



XSIX

Unpacking Plastic Risk on the ASX

Acknowledgements

We'd like to thank those who lent their expertise, reviewed or contributed to this report. In particular, Tara Jones (Program Manager, Plastics & Packaging, at Australian Marine Conservation Foundation) and the countless others whose work for a just and thriving planet we relied on.

SIX works on the lands of the traditional lands of the Wurundjeri Woi-wurrung people and the Gadigal of the Eora nation. We pay our respects to their Elders, past and present, and the role that oceans, rivers, and other ecosystems harmed by plastic pollution hold in Indigenous cultures. We hope that these places cease to be exploited resources, and return to being sacred places to be cherished once again.

To quote this report, please use the following reference:

James Alexander & Mariela Powell-Thomas, 2026,
Unpacking Plastic Risk on the ASX, SIX

Who is SIX?

SIX is Australia's first share trading platform designed specifically for ethical investors and shareholder advocacy.

Australia's corporation laws are some of the world's most prohibitive when it comes to shareholder rights to engage with the companies they are invested in. SIX breaks down those barriers for investors and advocacy groups, allowing shareholders to access shareholder rights that are part of the normal corporate landscape overseas. This means many ASX companies are, for the first time, required to be more accountable to engaging with all of their shareholders and addressing their ESG risks.

SIX leads shareholder campaigns that seek to push Australia's biggest companies to do better on the big issues, from workers' rights to climate, gender equity and nature protection. These campaigns insist on companies adequately addressing these issues and being accountable to shareholders on how they are managing these ESG risks.

Authors



James Alexander
Senior ESG Manager



Mariela Powell Thomas
Communications Manager

Contents

If you read 1 page	3
Recommendations for investors	4
The waste hierarchy	5
Company rankings	8
Packaging is driving plastic pollution	9
The cost of plastic packaging	11
Risks for companies and investors	15
Survey results and analysis	18
Glossary	25
Methodology	28

If you read 1 page

- 1. Current plastic production and pollution, especially from packaging, imposes enormous costs on the planet, society, economy and diversified investors.** Without systematic change plastic production is expected to grow 50% and pollution is expected to double by 2040.¹ The true cost of plastic is at least 10 times higher than the market price and is paid through government spending on waste management, human disease and illness, reduced ecosystem services and climate change, even if it doesn't show up on financial statements.² Packaging is the largest use of plastic globally, is expected to remain as the main source of plastic pollution without systemic change and is largely unnecessary or avoidable.³
- 2. Companies that use high amounts of plastic packaging, and their investors, are facing growing financial risks, especially from litigation and laws that penalise unnecessary packaging.** Litigation for chemical and plastic pollution is rising in the US, EU and Australia and targeting manufacturers and commercial users of harmful chemicals.⁴ The costs of lawsuits could be USD \$20-100 billion by 2030.⁵ Laws that ban or financially penalise plastic packaging are proliferating. Australia was the second largest single-use plastic consumer in the world per person in 2019 and the failure of industry self-regulation has led to imminent Federal Government intervention backed by strong public support.⁶

3. Plastic packaging is a growing source of Scope 3 emissions.

Australians' high use of single-use plastic and its large carbon footprint means these are potentially material scope 3 emissions ASX companies will have to report from 2027 onwards under the new mandatory climate disclosures.

- 4. ASX companies in plastic packaging-intensive sectors may be underestimating associated risks and opportunities.** Companies reported increased recycling, but aren't doing enough to reduce and reuse packaging and support ambitious government policy. Companies lack evidence of assessing total plastic packaging use, setting reduction targets, or monitoring progress. This prevents investors from understanding how exposed they are to this issue and how their investee companies are addressing it.

¹ PEW, 2025, Breaking the Plastic Wave 2025, [An Assessment of the Global System and Strategies for Transformative Change](#).

² Nicola J Beaumont et al, 2019, [Global ecological, social and economic impacts of marine plastic](#).

³ Ibid, OECD (2024), p.22.

⁴ McKenzie Moore et al, 2026, [From Chemicals to Courtrooms: Tracking the Expanding Landscape of PFAS Litigation](#), Piper Alderman.

⁵ Minderoo Foundation, [The Price of Plastic Pollution](#), 2022, p.22.

⁶ Parliament of Australia, [Inquiry into Australia's Plastic Pollution in Oceans and Waterways](#) and YouGov, 2024, [78% of Australians are concerned about the use of plastic in the nation](#).

Recommendations for investors

Investors should urge companies to follow the recommendations of 185 institutional investors representing over US \$10 trillion of assets and: ⁷

⁷ Investor Statement on Plastics, 2024, Investors call for urgent action to reduce plastics from intensive users of plastic packaging.

1. Disclose total packaging use, risks and opportunities	Disclose absolute plastic packaging use, associated risks and opportunities and plans to manage them as part of existing climate, nature or sustainability reporting. Investors should escalate by publicly stating their expectations of companies, and voting against directors and/or for shareholder resolutions if companies don't meet them.
2. Reduce plastic packaging	Commit to, and start delivering, absolute reductions of plastic packaging, including through implementing reuse systems.
3. Eliminate harmful chemicals	Commit to identifying and eliminating the use of hazardous substances in products and packaging and to publicly report their progress doing so.
4. Support ambitious government policy	Publicly support ambitious packaging policy, especially the Australian Government's anticipated packaging law reform. At minimum this means not lobbying directly or via industry groups to weaken their ambition and effectiveness, and better yet, supporting ambitious policy.

The waste hierarchy

The waste hierarchy is an internationally recognised tool used by governments, businesses and civil society to evaluate which actions to prioritise to protect the environment and avoid wasting resources. This aligns with circular economy principles of minimising resource inputs and keeping products in economic use for as long as possible.⁸

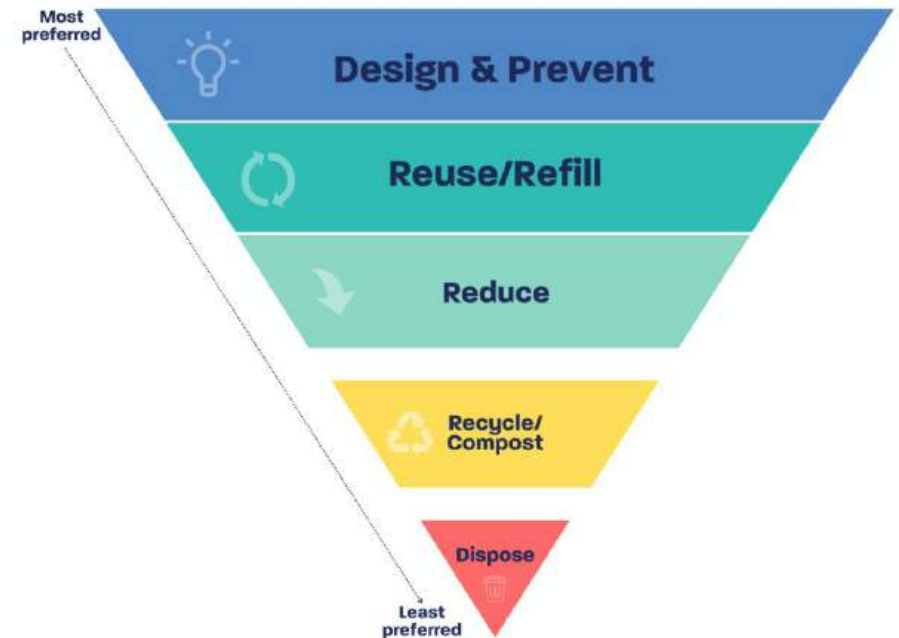


Figure 1: the Australian Marine Conservation Society's depiction of the waste hierarchy

⁸ Australian Government Department of Climate Change, Energy, the Environment and Water, 2025, Waste generation and prevention.

The waste hierarchy

The survey and analysis of ASX companies that is the foundation of this report was conducted through this lens. We focused on how companies in industries that use large amounts of plastic packaging are reducing and reusing it, over their efforts to recycle it. We also considered their support for policies addressing the various aspects of the waste hierarchy. See Methodology section for more information.

To date, business, government and civil society has focused on increasing recycling plastic since the environmental impacts of the post-WWII acceleration of mass consumerism became impossible to ignore. Yet, recycling is mostly a failed solution to plastic pollution which began as a public relations strategy by American plastic manufacturers in the 1980s. These companies heavily lobbied policymakers to promote recycling of polymers they knew were not designed to be recycled to fight off laws reducing or prohibiting manufacture and use of certain types of plastic.⁹

While some plastic packaging is more recyclable than other plastics (e.g. multilayered and flexible materials are harder to recycle), plastic is not infinitely recyclable unlike aluminium or glass. More importantly, in a circular economy recycling is the final stop when all the other design changes and business model changes have failed. It must also actually be recycled by companies, governments and consumers at a meaningful scale, not just be theoretically recyclable, which it often is not.

Australia only recycles 20% of plastic packaging overall, mainly because recycling infrastructure hasn't grown along with packaging use.¹⁰

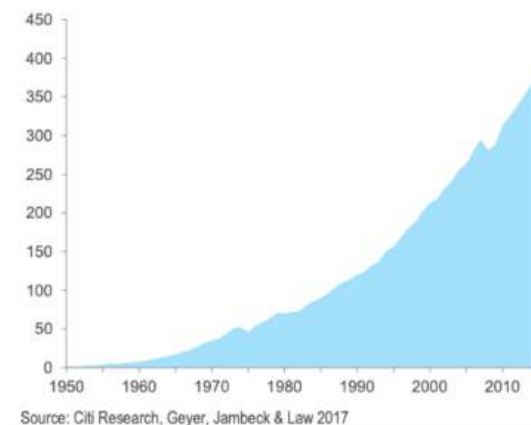


Figure 2: Annual global resin and fibre production (million metric tons)¹¹

If our strategy is ambitious growth of collection, sorting and recycling infrastructure only, PEW estimates plastic entering oceans will still increase by 65% by 2040 and cost more than doing nothing and use 17% of the carbon budget to limit dangerous global heating.¹²

⁹ Jonathan Baker, The Conversation, 2025, [How the plastics industry shifted responsibility for recycling onto you, the consumer.](#)

¹⁰ APCO, [Australian Packaging Consumption and Recovery Data 2023-24.](#)

¹¹ CitBank, 2018, [Rethinking Single-Use Plastics, Responsible to a Sea Change of Consumer Behaviour](#), p.9.

¹² PEW, 2020, Breaking the Plastic Wave, [A Comprehensive Assessment of Pathways](#)

The waste hierarchy

Australia's goal of 50% of packaging being made from recycled materials by 2030, pushed back from the original target of 2025, is highly unlikely. To do that we would need to recycle 620,000 tonnes of plastic every year. But Australia only makes 278,000 tonnes of plastic packaging domestically each year and most of that isn't from recycled materials. The Australian Government's approach to plastic packaging of industry self-regulation has failed, most publicly with the collapse of the RedCycle soft plastics program, and legislated policy intervention is expected this parliamentary term.

Moreover, when companies use more recycled plastic, nobody is tracing what chemicals are in the packaging, meaning there's a real risk that recycled plastic contains toxic substances that can leach into the packaging contents. Over 3,000 potentially harmful chemicals added to food packaging have been identified. Recent growth in litigation and attribution science is making this a material financial risk for many companies (see 'Legal' section of the report).

¹³ APCO, 2024, 2030 Strategic Plan, p.10

¹⁴ B Geuke et al, "Systematic evidence on migrating and extractable food contact chemicals: Most chemicals detected in food contact materials are not listed for use", Critical Reviews in Food Science and Nutrition, 2022, DOI: 10.1080/10408398.2022.2067828

Company rankings

Company	Industry	Total weighted score	Policies and lobbying	Reduce	Reuse	Recycle	APCO status ¹⁵
Temple & Webster Group Ltd.	Retail	37.1%	65.0%	38.0%	25.0%	17.0%	Good Progress
JB Hi-Fi Limited	Retail	34.1%	41.0%	50.0%	25.0%	33.0%	Advanced
Adairs Limited	Retail	31.2%	41.0%	25.0%	38.0%	17.0%	Advanced
Amcor Plc	Packaging	29.3%	88.0%	0.0%	25.0%	42.0%	Leading
Super Retail Group Limited	Retail	27.1%	65.0%	13.0%	25.0%	17.0%	Advanced
Collins Foods Limited	Restaurants	22.4%	41.0%	13.0%	25.0%	17.0%	NA
Bega Cheese Limited	Food & Beverages	18.9%	41.0%	14.0%	0.0%	50.0%	Leading
Guzman y Gomez	Restaurants	17.3%	41.0%	14.0%	0.0%	33.0%	NA
Ridley Corporation Limited	Food & Beverages	16.6%	18.0%	29.0%	0.0%	17.0%	Leading
Accent Group Limited	Retail	15.7%	41.0%	0.0%	25.0%	0.0%	Leading
Graincorp Limited	Food & Beverages	15.6%	41.0%	14.0%	0.0%	17.0%	No action plan
Select Harvests Limited	Food & Beverages	12.8%	18.0%	0.0%	0.0%	33.0%	Advanced
Sigma Healthcare Limited	Healthcare	12.7%	18.0%	0.0%	25.0%	17.0%	NA
EBOS Group Limited	Healthcare	11.7%	0.0%	25.0%	0.0%	17.0%	NA
Domino's Pizza Enterprises Limited	Restaurants	9.9%	41.0%	0.0%	0.0%	17.0%	NA
The a2 Milk Company Limited	Food & Beverages	9.2%	29%	0.0%	0.0%	33%	Beyond Best Practice
Inghams Group Ltd.	Food & Beverages	8.5%	18.0%	0.0%	0.0%	50.0%	Advanced
Elders Limited	Food & Beverages	6.9%	18.0%	0.0%	0.0%	33.0%	Advanced
Wesfarmers Limited	Retail	6.9%	18.0%	0.0%	0.0%	33.0%	Depends on brand
Kogan.com Ltd.	Retail	5.0%	0.0%	13.0%	0.0%	0.0%	NA
Cettire Limited	Retail	0.0%	0.0%	0.0%	0.0%	0.0%	NA
Nick Scali Limited	Retail	0.0%	0.0%	0.0%	0.0%	0.0%	NA

¹⁵ Australian Packaging Convent Organisation (APCO) is a non-profit industry body coordinating the Australian Government's regulatory framework governing its packaging policy. This framework defines the collective responsibility shared by governments and businesses across Australia in meeting Australia's National Packaging Targets. Its members submit progress updates to APCO on meeting the Targets, and they are given a status, however making this public is voluntary.

Packaging is driving plastic pollution

Current Global Plastic Production and Use

Although plastic is still a relatively novel material, it has become ubiquitous, with production growing from 2 million tons (Mt) in 1950 to nearly 500 Mt in 2025.¹⁶ One-third is for packaging, the largest use of plastic globally. Without change single-use plastic (SUP) and other short-lived packaging are expected to remain as the main source of plastic waste.¹⁷ On average 41% of global plastic waste is burned or dumped into the environment, partly due to inadequate waste management systems.¹⁸

Current Australian Plastic Consumption and Recovery

Australia was the second largest single-use plastic consumer in the world per person in 2019. Our plastic consumption per person grew 60% between 2000 and 2020-21, from 92kg to 148kg, but we recovered only 14% of it for a second use.¹⁹

The inadequacy of waste management systems is evident in the mismatch between supply and capacity. For example, the most recent data shows Australia used 1.27 million tons of plastic packaging but recycling capacity was only 0.3 million tons, despite growing 16.7% annually.²⁰

In other words, we have the capacity to recycle only 24% of the plastic we use every year, which is determined by the viability of collection, sorting and end markets.

We recovered (diverted from landfill) only 9% of flexible plastic and 28% of rigid plastic.²¹ Clearly Australia is not prepared to deal with this large volume of plastic waste.

As a result, Australia's environment is polluted with plastic packaging used by and developed for companies we assessed, namely packaging manufacturers, food and beverage and other retailers. The food sector is the world's largest user of single-use packaging. It consumes up to 35% of global packaging production, of which 95% is single-use, meaning USD \$80-120 billion annually in lost economic value.²²

Despite bans on types of single-use plastic (like straws, cutlery and plastic bags) in various Australian states (and globally) plastic packaging is still a major source of waste. Soft plastic packaging like food wrappers and packets were the second most common item found in the environment.²³

¹⁶ Our World in Data, [Plastic Pollution and OECD \(2024\), Policy Scenarios for Eliminating Plastic Pollution by 2040](#), OECD Publishing, Paris, p.11.

¹⁷ Ibid, OECD (2024), p.22.

¹⁸ WWF, [Plastics: The Cost to Society and The Environment](#), p.9.

¹⁹ The Australia Institute, 2024 [Plastic waste in Australia](#), p.1.

²⁰ APCO, [Australian Packaging Consumption and Recovery Data 2023-24](#), p.12.

²¹ APCO, [Australian Packaging Consumption and Recovery Data 2023-24](#), p.8.

²² Arijeniwa et al, 2024, [Journal of Environmental Management, Closing the loop: A framework for tackling single-use plastic waste in the food and beverage industry through circular economy- a review](#) and for lost economic value see The Ellen MacArthur Foundation, 2016, [The New Plastics Economy: Rethinking the future of plastics](#), p.15.

Packaging is driving plastic pollution

Future Projections

Globally, plastic production is expected to grow approximately 50% to 736 Mt in 2040, driven particularly by packaging and textiles manufacturing. Consequently, plastic pollution is projected to double by 2040.²⁴ Waste management capacity (such as recycling and composting) will only grow 26% with significant investment and won't be able to cope with this output.²⁵

Australian Packaging Convent Organisation (APCO), an industry body coordinating the Australian Government's packaging policy, predicts Australia will increase the amount of flexible packaging reprocessing (e.g. washing, shredding, and pelletising) from 6.7% to 70% in the 5 years to 2029, mainly through chemical recycling and waste-to-energy, which use mainly fossil fuel energy and catalysts to break plastic down into simpler materials.²⁶

We should be skeptical of these predictions when the industry has failed to meet the Government's National Packaging Targets,²⁷ and chemical recycling is beset by financial failures despite intense petrochemical lobbying for government subsidies, as well as chemical pollution and community opposition in the US, its most advanced market.²⁸

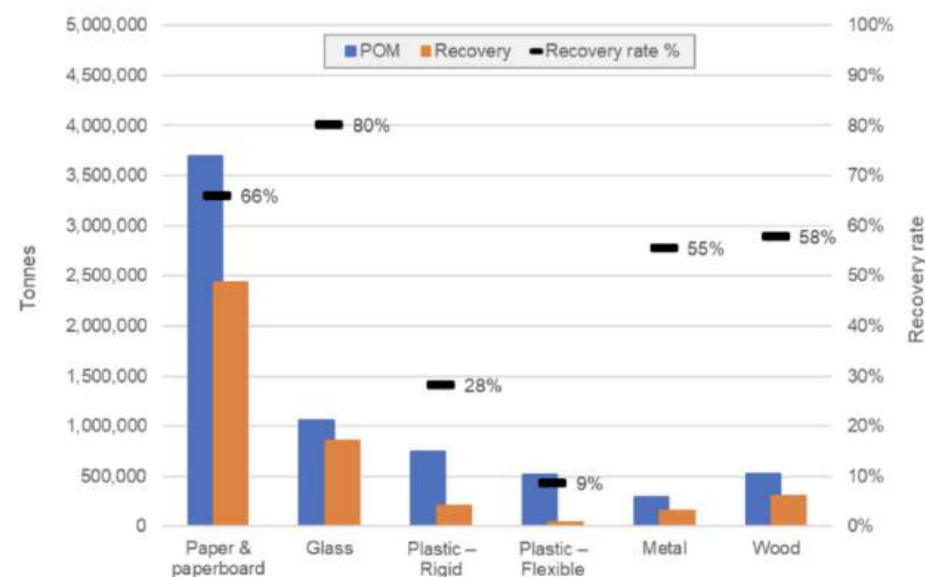


Figure 3: APCO Packaging data for Australia, 2023-34

²³ Clean Up Australia, [Litter Report FY25](#), p.18.

²⁴ PEW, 2025, [Breaking the Plastic Wave 2025, An Assessment of the Global System and Strategies for Transformative Change](#).

²⁵ PEW, 2025, [Breaking the Plastic Wave 2025, An Assessment of the Global System and Strategies for Transformative Change](#).

²⁶ APCO, [Australian Packaging Consumption and Recovery Data 2023-24](#), p.29

²⁷ APCO, [Ibid](#), p.29

²⁸ Lee Bell and Jenny Gitlitz, IPEN, 2023, [Chemical Recycling: A Dangerous Deception](#), p.7.

The cost of plastic packaging

The cost of plastic includes the market price of plastic, greenhouse gas emissions, damaged human health and livelihoods in industries like tourism and fisheries, ecosystem services, and clean-up costs.

Estimates of the true cost of plastic vary by boundary and assumptions but the numbers are staggering regardless of the method. The estimated lifetime cost of a single year of plastic production ranges between USD \$1 and 3.1 trillion (+/- \$1 trillion), more than the current GDP of Italy.²⁹ The World Wildlife Fund (WWF) estimated the true cost of plastic is at least 10 times higher than the market price paid by primary plastic producers.³⁰

The loss of marine “ecosystem services” (the economic value ecosystems provide to humans, such as food and climate sequestration), due to plastic pollution is conservatively estimated to be 1-5% per year.³¹ Research suggests plastics could impact the ocean's capacity to be a carbon sink for humanity's emissions by affecting zooplankton growth and reproduction. Marine plastic pollution could also result in GDP reductions by impacting tourism and the quality of seafood and aquaculture products.³²

Unnecessary plastic is driving us towards crossing planetary boundaries for climate change and novel entities that threaten the integrity of Earth system processes, including climate stability. This includes pollution from plastic, synthetic chemicals like PFAS, and nanomaterials.

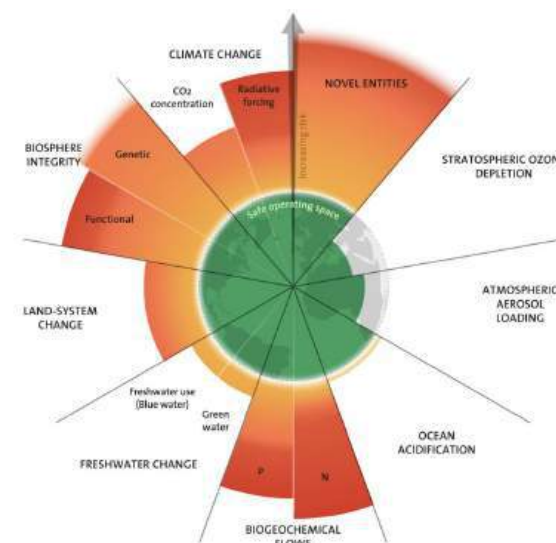


Figure 4: The 2025 update to the Planetary boundaries ³³

²⁹ For 2015 costs, see Philip J. Landrigan et al, 2023, Annals of Global Health: Boston College, The Minderoo-Monaco Commission on Plastics and Human Health and for 2019 costs see WWF, Plastics: The Cost to Society and The Environment, p.7.

³⁰ WWF, Plastics: The Cost to Society and The Environment, p.7.

³¹ WWF, Ibid, p.18.

³² Nicola J Beaumont et al, 2019, Global ecological, social and economic impacts of marine plastic.

³³ Azote for Stockholm Resilience Centre, based on analysis in Sakschewski and Caesar et al. 2025

The cost of plastic packaging

Health

Chemicals commonly added to plastics pose serious health risks, such as plasticisers and phthalates, which are added to increase flexibility or durability and can transfer directly to humans.³⁴

Research links these chemicals to endocrine disruption and increased risk of male reproductive birth defects, infertility, obesity, cardiovascular disease, renal disease, and cancers.³⁵

Fetuses and young children face elevated risks, including prematurity, stillbirth, low birth weight, birth defects of reproductive organs, neurodevelopmental impairment, impaired lung growth, and childhood cancer. These vulnerable groups are especially sensitive to plastic chemicals.³⁶

Chemical exposure may increase during recycling. Some research has measured more chemicals at higher amounts in recycled plastics than virgin polymers, including pesticides and industrial chemicals.³⁷ Australia's reliance on imported plastic resins or semi-finished and finished packaging, as well as commingled recycling collection where chemicals can transfer, increases the risk of exposing consumers to harmful chemicals.

See the 'Legal' section of the report for the growing risks of legal liabilities for companies exposed to the plastic packaging supply chain.



Investors should ask companies to commit to identifying and eliminating the use of hazardous chemicals (not just PFAS, known as “forever chemicals”) in packaging and to publicly report their progress in doing so.

³⁴ Naga Raju Maddela et al, 2023, Journal of Environmental Management, Additives of plastics: Entry into the environment and potential risks to human and ecological health. costs see WWF, Plastics: The Cost to Society and The Environment, p.7.

³⁵ Lee Bell and Jenny Gitlitz, IPEN, 2023, Chemical Recycling: A Dangerous Deception, p.17.

³⁶ Philip J. Landrigan et al, 2023, Annals of Global Health: Boston College, The Minderoo-Monaco Commission on Plastics and Human Health.

³⁷ Bethanie Carney Almroth and Eric Carmona Martinez, 2024, Dangerous chemicals found in recycled plastics, making them unsafe for use – experts explain the hazards.

The cost of plastic packaging

Climate change

Plastic is a pollution problem as well as a climate problem. Plastics account for around 3.3% of total greenhouse gas emissions, mostly due to fossil fuel extraction and chemical processing to produce virgin plastic polymers.³⁸ If the plastic lifecycle was a country it would have been the 5th largest emitter in 2019, which could increase to 15% of global emissions by 2050.³⁹ This would consume roughly ⅓ of the world's remaining carbon budget, far offsetting any emissions reductions from plastic compared to other materials.⁴⁰

In 2021 emissions from single-use plastics (SUP), around 36% of which is for packaging,⁴¹ were equivalent to 450 million metric tons (MMT) CO₂e, more than the total GHG emissions of the United Kingdom.⁴²

Approximately 60% of SUP emissions are from upstream from fossil fuel extraction, processing, and refining of feedstocks and polymer production.⁴³ For many companies we assessed these are potentially material scope 3 emissions they will have to report from 2027 onwards.⁴⁴ For example, 83% of Amcor's greenhouse gas (GHG) emissions are Scope 3 purchased goods and services.⁴⁵

Plastics are the fossil fuel industry's next growth market as demand for oil, gas and coal may decline due to the electrification of energy.

Petrochemical demand for oil as inputs to produce plastic and fibres is already driving oil growth and is expected to continue.⁴⁶ Without fundamental transformation of the global plastics system, greenhouse gas emissions from plastics will jump 58% by 2040 to 4.2 gigatons of CO₂e, roughly equivalent to emissions from one billion gasoline-powered cars.⁴⁷

As shown below, decarbonising production isn't enough, we need to reconsider the role of plastic packaging in our economy.

³⁸ Hannah Ritchie, Our World In Data, 2023 [How much of global greenhouse gas emissions come from plastics?](#) and AMCS and WWF, 2023, [Climate impacts of plastic consumption in Australia](#).

costs see WWF, [Plastics: The Cost to Society and The Environment](#), p.7.

³⁹ Laurie Wright, 2019, [Plastic warms the planet twice as much as aviation – here's how to make it climate-friendly](#), The Conversation.

⁴⁰ PEW, 2025, [Breaking the Plastic Wave 2025, An Assessment of the Global System and Strategies for Transformative Change](#).

⁴¹ Arijeniwa et al, 2024, Journal of Environmental Management, [Closing the loop: A framework for tackling single-use plastic waste in the food and beverage industry](#).

⁴² Dominic Charles and Laurent Kimman, [Plastic Waste Makers Index](#), 2023, Minderoo Foundation, p.10

⁴³ Dominic Charles and Laurent Kimman, Ibid, 2023, Minderoo Foundation, p.29-30

⁴⁴ Scope 3 emissions are those that occur in a businesses' supply chain that it does not have operational control over

⁴⁵ Amcor Limited, 2025, [Sustainability Report](#), p.42.

⁴⁶ IEA, 2025, [Oil 2025 Analysis and forecast to 2030](#), p.29.

⁴⁷ PEW, 2025, [Breaking the Plastic Wave 2025, An Assessment of the Global System and Strategies for Transformative Change](#).

The cost of plastic packaging

Figure 10: Plastic's Carbon Footprint Will Grow at an Accelerating Pace Under BAU, Even if the Plastic System Is Decarbonized
Cumulative GHG emissions with and without decarbonization in GtCO₂e, 2025–2040

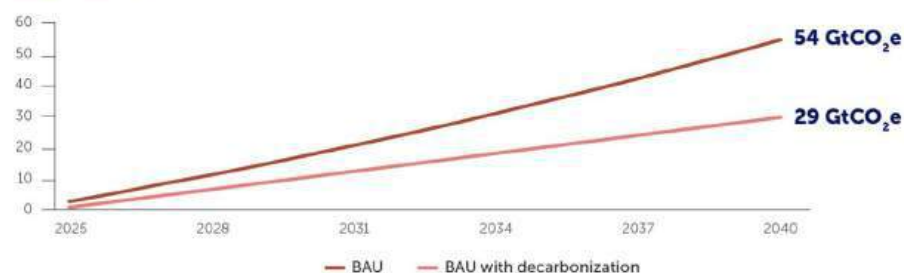


Figure 5: Plastic Carbon Footprint with different energy sources

“Universal Owners” - highly diversified, long-term investors like pension funds - ultimately bear some of the costs of plastic pollution because their portfolios represent the global economy. Although individual portfolio companies may profit from plastic production, the widespread health and ecological externalities of plastic pollution reduce overall market returns by harming productivity and economic growth across every other sector.

Universal Owners therefore have economic incentives to push portfolio companies to reduce plastic pollution, much as they do with climate emissions. As The Shareholder Commons notes, diversified investors benefit when portfolio companies reduce harm that threatens the broader economy, even if it reduces individual company profits.⁴⁸

What about investors in the companies that stand to profit from the growth of plastic?

They may pay the price of reduced profits through litigation from knowingly using chemicals that harm human health, environmental damage, misleading conduct, government regulation and laws that put the cost of addressing plastic pollution onto companies (e.g. via Extended Producer Responsibility schemes) and brand damage through greenwashing.

⁴⁸ The Shareholder Commons, 2022, [Climate Change and the Engagement Gap: Why Investors Must Do More than Move the Needle, and How They Can](#).

Risks for companies and investors

Legal

The Minderoo Foundation estimated lawsuits triggered by plastic and micro-plastic pollution are expected to cost petrochemical and plastics companies over US \$20 to 100 billion by 2030. Companies connected to harm from plastic face potential financial liabilities through litigation for 1) plastic-related chemicals (E.g. PFAS) and bodily harm, 2) micro and nano-plastics and bodily harm 3) environmental damage 4) misleading behaviour and 5) micro and nano-plastics and property damage. Of these, the authors contend litigation for bodily harm caused by plastic-related chemicals, especially certain phthalates, bisphenols and flame-retardants, is the highest risk of materialising by 2030, based on developments in the science of attribution and of legal doctrines and standards.⁴⁹ There are currently 69 lawsuits against companies in US state and federal courts, largely filed by US state Attorney Generals for reasons including misleading representations and harms caused by single-use and micro and nano-plastics.⁵⁰

The presence of hazardous chemicals like phthalates, PFAS and BPA has widened class actions against major US food companies for misleading advertising, while the pool for PFAS lawsuits has widened over time from just manufacturers to commercial users of PFAS, as well as to Europe and Australia, drawing comparisons to asbestos.⁵¹

The Australian Government sued chemical company 3M in 2026 for \$2 billion for massive environmental and health damages caused by PFAS ("forever chemicals") in aqueous film-forming foam (AFFF). The case rests on allegations 3M's actions constitute negligence, misleading or deceptive conduct and public nuisance and is clear evidence that more of these claims are likely to be filed in Australia.⁵²

Policy and regulation

Australian NGOs, cross-bench politicians and the packaging industry peak body, APCO, are urging the Government to legislate a mandatory Extended Producer Responsibility (ERP) scheme in 2026 that would shift the responsibility and cost of packaging from consumers and local councils to producers. Policy details haven't been announced, but if the proposed policy aligns with global plastic policy norms, this will mean mandatory national targets covering reduction, reuse, recycling and recycled content, and fees charged to "producers" based on how difficult the plastic is to recycle ("eco-modulated fees"). In overseas EPR schemes, "producer" includes companies throughout the plastic packaging value chain. For companies covered in this report, this could mean:

- high fees for packaging that is hard to recycle or reuse
- data collection and reporting on plastic types and volumes
- changes to packaging design

⁴⁹ The Shareholder Commons, 2022, [Climate Change and the Engagement Gap: Why Investors Must Do More than Move the Needle, and How They Can](#).

⁵⁰ Minderoo Foundation, [The Price of Plastic Pollution](#), 2022, p.22.

⁵¹ New York University School of Law, 2026 [Plastic Litigation Tracker](#).

⁵² Rosa Pritchard and Alice Merry, 2022, [Plastics on Trial: a briefing series on evolving liability risks related to plastics](#), Client Earth, p.9.

⁵³ Rosa Pritchard and Alice Merry, 2022, [Plastics on Trial: a briefing series on evolving liability risks related to plastics](#), Client Earth, p.9.

Risks for companies and investors

APCO estimates their recommended ERP scheme fee of \$415-551 per ton of soft plastic packaging and \$60 per ton for rigid plastic will increase soft plastics recycling from 6% in FY24 to 19% in FY30 and rigid plastic recycling from 28% to 36%. This is payable by the brand owner that puts the packaging on the market, with escalating ERP fees in the latter 2020s.⁵⁴ Far lower than the true cost of plastic, but nonetheless a cost that businesses will have to pay. PEW estimates the plastics industry could face a \$100 billion bill by 2040 if governments pass the full cost of plastic waste management to industry via ERP schemes.⁵⁵

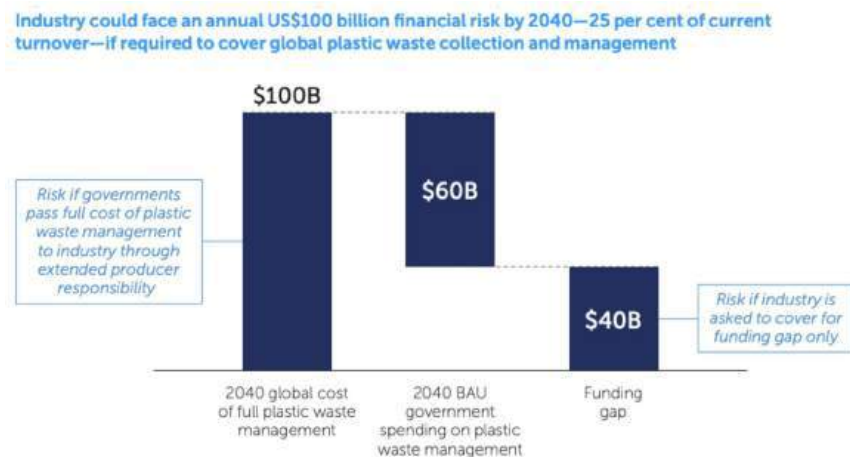


Figure 2: Funding gap for government spending on plastic waste management

Investor advocacy

Institutional investors are increasingly demanding companies act to reduce plastic waste. In 2023, 185 asset managers and owners with over USD \$10 trillion in assets called on the largest companies in the fast-moving consumer goods and grocery retail sectors to be more ambitious and act quicker to reduce their dependence on single-use packaging, and align with international climate and biodiversity agreements, including by supporting effective government policy.⁵⁶

Shareholder advocacy organisation, As you Sow, negotiated with nine major consumer goods companies to commit to reduce over 1 million tons of plastic,⁵⁷ and have already filed six resolutions as US companies in 2026.⁵⁸

300 global companies (including Amcor) have joined the Business Coalition for a Global Plastics Treaty, supporting the (yet to be achieved) Global Plastics Treaty, including moving away from SUPs towards reusable alternatives.⁵⁹

⁵⁵ PEW, 2020, *Breaking the Plastic Wave, A Comprehensive Assessment of Pathways Towards Stopping Ocean Pollution*, p.29.

⁵⁶ Investor Statement on Plastics, 2024, *Investors call for urgent action to reduce plastics from intensive users of plastic packaging*.

⁵⁷ As You Sow, 2026 *Plastic Pollution*.

⁵⁸ UNPRI, 2026, *Resolution Database*.⁵³ Rosa Pritchard and Alice Merry, 2022, *Plastics on Trial: a briefing series on evolving liability risks related to plastics*, Client Earth, p.9.

⁵⁹ *Business Coalition for a Global Plastics Treaty*.

Risks for companies and investors

Despite this, equity risk premiums - a basic measure of risk for equity investors - declined since 2012 and especially since 2022 for the largest companies in the three major segments of the plastic value chain: petrochemicals, packaging and retailers. This suggests investors view them as less risky than before, however, this was against a backdrop of declining risk premiums across developed market equities.⁶⁰ The authors also suggest plastics are not the only contribution to many of these companies' risk profiles. Investors may also believe the companies can weather any financial claims on them due to the large expected market growth for plastics.⁶¹

The plastic growth forecasts may turn out to be reasonable, however, structural forces are against them. Single-use plastic growth is strongly correlated to growth in GDP per capita and population, implying structurally lower growth rates of 2.7% than using past growth rates of 4.1% from 2005-19.⁶² That also says nothing of the pressure from policy, citizens and consumers to reign in the industry's growth due to growing awareness of its harms.⁶³

One study found companies in resource-intensive sectors with a higher degree of circularity drove superior risk-adjusted performance, considering a stock either on a standalone basis or in a fully diversified portfolio, and lower probability of default.⁶⁴

For the companies we assessed, failing to manage these risks could directly affect long-term returns. Likewise, if they proactively align with emerging standards to reduce plastic packaging use they could benefit from reduced legal fees and fines, stronger regulations and consumer trust.



Investors should set public expectations with companies and consider escalating through voting against directors and supporting shareholder resolutions if companies fail to meet them.

⁶⁰ Robeco, 2025, [When the equity risk premium fades, alpha shines](#), p.3.

⁶¹ Planet Tracker, 2023, [Measuring investors' risk in the plastic sector](#), p.21.

⁶² Dominic Charles and Laurent Kimman, [Plastic Waste Makers Index](#), 2023, Minderoo Foundation, p.25.

⁶³ YouGov, 2024, [78% of Australians are concerned about the use of plastic in the nation](#).

⁶⁴ Bocconi University, Ellen MacArthur Foundation and Intesa Sanpaolo, 2021, [The circular economy as a de-risking strategy and driver of superior risk-adjusted returns](#), p.14.

Survey results and analysis

Plastic packaging users on the ASX

In Australia there is no single source which maps plastic packaging flows by GICS sectors, however, by considering global trends, APCO and Government reports, industry, company reports and third-party waste collection data, a few industries are likely using the majority of Australia's plastic packaging and therefore have a responsibility to help to minimise it.

The Australian Marine Conservation Society (AMCS) annually audits the progress made by Australia's major supermarkets to address their plastic use. This report doesn't cover supermarkets, but investors in these companies should consider the risks to excessive plastic packaging use in combination with AMCS reports.⁶⁵ See Methodology section for more information.

Finding 1: No companies we assessed have set public targets to reduce plastic packaging across their entire businesses and report progress in a consistent way. Most companies report no actions to reduce or reuse packaging.

14 out of 22 companies have not reported action to reuse packaging and 10 out of 22 reported no action to reduce it. This is a critical failure, as recycling alone cannot fix the problem.⁶⁶ Some companies are working with suppliers to reduce plastic waste in their supply chains, for example through enforcing timebound expectations of suppliers to reduce waste through their own operations. However, without company-wide reductions this may be offset elsewhere in their businesses.

If they reported any reductions, companies gave examples of items or areas rather than company-level figures. For example, rather than reporting the change in the total plastic packaging used in a year (by weight or item codes) they report data without context, such as:

"Our target is to reduce the per-unit weight of woven polypropylene (WPP) plastic packaging bags by 10% (against a FY23 baseline) by 2030" - Ridley Corporation⁶⁷

"Domino's is working to phase out single-use plastics...In Australia we do not offer plastic bags" - Dominos Pizza Enterprises

⁶⁵ Australian Marine Conservation Society, 2025, [Unwrapped: Plastic use in Australian supermarkets](#).

⁶⁶ PEW, 2020, Breaking the Plastic Wave, [A Comprehensive Assessment of Pathways Towards Stopping Ocean Pollution](#), p.34.

⁶⁷ Ridley Corporation, 2025, [Sustainability Report](#), p.10.

⁶⁸ Dominos Pizza Enterprises Limited, [Sustainable Packaging](#).

Survey results and analysis

While these actions are necessary to reduce plastic packaging, they don't indicate if the company reduced their use of it overall, as their total usage could have increased despite these actions. This matches AMCS' findings with the major supermarkets (e.g. swapping plastic bread tags to cardboard, replacing black plastic trays in bakeries to cardboard).⁶⁹ These statements are equivalent to a company claiming to reduce its impact on climate change by avoiding greenhouse gas emissions by buying renewable energy, but not reporting total emissions.

This opaque reporting makes it harder for investors, governments and civil society to hold companies accountable. A food manufacturer may privately report the Business-to-Business (B2B) and Business-to-Consumer (B2C) packaging they use to APCO, while publicly reporting only B2B data, publicly assigning responsibility to the retailer for dealing with that waste. The retailer may also claim that it's not responsible for private label packaging and not report the volumes generated in their figures meaning no one takes responsibility for it.

Bega reported total packaging it used by weight over the past 3 years and reported that it reduced packaging by 25% over that period. While it didn't state the boundary of its reporting or the amount of packaging that was plastic, it was the only company to report total packaging used. Adairs reports packaging data by weight and SKU to APCO but doesn't publicly report this information.



Investors should ask companies to commit to, and start delivering, an absolute reduction of plastic packaging, prioritising eliminating unnecessary single-use packaging, and introducing reuse and refill options where there is a genuine need for packaging. They should report regularly and publicly on progress meeting these goals.

⁶⁹ Australian Marine Conservation Society, 2025, [Unwrapped: Plastic use in Australian supermarkets](#).

Case study



Reusing, Monitoring and Disclosing Packaging Use

Retailers with global presence are leading the action to measure and reduce plastic packaging.

Tesco, the UK's largest supermarket chain, first reported packaging data in 2018, and now reports packaging use and reductions by material type, split into own-brand and vendor-branded products, as a total tonnage amount, against its targets.⁷⁰

Tesco also conducted a 2-year trial with reusable packaging company Loop, which allowed customers to buy 200 products in pre-filled reusable packaging in-store or online, and return it for cleaning and refilling. Tesco reported many customers used the system, and that it can scale cost-efficiently where multiple suppliers and retailers use the same distribution networks.⁷¹ This matches economic analysis that found returnable packaging for beverages and personal care items can compete on cost with single-use when infrastructure is shared.⁷²

⁷⁰ Tesco, 2024, [Packaging Factsheet](#).

⁷¹ Tesco, [Reuse Report 2022](#), p.1.

⁷² Ellen MacArthur Foundation, [Unlocking a reuse revolution: scaling returnable packaging](#), p.35.

Case study



Innovating packaging data collection

Seabin is an Australian start up that captures plastic in Sydney and Melbourne waterways to use information about plastic waste it collects in Sydney and Melbourne to help companies understand their plastic waste footprint, including listed Fast-Moving Consumable Goods (FMCG) companies like Koala.

Companies generally take responsibility only for their own brand packaging but not private label packaging. If companies cannot fix plastic waste issues themselves they need to work with their suppliers. Our survey suggests companies understand this as nearly half said they worked with suppliers in the past year to reduce plastic packaging.



Set expectations of suppliers

JB HI-FI engages with suppliers to minimize packaging waste and expects supplier packaging to meet transparent and detailed sustainability criteria by 1 January 2026 set out in its supplier policy, including eliminating unnecessary single-use plastics (SUP) and minimum 50% recycled content.⁷³

As mentioned, there are examples of companies reducing packaging, but these are a minority. 10 out of 22 companies didn't provide any evidence they reduced plastic packaging, and 14 out of 22 companies didn't provide evidence of using reusable packaging.

6 companies - Nick Scali, Cettire, Dominos, Wesfarmers, Inghams and Select Harvest - reported no action to either reduce or reuse packaging, making them laggards compared to industry peers.

Companies that don't reduce total plastic packaging, especially single-use plastic, by avoiding the need for it may face higher costs or lose business opportunities, therefore putting long-term value creation and investment returns at risk. Accelerating bans, litigation, taxes and ERP costs shows these are material risks.

However, with current disclosures of packaging use and actions to minimise it we don't know if companies are making progress at all.

Survey results and analysis

Finding 2: Companies need to support stronger government policy to reduce plastic packaging and promote reusable packaging

If companies believe a collective solution is the best way to address this problem then they need to invest more in collaborating with governments, NGOs, suppliers, packaging developers and industry given the failed voluntary National Packaging Targets - the key commitment from Australian industry and government to transition towards a circular economy for packaging. They should be encouraging APCO or other industry bodies they are members of to lobby governments for more effective policies that are not self-regulatory. Companies should also publicly report their progress to meet APCO's goals.

The exception is packaging company Amcor. They participate in discussions surrounding the UN Global Plastics Treaty and regional frameworks like Europe's Packaging and Packaging Waste Regulation (PPWR). Amcor explicitly supported mandatory recycled-content laws and virgin plastic reduction targets, which can (at best) be achieved through increased recycling. However, they don't support policy to mandate reduction, reuse or refill targets, which is unsurprising given their entire business is mostly short-lived packaging.⁷⁴

Industry	Average policy score
Food & Beverages	14%
Packaging	57%
Healthcare	11%
Restaurants	25%
Retail	23%



Investors should ask companies to publicly support ambitious packaging policy, especially Australia and the EU's imminent changes to packaging laws. This includes not lobbying directly or via industry groups to weaken their ambition and effectiveness.

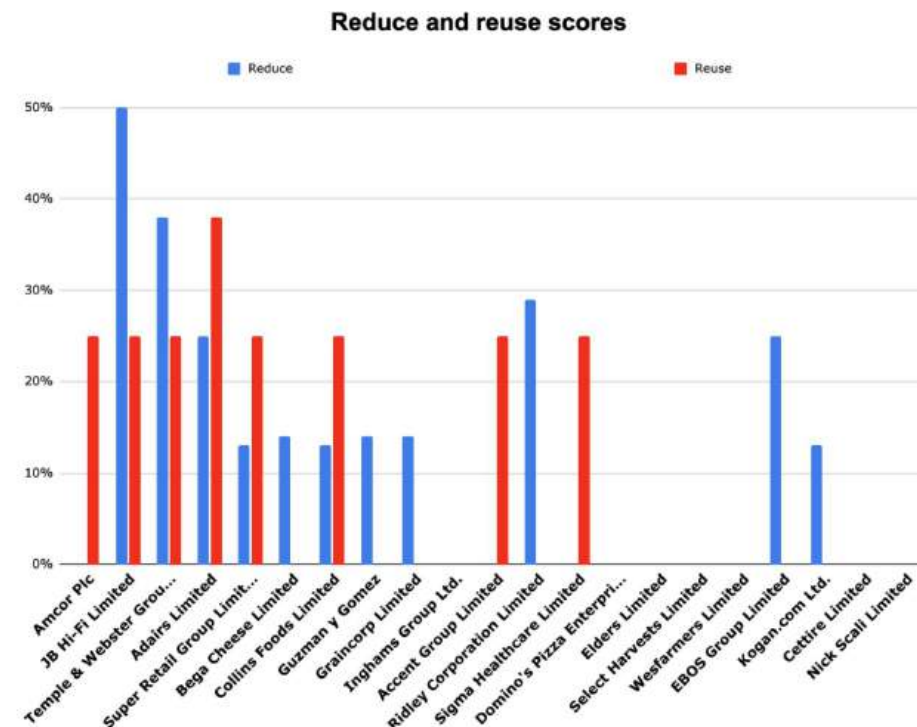
⁷⁴ Amcor, 2024, [How Amcor and Mars shaped the EU's new packaging regulations](#)

Survey results and analysis

Finding 3: Many companies are making progress on recycling, but failing on upstream reductions

17 out of 22 companies reported taking some action to increase recycling, mostly by increasing the proportion of recycled plastic in packaging. Only Nick Scali, Kogan, Cettire and Accent provided no evidence of doing anything. This is likely due to a number of factors:

Firstly, APCO members are expected to contribute towards progressing the four National Packaging Targets, which focus heavily on increasing the recyclability of packaging, increasing the proportion of packaging which is recycled, and increasing the recycled content of packaging. The one national packaging target to reduce packaging is the phase out of problematic and unnecessary single-use plastics – and reductions in this area may be offset by increases in other plastic types and formats used by businesses.⁷⁵



Secondly, the infrastructure and systems for recycling, while inadequate, is still more advanced than reuse and reduce options (e.g. supermarkets prefer to package groceries like nuts, cheese and meat in recycled plastic instead of letting customers bring their own containers).

⁷⁵ APCO, [Australia's National Packaging Targets](#)

Survey results and analysis

Industry	Average recycle score
Food & Beverages	33%
Packaging	42%
Healthcare	17%
Restaurants	22%
Retail	13%

Bega and Inghams are examples of leaders in recycling. They have policies in place that prioritise using recyclable or compostable packaging, which (at best) displaces virgin plastic, and report the amount of recycled content (as a % of total packaging weight) in their packaging materials (90% and 86% respectively) - though the boundary of this data is unclear. This matches the behaviour of large US companies.⁷⁶

While this is important for developing a circular plastic economy, recycling alone doesn't address the fundamental problem of excessive plastic packaging. For a circular economy to function we need less plastic overall and a better way to manage it.

⁷⁶ Kelly McBee et al, As You Sow, [Plastic Promises Scorecard 2024](#), p.11

Glossary

Bio-based plastics	Material that is partly or largely derived from biomass (plants) resources, such as sugarcane, corn, cellulose etc.
Biodegradable Plastics	Plastic packaging material which 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 (micro plastics) with the addition of chemicals to speed up this process, often when the material is exposed to oxygen (oxo-degradable), or light (photo-degradable).
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 in home (AS 5810-2010). Compostable materials should be considered a lower priority than reduction and reuse. Due to the limited commercial recycling facilities in Australia (with far lower concentrations in states such as Qld), many commercially compostable packaging items will end up in landfill, or incorrectly disposed of in commingled recycling streams. Currently, approximately 30% of Australian households have access to a Food Organics Garden Organics (FOGO) service (https://www.dcceew.gov.au/environment/protection/waste/food-waste/recovering-organic-waste). There are ongoing discussions surrounding the presence of PFAS in compostable packaging.
Circular economy	A circular economy aims to decouple growth from finite resource consumption. Its core objectives are to design out waste and pollution, preserve and enhance resource value, and regenerate natural and social systems.
Mandatory Extended Producer Responsibility (EPR) 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.
PFAS (Per- or Poly-Fluorinated Alkyl Substances)	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.

Glossary

Polymers	In reference to plastic types. The common plastic polymer types in packaging are as follows:
- PET	Polyethylene terephthalate, plastic type 1
- HDPE	High Density Polyethylene, plastic type 2
- PVC	Polyvinyl chloride, plastic type 3
- LDPE	Low Density Polyethylene, plastic type 4
- PP	Polypropelene, plastic type 5
- PS (rigid)	Polystyrene, plastic type 6. High impact polystyrene is rigid (not expanded), and is commonly used in takeaway coffee cup lids and bread tags.
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.
Problematic chemicals	Problematic chemicals are chemicals that are potentially hazardous to humans and/or the environment, such as the group of chemicals referred to as PFAS, which are persistent and bioaccumulate.
Recyclable packaging	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.

Glossary

Refill	Refillable packaging is designed to be used multiple times, through a dedicated system or reuse where a) the store or brand owns the packaging, accepts returns of packaging for cleaning and refilling and sells it again, or b) the customer owns the packaging and refills their container in store.
Reuse	Reusable packaging is designed to be used multiple times, for its originally intended purpose, as part of a dedicated system for reuse. This includes customer-owned packaging, store owned packaging, or brand owned packaging.
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.
Virgin materials	Materials that have not yet been used in the economy. Includes both finite materials and renewable resources.

Methodology

To determine which companies to focus on, we started with the ASX300 and selected Global Industry Classification Standard (GICS) industries most likely to use high amounts of plastic packaging:

- Broadline Retail
- Consumer Staples Distribution & Retail
- Containers & Packaging
- Food Products
- Hotels, Restaurants & Leisure
- Specialty Retail
- Textiles, Apparel & Luxury Goods
- Health Care

We then used judgement to eliminate companies within those industries that did not have products or services likely to use significant amounts of plastic packaging (for example, Orora sold its plastic packaging business and now exclusively makes glass and metal packaging). We did not assess supermarkets to avoid replicating the Australian Marine Conservation Society (AMCS) annual plastics audit of those companies.

We then adapted a survey created by AMCS and the Boomerang Alliance for supermarkets to be applicable to multiple industries, which you can view [here](#). We emailed each company the survey to offer them the chance to ensure we used the most accurate and up-to-date data to assess them. As no companies responded, we used publicly available information, prioritising company reports, press releases and APCO reports.

We weighted survey sections based on the waste hierarchy, an internationally recognised tool used by governments, businesses and civil society to evaluate which actions to prioritise to protect the environment and avoid wasting resources.

Section		Weighting
1	Policy and lobbying	20%
2	Reduce	40%
3	Reuse	30%
4	Recycle	10%

Please email james@six-invest.com.au if you would like to see individual company survey results.

Disclaimer

The information provided in this document does not constitute financial advice. The information is of a general nature only and does not take into account your individual financial objectives, situation or needs. It should not be used, relied upon or treated as a substitute for specific professional advice. SIX recommends that you obtain your own independent professional advice before making any investment decisions.

Sustainable Investment Exchange Pty Ltd (ABN 61 669 461 465, AFSL no. 557092).

© 2024 SIX. All rights reserved.



SIX

<https://www.six-invest.com.au/>