UNWRAPPED

Plastic Use In Australian Supermarkets

2023 Audit Report

Australian Marine Conservation Society

BOOMERANG ALLIANCE

About the Australian Marine Conservation Society (AMCS)

The Australian Marine Conservation Society is Australia's peak ocean conservation organisation. We are an independent charity staffed by a committed group of scientists, educators and passionate advocates who have defended Australia's oceans since 1965. Our paid and volunteer staff work every day to advance evidence-based solutions for threats to our marine wildlife.

AMCS projects such as the GoodFish Guide have become powerful drivers for change, equipping consumers with independent information on seafood sustainability so that they can make informed decisions about what they buy. Our work extends across all the major threats to marine wildlife, including reducing ocean plastic pollution, protecting critical ocean ecosystems such as Ningaloo and the Great Barrier Reef, preventing destructive practices such as whaling and supertrawlers from harming our endangered species, and stopping new oil and gas.

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About the Boomerang Alliance

The Boomerang Alliance was formed in 2003 with the aim of a zero waste society. We are a community-based 'peak organisation' representing 55 environment and community organisation members. Our primary focus is on government and stakeholder engagement to establish effective policies and practices that reduce waste and litter. Our extensive supporter base provides a community voice.

Our focus on plastic litter and waste has led to successful plastic bag bans, container deposit schemes and more recently the implementation of single-use plastic bans. As the organisation behind the influential Plastic Free Places program, we are well equipped to support supermarkets to reduce plastic thanks to our extensive experience working with cafes and food outlets to reduce problem takeaway plastics.

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Acknowledgements

This audit report was developed with the support of staff from Clean Up Australia and WWF-Australia.

AMCS and the Boomerang Alliance would like to acknowledge the Environmental Investigation Agency (EIA) for their advice and support in the development of this audit framework.

The Australian Marine Conservation Society and the Boomerang Alliance acknowledge the Traditional Custodians of this land and sea country, and pay our respects to their Elders past and present. We acknowledge that this land and sea country was, and always will be, Aboriginal land and sea.

Executive Summary

Supermarkets are the largest source of plastic packaging in our daily lives, representing an $130.2 billion sector that sells the vast majority of Australia's groceries, cleaning and personal care products.

While major supermarket brands have been quick to claim a commitment to sustainability, the recent collapse of the REDcycle soft plastics program and low plastic recycling rates have raised serious concerns about whether industry is taking responsibility for the environmental harms caused by its packaging.

Plastic pollution is now a global crisis, with the volumes of plastic entering our oceans likely to triple by 2040 due to the rising use of plastics.[1] Ocean plastic impacts the entire marine ecosystem, killing and harming animals through: entanglement, starvation and lacerations from ingestion of plastic, smothering and deprivation of oxygen and light, and physiological stress.[2] Supermarkets are a major source of this plastic, with data from Clean Up Australia indicating that soft plastics, food packaging and beverage litter make up 69% of all plastics found in coastal and community clean ups.[3]

To investigate the truth behind supermarket sustainability claims, AMCS and the Boomerang Alliance have partnered to conduct an investigation into the plastic reduction practices of Australia's largest supermarkets.

Using data provided by supermarkets, public reports and volunteer shopper surveys, this report analyses their 2022 performance in five categories: transparency; plastic footprint reduction; reuse and refill; recycling and recycled content; and policy, planning and governance.

This is the first independent audit into Australian supermarket plastics, and it exposes a concerning lack of transparency by Woolworths, Coles and other brands.

How does YOUR supermarket rank on reducing plastic?

Very few supermarkets offer **plastic-free refill** options for cleaning and personal care products

Soft plastics are misleadingly labelled as recyclable

Thin plastic bags and 15-cent heavyweight shopping bags have been phased out in most supermarkets

Hard-to-recycle carbon black plastic trays are being phased out (but only on own-brand products).

Plastic wrapped fruit and vegetables are cheaper than loose produce **78%** of the time.

Some supermarkets are trialing the removal of **single-use plastic produce bags.**

Audit highlights

- **Aldi has won first place this year in the race to reduce plastics,** reducing plastics on its fresh produce by 21.7% since 2019 and phasing out pre-packaged straws and cutlery.
- **Woolworths and Metcash (IGA/Foodland) are the poorest performers,** showing the least evidence of action to reduce plastic packaging.
- **Recycling and the use of recycled plastic was the worst performing area in this year's assessment,** with Woolworths receiving a score of 0% in this area.
- **Many supermarkets were found to be charging more for loose fruit and vegetables,** compared with plastic wrapped options.
- **The use of false solutions such as lightweighting (reducing packaging thickness) is a major concern,** with supermarkets unable to demonstrate reduction in the number of items wrapped in plastic.
- **Supermarkets are passing the buck by only applying targets to own-brand products,** with most not enforcing supplier sustainability guidelines.

CUT THE WRAP!

This audit has uncovered a serious lack of transparency, with all supermarkets hesitant to publicly release data on their packaging footprint.

Most annual sustainability reports do not show how much plastic is on supermarket shelves and limit information to cherry-picked examples with insufficient context to appropriately assess the supermarket's impact. Where actions have been taken to remove single-use plastics, these have usually been initiated to comply with incoming state and territory bans.

Australians care deeply about stopping plastic pollution,[4] but at the supermarket they are rarely given fair plastic-free options. There are few examples of genuine reuse or refill options in Australian supermarkets, with the majority in trial stages and servicing small numbers of customers. Where they do exist, plastic-free options in supermarkets are infrequently promoted in-store.

The good news is that, with the implementation of several key measures, Australia's supermarkets have the potential to significantly improve their sustainability performance.

International examples from companies such as Tesco in the United Kingdom show that supermarkets can report product-level packaging data for both own-brand and branded products, if they are willing.

Recent United Nations (UN) Environment Programme analysis also shows that it is feasible to transition at least 20% of packaging to reusable alternatives, with supermarkets well placed to act on recommendations that 30-50% of beverages and home/personal care products in PET/HDPE bottles could be replaced with reusables.[5]

By enforcing supplier sustainability guidelines and implementing government directives to phase out problem plastics such as produce stickers or pre-packaged straws and cutlery, supermarkets could see an immediate improvement in sustainability across a range of products.

With this report, AMCS and the Boomerang Alliance intend to bring transparency and accountability to the supermarket sector, giving Australian consumers the information they need to support the companies most committed to reducing plastic.

From Aisles to Oceans:
The impacts of plastic packaging

Plastic pollution has fast become a global crisis; current research suggests that almost every marine species is likely to have encountered plastic pollution.[6]

It is projected that without urgent action the volumes of plastic entering the world's oceans will triple by 2040.[7]

The impacts of plastics also threaten fisheries, ocean-based tourism and human health. The damage from marine debris to these industries in the Asia Pacific Economic Cooperation (APEC) region has risen from an estimated US$1.26 billion in 2009, to US$11.2 billion in 2015.[8]

Despite targets to achieve 70% recovery of plastic packaging by 2025, the Australian Packaging Covenant Organisation's (APCO) 2023 *Review of the 2025 National Packaging Targets* showed Australia's plastic recovery rates have stagnated at just 18%, with rising use of soft plastics one of the major barriers to increasing recycling rates. Even before the collapse of the REDcycle soft plastics recycling program, harder to recycle plastic materials such as soft plastics were being recycled at a much lower rate – approximately 7% of all soft plastics were recovered in 2020-21, most from business-to-business (B2B) applications.[9]

While government and industry alike have identified the need to decrease the consumption of plastics, progress has been far too slow.[10] Brand owners and retailers must take responsibility for the environmental impacts of their packaging choices, rather than placing the burden on consumers. As the main supplier of food and grocery items to Australian households, supermarkets must take responsibility for the high volumes of plastic packaging produced through their operations.

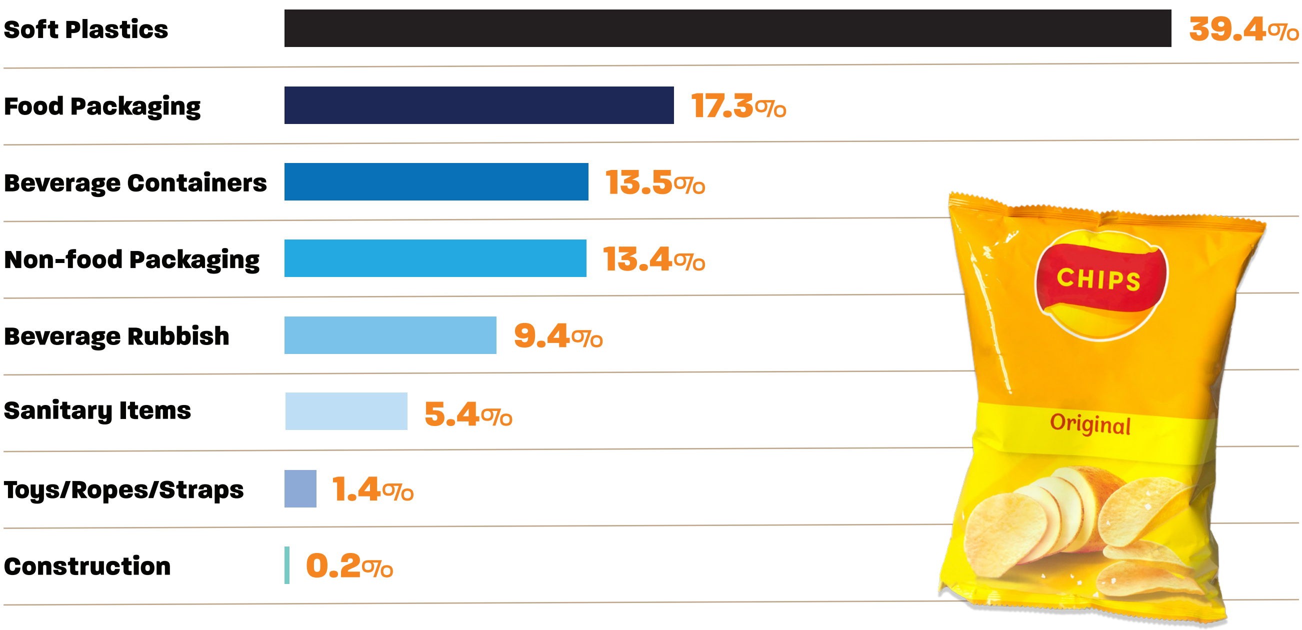
Fast facts

1. Australia is the second highest generator of single-use plastic waste per capita, after Singapore[11]
2. Each of us produces approximately 60kg of plastic waste each year[12]
3. Only 18% of plastic packaging was recovered in 2020-21[13]
4. Less than 5% of household soft plastics were recycled before the REDcycle collapse[14]
5. Australia's plastics consumption emits the same amount of greenhouse gas as 5.7 million cars on the road every year[15]

Environmental impacts of plastic

For a material that has only been widely used for around 80 years, plastic has made a mark on our environments that will last forever. Plastics account for about 85% of all marine waste, and are consistently the most common items collected in clean ups around Australia.[16] Clean Up Australia's 2022 Rubbish Report demonstrated an increase in soft plastics (up 7%), beverage containers (up 4.3%) and food packaging (up 0.7%) since 2021 (Figure 1). Soft plastics are one of the most lethal types of plastics for wildlife, posing both a direct entanglement risk, and causing life-threatening internal blockages when eaten.[17]

Figure 1. Most common plastics in Australian clean-ups 2022



Data from Clean Up Australia

Globally, an estimated 11 million metric tonnes of plastic waste enters our oceans every year, and that figure is expected to triple by 2040 if we don't take action.[18] Here on our own shores, there is an estimated 145,000 tonnes of plastic leaking into the Australian environment each year,[19] with evidence suggesting that the majority of plastic in Australia's oceans is from Australia, not overseas.[20] According to modelling conducted by the Minderoo Foundation, Australia's single-use plastic waste generation per capita is the second-highest in the world.[21]

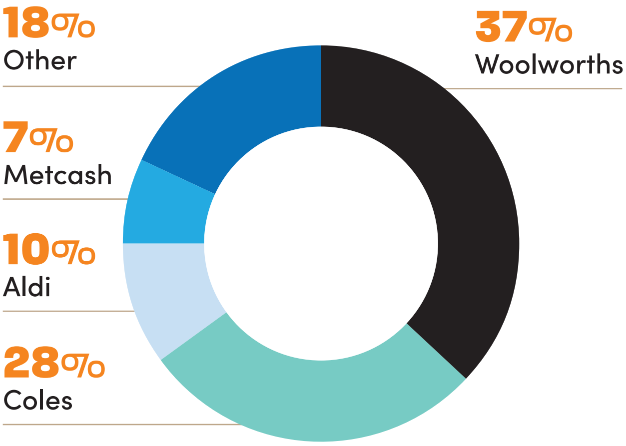
With more plastic entering our oceans every year, Australia's unique and diverse marine wildlife is increasingly impacted. Almost every species of marine wildlife has encountered plastic, and scientists have observed negative impacts in almost 90% of assessed marine species. Ingestion of marine plastic has been observed at every level of the food chain, from apex predators down to plankton.[22] Animals that ingest marine plastic can face significant harm, and for a range of animals, such as seabirds and turtles, even ingesting one piece of plastic can be enough to cause severe damage.[23] Research tells us that macroplastics – large plastic items such as plastic bags, balloons and cutlery – cause the most damage to marine animals through ingestion or entanglement,[24] but emerging research is beginning to show how harmful microplastics – plastic particles less than 5mm in diameter – can be to our marine environments, our marine animals[25] and our own health.[26]

Australia's plastic consumption is also contributing to climate change, with greenhouse gas emissions from plastics now understood to be higher than previously estimated in product life cycle assessments (LCA). Recent research commissioned by AMCS and WWF-Australia has shown that Australia's plastic use produces more than 16 million metric tonnes of greenhouse gas emissions annually, equivalent to 5.7 million cars on the road every year.[27] If we continue on our current path, plastic-related emissions are expected to more than double by 2050, with virgin fossil fuel based plastic generating twice the emissions of recycled or plant-based plastics. Analysis of future policy scenarios indicates that, to reduce emissions from plastic use, Australia must limit the use of plastic, power plastic production and waste management with renewable energy, and increase recycling and recovery of plastics.

State of play with Australian supermarkets

The Australian supermarket sector is valued at $130.2 billion and is primarily controlled by four major retailers, which collectively account for over 80% of the total market (Figure 2). The Woolworths Group is the market leader with a market share of 37%, followed by Coles (28%), Aldi (10%) and Metcash (7%). Metcash is the largest grocery wholesaler in the country and operates several retail brands such as IGA, SupaIGA (supermarkets), IGA X-press (convenience stores), IGA Fresh, Foodland and Friendly Grocer. Beyond these major players, there are a large number of regional independent operators, each accounting for less than 1% market share.

Figure 2. Australian Supermarket Market Share (2022 FY)



Source: IBIS World

As an industry, these four major players are the main source of food, beverages and household goods for the majority of Australians. This gives them colossal buying power and the ability to reduce plastic packaging dramatically, as well as eliminating a large volume of unrecyclable plastics, by working individually and collaboratively to implement plastic reduction policies. These supermarkets also have huge influence over suppliers, and therefore have the ability to extend their influence well beyond their own brands.

> **"Our largest retailers have an important role to play in how we reduce plastic waste in NSW, and we want to see them taking proactive steps."**
>
> EPA Executive Director Steve Beaman[28]

All four of these businesses have committed to action under Australia's 2025 National Packaging Targets. Woolworths, Coles and Aldi are also members of the ANZPAC Plastics Pact and have committed to facilitating a plastics circular economy, where plastic never becomes waste or pollution.

On top of these voluntary commitments, the supermarkets have also recently announced a number of initiatives to reduce their plastic footprint. The most notable has been the commitment of Woolworths, Coles and Aldi stores to phase out heavyweight plastic carry bags nationally in advance of state legislation in some Australian jurisdictions. While this is to be commended, this represents a small proportion of the overall plastic passing through supermarkets annually. The recent collapse of the REDcycle soft plastic collection program exposed a lack of recycling end markets for soft plastics, showing that supermarkets and brand owners can no longer avoid responsibility for reducing hard-to-recycle plastics.

Policy and domestic infrastructure

For years Australia has only had voluntary targets for reducing plastic pollution, and they have not worked. Coles, Woolworths and Aldi have all signed on to voluntary national targets (see *Australia's National Packaging Targets and the ANZPAC Plastics Pact*, Pg 11), but progress has been slow and relied heavily on soft plastic collection, with little consideration given to the true recyclability of these materials.

In November 2022, Melbourne-based REDcycle suspended soft plastic collection nationwide after revelations that around 10,000 tonnes of soft plastics reclaimed through the collection bins at Coles and Woolworths had been piling up in warehouses for months. While the collapse of REDcycle was a shock for many Australians, it also exposed the complex difficulties in recycling soft plastics. The tipping point for the collapse was a fire at a soft plastics processing facility in June 2022, which previously converted soft plastics from the REDcycle program into asphalt additives for road base. Even before the fire, only 7% of soft plastics were actually being recovered in Australia, the vast majority of which was low density polyethylene (LDPE) from B2B applications.[29] In large part, this difficulty is due to contamination and degradation issues that make it difficult to convert them into new plastics (see *Deep Dive: Soft Plastics* on Pg 47). Despite bans on exporting waste, supermarkets are seeking to ship these stockpiles offshore for processing, highlighting the inadequate domestic processing capacity.

In response to a damning review of Australia's progress towards the National Packaging Targets, Australia's Environment Ministers announced in June 2023 that they will move to regulate plastic packaging use in 2024 as a result of lacklustre efforts to reduce plastics by major brands and manufacturers. This presents a rare opportunity to implement much-needed design rules and standards, rules for recyclability and enforcement mechanisms to ensure targets are actually met.

Australia's National Packaging Targets and the Australia, New Zealand and Pacific Islands (ANZPAC) Plastics Pact

The main targets supermarkets are working towards relate to the 2025 National Packaging Targets, which have four key voluntary targets for its members to achieve by 2025;

1. **100% reusable, recyclable, or compostable packaging,**
2. **70% of plastic packaging recovered,**
3. **50% average recycled content included in packaging (revised from 30% in 2020), and**
4. **The phase-out of problematic and unnecessary single-use plastic packaging.**

A review of progress towards these targets published by the Australian Packaging Covenant Organisation (APCO) in April 2023 showed we are not on track to meet any of the four targets, with the target of achieving 70% recovery of plastic packaging being the poorest performer; in 2019-20 Australia recovered only 18% of plastic packaging.[30] These targets are voluntary, there is no penalty for not achieving the targets, and they only relate to supermarket's own brand products. This report states that industry requires support from the government to ensure these targets are met.

While these packaging targets relate to all materials, an Australia, New Zealand and Pacific Islands (ANZPAC) Plastics Pact was developed to address plastic packaging specifically. The four main goals in this pact are:

1. **Eliminate unnecessary and problematic plastic packaging through redesign, innovation and alternative (reuse) delivery models,**
2. **100% of plastic packaging to be reusable, recyclable or compostable by 2025,**
3. **Increase plastic packaging collected and effectively recycled by at least 25% for each geography within the ANZPAC region, and**
4. **Average of 25% recycled content in plastic packaging across the region.**

Methodology

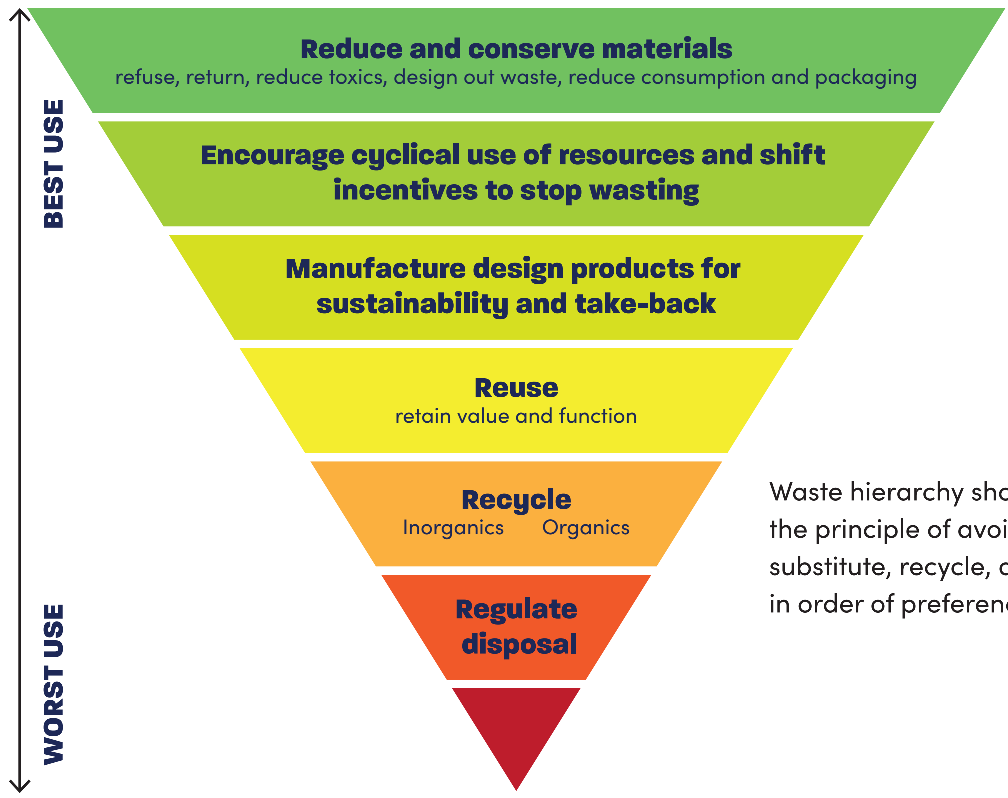
In early 2023, AMCS and the Boomerang Alliance developed an audit framework for the investigation of Australian supermarket packaging practices and plastic reduction efforts. This audit framework included a desktop literature review, a comprehensive assessment survey for supermarkets to self-complete, interviews with supermarket sustainability teams and shopper surveys to validate or extend on the data gathered from supermarkets. A copy of the assessment template is available at amcs.org.au/supermarkets.

The development of the audit framework and final report were supported by a project advisory group, consisting of five experts in environmental policy and sustainability assessments, including representatives from the Australian Marine Conservation Society, the Boomerang Alliance, Clean Up Australia and WWF-Australia. A similar project has been undertaken in the United Kingdom[31] and Europe[32], where supermarkets have made significant improvements since the beginning of these assessments.

Supermarkets were audited across five categories (Table 1), developed with the waste hierarchy in mind (Figure 3) and consideration of the policies and actions most likely to reduce plastic loss to the environment.

Each category is weighted according to its level of impact on plastic reduction, allowing us to provide an overall score that represents the likelihood of success in reducing plastic pollution.

Figure 3. Waste hierarchy



Waste hierarchy showing the principle of avoid, substitute, recycle, dispose, in order of preference.

Adapted from *CSIRO Standards Mapping.*

Table 1. Audit categories and associated weighting

Category	Max. Points Available	Weighting
1. Transparency Assesses supermarkets' willingness to publish and provide open and transparent access to data on their plastic footprint. For shoppers, transparency is essential to accurately understand which supermarkets are serious about reducing plastic packaging. Points were awarded for each published dataset, including information on mass and units of plastic packaging and the supermarket's ability to show independently quantifiable evidence of plastic reduction.	20	10%
2. Plastic footprint reduction Seeks to quantify the total amount of plastic packaging on Australian supermarket shelves. Reducing plastic is one of the most effective ways to reduce pollution, and the results here inform shoppers which supermarkets can prove the most evidence of reduction. It examines plastics and polymer use by unit and by tonnage, expecting a level of data commensurate with that reported by leading supermarkets in other parts of the world (see *Case Study: Tesco's commitment to transparency shows Australia how it's done* Pg 27).	31	40%
3. Reusables Reusable and refillable packaging is a critical component of a circular economy, and is higher up the waste hierarchy than recycling. Evidence suggests that every kilogram of reusable packaging has the potential to reduce single-use packaging by an average of 16kg.[33] This section allows shoppers to assess which supermarkets provide the highest access to packaging-free alternatives.	16	20%
4. Recycling and recycled content Setting clear recycled content targets for packaging and procuring recycled content is a critical driver to increase market investment in recycling infrastructure. This section informs shoppers which supermarkets have made demonstrable progress in increasing recycled content and recyclability of packaging, and also assesses the availability of on-site recycling and waste separation.	22	20%
5. Policy, planning and governance Assesses the robustness of supermarket strategies and policies relating to plastic packaging. Integrating plastic reductions into all aspects of the business model signals its importance to all staff members and sets the business up for success in achieving their targets. Scores are based on how embedded sustainability is within the business and its operations, including purchasing policies, packaging standards, and staff capacity and training.	33	10%

In April 2023, AMCS and the Boomerang Alliance began engagement with the top four supermarkets operating in Australia by market share; Woolworths, Coles, Aldi and Metcash (IGA, Foodland). Initial engagement began early in order to allow supermarkets to prepare resources to complete the audit survey, and begin developing relationships between the major supermarkets and the project team.

This was followed by distribution of the audit survey in May 2023. The survey was designed to:

- collect data relating to the supermarket's plastic footprint, their plastic reduction targets and initiatives, recycled content data and progress against voluntary plastic reduction pacts (where relevant),
- form baseline data which can be comparable in future years, encouraging further improvement,
- showcase best practice and evidence of effective initiatives, as well as highlight areas for improvement, and;
- easily compare supermarkets against one another to allow consumers to make choices aligning with their values.

To assess annual plastic footprint and recycling figures, this audit examined data up to the 2021-22 Financial Year, or 2022 Calendar year depending on the reporting time frames used by each supermarket. While 2023 sustainability reports have since been released by some supermarkets, this was outside the reporting period and is not available for all supermarkets. For fair comparison, this will instead be used in future annual audits. To improve comparability of supermarkets assessed, service stations and convenience stores were excluded from the year one audit.

In year one, no supermarket completed the survey in full, and provision of additional data was minimal. Time-poor staff and lack of data capture were the most common reasons provided by supermarket staff for non-completion of the survey. While all supermarkets report data to APCO, all were reluctant to provide this data to the public. Aldi and Coles were the most proactive in engaging with the audit, providing additional data and support to gather information within the timeframes required, whereas Woolworths refused to provide any information after the initial engagement. AMCS staff undertook desktop research to collect additional data to complete the audit surveys on behalf of each supermarket.

AMCS and Boomerang Alliance volunteers were engaged to assist with collecting supplementary data. In total, 2,357 supporters completed an initial survey asking broad questions about their feelings and impressions of plastic packaging in supermarkets. To directly validate findings and gather additional data, approximately 180 in-store shopper surveys were completed by AMCS and Boomerang Alliance volunteers, which has assisted in providing additional data for this assessment.

Data was analysed against criteria, and weighted according to impact (Table 1). Supermarkets were regularly engaged throughout the process, and allowed additional time to include as much data as possible in this assessment. All supermarkets indicated that they were seeking to update data capture and reporting procedures, so we look forward to improved access to more robust datasets in future years.

Independent supermarkets and small brands

The first year of this audit excluded small brands such as independent supermarkets and local convenience stores due to the vastly varying business models and the complexity of comparing their operations to major brands. Representing 82% of market share, Woolworths, Coles, Aldi and the Metcash network have the most impact on the amount of plastic packaging entering Australian homes and leaking into the environment, and significantly higher influence over packaging design and innovation, suppliers and public behaviour.

Summary of results

Summary of results

Table 2. Summary of results

Supermarket	Total Weighted Score	Transparency Weighting: 10% of final score	Plastic Reduction Weighting: 40% of final score	Reusables Weighting: 20% of final score	Recycling Weighting: 20% of final score	Policy, Planning & Governance Weighting: 10% of final score
ALDI	20%	33%	28%	9%	5%	33%
coles	15%	10%	13%	19%	9%	29%
Woolworths	10%	5%	16%	6%	0%*	18%
Metcash	3%	5%	0%*	7%	5%	6%

**Insufficient data provided to quantify impact against assessment criteria.*

The first year of this project has highlighted fragmented performance that is far behind the level of action needed to achieve substantial reductions in plastic pollution.

Unwillingness to publicly release packaging data amongst most supermarkets indicates that the use of plastics may not be reducing in real terms. While plastics avoided by the removal of specific items such as shopping bags are reported in annual sustainability reports, these cannot be validated against the total volume of packaging produced. Without the whole picture, Australian consumers cannot have confidence that supermarkets have reduced plastic in any meaningful manner.

Key Findings

78%

of shopper surveys found that **loose fresh produce was more expensive than plastic wrapped produce.**

Source: Unwrapped: Plastic use in Australian Supermarkets. 2023 Audit Report

1 Most supermarkets are not transparent about their plastic footprint

With the top performer achieving just 33% in the transparency category and the rest trailing behind at 10% or less, it is clear that most Australian supermarkets have been avoiding public accountability and scrutiny relating to their plastic footprint. Annual sustainability reports provide little evidence of impact, with cherry-picked statistics and initiatives that don't paint the whole picture. Most supermarkets cited a lack of detailed data collection as one of the main reasons for not reporting this data, which is itself a cause for concern; or suggested that packaging data is commercially sensitive, despite international evidence that this data can be made available if a supermarket is willing (see *Case Study: Tesco's commitment to transparency shows Australia how it's done* Pg 27).
Where supermarkets do provide limited data to APCO as part of their membership, this information is limited to own-brand products, and is not made publicly available.

Aldi, Coles and Metcash should be acknowledged for their willingness to engage during the audit process, all of whom provided some additional evidence for scoring across the audit categories. Despite strong initial engagement and evidence of internal work to establish data collection systems, Woolworths did not provide any data beyond its public sustainability reports. As the largest operator by market share, this is especially concerning.

2 Reuse and refill systems need to be scaled urgently

Currently there is very little in the way of genuine reuse and refill opportunities for customers in the top four supermarkets, and targets to improve this are not explicitly included in their sustainability plans. As supermarkets are the main source of food and grocery items to Australian households, they are well placed to trial and develop reuse initiatives and to provide standardised systems. Currently the 2025 National Packaging Targets do not separate reuse from recycling and composting, and therefore supermarkets have been able to get away with avoidance of this critical area.

Of the big four, Coles showed the most evidence of action to implement reuse trials, including trials for customers to BYO containers to the deli. However these trials appear to be limited geographically, and need to be scaled up to include more stores and regions.

3 Leading supermarkets are not prioritising removal of plastic, over-relying on false solutions such as 'lightweighting'

While there are a couple of examples of innovative and successful packaging redesigns in Aldi, Coles and Woolworths ranges, most reductions appear to have been achieved through reduction in the overall weight of packaging, known as 'lightweighting' (see 'Lightweighting – a false solution?' Pg 31), rather than removing plastic packaging from products. This strategy is often hidden by reporting plastic reductions by tonnage, rather than by unit, and frequently involves moving from recyclable plastic to difficult-to-recycle soft plastic packaging.

Of the big four, Aldi was able to provide the most evidence of progress in replacing problematic plastic packaging; replacing expanded polystyrene (EPS) packaging for 70% recycled cardboard in some appliances, and flexible polyvinyl chloride (PVC) with fabric offcuts destined for waste on some homewares.

4 Loose fresh produce is frequently more expensive than plastic-packaged produce

In a concerning finding, 78% of volunteers conducting shopper surveys for this audit reported that plastic packaged fresh produce was cheaper than loose produce, when comparing price per kilogram.

This price discrepancy not only incentivises customers to choose plastic packaged options, it penalises those who try to shop plastic-free. Given supermarkets are not paying for the cost of packaging on these products, it is concerning that environmentally conscious consumers are expected to pay more, particularly during a cost of living crisis.

5 Supplier packaging guidelines are rarely enforced

All assessed supermarkets have packaging guidelines for suppliers, yet most do not have systems to monitor and enforce compliance. Only Aldi specifies that certain items, such as plastic straws and cutlery pre-packed within products, will not be accepted at delivery. By only measuring and reporting against targets for their own-brand packaging, Woolworths, Coles and Metcash avoid taking responsibility for the majority of plastics on their shelves. Metcash does not yet have publicly-available guidelines for suppliers relating to sustainable packaging.

6 Recycling and recycled content was the worst performing area of all assessed categories

Recycling and the use of recycled content has been the primary focus in supermarket sustainability strategies, despite its lower importance in the waste hierarchy. In spite of this hype, all four supermarkets were unable to demonstrate evidence of significant progress in resource recovery and increasing the use of recycled plastic content. REDcycle was cited as their flagship action for addressing plastic pollution, but its collapse exposed the difficulties of recycling soft plastics, and supermarkets are yet to implement actions to move to more recyclable formats. While supermarkets were quick to take responsibility for the stockpiled material, there have been delays in getting the scheme back up and running, with supermarkets admitting it is unlikely full national access will be restored in any near timeframe.

Little real progress has been made on increasing the recycled content in plastic packaging, with food safety cited as a primary concern. As part of the upcoming plastic packaging reforms, the federal government has proposed a polymer-tracking framework to boost confidence in recycled feedstock for food grade packaging. This improvement in traceability, along with improved recycling infrastructure, will assist supermarkets and brand owners to increase the proportion of recycled content in packaging.

Brand performance

1st Place:
Aldi

Aldi leads in the Australian supermarket sector, achieving the highest score at 20%. Aldi achieved relatively high scores in: policy, planning and governance, transparency and plastic reduction, as the supermarket with the best data on their plastic footprint. Aldi's standout achievements were in reaching a 21.7% reduction in plastic on fresh produce, as well as specific initiatives to remove problematic packaging materials, such as EPS and PVC in some of its product ranges. Aldi is the only supermarket to remove plastic straws and cutlery packaged within products such as juice boxes and pre-made salads. Aldi has stated in guidelines for suppliers that it will not take delivery of products containing these problematic plastics, showing the strongest example of willingness to enforce sustainable packaging guidelines.

2nd Place:
Coles

Coming in at second place with a score of 15%, Coles' best performing section was Policy, Planning and Governance. Coles was the strongest performer on reuse, demonstrating some commitment to improving reuse by implementing trials such as a reusable box for online orders in Tasmania, and a trial for stores in South Australia to allow customers to BYO container for some deli items. Coles has also recently added foaming hand wash tablets to its exclusive Koi brand range, reducing plastic packaging through a reusable option.

To achieve better results in the recycling category, all supermarkets, including Coles, should publicly report on their progress towards meeting both the National Packaging Targets and the ANZPAC Plastic Pact Targets, specifically the recycled content of their products overall. While Coles has provided some detail on where it has made progress (for example, its single-use plastic produce bags are made from 50% recycled plastic), it has not yet reported on its overall progress towards the target of 25% recycled plastic content in packaging.

3rd Place:
Woolworths

Woolworths trails behind with a score of just 10% for its overall progress, a disappointing score for the largest retailer by market share. Woolworths' highest performing category is also Policy, Planning and Governance, but this was largely attributable to the existence of a sustainability team, commitment to the 2025 National Packaging Targets (along with Coles, Aldi and Metcash), and the provision of guidelines to brand owners on preferred packaging materials. Woolworths should be complimented for being the first supermarket in Australia to ban heavyweight reusable plastic bags in 2023 ahead of state single-use plastic bans, and was able to highlight one product line made of 100% recycled plastic.

It is disappointing that Woolworths was unwilling or unable to provide evidence of progress against most targets, raising concerns over their willingness to face public scrutiny. Like Coles, Woolworths has not provided data on the total proportion of recycled content in its packaging, which makes it impossible to verify any claims of improvement. With a lack of evidence for recycling separation and in-store collection programs, Woolworths achieved a shocking score of 0% for this area.

4th Place:
Metcash (IGA/Foodland)

The lowest performing supermarket assessed is Metcash, with a score of just 3%. Metcash is the brand owner of IGA and Foodland, and has a vastly different business model to the other three supermarkets in this report. While Coles, Woolworths and Aldi all own and run each of their retail stores, Metcash runs a franchise, allowing each IGA and Foodland store to be run independently. This means that each store is responsible for ordering their own stock from suppliers other than Metcash's own-brand, and Metcash does not collect any of that data nor claim any responsibility for operations in each store.

While Metcash is required to report against the 2025 National Packaging Targets, there is little evidence that it has undertaken any work to operationalise this commitment or worked with its retailers to reduce the use of plastic; it only states that it will ensure all stores are following relevant state and federal legislation regarding packaging, for example, state bans on plastic bags. Its main achievement was a reduction in the use of plastic pallet wrap.

It should be noted that while Metcash has taken little action to meet its sustainability commitments, some independent IGA and Foodland retailers have implemented impressive initiatives for reuse/refill and sustainability.

Transparency

Transparency

Key criteria

- Provision of detailed data on plastic polymers and volumes (*mass and unit*)
- Provision of data for own-brand and branded packaging
- Provision of data on compostable packaging usage *(mass and unit)*
- Provision of data on problematic single-use plastics (*i.e. EPS, plastic bags, carbon black plastics*)
- Provision of data on secondary / tertiary packaging (*i.e. promotional displays, packaging for shipping*)

Table 3. Results: Transparency

Ranking	Supermarket	Points	Score
1	Aldi	6.5/20	33%
2	Coles	2/20	10%
3	Woolworths	1/20	5%
4	Metcash	1/20	5%

For too long, supermarkets and other retailers have not been held accountable for the amount of plastic packaging they place on the market in Australia. While supermarkets are required to report on their progress towards the 2025 National Packaging Targets, this data is not made publicly available. Details contained within annual sustainability reports highlight cherry-picked achievements without providing verifiable evidence that it has reduced plastic packaging in real terms. Without releasing data, supermarkets can greenwash their impact without public scrutiny.

This category looks at how transparent the supermarkets are in regards to releasing data and reporting publicly on their commitments and progress. To encourage transparent reporting and to highlight transparency of data achievements, points were allocated for providing plastic packaging data in volume (mass and units), with a breakdown for all the most common types of plastic (polymers).

Aldi is in first place in year one, as its annual reports provide a greater level of detail on its initiatives to reduce plastic overall, and allows us to track its impact in more detail (see *Case Study: Greater transparency in Aldi Australia's reports*, Pg 25). Aldi has provided information on how it has reduced soft plastics by packaging one of its own-brand multi-pack chips in cardboard, moving away from the previous soft plastic packaging. While Aldi's data capture and reporting is ahead of the other supermarkets in Australia, it could be more transparent in reporting how much plastic its business contributes to waste in Australia.

While Aldi is the leader in this section, it (like the other supermarkets) has not provided data on both weight and units of plastic packaging overall or by polymer, making it difficult for consumers to trust the veracity of the information provided.

Coles comes in at second place, having provided some details in its annual reports that specify reductions in plastic, as well as reductions in specific polymers (PET and rigid polystyrene) through removing plastic scoops in own-brand laundry powder and plastic bread tags. While Coles has reported plastic reductions as a result of such initiatives, it has not provided an overall plastic footprint figure against which it can be verified. Like the other supermarkets, Coles does not capture or report on supplier packaging.

Woolworths and Metcash tie in last place on transparency, a concerning position for the largest retailer Woolworths. Woolworths publishes some details of plastics eliminated through the phase out of single-use plastic items such as heavyweight reusable plastic carry bags, but missed out on points for a noticeable lack of polymer-specific data, evidence of plastic reduction as a proportion of plastic footprint, or details on the the recycled content of its plastic packaging (as opposed to all packaging types). Woolworths has provided some data on tonnes of virgin plastic removed or replaced with recycled content. However, without detail on the weight and units of plastic packaging used through its operations, these reductions cannot be assessed for their overall impact.

Metcash claims little to no responsibility for the plastic footprint of its stores, choosing not to request retailers collect or disclose that information. In cases where any plastic reductions were cited, only tonnages of plastic replaced with other materials or avoided through lightweighting were reported, failing to capture details on reductions as a percentage of packaging or within the most problematic polymers. While it cites a figure for a reduction in 'plastic wrap usage intensity by revenue,' this is not a quantified method of plastic reduction calculations that can be compared against competitors.

Case Study: Greater transparency in Aldi Australia's reports

While all supermarkets release an annual sustainability report, Aldi stands out as the most transparent by providing clear progress updates against all of their targets, including a specific plastic reduction target.

Aldi's targets cover not only the 2025 National Packaging Targets and ANZPAC plastics pact targets, but also include some of its own targets such as decreasing the amount of plastic in the fresh produce section, and reducing or replacing difficult to recycle packaging.[34] Aldi is on track to achieving all but two goals - the phase out of problematic and single-use plastic by the end of 2020 (a target that others are attempting to complete by 2025), and its target to display the ARL on all own-brand products. Aldi has provided an explanation for the delays, while reaffirming their commitment to the targets.

While this level of reporting is an improvement on others' sustainability reports, it still does not show the whole picture of its plastic footprint and in which areas reductions have been achieved, and we would like to see further data reported in the future.

Target	Progress
Reduce plastic packaging 25% by 2025	**12.2%** reduction
Reduce plastic packaging in fresh produce	**21.7%** reduction
Phase out problematic and unnecessary single-use plastics by 2020	**77.3%** reduction - Delayed
Reduce difficult to recycle black plastic	**55.3%** reduction
Include an average of 30% recycled plastic by 2025	**8.6%** recycled plastic content
Display the ARL on all own-brand products	**78%** of products have the ARL - Delayed

Passing the buck: Own-brand versus supplier packaging

All supermarkets to which the 2025 National Packaging Targets apply have committed to sustainability targets for their own-brand products only. While these targets should apply to all packaging placed on market, the supermarkets have not taken responsibility for the products they stock.

In its 2021 Brand Audit Report, Break Free From Plastic named the top 10 global brands contributing to plastic pollution, all of which are stocked in Australian supermarkets. The brands in order are:[35]

1. Coca-Cola
2. PepsiCo
3. Unilever
4. Nestlé
5. Procter & Gamble
6. Mondelez International
7. Philip Morris International
8. Danone
9. Mars Incorporated
10. Colgate-Palmolive

As the largest purchaser of these goods within the Australian market, Australian supermarkets have significant sway with these global brands that they are choosing not to use.

In the UK, retail giant Tesco announced its plans to delist any supplier who did not comply with its new, ambitious rules on plastic packaging. Tesco set a target to remove the hardest to recycle plastics from its own brand packaging by the end of 2019. Following the success of this target, the brand has extended its commitments to products from other brands, showing that it is possible for supermarkets to take responsibility for the products that are sold through their operations.

In the 3rd annual 'Checking out on Plastic' report UK supermarket chain Waitrose reduced its overall plastic footprint by robust engagement with suppliers of branded products.[36] Australia's supermarkets, by comparison, claim no responsibility for the packaging on the products they stock by other brands, dealing only with their own brands.

It should be noted that the major Australian supermarkets all reported the implementation of packaging guidelines for their suppliers, however these are not being enforced. Some supermarkets have demonstrated a commitment to educating their suppliers on sustainable packaging, however data needs to be captured to set strategic plastic reduction goals and to show Australians how much plastic packaging is being sold through their operations.

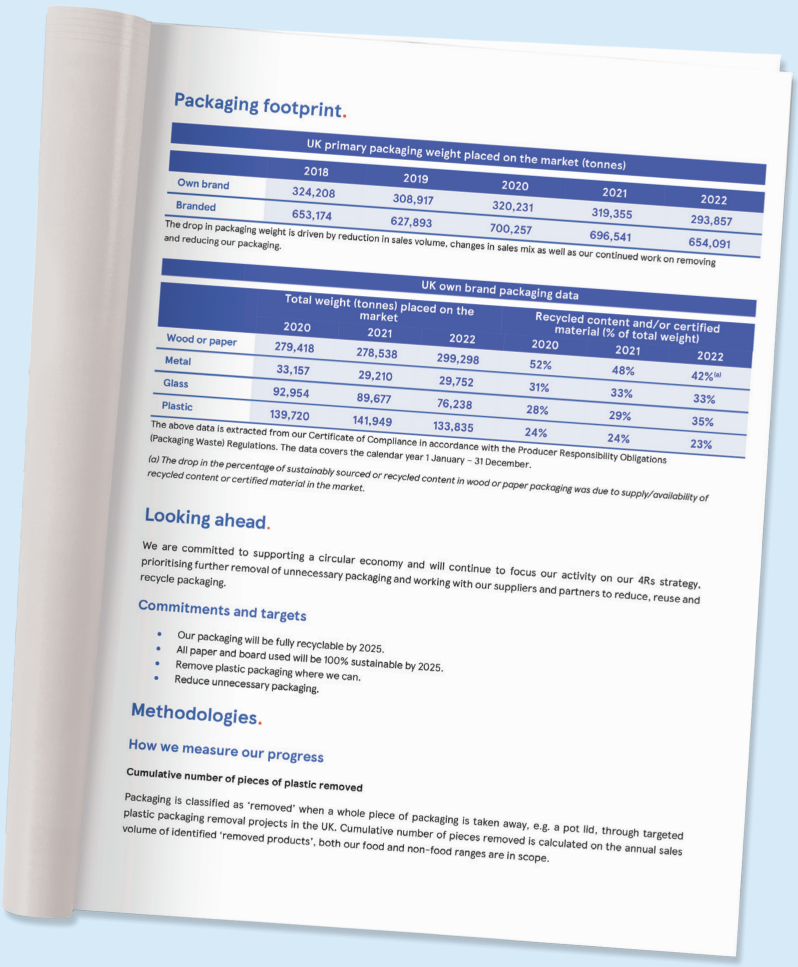
Not so Fantastic

Case Study: Tesco's commitment to transparency shows Australia how it's done

UK retailer Tesco is leading the way in transparency, demonstrating how transparent reporting can be achieved while retaining commercially sensitive information. Tesco has implemented and reported on initiatives to remove unnecessary plastic packaging across both its own brand and branded products, working with suppliers to achieve their targets.

In its reporting, Tesco has detailed the tonnage of packaging from own-brand and branded products every year since 2018.[37] Tesco even released a report sharing its learnings from a reuse trial, demonstrating true accountability for its initiatives, and a real commitment to reducing plastic packaging. Tesco also clearly reports against its targets for packaging reduction and also includes a proportion of recycled content in its packaging by material type, demonstrating how it is progressing year-on-year.

Figure 4. Tesco's transparent reporting



Packaging footprint.

UK primary packaging weight placed on the market (tonnes)

	2018	2019	2020	2021	2022
Own brand	324,208	308,917	320,231	319,355	293,857
Branded	653,174	627,893	700,257	696,541	654,091

The drop in packaging weight is driven by reduction in sales volume, changes in sales mix as well as our continued work on removing and reducing our packaging.

UK own brand packaging data

	Total weight (tonnes) placed on the market			Recycled content and/or certified material (% of total weight)		
	2020	2021	2022	2020	2021	2022
Wood or paper	279,418	278,538	299,298	52%	48%	42%[a]
Metal	33,157	29,210	29,752	31%	33%	33%
Glass	92,954	89,677	76,238	28%	29%	35%
Plastic	139,720	141,949	133,835	24%	24%	23%

The above data is extracted from our Certificate of Compliance in accordance with the Producer Responsibility Obligations (Packaging Waste) Regulations. The data covers the calendar year 1 January – 31 December.

(a) The drop in the percentage of sustainably sourced or recycled content in wood or paper packaging was due to supply/availability of recycled content or certified material in the market.

Looking ahead.

We are committed to supporting a circular economy and will continue to focus our activity on our 4Rs strategy, prioritising further removal of unnecessary packaging and working with our suppliers and partners to reduce, reuse and recycle packaging.

Commitments and targets

- Our packaging will be fully recyclable by 2025.
- All paper and board used will be 100% sustainable by 2025.
- Remove plastic packaging where we can.
- Reduce unnecessary packaging.

Methodologies.

How we measure our progress

Cumulative number of pieces of plastic removed

Packaging is classified as 'removed' when a whole piece of packaging is taken away, e.g. a pot lid, through targeted plastic packaging removal projects in the UK. Cumulative number of pieces removed is calculated on the annual sales volume of identified 'removed products', both our food and non-food ranges are in scope.

Plastic Reduction

Plastic Reduction

Key criteria:

- Demonstrated plastic reductions overall, and by each polymer
- Demonstrated engagement with suppliers relating to plastic reduction outcomes
- Detailed break-down of single-use plastic items and problematic plastic items, including mass and units distributed
- Proportion of fresh produce sold loose versus pre-packed, and evidence of plastic reduction targets for fresh produce

Table 4. Results: Plastic Reduction

Ranking	Supermarket	Points	Score
1	Aldi	8/29	28%
2	Woolworths	5/31	16%
3	Coles	4/31	13%
4	Metcash	0/30	0%*

**Insufficient data provided. Note: Where supermarkets do not provide in-store cafes or online shopping, related questions have been exempted from their final scores.*

Plastic reduction is critical if we are to bring plastic consumption down to levels that can safely be managed. As such, this section is the highest weighted category, accounting for 40% of the overall score.

Based on current trends, annual plastics consumption in Australia is projected to increase by 156% by 2050, up to 9.7 million tonnes, most of which will be fossil fuel-based virgin plastics. By 2050, this would equate to an annual per capita consumption of around 260 kg per person,[38] outpacing attempts to build sufficient recycling infrastructure to manage all the plastics used in Australia.

This section of the audit aims to quantify the overall plastic footprint of Australia's supermarkets, and over future years will allow the public to track the impact of the supermarket's plastic reduction efforts in real terms.

Aldi has again come through as the clear winner on overall plastic reduction, as the only supermarket with a measurable plastic reduction target. Aldi has demonstrated progress in removing problematic plastic through the replacement of expanded polystyrene with 70% recycled cardboard in its coffee machines and toasters; removal of plastic picnicware; removal of pre-packaged plastic straws and forks (in juice boxes, pre-made salads, etc.) and a number of other initiatives.[39] As a result, it has removed upwards of 323 tonnes of problematic or unnecessary plastic off its shelves each year, although this may include lightweighting. Aldi does not engage in wasteful promotional giveaways, and has never provided lightweight, single-use plastic bags. Aldi is also the only supermarket with a goal to reduce plastic in fresh produce – while its target has not been defined, as of 2022 it has reduced plastic on its fresh produce by 21.7%.[40]

While Aldi has come out on top in this section, there is still a significant amount of work for it to do to reduce the impact caused by its business operations. In 80% of shopper surveys conducted at Aldi by our volunteers, plastic-wrapped produce was found to be cheaper than loose produce. Aldi also lost points for not phasing out plastic produce stickers at this stage or being able to demonstrate clear evidence of reductions in tertiary plastic packaging (packaging used in the transportation of goods), however it does indicate that its reusable plastic shopping bags include some recycled content from its pallet wrap.

Woolworths has taken second place in the plastic reduction section, with a score of 16%. Woolworths has been showing steady progress towards its 50% virgin plastic reduction target, achieving 22% reduction compared to its baseline in 2022.[41] However, reduction in virgin plastic does not mean a reduction in the use of plastic, and we cannot verify whether this is a reduction in the number of packaging items, or whether it was achieved by lightweighting. Woolworths should be commended for being the first to remove its heavyweight 15-cent plastic bags from checkouts, pre-empting state and territory bans.

Woolworths has not provided any data on the reduction of problematic plastic polymers, such as polystyrene and PVC. Woolworths has worked to replace the unrecyclable black plastic trays on 50 bakery items, replacing them with cardboard trays.[42] However, data was not provided to quantify the change as a proportion of all plastics. It did, however, state that the change removes 262 tonnes of unrecyclable plastic annually. Woolworths has no evidence of a target to reduce the amount of fresh produce sold pre-packed, and there is no policy to phase out plastic produce stickers.

Coles has come in third in the plastic reduction category, achieving a score of just 13%. Coles has been able to demonstrate some plastic reductions through removing unnecessary plastic items, and has provided limited data on reduction of specific polymers (rigid polystyrene and PET).[43] Along with Woolworths and Aldi, Coles has phased out its thick reusable plastic bags ahead of incoming state legislation, replacing them at checkouts and in online shopping with recyclable paper bags. Coles has a policy not to use plastic in its promotional giveaway items, and has trials in place to allow customers to choose low plastic options for online shopping.

Coles has identified action on some problematic plastic types in its annual reports, including rigid polystyrene and black plastic, through actions such as switching to cardboard bread tags, removing 79 tonnes of plastic annually. While these are promising reductions in the use of plastics, a lack of data on overall packaging by weight and unit obscures the percentage of plastic reduced overall, making it impossible to verify if this has meaningfully reduced plastic on shelves. It also did not report on the volume of fresh produce provided pre-packaged, and while Coles has told us it has internal ambitions to reduce the amount of fresh produce sold pre-packed, it has not stated a specific reduction target, and has not announced a plan to phase out plastic produce stickers ahead of incoming bans in jurisdictions such as South Australia.

Metcash provided virtually no information to quantify its plastic footprint. The only information available to assess Metcash's plastic reduction was a figure from its *Sustainability Report 2022*, stating it achieved a small reduction of plastic pallet wrap, however this was not provided in real terms, and therefore no points were awarded.[44] Metcash has provided no evidence of work with subsidiaries to reduce its plastic waste, no evidence of reducing problematic plastic items and no evidence of policies to reduce the amount of plastics in secondary or tertiary plastics (i.e. promotional displays, transportation). Metcash also has no evidence of a target for reduced proportion of pre-packed fresh produce or efforts to phase out plastic produce stickers. It is important to distinguish between Metcash and its group of independently run IGA and Foodland stores, where some individual stores have implemented initiatives such as refill options to reduce their plastic footprint.

Lightweighting – a false solution?

The process of lightweighting involves packaging manufacturers literally reducing the weight of packaging, making it smaller and/or lighter, to achieve plastic reductions. While plastic reductions are necessary and applauded, this focus on weight has arguably fuelled a shift towards soft plastics, which are among the most lethal plastics for wildlife. In addition, maintaining the same number of items by making them lighter does not help our ocean wildlife, which can become entangled in or suffocated by lightweight plastics just as easily as thicker plastics if they end up in the environment. For this reason, we call for an absolute reduction of plastic packaging by unit as well as by weight, in accordance with the waste hierarchy. This should be achieved through shifting to reusables where possible, and by redesigning packaging using more sustainable materials.

How loose produce can help fight food waste

"We found that for most items, the plastic packaging they were sold in made little or no difference to their shelf life." [45]

In recent research that has shed new light on the relationship between packaging and food waste, UK charity WRAP has shown that food waste reductions can be achieved by reducing plastic, contrary to claims by many supermarkets.

The scale is staggering; their report states that for the UK, an equivalent of 14 million shopping baskets worth of food could be saved if retailers adopt three recommendations:

- **Sell loose** – unless it can be shown that plastic packaging reduces overall food waste,
- **Do not apply a date label to uncut fresh produce** – unless it can be shown that a Best Before date reduces overall food waste; and
- **Provide Best Practice guidance on storage** – at home, store below 5°C.

Case Study: Phase-out of plastic shopping bags.

Plastic bags are one of the most lethal plastics for ocean wildlife,[46] blowing away into rivers and waterways and entangling or suffocating animals that interact with them.

Ahead of incoming state bag bans in Queensland and Western Australia, Woolworths announced in April 2023 it would no longer stock its 15-cent heavyweight plastic bags, spurring competitors Coles and Aldi to follow suit in May 2023. The impact from removing these bags is significant, with supermarkets reporting that it will remove 9000 tonnes (Woolworths[47]) and 888 tonnes (Aldi[48]) of plastic, and 230 million bags (Coles[49]) from circulation annually.

With their huge market share, supermarkets have considerable influence in easing the way for policy change. While South Australia and the Northern Territory had banned lightweight plastic bags (less than 35 microns thick) over a decade ago, decisions by Woolworths and Coles to voluntarily phase them out in 2018 helped to inspire the rest of Australia's states and territories to legislate bans on these lethal plastics. Free, lightweight plastic bags were never offered by Aldi.

This latest decision to ban thick plastic bags demonstrates that eliminating plastic carry bags and shifting to reusable alternatives is possible, and is a critical step towards achieving harmonised state-wide bans on this dangerous plastic. It is an example of how supermarkets can make significant reductions in the volume of plastics being consumed in Australia, and how they can be agents for change among consumers and policy makers.

Case Study: Aldi phases out problematic polymers

Aldi has made progress in tackling problematic plastic in its stores with two significant changes. In 2021 Aldi removed EPS from the packaging of its capsule coffee machines, replacing it with cardboard packaging made from 70% recycled content. Another Aldi initiative is the removal of PVC from its bedding range, replacing this packaging with fabric off-cuts from the manufacturing process.

EPS presents challenges to the environment, waste collection and recycling, and is being targeted for phase out by governments. According to APCO, EPS is one of the most common materials found in illegally dumped rubbish; as EPS is lightweight by design, it is easily moved through the environment, and breaks down into smaller pieces easily. While technically recyclable, EPS is not accepted through the co-mingled kerbside recycling stream in Australia, and while some waste transfer stations offer drop-offs, it is dependent on the local council area. It also takes up a disproportionately large space relative to its small weight, making it costly to landfill and transport.[50] Aldi's move to remove this material from its packaging is a step in the right direction, eliminating almost half a tonne of this problematic plastic from its operations every year.

PVC is another difficult to recycle plastic; there are around 5,000 different formulations of PVC in use in Australia, and each is treated with chemicals to give the plastic different properties, such as flexibility, rigidity or UV resistance.[51] PVC has been identified as a problematic plastic by governments, and Aldi's move to replace this packaging with offcuts from the production of its bedding range is a creative solution to a significant problem.


Not so Fantastic
Plastic Wrapped Produce
$ 4.20
0123456789
UNWRAPPED
Plastic Use In Australian Supermarkets
CUT THE WRAP!

Reusables

Reusables

Key criteria:

- Evidence of policies to increase items sold through reuse/refill systems
- Evidence of examples of currently available reuse and refill options in-store, and their availability to a wide range of customers
- Use of standards specifying minimum number of reuse that reusable picnicware must be able to withstand

Table 5. Results: Reusables

Ranking	Supermarket	Points	Score
1	Coles	3/16	19%
2	Aldi	1/11	9%
3	Metcash	1/15	7%
4	Woolworths	1/16	6%

Note: Where supermarkets do not provide online shopping or picnicware, related questions have been exempted from their final scores.

Reuse sits higher on the waste hierarchy than recycling, and is one of the most vital ways companies can reduce plastic. By designing for reuse, there are significant savings in greenhouse gas emissions from plastic use,[52] as well as removing single-use plastics from circulation. According to the UN Environment Programme, at least 20% of plastics from short-lived products are avoidable and can be reduced or replaced by reusable packaging.[53] Supermarkets in particular are well placed to offer and normalise reuse and refill for a wide range of consumers.

In this section we audited supermarkets on reuse options available in store, including trials underway or planned, and targets to increase the amount of reusables and refillable options.

Coles had the most demonstrable reuse initiatives, which helped them take the top spot in this section. A reuse trial is underway in South Australia, where customers can opt to bring their own container to purchase some deli items. While the trial has restrictions on the type of container and deli items available with this service, it is an important first step in encouraging customers to have greater control over the amount of plastic packaging they are bringing home with them. A second trial underway is the swap-a-box for online shopping customers in Tasmania. While this is only available to a relatively small proportion of Coles customers, it is a step in the right direction. Coles also ran a trial in the Australian Capital Territory, removing all plastic produce bags, and offering free reusable produce bags to customers in a promotion. Coles scored points for its Scoop & Weigh options, both in dry goods (nuts, seeds and snacks) and pet products. While these systems are encouraged as they allow customers to purchase just the amount required, they still rely on plastic bags; currently there is no system for customers to bring their own containers. They could, however, bring their own reusable lightweight produce bag (available for purchase in-store) or opt to find a paper bag, but these options are not advertised or encouraged.

Aldi comes in at second place, thanks to its reusable produce crates. While this is a good step for the business to reduce disposable produce crates and boxes, there are currently no options being trialled for customer reusable options, and no evidence of reuse/refill targets. Reuse is a critical component of waste reduction and a move to a circular economy, and Aldi needs to begin making progress in this area, or risk plateauing in its plastic reductions.

Metcash has come in at a close third, due to its one reusable option. While many products on the shelf in cleaning and personal care claim to be 'refillable', these are currently designed to be a lightweight, flexible plastic pouch with no current recovery options (previously, these would have been accepted in the REDcycle collection bins). However, many IGA stores stock ZeroCo products, which have an existing collection scheme that refills the pouches and puts them back into the system for purchase, and most of those stores that stock the product also offer a return-to-store option.

Having a convenient return option for reuse products is critical, otherwise these pouches will likely end up in landfill.

Woolworths also has one genuine reuse option available for customers; some Woolworths stores also now stock ZeroCo products. While we applaud this move, it is difficult for consumers to return the pouches; this requires an online purchase directly from the company (ZeroCo), that provides them with a return-to-sender envelope. Woolworths does not appear to have any return-to-store services available for these pouches, therefore customers cannot return the packaging to the place they bought it. Woolworths does also have a scoop-and-weigh service for nuts and snacks, however it did not provide evidence that reusable containers are permitted. Woolworths comes in slightly behind in this category as it was also assessed on cafe services, for which it did not provide data.

How supermarkets can increase refill participation

In a pilot partnership with Unilever and Asda, food waste charity WRAP UK conducted research into consumer behaviour change interventions to increase participation in reuse and refill systems. This 2022 study identified barriers that prevented shoppers from using available refill and reuse systems, with the aim to develop an understanding of how to increase citizen uptake of in-store reuse and refill.

It defined three key strategies that retailers can use in-store to encourage consumer uptake of reuse/refill options, and how to maintain the behaviour:

- **Make pricing clear** – consumers wanted to see clear and obvious price differences between loose and pre-packed products, to highlight opportunities where cost saving and reduced packaging were available together.
- **Help people overcome uncertainty and apprehension** – step-by-step guidance helped overcome the barrier for first-time users of reuse and refill stations. Signage that differed from the retailer's usual signage helped to make the refill zone easier to navigate, and having staff available to assist encouraged first-time users.
- **Make the experience fun and enjoyable** – promotional brand activities and staff presence successfully created an enjoyable experience and exciting atmosphere, which drew in shoppers. Having other people in the zone helped to reduce barriers to entry, and normalise the behaviour.

Case Study: Refill Coalition

With plans to launch later in 2023, the Refill Coalition is a member organisation working on an open source industry standard to quickly scale up reuse in the UK. The organisation is designed for optimised forward and reverse logistics, with a standardised bulk reusable container, suitable for both dry goods and liquids.

The group has partnered with nine UK Supermarkets such as Aldi and Waitrose, and they are working collectively on a solution that can work across multiple formats (online and in-store.) So far the group is working on solutions for cereals, pasta, rice, seeds, dried fruits, household detergents and personal care liquids, and will be looking to expand to other areas over time. It is hoped that deploying a cross-industry approach will help overcome some of the barriers to scaling up refill solutions within retail. The coalition is in the process of producing its first units and is due to go live in its first store later in 2023.

Case Study: ZeroCo in supermarkets

In recent years, a few brands have attempted to fill the gap for refill and reuse in Australia, providing e-commerce options for dry goods, and cleaning and personal care products. One brand has recently entered the Australian supermarkets, with Woolworths and IGA stores now stocking some ZeroCo products. ZeroCo products are sold in soft plastic pouches designed for refill with an option to purchase a ‘forever bottle’. Pouches are returned by mail in an envelope provided to you on your first order (and again after 15 pouches have been purchased), and refilled.

While it is heartening to now see reuse and refill options in large supermarkets, it begs the question: What happens to that refill pouch after the customer brings it home? Most, if not all, IGA stores that stock ZeroCo also offer an in-store collection service, meaning customers can bring packaging back to the location they originally purchased from. Customers purchasing the product from Woolworths would need to make another purchase directly with the company online to be sent an envelope to return the pouches – a move that requires additional effort on the part of the consumer.

In order for reuse initiatives to be effective, convenience is key. Offering a range of return options, and conveniently located drop-off locations, will increase the success of reuse initiatives; without this, these pouches might end up in landfill.

Recycling

Recycling

Key criteria:

- At least 80% of own-brand and branded products display the Australasian Recycling Label (ARL)
- Demonstrate proportion of recycled content in plastic packaging by polymer
- Evidence of recovery streams available to customers for difficult-to-recycle plastics *(i.e. soft plastics, EPS, PVC)*
- Widespread resource recovery options for back-of-house operations *(i.e. pallet wrap, EPS)*

Table 6. Results: Recycling

Ranking	Supermarket	Points	Score
1	Coles	2/22	9%
2	Aldi	1/22	5%
3	Metcash	1/22	5%
4	Woolworths	0/22	0%*

**Insufficient data provided*

This category is among the worst performing categories in 2023, due to a significant deficiency in the collection and disclosure of data by the top four supermarkets. This is the area where supermarkets claim to be making the most progress, with many claims of achievements on specific product lines, yet the lack of data on progress against recycled content targets raises questions over how much the big four supermarkets have actually done to improve recyclability and use of recycled content.

This section requested data on recycled content in plastic packaging, products, and packaging that is home or commercially compostable, in-store waste collection services for hard-to-recycle plastics, and data on which diversion streams their stores and distribution centres have access to.

Coles has managed to inch ahead of competitors, achieving targets set out in the National Plastics Plan for 80% of products to display the Australasian Recycling Label (ARL) by December 2023, although this has been limited to just its own-brand products. While this is to be commended, the National Plastics Plan states that all supermarket products should include the label,[54] and Coles has not provided data for branded products sold in its stores. The ARL is an important tool that advises consumers where to put the packaging at the end of its life, however this does not ensure the material is recovered in practice or at scale. Some Coles stores have a dedicated pallet wrap collection service, but details on how much material is being recovered is limited. Little else can be scored in this section; without data showing true progress towards recycled content targets, there is no evidence of any further action to improve the recovery or recycled content of plastic packaging specifically in Coles stores. Coles has stated that all its own-brand products claiming compostability must be certified with the Australian Standards, but it has no such requirement for branded products and packaging.

Aldi and Metcash come in at second place. In 2022, Aldi had the ARL displayed on 78% of its own-brand products. Aldi also states their plastic recycled content sits at 8.6%, however there is insufficient detail to provide any scores for this section.[55] Aldi has not provided sufficient data on recycled content by plastic type, and has provided no evidence that compostable packaging and products must be certified with Australian Standards. Aldi reports in its sustainability report that 60% of the recycled content of its reusable plastic carrier bags come from recycled pallet wrap from Aldi warehouses, however the total amount of plastic recycled, or the number of stores with this collection service, is not disclosed.

In 2020, APCO increased the recycled content goal to 50% to include all packaging material types, and set a 20% goal for plastics.[56]

While **Metcash** stated in its annual sustainability report that it is required to report to the National Packaging Targets, it was not able to provide data on the progress to 100% recyclability of its product packaging or the use of recycled content. Its sole point achieved in this section is due to its achievement of 100% of home brand products displaying the ARL. No further evidence of any progress relating to recyclability or recycled content is available.

Woolworths has yet to achieve the goal of 80% of products displaying the ARL, achieving 72% in 2022. Woolworths also has not provided overall progress towards its recycled content target of 25%, instead drawing attention to just one product line that contains 100% recycled plastic. Woolworths has provided no evidence that its packaging and products claiming to be compostable adhere to the Australian Standards.

After REDcycle: Are supermarkets doing anything to reduce soft plastics?

Supermarkets are still in limbo regarding the processing of stockpiled soft plastics, which they assumed responsibility for following REDcycle's collapse. There has been a lack of detail regarding the plan for processing the remaining material, with supermarkets seeking exemptions to Australia's ban on plastic waste exports in order to ship the stockpiles off-shore for processing, admitting that limited domestic capacity exists for soft plastics recycling. With few other nations capable of processing soft plastics, this move tries to avoid the reality that soft plastics are hard to recycle. Despite a soft plastics taskforce meeting held in late September 2023, no details of the plan to move forward have been shared.

Recyclability guidelines (Australasian Recycling Label) have been slow to be updated following the discontinuation of soft plastics collection in stores, with a new 'check locally' sticker being used to avoid the issue as supermarkets and packaging producers turn a blind eye to the low recyclability of soft plastics. Instead, they choose to wait in the hope that the government will find a way to solve the soft plastics recycling issue, pinning their hopes on emerging technologies such as chemical recycling, which have yet to be proven at scale. Chemical recycling has yet to be proven as a viable and sustainable recycling option, with recent research showing it is 67% more emissions intensive than current mechanical recycling.[57] The *Roadmap to Restart* suggests a staged return of soft plastics collections may occur in a small number of stores from late 2023,[58] which seems optimistic at this stage.

Case Study: Woolworths 100% recycled plastic sauce bottle

In its *Sustainability Report 2022*, Woolworths announced a line of sauce bottles made entirely from recycled plastic. Partnering with Wellman Packaging, these bottles have reduced the brand's reliance on virgin plastics by 67 tonnes annually. This is an example of recycled plastic in food applications, and demonstrates that it is possible to use recycled plastics in food packaging, when designed carefully.

Using recycled plastic for food contact has historically been difficult to achieve; there are often far more chemicals found in recycled plastic, through contamination and leaching of chemicals into plastic waste, chemicals arising from the recycling process, and chemicals added to non-food plastic which is mixed through the recycling process.[59]

Policy, Planning, Governance

Policy, Planning, Governance

Key criteria:

- Evidence of a sustainability team, with staff dedicated to reducing plastic packaging
- Ongoing, formalised staff training for optimising resource recovery, source separation, and plastic reduction
- Active promotion of plastic-free options available in stores
- Evidence of active support for mandated plastic reduction targets
- Time-bound and specific plastic reduction targets across all areas of business operations

Table 7. Results: Policy, Planning & Governance

Ranking	Supermarket	Points	Score
1	Aldi	10/30	33%
2	Coles	9.5/33	29%
3	Woolworths	6/33	18%
4	Metcash	2/33	6%

Note: As Aldi does not provide online shopping, related policy questions have been exempted from its final scores.

This section determines how sustainability practices are embedded into the company. It places specific emphasis on policies and training needed to achieve plastic reductions, and eliminate harmful chemicals. It also examines supermarket engagement with policy reform processes.

Changing packaging for large supply chains such as Australia's supermarkets is not necessarily a straightforward task, and it is therefore critical that there are adequate resources in these organisations to ensure targets are met. Commitments and progress towards targets needs to be monitored and enforced.

Aldi again leads in this category, with sustainable packaging guidelines for suppliers that go into greater detail regarding its packaging targets than other supermarkets. Aldi has the strongest position with suppliers, stating that it will not accept products that do not meet its specifications.[60] Aldi expects suppliers to comply with its policies to phase out problematic plastic items such as pre-packaged straws and cutlery, and incoming phase outs of PVC labels and EPS packaging, stating it will not accept delivery of such products after its deadlines. Aldi has also identified plastic pigmented with carbon black as a priority area, and while the ban only applies to Aldi own-brand products currently, it encourages suppliers to remove this plastic from their packaging. Strategically, Aldi has also announced a partnership with Pact Group, which will improve the supermarket's ability to access high-quality recycled plastic for some of its own-brand packaging. Aldi Australia has endorsed the Business Coalition for a Global Plastics Treaty in 2022; a move that demonstrates strong support for binding plastics targets, and one that has not yet been committed to by other Australian supermarkets assessed for this report. Aldi lost points for not providing evidence that it actively promotes plastic-free options in-store, and has provided little detail on its policies relating to staff training, or purchasing policies relating to the 'forever chemicals' Per- and polyfluoroalkyl substances (PFAS) in packaging, or addressing agricultural plastics in their supply chain.

Coles came a close second in this category. In its sustainability report, Coles emphasises its engagement with its stakeholders, stating that the main area of customer interest is "sustainability of our products including packaging". It also describes engagement with federal, state and local government regulators, however it does not state whether these discussions include sustainability around packaging or priorities for reform that would assist plastic reduction efforts. Coles gained points for having guidelines in place for suppliers to assess the sustainability of its packaging, however there is no evidence of enforcement of this tool or penalties for suppliers that do not comply.[61] Coles has recently partnered with Planet Ark for three years in an effort to improve packaging reusability, recyclability and compostability. Coles provided evidence of policies relating to staff training to improve waste management outcomes, as well as supplier education on the responsible use of packaging in its supply chains, the impacts of plastic use in agriculture, and the addition of PFAS in its packaging. Coles was unable to provide evidence for targets to reduce plastic in supplier products or packaging and B2B packaging.

Woolworths also has a packaging guideline tool for suppliers to assess their packaging, which was updated in 2021-22.[62] Woolworths has a sustainability team within its organisation, however we were unable to obtain information regarding its policies on customer engagement, staff training to improve resource recovery, and engagement with government. There are some examples of promoting plastic-free options in-store; in some stores, reusable produce bags are displayed for sale on the same stand as single-use plastic produce bags, with a sign encouraging customers to BYO bag.

To improve its recycled content, Woolworths has partnered with Samsara, an advanced chemical recycling start-up, and Wellman Packaging to launch a line of 100% recycled plastic sauce bottles; however, how this impacts its overall plastic recycled content target, or its reduction target, is unclear. Woolworths provided no evidence of policies relating to ghost gear, agri-plastics, forever chemicals (PFAS) in its packaging, or targets to reduce its B2B plastic use. Without these policies and without progress indicators, Woolworths has no visible plan of action to achieve its voluntary targets.

Metcash takes limited responsibility for the plastics sold in-store, however it does have a sustainability department which allows them to achieve a score in this category. Metcash has a vastly different business structure to the other supermarkets assessed in this report, and as such it claims responsibility for the wholesale of its own-brand products to its franchisees but not other product categories. As each individual IGA and Foodland store is responsible for sourcing its own products to stock on its shelves, Metcash has no policies in place regarding supplier products. We want to see Metcash taking more responsibility for the plastic reduction in its stores, and work with store owners to implement reuse initiatives, educate customers on sustainable packaging choices, implement policies that reach all IGA/Foodland stores, and use its market share to engage with suppliers on enforcing sustainable packaging guides.

Case Study: Supplier guidelines for sustainable packaging

Each of the supermarkets audited in this report except Metcash have a publicly available supplier-facing document providing advice on sustainable packaging. Mostly using a traffic light system, these guidelines follow advice from the Packaging Recyclability Evaluation Portal (PREP), which determines which Australasian Recycling Label (ARL) symbols should be used on the label.

In the wake of the REDcycle collapse, the ARL labelling for soft plastics has been updated – instead of a 'return to store' label, the packaging can be labelled as 'check locally' (for recycling opportunities) if it meets some recently updated guidelines on how the material is produced and which polymers are included. For films and soft plastics using only one polymer, recyclability is considered 'good', and a 'check locally' label can be placed on he packet.

In the currently available guide for suppliers, both Coles and Woolworths have some soft plastic options listed as 'preferable', specifically those with one polymer. Aldi goes further, communicating its reduction and recycled content targets to suppliers, specifying problematic plastic types, and specifically stating that it will not accept delivery of any products containing problematic plastics. It also states future focus areas, such as EPS fill, and PVC labels, giving suppliers notice of the areas where further action will need to be taken.

Should governments regulate supermarket plastic reduction targets?

In August 2023, Environment and Climate Change Canada announced it is consulting with the supermarket sector on a new plan to slash plastic waste in Canada's largest supermarkets.[63] The new plan is proposed to apply to supermarkets that generate over $4 billion in annual sales, and would require supermarkets to create strategies to reduce the plastic waste on their shelves.

"We're asking these companies to be responsible and do the right thing. And we think they can do that", says Canada's Environment Minister Steven Guilbeault.

The earliest changes, such as a requirement that at least 75% of fresh produce is sold in plastic-free packaging, could come into effect as early as 2026. By 2030, the government proposes that more than 50% of non-perishable products such as dried beans and rice need to be sold in plastic-free packaging.

Deep dives

Deep dives – the highs and the lows

Deep Dive 1: Soft Plastics

Soft, flexible plastics are a common sight in supermarkets, kitchens, schools and workplaces – they are everywhere. Soft plastics have also sharply come into focus since the November 2022 REDcycle collapse, leaving consumers angry and disappointed after working hard to separate and return soft plastics to store. This common material is in every section of the supermarket, from chip packets to fresh produce, and REDcycle's collapse has exposed a deeper issue with soft plastics.

In Australia, soft plastics are the most rapidly increasing category of plastic packaging; in 2021-22, 496,000 tonnes of soft plastic were sold in Australia, representing 42% of plastic packaging placed on the market, and that figure is projected to increase to 583,000 tonnes by 2025.[64] Our addiction to soft plastics stems from a number of factors: convenience and versatility (takeaway single-serve foods such as yoghurt pouches and snack chip packets), innovations in packaging design leading to easy-open, vacuum sealing, and other convenience features, as well as the ability for marketers to print bright logos and branding without the need for labels or stickers.

Arguably the shift to soft plastic is also being driven by pursuit of increased profits. Due to the high volumes of production, it is incredibly cheap to make soft plastic from virgin fossil fuels. A report by APCO claims that even if recycled material were cheaper, the cost to transition packaging to incorporate recycled material would be so large that using virgin materials would still be cheaper overall.[65] It is also cheaper to transport soft plastic packaging, as it is lightweight in nature compared to other packaging options such as glass, paper/cardboard, or metal. Another important element of soft plastic is its ability to keep food fresh, acting as a barrier against moisture, air, and microbial contamination, giving some products a longer shelf life and ultimately increasing profits for big brands.

Soft Plastics: A Lethal Threat to Ocean Wildlife

Lightweight and easily blown away, soft plastics are increasingly being found in the ocean, and now represent 39.4% of the plastic packaging found in litter cleanups by Clean Up Australia volunteers.[66] Posing an entanglement risk to wildlife, they can prevent animals from reaching the surface for air, slowly suffocating them. When ingested, soft plastics wrap around other items in the stomach and can cause life threatening blockages and starvation.[67] Macroplastics (commonly defined as plastics larger than 5mm in diameter) can also cause damage to coral reefs and mangroves due to smothering.[68]

Difficult to Recycle

In Australia, our growing consumption of soft plastic is not compatible with most recycling infrastructure. While there are some emerging technologies for recycling soft plastics, such as chemical recycling, these new technologies are unlikely to operate on a sufficient scale any time soon.

Soft plastics are difficult to recycle for a number of reasons. They are often highly contaminated with food and other substances, or made up of multiple polymers, with different melting points and molecular structures. These need to be separated in order to be recycled into a high-quality product again.

“The fundamental problem with plastics is that they don’t mix. So, if you melt it all and churn it all up, when it solidifies again, it separates and creates a weakness. So then, if you don’t laboriously separate one plastic from another, you end up with an inferior product that is very, very brittle and is not useful for many applications,”

Professor Geoff Spinks of University of Wollongong.[69]

And the separation process can indeed be laborious; soft plastics are characterised by their pliable, flexible nature, but lack the structural integrity of their rigid packaging counterparts, meaning they often tear, tangle and clump together in the sorting process. This is partly why so much soft plastic has historically been ‘downcycled’ to park benches, road surfaces and other infrastructure.

The Need to Reduce Soft Plastics

Despite the difficulties in recycling soft plastics, demand for soft plastics by product manufacturers continues to grow. Given what we know about its impacts on the environment and its challenges in recyclability, it is irresponsible for companies to continue locking in this choice at the design stage. Design criteria should prioritise the avoidance and reduction of single-use packaging as a first option.

While packaging at its core is supposed to protect food from contamination and extend shelf life, there are far too many examples of excessive soft plastic packaging on our supermarket shelves. One example is individual-serve chip packets for lunchboxes. These typically include multiple individual serve packets contained within one large soft plastic bag. In 2020-21, Aldi removed the outer bag, replacing it with cardboard, saving 26.2 tonnes of soft plastic each year. While simply swapping one material for another is not always a suitable solution, in some instances it can make a significant impact.

Despite some local areas trialling soft plastics collections, current domestic processing capacity cannot support widespread collection and reprocessing of soft plastics. Recycling capacity is not likely to reach any reasonable scale in the next decade due to a lack of technological solutions, so the only destinations for soft plastics are landfill or pollution of the natural environment for the foreseeable future.[70]

Deep Dive 2: Reuse and Refill

Uptake of reuse and refill systems has been slow, yet it is arguably the most vital piece of the puzzle to reducing plastic consumption to levels that can safely be managed. In the waste hierarchy, reuse sits above recycling for this very reason. According to APCO, "every kilogram of quantified reusable packaging systems avoided the use of 16 kg of single-use packaging in 2020-21".[71] Within this report, 'reuse' describes systems where purpose-built packaging is reused (either returned to store or customers refilling their own packaging); it does not describe the practice of packaging being reused by customers for something other than its intended purpose, such as reusing glass jars for home food storage.

The move to single-use culture in modern times is the greatest driver of pollution, with single-use items choking our environment and oceans. Creating packaging for reuse is slowly gaining traction, but there are few examples of reuse occurring at scale in Australia. The reuse system is in its infancy, and the success of the system relies on sufficient scale, standardisation and supporting infrastructure. In their 2023 study, Zero Waste Europe and Searious Business identified that for three studied return systems investigated (takeaway food, reusable big bags for secondary transport and beverage containers), the return on investment is achieved within a few years (between 2-6 years depending on the system).[72]

Australia lags behind on shifting to reuse

Despite estimates that at least 20% of short-lived plastic packaging could be made reusable, and at least 50% of bottled products and beverage cups able to be replaced with reuse or other new delivery models by 2040,[73] Australia's current reuse options are mainly limited to business-to-business (B2B) operations such as reusable timber pallets.

Some smaller companies in Australia have implemented reuse initiatives, such as e-commerce businesses providing refill pouches to consumers, who are provided with a return envelope to mail pouches back for reuse. The ambitions and impact of these companies is admirable, but these systems have largely failed to grow to a scale required for significant change for a number of reasons. Usually there is a fairly high level of effort required by consumers to return packaging, such as posting back packaging, and while online shopping is convenient, many people still purchase most of their household items at the supermarket.

These reuse initiatives also tend to lock consumers into using one brand or product.

There is an urgent need for standardised systems where consumers can use the same reusable system at a range of locations. While many supermarkets in Australia have signed on to voluntary targets to have 100% of packaging be recyclable, reusable or compostable by 2025, these targets are lumped together, allowing supermarkets to avoid reusables altogether, overemphasising recycling despite the lack of recycling capacity in the system.

Supermarkets are critical to facilitating reuse culture

As the primary source of household food, bathroom and cleaning products, supermarkets are well placed to implement reuse options for consumers, and to influence consumer behaviours to shift towards reuse. With their large market share, supermarkets have the power to create and promote refill stations, and work with suppliers to adopt standardised systems, as well as setting targets and quotas for refill.

Some small and independent stores are already offering multiple reuse initiatives. Many IGA stores stock ZeroCo, an e-commerce business offering personal care and cleaning products in reusable pouches; encouragingly, many of the IGA stores offering these products also offer a 'return to store' option, as opposed to Woolworths customers who need to purchase the same product online to be provided a return sachet. Harris Farm offers customers choices of milk on tap, providing glass bottles for customers to return to store. It also offers refills for honey, self-serve dry goods, tea and coffee, soup in returnable glass jars and unpackaged bread (depending on the store).

For supermarket reuse or refill systems where reverse logistics are required (such as those required to transport empty containers for cleaning and refill), in-depth LCAs need to be undertaken to determine efficiencies in return. A recent study demonstrated that the most efficient reuse systems are those that "contain recycled material, are recyclable themselves, are tough enough to have a long life in the system, and are stackable when empty to optimise vehicle utilisation".[74] The study also surveyed respondents to understand the types of reuse systems that customers were most likely to engage with, and found that 37% of respondents were more willing to reuse a glass container, compared to containers made from films, flexible plastic, or foil (<5%).

Policy needed to incentivise reuse

> **"Accelerating the uptake of reusable packaging and working with businesses to expand the range of applications for its use is a critical element of not only achieving the 2025 National Packaging Targets, but the development of a true circular economy for packaging"**
>
> Brooke Donnelly, then-CEO, APCO[75]

There is a need for a dedicated national target for reuse systems, with quotas for major industries such as supermarkets and beverage companies. A national reuse strategy to support adoption of standardised systems to optimise forward and reverse logistics would be a helpful step in scaling up reusables.

One method for increasing the uptake of reusables is through the expansion of Container Deposit Schemes (CDS) to include reusable containers. Most states in Australia have an existing CDS scheme (or are close to introducing one) for single-use beverage containers such as soft drink bottles, beer and post-mix alcoholic beverages, fruit juice and flavoured milk. Yet in Australia, return rates are still relatively low when compared to other nations. New South Wales is sitting at an average 65% redemption rate for eligible containers,[76] and the Queensland redemption rate average was 62.9%, falling short of the goal of 85%.[77]

When we look to international examples, there is much to be learned. Germany's CDS scheme offers consumers three options; beverages in a refillable glass bottle, beverages in a refillable PET bottle and beverages in single-use PET bottles. Each of these have a deposit paid by the consumer at purchase – a higher deposit for single-use bottles than refillable bottles – and redeemed when containers are returned. Currently, its redemption rate is 98%, the highest in the world. LCAs demonstrated that glass refillable bottles can be refilled up to 50 times, and PET bottles refilled up to 25 times, prior to needing to be recycled back into new bottles.[78]

LCAs look at the impact of a product at every stage of its life – from design to end-of-life management. An LCA needs to be undertaken to consider environmental impacts associated with all stages of a products life cycle. For reuse systems, this includes raw materials used to make the product, energy used in processing, transport across all stages (i.e. getting to the customer, reverse logistics, refill, cleaning etc.), number of reuses and eventual end of life. One crucial aspect that is missing in LCAs is the impact of marine pollution.[79]

Without an appropriate and accurate assessment, there is a risk of shifting from one environmental problem to another. Policy support in the form of a central LCA assessment system facilitated by the government, with tightened criteria for assessment (ensuring a minimum number of reuses is both designed for and considered in the LCA), could assist brands to transition to reuse.

In addition to LCA, consumer behaviours are vital to understand. Determining the preferred reuse system and how likely they are to engage with it, along with ease of return/refill, are important factors to understand. Consistent national waste education programs based on relevant behaviour change theory will support supermarkets to change consumer behaviours, helping to achieve the scale required for successful reuse systems.

Deep Dive 3: Wasteful single-use packaging and online shopping

Excessive and wasteful single-use plastic packaging is a key issue driving the rapid increase of plastic consumption in Australia.

While the main role for packaging is to ensure food safety and prevent food waste, much of the plastic packaging found in supermarket shelves is excessive and unnecessary. While some items have been targeted by APCO and roadmaps have been established to deal with problematic packaging, in practice improvements have been slow and fragmented. Consumers are frustrated by the lack of choice they have over the amount and type of packaging they bring home with their grocery shop.

Common examples of wasteful single-use plastics

Consumers are often frustrated by the amount of wasteful and unnecessary plastic on supermarket shelves. In a survey conducted by AMCS and the Boomerang Alliance, shoppers commented on the amount of wasteful plastic packaging in every section of the supermarket.

Some of the common complaints were:

- Pre-packed fresh produce
- Plastic straws and shrink-wrap in multi-pack drinks
- Bread
- Produce bags
- Plastic Scoop & Weigh bags

While food waste is often cited as a reason for retaining plastic packaging, this excuse doesn't stack up for many products on supermarket shelves. In fact, WRAP UK's new research on the relationship between plastic packaging and food waste of common fresh produce suggests selling fresh produce loose actually creates less waste.[80] There are plenty of other examples on supermarket shelves; from pasta wrapped in soft plastic instead of cardboard boxes, plastic windows on boxes or on paper bread bags, plastic stickers on produce, individual serves of chips contained in a larger plastic packet, pre-packaged straws and cutlery, to personal health and cleaning products wrapped in plastic, examples of wasteful plastic are easy to identify across all areas of the supermarket.

Consumers incentivised to choose plastic-wrapped produce

Our volunteers conducted a series of shopper surveys to investigate the cost of pre-packed versus loose fresh produce in their local supermarket. In these surveys, 78% of volunteers found that loose fresh produce was more expensive than plastic packaged produce in every supermarket, with the one exception being Coles where this was reported 50% of the time. In all supermarkets except Coles, supporters also identified products that did not have a comparable loose or package-free option. Data collected by WWF-Australia also found that pre-packed items such as onions, carrots and potatoes were regularly sold for less than the cost of loose items.[81] By having cheaper pre-packed fresh produce than loose produce, particularly in a cost of living crisis, supermarkets proactively push consumers towards plastic packaging – exactly the opposite of the behaviour change needed – and makes sustainable choices harder for struggling families. In response to our survey, the majority of AMCS and Boomerang Alliance supporters said they often had to choose between their values of shopping low plastic/plastic-free, and their budget.

Online shopping

Both Coles and Woolworths customers reported the ability to select low plastic at the checkout when completing their online shopping. However, this did not always translate into low plastic packaging, with supermarkets choosing to use produce bags even for small volumes of fresh produce, and using plastic bags to separate meat and cleaning products. Stories of a single apple in a plastic single-use produce bag are all too common. Even with the swap from plastic bags to paper for the major supermarkets, this material is now being overused, with shoppers reporting single items ending up in a paper bag by themselves. Supermarkets were asked about their policies on staff training for waste avoidance and reduction when packing online orders, however neither Coles or Woolworths (the only two supermarkets that offer online shopping) provided any evidence in support of this.

Recommendations

Recommendations for supermarkets

The results from this audit show that supermarkets have a long way to go to reduce the use of plastic packaging, or even to achieve their self-governed sustainability goals. We have identified a series of recommendations that, if implemented, would improve transparency and lead to improved scores in 2024. This would substantially reduce plastic on shelves and consequently entering the environment.

Recommendation 1:

Implement 'quick win' phase outs and policies

There are a number of areas in which supermarkets can reduce their overall plastic footprint without significant system changes, all of which have been implemented by at least one supermarket or have been targeted for action under state or federal government policy. By implementing these small changes, poorly performing supermarkets could quickly improve their scores in future years.

Our top 5 recommendations for immediate action

1 **Eliminate single-use plastic produce bags and plastic produce stickers***

2 **Introduce reusable containers for deli items and delivery**

3 **Phase out pre-packaged plastic straws and cutlery***

4 **Reduce or phase out individually wrapped small serving sizes**

5 **Require loose fresh produce to be cost-competitive against packaged produce**

*Indicates items targeted by state/territory bans.

"People can engage in sustainable actions, but they are not always able to do it on their own; to really make a difference, businesses must provide sustainable options at scale."

APCO Case Study (2022), KeepCup.

Recommendation 2:

Improve data collection and transparent reporting

This was identified as the area of most concern in this year's audit. Most supermarkets are not collecting sufficient packaging data or have intentionally sought to avoid sharing data with consumers or authorities about the true scale of plastic packaging on their shelves.

The first step to improving something is measuring it; data on volume of packaging materials (by unit and by tonnes) as well as plastic types (polymers) needs to be collected and reported on, both to identify areas for improvement and to showcase progress. This must include both own-brand and branded products. Provision of these datasets should accompany supermarkets annual sustainability reports, with details on how supermarkets will take steps to improve progress if sustainability targets are not met. At a minimum, public reporting on the supermarket's progress against the ANZPAC targets is recommended.

Recommendation 3:

Strengthen and enforce supplier packaging guidelines

Each supermarket except Metcash has their own version of a publicly available supplier packaging guide, which identifies desirable and undesirable packaging materials and types. These guidelines need to be fit for purpose, ensure all packaging is of high recyclability or recoverability and must be enforced. Due to the sizable market share of each of the four main supermarkets in Australia, pledges to delist brands and suppliers that do not comply with these guides would motivate suppliers to fast-track improvements in product packaging design.

Recommendation 4:

Set time-bound, measurable targets for plastic reduction

While most supermarkets have committed to ensuring 100% of their own-brand packaging is reusable, recyclable or compostable, they have not implemented targets to reduce plastic in real terms, or by unit. Achieving real reductions in plastic use is critical to bringing levels of plastic packaging within limits that can be sustainably managed and eliminating plastic lost to the environment. Supermarkets should set clear, time-bound targets for plastic reduction, by unit rather than tonnage, and should report against such targets in annual sustainability reports with remediation actions outlined if targets are not being met.

We recommend that supermarkets also set specific reduction targets for high priority areas such as fresh produce, ensuring that plastic-free options are also cost competitive.

Recommendation 5:

Set time-bound targets for high recyclability and recycled content

While most supermarkets have targets to ensure 100% of packaging is reusable, recyclable or compostable, in most cases they only apply those targets to own-brand products and do not require them to be proven to be recyclable at scale. Supermarkets should implement a time-bound target to achieve *high* recyclability and full compliance with Australian composting standards, working to reduce hard-to-recycle packaging types such as mixed plastics and soft plastics which are unlikely to be able to be recycled at scale in the near future.

We also recommend this is supplemented by a dedicated recycled content target for plastic packaging, ensuring reductions in virgin plastic are not just achieved through lightweighting of existing plastic packaging, while driving market demand for recycled content.

Recommendation 6:

Set a time-bound target for reusable packaging

Supermarkets can lead the way for scaling up reusables in Australia due to their market share, range of products available in-store, opportunities for collection/drop-off points for consumers and for reverse logistics. Yet only 4% of packaging placed on market by ANZPAC members is designed for reuse.[82]

We recommend supermarkets set specific targets for at least 20% of packaging to be reusable, with a priority on beverages and home/personal care products packaged in PET/HDPE bottles, 30-50% of which the UN Environment Programme estimates can be replaced with durable reuse models by 2030.[83]

This should be backed by annual reporting against the target, to drive the innovation required (particularly around reverse logistics) to implement reusables at a large scale.

Recommendation 7:

Implement policies to ban problematic plastics and chemicals of concern

Policies to refuse products containing problematic plastics such as pre-packaged straws and cutlery (as Aldi has done) or packaging of poor recyclability should be made standard across all supermarkets in Australia. Similarly, policies refusing products or packaging with added PFAS (or containing high amounts of PFAS) should be implemented in all supermarkets, as these kinds of contaminants are one of the reasons recycled plastics are a concern for food safety. Action on enforcing the refusal of other problematic plastics, such as plastics with carbon black, and PVC labels, should be accelerated for suppliers.

Recommendations for Government

Within the current economic structure, brands that prioritise sustainability goals can be undercut by less scrupulous competitors that prioritise profit. This is especially evident within the Australian context, with limited competition among the top players in the supermarket sector.

To level the playing field, strong packaging rules and targets are required to ensure all supermarkets and retailers are held to the same standard. Based on the insights from this audit, AMCS and the Boomerang Alliance have identified the following recommendations for governments that could assist and accelerate supermarket plastic reduction efforts.

Recommendation 1:

Put mandatory packaging rules and targets into law

Packaging regulation is urgently needed to bring transparency and accountability to the supermarket sector and major product brands. National targets should be put into law to ensure plastic reduction and the development of a sustainable plastic recycling industry in Australia can be achieved. Signals from the waste industry show strong support for packaging reform, with both the Waste Management and Resource Recovery Association of Australia (WMRR)[84] and the Australian Council of Recycling (ACOR)[85] expressing support in June 2023.

An effective packaging regulatory scheme must include:

- Mandatory targets for plastic reduction, reusable packaging and recycled content,
- Mandatory design rules and standards requiring products to be reusable, recyclable or compostable at scale and in practice in Australian infrastructure,
- A recycled plastic traceability framework, giving confidence to use recycled plastic for food grade applications,
- An eco-modulated packaging levy, making packaging producers responsible for funding the full cost of associated waste and recycling infrastructure, and
- A central packaging regulator, accountable for monitoring and enforcing the scheme

Recommendation 2:

Require supermarkets to transparently report plastic packaging data and make it available to the public

Under a future packaging regulatory scheme, brand owners should be required to report on the total packaging placed on market by unit, including the type of packaging, its recyclability and the use of recycled content. This should be managed and overseen by a centralised government packaging regulator, ensuring all product owners are held accountable to an independent body.

Recommendation 3:

Improve the Australasian Recycling Label (ARL) and Packaging Recyclability Evaluation Portal (PREP)

The ARL was developed to provide consumers with easy-to-use recycling information for decisions made at the point of disposal, giving clear guidance on what is recyclable at scale. The ARL is based on assessments under the Packaging Recyclability Evaluation Portal, a framework that allows brand owners to assess whether a packaging item can be collected, sorted, reprocessed and reused in the manufacturing of new items in Australia and New Zealand.

We recommend a review of the ARL and PREP tool be undertaken to include a requirement that a package, identified as recyclable, must also be recycled in practice. Consumers must have confidence that discarding a package for recycling means it gets recycled, wherever that consumer resides. Recent updates allowing soft plastics to be labelled 'check locally' is misleading when it is unlikely that there will be scalable soft plastics recycling in Australia for many years to come.

Recommendation 4:

Harmonise kerbside collection and recyclate processing

Currently 98% of Australian residents have access to a Council-provided kerbside co-mingled recycling bin.[86] However, acceptable materials vary significantly across local government areas, and many regional and rural residents do not have access to a kerbside co-mingled recycling bin at all. By harmonising the kerbside co-mingled recycling stream, and upgrading Materials Recovery Facilities (MRFs) which do not currently accept a wide range of material types, governments can not only increase the volume of materials recovered, but also allow for simpler national waste education strategies to assist in improving resource recovery rates and reducing contamination rates, and ultimately increase consumer confidence.

Recommendation 5:

Provide access to centralised life cycle assessment tools

Life Cycle Assessments (LCAs) are critical for understanding the environmental impacts of an item, from manufacture to end of life. Life Cycle Assessments are complex and in-depth assessments that need to be undertaken to minimise the risk of unintended environmental consequences arising from packaging choices. However, previous LCAs currently being referenced by supermarkets are likely to have underestimated the emissions impacts of plastics which have been revised in recent years,[87] and too often have undervalued the impact on wildlife and ecosystems. Government can play a critical role in quality control by providing a centralised LCA evaluation portal and certifying which LCA assessments meet a best practice standard.

Glossary

Australasian Recycling Label (ARL)	A scheme designed to boost recycling rates by providing on-pack instructions to consumers advising where components of the packaging materials should be placed – at the time of printing the current options are: • Recyclable: please dispose in your recycling bin • Conditionally recyclable: Provides instructions for recycling (e.g. flatten carton to recycle). If these instructions can be followed, place into recycling bin, otherwise dispose in general waste • Not recyclable: Dispose in your general waste bin • Check locally (previously 'return to store'): The item may be recyclable, visit arl.org.au to check for local recycling options For more information on the ARL and assessment criteria, visit https://apco.org.au/the-australasian-recycling-label
Bio-based plastics	Material that is partly or largely derived from biomass (plants) resources, such as sugarcane, corn, cellulose etc. These materials raise sustainability concerns due to the land required for producing the renewable resource, as well as the limited capabilities for recyclability.
Biodegradable plastics	Plastic packaging material that degrades in landfill or the natural environment. The degradation of these materials is not the same as compostable (definition below). Biodegradable materials are designed to break into smaller pieces (mico plastics) with the addition of chemicals to speed up this process.
Business-to-Business (B2B)	Business that is conducted between two businesses, rather than between a business and a consumer. In this instance, we refer to waste created through B2B operations, such as the procurement of products to be stocked on a supermarket shelf, and the waste associated with that transportation (such as pallet wrap, boxes, labels, etc).
Compostable packaging	Compostable describes only packaging or materials that are suitable for microbial treatment at end of life in a composting environment, and which carry Australian Standard certification clearly marked on the packaging, whether commercial (AS 4726-2006) or at-home (AS 5810-2010). Due to the limited commercial recycling facilities in Australia (with far lower concentrations in states such as Queensland), many commercially compostable packaging items will end up in landfill, or incorrectly disposed of in co-mingled recycling streams. Currently, about 32% of Australian households have access to a Food Organics Garden Organics (FOGO) service.[88] There are ongoing discussions surrounding the presence of PFAS in compostable packaging, which make processing difficult for commercial composting facilities.

Ghost gear	Ghost gear refers to abandoned, lost or discarded fishing gear
Lightweighting	This common process involves reducing the weight of product packaging through strategies such as creating thinner plastic, replacing rigid plastic with plastic film, and using mono-materials to increase strength while reducing weight. While these strategies do impact overall plastic use, it has little impact on plastic pollution and number of items leaking into the environment.
Life Cycle Assessment (LCA)	The act of assessing the environmental impact of a product through its entire life, from manufacture to disposal and waste management.
Mandatory Extended Producer Responsibility Scheme	A mandatory EPR scheme would identify the producer of packaging as the steward of that material and place the responsibility for managing that material on the producer to reduce the amount of waste generated, and ensure responsible and appropriate management of the material at end of life.
Per- or Poly- Fluorinated Alkyl Substances (PFAS)	A group of more than 4,700 chemicals used in food packaging for grease and water resistance. Chemicals in the PFAS group are persistent and of health and environmental concern, and are often referred to as ‘forever chemicals’.
Polymers	In reference to plastic types. The common plastic polymer types and the associated numerical numbering on packaging are as follows: • PET – Polyethylene terephthalate (Number 1) • HDPE – High density polyethylene (Number 2) • PVC – Polyvinyl chloride (Number 3) • LDPE – Low density polyethylene (Number 4) • PP – Polypropylene (Number 5) • PS – Polystyrene (Number 6). Not expanded, commonly used in takeaway coffee cup lids and sushi containers • EPS – Expanded polystyrene (Number 6). Expanded by adding air into the material while cooling. Commonly used for packing materials. • Other – any plastic polymer that does not fall into the above polymer types. (Number 7). Not acceptable in co-mingled recycling streams in Australia.

Primary packaging	Packaging that contains the final product, also referred to as retail or consumer packaging. This is packaging that contains products purchased at retail stores by customers, as is disposed of by the user via reuse, recycling, landfill, compost, litter, or other disposal avenues.
Recyclable packaging	Currently, recyclable packaging is as identified by Australasian Recycling Labels (ARL). Recyclable packaging should be classified as such only if it is recycled in practice and at scale; in future iterations of this survey, the definition of recyclable may evolve to ensure this is achieved.
Reuse	Reusable packaging is designed to be used multiple times, for its originally intended purpose, as part of a dedicated system for reuse. Examples of a reuse system are: Purpose-built bottle to be refilled in-store (owned by customer); purpose-built bottle which is returned by customer, refilled by manufacturer, and returned to store for sale (company/industry owns container). While consumers may have the option to reuse packaging for purposes other than its original intended purpose (i.e. reusing glass jars for food storage), this is not the intended definition of reuse within this context.
Secondary packaging	Packaging additional to the primary packaging that is used to protect and aggregate individual units during transport, storage and distribution. Examples include packaging made to display multiple primary product units on the shelf and may also be referred to as shelf-ready packaging.
Tertiary packaging	Outer packaging, including pallets, wrap, strapping etc. used for the distribution of goods, also referred to as transport or transit packaging.

Endnotes

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