

Incentives to reduce plastic waste

Generating value for plastic through fundamental changes in behaviour

The challenge

Plastic becomes a pollutant due to its low value and lack of recycling options. A comparison of aluminium cans and plastic bottles found side by side in convenience stores is illustrative: cans are so rare in the environment as to be virtually undetectable in a recent analysis covering 8,000 coastal monitoring sites around the globe. In contrast, plastic bottles typically represented 20 to 40% of littered items.

Behaviour change is a large part of addressing this missed economic opportunity. Increasing the value of plastic is a complex problem, linking economic incentives, consumer behaviour, commercial strategy and government policy. The social license for our behaviour around littering has changed, as has our appetite for many single use items such as straws and plastic bags.



Our response

We are evaluating socio-economic approaches for increasing the recognised value of plastic and shifting behavioural responses. We are exploring market opportunities and new business models to increase plastics recovery and prevention of pollution. We have a reputation for well-researched, balanced, and empirically-based recommendations, backed by transparent data analysis. This reputational caché, and the role we can play as a connector among disparate parties, makes us uniquely placed to drive a global change in plastic pollution. Key areas of capability include assessing the effectiveness of container deposit legislation and other governmental policies in reducing mismanaged waste in the environment, evaluating social licence to operate, and delivering a circular economy roadmap for plastics.

The benefits

Incentivising behavioural changes will lead to improved economic gains for communities, organisations, and companies involved in the plastic supply chain. We will achieve long-term shifts in material recovery through combining validated socio-economic incentives with industry innovation. In the short-term our research can generate response options that include viable solutions for regional and remote areas of Australia, for urban centres around the country, and for government and industry to address society demands for reducing plastic pollution.

As Australia's national science agency and innovation catalyst, CSIRO is solving the greatest challenges through innovative science and technology. **Contact us** 1300 363 400 +61 3 9545 2176 csiroenquiries@csiro.au csiro.au For further information CSIRO Land and Water Andrea Walton +61 7 3833 5575 andrea.walton@csiro.au csiro.au/plastics