



**Australian Government**

**Department of Climate Change, Energy,  
the Environment and Water**

# **Submission on the inquiry into plastic pollution in Australia's oceans and waterways**

House Standing Committee on Climate Change, Energy, the Environment and Water

January 2023

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## Purpose of this submission

The Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW) is pleased to provide this submission for consideration by the House Standing Committee on Climate Change, Energy, the Environment and Water (Committee).

This submission outlines the scale of the plastic pollution problem and the roles and responsibilities of DCCEEW in relation to the Committee's inquiry into plastic pollution in Australia's oceans and waterways. The submission has been prepared with regard to the Committee's terms of reference that includes:

- the environmental impacts of plastic pollution particularly in oceans and waterways
- the effectiveness of Australia's plastics management framework under the National Plastics Plan and related policies to reduce plastic pollution particularly in oceans and waterways
- the effectiveness of the Australian Government's engagement with states, territories, industry and non-government organisations to reduce plastic pollution particularly in oceans and waterways
- the effectiveness of community campaigns to reduce plastic pollution particularly in oceans and waterways and encourage the use of alternative materials
- global initiatives underway to reduce plastic pollution particularly in oceans and waterways, and
- any other relevant matter.

## Context

The Department of Climate Change, Energy, the Environment and Water is responsible for leading Australia's response to climate change and sustainable energy use, and protecting our environment, heritage and water. DCCEEW achieves this through policies and programs that deliver positive outcomes in its areas of responsibility. DCCEEW works closely with state and territory governments, global peers, stakeholders and the public to achieve its objectives.

DCCEEW is taking steps to help manage plastic pollution and support Australia's transition towards a safe circular economy. It's a significant challenge and everyone – governments, industry, businesses and the community – has a role to play.

### 1.1 The Role of DCCEEW

The Australian Government leads and coordinates plastic management policy, where it relates to international obligations, agreed national actions and standard setting. The day-to-day management and regulation of plastic waste management and recycling is primarily the responsibility of state and territory and local governments. State, territory and local government are in the best position to make critical decisions on recycling regulation and respond to market pressures with respect to recyclable materials such as plastic. The Australian Government has a direct role in environmental regulation where it is required for controls at the border, setting national standards or protecting matters of national environmental significance.

DCCEEW works with the states and territories to explore plastic management options to help reduce any adverse impacts of plastics through analysis and by connecting governments and industries. In particular, DCCEEW engages in national waste activities through:

- forums such as the Environment Ministers Meeting, and meetings of senior officials and heads of environment protection agencies
- data collection from states and territories, including for collation in the Australian Government's National Waste Report, the Australian Plastic Flows and Fates report, and the National Survey of Problematic and Unnecessary Single-use Plastic Packaging and Products (SUPPPs)
- the development of environmental standards and guidance
- implementing the 2019 National Waste Policy Waste Policy Action Plan and National Plastics Plan
- the coordination of activities
- direct regulation in some areas.

DCCEEW is supportive of collective efforts to end plastic pollution and will continue to play a leadership role to support Australia's transition to a safe circular economy.

## 2 Environmental impacts of plastic pollution

Plastic has been a revolutionary material. Its unique properties of being highly mouldable, durable, lightweight and cheap to produce have made it one of the most prevalent human-made products on earth. It serves critical functions in medicine, keeps food fresh and reduces transport costs.

The prevalence of plastics use and their persistence in the environment when disposed has created a global problem. Plastic pollution is now a major environmental challenge. Plastics can leak into the terrestrial environment at various stages of their lifecycle and end up in our oceans. They can be easily spread all over the world via air, natural and man-made waterways, and oceans. Large river systems have been shown to be the main vectors for spreading plastic pollution into the marine environment.<sup>1</sup> Plastics are found in all corners of the globe, including in Antarctica, the Arctic and in the Mariana Trench (the deepest oceanic trench on earth).

Globally, around 22% of plastic waste is mismanaged and another 19% is incinerated, giving rise to a range of public health concerns.<sup>2</sup> This is largely due to the release of toxic substances such as persistent organic pollutants (POPs), heavy metals and acid gases that can enter the air, water and soil, causing both direct and indirect health risks for workers and communities.

In 2018–19, Australia consumed 3.5 million tonnes of plastic. We consume plastic at a rate three times the global average<sup>3</sup> and our consumption continues to grow. On current trends, without action, global plastic production is expected to double by 2040 and the current 150 million metric tonnes of waste plastic in the ocean is expected to more than quadruple by 2040.<sup>4</sup>

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<sup>1</sup> CSIRO, "Circular Economy Roadmap for Plastics, Glass, Paper, and Tyres: Pathways for Unlocking Future Growth Opportunities for Australia" (2021), <https://www.csiro.au/en/research/natural-environment/circular-economy>

<sup>2</sup> OECD, "Plastic pollution is growing relentlessly as waste management and recycling fall short, says OECD", (2022) <https://www.oecd.org/environment/plastic-pollution-is-growing-relentlessly-as-waste-management-and-recycling-fall-short.htm>

<sup>3</sup> World Wildlife Foundation and Boston Consulting Group, *Plastic Revolution to Reality: A Roadmap To Halve Australia's Single-Use Plastic Litter*

<sup>4</sup> The Pew Charitable Trusts and SYSTEMIQ, "Breaking the Plastic Wave: A Comprehensive Assessment of Pathways Towards Stopping Ocean Plastic Pollution" (2020) [https://www.pewtrusts.org/-/media/assets/2020/07/breakingtheplasticwave\\_report.pdf](https://www.pewtrusts.org/-/media/assets/2020/07/breakingtheplasticwave_report.pdf) p. 26; J.R. Jambeck et al., "Plastic Waste Inputs From Land Into the Ocean," *Science* 347, no. 6223 (2015): 768-71, <http://dx.doi.org/10.1126/science.1260352>

Plastic pollution in Australia's oceans and waterways

Once in the environment, plastics have a severe impact on biodiversity and ecosystems. They impact habitats, harm wildlife, and disrupt food chains. More than 800 species are already known to be affected by marine plastic pollution, including all sea turtle species.<sup>5</sup>

Microplastics, tiny fragments of plastic less than 5mm in length, are especially difficult to remove from the environment. They can come from a variety of sources including larger plastic debris that degrades, microbeads in beauty products, and microfibers in clothing. Once in the environment, microplastics can be absorbed by plants and animals and accumulate in the food chain.

Attention also needs to be given to the additives in plastics, some examples of the most common additives include flame retardants (FRs), impact modifiers, antioxidants, antimicrobials and UV stabilisers. They are widely used, and no plastic is produced without some additives. They are found in many products, including many of those used in the home. The information on the additives is rarely available beyond the manufacturer and are difficult to trace. Many of the additives are potentially toxic, and some meet the definition of being persistent organic pollutants that are subject to international action. They pose a risk to the environment or to human health when they leach out of plastic pollution.<sup>6</sup>

Given the prevalence of plastics in the environment, it is likely that almost every marine species has encountered some form of plastic.<sup>7</sup> Without taking action, by 2050 it is predicted that the amount of plastic in our oceans will outweigh fish, causing untold harm to marine life.<sup>8</sup> By 2025 it is also estimated that 99% of seabirds will have ingested plastic, which often leads to a slow and painful death.<sup>9</sup>

Plastics harm species and ecosystems in a variety of ways. This includes:

- **Smothering.** Plastic pollution can smother aquatic life, preventing them from receiving oxygen, nutrients, and light.

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<sup>5</sup> Pew Charitable Trusts and SYSTEMIQ, "Breaking the Plastic Wave: A Comprehensive Assessment of Pathways Towards Stopping Ocean Plastic Pollution" (2020), [https://www.pewtrusts.org/-/media/assets/2020/10/breakingtheplasticwave\\_mainreport.pdf](https://www.pewtrusts.org/-/media/assets/2020/10/breakingtheplasticwave_mainreport.pdf)

<sup>6</sup> UNEP, "Report on the activities of the Basel and Stockholm conventions regional centres: Plastic and toxic additives, and the circular economy: the role of the Basel and Stockholm Conventions" (2019), UNEP/POPS/COP.9/INF/28/Add.1

<sup>7</sup> World Wildlife Fund, "Impacts of Plastic Pollution in the Oceans, on Marine Species, Biodiversity, and Ecosystems" (2022), [https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Plastik/WWF-Impacts\\_of\\_plastic\\_pollution\\_in\\_the\\_ocean\\_on\\_marine\\_species\\_biodiversity\\_and\\_ecosystems.pdf](https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Plastik/WWF-Impacts_of_plastic_pollution_in_the_ocean_on_marine_species_biodiversity_and_ecosystems.pdf)

<sup>8</sup> World Economic Forum, Ellen MacArthur Foundation, and McKinsey & Co., "The New Plastics Economy: Rethinking the Future of Plastics" (2016), <https://www.ellenmacarthurfoundation.org/publications/the-new-plasticseconomy-rethinking-the-future-of-plastics>

<sup>9</sup> Chris Wilcox, Erik Van Seville and Britta Denise Hardesty, "Threat of plastic pollution to seabirds is global, pervasive, and increasing" (2015), <https://www.pnas.org/content/112/38/11899>

Plastic pollution in Australia's oceans and waterways

- **Ingestion.** Ingestion of plastics by aquatic animals can cause stress, toxicological harm, and starvation.
- **Entanglement.** Aquatic animals can become tangled in plastic and abandoned fishing gear, resulting in starvation and drowning.
- **Harmful toxic effects.** Chemicals used in the manufacture of plastics can leach into the aquatic environments having adverse effects on organisms.
- **Ecosystem disruption by microplastics.** Microplastics can disrupt biological processes in aquatic organisms.
- **Damage to environmental health.** Important ecosystems for environmental health such as coral reefs and mangrove forests are being damaged by plastic pollution.
- **Pathogenic vectors.** Floating plastics can transport bacteria.
- **Pollutant vectors.** Microplastics absorb pollutants and contribute to the bioaccumulation of pollutants.

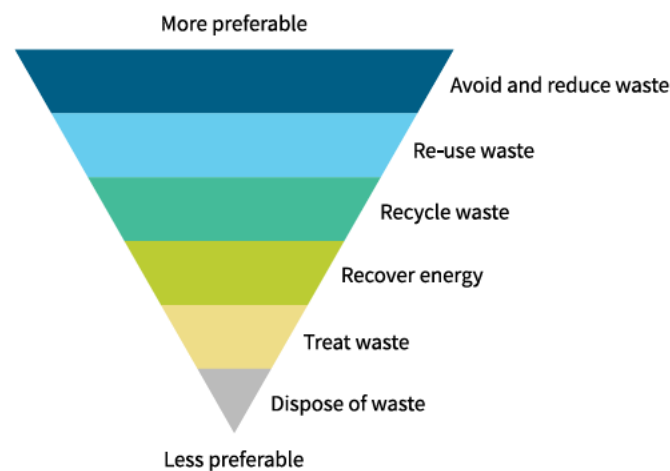
## 3 Reducing plastic pollution in Australia

DCCEEW plays a national leadership role in driving action towards a safe circular economy for plastics. Addressing the plastic problem requires multiple interventions across the entire plastic lifecycle. This includes design, use, recovery, and reuse. No single intervention can fix the plastics problem on its own. All Australians, including governments and industry, have a role to play in implementing a safe circular economy, supporting resource recovery and recycling, reducing the use of harmful substances and preventing them entering or re-entering the economy, and reducing the generation of waste.

To manage the approach to reduce waste, including plastic pollution, Australia has adopted the waste hierarchy to work towards achieving a circular economy.

### 3.1 Waste hierarchy and circular economy

The waste hierarchy shown in Figure 1 identifies the options to manage the generation of waste and how a product can be handled at the end of its life. These options range from the preferred option of waste avoidance, such as avoiding the purchase of products with unnecessary packaging, to the least preferred option of waste disposal.



**Figure 1: The Waste Hierarchy<sup>10</sup>**

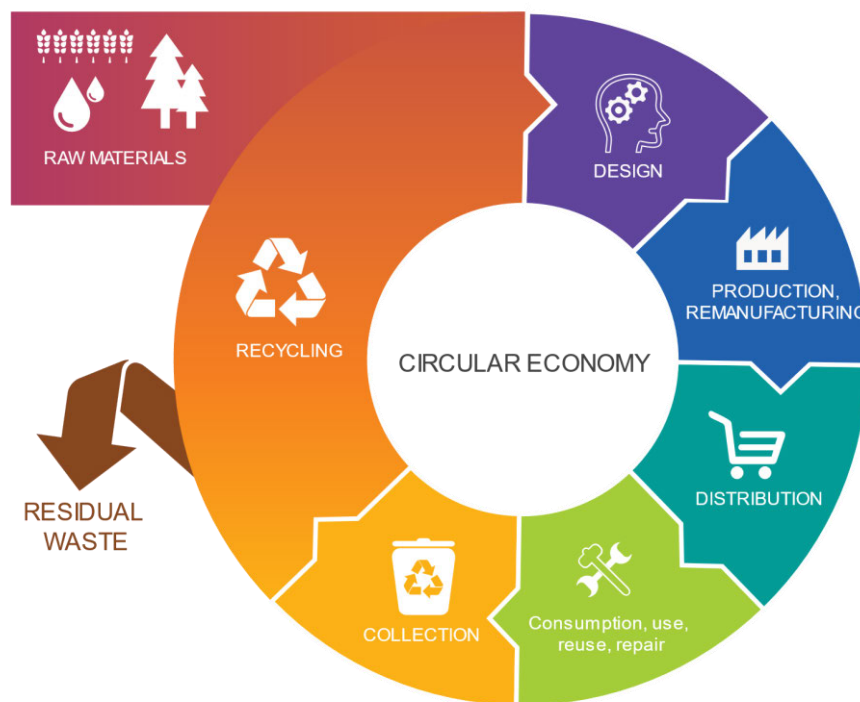
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<sup>10</sup> Pickin J, Wardle C, O'Farrell K, Nyunt P & Donovan S (2020). National waste report 2020, report prepared for the Australian Government Department of Agriculture, Water and the Environment, Blue Environment, Melbourne.



## Plastic pollution in Australia's oceans and waterways

The options in the waste hierarchy that allow for materials used in products to re-enter the system through reuse, recycling or recovery, support a circular economy. These options, together with a broader range of considerations, such as designing products so they can be more easily recycled at the end of their life (see Figure 2), retain the value of materials in the economy for as long as possible. This reduces the unsustainable depletion of natural resources and impacts on the environment. Additionally, a circular economy approach supports has economic benefits, creating new industries, markets and products, and leading to new revenue streams and creation of jobs.<sup>11</sup>



**Figure 2: Circular Economy<sup>12</sup>**

There are five principles that underpin waste management, recycling and resource recovery in a circular economy:

1. Avoid waste:
  - a. Prioritise waste avoidance, encourage efficient use, reuse and repair
  - b. Design products so waste is minimised, they are made to last, we can more easily recover materials and avoid harmful additives that prevent safe reuse and recycling.

<sup>11</sup> Centre for International Economics, "Final report: Headline economic value for waste and materials efficiency in Australia", 27 October 2017.

<sup>12</sup> [National Waste Policy 2018 \(a https://www.agriculture.gov.au/sites/default/files/documents/national-waste-policy-2018.pdf\)](https://www.agriculture.gov.au/sites/default/files/documents/national-waste-policy-2018.pdf) agriculture.gov.au). Representation of a circular economy as it applies to resource use reproduced in the National Waste Policy 2018 with permission of the European Union.

2. Improve resource recovery:
  - a. Improve material collection systems and processes for recycling
  - b. Improve the quality of recycled material we produce.
3. Increase use of recycled material and build demand and markets for recycled products.
4. Better manage material flows to benefit human health, the environment and the economy.
5. Improve information to support innovation, guide investment and enable informed consumer decisions.

Inevitably, there will be residual plastic waste that needs to be managed appropriately and cannot be returned to a circular economy without significant technological advancement. This is particularly the case for plastics containing hazardous substances. For example, research could help ensure the plastics or their constituents can be upcycled into higher value feedstocks for new and existing industrial processes.<sup>13</sup> Waste plastic needs to be appropriately managed to prevent the plastics polluting the environment.

The 2018 National Waste Policy incorporates the waste hierarchy with a focus on high order uses, while building on the idea of creating a circular economy by continually reusing, recycling and reprocessing materials. The 2019 National Waste Policy Action Plan implements this policy. One of the key deliverables under the plan was the development of the 2021 National Plastics Plan.

These plans have supported the forward agenda for better management of plastics and plastic wastes across Australia with the aim of achieving better protection of the environment. DCCEEW has a central role in the delivery of these plans. The department also implements regulatory frameworks at the Commonwealth level to reduce the adverse impacts of plastics on the environment, including through regulating the export of waste plastic and better managing environmental risks of chemicals and hazardous substances.

## 3.2 National Waste Policy Action Plan

The 2019 National Waste Policy Action Plan guides Australia's investment and supports policy reform to better manage Australia's waste and resource recovery to 2030 and beyond. The plan identifies seven ambitious targets:

- banning the export of waste plastic, paper, glass and tyres
- reducing the total waste generated in Australia by 10% per person by 2030

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<sup>13</sup> UNEP, "Report on the activities of the Basel and Stockholm conventions regional centres: Plastic and toxic additives, and the circular economy: the role of the Basel and Stockholm Conventions", (2019) UNEP/POPS/COP.9/INF/28/Add.1

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- achieving an 80% average recovery rate from all waste streams by 2030
- significantly increasing the use of recycled content by governments and industry
- phasing out problematic and unnecessary plastics by 2025
- halving the amount of organic waste sent to landfill by 2030
- making comprehensive, economy-wide and timely data publicly available to support better consumer, investment and policy decisions.

These targets are underpinned by actions that are delivered collaboratively between governments, industry and the community. DCCEEW has responsibility for coordinating the body overseeing the delivery of the plan and leading the delivery of around 50 action items independently or in conjunction with the states and territories.

In October 2022, all of Australia's environment ministers noted that Australia must do more to prevent waste, including better product design and more efficient production processes. Ministers requested the plan to be expanded in 2023 to strengthen Australia's efforts towards our 2030 targets. DCCEEW will lead the Australian Government efforts to support the delivery of this work in partnership with state, territory and local governments, and industry.

### 3.3 National Plastics Plan

Our challenge is to better manage the plastics we need in modern life, while designing out the plastics we don't need. The 2021 National Plastics Plan<sup>14</sup> outlines actions that support the reduction of plastic pollution in Australia and globally. The actions aim to:

- reduce plastic waste and increase recycling rates
- find alternatives to the plastics we don't need
- reduce the amount of plastics impacting our environment.

The plan provides a strong foundation for the sustainable management of plastics in Australia in focussing efforts towards reducing plastic wastes and increasing recycling rates. There is still more to be done. In 2023, DCCEEW is planning to update the plastics plan to outline a way forward for the sustainable use of plastics in Australia to:

- provide clear strategic direction on activities on plastic action
- give Australians confidence that the plastics they use and recycle are sustainable and part of a safe circular economy
- provide greater certainty and predictability for industry so they can effectively design, use, reuse and recycle plastics that are placed in the market

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<sup>14</sup> <https://www.dcceew.gov.au/environment/protection/waste/plastics-and-packaging/national-plastics-plan>

- achieve better protection of the environment through ending plastic pollution.

### **3.3.1 Prevention**

Actions in the plan take a whole-of-life-cycle approach to the plastics challenge including design, use, recovery, and reuse. This includes actions to address problematic plastics at their source. The simplest way to reduce plastic waste and pollution is to avoid using problematic and unnecessary single use plastics (PSUPs). Product design provides an unmatched point of intervention to reduce plastic waste.

DCCEEW has been working closely with states and territories, industry and the community to deliver on the actions in the National Plastics Plan. Phase-outs are underway across states and territories. Several state and territory governments have taken successful steps to ban specific PSUPs. Early indications have been positive with businesses eager to find more sustainable alternatives. Over 99% of rinse-off cosmetic, personal care and cleaning products sold in Australia are now microbead-free.

At the Environment Ministers' Meeting in October 2022, ministers agreed to develop nationally harmonised definitions to support the phase out of PSUPs. The intent here is to make it easier for industry to comply with the bans and to reduce the costs of doing business over state and territory boundaries. DCCEEW will continue to work with states and territories on potential future products requiring a national approach for harmonised phase out.

The Australian Government also supports efforts within the community to reduce the amount of PSUPs and packaging that leaks into the environment. The Australian Government awarded \$600,000 to Boomerang Alliance's Plastic Free Beaches Program to support Australian beachside cafes to transition away from single use plastics.

The Australian Government supports the Australian Packaging Covenant Organisation's (APCO) work with industry across the packaging supply chain to deliver the National Packaging Targets that include:

- 100 per cent of all Australia's packaging will be reusable, recyclable or compostable
- 70 per cent of Australia's plastic packaging will be recycled or composted
- 50 per cent average recycled content will be included across all packaging
- Problematic and unnecessary single-use plastic packaging will be phased out through design, innovation or introduction of alternatives.

More information on the phase out of problematic and unnecessary single-use plastic products under the National Plastics Plan is in Appendix A.

### **3.3.2 Recycling**

Households want assurance that the plastics they put in their recycling bin are reused in the economy and not sent overseas to end up in landfill or the environment. Australia is taking responsibility for our plastics by supporting several initiatives that encourage recycling.

In July 2021, regulations on the export of mixed plastic wastes commenced. The regulations require that waste plastic exported from Australia be sorted into single polymers, washed, and further

processed prior to export (more information in 3.3.1). Export of waste plastic may also be regulated by the *Hazardous Waste (Regulation of Exports and Imports) Act 1989* in some circumstances.

The Recycling Modernisation Fund (RMF) is on track to leverage over \$1 billion of total investment from the Australian Government, state and territory governments and industry for new or upgraded infrastructure to sort, process, recycle and remanufacture waste glass, tyres, plastic and paper. Forty-seven plastics projects have been announced under the RMF, and these are expected to deliver over 293,000 tonnes per annum of recycling capacity.

Progress in the product stewardship of problematic and unnecessary single use plastics has also been advanced through their inclusion on the Minister's product stewardship priority list. The list signals to industry that they must take action to reduce the environmental and health impacts of a product. If industry action is determined to be insufficient, the Minister may consider regulatory measures under the *Recycling and Waste Reduction Act 2020*.

The National Product Stewardship Investment Fund has supported the development, or expansion, of 24 product stewardship schemes and the establishment of Australia's first Product Stewardship Centre of Excellence. Examples of some of the projects funded include A Circular Economy for Silage Wrap, National Non-Packaging Agricultural Plastics Stewardship Scheme and National Plastics Recycling Scheme and Sports Equipment Product Stewardship.

### **3.3.3 Plastics in our daily lives**

Australian households and consumers face barriers to recycling correctly. Industry reports find that materials in kerbside recycling bins are often disposed of incorrectly.

The Australian Packaging Covenant (APCO) supported by the government is fast-tracking the rollout of the Australian Recycling Label (ARL) so that by the end of 2023 approximately 80% of supermarket products will display the ARL. The ARL will also be rolled out to business-to-business packaging (which makes up 17% of plastic packaging in Australia, additional data for 20-2021 will be available late January 2023).

The Australian Government is working with states and territories towards more harmonised kerbside recycling collection to improve recycling and reduce contamination. In addition, funding under the Cooperative Research Centres Projects (CRC-P) grants has supported the Smart Material Recovery Facility (SMRF) – Curby Soft Plastics' project which supports the collection and sorting of soft plastics which was used in Nestle's first recycled content KitKat Wrapper.

To continue to tackle microplastics, the National Plastics Plan also sets out actions on microfibres released from clothing by phasing-in microfibre filters on new residential and commercial washing machines.

## **3.4 Regulatory interventions**

DCCEEW administers legislation that allows the Commonwealth to regulate waste and hazardous substances at the border, set national standards for improved environmental management, and develop threat abatement plans.

### 3.4.1 Recycling and Waste Reduction Act 2020

In March 2020, the Australian, state and territory governments, and the Australian Local Government Association, as members of the former Council of Australian Governments (COAG) agreed that the export of waste glass, plastic, tyres and paper be regulated by the Australian Government.

Ensuring only properly processed waste glass, plastic, tyres and paper are exported prevents these materials being dumped overseas, reducing harm to the environment and human health from pollution. It also helps build capacity in Australia to turn waste materials into high-value, recycled commodities.

Consistent with the action under the National Plastics Plan, the export of waste plastic is regulated under the *Recycling and Waste Reduction Act 2020* and the *Recycling and Waste Reduction (Export – Waste Plastics) Rules 2021*. Under the rules, from July 2022 waste mixed plastic can only be exported if it has been:

- sorted into a single resin or polymer type and further processed, for example flaked or pelletised
- processed with other materials into processed engineered fuel.

To export waste plastic, an export licence is required. A permit under the *Hazardous Waste (Regulation of Exports and Imports) Act 1989* may be required in certain circumstances.

The effectiveness of these regulations will be considered during statutory review of the *Recycling and Waste Reduction Act 2020*.

### 3.4.2 National Environment Protection (Used Packaging Materials) Measure 2011

The Commonwealth *National Environment Protection Council Act 1994*, and complementary state and territory legislation allow the National Environment Protection Council to make National Environment Protection Measures (NEPMs). NEPMs are a special set of national objectives designed to assist in protecting or managing aspects of the environment.

The goal of the *National Environment Protection (Used Packaging Materials) Measure 2011* (Used Packaging NEPM) is to reduce environmental degradation arising from used packaging and encourage re-use and recycling supported by the voluntary strategies in the Australian Packaging Covenant.

Together the Packaging NEPM and the Covenant form the co-regulatory arrangement for managing used packaging materials in Australia.

In 2021, DCCEE led an independent legislative review examining the effectiveness of the national co-regulatory arrangement. The review found that, while the Covenant operates effectively as a voluntary product stewardship scheme, the Packaging NEPM is not fit-for purpose and reform is needed to improve the environmental outcomes for packaging. The Australian Government response to the review was released in December 2022.

At the October 2022 Environment Ministers' Meeting, ministers agreed to reform the regulation of packaging by 2025, to ensure that all packaging available in Australia is designed to be recovered, reused, recycled and reprocessed safely in line with circular economy principles. Reforming the co-regulatory framework and shifting the focus to packaging design provides an opportunity to accelerate material circularity for the 6.3 million tonnes of packaging placed on the Australian market every year.

It is anticipated that legislative reform processes will be undertaken in 2024–25, with a new regulatory framework for packaging to be implemented by the end of 2025.

### 3.4.3 The Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a framework for managing the impacts of plastic pollution by providing for the listing of key threatening processes and the development of threat abatement and recovery plans.

Key threatening processes threaten the survival, abundance or evolutionary development of a native species or ecological community. The assessment as to whether key threatening process is occurring is the first step to addressing the impact of a particular threat under Commonwealth law. The key threatening process *Injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful marine debris* was listed under the EPBC Act in 2003.

Threat abatement plans outline the research, management, and other actions necessary to reduce the impacts of a listed key threatening process on affected listed threatened species and ecological communities. The *Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans* (2018), guides and coordinates Australia's response to the impacts of harmful marine debris. The plan binds the Commonwealth to respond to the impact of marine debris on vertebrate marine life, and identifies the research, management and other actions needed to reduce the impacts of marine debris on affected species. It includes a range of management approaches for research and monitoring, public outreach and education, preventing and reducing debris from land-based sources as well as addressing marine-based sources and removing accumulated marine debris from the coastal marine environment.

### 3.4.4 Hazardous Waste (Regulation of Exports and Imports) Act 1989

The *Hazardous Waste (Regulation of Exports and Imports) Act 1989* (Hazardous Waste Act) gives domestic effect to the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal. Mixed, contaminated, or hazardous plastic wastes that are moved between countries are subject to controls.

The Hazardous Waste Act regulates:

- any plastic waste that is not almost exclusively a single polymer or resin
- any plastic that is not almost free from contamination from other types of wastes
- any plastic that is hazardous
- certain fluorinated polymers

- halogenated polymers
- any plastic that is not going to be recycled.

All waste plastic that is controlled under the Basel Convention requires prior informed consent before any transboundary movement from the country of export. Consent is required from the country of import and all countries the waste will transit through. Consent is only provided after an assessment concludes that the waste will be transported and recycled/disposed of in an environmentally sound manner. This assessment will minimise the risk that the plastic waste that is subject to any transboundary movement will enter water ways or oceans and that the recycling/disposal minimises harm to human health and the environment (including the aquatic environment and waterways).

The Basel Convention also puts an emphasis on parties to reduce the amount of hazardous waste that is exported for disposal or recovery options (Art 4(2)(d)). This was underlined in the Cartagena Declaration.

See also 4.2.1 Basel Convention.

### **3.4.5 Industrial Chemicals Environmental Management (Register) Act 2021**

Industrial chemicals are part of everyday life in Australia. However, if they are not managed properly, these chemicals can pollute our environment. To reduce the risk of chemical pollution, all Australian governments are working together to implement the Industrial Chemicals Environmental Management Standard, or IChEMS, established under the *Industrial Chemicals Environmental Management (Register) Act 2021* (ICEMR Act). The IChEMS is a national approach to managing chemical import, use and disposal. It will deliver more consistent regulation and make it easier for industry to choose less harmful chemicals.

Under the IChEMS, industrial chemicals, including those used as additives in plastics, will be categorised into one of seven schedules on the IChEMS Register. The chemicals of highest concern, including those listed on international agreements such as the Stockholm Convention on Persistent Organic Pollutants (POPs), will be subject to severe restriction or prohibitions. This will limit their use, distribution and environmental impacts in Australia. The IChEMS will support the design and use of safer plastics and prevent additional POPs entering the Australian market.

Implementation of the IChEMS supports delivery of an action for the sound management of chemicals and hazardous waste under the 2019 National Waste Policy Action Plan. To take effect, the IChEMS must be adopted through jurisdictional regulatory frameworks, including in the Commonwealth. States and territories are working to adopt the IChEMS. DCCEEW continues to work to control chemicals at the border, giving effect to restrictions and prohibitions, and regulate the management of chemicals in Commonwealth areas.

## **3.5 Supporting innovation and action**

The Australian Government supports innovation and action on preventing and managing plastic pollution in Australia through funding, resourcing, and data collection and analysis.



### 3.5.1 Recycling Modernisation Fund

The Recycling Modernisation Fund (RMF)<sup>15</sup> is a national initiative that is expanding Australia's capacity to sort, process and remanufacture glass, plastic, tyres, paper and cardboard.

The additional recycling capacity funded by the RMF supports Australia to domestically manage those materials (waste glass, plastic, tyres, paper and cardboard) that were previously exported. Increased recycling capacity supports the circular economy, by allowing more products to be reused, recycled or remanufactured when they are no longer useful or required for their initial purpose.

The Australian Government is investing \$250 million into new and upgraded recycling infrastructure through the RMF. The RMF will see over \$1 billion of investment in recycling infrastructure, with contributions from the states and territories and industry. RMF projects already announced will add over one million tonnes of processing capacity every year, including over 293,000 tonnes per annum of recycling capacity for plastics

Australian Government funding for the RMF includes \$60 million for the Plastics Technology stream, which was confirmed in the October 2022 Budget. The funding will be invested in advanced recycling solutions for hard-to-recycle plastics. This will build Australia's capability for hard-to-recycle plastics and address our relatively low recycling rates for plastics.

The department is currently consulting on draft Guidelines for the Plastics Technology stream. Details on how the Plastics Technology stream will be implemented will be available in due course.

### 3.5.2 Sustainable Procurement

The Australian Government is committed to leading a national shift to sustainable procurement. This includes increasing the use of recycled content in government projects. Using recycled materials reduces the amount of waste in our environment including plastic, lowers the emissions caused by landfill and creates jobs. Examples of the government's use of recycled plastic include various asphalt projects and over 32,000 multi-sort bins made from 68 tonnes of recycled plastic across the Defence estate; and 100% recycled plastic, including plastic from ghost fishing nets, in 2,000 square meters of carpet installed at the Reef HQ Aquarium Centre.

DCCEEW's Commonwealth Sustainable Procurement Advocacy and Resource Centre supports all Commonwealth agencies to improve the environmental sustainability of their procurements with

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<sup>15</sup> [https://www.dcceew.gov.au/environment/protection/waste/how-we-manage-waste/recycling-modernisation-fund#:~:text=The%20Recycling%20Modernisation%20Fund%20\(RMF,%2C%20tyres%2C%20paper%20and%20cardboard.](https://www.dcceew.gov.au/environment/protection/waste/how-we-manage-waste/recycling-modernisation-fund#:~:text=The%20Recycling%20Modernisation%20Fund%20(RMF,%2C%20tyres%2C%20paper%20and%20cardboard.)

resources and education activities This includes a Sustainable Procurement Guide, toolkit, and model clauses. Resources can be found on DCCEEW's website<sup>16</sup>.

DCCEEW is working to build industry awareness of the opportunities and barriers to using recycled plastics in road infrastructure. DCCEEW commissioned the Australian Roads Research Board<sup>17</sup> to assess the environmental, social, and economic benefits and costs of using recycled plastics (and nine other materials) in roads. DCCEEW also partnered with Infrastructure Australia<sup>18</sup> to expand its Market Capacity Program to assess the potential to use recycled materials, including plastics, in the major road infrastructure pipeline.

### **3.5.3 Action in our oceans and waterways**

It can take just a moment for plastic to enter the environment, but the environmental impacts last for centuries.

DCCEEW is leading on several actions to address plastic pollution in our oceans and waterways. These include committing funding for plastic waste reduction and remediation of plastic pollution and debris in our oceans and waterways and those in our region.

#### **3.5.3.1 National Plastic Pollution Portal**

Understanding the origin and fate of plastics and microplastics is key to understanding the impacts of plastic pollution in Australia, since it is estimated that most plastics found in Australian oceanic waters are of local origin.<sup>19</sup> Identifying the main sources of plastic pollution, now and through time, is critical in informing and adapting mitigation and response strategies and actions.

To take effective action on plastic pollution we first need to understand the primary sources of plastic pollution, where it travels and where it accumulates. To obtain this understanding, the DCCEEW is partnering with the CSIRO to develop a national web-based portal to display information on plastic pollution around Australia.

Data collection on plastic pollution is carried out by governments, industry, scientists and the non-government sector. The National Plastic Pollution Portal will provide a 'national picture' of plastic pollution around Australia, allowing us to identify hotspots and see changes in plastic pollution by location and over time. This will enable more targeted clean-up activities and inform policies to tackle the worst types of plastic pollution. It will also help monitor the success of our efforts to reduce plastic pollution.

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<sup>16</sup> <https://www.dcceew.gov.au/environment/protection/waste/sustainable-procurement/recycled-content-in-use>

<sup>17</sup> [https://www.arrb.com.au/recycled\\_materials\\_best\\_practice\\_advice](https://www.arrb.com.au/recycled_materials_best_practice_advice)

<sup>18</sup> <https://www.infrastructureaustralia.gov.au/publications/2022-replacement-materials-report>

<sup>19</sup> <https://publications.csiro.au/publications/publication/Plcsiro:EP183257>

The establishment of the web-portal is a multi-year project which started mid-2022 and is scheduled to finish 2025.

### **3.5.3.2 Ghost Nets Initiative**

Abandoned, lost, or otherwise discarded fishing gear (often referred to as 'ghost nets' or 'ghost gear') is a major component of global marine plastic pollution, with far-reaching socioeconomic and environmental impacts to sustainable fisheries.

It is estimated that nearly 2% of all fishing gear is lost to the world's oceans each year. This is comprised of almost 3,000 km of gillnets, over 75,000 km of purse seine nets, over 200 km of trawl nets, almost 750,000 km of longline mainlines, nearly 14 billion longline hooks and over 25 million pots and traps per year.<sup>20</sup>

The coastline of northern Australia has one of the highest global densities of ghost net pollution. The prevailing currents and conditions in the Arafura and Timor Seas and the Torres Strait mean that discarded or lost nets remain trapped in the Gulf of Carpentaria until they are eventually washed ashore. The Gulf is recognised as a global marine debris 'hot spot'. Landfilling is currently the most widely used approach for disposing of plastic marine debris and ghost nets in northern Australia.

In response to the issue of ghost nets and plastic marine debris in northern Australia, the Australian Government is implementing the \$14.8 million Ghost Nets Initiative<sup>21</sup> over four years (to June 2024), a key action listed under the National Plastics Plan.

Work under the Ghost Nets Initiative is examining the feasibility of developing a new recycling pathway for marine debris and ghost nets in the Gulf of Carpentaria and prototyping the use of new technology for remanufacturing the ghost nets collected from Indigenous rangers and other community groups in the Gulf region. These projects have found that although there may be promising technological solutions available for reprocessing ocean plastics, particularly in remote coastal communities across northern Australia, there are significant barriers to adoption. This is largely due to the lack of existing waste infrastructure and access to markets for recyclables, and very high transport costs. Any new recycling pathway for marine debris is unlikely to be cost-effective and therefore would require ongoing external funding or introduced levies.

### **3.5.3.3 Indian Ocean Territories and Coral Sea Marine Parks**

Australia's remote Christmas Island and Cocos (Keeling) Islands Marine Parks in Australia's Indian Ocean Territories and the Coral Sea Marine Park off the north-east of Australia face significant

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<sup>20</sup> <https://blog.csiro.au/abandoned-fishing-gear/> 740,000km of fishing line and 14 billion hooks: we reveal just how much fishing gear is lost at sea each year. Dr D Hardesty, Dr C Wilcox, J Vince & K Richardson.

<sup>21</sup> <https://parksaustralia.gov.au/ghost-nets-initiative/>

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problems from plastic pollution, which is becoming a focus for planning of future work by Parks Australia.

These remote marine protected areas suffer from significant, rapid build-up of plastic pollution on island beaches and shorelines from the surrounding ocean. Where able, local communities together with environmental NGOs make significant and regular efforts to clean up this plastic pollution, however, it can rapidly build up again.

The Indian Ocean territories have very limited options to manage plastic pollution (or to manage waste more broadly). Plastic waste is generally sent to landfill on Christmas Island and (where possible) to incineration on Cocos (Keeling) Islands. Local recycling facilities are currently not in place and export of waste to mainland facilities is not economically viable and carries biosecurity risks.

The waters surrounding Christmas Island and Cocos (Keeling) Islands were declared marine parks in March 2022 and significant areas of the islands are national park. While more research is required on its impacts, it is known that plastic pollution is and will be one of the most significant threats to the values of these new marine parks, existing national parks—Pulu-Keeling and Christmas Island National Parks—and EPBC Act listed species, such as sea birds and marine turtles.

The Coral Sea Marine Park has over 60 remote and near-pristine un-inhabited islands supporting globally important seabird and turtle nesting areas. Plastic waste originating from the Pacific Ocean region accumulates on these islands via wind and current drift. Many birds place these plastics in their nests, and it also breaks down into micro-plastics, which is toxic to marine life, entering the food chain. Since 2016, in collaboration with Tangaroa Blue Foundation and the Queensland Parks and Wildlife Service, Take 3 for the Sea and the Surfrider Foundation, Parks Australia has undertaken considerable effort to assess the types and origins of these plastics and clean up the islands to reduce the impacts.

Parks Australia conducted an initial plastic pollution clean-up voyage in mid-2016. This voyage collected over 2.2 tonnes of marine debris from 18 islands. Since then, marine debris has been regularly removed from the Coral Sea Marine Park islands and analysed. In 2021 and 2022, 46 islands were cleaned of 28,000 marine debris items weighing over 3.1 tonnes. However, a recent voyage to 22 islands in November 2022 by Tangaroa Blue foundation supported through an Our Marine Parks Grant Round 3 has revealed that about 1.9 tonnes had re-accumulated rapidly.

Parks Australia's analysis of the marine debris data shows the plastic pollution (mostly plastic bottles, footwear and other hard and soft plastics) is coming from neighbouring countries and possibly further away. Marine debris has also been identified as originating from commercial ships and foreign fishing vessels (ropes; fishing buoys, longline GPS buoys, nets, packing crates and fish aggregating devices made from PVC pipes). The proportion of land-generated versus maritime transport-generated marine debris in these regions is not known.

### **3.5.3.4 Government funded community clean up campaigns**

The ReefClean project<sup>22</sup>, currently delivered under the Australian Government's Reef Trust, has been highly successful at engaging and mobilising multiple levels of the Great Barrier Reef community. These include source reduction programs with industry forums and local chambers of commerce, targeted recycling and reclamation programs with major retail chains (e.g. BCF) and sporting facilities (e.g. Dairy Farmers Stadium) and clean-up programs involving research institutes, NGOs, schools and local councils.

Local governments, such as our Reef Guardian Councils, are tackling plastic pollution through activities such as waste and recycling, stormwater management (e.g. gross pollutant traps and other methods) and community engagement. Many of them have these types of activities identified in their action plans. DCCEEW partner with them to increase capacity and share knowledge, including looping in partners such as Tangaroa Blue Foundation to provide expert advice.

The Indigenous Ranger Coastal clean-up Project is the largest component of the Ghost Nets Initiative (discussed in 3.5.3.2). To date there are 16 Indigenous ranger groups engaged in the project who have conducted 269 clean-up activities removing more than 300 ghost nets and more than over 300 cubic metres of marine debris from beaches and reefs in the Gulf of Carpentaria.

### **3.5.3.5 National Environmental Science Program (NESP)**

The National Environmental Science Program (NESP)<sup>23</sup> is a long-term commitment by the Australian Government to applied environment and climate science, supporting world-class collaborative and practical research that informs decision-making and on-ground action.

NESP research on marine plastics was used to inform policy options and actions in implementing Australia's 2018 National Waste Policy, with a focus on microplastics. Current NESP research includes projects focused on:

- synthesising current data and identifying key knowledge gaps for the management of microplastic pollution in south-eastern Australian coastal waters, including microplastics occurrence, sources and pathways in coastal and marine environments
- developing tools to quantify microplastic contamination to underpin identification of contamination hotspots and sources, decision-support tools and evidence-based priority actions towards policy development
- developing a risk framework for understanding impacts to EPBC Act-listed species
- developing a monitoring protocol for the systematic sampling, identification and analysis of microplastics in a variety of different environments, such as sand, soil and water

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<sup>22</sup> <https://www.tangaroablue.org/amdi-network/reefclean/>

<sup>23</sup> <https://www.dcceew.gov.au/science-research/nesp>

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- providing critical information to a range of research-users about the current and emerging risks to the marine environment of contaminants – including microplastics – associated with wastewater discharges
- identifying control and management options to minimise the impacts of secondary microplastics (e.g. waste tyres, synthetic grass, marine and stormwater debris), for example through re-manufacturing of materials or providing alternative materials.

### **3.5.3.6 Reef 2050 Long Term Sustainability Plan**

The Reef 2050 Long Term Sustainability Plan (Reef 2050 Plan)<sup>24</sup>, jointly developed with the Queensland Government, is Australia's overarching long-term strategy for the protection and management of the Great Barrier Reef to support its health and resilience.

The Reef 2050 Plan identifies marine debris as one of the threats it seeks to address, and includes the goal 'Marine Debris, rubbish pollution and at-sea disposal of waste is reduced'. It also includes strategic actions to implement domestic measures that reduce marine debris and manage waste disposal, and to foster international efforts to reduce marine debris entering the Reef and aims to reduce plastic.

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<sup>24</sup> <https://www.dcceew.gov.au/parks-heritage/great-barrier-reef/protecting/reef-2050-plan>

## 4 Global engagement on plastic pollution

DCCEEW leads on or engages in a range of global actions and initiatives to address plastic pollution in our oceans and waterways. This includes leading work on a new global agreement on plastic pollution.

In November 2022, Australia also joined the Ellen McArthur Foundation Global Commitment on plastics. Launched in October 2018 by the Ellen MacArthur Foundation and UNEP, the Global Commitment provides a voluntary framework for countries to deliver actions towards a common vision of a circular economy for plastics.

Appendix B lists additional global activities, agreements, bodies and initiatives on plastic pollution to which DCCEEW contributes and engages on.

### 4.1 A new legally binding international agreement on plastic pollution

In March 2022, the fifth session of the United Nations Environment Assembly (UNEA) agreed to establish an Intergovernmental Negotiating Committee (INC) with an ambitious mandate to develop a new international legally binding instrument on plastic pollution, including in the marine environment by the end of 2024.

DCCEEW leads the Australian Government's negotiations on the proposed treaty with the support of the Department of Foreign Affairs and Trade (DFAT), the Office of International Law (OIL), and other Australian government agencies.

The Australian Government joined the High Ambition Coalition (HAC) to End Plastic Pollution by 2040 (HAC) in November 2022. The HAC is a group of likeminded countries with the ambition to end plastic pollution through a global approach defined by three high level goals:

- Restrain plastic consumption and production to sustainable levels
- Enable a circular economy for plastics that protects the environment and human health
- Achieve environmentally sound management and recycling of plastic waste.

As a member of the HAC, Australia will advocate for a treaty that supports a safe circular economy, and eliminates problematic and unnecessary plastics, as well as harmful chemicals from product supply chains.

### 4.2 Obligations to manage and eliminate hazardous wastes and substances

DCCEEW is the lead agency responsible for engagement and Australia's administration of International Conventions that seek to address global environmental impacts of hazardous substances and wastes.

There is a wide range of toxic chemicals used as plastic or polymer additives – for example, chemicals such as many endocrine disrupting chemicals or recognised persistent organic pollutants (POPs) which are allowed to be used under exemptions in the conventions, unintentionally produced during manufacture or used historically. The global trade in waste plastics has seen the movement of significant volumes of plastic waste from developed countries to developing countries, where environmentally unsound recycling and disposal practices can exacerbate exposure to toxic compounds. Toxic additives will also impact on the future recycling of the products in which they have been used. It is desirable that these toxic additives be phased out and substituted with non-toxic alternatives, where they exist, to facilitate the transition to a more circular economy for plastic.<sup>25</sup>

The Basel and Stockholm Conventions have acted on number of substances, through listing or through issuing technical guidance. There are still many chemicals which are not yet subject to adequate control at the international level, and on which further action could make a significant contribution towards reducing the risks associated with the use of plastics and to promoting life-cycle approaches and the circular economy.

#### **4.2.1 Basel Convention**

The Basel Convention includes several work streams to improve the control of transboundary movements of hazardous wastes and their disposal. These programs are aimed at addressing increasing levels of marine plastic and microplastic pollution, as well as their negative impacts on the environment. These include:

- Reviewing the constituents or characteristics that identify plastic wastes that are hazardous.
- A partnership of plastic waste working group consisting of business, government, academic and civil society members, to improve and promote the environmentally sound management of plastic wastes at the global, regional and national levels, as well as to eliminate the discharge of plastic waste and microplastics into the environment.
- Updating the 2002 Technical Guidelines for the Identification and environmentally sound management of plastic wastes and their disposal. These technical guidelines are supported by other guidelines – for example guidelines on the safe destruction of persistent organic pollutants.
- An update to the 2011 Technical Guidelines on the environmentally sound management of used and waste pneumatic tyres, to address leakages of rubber and rubber waste to the environment.

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<sup>25</sup> UNEP, “Report on the activities of the Basel and Stockholm conventions regional centres: Plastic and toxic additives, and the circular economy: the role of the Basel and Stockholm Conventions”, (2019) UNEP/POPS/COP.9/INF/28/Add.1



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- The thirteenth meeting of Open-Ended Working Group will consider whether new technical guidelines on the environmentally sound management of rubber wastes and waste parings and scrap of rubber should be developed.
- Consideration of whether, how and when countries should assess the effectiveness of the measures taken under the Convention to address the plastic waste contributing to marine plastic litter and microplastics.

As part of its technical assistance, the Basel Convention's Secretariat is implementing various projects to strengthen capacities for the control of transboundary movements, environmentally sound management and prevention and minimisation of the generation of plastic waste. These include:

- Preventing and significantly reducing marine litter and microplastics by strengthening capacity in Ghana and Sri Lanka. This is supported by:
  - The Plastic Waste Inventory Toolkit and the Plastic Waste environmentally sound management strategy, to enable mapping of flows of plastic waste arising from sources of generation through the formal and informal waste management systems and to its disposal or recovery or leakage into the environment.
  - The assessment of the degree of leakage of waste plastics from the waste management system to understand the points at which leakage occur to allow for targeted interventions.
- Assisting partner countries to improve their management of plastic waste and ultimately contribute to Sustainable Development Goal target 14.1
- Strengthening capacity and awareness of plastic waste in remote and mountainous areas to ensure its environmentally sound management
- Strengthening knowledge and capacity to prevent and reduce releases of plastic waste in Malawi and Zimbabwe
- A series of projects on plastic waste, being undertaken under the Basel and Stockholm Convention's Regional Centre Small Grants Program, funded by Norway, to improve the management of plastic waste in partner countries and thus contribute towards preventing and significantly reducing marine pollution.

#### **4.2.2 Stockholm Convention**

The Stockholm Convention on Persistent Organic Pollutants (the Stockholm Convention) aims to protect human health and the environment from the adverse effects of persistent organic pollutants (POPs). Countries that ratify the Stockholm Convention agree to take measures to eliminate or reduce environmental releases of these POPs.

POPs are chemicals that can stay in the environment for a long time and travel vast distances in water or the atmosphere. They accumulate in the bodies of living organisms, including humans, are found in higher concentrations at higher levels in the food chain, and can be toxic to living organisms.

Listing of a chemical on the Stockholm Convention is dependent on criteria including their potential for long rang environmental transport, which limits the ability of individual countries to manage their impacts alone. POPs in plastics can be transported over long distances in water and through ingestion by migratory species.

The Stockholm Convention lists several POPs that have historically been used or continue to be used in plastic production, are by-products of plastic production, or are themselves classified as plastics. These include per- and polyfluoroalkyl substances (PFAS), short-chain chlorinated paraffins (SCCPs), decabromodiphenyl ether (decaBDE) and related polybrominated compounds, polychlorinated biphenyls (PCBs), and dioxins.

Australia has ratified twelve chemicals listed on the Stockholm Convention and is currently undertaking domestic regulatory processes to enable ratification of the remaining listings.

### **4.2.3 Waigani Convention**

The Convention to Ban the importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement of Hazardous wastes within the South Pacific Region, known also as Waigani Convention controls the movement of controlled waste within the Pacific Region – including Australia and New Zealand.

The Australia Government is leading a working group, consisting of New Zealand, Papua New Guinea and Samoa, to develop a proposal to introduce the enhanced controls for plastic waste that have been agreed by parties to the Basel Convention into the Waigani Convention.

The Australian Government is preparing a proposal that will be considered by the Waigani scientific and technical advisory group meeting in February 2022 and the aim is to provide a proposal for these enhanced controls to amend the Waigani Conference of Parties for consideration at the end of 2022.

## **4.3 Plastics in our region and beyond**

### **4.3.1 The Pacific**

Australia's near Pacific neighbourhood covers 100 million km<sup>2</sup> of the Pacific Ocean. That's more than half the Pacific and almost a fifth of the world's total ocean area.

It is estimated that 310,000 tonnes of waste plastic is generated by Pacific Island nations and territories each year, with much of it ending up in their coastal waterways and coastal waters – which then impacts on the health of the marine ecosystem and the health of inshore fisheries. Pacific island nations typically do not have the infrastructure to capture this waste, the population size to make recycling economical, nor the technical support to develop measures to reduce the use of plastics. In addition to domestically sourced plastic pollution, Pacific Island nations are also recipients of transboundary marine plastic pollution.

To combat the problem of litter in their ocean environment, the Pacific Island nations, through the Secretariat of the Pacific Regional Environment Programme (SPREP), recently launched the *Pacific Regional Action Plan – Marine Litter – 2018-2025* (Marine Litter Action Plan). The Marine Litter Action Plan sets out the policy context and key actions to minimise marine litter across the Pacific Island Countries and Territories.

Australia has a key role to play in the Pacific. DCCEEW leads on and engages in the following activities:

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- **The Pacific Regional Declaration on the Prevention of Marine Litter and Plastic Pollution and Its Impacts.** The Declaration provides a Pacific regional voice, calls attention to the impacts of plastic pollution in the region and calls for a new binding global agreement.
- **Pacific Ocean Litter Project (POLP).** DCCEEW, in cooperation with SPREP, implements the \$16 million POLP to address marine plastic pollution in the Pacific by helping Pacific Island countries refuse, reduce and find alternatives to single-use plastics. The POLP is funded through Official Development Assistance (ODA) administered by agreement between DFAT and DCCEEW.
- **The ANZPAC Plastics Pact.** Australia is a supporting member of ANZPAC, an industry-led regional pact focused on accelerating a circular economy for plastic packaging and reducing plastic waste and pollution in the Australia, New Zealand, and the Pacific Islands region through an ambitious set of targets.

#### 4.3.2 The Antarctic

Australia maintains Antarctic Treaty System (ATS) responsibilities for the regulation and management of activities within the Antarctic region, for example under the Protocol on Environmental Protection to the Antarctic Treaty and the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR). Australia has measures in place to manage plastics in and around Antarctic stations and field camps. Australia undertakes clean-up activities, and records and reports on plastics found in the region to relevant bodies.

Through representation across multiple global initiatives by the Australian Antarctic Division (AAD), DCCEEW provides input into:

- CCAMLR – which is working on mechanisms to reduce plastic pollution in its Convention area. CCAMLR has a marine debris monitoring program in place and collaborates with the Committee for Environmental Protection (CEP) to mitigate the impact of plastic debris around Antarctica.
- The International Whaling Commission (IWC), which adopted by consensus a resolution on marine plastic pollution at their 68th meeting in October 2022. The resolution commended the UN Environment Assembly of Resolution UNEP/EA.5/Res.14 agreeing to convene an intergovernmental negotiating committee (INC) to develop an international legally binding instrument on plastic pollution. The Commission instructed the IWC's Secretariat to engage in this INC process. The resolution also recommended contracting government reports on marine plastic pollution and plastic ingestion by stranded cetaceans. The Commission directed its Scientific Committee to complete a global risk assessment on exposure of cetaceans to marine plastic ingestion and entanglement, and the AAD will continue to engage in the development of this process.
- The Scientific Committee on Antarctic Research (SCAR) Action Group on Plastic in the Polar Environment – whose 2022 event 'Plastic Pollution in the Southern Ocean: A Global Outlook' included contributions from AAD scientists.
- Ongoing research collaborations addressing plastic pollution and their impacts on seabirds on the sub-Antarctic islands and Antarctic continent.

### 4.3.3 High Level Panel for a Sustainable Ocean Economy

Prime Minister Albanese is Australia's member on the 17-nation Ocean Panel – a unique global initiative established in 2018 to build momentum towards a sustainable ocean economy in which effective protection, sustainable production and equitable prosperity go hand-in-hand.

The Ocean Panel's *Transformations for a Sustainable Ocean Economy*<sup>26</sup>, launched in December 2020, is centred around five interconnected themes – ocean health, wealth, knowledge, equity and finance. The Panel's vision shares high level outcomes and priority actions for how the world can rapidly transition to a sustainable ocean economy including to reduce ocean pollution through targeting sources from land and sea and improving management practices.

All Ocean Panel members have committed to sustainably manage 100% of the ocean area within national jurisdiction, guided by a Sustainable Ocean Plan, by 2025. The government is scoping the process and content for Australia's sustainable ocean plan which will outline how we will achieve a sustainable ocean economy with a healthy and resilient ocean at its foundation.

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<sup>26</sup> <https://oceanpanel.org/the-agenda/>

## 5 Conclusion

DCCEEW is committed to addressing plastic pollution to protect our environment and reduce potential health impacts for Australians. In working closely with governments, industry, businesses and the community, DCCEEW will continue to:

- actively engage in negotiations on the plastics pollution treaty and establish Australia as a leader on plastic pollution prevention
- work to define a clear strategic direction for plastic management across DCCEEW's activities
- work with states and territories where strong national leadership is needed to deliver desired outcomes for the environment
- implement initiatives that reduce the harmful and toxic effects of plastic pollution
- drive initiatives to deliver a safe circular economy for plastics.

## Appendix A

### A.1 Phasing out of problematic and unnecessary single-use plastic products

The simplest way to reduce plastic waste and pollution is to avoid using problematic and unnecessary single use plastics (PSUPs).

In 2021, all Australian governments agreed eight problematic and unnecessary single-use plastics that should be prioritised for industry phase out by 2025. These are:

- lightweight shopping bags
- bowls and plates
- fragmentable plastics
- expanded polystyrene (EPS) consumer food containers
- straws
- EPS goods packaging
- utensils and stirrers
- microbeads in personal products

The National Plastics Plan targets certain packaging formats. The following problematic and unnecessary single-use plastic packaging formats are subject to industry-led phase out. These phase outs are voluntary and give industry the opportunity to demonstrate leadership in implementing the phase outs, prior to government consideration of whether regulatory intervention is needed.

- ***Non-compostable plastic packaging products containing additive fragmentable technology that do not meet relevant compostable standards (AS4736-2006, AS5810-2010) by July 2022***

Industry is already making substantial efforts to transition toward certified compostables. The Australasian Bioplastics Association, the bioplastics industry peak body, reports an unprecedented increase in inquiries and applications for certification since the release of the National Plastics Plan. Four jurisdictions (SA, ACT, WA, and Vic) have also committed to fast-tracking phase outs from 2022.

- ***EPS loose fill and moulded consumer packaging by July 2022, and EPS consumer food and beverage containers by December 2022***

A roadmap to deliver a national approach to phase-out EPS was released by the Australian Packaging Covenant Organisation (APCO) on 18 November 2022. There has been strong progress on EPS loose fill and food and beverage containers. Industry has indicated that there has been a significant drop in volumes placed on the market and that industry would be on-track to phase-out EPS loose fill by beverage containers by December 2022. The department has commissioned the Problematic Single Use Plastics Survey (PSUPs Survey) that will provide the baseline data and ongoing monitoring of the phase out. The initial survey will be published towards the end of 2022.

Through the development of the roadmap, industry have advised that moulded packaging is still a significant challenge. DCCEEW will continue to work with industry to fast-track these phase outs nationally, while providing flexibility for industry to pursue alternative approaches for

products requiring longer lead times or where no suitable alternatives to EPS are currently available.

- ***PVC packaging labels by December 2022***

DCCEEW is working with industry on an approach to phase out PVC packaging labels. National surveys will track and monitor quantities of PVC packaging labels placed on market, against which the department can track and guide the industry-led phase out. Significant progress has already been made to phase out PVC labels due to work undertaken by the Australian Packaging Covenant Organisation to help businesses transition to more sustainable packaging design.

We will continue to review industry progress and alternative options through surveys and industry feedback to determine whether further action (e.g., regulated ban, or a co-regulatory or mandatory product stewardship arrangement) is needed.

### **A.1.1 Plastic Free Beaches**

Under *Plastic Free Beaches*, Boomerang Alliance will provide tailored assistance to food retailers within eight selected geographic regions to eliminate single-use plastic and switch to reusable or 100% compostable alternatives. This will largely focus on eliminating six key plastic items, which make up a significant proportion of Australia's litter load – coffee cups/lids, straws, foodware, takeaway containers, plastic bags and plastic water bottles.

Local businesses can opt-in to the initiative and are supported by a local project manager that provides businesses with advice and links them with suppliers of more sustainable alternatives to single use plastics.

Boomerang Alliance, in discussion with the department, selected locations based on the fact they:

- are geographic areas that disproportionately contribute to marine plastic litter (e.g., high visitor numbers, density of retail and food outlets offering single use plastic items, proximity to the coast or waterways through which plastic pollution is transported, or other evidence that shows they have a disproportionate contribution to marine plastic litter), or are areas where species/ecological communities are at greatest risk from plastic pollution; and
- demonstrated local community and businesses support, noting that the program's success ultimately depends on businesses opting into the initiative.

The areas selected to participate in Plastic Free Beaches are:

- *Port Douglas (QLD)* (July – December 2021; complete) – over 12,900 items avoided through the program as of March 2022. 44 member businesses involved.
- *Port Lincoln (SA)* (July – December 2021; complete) – 10,490 items avoided through the program as of March 2022. 8 member businesses.
- *Darwin City Beaches (NT)* (July 2021 – July 2022) 40 business members to date signed up to the program.

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- *Mornington Peninsula (Vic)* – year long project that commenced in September 2021 but was delayed to February 2022 due to COVID-19 related issues. Currently 34 member businesses involved. This location would benefit from further promotion / media opportunities.
- *Randwick (NSW)* – Including *Clovelly Beach, Congwong Beach, Coogee Beach, Frenchmans Bay, Gordons Bay, Little Bay Beach, Little Congwong Beach, Malabar Beach, Maroubra Beach, Yarra Bay Beach and Surfers' Code*. Year-long project that commenced in September 2021 but was delayed to February 2022 due to COVID-19. Currently 16 member businesses involved.
- *Rottnest Island/ Stirling Council (WA)* – year long project that commenced in September 2021. Currently 14 member businesses involved.
- *South-eastern Tasmania (Tas)* – year long projects, commenced late March 2022.
- *Jervis Bay/Sussex Inlet (ACT/NSW)* – commenced in July 2022.

Boomerang Alliance was awarded \$600,000 (ex GST) in departmental funding over two years. To-date, it has received \$400,000 (ex GST) with the balance to be paid in 2022–2023.



## Appendix B

### B.1 Global agreements, bodies and initiatives

DCCEEW leads or engages in a range of global actions and initiatives to address plastic pollution in our oceans and waterways as outlined below.

- **International Convention for the Prevention of Pollution from Ships (MARPOL):** Includes a complete ban on the disposal of plastics from shipping into the sea and reporting requirements for any lost or discharged fishing gear that poses a significant threat to the environment or navigation.
- **International Maritime Organisation (IMO):** The IMO has implemented an Action Plan and Strategy to address marine plastic litter from ships. To deliver the objective of the Action Plan, the IMO will look to strengthen existing international frameworks, such as MARPOL, and introduce new supporting measures.
- **London Protocol and Convention:** Prohibits the dumping of waste at sea and requires assessment of eight waste categories (as listed in Annex 1 of the London Protocol) prior to dumping at sea.
- **United Nations Convention on Law of the Sea (UNCLOS):** Informs states of their duty to protect the marine environment, including to “prevent, reduce, and control pollution of the marine environment by dumping.
- **New high seas biodiversity treaty (BBNJ):** An international legally binding instrument is currently being developed on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.
- **Convention on Migratory Species (CMS):** Adopted a resolution on ‘Management of Marine Debris’ in 2017 which defines marine debris, identifies key knowledge gaps, tackles best practice for commercial marine vessels, acknowledges the importance of education and awareness as well as collaboration and policy interventions. The CMS also has appointed an independent expert to provide advice to the Convention on marine debris
- **Convention on Biological Diversity (CBD):** Under the CBD’s Post-2020 Global Biodiversity Framework (GBF) Australia is advocating for the prevention, reduction, and progressive elimination of plastic pollution
- **G20:** G20 nations including Australia adopted the G20 Action Plan on Marine Litter in 2017 and the G20 Implementation Framework for Actions on Marine Plastic Litter (Osaka Blue Ocean Vision) in 2019.
- **Organisation for Economic Co-operation and Development (OECD):** Australia contributes to the OECD’s work on plastic pollution, such as guidance, assessments, policy lever analysis, and mapping of value chains. In 2021, Australia contributed to the development of the OECD

guidance document/report 'A Chemicals Perspective on Designing with Sustainable Plastics', as well as the OECD's Global Plastics Outlook Report.

### B.1.1 Other relevant International, Regional or Bilateral initiatives led by external agencies

The following information includes additional international initiatives in which DCCEEW is engaged but are led by external agencies such as the Department of Foreign Affairs and Trade (DFAT) through Official Development Assistance (ODA), and the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

- **Marine Plastic Innovation Hub Indonesia:** Australia and Indonesia have launched a new Marine Plastic Innovation Hub under the joint leadership of the CSIRO and the Indonesian Ministry of Education, Culture, Research and Technology. This new initiative will strengthen our research and industry collaboration to help identify new approaches in tackling marine plastic waste across the region. The Indonesia Hub is part of the broader Indo-Pacific Plastics innovation network (<https://ippin.org/>) and is funded through ODA administered by DFAT.
- **CSIRO is working with Bangladesh** to develop a scalable environmental monitoring system using artificial intelligence (AI). This will contribute towards a world first, statistically robust, global baseline study of how much waste is leaking into the environment. This activity is a component of wider global baseline monitoring studies:
  - Global plastic losses – Phase I <https://research.csiro.au/marinedebris/projects-2/projects/globalplasticsleakageproject/>
  - Global plastic losses – Phase II <https://research.csiro.au/marinedebris/projects-2/projects/global-plastic-losses-phase-ii/>
- **Asia-Pacific Economic Cooperation (APEC) Roadmap on Marine Debris:** The roadmap aims to drive regional and domestic efforts on understanding the impacts and costs of marine debris and develop the required management and prevention approaches to mitigate its impediments to sustainable economic growth in the Asia-Pacific. Australia is further leading on specific capacity building under the roadmap to apply a trade and economic lens plastics pollution and to utilise trade tools to enable remediation.
- **World Trade Organisation (WTO):** Australia plays a lead role in the WTO Informal Dialogue on Plastics Pollution and Sustainable Plastics Trade, which aims to address the trade-related aspects of plastic pollution and to identify opportunities for cooperation on trade and trade policies that could support the range of domestic and international efforts underway to reduce plastic pollution.
- **Association of Southeast Asian Nations (ASEAN) Regional Action Plan for Combating Marine Debris:** This regional action plan, led by Thailand and with the support of the World Bank, proposes the phased implementation of a systematic and integrated response to guide regional actions in addressing the issue of marine plastic pollution in ASEAN over the next five years (2021-2025).
- **Indian Ocean Rim Association (IORA) Strategic Framework of Action on Marine Debris:** Australia supported the development of this framework through IORA. It aims to minimise

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waste generation on land, thereby reducing the amount of plastic waste that enters the rivers and oceans by developing joint strategies and actions. The Framework was approved by IORA's Council of Ministers (including the Assistant Foreign Minister) in November 2022.

- **The Global Ghost Gear Initiative:** The Global Ghost Gear Initiative is a cross sectoral alliance working on solutions to the problem of lost, abandoned, and discarded fishing gear. It does this by working to build evidence, define best practice and to catalyse and replicate solutions. GGGI members include the fishing industry, private sector, academia, governments, intergovernmental and non-governmental organisations. Australia is not currently a member of the GGGI however the potential benefits of joining the initiative are currently under consideration.