



**Australian Government**

**Department of Agriculture,  
Water and the Environment**

# National Plastics Plan 2021

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# FOREWORD

Australia is on a plastics mission. It is a significant challenge in which each of us – government, industry and the community – must play a part. In March 2020, we were privileged to convene Australia’s first ever National Plastics Summit. The summit was the first step in our plastics mission and brought together over 200 leaders and experts from government, industry and community sectors to identify and showcase new ideas and solutions. The National Plastics Summit highlighted that plastic waste is an issue that Australians care about deeply – governments are engaged, industry is engaged and the community is engaged.

This National Plastics Plan puts into action many of the excellent ideas raised at the Summit. Everyone has a role to play, for the Australian Government’s part, we are tackling the plastic challenge on 5 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

By working together we are confident Australia can meet the plastic challenge. For more information on the first National Plastics Plan go to [www.environment.gov.au/plastics-and-packaging](http://www.environment.gov.au/plastics-and-packaging)



**The Hon. Sussan Ley MP**  
Minister for the Environment

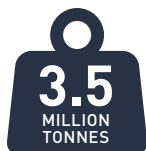


**The Hon. Trevor Evans MP**  
Assistant Minister for Waste Reduction  
and Environmental Management



# THE PLASTICS PROBLEM

Australians used **3.5 million tonnes of plastics** in 2018 to 2019<sup>1</sup> of which around **60% was imported**<sup>2</sup>



**One million tonnes** of Australia's annual plastic consumption is single-use plastic<sup>6</sup>

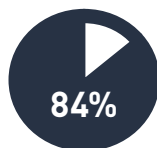


Australia is missing out on an estimated **\$419 million of economic value each year** by not recovering all PET and HDPE<sup>3</sup>

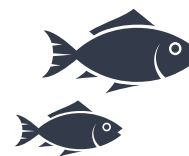


Australia uses around **70 billion pieces** of soft 'scrunchable' plastics, such as food wrappers, each year<sup>7</sup>

**84% of plastic used** is sent to landfill and **only 13% is recycled**<sup>4</sup>



By 2050, it is estimated that **plastic in the oceans will outweigh fish**<sup>8</sup>



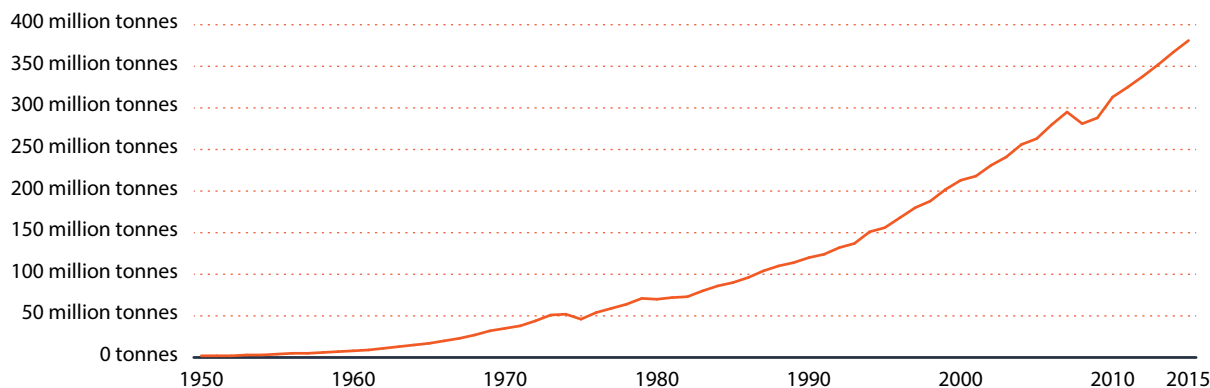
In Australia approximately **130,000 tonnes** of plastic leaks into the marine environment each year<sup>5</sup>



**Our use of plastic is increasing**, and across the world **will double** by 2040<sup>9</sup>

## Global plastics production 1950 to 2015<sup>10</sup>

Annual global polymer resin and fibre production (plastic production), measured in tonnes per year





# PLASTICS MISSION



2019

- Council of Australian Governments (COAG) agreed to establish a timetable to ban the export of waste plastic, paper, glass and tyres
- National Waste Policy Action Plan (NWPAP) agreed to by Australia's environment ministers

2020

- First National Plastics Summit
- Passing of the *Recycling and Waste Reduction Act 2020*
- Microbeads phased out in rinse-off cosmetics, personal care and cleaning products<sup>11</sup>

2021

- First National Plastics Plan delivers on action 5.5 of the NWPAP
- CSIRO's *A circular economy roadmap for plastics, tyres, glass and paper in Australia* released (January 2021).
- Regulate unsorted mixed plastic waste exports (July 2021)
- First review of National Environment Protection (Used Packaging Materials) Measure 2011 and the Australian Packaging Covenant to evaluate the co-regulatory arrangements
- National Plastics Design Summit

2022

- Regulate unprocessed single polymer or resin waste plastic exports (July 2022)
- Phase out non compostable plastic packaging products containing additive fragmentable technology that do not meet relevant compostable standards (AS4736-2006, AS5810-2010 and EN13432) (July 2022)
- Phase out expanded polystyrene (EPS) in loose fill and moulded consumer packaging (July 2022), and food and beverage containers (December 2022)
- Phase out PVC packaging labels (December 2022)
- Review progress of 2025 National Packaging Targets

2023

- At least 80% of supermarket products to display the Australasian Recycling Label (December 2023)

2025

- National Packaging Targets for industry:
  - 100% of packaging is reusable, recyclable or compostable
  - 70% of plastic packaging goes on to be recycled or composted
  - 50% average recycled content within packaging (20% for plastic packaging)
  - problematic and unnecessary single-use plastic packaging phased out (target 5 of NWPAP)

2030

- Work with the textile and whitegoods sectors on an industry-led phase-in of microfibre filters on new residential and commercial washing machines by 1 July 2030

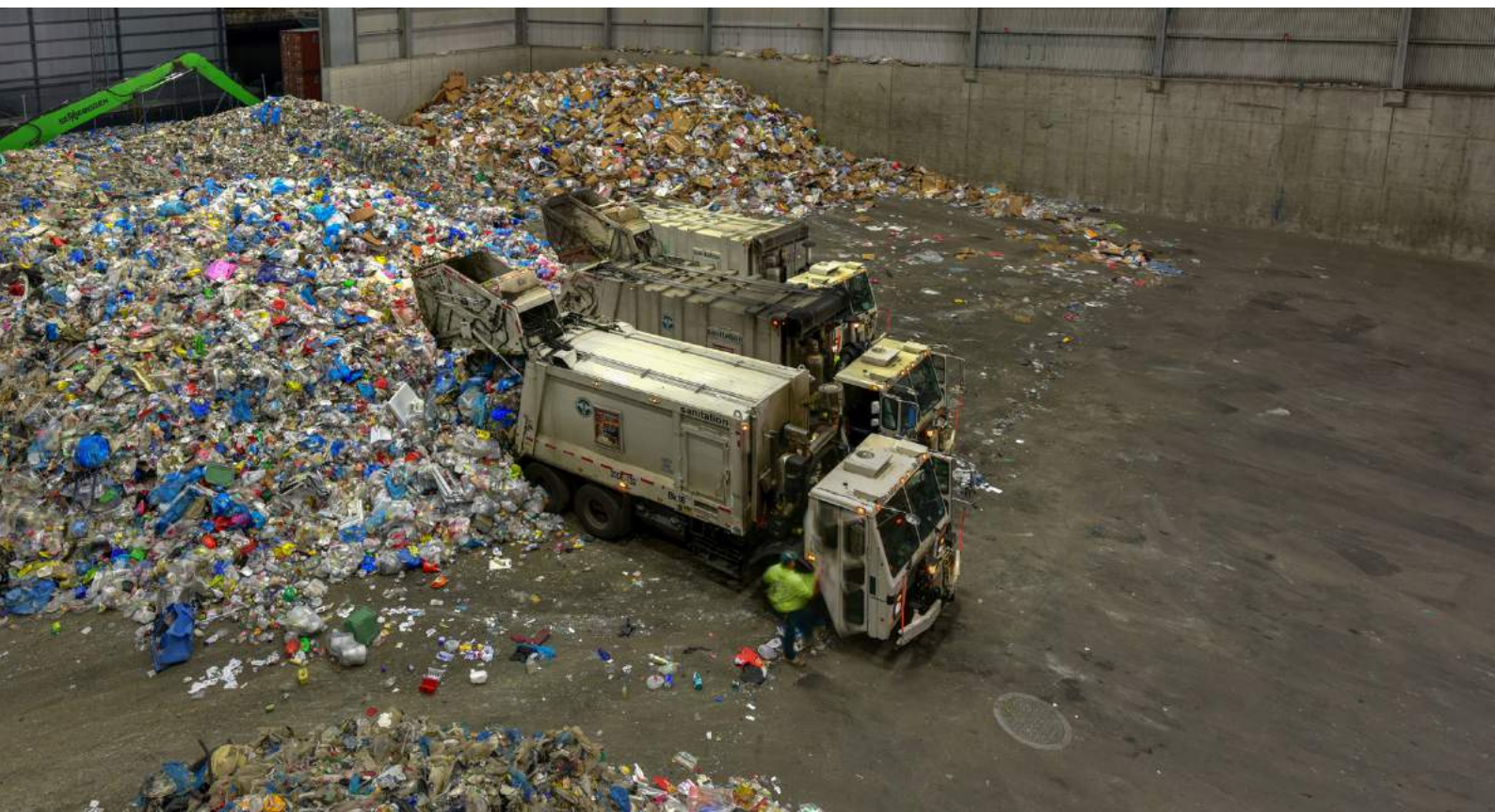
# INTRODUCTION

**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. Plastic consumption has grown dramatically since the 1970s and our plastic production is expected to double in the next 20 years.<sup>12</sup>

**Australia has a plastics problem.** Australia now produces 2.5 million tonnes of plastic waste each year, equating to 100 kg per person. Of this, only 13% of plastic is recovered and 84% is sent to landfill.<sup>13</sup> More concerning, around 130,000 tonnes of the plastic we consume leaks into the environment each year.<sup>14</sup> By 2025 it is predicted that 99% of seabirds worldwide will have ingested plastic.<sup>15</sup>

**Addressing the plastic problem will require multiple interventions across the entire plastic life-cycle.** This will include design, use, recovery and reuse. No single intervention can fix the plastics problem on its own.

**Everyone has a role to play, including the Australian Government, state and territory governments, local government, industry and consumers.** Many of these roles and responsibilities are set out in the 2019 National Waste Policy Action Plan.



# 1. PREVENTION—ADDRESSING PLASTICS AT THE SOURCE

**The simplest way to reduce plastic waste and pollution is to avoid using unnecessary and problematic plastics.**

Several state and territory governments have already taken successful steps to ban specific problematic single-use plastics. The Australian Government will work with states and territories to align these bans where practical.

**Industry needs to phase out problematic plastic materials to support State bans on specific products.** The Australian Government will work with industry to fast-track phase outs of problematic plastic materials, including, expanded polystyrene in certain applications, non-certified compostable packaging, and PVC packaging labels.

**Product design provides an unmatched point of intervention to reduce plastic waste.** It is estimated that the design stage of a product determines 80% of its total environmental impact.<sup>16</sup> To support improved product design the Australian Government will convene a Plastic Design Summit in 2021 with input from the Design Institute of Australia. This will fast track industry's use of more sustainable product design, including a shift to reusable products and plastics that are more likely to be recycled.

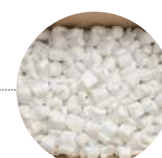
ACTIONS	PREVENTION—ADDRESSING PLASTICS AT THE SOURCE
<b>Phase out Problematic and Unnecessary Plastics</b>	<p>Work with industry to fast-track the phase out of polymer types in certain applications, and consider regulatory action should industry phase outs not be achieved:</p> <ul style="list-style-type: none"> <li>Phase out plastic packaging products with additive fragmentable technology that do not meet relevant compostable standards (AS4736-2006, AS5810-2010 and EN13432) (July 2022)</li> <li>Phase out expanded polystyrene (EPS) from loose packaging fill and moulded packaging in consumer packaging (July 2022), and EPS consumer food and beverage containers (December 2022)</li> <li>Phase out PVC packaging labels (December 2022)</li> </ul>
<b>Plastic Free Beaches</b>	Work with Boomerang Alliance to eliminate single-use plastics from Australia's favourite beaches and support local businesses to switch to alternative products
<b>Plastics Design Summit</b>	Hold a Plastics Design Summit in 2021 for product designers and manufacturers to showcase their sustainable product design
<b>Industry Shift to Easily Recyclable Plastics</b>	Industry to transition towards higher-value, easily recyclable plastics such as PET, HDPE, LDPE and PP, and encourage the design of easier to recycle products
<b>National Packaging Targets</b>	<p>Industry to deliver 4 National Packaging Targets by 2025 of which two concern prevention:</p> <ul style="list-style-type: none"> <li>100% of packaging being reusable, recyclable or compostable</li> <li>Phase out problematic and unnecessary single-use plastic.</li> </ul>



● non-certified 'compostable' packaging

● expanded polystyrene (EPS) consumer packaging fill and EPS consumer food and beverage containers

● PVC packaging labels



Source: APCO's Action Plan for Problematic and Unnecessary Single-Use Plastic Packaging



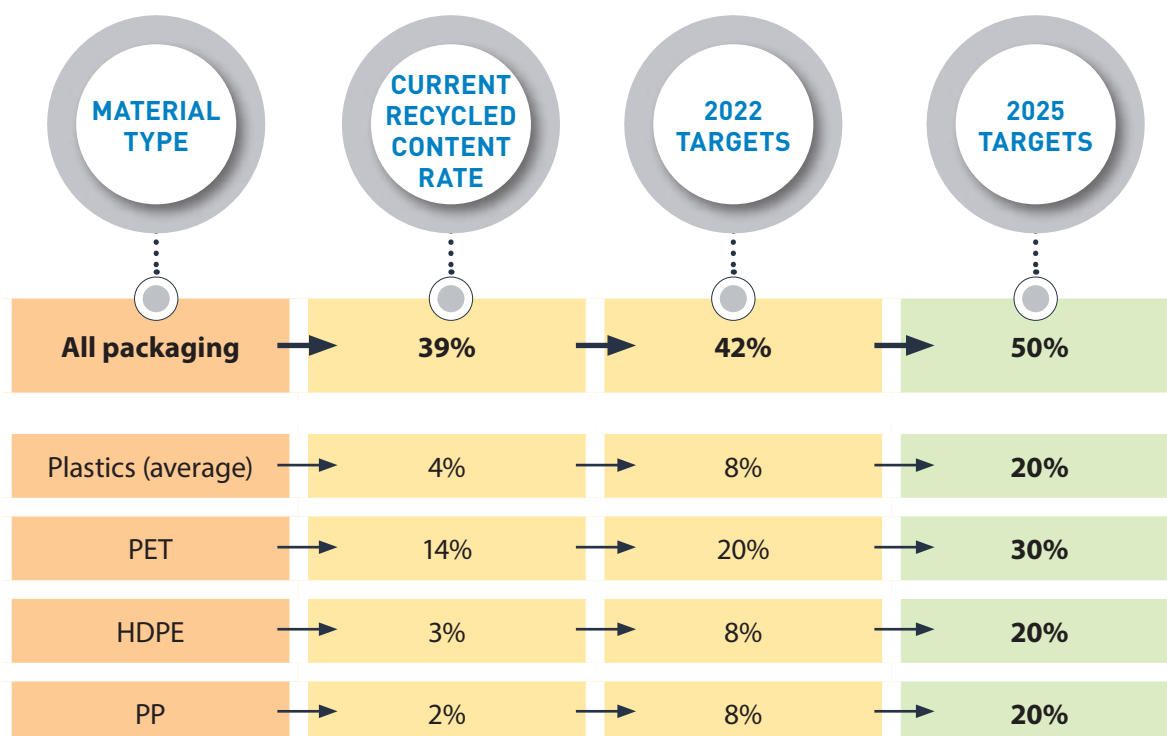
## 2. RECYCLING—TAKING RESPONSIBILITY FOR OUR PLASTICS

**Australia is taking responsibility for its plastic waste.** The Australian Government’s *Recycling and Waste Reduction Act 2020* became law in December 2020 and puts in place Australia’s world-leading waste export ban. The new legislation bans the export of unsorted mixed plastics from 1 July 2021 and unprocessed single polymer or resin plastics from 1 July 2022. Households want assurance that the plastics they put in their recycling bin gets reused in the economy and not sent overseas where it may end up in landfill or the environment.

**Australia’s annual recycling capacity will more than double by 2025.** The Recycling Modernisation Fund, the National Waste Policy Action Plan, and future funding under the Modern Manufacturing Strategy, will underpin a dramatic increase in Australia’s domestic recycling capacity. This will drive a \$1 billion transformation of Australia’s recycling industry and create approximately 10,000 new jobs.

**If we do not buy recycled, we are not recycling.** The recycling process does not end when we put something in the recycling bin. Governments, business and consumers also need to buy products made from recycled material. The Australian Government has amended the Commonwealth Procurement Rules and updated its Sustainable Procurement Guide to ensure it uses recycled material.

**Industry needs to take greater responsibility for the materials it produces.** The Australian Government supports industry-led product stewardship schemes, because industry is best placed to ensure sustainable material production and end-of-life management systems are in place. To drive further industry action, Australian Packaging Covenant Organisation (APCO) has set new industry targets for average recycled content in plastic packaging.



Sources: Australian Packaging Covenant Organisation – Australian Packaging consumption and recycling data 2018-19. 2025 National Packaging Targets Organisation monitoring program.



ACTIONS	RECYCLING—TAKING RESPONSIBILITY FOR OUR PLASTICS
<b>Waste Export Ban</b>	Regulate waste plastic exports by banning the export of unsorted mixed plastic from 1 July 2021 and unprocessed single polymer or resin plastics from 1 July 2022
<b>Turbo-charge Australia's Recycling Capacity</b>	The Recycling Modernisation Fund will turbo-charge Australia's recycling industry, generating \$600 million of recycling investment. This will also be supported by the Modern Manufacturing Strategy (\$1.5 billion) which identifies recycling as a national manufacturing priority
<b>Product Stewardship</b>	Invest \$7 million to support 10 projects through the National Product Stewardship Investment Fund, to establish new plastics product stewardship schemes and expand existing schemes
<b>Regional Solutions</b>	Assess and identify collection processes and the feasibility of reprocessing packaging waste in remote and regional areas through partnerships
<b>National Packaging Targets</b>	Industry to deliver 4 National Packaging Targets by 2025, of which 2 concern recycling: <ul style="list-style-type: none"> <li>• 70% of plastic packaging being recycled or composted</li> <li>• 50% of average recycled content included in packaging (20% for plastic packaging)</li> </ul>
<b>Used Packaging Materials NEPM</b>	The first review of the National Environment Protection (Used Packaging Materials) Measure 2011 and Australian Packaging Covenant to evaluate how well the co-regulatory arrangements are working to reduce the environmental impacts of packaging
<b>Australian Circular Economy Hub</b>	Establish a National Circular Economy Hub and Market place by end 2021
<b>Material Performance Standards</b>	Work across the plastics recycling supply chain to develop nationally consistent performance standards for material recovery facilities to deliver clean feedstock for remanufacturing
<b>Industry to Use More Recycled Plastics</b>	Businesses to commit to increase their use of recycled content through Australian Packaging Covenant Organisation's (APCO) Member Pledge program
<b>Government Commitments to use Recycled Plastics</b>	The Australian Government has strengthened the Commonwealth Procurement Rules to make sustainability, including the use of recycled materials, part of the value for money assessment for everything it buys.



# 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. This contamination can significantly reduce the economic value of recyclable materials and cause them to be sent to landfill.

**More products on supermarket shelves to have easy-to-understand recycling labels.** The Australian Government will fast-track the rollout of the Australasian 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 (27% of plastic packaging in Australia).

**Australia needs a consistent nationwide kerbside recycling collection system.** Inconsistency in kerbside recycling, including the colour of bin lids and what is accepted for recycling can cause consumer confusion. The Australian Government and industry will work with state and territory governments to harmonise kerbside recycling.

**Australia is on track to have container deposit schemes in every state and territory.** Every state and territory now has, or plans to implement, a container deposit scheme. The Australian Government will continue working with states and territories to better align aspects of each scheme.

ACTIONS	CONSUMERS—PLASTIC IN OUR DAILY LIVES
<b>Better Recycling Information for Consumers</b>	Work with industry to ensure all APCO members with annual revenue greater than \$500 million use the ARL by end 2023, resulting in 80% of supermarket products displaying the ARL, including recycled content. The Australian Government will also support uptake by small to medium-enterprises (SMEs)
<b>Combat 'Greenwashing'</b>	The Australian Government will refer companies making false or misleading labeling and environmental claims such as misrepresentation of recyclability to the ACCC for investigation
<b>Consistent Kerbside Recycling Collection</b>	The Australian Government will work with states and territories to harmonise kerbside recycling collection
<b>Recycle Mate</b>	The Australian Government is supporting the national rollout of the Recycle Mate App in 2021. The app helps consumers determine whether a product can be recycled
<b>Consistent Container Deposit Schemes (CDS)</b>	The Australian Government will keep working with state and territory governments to better align aspects of CDSs.

The ARL was recently rated by the United Nations Environment Programme as a world-leading consumer labelling program.



**Recyclable**—this can be placed in your kerbside recycling



**Conditionally recyclable**—can be recycled ONLY if the instructions below the symbol are followed. Otherwise these items are not recyclable.

*This tells you if any additional steps are required before you recycle the item through either an action or alternative destination (e.g. soft plastics bins at Coles or Woolworths in Australia).*



**Not recyclable**—this cannot be placed in kerbside recycling. Please dispose in your rubbish bin.

*This refers to the specific packaging component the label is referring to.*

## 4. PLASTICS IN OUR OCEANS AND WATERWAYS

**It can take just a moment for plastic to enter the environment, but the environmental impacts last for centuries.** By 2050 it is predicted that the amount of plastic in our oceans will outweigh fish,<sup>17</sup> causing untold harm to marine life. By 2025 it is estimated that 99% of seabirds will have ingested plastic, which often leads to slow and painful deaths.<sup>18</sup>

**The Australian Government will take action on the most commonly littered plastics.** Cigarette butts are the most often littered plastic item in Australia.<sup>19</sup> Of the 24 billion cigarettes sold in Australia each year, 8 billion are littered.<sup>20</sup> If placed end to end, these could wrap around Earth 6.5 times.

**Microplastics are an issue of increasing concern.** Microplastics are very small pieces of plastic that remain when large pieces of plastic breaks down. Once in the environment, microplastic particles can be absorbed by plants and animals and accumulate in the food chain. Each of us already digest an estimated 74,000 to 113,000 particles per year.<sup>21</sup>

**Wastewater is a key pathway for microplastics entering the marine environment.** The Australian Government has supported industry to voluntarily phase out microbeads from 99.3% of rinse-off cosmetic, personal care and cleaning products sold in Australia. To further address microplastics, the Australian Government will work with industry to phase in microfibre filters on all washing machines sold in Australia by 2030.

**Community stewardship is key to removing litter from our waterways and beaches.** The best custodian of any landscape is the local community. For this reason, the Australian Government is supporting local communities and Traditional Owners to drive the cleanup of plastic litter.

**Australia supports global action on plastic pollution.** Marine plastic debris is an international problem that transcends national borders. Australia will pursue improved coordinated global action to address marine plastic pollution including through discussions towards a new global agreement at the United Nations Environment Assembly. Australia will also continue to be an active leader in other regional and international fora – including the G20, Asia-Pacific Economic Cooperation, the International Maritime Organization and the High-Level Panel for a Sustainable Ocean Economy.





ACTIONS	PLASTICS IN OUR OCEANS AND WATERWAYS
<b>Global Action on Marine Plastic Pollution</b>	The Australian Government will pursue coordinated global action on marine litter and microplastic pollution through a new global agreement
<b>Microplastics Fibre Filters for Washing Machines</b>	Work with the textile and whitegoods sectors on an industry-led phase-in of microfibre filters on new residential and commercial washing machines by 1 July 2030
<b>Cigarette Butts</b>	The Australian Government to initiate an industry-led cross-sectoral stewardship taskforce to reduce cigarette butt litter in Australia and consider potential stewardship schemes
<b>Stormwater</b>	Partner with states and territories and the CSIRO on solutions to prevent plastic debris entering the marine environment via stormwater
<b>National Plastics Pollution Database</b>	Partner with organisations to establish a national monitoring protocol and database for plastic pollution
<b>Ghost Nets</b>	The Australian Government has committed \$14.8 million to remove ghost nets and marine debris pollution from strategic locations in Northern Australia
<b>Operation Clean Sweep®</b>	Industry to participate in Operation Clean Sweep® to eliminate pre-production plastic resin pellet, flake, recycled chip and powder loss
<b>Marine Debris Threat Abatement Plan</b>	Continue to implement the <i>Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans</i>
<b>Communities Environment Program</b>	The Australian Government is supporting community-led projects that address local environmental priorities and deliver positive environmental outcomes. Over 1,330 projects, totalling \$18 million, were funded in 2019-20
<b>Environment Restoration Fund (ERF)</b>	The Australian Government has invested \$100 million over 4 years to protect our environment for future generations. Projects delivered under the ERF focus on protecting threatened and migratory species and their habitat, across Australia's coasts, oceans and waterways
<b>Indonesia Partnership</b>	Establish an Indonesia-Australia Systemic Innovation Lab on Marine Plastic Waste under the leadership of the CSIRO and the Indonesian Ministry of Marine Affairs and Fisheries
<b>Pacific Ocean Litter Project</b>	\$16 million in Australian Government funding to help Pacific Island countries tackle single use plastics that harm the ocean
<b>Shipping Waste</b>	Reduce shipping waste by implementing the International Maritime Organization's <i>Marine Litter from Ships and the Ship-Generated Garbage in the Pacific Action Plan</i> .





# 5. RESEARCH, INNOVATION AND DATA

**Good decisions are based on good information.** The Australian Government has invested \$20.6 million to create a waste data visualisation platform. The public-facing data repository will bring together data from a range of sources to provide nationally consistent real-time information. Understanding plastic volumes, value and movement through the economy will support effective decision making and create new economic opportunities for businesses.

**New recycling technologies create new possibilities.** The Australian Government is supporting new technologies focused on reducing plastic waste and boosting plastic recycling. These include advancements in using recycled plastic waste in construction materials, mobile recycling facilities and chemical recycling to process contaminated plastic waste.

ACTIONS	RESEARCH, INNOVATION, AND DATA
<b>Waste Data Visualisation Platform</b>	Invest \$20.6 million to create the public-facing Waste Data Visualisation Platform
<b>Cooperative Research Centres Projects Grants (CRC-P)</b>	\$29.1 million to research projects that demonstrate innovative ways to recycle plastics and reduce plastics going to landfill
<b>Australian Plastics Recycling Survey</b>	Expand the Australian Plastics Recycling Survey to provide a comprehensive picture of the consumption, flow and recycling of plastics in Australia
<b>Circular Economy Roadmap</b>	CSIRO's <i>National Circular Economy Roadmap for Plastics, Glass, Paper and Tyres: Pathways for unlocking future growth opportunities for Australia</i> (the Roadmap) provides valuable information to support the circular economy. It will be used by governments, industry and researchers to inform future decisions on investment, policy development and research priorities
<b>National Environmental Science Program (NESP)</b>	Waste impact management will be a NESP cross-cutting priority to support policy development, program management and regulatory processes in both marine and terrestrial environments.

## CASE STUDY:

Under the CRC-P the Australian Government has awarded \$1.9 million to Integrated Green Energy Solutions (IGES) which has developed technology that converts contaminated waste plastic into reusable raw material through chemical recycling. This technology will place Australia as a world leader in plastic waste management.



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