

# WASTE DATA

## AN OUTSIDER'S PERSPECTIVE

**Dr Rachel Chiaroni-Clarke** of the Office of the Prime Minister's Chief Science Advisor has been analysing New Zealand's waste data. She shares what data is needed to truly understand and solve our plastic crisis.

**I'VE BEEN ON A** mission to find out how much plastic comes into Aotearoa New Zealand and where it ends up.

My hunt for data forms part of the Rethinking Plastics project by the Office of the Prime Minister's Chief Science Advisor, which will provide government with a summary of the evidence and accompanying recommendations on ways to mitigate the issues related to plastics.

Our project is guided by a panel of experts from wide-ranging disciplines, and is further supported by a broader group that has helped us through consultation and peer review. Ahead of the full report, we've published the draft of Part 1 of *To what extent can we quantify Aotearoa's plastics footprint? New Zealand's data challenge*, which provides a current snapshot of the available data and highlights knowledge gaps for plastic material flow through Aotearoa New Zealand.

### Systematic data collection is needed

As members of the waste industry, I'm sure it comes as no surprise to you that we are lacking an aggregated national dataset housing the information I'm hunting for. This urgently needs to change. Aotearoa New Zealand needs accurate, high-quality data as the foundation of our system-wide rethink of how we use and dispose of plastic.

The waste industry's role here is crucial. Coordinated, systematic and ongoing collection and sharing of data for recovered and waste plastic is essential to inform and prioritise policy decisions, including infrastructure investment.

I'll briefly explain what I think the waste industry can do to help fill some of those gaps, and highlight some of the initial recommendations from our panel.

### We need to know more than gross tonnages

The majority of available data on landfilled or recycled plastic is limited to a tonnage value. Capturing additional data has the potential to support better management of plastic in Aotearoa New Zealand by better supporting evidence-informed decisions.

Because all plastic products aren't equally recyclable, knowing which resin types and colours are used is key. The best publicly available data on kerbside recycling composition differentiates by clear PET, natural HDPE and mixed plastics. This makes practical sense for the day-to-day business of recycling because of the nature of how bales are currently sold, but doesn't allow us to really understand how much and which types of plastic need to be managed differently.

Soon our country won't be able to rely on shipping mixed bales offshore, so more granular data is needed to inform decisions such as whether government should restrict use of certain resin types or colours, invest in infrastructure for secondary sorting, or move to a waste-to-energy approach to deal with plastic at its end-of-life.

The diversion potential of plastic sent to landfill is useful information that is often not recorded or disclosed. The current WasteMINZ study auditing a nationally representative sample of household refuse and recycling streams is a great first step to address this data gap. It would also be informative for educational campaigns and policy decisions to have data on the types of plastic that commonly contaminate the recycling stream and are then sent to landfill.

The same goes for non-household waste plastic. Data collection efforts need to include the amount, types, colours, contaminants and diversion potential of plastic in commercial recycling streams and non-municipal landfills, making sure that data is captured for other high-use industries such as construction and agriculture.

But beyond individual measures, what's really needed is a co-ordinated approach across the plastic value chain to capture data and make it accessible. That will require data collection throughout the full product lifecycle.

Measurements also need to include information about recycled content, reuse potential for multi-use systems, industry, source and end market (local or overseas), location and average lifetime of the product.

## Now is the time to start collecting better data

A national data framework for plastic is needed, but it won't happen overnight and Aotearoa New Zealand simply cannot wait for a perfect dataset before initiating change. Our panel recommends that a series of audits are undertaken across the plastics supply chain to give us a better baseline understanding of the plastics material flow through Aotearoa New Zealand. Particular effort should be made to address knowledge gaps, such as how much plastic waste goes to non-municipal landfill and how much plastic that is sent for recycling actually ends up in landfill.

From there, a framework for the ongoing collection of information on plastics across the

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value chain should be built. One way to approach this could be for stakeholders to disclose their data to an independent third party, to be aggregated into a national dataset that is easily accessible for policymakers and the public.

An aggregated national dataset will also allow government to supply more accurate waste data to the OECD and other international organisations, and hold ourselves accountable to targets related to plastic use and waste, such as those agreed to in the NZ Plastics Packaging Declaration and the New Plastics Economy Global Commitment. The National Waste Data Framework is a great start for data collection for the waste industry that should be built on.

## **Aotearoa New Zealand's plastic data can guide our shift to a new plastics economy**

I think one of the biggest opportunities for better data on plastic use and disposal in Aotearoa New Zealand is that it can support and guide the transition to a circular economy for plastics. The waste industry has an important role here – you can support manufacturers and brand owners to establish circular solutions for products, particularly with your knowledge of the various recovery techniques available for different types of plastic materials in circulation, and their associated environmental impacts.

We're at a pivotal point where we can rethink how we use plastics to reduce the negative impacts while retaining its many benefits. Let's seize the opportunity!

Look out for our full report later in the year. **R**



Dr Rachel Chiaroni-Clarke is the research analyst and writer leading the Rethinking Plastics in Aotearoa New Zealand project for the Office of the Prime Minister's Chief Science Advisor. Through this project, Rachel has taken a deep dive into the issue of plastics, spending months analysing the evidence, consulting with stakeholders across Aotearoa, and working with the project's expert panel.

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