

100% Plastic: New Zealand's Growing Problem - Part One

In recent months the conversation surrounding single use plastics has forced many of us to reconsider our consumption habits and how we deal with plastic waste. Whilst the banning of plastic bags is seen as a step in the right direction, plastic bags are only a small part of a much bigger problem that needs to be addressed.

In this two-part issue, we look to highlight the problem and spotlight some innovative companies around the country that are operating as part of the wider "circular economy".

In this first part we discuss the size of the growing problem. We will publish the second part later in the week which includes how we are working with some of these innovators.

Last year New Zealanders contributed an average of 550kgs of waste per person to landfills – over 2.5million tonnes in total. In addition, New Zealanders send 3 million tonnes of construction and demolition debris to land and clean fills, along with 300 million steel cans each year.

Whilst these figures are dwarfed by those of large countries like China, India, or the United States, OECD statistics suggest that we are the 4th largest waste producing nation in the world per capita. Since 2012 we have steadily increased our waste output from 562kg's per capita to 730kg's per capita in 2017 – a 30% increase.

The foundations of New Zealand's plastic addiction can be found in decades of deeply ingrained consumption and disposal habits. While most New Zealanders support recycling and engage in some level of waste minimisation, the disconnect between what we say and what we do is ultimately why our waste output is growing at an annual compound rate of 5.4%.

For a country which markets itself globally as '100% Pure', it is worth pointing out that even Ethiopia boasts a more technologically advanced waste-to-energy facility than those operating in New Zealand.



It may surprise some that many years' worth of recycling in New Zealand have ultimately ended up in landfills overseas. Last year we sent 41 million kilograms of plastic waste to other countries for processing. More than 7 million kilograms of New Zealand's plastic waste was shipped to China last year. Hong Kong, a separate import jurisdiction, received 13.5 million kilograms, and another 19 million kilograms was sent to Indonesia, Thailand, Malaysia, and Vietnam. Our lack of foresight in how we deal with our waste has led to an overreliance on foreign markets to buy our garbage – and that global demand is drying up.

On December 31st, 2017, China put a ban on 24 different types of the plastic waste that foreign countries like New Zealand send to its shores for disposal. To calculate the impact of that ban, researchers looked at how much plastic waste China imported from 1988 to 2016. They then used that information to calculate that by 2030, the ban might leave 111 million metric tons of plastic trash with nowhere to go, according to a study published in "Science Advances".

For the past three decades, China has been the world's dumping ground, accepting more than 10 million metric tons of plastic waste from countries like New Zealand. The 2017 ban, however, has forced us to face our waste crisis rather than siphon it off on a barge. Plastic waste is often in cruddy condition once it reaches the bin: if it's not covered in yesterday's lunch, then it's mixed in with other materials as many countries ask residents to recycle plastic, glass, and paper all together. Sorting through and breaking down that jumbled litter takes

energy, and that energy costs money that countries, like New Zealand, aren't willing to spend. It was simply cheaper to throw the garbage onto a boat and send it abroad than deal with it here.

Our lazy habits have caught up with us as we now see makeshift storehouses full of recyclable product that we can no longer toss on a ship and forget about. These storehouses are already at capacity and because we do not have the infrastructure to process this recycling within our own borders – the only current alternative is landfill.



With these facts as a backdrop, it is becoming increasingly apparent that we need to make the shift from an intellectual conversation about recycling and start implementing it as part of our everyday lives. There is a huge opportunity for New Zealand to take a leadership position in waste reduction and to increase our national recycling capacity; in doing so we may be able to reverse some of the damage we've caused to our natural environment.

In the second part of this thought piece we will discuss some of the New Zealand businesses currently involved in this space, and how Armillary is working to grow them.

To get in contact with us, please visit our website: www.armillary.co.nz

Sources:

[Municipal Waste](#), [Africa WTE](#), [NZ Waste Production](#)