



Aide memoire: Information on plastic waste exports out of New Zealand

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| Actions sought from Ministers | |
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| <i>Name and position</i> | <i>Action sought</i> |
| To Hon Rachel BROOKING Associate Minister for the Environment | For noting only |

| Appendices and attachments |
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| 1. Impact of plastic waste exports on developing countries 2. Plastics NZ submission to Lydia Chai's petition 3. Caveats to plastic waste export data |

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Information on plastic waste exports out of New Zealand

Purpose

1. This aide memoire is provided following your request on 12 June 2023 for an overview of the export of plastic waste from New Zealand, including known impacts on importing countries, and relevant domestic and global policies.
2. Your request on 12 June 2023 was prompted by an update from officials on Lydia Chai's presentation to the Environment Select Committee on 8 June 2023, which considered Chai's petition asking the Government to ban the export of plastic waste to Malaysia and other developing countries (the petition).

Key messages

1. The amount of plastic waste exported from New Zealand has dropped significantly since China's *National Sword Policy* came into effect in 2018. Exports reduced from over 40,000 tonnes in 2017 to 21,000 tonnes in 2022. We mainly export to Malaysia and Indonesia, and about 70 per cent of the plastic waste we export is polyethylene.
2. Current controls on plastic waste exports from New Zealand are limited to the plastic wastes controlled under the Basel Convention, and the Convention's general hazardous waste restrictions on any good which is contaminated. The Imports and Exports (Restrictions) Act 1988 (Imports and Exports Act) places permitting requirements on the export of mixed or contaminated plastic waste from New Zealand, as required under the Basel Convention. The regulatory framework relies on the exporter to identify if a permit is required.
3. Feedback from the plastics and recycling industry indicates that practices have changed significantly since the 2021 the Basel Convention plastic amendments. This includes improved processing technologies, performing quality checks, and auditing the facilities they export to.
4. To reduce reliance on exporting plastic waste, New Zealand is investing to improve onshore recycling capacity and capability. This includes investing in recycling facilities and projects that will reduce New Zealand's reliance on virgin plastics. Refer to section *Improving plastics recycling in New Zealand*.
5. New Zealand is participating in negotiations towards a United Nations internationally legally binding instrument to end plastic pollution (Global Plastics Treaty) from 2022 to 2024. The negotiations will consider the full plastic lifecycle and may include discussion on binding global measures for plastic trade, including plastic waste exports.
6. The reform of the Waste Minimisation Act 2008 (WMA) also provides an opportunity to look at better controls for the import and export of all forms of waste, including plastic waste. You will receive a further briefing in a few weeks on options to control the import and export of waste through the new waste legislation.

Lydia Chai's petition to ban plastic waste exports

7. On 1 August 2022, Lydia Chai presented a petition to ban the export of plastic waste from New Zealand to developing countries, signed by more than 11,000 people. The Select Committee considered this petition on 8 June 2023.
8. The petition, and Lydia's oral submission to Select Committee, strongly argued that:
 - a. developing countries, like Malaysia, have no capacity to handle the world's plastic waste and it is causing harm to the environment and human health (see Appendix 1)
 - b. the Basel Convention is not working effectively due to insufficient monitoring and reporting of what happens to exported waste once it leaves the country of origin.
9. The Ministry for the Environment (the Ministry), Plastics New Zealand, and the Waste and Recycling Industry Forum (WRIF) presented submissions in response to the petition. In general, the points raised by these submitters, including the Ministry, are cautious about the implications of banning plastic waste exports. Submitters noted that New Zealand cannot deal with all our plastic waste onshore due to infrastructure constraints and because there are international markets for high value plastics. Therefore, a ban on plastic waste exports could result in high value plastics being landfilled in New Zealand, and impacts on the export market.

The Basel Convention places some restrictions on the export of plastic waste out of New Zealand

10. In New Zealand, the only international controls on the exports of hazardous wastes and other wastes are under the Basel Convention. Since 1 January 2021, the Basel Convention has restricted the import and export of most mixed plastic waste without a permit. To export this material, the country receiving the material must first provide consent and the exporter must be able to show the plastic would be dealt with in an environmentally sound manner. The Basel Convention is given domestic legislative effect through the Imports and Exports (Restrictions) Prohibition Order (No 2) 2004 (Imports and Exports Order) under the Imports and Exports Act.
11. Mixtures of plastic waste containing polyethylene terephthalate (PET #1), polyethylene (HDPE #2, LDPE #4) and polypropylene (PP #5) and separated streams of other types of plastic¹ do not require a permit to be exported so long as it is 'almost free' from contamination and other wastes and destined for 'environmentally sound' recycling². Further, any good including plastic waste, is subject to the Basel Convention if it is contaminated with hazardous substances.³
12. The Environmental Protection Authority (EPA) has power under the Imports and Exports Act and Order to issue permits for the import or export of hazardous and other waste controlled under the Basel Convention. So far, only one plastic waste permit has been issued since the amendments to the Basel Convention came into effect. This was for New Zealand Panels Group Limited to export 900 tonnes of

¹ As laid out in Schedule 3 of the Imports and Exports (Restrictions) Prohibition Order (No 2) 2004.

² The Basel Convention does not define 'almost free from contamination' nor 'almost exclusively'.

³ Such as soil, food scraps, pesticide residue or waste oil.

separated PVC waste to Australia. The permit expires in 2024. Three shipments, totalling 41 tonnes have been exported, between November 2021 and April 2022.

13. The New Zealand Customs Service (Customs) is responsible for enforcement of the Imports and Exports Order. Enforcement may include checking consignments to make sure they meet domestic legal requirements. The system relies on self-declaration by the exporter that the goods do not require a permit from the EPA under the Imports and Exports Order.
14. The Ministry is aware that there are limitations in the way the Imports and Exports Order is drafted, particularly in relation to monitoring, inspection and enforcement functions. We intend to commence a policy review of the Imports and Exports Order's settings over the next 12 months.

Current state of plastic waste exports out of New Zealand

Export of plastic waste has reduced in recent years and available data suggests it has now stabilised

15. The only mechanism to track plastic waste exports is through self-declaration at Customs.⁴ In the case of plastic waste, the exporter must declare whether it requires a permit or not. There is no ability to track waste once it has left New Zealand. Figure 1 shows that annual plastic waste exports have declined since 2016 but have stabilised over the last few years.

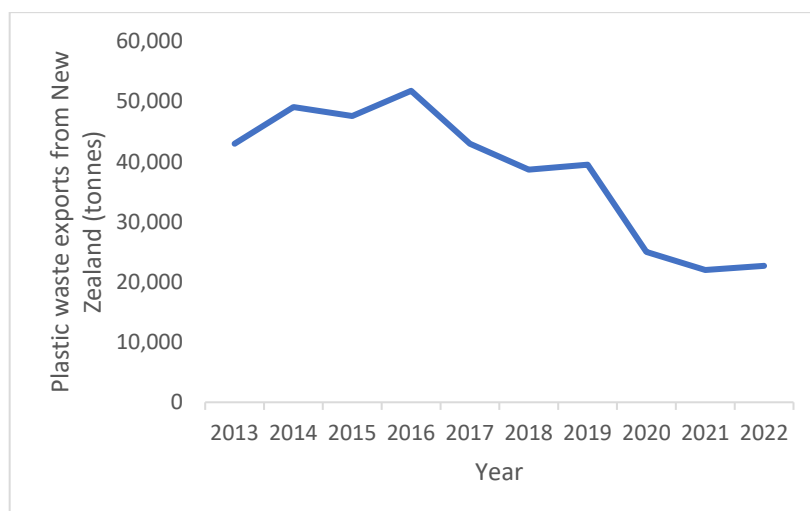


Figure 1. Plastic waste exports from New Zealand (Customs internal data)

16. Note, 'plastic waste' does not capture all plastic exported from New Zealand for recycling or remanufacture. A 2021 analysis found that exports of plastic waste made up half of all exported 'plastic raw materials'.⁵ Some of these raw materials are recycled commodities with basic processing such as shredded or flaked plastic. Exports of shredded or flaked plastic have increased following China's *National Sword Policy* with 340 tonnes exported in 2020 and 1640 tonnes exported in 2022.⁶ We expect this is due to investment in the New Zealand recycling value chain. The

⁴ All export consignments valued at over \$1000 are required to submit an export entry to Customs. Exporters are not required to submit where their consignment is valued at \$1000 or less.

⁵ Scion (2021). [Making Zero the Hero](#).

⁶ Customs internal data.

process of flaking or shredding plastic waste densifies plastics for shipment and may involve further quality control to remove non-target materials, lids, and labels.

Most of the plastics we export are polyethylene polymers

17. In 2022, the main plastics exported were:

- a. polyethylene (PE) polymers (high density PE (HDPE) #2, low density PE (LDPE) #4) - 69 per cent
- b. PP #5 and PET #1 or any other polymers - 31 per cent.⁷

18. All categories of polymers have experienced a decrease in exports out of New Zealand in recent years, including:

- a. some decrease in ethylene polymers (#2 and #4) since 2019, but still strong global demand
- b. almost a complete drop of styrene polymers (#6) since mid-2019, though in their submission to the petition, Plastics New Zealand queried this figure given anecdotal evidence of companies exporting this type of plastic
- c. a large decrease in PP #5, PET #1 and any other polymers since 2020, likely due to increased onshore recycling of PP and PET and the Basel Convention restricting export of other plastic waste previously exported
- d. a decrease in polyvinyl chloride (PVC) #3, though the trade of PVC was sporadic prior to 2018.

19. See Plastics New Zealand's submission on the petition (Appendix 2) for more detail on export trends by polymer type.

Most of our plastic waste exports go to Malaysia and Indonesia

20. New Zealand exports plastic waste to at least ten countries. In recent years, Indonesia and Malaysia have been the largest markets, with volume fluctuations between the two countries. Figure 2 shows the proportion of 2022 plastic waste exports by destination country. Appendix 3 outlines caveats to this data.

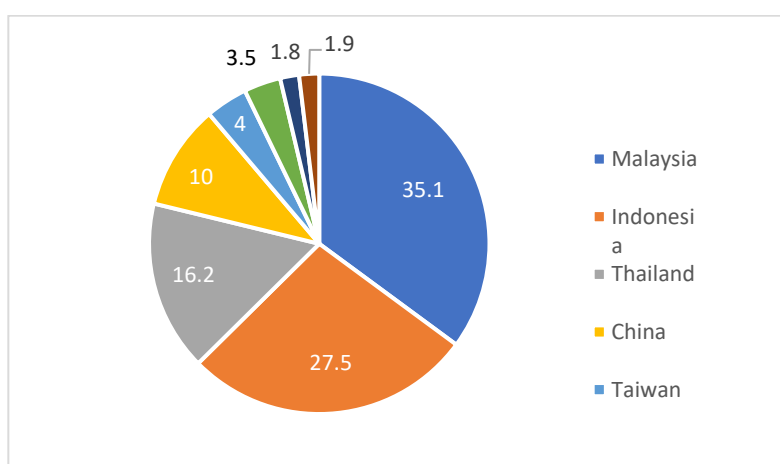


Figure 2. Percentage volume of plastic waste exports out of New Zealand to different countries in 2022 (Customs internal data)

⁷ Statistics New Zealand Infoshare HS 3915 codes.

21. In 2022, New Zealand exported high value plastic waste to Indonesia, Taiwan, and Australia. In contrast, New Zealand exported lower value plastic waste (ie, likely lower quality) to Malaysia, Thailand, China, and Hong Kong.
22. China's *National Sword Policy* in 2018 saw a dramatic reduction in exports to China, down from 16 per cent of plastic waste exports in 2017 to only one per cent in 2019. However, the amount of waste sent to China has increased to 10 per cent in 2022. While we do not know the reason for the increase, it could be due to various factors, such as companies improving systems and reducing contamination to meet the tight import requirements, or inaccurate destination data being submitted to Customs (eg, consignments being sold to a trader in one country but going elsewhere).

The recycling industry have improved export practices in recent years

23. In their submission to the petition, the WRIF emphasised that material that is now exported is sorted plastic that has value to the importing country. During our recent conversations with some plastics recycling facilities⁸ they stated that they are:
 - a. no longer sending low-value mixed-grade plastics (which was happening prior to China's *National Sword Policy* and the Basel Convention plastic waste amendment); material that is sent has gone through optical sorters, has been hand-picked for quality assurance and/or has already been pelletised ready for remanufacture
 - b. complying with due diligence checks imposed by importing countries (eg, the Malaysian Government requires photos of the material to be sent prior to export)
 - c. undertaking visits and audits of facilities themselves (eg, Visy have a trading team in Singapore and visit processors as part of due diligence with their Auckland Council contract).
24. Beyond anecdotal information from individual exporters, we do not have official information about the processing of our plastic waste exports when they arrive in the receiving country. The processing of the plastic will depend on the environmental controls subject to the relevant country's domestic legislation. There is evidence that there is poor compliance and enforcement of laws in developing countries, coupled with limited resources and poor waste management infrastructure, resulting in waste being dumped or incinerated rather than recycled. Refer to Appendix 1 for more information on the impacts of plastic waste exports on developing countries.
25. Some of the recyclers we spoke to stated they would prefer not to export waste plastic and instead improve our domestic capability, given the risks and perceptions of export.
26. The recyclers we spoke to are four of 20 operators recorded to have exported plastic waste in 2022.⁹ These four recyclers are all material recovery facility operators who mainly deal with kerbside recycling streams, which is expected to make up less than half of plastic waste exported. Some of these recyclers and other

⁸ From conversations with Visy, EcoCentral, Oji (26/06/23), and Recycle South (27/06/23). These companies operate material recovery facilities in Auckland, Wellington, Christchurch, Dunedin, and Invercargill accounting for more than two thirds of the volume of kerbside recycling.

⁹ Customs data.

recyclers may also export non-kerbside plastics eg, PE films, which are likely to account for a large share of plastic waste exports.

27. Recyclers dealing with kerbside plastic have a degree of local and central government oversight through contracts, investment and policy work. Beyond these recyclers, we have limited interaction with other commercial operators or traders, and therefore, limited visibility of other materials being sent from other sources.

Some shipping companies have stopped exporting plastic waste

28. Recently, some international shipping companies have stopped transporting waste plastics. This includes CMA CGN, its subsidiaries (ANL, APL), and Maersk¹⁰ who are either main shipping companies or transport significant volumes from New Zealand to Asia. We understand the reasons for doing so are driven by compliance with regulations such as those that give effect to the Basel Convention and the risk of being left with abandoned containers that are not accepted. We are awaiting further information to confirm whether other shipping companies continue to export plastic waste.

Improving plastic recycling in New Zealand

29. New Zealand's recycling capability is patchy and unevenly spread around the country. Most recycling facilities are concentrated around Auckland, the lower North Island or Canterbury. Figure 3 shows the main polymers recycled onshore.¹¹
30. Our data is limited on the total amounts of material recycled in New Zealand, however Eunomia estimated approximately 33,000 tonnes were recycled in 2020.

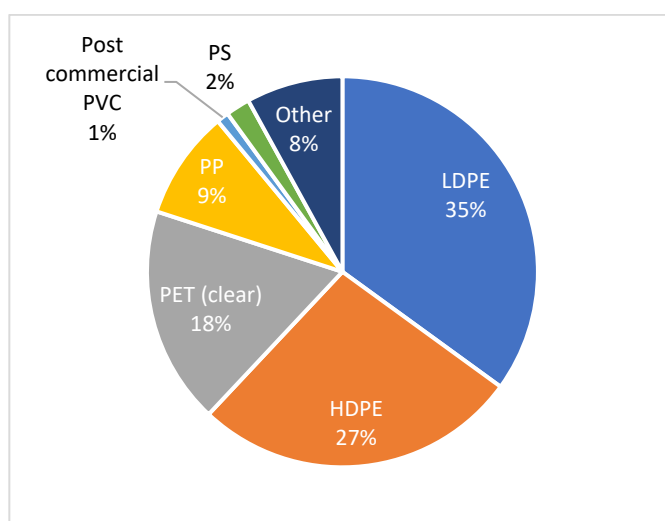


Figure 3. Make up of polymers recycled in NZ (Eunomia, 2021)

31. As highlighted in the Plastics New Zealand submission to the petition, onshore processing of plastics is limited. For example, coloured PET is only reprocessed onshore in small volumes and is largely sold in export markets.¹²

We are investing to improve our recycling infrastructure

¹⁰ Maersk has only banned transportation of plastic waste where it is for import into Malaysia.

¹¹ Eunomia. 2021. [Waste and Resource Recovery Infrastructure and Services Stocktake](#).

¹² Conversation with Visy 26/06/2023.

32. The Government is investing in recycling infrastructure through:
- a. the expanded waste disposal levy: increasing the funds available for central and local government to spend on waste reduction activities
 - b. the Waste Minimisation Fund (WMF): to support projects that will accelerate New Zealand's transition towards a low emissions and low waste circular economy
 - c. the Plastics Innovation Fund (PIF): \$50 million to support projects that minimise plastic waste and its harm on the environment, including making what we do use reusable or recyclable
 - d. the COVID-19 Response and Recovery Fund (CRRF): \$100 million to improve recycling infrastructure, including optical sorters to enable better separation of plastics.
33. The development of the first waste action and investment plan is underway, which will outline an approach for addressing current national waste infrastructure deficit over the next five years. The draft plan will come to you later this year and is likely to cover future investment priorities; collaboration with other agencies (ie, on standards for recycled content in exported products/packaging); and pilot of a regional infrastructure planning approach to develop a circular resource recovery network.

New waste legislation will have improved powers to control plastic and other types of waste exports

34. In March 2022, the Environment, Energy and Climate Cabinet Committee (ENV) agreed to repeal and replace the WMA and Litter Act 1979 (see ENV-22-MIN-0053). This included developing effective controls for waste imports and exports and delegated decision making on the proposed enabling powers to the Minister for the Environment and Minister for Customs.
35. The new legislation will provide a good opportunity to ensure appropriate import and export regulations for all forms of waste. Officials are currently developing policy options for you and the Minister of Customs to consider and you will be receiving a briefing in a few weeks.

Global efforts are increasing to reduce plastic waste

36. The plastic waste amendment to the Basel Convention is a first step towards better managing the export of plastic waste – but is limited in what it can do. Further, compliance with the Basel Convention as given effect in domestic regulation relies solely on self-declaration by the exporter.
37. New Zealand is participating in negotiations towards setting a legally binding Global Plastics Treaty. The negotiations will consider the full scope of the plastic lifecycle and could involve discussions on binding or voluntary global measures for the trade of plastics including plastic waste exports.

We are taking action on plastic waste

38. Through the National Plastics Action Plan, the Government is taking action to reduce plastic waste and improve systems for dealing with plastic waste by:
 - a. phasing out certain hard-to-recycle and single-use plastics by 2025: the ban aims to simplify materials in use and reduce contamination in recycling streams, leading to greater recovery and recycling rates
 - b. improving household recycling: standardising materials collected in household recycling and widening access to kerbside recycling services will increase consistency and reduce confusion, thereby improving the quality and quantity of materials collected and reducing rubbish to landfill. Only plastics 1, 2, and 5 will be accepted in household kerbside recycling as these are most likely to be recycled onshore and have good end markets
 - c. regulating a product stewardship scheme (RPS) for plastic packaging: a RPS scheme will place responsibility for managing plastic packaging at the end-of-life on producers, importers and retailers and will help to reduce waste and increase reuse and recycling of plastic waste.

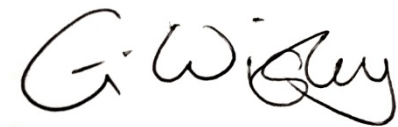
Countries are taking action on the export of plastic waste

39. In Australia, since 1 July 2022 only waste plastic that has been sorted into single resin or polymer type and further processed (flaked or pelletised), or processed into engineered fuel, can be exported. Exporters must hold a license in order to export waste plastics and operate in accordance with Australian national standards for plastic waste.
40. However, this ban, along with high volumes of recyclables collected through container return schemes has resulted in Australia facing domestic recycling capacity issues and stockpiling of waste plastics. To mitigate this, a one-year exemption was granted in early 2023 to allow the export of clean and sorted PET #1.
41. In January 2023, the European Parliament voted to ban the export of plastic waste to non-OECD countries and phase out exports to OECD countries within four years. The law to enforce this ban is currently being developed.
42. Officials consider that we should look into policy options for restricting the export of plastic waste from New Zealand in 3 to 5 years' time once we have invested more into plastic recycling infrastructure and concluded negotiations on a global plastics treaty.

Next steps

43. We will be briefing you and the Minister of Customs in a few weeks on options to control the import and export of waste under the new waste legislation.
44. Officials can meet with you to discuss the contents of this briefing if required.

Signatures



Glenn Wigley
Director – Policy and
Regulatory
**Waste and Resource
Efficiency**

**12 July
2023**

Appendix 1. Impact of plastic waste exports on developing countries

45. The United Nations Environment Programme (UNEP) have estimated approximately 4 million metric tonnes of plastic waste per year is exported from high-income countries to low and middle-income countries.¹³
46. A recent International Pollutants Elimination Network (IPEN)¹⁴ report highlighted that many Association of Southeast Asian Nations (ASEAN) member states are facing significant problems with waste due to:
 - a. high levels of domestic waste and low levels of domestic recycling
 - b. high levels of imported waste (for example, Lydia Chai cited over 1 million tonnes of plastic waste being imported into Malaysia)
 - c. poor compliance and enforcement of laws, coupled with limited resources and poor waste management infrastructure
 - d. fragile ecosystems and vulnerability to climate change, with these regions being some of the most ecologically biodiverse and natural resource-rich regions in the world.
47. These issues result in waste being dumped or incinerated rather than recycled and causing harm to the environment and human health.¹⁵
48. Malaysia has high levels of contamination through its domestic plastic waste collections. Plastic waste imports can provide Malaysia a greater guarantee of supply, value or quality¹⁶.
49. The UNEP report highlights anecdotal evidence suggesting that mismanaged or lost volumes of plastic waste are often not accounted for in these countries. Many of these countries are starting to introduce stronger measures for managing waste. For example, the Malaysian government has returned 150 shipping containers of illegal waste in 2019 and 2020.

¹³ UNEP (2023). [Turning off the Tap: How the world can end plastic pollution and create a circular economy.](#)

¹⁴ IPEN et al (2021). [Waste Trade in Southeast Asia Legal Justifications for Regional Action.](#)

¹⁵ Lydia Chai's petition

¹⁶ Chen et al (2021). The plastic waste problem in Malaysia: management, recycling and disposal of local and global plastic waste. *SN Applied Sciences* (2021) 3:437.

**Appendix 2. Plastics New Zealand submission to Lydia Chai's
petition (as attached)**

Appendix 3. Caveats to plastic waste export data

Customs provided the Ministry data on plastic waste exports based on raw data extracted from its system. This data will differ from that publicly available on Statistics New Zealand Infoshare site. Customs data:

- includes all exports of plastic waste for which an export entry has been lodged
- does not include exports of plastic waste where no export entry has been lodged on the Customs system. This data is not recorded in a readily retrievable manner on the Customs system, and not recorded at all on the Statistics New Zealand site. It is likely some plastic waste is being exported in this manner. Exporters are not required to lodge export entries for consignments valued at \$1000 or less
- has had some detected destination anomalies corrected
- does not include export consignments of flaked/shredded plastic, which has a different categorisation.

Statistics New Zealand does not report exports that are valued at \$1000 or less.