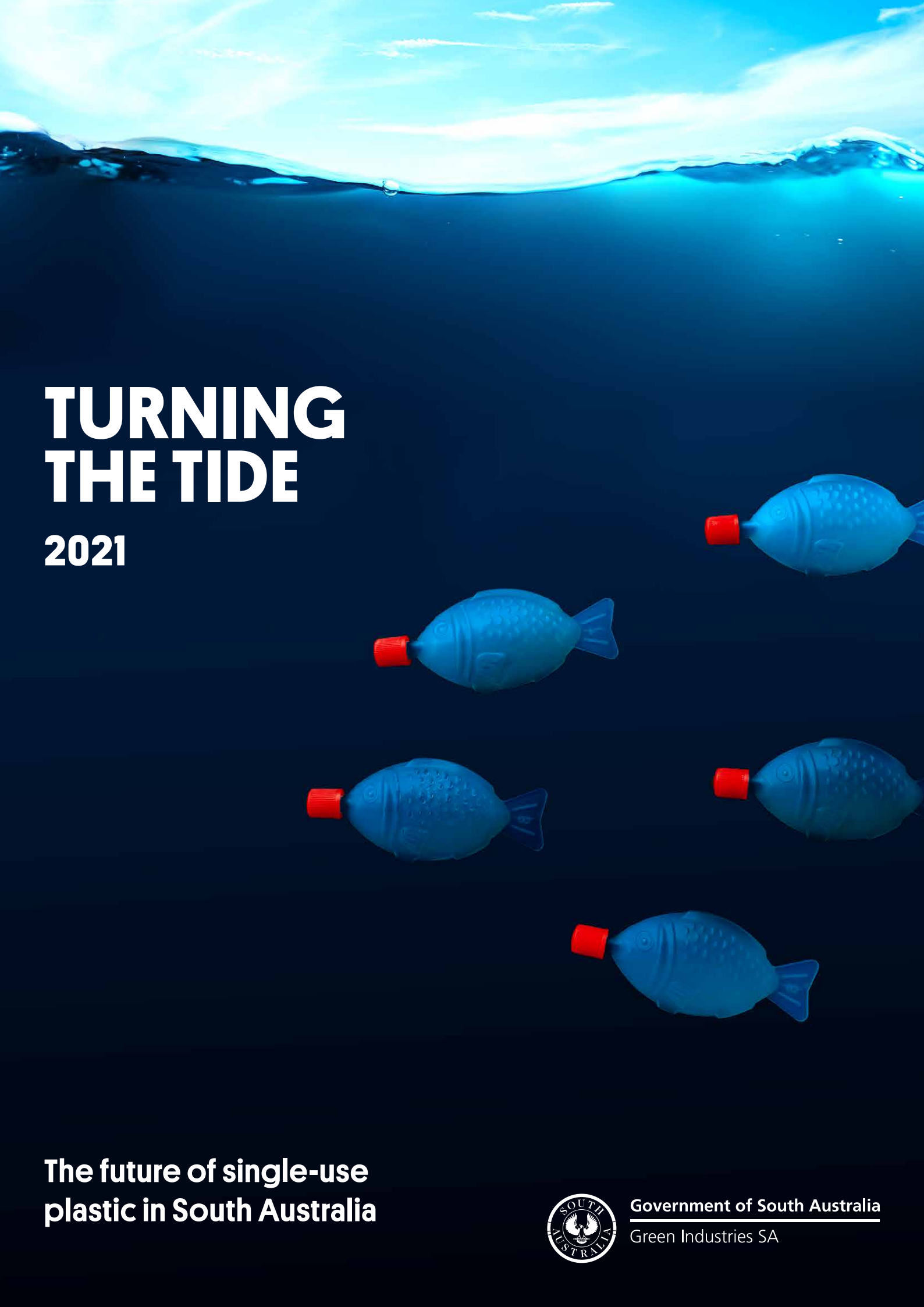

TURNING THE TIDE

2021

The future of single-use plastic in South Australia

Government of South Australia
Green Industries SA

Government of South Australia

Green Industries SA

Published by:

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Acknowledgement of Country

We acknowledge the Kaurna people of the Adelaide Plains as the traditional custodians of the land on which we live and work on.

We respect their spiritual relationship with Sea and Country and acknowledge their Elders – past, present and emerging.

We also pay our respect to the cultural authority of Aboriginal and Torres Strait Islander peoples from other areas of South Australia and Australia.

Contents

From the Minister

South Australia enhanced its already impressive environmental credentials last year when it became the first Australian state to ban and restrict some of the most problematic single-use plastics: straws, cutlery and beverage stirrers. This was a lighthouse moment for our nation and provided a strong signal that other jurisdictions have since followed.

South Australia's *Single-use and Other Plastic Products (Waste Avoidance) Act 2020* came into operation on 1 March 2021, and I have been encouraged both by the willingness of business and industry to adjust and adapt to the changes and by the ongoing community support for the State Government's vision and intent.

A second phase of change will begin soon. From 1 March 2022, expanded polystyrene cups, bowls, plates and clamshell containers will be banned, as will oxo-degradable plastic products, which include some produce bags, pet waste bags, bin liners, magazine wraps and dry cleaning bags.

But there is more work to be done, and the government is seeking opinions and ideas from all South Australians about products to be considered for possible future phase outs. Specifically, we are looking for input in relation to nine plastic products identified in the legislation alongside a range of other products.

It is an important issue, but also a complex one.

We know that a culture of convenience has a high cost for our state, our nation and our planet, and that we can make a big difference by replacing single-use products with those that can be reused or genuinely recycled in a circular economy.

At the same time, we know that the manufacture and use of these products is very much a part of modern society, so change requires thought, care and planning. We need to be clear about the alternatives and put in place sensible strategies and timelines.

But ultimately, we need to address wasteful consumption habits, and this is an important step that all South Australians can take. I encourage you to read this paper and join the discussion.

David Speirs MP
Minister for Environment and Water

What we want to know

Two stages of South Australia's initiative to turn the tide on single-use plastic are already in train.

- On 1 March 2021, single-use plastic **straws, cutlery and beverage stirrers** were prohibited from sale, supply or distribution in the state. Exemptions apply in some circumstances, such as allowing access to single-use straws for disability or medical needs.
- From 1 March 2022, the sale, supply or distribution of **expanded polystyrene cups, bowls, plates and clamshell containers** will be prohibited, as will the manufacture, production, sale, supply or distribution of **oxo-degradable plastic products**, which include additives to accelerate their fragmentation.

We are now seeking community and industry input to help consider future stages of product phase-outs and the timing of these.

The following nine product groups have been identified for attention at section 14(2) of the *Single-use and Other Plastic Products Act 2020*:

- single-use plastic cups (including coffee cups)
- single-use plastic food containers
- single-use plastic bowls
- single-use plastic plates
- plastic lids of single-use coffee cups
- plastic balloon sticks
- plastic balloon ties
- plastic-stemmed cotton buds
- plastic bags

Other products being considered in this discussion paper include:

- fruit stickers
- plastic confetti
- plastic pizza savers
- plastic soy sauce fish
- plastic beverage plugs
- plastic bread tags
- other expanded polystyrene consumer food and beverage containers
- expanded polystyrene trays used for meat, fruit and other items for retail sale

Each of these products is considered in this paper, beginning on page 16. There are issues specific to each product, but in general we are seeking answers to the following questions in each case:

- Should South Australia consider banning or restricting this product group?
- Are there viable alternatives, and if so, what are they?
- What sort of exemptions, if any, may be needed?
- What are the health, economic, logistical or social issues that should inform any decisions?
- What sort of timeframes should be considered?
- How long would businesses, industry and supply chains need to prepare?

Your feedback

Your views will help inform government consideration of phase-outs of the different product groups, implementation timeframes and matters for further consideration, such as alternative products and potential exemptions.

You may agree or disagree with or comment on the general issues discussed in this paper, or the proposed measures identified to address single-use plastic products.

Please provide reasons for your comments, supported by relevant data and information. You can make an important contribution by suggesting more appropriate ways to address single-use plastic products.

Comments can be provided in writing or online, including by undertaking a short survey, at:

replacethewaste.sa.gov.au/survey

Written submissions must be lodged with Green Industries SA in writing, either via our email address sup@sa.gov.au or by post to GPO Box 1047, Adelaide, SA 5001.

Include your name, position, organisation and contact details (telephone number, email and postal address) with your submission.

The deadline for comments and submissions is **5:00pm, Saturday, 19 February 2022.**

Submissions will be treated as public documents, unless received in confidence subject to the requirements of the *Freedom of Information Act 1991*, and may be quoted in full or part in subsequent Green Industries SA (GISA) reports. If you do not want the public to read your answers, please write "confidential" on your submission.

A summary of feedback will be prepared and released publicly. Subject to the outcomes of this consultation process, further consultation with business, industry and other parties will be undertaken.

Tips for written submissions

- List points so that issues raised are clear, and include a summary of your submission.
- If possible, in each point refer to the appropriate section, chapter or proposal in this discussion paper.
- If you discuss different sections of this document, keep these distinct and separate, so there is no confusion as to which section you are considering.
- Attach any factual information you wish to provide and give details of the source.

Scan here to take our fast, four minute survey

Background and context

The plastic problem

It is recognised around the world that phasing out single-use plastics is an important and achievable step in striving to reduce pollution, cut carbon emissions and protect marine life.

There are a range of plastic packaging and consumer products that are designed to be used once, often away from home and for just a short time or a very limited number of uses, before being thrown away. These include packaging, bags and disposable foodware items.

Consumers and industry can make a conscious choice to avoid problematic and unnecessary single-use plastics, and when supported by governments these seemingly small actions result in real and powerful environmental benefits.

Globally recognised concepts such as ecologically sustainable development, the circular economy, the waste management hierarchy and the United Nations Sustainable Development Goals [see Appendix 5] provide a framework for how we should consider our impact on the planet and what steps we should take.

Much of the information and content contained in this discussion paper is based on desktop research and investigation and has been framed within the context of these existing policy settings and the underlying community sentiment associated with single-use plastics.

The views and perspectives of business and industry are crucial in considering initiatives regarding single-use plastic products. This was demonstrated in the feedback received on the *Turning the tide on single-use plastic products* discussion paper in 2019 and in the deliberations of the South Australian Government's Single-Use Plastics Stakeholder Taskforce that informed the development of the state's legislation, The *Single-use and Other Plastic Products (Waste Avoidance) Act 2020* and *Other Plastic Products (Waste Avoidance) Act 2020*.

There are clear advantages in replacing non-recyclable products with those that can be recycled, and all such endeavours are to be applauded. However, the real problem is that the

products are single-use. They require resources and energy to manufacture and distribute, and comprehensive, integrated and accessible systems to effectively recycle. A potentially recyclable item can easily become litter or find its way into landfill.

Avoiding the need for some products altogether, or designing products to be reusable as part of a circular economy approach, is a preferred outcome, but manufacturers will need support to achieve this. It will take time to put in place required systems and infrastructure changes, in part because of global production and supply chain logistics.

The South Australian story so far

The *Turning the tide* discussion paper received 3,564 public submissions, comments, survey responses and letters, along with 68 submissions from industry stakeholders. There was broad support for increased measures to address single-use plastics, and many respondents shared how they were achieving this in their own households, businesses, organisations and communities.

There was also support for government intervention, with the rationale that this was needed for change(s) to be achieved. The discussion paper referenced specific items – straws, cutlery and takeaway coffee cups among them – but respondents felt there were others to be considered.

Most comments related to the packaging of items by manufacturers or at retailers' point of sale, or to takeaway food containers.

A subsequent document, *Turning the tide on single-use plastic products: Approach and next steps*, released in July 2019, set out the Government's response. It announced the intention to develop legislation to phase out single-use and other plastic products, establish a stakeholder taskforce to inform the development of the legislation and implement a plastic-free precinct pilot program.

Legislation to restrict and prohibit certain single-use and other plastic products was introduced into the South Australian Parliament on 30 April 2020 and was passed on 9 September 2020. The *Single-use and Other Plastic Products (Waste Avoidance) Act 2020* (SUP Act) came into operation on 1 March 2021. Exemptions under the Act were implemented via regulations on the same date.

The first stage of the single-use plastic legislation has been hugely successful with broad adoption by the public and the introduction of a range of alternatives to the market. The second stage will commence on 1 March 2022, with other stages to follow.

For more detailed information about South Australia's journey, see Appendix 1.

National and international responses

Since the release of South Australia's discussion paper (2019), the Australian Government and other state and territory governments have taken further steps to address problematic and unnecessary plastic products, with strong community support. This combination of efforts is highlighted in Appendices 2 and 3.

Of particular note, at a meeting on 15 April 2021, Australian environment ministers identified eight product types for industry to phase out nationally by 2025, if not sooner, given progress on some items. These are:

- lightweight plastic bags
- plastic products misleadingly termed as "degradable"
- plastic straws
- plastic utensils and stirrers
- plastic bowls and plates
- expanded polystyrene (EPS) consumer food containers (e.g. cups and clamshells)
- EPS consumer goods packaging (loose fill and moulded)
- microbeads in personal health care products.

Although timeframes may vary between states and territories, some alignment and consistency is evident, which strengthens South Australia's resolve to continue to demonstrate its leadership and commitment within the context of this more holistic approach.

Globally, action continues in relation to single-use and other problematic and unnecessary plastics. Appendix 4 highlights some of these approaches.

According to the Intergovernmental Panel on Climate Change (IPCC), the evidence is clear that carbon dioxide (CO_2) is the main driver of climate change, even as other greenhouse gases and air pollutants also affect the climate. A 2021 report states that human actions still have the potential to determine the future course of climate and that this will require strong, rapid, and sustained reductions in greenhouse gas emissions. [See Appendix 5]

The Centre for International Environmental Law suggests that over 99% of plastics are sourced from chemicals made from fossil fuels. The production of plastics from fossil feedstocks has a significant carbon impact that will become even more significant with the projected surge in consumption of plastics. [See Appendix 5]

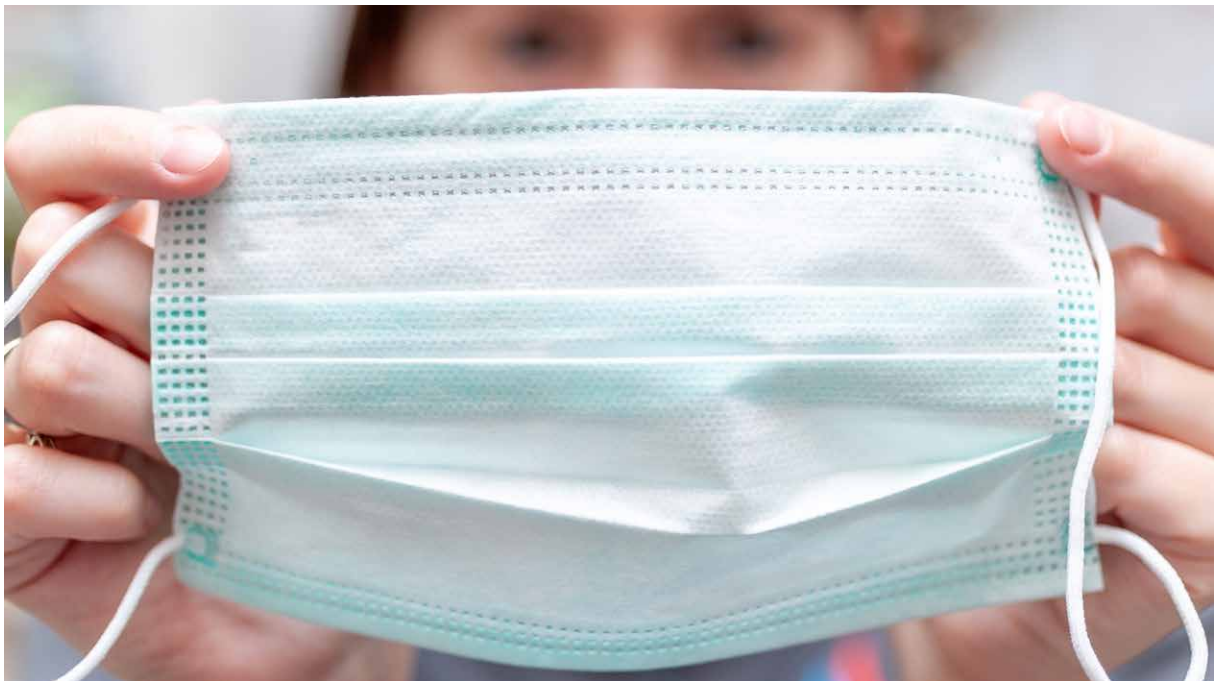
Impact of COVID-19

The COVID-19 pandemic has required greater use of single-use plastic items to comply with hygiene guidelines, particularly in health and medical settings.

For this reason, plastic products used specifically for health-related applications are not considered for phase out through the SUP Act.

The most obvious issue is with face masks, which are mandatory in some public places in South Australia and recommended in many others. Neither single-use nor reusable masks can be recycled through kerbside bin systems. SA Health's advice is that they be placed in waste bins.

There have been proposals in Australia and overseas regarding recycling disposable masks. However, these need to be considered in the context of public safety and associated health advice.



South Australia's second stage

On 1 March 2022, expanded polystyrene (EPS) cups, bowls, plates and clamshell containers will be prohibited from sale, supply or distribution in South Australia. This date has been included in the legislation since its commencement and aligns with the Government's July 2019 commitment that these products will be prohibited 12 months following the initial products.

As identified by the Australian Packaging Covenant Organisation (APCO), food packaging made from EPS is currently not recyclable through kerbside recycling services in Australia, and there are no alternative collection systems available. [See Appendix 5]

Because EPS is light and very buoyant, many containers find their way into waterways and oceans, where they persist for long periods (the material does not biodegrade) before breaking down into microplastics. These small pieces then find their way into the marine food chain.

Other Australian states and territories have banned or are intending to ban these types of EPS products, as they are generally regarded as problematic and unnecessary (see Appendix 1). The European Union's ban on EPS cups and food and drink containers (including lids) came into effect in July 2021 and applies to its 27 member states.

Oxo-degradable plastic products will be prohibited from sale, supply or distribution, as well as from manufacture and production, in South Australia on 1 March 2022. This date has also been included in the legislation since its commencement and was announced by the Government in July 2019.

As defined in the SUP Act, oxo-degradable plastic means a material (however described) made of plastic which includes additives to accelerate the fragmentation of the material into smaller pieces, triggered by ultraviolet radiation or heat exposure, whether or not this is, or may be, followed by partial or complete breakdown of the material by microbial action.

Other Australian states and territories have banned or are intending to ban oxo-degradable plastic products (see Appendix 2). The European Union's ban on all products made of oxo-degradable plastic came into effect in July 2021.

Some produce bags, pet waste bags, bin liners, magazine wraps and even some dry cleaning bags are comprised of oxo-degradable plastic and will be banned.

As identified by APCO (see Appendix 5), the issues associated with fragmentable plastics are: microplastic pollution; difficulty differentiating it from conventional plastics; consumer confusion; potential contamination of mechanical recycling or organics streams; and potential for claims to breach Australian Consumer Law.

Examples of EPS products to be prohibited from March 1, 2022

What are South Australia's next priorities?

The SUP Act requires the Minister to prepare an Annual Report on the operation of the Act. The initial report, due in September 2022, must include information on the consideration of adding the following product classes to the list of prohibited products:

- single-use plastic cups (including coffee cups)
- single-use plastic food containers
- single-use plastic bowls
- single-use plastic plates
- plastic lids of single-use coffee cups
- plastic balloon sticks
- plastic balloon ties
- plastic-stemmed cotton buds
- plastic bags.

The SUP Act provides a framework for adding other products or classes of products to the list of 'prohibited plastic products'. This includes publishing a notice regarding the products, why they have been proposed for addition, information regarding the availability of alternative products and potential exemptions that may be required, followed by public consultation. This discussion paper is fulfilling the notice requirements and inviting submissions in accordance with the framework.

Some classes of products are quite clear-cut but others – notably single-use plastic cups (including coffee cups) and plastic bags – comprise a diverse range of products using a wide variety of plastics in an array of shapes and sizes.

To inform community submissions and comments, further detail is provided over the following pages on each of these product classes. Where relevant, discussion has been narrowed to a product-specific focus to align with approaches in other Australian states and territories.

Views are also sought on a range of other plastic products:

- fruit stickers
- plastic confetti
- plastic pizza savers
- plastic soy sauce fish
- plastic beverage plugs
- plastic bread tags
- other EPS consumer food and beverage containers
- EPS trays used for meat, fruit and other items for retail sale.

What is the timing?

The first two stages of the legislation are:

Stage 1

1 March 2021: prohibition of single-use plastic drinking straws (subject to exemptions), cutlery and beverage stirrers.

Stage 2

1 March 2022: prohibition of expanded polystyrene cups, bowls, plates and clamshell containers, and oxo-degradable plastic products.

This discussion paper proposes to prohibit additional products in stages within a 3 year timeframe as follows:

Stage 3

Within six to twelve months of 1 March 2022 – i.e. no later than 1 March 2023.

Stage 4

Within twelve to 24 months of 1 March 2022– i.e. no later than 1 March 2024.

Stage 5

Within 24 to 36 months of 1 March 2022 – i.e. no later than 1 March 2025.

These timeframes will allow time for businesses and the community to prepare for, and for the necessary communications to be undertaken prior to, the products being prohibited. Similar to the initial staged commencement of the legislation, this staged approach to the phase-out of additional products will provide longer transitional periods where considered necessary.

Fast Facts

Plastics production has surged over the past 50 years, from 15 million tonnes in 1964 to 311 million tonnes in 2014, and is expected to double again over the next 20 years as plastics serve increasingly more applications.

The production of plastics from fossil feedstocks has a significant carbon impact that will become even more significant with the projected surge in the consumption of plastics.

Over 99% of plastics are sourced from chemicals made from fossil fuels.

Currently, packaging represents 26% of the total volume of plastics used globally.

According to UN Environment Programme (UNEP), one million plastic drinking bottles are purchased every minute, while up to five trillion single-use plastic bags are used worldwide every year.

In total, half of all plastic produced is designed to be used only once — and then thrown away.

It is estimated that Australians throw away up to a billion coffee cups per year.

It's estimated that 500 billion disposable coffee cups are produced globally each year.

Without action, the annual flow of plastic into the ocean alone will nearly triple by 2040 to 29 million metric tonnes per year, the equivalent of 50kg of plastic for every metre of coastline worldwide.

Scientists have discovered microplastics near the summit of Mount Everest, the world's tallest mountain, and a plastic shopping bag in the Mariana Trench, the deepest point of the ocean.

At least eight million tonnes of plastics end up in the ocean each year – which is equivalent to dumping the contents of one garbage truck into the ocean per minute.

About 300 million tonnes of plastic waste is produced every year, nearly equivalent to the weight of the entire human population.

It is estimated that there are over 150 million tonnes of plastic in the ocean today.

Plastic marine debris can carry thousands of different types of microbes across marine ecosystems, many of which are invasive species.

If current trends continue, the ocean is expected to contain 1 tonne of plastic for every 3 tonnes of fish by 2025, and by 2050, more plastics than fish by weight.

Humans eat almost 20kg of plastic in their lifetime.

People consume about five grams of plastic every week, equivalent to a credit card.

80% of marine litter is from land based sources.

Products for consideration

Plastic bags

There are many types of plastic bags on the market today. This discussion paper focusses on two particular types: thick supermarket or boutique-style plastic bags; and produce bags (barrier bags) used to contain unpackaged fresh produce.

Supermarket bags

Lightweight plastic bags used at check-outs were banned in South Australia in 2009, leading to a dramatic decrease in the use of such bags and a culture of 'bring-your-own' bags.

The *Plastic Shopping Bags (Waste Avoidance) Act 2008* came into effect on 1 January 2009, with the ban on shopping bags taking effect from 4 May 2009. If heavyweight bags are to be prohibited, work will be undertaken to examine the potential opportunity to streamline legislation by incorporating amended provisions from this Act into the SUP Act.

What are the issues to consider?

Swapping light for heavy

While single-use plastic bags thinner than 35 microns are now banned in most Australian states and territories, many retailers supply heavyweight plastic carry bags – which some regard as defeating the purpose of the legislation.

These thicker bags ostensibly fulfil the same function as the lightweight bags, including product protection and consumer convenience; for high value products, they are also likely to feature branding elements. They typically are made of low density polyethylene (LDPE) plastic.

Estimates suggest around 900 million thicker-style plastic bags are supplied in Australia each year, in which case, South Australia's consumption could be as high as 63 million each year. [See Appendix 5]

Environmental impact

The Australian Marine Conservation Society (AMCS) has identified plastic bags as one of the most lethal killers of marine animals. They float easily in the air and on water, travelling long distances, and pose a huge threat to marine species at every level of the food chain. Estimates are that they take between 20 and 1,000 years to break down, depending on factors such as exposure to sunlight. [See Appendix 5]

Recycling options

The advice for South Australians is that clean household soft plastics, including plastic bags, can be taken to retailer drop-off points at some participating stores. The material can then be processed into plastic products such as furniture or plastic timber.

Although some small-scale soft plastic recycling schemes for kerbside (household) materials have been trialled, this is not currently an option for most of Australia, including South Australia. Soft plastics, including plastic bags, are not recyclable through kerbside recycling. According to APCO, when incorrectly placed in a recycling bin they can get tangled in the machinery in a recycling facility and contaminate other material streams. [See Appendix 5]

Charging for bags

Many retailers have introduced small fees for alternative bags to cover increased costs and further reduce consumption. However, AMCS suggests that these have been too small to drive a sufficient shift in behaviour toward re-use or avoidance.

Are there alternatives?

Alternatives such as paper, cardboard or reusable woven polypropylene bags are readily available and have been adopted by many major retail brands. It would be reasonable for government to underpin these efforts in the event that voluntary industry measures fail to gain timely momentum (see below).

Single-use plastic bags are one of the most consumed items globally and any replacement material has its own environmental impacts. These include water and energy consumption, marine impacts, greenhouse gas emissions and litter.

Using a lifecycle approach, a single-use plastic bag is considered a poor option in terms of litter on land, marine litter and microplastics. However, according to UNEP, these items score well in comparison to some non-plastic alternatives when it comes to other environmental impact categories, such as climate change, acidification, eutrophication, water use and land use. [See Appendix 5]

UNEP concludes that reducing environmental impacts of bags is not just about choosing, banning, recommending or prescribing specific materials or bags, but also about changing consumer behaviour around reuse and littering. The shopping bag that has the least impact on the environment is the bag the consumer has brought from home.

Plastic produce bags

This section refers to bags used in fresh produce settings and usually dispensed on a roll accessible by the consumer. It does not include bags used behind the counter in retail settings as part of the packaging process for products such as bread, seafood, meats, cheeses and olives. These may be considered in the future.

The produce bags in question are usually mono-layer, using one polymer – often polyethylene. The environmental and recycling issues are similar to those for heavyweight plastic carry bags, as discussed in the previous section.

Are there alternatives?

There are alternatives in South Australia linked to the maturity and strength of our organic processing sector. The state government is encouraging the diversion of food waste from households to more beneficial uses, such as composting, through the strategy *Valuing Our Food Waste* (2020-2025).

The approach has been largely based on the use of kitchen caddies and compostable liners, along with education and awareness campaigns. The liners are certified to Australian Standards for compostability (AS4736-2006 andAS5810-2010).

In 2018, the government funded the City of Holdfast Bay to conduct a 12-month trial providing compostable bags for loose fruit and vegetables in two supermarkets. These replaced plastic produce bag rolls and customers were asked to reuse the bags at home to collect food scraps for placement in council collected green organics bins.

The trial resulted in 117% more food being diverted from landfil – the equivalent of 0.48 kilograms more food waste for each household each week. Expanding this figure across the council area would divert an estimated 308 tonnes more food waste from landfill and save tens of thousands of dollars in annual landfill levies alone, as well as, reducing landfill, reducing methane and saving farmers with reduced water and fertiliser needs once the compost is used to improve soils. If similar outcomes were achieved in all metropolitan households, this could divert an estimated 12,500 tonnes more food waste from landfill each year.

Independent of government support or intervention, two large metropolitan supermarkets introduced compostable barrier bags for all fresh produce, meat and bakery areas on an ongoing basis in 2020 and trials have been conducted by other supermarket chains in areas where food waste recycling is available to the majority of households – removing the single-use nature of the bags.

What are other jurisdictions doing?

In July 2017, Commonwealth, state and territory Environment Ministers agreed to work with retailers to explore options to reduce thicker plastic shopping bags, potentially under a voluntary code of practice.

Queensland's Department of Environment and Science was tasked with leading this national project, working with the National Retail Association, APCO and retailers to develop a voluntary sustainable shopping bag code of practice. The code has not yet been released.

Western Australia is planning to ban plastic produce bags by 2022 and heavyweight plastic shopping bags by 2023. Australian Capital Territory is also banning plastic produce bags in July 2022. New South Wales has indicated that it will consider a ban on heavyweight shopping bags along with barrier bags and non-compostable produce bags in three years, subject to a review by 2024.

Plastic bags below 50 microns have been banned in France, except for domestically compostable plastic bags that are at least 50% biobased (60% in 2025).

In New Zealand, retailers can no longer sell or distribute single-use plastic shopping bags made of less than 70 microns to customers for the purpose of carrying or distributing their sold goods.

Our proposal

It is proposed that plastic produce bags, as defined above, be banned in South Australia during Stage 3 (no later than 1 March 2023). This will allow industry to transition to compostable or other alternatives and for the community to adopt the bring-your-own behaviours for fresh fruit and vegetable bags.

Should voluntary industry approaches not be considered satisfactory, it is proposed that **thicker style plastic carry bags** be banned in South Australia during stage 4 (no later than 1 March 2024). This timeframe enables industry to voluntarily transition to more sustainable alternatives and will be reviewed in 2023.

Single-use plastic cups

Takeaway cups are a major issue because of their sheer volume.

It is conservatively estimated that Australians throw away a billion coffee cups each year, which equates to more than 190,000 a day in South Australia alone. On average, they are used for less than 13 minutes each, and they often come with a lid and other attachments, such as plugs (see following sections), so the problem is exacerbated and made more complicated. [See Appendix 5]

And that's just coffee. Single-use cups made from or containing plastic are also used for tea, juice, soft drinks, soup and wine.

What are the issues to consider?

Plastic lining

Takeaway cups are usually made of paperboard with a polymer lining (polymer-coated paperboard, or PCPB) to prevent leakage and maintain structural integrity. About 90% of coffee cups are lined with polyethylene (PE) – a plastic made from fossil fuels – and 10% with polylactic acid (PLA), a bioplastic made from plant starches.

However, neither PE nor PLA readily biodegrades in the natural environment. Bioplastics must be sent to a commercial compost facility, otherwise they pose similar environmental risks to traditional plastics, including the formation of microplastic. They could quickly create a new class of persistent pollutants in the marine environment.

In South Australia, most industrial-scale commercial compost operations that provide soil enhancement products to agricultural markets accept compostable packaging, including takeaway cups that are certified to a recognised standard. However, there are few organics bins in public places, so most cups end up in landfill bins, incorrectly in recycling bins, or as litter.

Recycling confusion

There are few recycling bins in public areas for takeaway cups, and even where they exist signage can be inadequate. This often leads to confusion about how to dispose of cups and lids.

Even in commercial settings such as offices, plastic-lined cups are likely to be placed in the incorrect stream where the product can end up as a contaminant through the recycling or composting process. The default bin is often the landfill bin.

It is not currently feasible to recycle takeaway cups through conventional household kerbside bin systems.

Recycling complexity

Conventional recycling facilities generally seek to sort materials into single streams, such as paper, cardboard, glass, plastics and metals, for sale into recycle commodity markets. A product comprising two or more different material types bonded together creates difficulties.

For recycled paper processors, separating the plastic lining from the paper for most standard PE-lined disposable beverage cups is challenging. Recycled paper is processed by pulping the material in a paper mill; when the paperboard fibres remain attached to the plastic, they can't be turned back into paper products, and so become waste destined for landfill.

Longer processing times and alternate screens are required for recycling PCPB packaging due to the polymer laminates and additives. There is currently no dedicated recycling facility in Australia for PCPB, making paper mills the primary market, along with landfill.

Are there alternatives?

Economic and regulatory measures are often introduced by governments to encourage the marketplace to innovate. In the case of single-use plastic cups, these measures are expected to provide the incentive and opportunity that businesses need to develop alternatives.

In addition, reusable bring-your-own "keep cups" are becoming more popular and some retailers and businesses are increasing the options for returnable collection systems.

What are other jurisdictions doing?

Single-use plastic coffee cups and lids will be banned in WA by late 2022. The ACT is considering phasing out coffee cups and lids by 2023.

Earlier this year, France banned several single-use plastic items, including coffee cups. Honolulu has included coffee cups in its ban of plastic foodware items and the Indian state of Kerala has included coffee cups in its ban of the production, sale and use of single-use plastics.

Our proposal

The current proposal is for South Australia to ban single-use plastic cups during stage 4 (no later than 1 March 2024), except where the cup and all attachments (e.g. lids):

- are certified compostable to relevant standards (AS4736-2006, AS5810-2010) and/or are 100% recyclable through widely available services; and
- feature clear and prominent labelling regarding which bin(s) to place them in.

Manufacturers must demonstrate that sustainable systems and labelling are in place to ensure the product is actually fully recycled or composted and that the risk of contamination between product types (e.g. cup and lid) is managed.

This timeframe should allow industry to source non-plastic alternatives (particularly in view of supply timeframes associated with global production and distribution arrangements, including delays due to the pandemic) or to obtain necessary certifications or establish collection and recycling systems for single-use plastic cups.

Plastic lids on single-use cups (including coffee cup lids)

Plastic lids to prevent spilling and enable safe and convenient consumption are common on single-use cups and thus an integral part of the growing disposal problem. In fact, the littering potential of lids is exacerbated by their light weight, which can see these items transported great distances by the wind and also water currents.

Reports also suggest that cup lids account for the high energy production and pollution associated with plastic cups.

What are the issues to consider?

Two types of plastic

Plastic cups and lids are made from different materials (lids are most commonly polypropylene or polystyrene). This means that two different processes are required to recapture and reuse the materials that a single cup set comprises.

The sorting, cleaning and melting associated with converting polypropylene into a reusable plastic is not considered profitable when compared to creating new polypropylene lids from virgin materials. [See Appendix 5]

In addition, lids, like cups, can contaminate other recyclable material.

Consumer confusion

Needing separate disposal and/or recycling pathways for what consumers see as a single product creates both confusion and difficulty. The cup and lid may simply be kept as one.

Polystyrene lids are not recyclable through the kerbside bin system in South Australia. However, due to the misconception that coffee cups and their counterparts can be recycled, lids are often placed in the recycling bin. Polystyrene easily breaks apart into very small pieces, which contaminates the paper and cardboard recycling stream.

Are there alternatives?

Some companies are now manufacturing lids made from polylactic acid (PLA). These are compostable under certain environmental conditions which can only be found in industrial composting facilties. Littering remains a potential problem. The use of reusable bring-your-own cups also solves this problem.

What are other jurisdictions doing?

WA intends to phase out coffee cups and lids by late 2022. However, the emphasis on lids appears related specifically to coffee cups rather than more broadly.

Plastic lids have been banned in France since January 2021. Initially, there was an exemption for bioplastic lids, but this was later cancelled.

Our proposal

As with single-use cups, our proposal is for a ban on the lids to apply during stage 4 (no later than 1 March 2024), with the same exemptions to apply for certified compostable and/or recyclable products with clear labelling (see page 20).

Single-use plastic food containers, bowls and plates

Single-use plastic food containers, bowls and plates are commonly used for takeaway meals and at social functions in public settings. However, they cannot be easily recycled, even if made from recyclable plastic.

Studies suggest they are often the wrong shape or too light to be correctly sorted by conventional recycling processes, which are designed for items such as bottles and containers (see Appendix 5). As a result, plastic dinnerware often ends up in the paper processing line, contaminating the paper and cardboard products and significantly reducing the quality of recycled paper products.

Food residue, which is common, also hinders successful recycling. This is not an issue for compostable products that are placed in organics bins.

There are also concerns with paper plates and containers which are coated with plastic (polyethylene), primarily to protect food from dye used to colour the paper. This lining can shed microplastics and also contaminate kerbside recycling bins or the organics stream.

Are there alternatives?

Biodegradable and compostable tableware, in particular products made from starch-based biopolymer and wood-based fibre, are emerging as good single-use alternatives. For example, Ikea phased out plastic-coated paper plates and cups in 2020, along with plastic straws, freezer bags, and bin bags.

Other alternative disposable options on the market are products made from palm leaf, paperboard, sugarcane, wood, bamboo and foil. Reusable bring-your-own containers are also becoming popular with some retailers.

What are other jurisdictions doing?

Queensland has already banned single-use plastic plates and bowls, with WA to follow in 2022 and Victoria in 2023. NSW is looking to review these items for phase-out within the next three years.

WA also recognises that there are alternatives to plastic-lined paper plates and has decided to include them in its ban. Queensland won't be addressing plastic-lined paper plates in its ban to avoid banning (predominantly children's) party products, but will revise it in the future. NSW also won't be addressing plastic-lined paper plates but is looking to revisit them in future.

The European Union's ban on plastic plates came into effect in July 2021 and applies to its 27 member states. Earlier this year, Honolulu banned food vendors from providing plasticware, including foam plates and food containers, and will be extending the ban to additional foodware items across all other businesses.

Our proposal

The current proposal is for South Australia to ban single-use plastic containers, bowls and plates during stage 4 (no later than 1 March 2024). Where appropriate, exemptions similar to those for single-use plastic cups (page 20) will be implemented.

Plastic balloon sticks and ties

Balloon sticks and ties are considered separate items from balloons themselves. Comments also are welcome on other balloon accessories, such as grips, plastic clips, cups and ribbons.

Plastic accessories easily detach from balloons and are not biodegradable. According to the UK Department of Environment, Food and Rural Affairs, they are predominantly made from polypropylene and, in a few instances, from bioplastic. [See Appendix 5]

They are small and easily mistaken for food by animals. In a marine environment they can break down into even smaller pieces which are then ingested. All plastic debris can cause entanglement, injury and death to pets and wildlife, and adds to the huge volumes of plastic waste in the environment.

Ribbons also pose a significant threat to wildlife. It is sobering to note a US study which found ribbons made up 44% of balloon-related litter found on remote beaches in Virginia and that 66% of littered balloons still had ribbons attached. [See Appendix 5]

Are there alternatives?

Cardboard balloon holders are available in Australia. Balloon sticks can be made from wood or bamboo.

What are other jurisdictions doing?

No other Australian states or territories have included balloon sticks and ties in their single-use plastics bans. The ACT, the City of Darwin, Queensland and Victoria have anti-littering laws against helium balloon releases which reduce the number of balloon accessories that end up in marine ecosystems.

A European Union ban on plastic balloon sticks came into effect in July this year and applies to its 27 member states. The ban provides a measure of confidence that the market will quickly develop alternatives to plastic balloon sticks, some of which are already available.

Why not balloons?

South Australia's Single-use and Other Plastic Products (Waste Avoidance) Act 2020 prohibits the sale, supply, or distribution of prohibited plastic products. The South Australian Government is not proposing that balloons be prohibited.

Some state and local governments across Australia have introduced bans relating to the release of helium-filled balloons. The legal instruments and enforcement mechanisms relating to these differ between states and territories, although most regard deliberate balloon releases to the open environment as littering.

In South Australia, the *Local Nuisance and Litter Control Act 2016* applies to litter to land and water, including from balloons, and local councils are able to enforce these provisions where appropriate.

Our proposal

The current proposal is for South Australia to ban plastic balloon sticks and ties during stage 3 (no later than 1 March 2023).

Plastic-stemmed cotton buds

Plastic-stemmed cotton buds are often flushed down toilets and, due to their weight and small size, can pass through sewage filtration systems into the marine environment. WWF Australia lists them among the top 10 worst single-use plastics in Australia. [See Appendix 5]

The stems are mostly made of polypropylene, which in the marine environment can accumulate toxic biological and chemical contaminants including *E-coli*, flame retardants, heavy metals and pesticides. When the plastic breaks down, it can also release toxic components, including the chemicals used to dye or coat the plastic.

Seabirds consume cotton buds and cotton bud fragments. These fragments remain trapped in their digestive tract which can inhibit them from eating, resulting in malnutrition and eventual starvation.

Are there alternatives?

There are a number of alternative options in Australia, including bamboo, sugarcane, wood and paper stemmed products. Reusable cotton buds that can be washed are also an alternative.

What are other jurisdictions doing?

NSW has proposed banning plastic cotton bud sticks by 2022, with Victoria and WA to follow in 2023.

Scotland banned plastic stemmed cotton buds in 2019 and legislation which came into force in 2020 makes it illegal to sell or supply plastic cotton buds, straws and drink stirrers in England. A European Union ban came into effect in July 2021 and applies to its 27 member states.

New Zealand has announced it will ban plastic-stemmed cotton buds within its 2022-25 timeframe to phase out a range of single-use plastic products.

Our proposal

The current proposal is for South Australia to ban plastic-stemmed cotton buds during stage 3 (no later than 1 March 2023).

Other products for consideration

Fruit stickers

Stickers are frequently used on unpackaged fruit but are not required by law. They carry Price Look-Up codes, which are used across the world to track inventory and scan prices at point of sale, and some stores also create retailer-assigned codes that indicate whether the fruit is conventionally grown, organic or modified in some way.

These codes don't indicate where the fruit is from or who grew it, although sometimes this information is also on the label. The main concern from Australian farmers is to be able to brand their produce and sell conventionally grown fruit next to organic produce.

However, stickers are frequently made of thin plastic, which creates problems. Most end up as litter or in landfill, or find their way into composting facilities where they become contaminants. Because they are so small they often pass through the screening procedures in composting facilties for stripping out contaminants.

Are there alternatives?

Some industries have voluntarily moved towards non-plastic options. Organic farmers, in particular, are embracing more sustainable options, as their target consumers have been vocal about reducing plastic waste.

What are other jurisdictions doing?

NSW has identified plastic fruit stickers as items to be reviewed three years following the passage of the state's plastic reduction and circular economy legislation which was passed by its Parliament in October 2021. New Zealand has proposed that stickers be phased out by 2023.

In the Indian state of Chhattisgarh, the Chhattisgarh Food and Drugs Administration banned the pasting of stickers on fruit in 2019 due to the adverse health effects and the increased price of the produce.

Our proposal

The current proposal is for plastic fruit stickers to be banned in South Australia during stage 5 (no later than 1 March 2025). This timeframe should allow for a transition to more sustainable alternatives, while still ensuring compliance with any relevant food industry standards, codes or guidelines, and can be monitored in the lead up to this date.

Plastic confetti

Confetti in any form is a littering problem but the threats are exacerbated if it is not compostable. Plastics such as polyethylene terephthalate or metallized poly vinyl chloride are sometimes included in its manufacture.

Due to its small size and neglible weight, plastic confetti can travel large distances, become trapped in vegetation and eventually break down into smaller microplastics. Animals can unknowingly ingest small pieces of plastic.

Are there alternatives?

There are environmentally friendly alternatives made of rice paper, petals, gum leaves and tissue paper.

What are other jurisdictions doing?

No Australian states or territories have banned confetti, but the Town of Victoria Park in WA is considering banning the use of plastic-based confetti on council lands.

As part of its ambition to realise a circular economy, France included confetti in the extensive list of single-use plastic products it banned from January 2021. The Wallonia region in Belgium has banned the release of plastic confetti and streamers, Malta imposed restrictions on the use of plastic confetti at public events and Sweden is considering similar action for outdoor settings.

In the US, Mobile in Alabama banned plastic confetti or serpentine (coloured streamers) in 2019.

Our proposal

The current proposal is to ban plastic confetti in South Australia during stage 3 (no later than 1 March 2023).

Plastic pizza savers

Plastic pizza savers or tables, first patented in the 1980s, are designed to prevent a pizza box from sagging and touching the pizza topping.

While many pizzerias do not use them, they are occasionally used with large orders. However, many consumers are confused about what they achieve and are increasingly expressing their concern on social media about the unnecessary use of plastic items that cannot be easily recycled.

In South Australia, *Which Bin* messaging advises consumers that a clean cardboard pizza box without food goes in the recycling bin, whereas pizza scraps and a dirty pizza box should go in the organics bin. There is a risk that a plastic pizza saver will end up with a dirty pizza box in the organics bin.

Are there alternatives?

The obvious alternative is nothing at all. Some pizzerias have turned to the method of baking a small bread ball into the centre of their pizzas. There are also options to make these from the same material as the pizza box, which would allow them to be placed in the organics bin with food scraps.

What are other jurisdictions doing?

No Australian state or territories have banned plastic pizza savers. In 2019, Malta proposed restrictions on pizza lid supports in catering facilities, but did not ban them.

Our proposal

The current proposal is to ban plastic pizza savers in South Australia during stage 3 (no later than 1 March 2023).

Plastic soy sauce fish

Invented in the 1950s as an alternative to ceramic or glass bottles for providing soy sauce for takeaway sushi, plastic fish have become a symbol of how convenience culture is harming the environment.

They are light and trap air easily, so can float on ocean currents and travel great distances. For many seabirds and marine life, they look like a normal food source, but once ingested can become trapped in the animal's gut.

According to Planet Ark, the problems are three-fold: they are a single-use, two-part containers, meaning significant resources are needed to make them; they are so small that customers are usually given more than one; and, though they are made of a recyclable plastic (polyethylene), their size and design make recycling difficult. [See Appendix 5]

The best chance of successful recycling is if consumers keep the empty fish, clean them out and place the containers and lids inside plastic bottles, such as milk or juice bottles. However, this is time consuming and often not feasible, as the fish are largely used with takeaway meals eaten outside the home.

Are there alternatives?

The best alternative is for customers to ask for the soy sauce to be added directly into the sushi rather than provided as a takeaway item. Foil sachets are an option but they are still single-use and may simply substitute one problem material for another.

Fully compostable alternatives such as certified compostable PLA (a plant based bio-plastic) can be composted in industrial scale compost facilities, but the small product size and limited availability of away-from-home organic collection systems may still lead to this product being discarded as litter.

What are other jurisdictions doing?

No Australian states or territories have banned plastic soy sauce fish and Green Industries SA has found no evidence of specific initiatives overseas.

Our proposal

In view of limited sustainable alternatives, it is not proposed (at this stage) that plastic soy sauce fish be banned. However, these and similar single-use condiment products will be continually reviewed, and industry is encouraged to pursue alternative options and improve education and awareness for consumers on responsible disposal of the product in its current form.

Plastic beverage plugs

Plastic beverage plugs (or splash sticks) are designed to plug the sipper hole in a takeaway beverage lid to protect consumers from leakage or spillage and to stop heat loss, especially in transit. Anecdotal evidence suggests they are used for only a very short time before being discarded.

These items potentially contribute a third material type to a takeaway beverage (cup, lid and plug), creating even more confusion for consumers about how best to dispose of the product once the contents have been consumed.

Are there alternatives?

Not really. The best option in Australia is simply for consumers to decline to use them. In the US, San Francisco recommends that hospitality venues stock alternatives made from natural fibre such as paper, wood or bamboo that can only be available upon customer's request. Some beverage cup lids have a stopper built into them, negating the need for a separate plug, while other businesses are opting to use stickers.

What are other jurisdictions doing?

No Australian states or territories have banned plastic beverage plugs. San Francisco did so in 2019 as part of its new Plastic, Toxics, and Litter Reduction ordinance. [See Appendix 5]

Our proposal

Plastic beverage plugs are likely to be addressed in relation to the actions discussed earlier in this paper in relation to single-use plastic cups and their lids, as any exemptions for these products based on compostability or recyclability must consider their entire composition.

In view of this, the limited alternatives and the safety function they play, it is not proposed at this stage that plastic beverage plugs be specifically banned. This product will be continually reviewed, and industry is encouraged to pursue alternative options and solutions to these products, and to improve education and awareness for consumers on responsible disposal of the product in its current form.

Plastic bread tags

Plastic bread tags come in many shapes, sizes and colours. While they are commonly associated with pre- sliced bread, they are also used with a range of bread products, including wraps, pizza bases and bagels, as well as other types of products, such as rice crackers.

As they are made from polystyrene, they are not recyclable in any form in conventional recovery facilities. There are, however, a number of programs that collect tags or to produce products such as bowls (for charitable purposes). One such South Australian company, Transmutation, is based in Robe.

Are there alternatives?

Tip Top, one of Australia's largest bread producers, has released a recyclable cardboard bread tag which is set to replace plastic tags across all its bread products. The company claims the new tags are as durable as plastic and there will be no extra cost for retailers. [See Appendix 5]

Cardboard tags can be placed in recycling bins, but because they are small it is suggested they be placed inside a larger cardboard carton or envelope to avoid them escaping from recycling machines. Tags made from 100% cardboard can also be easily composted if placed alongside food scraps in the green organics bin.

What are other jurisdictions doing?

No Australian states or territories have banned plastic bread tags and Green Industries SA has found no evidence of specific initiatives overseas.

Our proposal

As viable alternatives at scale are still emerging, it is not proposed, at this stage, that plastic bread tags be banned. However, this product will be continually reviewed, and industry is encouraged to pursue alternative options and solutions, and improve education and awareness for consumers on responsible disposal of the product in its current form.

Other (EPS) consumer food and beverage containers

EPS plates, cups, bowls and clamshell containers will be banned in South Australia from 1 March 2022.

All states and territories have agreed to phase out all EPS consumer containers by 2025, so South Australia must determine how best to address other EPS products, for example certain EPS ice cream containers.

The 2025 National Packaging Targets set a voluntary industry target for 100% of packaging to be reusable, recyclable or compostable by 2025 and for problematic and unnecessary single-use plastic packaging to be phased out through redesign, innovation or alternative delivery methods. [See Appendix 5]

Are there alternatives?

Potential alternatives to EPS ice cream containers, such as bagasse containers (made from sugarcane) that are refrigerator and freezer safe, are available and options such as reusable (return to store) containers could be considered.

What are other jurisdictions doing?

The ACT's *Plastic Reduction Act* captures EPS ice cream containers, although the ACT Government has prepared a temporary exemption for these items (expiring on 1 July 2022) so it can investigate suitable alternatives and/or alternative arrangements for businesses that use these products. In contrast, Queensland captures these containers as part of its single use plastics legislation. Its ban on EPS food containers and cups commenced on 1 September 2021.

In July 2021, the European Union banned cups and food and drink containers made of expanded polystyrene (including lids). In the US, a number of states and jurisdictions, including Seattle, Washington DC, Portland and San Francisco, have already banned the use of disposable, single-use EPS packaging or containers for food or beverages.

Our proposal

In consideration of the voluntary industry target of 2025, it is proposed that other EPS consumer containers be banned in South Australia during stage 5 (no later than 1 March 2025).

This timeframe does not preclude retailers and suppliers of EPS consumer food and beverage containers to transition within a shorter duration to more sustainable product design and/or alternative product delivery models (e.g. reusable, return to store / take back).

EPS trays used for meat, fruit and other food items for retail sale

This product class includes single-use EPS food packaging and fresh produce packaging for products sold to consumers, but not business-to-business fresh produce boxes used to distribute bulk fresh produce or transport packaging for home delivery service (business-to-home direct deliveries).

A significant problem is that these products are not currently collected through kerbside recycling systems in South Australia or nationally, are not recyclable, and have no end-of-life market. This is exacerbated by a lack of clarity for consumers about how to responsibly dispose of the products. As a result, some ends up in recycling bins as a contaminant.

Are there alternatives?

The Australian Packaging Covenant Organisation (APCO) advises its members that there are many easily accessible alternatives for EPS packaging applications and that those selected should be made from materials that are currently recyclable through kerbside or other established systems. By way of example, it mentions Coles, which has replaced black foam meat trays with clear recyclable trays made from a combination of recycled and virgin polyethylene terephthalate (PET).

As noted above, the 2025 National Packaging Targets include a voluntary industry target for 100% of packaging to be reusable, recyclable or compostable by 2025 and for problematic and unnecessary single-use plastic packaging to be phased out through redesign, innovation or alternative delivery methods.

What are other jurisdictions doing?

WA aims to phase out polystyrene packaging by the end of 2022, although it is not clear at this time if any exemptions will be provided.

In the US, San Francisco banned EPS food service and packing materials in 2017 in accordance with its *Food Service and Packaging Waste Reduction Ordinance*. Any packaging material or disposable foodware sold or distributed must be accepted as compostable or recyclable in the city's collection program.

Our proposal

In consideration of the voluntary industry target of 2025, it is proposed that EPS trays used for meat, fruit and other food items for retail sale be banned in South Australia during stage 5 (no later than 1 March 2025).

Pre-packaged and attached products

An exemption to the prohibition on single-use plastic straws and cutlery, as well as EPS cups and bowls, is currently in place for pre-packaged and attached products. These are defined as:

(a) single-use plastic drinking straws or single-use plastic cutlery that form an integral part of a **relevant food or beverage product** (whether attached to or contained in the product) to enable or assist with consumption of the food or beverage.

(b) EPS cups or EPS bowls that form part of the packaging of a **relevant food or beverage product**.

A "relevant food or beverage product" is defined as: a food or beverage product that is pre-packaged as a single-serve and is ready for immediate consumption or consumption after cooling or heating the food or beverage.

Plastic straws, cutlery and EPS food containers are among the products identified by all Australian Environment Ministers for industry to phase out nationally by 2025, which aligns with the 2025 National Packaging Targets.

Our proposal

Industry is put on notice that the exemption for pre-packaged and attached products in South Australia will be removed no later than 1 March 2025, and preferably sooner when suitable alternatives are implemented at scale by industry.

Appendices

Appendix 1: South Australia's journey

Single-use Plastics Taskforce

A taskforce of business, industry, local government, disability and interest group stakeholders was established to ensure impacts associated with government intervention on single-use plastics are properly considered and to inform the development of legislation.

The Taskforce met for the first time on 12 September 2019. Ten further meetings have since been held.

The Taskforce comprises the following organisations:

- Australian Food and Grocery Council
- Australian Hotels Association (SA)
- Australian Packaging Covenant Organisation
- Australian Retailers Association
- Conservation Council SA
- Disability Elders of All Ages
- Environment Protection Authority
- Green Industries SA
- JFA Purple Orange
- KESAB *environmental solutions*
- Local Government Association of South Australia
- National Retail Association
- Restaurant and Catering Industry Association
- SA Independent Retailers
- Waste Management Resource Recovery Association
- Woolworths Group

Plastic free SA

A plastic-free precincts program (now Plastic Free SA) was established to inform the wider phase-out of single-use items; identifying opportunities, challenges and barriers associated with transitioning away from single-use plastic products to reusable, recyclable or compostable alternatives, as well as inform support requirements for participating businesses.

Following a tender process, the Boomerang Alliance was engaged on 11 July 2019, to deliver the program, which rolled out in two phases and commenced on-ground operations in September 2019. The following precincts are participating in the program.

First phase:

- Adelaide Central Markets and Arcade
- Jetty Road, Brighton
- The Parade, Norwood
- SA Surf Life Saving Clubs

Second phase:

- Adelaide Zoo
- Adelaide Airport
- Flinders Medical Centre café and gift shop
- Normanville (regional location)
- SA Aquatic and Leisure Centre, Marion
- SA Museum
- Sturt Football Club
- Uraidla (Adelaide Hills)

Other:

- Adelaide Oval Stadium Management Authority
- Rundle Mall Management Authority
- Glenthorne National Park – sporting facilities
- Port Lincoln – plastic free beaches

Through this program, more than two million single-use plastic items were eliminated up to August 2021.

Table 1: Plastic items eliminated.

Item	No. eliminated
Water bottles	28,791
Straws	152,896
Coffee cups	908,685
Coffee cup lids	168,146
T/A containers/lids	332,328
Cups	277,495
Cutlery	118,435
Bags	12,113
Plates & bowls	70,618
TOTAL	**2,069,507**

The program will continue, and in late 2021 was opened up to any engaged business that is seeking to transition away from single-use plastics.

Communications and awareness

A broad education and awareness campaign was developed to support South Australia's approach to the single-use plastic ban from 1 March 2021. Campaign elements included the Replace the Waste education campaign (www.replacethewaste.sa.gov.au); brochures in multiple languages; a Facebook page for direct community engagement, facebook.com/ReplaceTheWaste, free point-of-sale information for retailers, hospitality and businesses; training videos; electronic direct mail advisories; monitored dedicated email (sup@sa.gov.au) and operation of a free call business help line.

As part of the Government's commitment to increasing public awareness on the issue of single-use plastics it supported the Adelaide Festival of the Arts to bring internationally renowned New York Artist Robin Frohart's interactive exhibition called The Plastic Bag Store to South Australia to highlight the harm single-use plastic has on our environment. A school art exhibition inspired by the installation in partnership with the Adelaide Festival, Adelaide City Library and Rundle Mall Management Authority (RMMA) also was organised.

Ongoing communications activities continue with business and industry to ensure that single-use plastic straws remain accessible for medical and disabilities needs consistent with the intent of the exemption provisions.

Stakeholder awareness

In November 2020, the National Retail Association (NRA) was contracted to deliver an intensive engagement program across South Australia to educate retailers, especially small or culturally diverse businesses, about the single-use plastics ban due to come into effect on 1 March 2021. This included establishing and managing a free call hotline, alongside engagement with retailers in both metropolitan and regional areas. The NRA visited 105 sites, 86 metropolitan and 20 regional, and during those visits spoke with 1032 retailers. It also fielded 49 telephone enquiries.

A new Act to drive change

Following a consultation process on a draft Bill, the *Single-use and Other Plastic Products (Waste Avoidance) Act 2020* (SUP Act) was passed by the South Australian Parliament on 9 September 2020. The legislation commenced on 1 March 2021, restricting and prohibiting the sale, supply or distribution of single-use plastic drinking straws, cutlery and beverage stirrers.

Regulations to support implementation and facilitate exemptions under the legislation were implemented from 1 March 2021, including an exemption to maintain access to single-use plastic drinking straws for people who rely on them due to disability or medical requirements. In addition, regulations currently exempt attached items (e.g. straws attached to fruit boxes) from the definition of a prohibited plastic product under the Act. It is expected that the exemption for attached products will be reviewed and may be repealed when non-plastic alternatives become more readily available (refer earlier discussion). A temporary exemption was also implemented for single-use plastic spoons used for clinical purposes, based on feedback from the healthcare sector that it requires additional time to transition to suitable alternatives. The temporary exemption expires on 1 March 2022.

On 1 March 2022, the prohibition will be extended to include EPS cups, bowls, plates and clamshell containers and oxo-degradable plastic products.

As a legislative instrument, the SUP Act was specifically drafted to serve an on-going purpose and provide a means to phase out single-use and other plastic products. Those products specifically listed under section 6 of the Act will be phased out, and the Act also provides a means to consider products listed under section 14(2), or other products not yet listed, subject to meeting certain requirements set out in section 6(2), including public consultation.

Section 14 of the SUP Act requires the Minister to prepare an Annual Report on the operation of the Act with the initial report under this section to include information on the consideration of adding specified products to the list of prohibited plastic products. This discussion paper is intended to help inform that report, due in Sept 2022.

Appendix 2: Australian developments

A new Commonwealth Act

In December 2020, the Australian Government's *Recycling and Waste Reduction Act 2020* became law. The new legislation implements the 2020 commitment of the Australian government – through the former Council of Australian Governments (COAG) – to ban the export of waste glass, plastics, tyres and paper.

The commitment to ban the export of certain waste materials featured as a target in the Australian Government's *National Waste Policy Action Plan 2019*, which includes actions designed to drive change in industry, businesses, governments and the community to turn waste into a reusable commodity.

The regulation of waste plastic commenced on 1 July 2021 and was implemented through the Recycling and Waste Reduction (Export – Waste Plastic) Rules 2021 which were made by the Commonwealth Minister for the Environment on 21 May 2021. These new rules banned the export of mixed plastic waste and regulated the export of sorted single polymer or resin plastic waste and processed engineered fuels. From 1 July 2022, sorted single polymer or resin plastic waste will also need to be processed (i.e. into flakes or pellets).

The National Plastics Plan

In 2021 the Australian Government released its National Plastic Plan (NPP) and committed to tackling the plastic challenge on five fronts:

- working with industry to fast-track the phase-out of particularly problematic plastic materials
- stopping the export of unprocessed plastic waste and promoting product stewardship through the *Recycling and Waste Reduction Act 2020*
- unprecedented investments to turbo-charge Australia's plastic recycling capacity
- research to make Australia a global leader in plastic recycling and reprocessing
- community education to help consumers make informed decisions and recycle correctly

Under the NPP, the Australian Government has committed to work with industry to phase out polymer types in certain applications and consider regulatory action, should industry phase out not be achieved:

- Phase out plastic packaging products with additive fragmentable technology that do not meet relevant compostable standards (AS4736-2006, AS5810-2010 and EN13432) (July 2022)
- Phase out EPS from loose packaging fill and moulded packaging in consumer packaging (July 2022), and EPS consumer food and beverage containers (December 2022)
- Phase out PVC packaging labels (December 2022)

At a meeting of federal, state and territory environment ministers on 15 April 2021, eight "problematic and unnecessary" plastic product types were identified for industry to phase out nationally by 2025 (or sooner in some cases) under the National Waste Policy Action Plan, although this is understood to be a voluntary target. These are lightweight plastic bags; plastic products misleadingly termed as 'degradable'; plastic straws; plastic utensils and stirrers; EPS consumer food containers (e.g. cups and clamshells); EPS consumer goods packaging (loose fill and moulded); and microbeads in personal health care products.

Australian Packaging Covenant Organisation (APCO)

The industry-led Australian Packaging Covenant Organisation (APCO) is tasked with achieving the following national packaging targets by 2025:

- 100% of packaging to be reusable, recyclable or compostable
- 70% of plastic packaging recycled or composted
- 30% average recycled content across all packaging
- Phase out problematic and unnecessary single-use plastic packaging through redesign, innovation or alternative delivery methods

In 2020, APCO worked closely with the Ellen MacArthur Foundation and WRAP UK to develop ANZPAC. The ANZPAC Plastics Pact (ANZPAC) is a collaborative solution that brings together key players behind a shared vision of a circular economy for plastic, in which it never becomes waste or pollution.

Engaging with Australia, New Zealand and the Pacific Islands, ANZPAC is the first Plastics Pact in the Oceania region and the second regional Plastics Pact to become part of the Ellen MacArthur Foundation's global Plastics Pact network. With Pacts in Africa, Europe, North America and South America, this network is a globally aligned response to plastic waste and pollution.

Research institutions and others

CSIRO is developing The Ending Plastic Waste Mission, which aims to drive Australia's circular economy and create systemic change through data science, materials and manufacturing, recycling processes and whole of life, circular solutions to reduce plastic pollution entering the environment.

Griffith University is seeking to establish a Plastic Waste Cooperative Research Centre (https://www.plasticwastecrc.com/) under the Commonwealth's CRC program. It would identify new technologies, products, services and industries that can emerge from taking on a circular economy approach.

Business and industry

For business and industry, phasing out single-use and other plastic products and transitioning to alternatives may result in short-term operational costs as they adjust to product bans. To be effective, the legislation relies on industry-wide collaboration, cooperation and consensus.

A survey conducted following the implementation of the first phase of the SUP legislation aimed at reducing single-use plastic products in South Australia found that 77% of respondents support the legislation, with only 6% against it.

Although there is still some way to go, there are numerous examples of businesses signalling their intention to shift toward more sustainable packaging options and it will be important that those signals translate into direct and observable action at the point of purchase for consumers. In some instances this will require re-designing existing packaging and in others completely new packaging design solutions will be needed.

Appendix 3

Global Action on Single-Use Plastic Products

	PRODUCTS	BAN									RESTRICTION
		EU-wide	*Countrywide (further to EU, if member)*			*Countrywide*			*Statewide*	*Citywide*	*Statewide*
		27 member states[3]	France[3]	Italy[3]	England[1]	Scotland[1]	Canada[2]	New Zealand[3]	Washington[1]	San Francisco[3]	Honolulu[2]
2021 SA Ban	Straws (exemptions apply)	**2021**	**2021**	**2021**	**2020**	2022*	2021*	2022*		**2019**	2021*
	Beverage stirrers	**2021**	**2021**	**2021**	**2020**	2022*	2021*	2022*		**2019**	2021*
	Cutlery	**2021**	**2021**	**2021**		2022*	2021*	2022*		**2019**	2021*
2022 SA Phase-out	Expanded polystyrene cups	**2021**	**2021**	**2021**		2022*		2022*	2024*	**2017**	2021*
	Expanded polystyrene bowls	**2021**	**2021**	**2021**		2022*			2024*	**2017**	2021*
	Expanded polystyrene plates	**2021**	**2021**	**2021**		2022*			2024*	**2017**	2021*
	Expanded polystyrene clamshell containers	**2021**	**2021**	**2021**		2022*		2022*	2024*	**2017**	
	Oxo-degradable plastic	**2021**	**2021**	**2021**		2022*		2022*			
	Oxo-degradable plastic carrier bags	**2021**	**2021**	**2021**		2022*		2022*			
Section 14.2 Products	Single-use plastic cups (inc coffee cups)		**2021**								
	Single-use plastic food containers		2025*								2021*
	Single-use plastic bowls							2023*			
	Single-use plastic plates	**2021**	**2020**	**2021**		2022*	2021*	2023*			
	Plastic lids for coffee cups										
	Plastic balloon sticks	**2021**	**2021**	**2021**		2022*					
	Plastic balloon ties										
	Plastic-stemmed cotton buds	**2021**	**2020**	**2021**	**2020**	**2019**		2022*			
	Thick plastic shopping bags										
	Barrier bags		**2017**	**2018**				2023*			
	Fruit stickers							2023*			
	Toothpicks									**2019**	
	Beverage plugs									**2019**	
	Beverage six-pack rings						2021*				
	Plastic cocktail sticks									**2019**	
	Expanded polystyrene consumer food and beverage containers (other)	**2021**	**2021**	**2021**				2022*			
	PVC meat tray							2022*			
	PVC fruit and veg packaging							2025*			
	Plastic confetti		**2021**								
	Packaging around fresh fruit and vegetables [when packaged produce weighs < 1.5 kg]		**2021**								
	Plastic-lined paper plates		**2021**								
	Steak picks		**2021**								
	Plastic tea bags		2022*								
	Plastic toys (as part of children's menu)		2022*								
	Food packaging from hard to recycle plastic						2021*				
	EPS packing peanuts									**2017**	
	EPS meat trays									**2019**	
	EPS packaging void fill								2023*		

Note: **Dates in bold** are already banned

*indicates items that are proposed for phase-out and have not yet been included in any legislation

The EU countries are: Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. These 27 member union states have a combined population (in 2020) of 447.2 million

1 Bioplastics (including polylactic acid [PLA]) still permitted
2 Yet to be announced if bioplastics are permitted
3 Bioplastics (including polylactic acid [PLA]) not permitted

Appendix 4

National Action on Single-use Plastic Products

	PRODUCTS	BAN				BAN				PARTIAL BAN	
		Statewide				*Statewide*		*Territory-wide*		*Events on council land*	*Council-wide*
		SA	NSW[4]	QLD[3]	TAS	VIC[4]	WA[2]	ACT[1]	NT	City of Darwin[1]	City of Hobart[3]
2021 SA Ban	Straws (exemptions apply)	**2021**	2022*	**2021**		2023*	2022*	2022*		**2019**	**2021**
	Beverage stirrers	**2021**	2022*	**2021**		2023*	2022*	**2021**		**2019**	
	Cutlery	**2021**	2022*	**2021**		2023*	2022*	**2021**		**2019**	**2021**
2022 SA Phase-out	Expanded polystyrene cups	2022	2022*	**2021**		2023*	2021*	**2021**			
	Expanded polystyrene bowls	2022	2022*	**2021**		2023*		**2021**			
	Expanded polystyrene plates	2022	2022*	**2021**		2023*		**2021**			
	Expanded polystyrene clamshell containers	2022	2022*	**2021**		2023*		**2021**			
	Oxo-degradable plastic	2022	2024*				2022*	2022*			
Section 14.2 Products	Single-use plastic cups		2024*				2021*			**2019**	**2021**
	Single-use plastic food containers										
	Single-use plastic bowls		2024*	**2021**			2021*			**2019**	**2021**
	Single-use plastic plates		2024*	**2021**		2023*	2021*			**2019**	**2021**
	Plastic lids for coffee cups						2022*			**2019**	**2021**
	Plastic balloon sticks										**2021**
	Plastic balloon ties										
	Plastic-stem cotton buds		2022*			2023*	2022*	2021*			
	Thick plastic bags		2024*				2021*				
	Fruit stickers		2024*								
	Single-use coffee cups						2022*			**2019**	**2021**
	Barrier bags		2024*				2022*	2021*			
Takeaway Food Service Items	Expanded polystyrene consumer food and beverage containers (other)		2022*	**2021**			2021*	**2021**			
	Plastic lids for cups (ex. Coffee)		2024*							**2019**	
	Plastic lids for bowls		2024*								
	Plastic-lined noodle boxes										**2021**
	Plastic-lined paper plates						2021*				
	Sandwich wedges (packaged in-store)										**2021**
	Sauce sachets										**2021**
	Plastic takeaway containers									**2019**	**2021**
	Polystyrene packaging						2022*				
	Helium balloon releases					**2021**	2022*			**2019**	

Note: **Dates in bold** are already banned

*indicates items that are proposed for phase-out and have not yet been included in any legislation

1 **Legislation currently prohibits compostable plastic** (including polylactic acid [PLA]), **however, exemptions may apply for some of the products.**
2 Compostable plastic permitted, but must adhere to Australian composting standard AS 4736 (industrial composting).
3 Compostable plastic permitted but must adhere to Australian composting standards AS 4736 and AS 5810 (home composting).
4 Yet to be announced whether compostable plastic items will be permitted or not.

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