documents/Services/Recycling%20and%20Resource%20Recovery/Container%20Return%20Scheme%20-%20Design%20Progress%20to%20Date/Design%20Document%20and%20Appendices/NZ_Container_Return_Scheme_Draft_Design_Appendices-27_October_2020.pdf, p.211.
- ¹³ 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/static/planet4-aotearoa-stateless/2020/05/c68f45e8-reusable-and-refillable-plastics-nz.pdf>, p.1.
- ¹⁴ Sherrington et al (2022), above n 11, p.7.
- ¹⁵ Ministry for the Environment (2022) *Transforming recycling—Te panoni i te hangarua: consultation document* (Wellington, Ministry for the Environment). Accessible at <https://environment.govt.nz/news/transforming-recycling>, p.11.
- ¹⁶ Break Free From Plastic (2021), above n 1.
- ¹⁷ Greenpeace (2021), above n 5, pp.4-5.
- ¹⁸ Kantar and Sustainable Business Council (2022) *Better Futures 2022*. Accessible at <https://www.kantarnewzealand.com/wp-content/uploads/2019/05/Kantar-Better-Futures-Report-2022.pdf>
- ¹⁹ Ibid, pp.21,30,35.
- ²⁰ Break Free From Plastic (2021), above n 1, p.8.
- ²¹ Lau et al (2020) “Evaluating scenarios toward zero plastic pollution” *Science* 369 (6510). DOI: 10.1126/science.aba9475; Farrelly, Borrelle and Fuller (2020), above n 6.
- ²² Hannah Blumhardt (2022), above n 10, ch 1.1, p.4.
- ²³ Anne Schroerer, Matt Littlejohn and Henning Wilts (2020) *Just one word: refillables. How the soft drink industry can – right now – reduce marine plastic pollution by billions of bottles each year* (Oceana). Accessible at <https://oceana.org/reports/just-one-word-refillables/>.
- ²⁴ Tuvalu Waste Management (Prohibition on the Importation of Single-Use Plastic) Regulation 2019 (Tuvalu). Accessible at https://nicholasinstitute.duke.edu/sites/default/files/plastics-policies/2601_N_2019_Waste_Management_Prohibition_on.pdf.
- ²⁵ Petition of Elena Di Palma on behalf of Greenpeace New Zealand - Ban single-use plastic bags. Accessible at https://www.parliament.nz/en/pb/petitions/document/PET_76464/petition-of-elena-di-palma-on-behalf-of-greenpeace-new.
- ²⁶ Blumhardt (2020), above n 13, pp.6-12; Zero Waste Network and the New Zealand Product Stewardship Council (2022) *CRS and Refillable Beverages - complementary systems to reduce waste and emissions*. Accessible at <https://zerowaste.co.nz/assets/CRS-2-pager-refillables.pdf>.
- ²⁷ Tangri et al (2022) *Zero Waste To Zero Emissions: How Reducing Waste Is A Climate Gamechanger* (Berkeley, CA: Global Alliance for Incinerator Alternatives). Accessible at no-burn.org/zerowaste-zero-emissions, pp.42-43.

²⁸ Blumhardt (2020), above n 13, pp.4-5; Blumhardt (2022) “1.1 What is reusable packaging and why is it important” in *Reusable Packaging in Aotearoa* (Reuse Aotearoa), pp.9-10. Accessible at https://reuseaotearoa.org.nz/wp-content/uploads/2022/06/RA-June-22-1.1-Setting-the-scene_.pdf.

²⁹ OECD (2022), above n 2.

³⁰ Read our collective submission text on the home page of the Kiwi Bottle Drive website: <https://kiwibottledrive.nz/>.

³¹ Blumhardt (2020), above n 13, p.6.

³² Gerassimidou et al (2022), above n 3; Geueke et al (2018), above n 3; Greenpeace (2022), above n 3.

³³ Sherrington et al (2022), above n 11.

³⁴ Ibid, p.12.

³⁵ Break Free From Plastic (2021), above n 1, p.23.

Appendix 1

Reusable Beverage Packaging and Refillable Beverage Delivery Systems in New Zealand: Discussion Document by Hannah Blumhardt (The Rubbish Trip) – Commissioned by Greenpeace New Zealand. Attached herewith

Appendix 2

Container Return Scheme and Refillable Beverages complementary systems to reduce waste and emissions Prepared by the Zero Waste Network Aotearoa and the New Zealand Product Stewardship Council. Attached herewith

Appendix 3

Greenpeace Aotearoa Ban the Bottle supporter survey responses, collated September 2022. Attached herewith.