

The Global Plastic Pollution Crisis

how should New Zealand respond?

Abstract

The management of plastic waste is a global problem which currently lacks a global solution. As one of the highest per capita producers of household waste in the developed world, New Zealand has a key role to play in addressing the plastics crisis at multiple levels of governance. This article analyses the various policy options available to the New Zealand government and offers a series of recommendations, including prioritising policy and investment at the top of the waste hierarchy (refuse, rethink, redesign, reduce and reuse); linking plastic waste to toxicological risk and commitments to carbon reduction targets; implementing global commitments domestically; and supporting a proposed international legally binding agreement that captures the full lifecycle of plastics and regulates the transboundary flows of plastic pollution.

Keywords plastic waste, New Zealand, product stewardship, plastic pollution treaty, waste hierarchy, Basel Convention, Waste Minimisation Act 2008

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The management of plastic waste is a global problem which currently lacks a global solution. Yet plastic pollution is a transboundary issue. Plastics and their associated toxicants are found thousands of kilometres from source, including at the bottom of the Marianas Trench, in Arctic ice, and in the cuticles of Amazonian insects. Indeed, scientists are regularly discovering new vectors and pathways for the transboundary migration of macro and microplastics: they are highly mobile in air and have been found in deep lung tissue (Wright et al., 2019); they raft invasive species and pathogens vast distances across marine territories, carrying persistent organic pollutants into food systems and posing biosecurity risks; and they are carried across geopolitical boundaries in the guts of birds, mammals and fish.

Until recently, China imported and recycled over half the globe's post-consumer plastics and paper, with New Zealand sending 15 million kilograms of waste to the country annually (Sage, 2018). However, in January 2018 China enacted a National Sword Programme banning imports of polyethylene terephthalate (PET), polyethylene (PE), polyvinyl chloride (PVC) and polystyrene (PS), and setting much tougher standards for

acceptable rates of contamination in shipments of scrap plastic (from 90–95% purity to 99.5%). The Blue Sky 2018 customs initiative then seized smuggled waste over the next ten months. With recyclable materials subsequently stockpiling in New Zealand's ports, and the government looking to alternative markets, by September 2019 some of the countries identified as emitting the world's highest volumes of waste into the marine environment (Malaysia, Indonesia, the Philippines, Thailand and Vietnam) were receiving about 58% of New Zealand's plastic waste exports – a 22% increase since 2014 (Beattie, 2019).

In March 2019, United Nations member states, including New Zealand, agreed to an amendment of the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. While the convention goes some way to addressing the transboundary flow of waste via trade, plastic pollution transgresses geopolitical boundaries via ocean and air currents, and no binding global commitment exists to address such pathways. While several international agreements cover marine debris, including the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL), the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 and the Honolulu Strategy,¹ they do not address plastics entering the ocean from land-based sources.

In the November 2018 issue of *Policy Quarterly*, Blumhardt outlined the policy options available to the New Zealand government to unlock the potential of the Waste Minimisation Act 2008 in addressing the waste crisis (Blumhardt, 2018). As one of the highest per capita producers of household waste in the developed world (Kaza et al., 2018), New Zealand has a key role in addressing plastic pollution domestically, regionally and internationally.

Two years on from Blumhardt's analysis, and with public awareness and action on the plastic pollution crisis growing, this article evaluates where progress has been made, and identifies gaps, particularly considering the developments set out above. The article puts forward the following policy recommendations for New Zealand:

To overcome the reliance on exporting plastic waste, the New Zealand government will need to take significant regulatory actions under the Waste Management Act.

- focus on the top of the waste hierarchy;
- avoid 'false solutions' that lead to financial, infrastructural and cultural 'lock-in' at the bottom of the waste hierarchy and perverse outcomes;
- implement policy that responds to the link between plastics and climate change;
- demonstrate international leadership by implementing the January 2021 Basel plastics amendment to the Basel Convention, and ratifying the Basel Ban Amendment;
- support the call for an international, legally binding agreement to regulate plastic pollution at the fifth United Nations Environmental Assembly in Nairobi, February 2021.

Prioritising the waste hierarchy

To address plastic pollution, ensuring long-term sustainable solutions through 'zero waste' and 'circular economy' mechanisms, greater attention needs to be paid to mechanisms at the higher end of the waste hierarchy (see Figure 1). This includes designing fossil fuel-based synthetic polymers out of the economy where feasible and banning the production of disposable,

unnecessary, toxic and avoidable plastic products (hereafter 'priority plastics'), as well as disincentivising producers from externalising the full costs of their products. Currently, these complementary approaches cannot realistically exclude 'end of pipe' (waste management) solutions such as recycling. However, any waste management options for single-use plastics can only be considered short- to medium-term investments and cannot be considered part of New Zealand's 'ultimate suite of solutions' to the plastics crisis. In addition, the government and private sector must avoid financial long-term 'lock-in' for those waste management investments intended as short- or medium-term solutions which divert valuable financial capital and resources away from solutions at the top of the waste hierarchy.

To overcome the reliance on exporting plastic waste, the New Zealand government will need to take significant regulatory actions under the Waste Management Act. At present, New Zealand's woefully low waste disposal levy of \$10/tonne (applying to municipal landfills only) has failed to prevent a 48% increase in waste to landfill over the last decade (Ministry for the Environment, 2019b, p.14) and the plastics economy remains almost entirely unregulated, save for a mandatory phase-out of plastic microbeads in personal care and cleaning products (2017) and single-use plastic shopping bags (2018). The government must follow through with the proposed increase and expansion of the waste disposal levy, a national container deposit scheme that prioritises refill and return over recycling, and regulated product stewardship schemes that focus on the top of the waste hierarchy. Significant improvements in New Zealand data on volumes of plastic imports, as well as plastic to landfill, offshore trade, carbon emissions, and onshore recycling and environmental leakage will also be needed to guide future policymaking, as acknowledged in the 2019 *Rethinking Plastics in Aotearoa New Zealand report* (Office of the Prime Minister's Chief Science Advisor, 2019).

Regulated product stewardship schemes

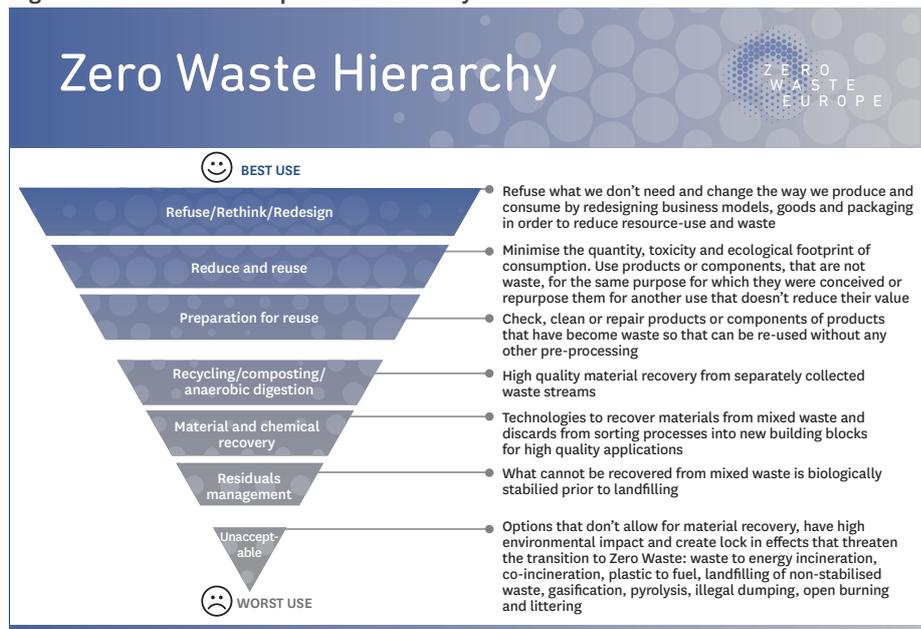
Under the Waste Management Act, the most effective tool available to government to drive waste minimisation

and internalise externalities is product stewardship, through the power to declare certain products ‘priority products’. The Ministry for the Environment defines product stewardship as ‘when people and businesses take responsibility for the life cycle of their products, either voluntarily or in response to regulatory tools’ (Ministry for the Environment, 2019a, p.7). Priority products are those that are difficult and costly for consumers and councils to dispose of, and declaring them priority products prohibits their sale except in accordance with an accredited product stewardship scheme. Such a declaration therefore triggers the compulsory development of a scheme designed to regulate the products through a suite of potential policies, including reduction, reuse and recycling targets, mandatory take-back schemes and deposits, advanced disposal fees, labelling, contribution to research and development, and ‘right to repair’² provisions.

Regulated product stewardship schemes have proven successful overseas. In Canada such schemes have been established at the provincial level since the 1990s and now encompass 94 product categories. Not only has the move driven green chemistry and sustainable innovative design and technologies, but it has also significantly raised diversion rates from landfill (over 90% of tyres) (Ministry for the Environment, 2019a, p.22). Mandatory regulation has also proven effective in Europe by increasing recycling rates, with similar tyre diversion rates (over 80%) (ibid.). The EU Packaging Directive 94/62/EC is also credited with having successfully decoupled packaging production and packaging waste disposal from economic growth across the EU (EUROPEN, 2015).

In contrast, New Zealand’s waste policy has emphasised industry-led and voluntary waste minimisation measures. Despite the inclusion of the option in the Waste Management Act in 2008, to date no priority product has ever been declared. New Zealand’s industry actors typically resist regulation and advocate for voluntary corporate and individual responsibility. While New Zealand does have some accredited product stewardship schemes, including for plastic packaging, these schemes are all voluntary and

Figure 1: Zero Waste Europe waste hierarchy



Source: Simon, 2019

predominantly industry-led. The New Zealand Product Stewardship Council strongly criticised this approach in its submission to the parliamentary commissioner for the environment, (*Un)changing Behaviour*, in 2018 (New Zealand Product Stewardship Council, 2018). Driving plastic product redesign to ensure safe reuse and developing innovative delivery systems that do not require disposable plastic packaging necessitates major changes to the way most industries currently operate, changes that only a fraction of New Zealand industries have embraced voluntarily.

Some argue that while it is industry that produces plastics, industry have also been instrumental in investing more heavily in these solutions than governments have: for example, by participating in the Ellen MacArthur Foundation and UN Environment’s *The New Plastics Economy Global Commitment* in October 2018, in which businesses and governments committed to a set of targets (Ellen MacArthur Foundation and UN Environment, 2018). While this shows promise, the commitments are still relatively weak, focusing on recycling rather than reducing single-use plastics. Another example of voluntary industry commitment to addressing plastic pollution was establishment in 2019 of the Alliance to End Plastic Waste (endplasticwaste.org). While this has

resulted in US\$1 billion dedicated over the next five years to developing improved plastics recycling, the companies promise little that will tackle the source of the problem. Hypocritically, in 2019 the alliance’s founding companies are among the world’s biggest investors in new plastic production plants (Williams et al., 2019). Consequently, many charities from around the world consider the Alliance to End Plastic Waste a greenwashing stunt (McDermid, 2019).

The most powerful government response is to create a level playing field and compel industry to get serious about implementing sustainability strategies through regulation, a point emphasised by Ma, Park and Moultrie:

We are thus caught in a plastic packaging trap, where all stakeholders are waiting for others to act. Companies won’t act without either legislative pressure or consumer demand. Consumers won’t act whilst there are cheaper solutions available. Governments are reluctant to intervene in the market and impose solutions on firms. Whilst this impasse remains, progress in eliminating plastic will progress much more slowly than it needs to. (Ma, Park and Moultrie, 2020, p.11)

The current New Zealand government recognises that urgent action is required through regulation and is working to implement regulatory change needed before the next general election in September 2020. The government's announcement in August 2019 of a proposal to declare several 'priority products', including single-use plastic packaging for consumer goods, beverage packaging and farm plastics, is the first time the government has sought to implement regulated product stewardship schemes (Sage, 2019b). If implemented, it could drive a revolution across the board, from consumer packaging and bottling, to farm practice, IT equipment and the tyre sector, with major policy repercussions. The almost simultaneous release of this proposal alongside the government announcement that it would fund a working group to design a nationwide container return scheme for beverage containers (Sage, 2019c) follows sound logic, as the two are interdependent. The container deposit scheme, initially designed for beverage packaging together with a regulated product stewardship scheme has the potential to ensure that beverage containers that cannot be recycled or reused through a nationwide container return scheme are designed out of New Zealand's economy. The government is also reviewing submissions on its proposal to increase the landfill levy (Sage, 2019d).

It is also encouraging to see the government's announcement of the phase-out of polystyrene and PVC food containers (Ardern and Sage, 2019) following the *Rethinking Plastics in Aotearoa New Zealand* report. Regulatory action such as this has the potential to drive innovation for bio- and eco-benign materials based on green chemistry. Plastic construction waste, particularly PVC and polystyrene, should be added to the proposed list of priority products, as well as disposable sanitary products, synthetic turf and discarded plastic fishing gear.

Avoiding false solutions

On the road to advancing 'zero waste' and 'circular economy' mechanisms, 'false solutions' and paths leading to dependence on solutions positioned low on the waste hierarchy must be avoided.

While most plastic products can only be downcycled (e.g. into roading, fence posts or outdoor furniture) and cannot be recycled to produce the original product ... other plastics (thermoplastics) can be recycled, albeit a limited number of times ...

In 2019 New Zealand established the National Resource Recovery Taskforce to respond to China's National Sword policy. However, their recommendations prioritised infrastructural waste management approaches rather than producer responsibility, and increasing recycling rates, rather than prioritising investments in strategies and systems to restrict the flow of priority plastics into New Zealand's economy (Sage, 2019a). In response to the taskforce's report, in July 2019 Shane Jones, the minister for regional economic development, announced that the government's \$40 million Provincial Growth Fund would invest 'in projects that convert waste, including plastic waste, into materials and products useful to businesses and consumers' (Jones and Sage, 2019). In addition, the Waste Minimisation Fund invested \$3 million in PACT Group's plan to recycle PET into food contact materials in Auckland (Nadkarni, 2019).

There are several risks and problems associated with these investments. While most plastic products can only be

downcycled (e.g. into roading, fence posts or outdoor furniture) and cannot be recycled to produce the original product (Envirotech, 2018), other plastics (thermoplastics) can be recycled, albeit a limited number of times before the product becomes brittle and has to be discarded. Plastics producers claim that PET and high-density polyethylene (HDPE), two of the most recyclable thermoplastics, can be reprocessed up to ten times before disposal (e.g. ESE Group, 2018). However, virgin plastics and additives must be added at each reprocessing to increase the physical integrity and performance of the product (Spary, 2019). Fundamentally, recycling will do little to stem the flow of single-use plastics production. Currently, approximately 14% of all plastics produced are recycled (Ellen MacArthur Foundation, 2016), while investments in the petrochemical and plastics industries continue to increase by a projected 40% by 2050 (Geyer, Jambeck and Law, 2017). Without making serious efforts to stem the flow of single-use plastic production, recycling will continue to lag behind production rates (Wilkins, 2018).

Socio-environmental externalities across the full life cycle of plastics must also be factored in. Faith in plastic recycling as a principal solution to the plastic waste problem fails to appreciate its human health consequences. Toxicants used in plastics production are currently tested as safe by the Environmental Protection Authority at 20,000 times higher than current endocrinological studies show are safe (Institute for Green Science, 2020). These toxicants include bisphenols (e.g. BPA), phthalates and perfluorinated compounds and are toxic at extremely low doses (parts per million). In addition, non-intentionally added substances (NIAS) are introduced in plastics production and each recycling process. These toxicants pose health risks to humans particularly when recycled plastics are used for food and beverage packaging, or children's toys (Gueke, 2018, p.3; Coniglio, Fioriglio and Laganà, 2020; Muncke et al., 2014).

Foreign investors are also promoting municipal waste to energy (WtE) incinerator plants (Zero Waste Network, 2019) as a solution in New Zealand. Yet

WtE is a dying industry. Globally, countries are moving to circular approaches instead, recognising that municipal WtE incineration constitutes a polluting, carbon-intensive and linear waste management system. Even the latest incinerator technology cannot remove dioxins from the air, nor does it replace landfills given that dioxin-filled filters and fly and bottom ash resulting from incineration are landfilled (Weidemann, 2014; Blue Ridge Environmental Defense League, 2009). Moreover, a recent report states that incineration produces the most CO₂ of all possible plastic waste management methods (CIEL, 2019). In addition, WtE destroys resources that could otherwise be recycled, reused or repurposed, and competes with New Zealand's renewable energy goals and commitments to a circular, low-emissions economy (GAIA, 2018, p.2), including New Zealand's recent commitments in its Climate Change Response (Zero Carbon) Amendment Act 2019.

In response to growing concern over single-use plastics, a range of single-use bioplastics have appeared on the New Zealand market. A report released by the parliamentary commissioner for the environment already outlines known and undetermined risks associated with bioplastics, confusion around labelling of products including terms such as 'bioplastic', 'biodegradable' and 'compostable' and their fates, and the need for appropriate waste infrastructure (Northcott and Pantos, 2018). Relatedly, there is a growing call from ecotoxicologists for the modern testing of all toxicants associated with plastics, including bioplastics, to determine safe levels (Endocrine Society, 2014).

Plastic pollution and climate change

Plastics' impacts on the climate have not been widely published. Perhaps the first comprehensive analysis of the relationship between these two environmental challenges is a 2019 report investigating the greenhouse gases emitted throughout the full life cycle of plastics. The report concludes the following:

if plastic production and use grow as currently planned, by 2030, emissions

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could reach 1.34 gigatons per year – equivalent to the emissions created by more than 295 500-megawatt coal power plants. By 2050, the production and disposal of plastic could generate 56 gigatons of emissions, equivalent to 10–13 percent of the entire remaining carbon budget. (CIEL, 2019, p.4)

New Zealand has committed to tackling climate change, legislating for zero carbon targets at home, and engaging with the Carbon Neutrality Coalition at the global level, but the CIEL report gives a very short time frame to reverse global trends. Importing these carbon-hungry materials and then exporting them for 'recycling' uses huge amounts of carbon and incineration adds more. In addition, methane is emitted from landfilling bioplastics, and when plastics are exposed to sunlight (Royer et al, 2018). When addressing plastic pollution, New Zealand must consider the reduction of plastics-related greenhouse gases.

The greatest level of greenhouse gas abatement from any waste policy comes from actions at the top of the waste hierarchy (McQuibban, 2019). Therefore,

in terms of policy implications, the best way to reduce the climate impact of plastics is through drastic reductions in volumes of priority plastics moving through the New Zealand economy. Implementing effective and ambitious product stewardship schemes that go beyond recycling to achieve real reductions in plastic consumption could be considered a climate change policy.

International leadership

On 10 May 2019, United Nations member states made significant changes to the Basel Convention, an international legal instrument regulating the movement and management of hazardous waste. With 186 parties out of the 193 UN members, the convention includes all top plastic waste exporters, except the United States. While most plastic waste was not originally subject to the convention, the plastics amendment adopted in May 2019 significantly widens the scope of plastic waste covered and grants legal credence to plastic waste as a hazardous material.

The amendment, which comes into effect on 1 January 2021, makes two key changes. First, it adds plastic waste as a category of 'other wastes' under Annex II. This subjects it to the general obligations of the Basel Convention, which establishes a strict regulatory system based on the concept of prior informed consent (PIC). These obligations, applicable to both 'hazardous wastes' and 'other wastes' (including household waste and residues from municipal waste incineration), impose conditions on import and export, and stringent requirements for the notice, consent and tracking of movement across national boundaries. Second, 'solid plastic waste' is removed from the list of non-hazardous waste under Annex IX, as its inclusion under this annex was often used to export plastic waste as 'green' waste.

The amendment will result in increased traceability, more control and less illegal dumping of plastic waste, as only batches of clean, separated, individual non-halogenated polymers³ intended specifically for recycling can be freely traded. All other plastic waste types will require the importing country's PIC. Making transboundary movements of

plastic waste more difficult forces states to take greater responsibility for the plastic waste they generate and consume.

Basel Convention Ban Amendment

Another amendment, the Basel Ban Amendment, was adopted at the Basel Convention's second conference of parties in 1992 and came into force on 5 December 2019. Whereas the plastic amendment subjects most plastic waste to the convention's regulatory system, the Ban Amendment goes further. It expressly prohibits OECD countries, the European Union and Lichtenstein from all transboundary movements to non-OECD states of hazardous wastes covered by the convention that are intended for final disposal, and all transboundary movements of hazardous wastes covered by paragraph 1(a) of article 1 of the convention that are destined for reuse, recycling or recovery operations.

The Basel Ban Amendment is the only way to prevent non-municipal hazardous plastic waste exports (e.g. spent pesticide containers) to developing countries, forcing New Zealand to commit to managing such waste domestically. In doing so, the Ban Amendment can ensure that the proposed regulated product stewardship schemes are implemented and effectively target top-of-pipe innovative solutions to prevent the import and retail of priority products.

More broadly, the amendment addresses the use of PIC, introduced through the amendment, to justify waste dumping. The problem with reliance on PIC is that developing countries can feel pressured by the economic powers of developed countries to consent to accepting the world's waste. The Ban Amendment also closes loopholes in waste movement management across the world. For example, recent research by the Basel Action Network revealed that, despite the Indonesian government stating that hundreds of consignments of illegal waste imports from the US would be 're-exported to their country of origin', only 12 of the 58 containers were returned. Thirty-eight containers were diverted to India, three to South Korea, and one container each went to Thailand, Vietnam, Mexico, the Netherlands and Canada (Basel Action Network, 2019). Only by preventing these

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waste shipments in the first place can backdoor consignments to developing countries be closed.

New Zealand is one of five countries (along with Japan, the US, Canada and Australia) that have repeatedly made efforts to undo, weaken and delay the Ban Amendment from entering into force. In a letter from David Parker to the first author, the minister defended New Zealand's decision not to ratify the amendment, stating that New Zealand's 'geographical isolation and lack of economies of scale' means it could not be responsible for managing its own hazardous waste domestically, and that the amendment would mean that we could no longer export such waste to non-OECD countries offering high technology recycling and treatment facilities (personal communication, April 2019). However, if a state-of-the-art facility were to be established in a developing country, it is unlikely that that country would have the resources, capacity, or robust policies and legislation to support adequate monitoring of emissions, and the enforcement required to protect workers, communities, the environment and human health. These are

costs that are externalised by waste trade and that are often ignored by those who export waste to developing countries.

While technically the Basel Ban Amendment is only binding on those that ratify it (in accordance with article 17(5) of the convention), New Zealand as a Basel Convention party must still respect the import prohibitions of other parties. Notably, Malaysia and Indonesia, destination countries for New Zealand's post-consumer plastics, are two of the 98 member states that have ratified the amendment – a clear announcement that they no longer want New Zealand's hazardous waste (including contaminated plastics). New Zealand can no longer export hazardous waste, including Annex II waste, to these countries.

Moreover, the political impacts of the amendment will mean that New Zealand will be under growing pressure to ratify and to refrain from hazardous waste exports to all non-Annex VII countries (non-OECD countries) regardless of whether or not they have ratified it:

Generally, with the force now of international law, exports of hazardous waste from rich industrialised powers to poorer countries will be perceived as a criminal or irresponsible act as will other forms of exploitive externalisation of real costs and harm to poorer countries. (Basel Action Network and IPEN, 2019, p.9)

Increasing numbers of non-Annex VII countries that have not yet ratified the Ban Amendment are likely to do so, to update their Basel commitments and to protect themselves from hazardous waste imports.

Support for an international, legally binding treaty on marine litter and microplastics

The global governance of plastics has been described as 'characterised by fragmented authority, weak international institutions, uneven regulations, uncoordinated policies, and business-oriented solutions' (Dauvergne, 2018, p.22). In contrast to other global pollutants, such as chlorofluorocarbons (CFCs) and persistent organic pollutants (POPs), plastic pollution has received little global policy attention, despite growing science-

based evidence of its widespread harms and persistence in the environment.

While the Basel Convention amendments represent important progress, the convention's operative provisions primarily focus on managing existing waste, so do not address the root of the plastic pollution problem. The benefits of a comprehensive international agreement are well known. A global architecture with a multi-layered governance approach could fill existing gaps, providing improved standards, guidelines and annexes for priority chemicals, plastics requiring special attention, and products of concern for marine plastic litter and microplastics, as well as legislative guidance and sharing of best available technology and environmental practices (Raubenheimer, Oral and McIlgorm, 2017, p.125).

A global governance framework will ensure that continued pollution in one region does not negate efforts in another. Currently, capacity to prevent and mitigate plastic pollution locally and nationally varies based on available waste management capacity (Borrelle et al., 2017, p.9995). While New Zealand already supports several political initiatives, including the Clean Seas Campaign and the New Plastics Economy Global Commitment, international evidence of failing voluntary measures and agreements indicates that only an international legal agreement can set clearly defined, binding waste reduction targets and address inconsistent national and regional capabilities (ibid.). In this regard, New Zealand has a responsibility for its Pacific Islands partners.

At the second session of the United Nations Environmental Assembly (UNEA-2), member states adopted resolution UNEP/EA.2/Res.11 on marine plastic litter and microplastics, in which governments requested an assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches to combat marine plastic litter and microplastics. The resolution called for identification of possible gaps and options for addressing these gaps. This work concluded that current efforts 'provide some degree of progress but combined may not reach the desired outcomes at a global level of protecting the environment, human health and food

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Island countries
and territories,
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more to show
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security' (Raubenheimer, Oral and McIlgorm, 2017, p.153).

Subsequently, NGO members of the UN Ad Hoc Open-Ended Expert Group put forward a 'thought-starter' in November 2018 outlining four pillars of action required to establish an international, legally binding plastic pollution treaty. The proposed treaty will likely take ten years to come into force. However, in a decade, at status quo, global plastic-related pollution will have reached catastrophic levels. Accordingly, the group proposes a start-and-strengthen approach (CIEL, Massey University and EIA, 2018).

New Zealand briefly addressed plastic waste in its national statement at UNEA-4, noting its plastic bag and microbeads bans, and highlighting the challenges that marine plastics and waste disposal pose across the Pacific. However, New Zealand did not call for an international, legally binding agreement. In contrast, all eight member states of the Secretariat of the Pacific Environmental Programme at UNEA-4 made interventions in favour of a multilateral governance structure with the potential to establish an international, legally binding plastic pollution treaty.

Conclusion

New Zealand must replace its current 'take, make, waste' economic model with a regenerative one, in which priority plastics have no place. This is a critical time for New Zealand to move in a safe, healthy and environmentally sound direction away from 'false solutions', such as WtE incineration, recycling plastics for food contact materials and without considering the risks associated with alternatives such as bioplastics, and downcycling plastics into roading and fence posts. New Zealand's first steps during 2019 are acknowledged, including proposals to establish regulated product stewardship schemes and increase and expand the waste disposal levy, funding allocated to design a national container return scheme, and a clear intention to direct government funding towards waste-related projects (although the latter has, thus far, been invested too low down the waste hierarchy).

To harness the potential generated by these first steps, New Zealand must begin designing a policy framework and investment plan that drives economic activity towards the top of the waste hierarchy. At this juncture there is a risk that poorly conceived or under-ambitious investments and product stewardship schemes could create policy or financial lock-in of short-sighted false solutions that perpetuate an ineffective and potentially hazardous waste management approach. This will require a precautionary approach. Policies need to be flexible and future-proofed. While recycling plastics cannot feasibly be avoided immediately, long-term planning and action based on reducing the priority plastics flowing through our economy is crucial.

New Zealand is failing to meet political commitments made at the international level, remaining one of the highest producers of household waste in the developed world per capita. If it is to champion the needs of Pacific Island countries and territories, New Zealand can do much more to show regional and global leadership on plastic pollution and related issues. New Zealand must consider the harmful diplomacy the refusal to ratify the Basel Ban represents. This refusal sends a message to the international community that New Zealand will continue to export

hazardous waste to developing countries if they so wish even though they are party to the Basel Convention which now forbids this type of trade. New Zealand will be seen by other nations as ideologically opposed to the Ban Amendment and, by extension, in support of the externalisation of costs for the products New Zealand imports, produces and consumes onto developing countries.

By the time the amended Annex II of the Basel Convention comes into force on 1 January 2021, New Zealand should have ratified the Basel Ban and implemented the Basel Ban Amendment domestically. In

addition to presenting a national statement at UNEA-5 on the need for an international, legally binding agreement, tackling the whole life cycle of plastics would demonstrate commitment to change, and fulfil broader responsibilities, particularly towards New Zealand's Pacific Island partners. New Zealand must play its part, not only in accelerating efforts at home, but also in showing leadership on the regional and global level, including responding to the wider impacts of plastics on human health, climate change and environmental justice.

- 1 A framework for a comprehensive and global collaborative effort to reduce the ecological, human health and economic impacts of marine debris worldwide.
- 2 These provisions require manufacturers to design longer-lasting products and make spare parts readily available in an effort to reduce waste.
- 3 Limited to polyethylene, polypropylene and polyethylene terephthalate.

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