DISCUSSION PAPER

Updating the 2009 National Waste Policy: Less waste, more resources

September 2018

Preparation of this discussion paper was coordinated by the Australian Government, with input from state and territory government officials, the Australian Local Government Association, business and industry associations and non-government organisations. This paper is intended to inform discussion and does not represent official positions of the contributors.
About this discussion paper

On 27 April 2018, Commonwealth, state and territory environment ministers and the President of the Australian Local Government Association committed to set a sustainable path for Australia’s recyclable waste. Ministers agreed to work together to better manage waste including updating the 2009 National Waste Policy – Less waste, more resources by the end of 2018.

The purpose of this discussion paper is to seek input on priority issues to be considered in future Australian waste management and resource recovery. Feedback will inform updates to the 2009 National Waste Policy for consideration by environment ministers later this year.

How to provide feedback

Feedback should be supported with evidence and data wherever possible.

Feedback must be received by 5pm (AEST) Friday, 5 October 2018. Late feedback may not be considered.

Feedback may be submitted by:


Email: nationalwastepolicy@environment.gov.au

Post: Waste Strategy Taskforce

GPO Box 787

Canberra, ACT, 2601

Australia

Email and posted feedback must include a completed cover sheet, available at:

For more information, please contact nationalwastepolicy@environment.gov.au

Confidentiality

Your feedback will be treated as a public document unless you indicate that all or any part of your feedback is confidential. Your feedback may be published in full or included in a published summary report of submissions.

Please note that a request may be made under the Freedom of Information Act 1982 for access to a submission, including a submission marked ‘confidential’. Such requests, including determining whether information is exempt from release, will be handled in accordance with provisions of the Act.
Introduction

Australians generate around 64 million tonnes of waste every year and that figure is growing. To better support our economy, protect the health of our communities and reduce environmental impacts we need to take action on waste.

This includes a rapid shift away from the ‘take, make, use and dispose’ approach to a more circular approach where the value of resources is maintained for as long as possible (known as a ‘circular economy’).

Improved waste management and changes in resource recovery provide significant economic opportunities. The Australian waste sector employs around 50,000 people and generates $15 billion per year.

For every 10,000 tonnes of waste that is recycled, 9.2 jobs are created (compared with 2.8 jobs if the same amount of waste was sent to landfill).

Better waste management also reduces greenhouse gas emissions, prevents pollution of our land and oceans, and has long-term economic benefits for individuals and businesses.

For example, Australian households spend between $2200 and $3800 per year on food that becomes waste.

Governments and businesses have a long history of working together to improve waste management practices. Communities are also increasingly making informed choices about the production, purchase and disposal of goods they consume.

Improvements in kerbside collection, increased processing capacity and better management of materials used in everyday activities means we are now recovering 58 per cent of the waste we generate.

New challenges

The 2009 National Waste Policy: Less waste, more resources provided a national framework for improving Australian waste management.

During the life of this policy the amount of waste generated per capita has declined on average by 0.3 per cent per year.

Since 2006–07, the recovery rate (including recycling and energy recovery from waste) has increased by over 20 per cent across all waste streams.

Growing populations, new products and new technologies are changing the way we create and manage materials.

China’s decision to restrict imports of recycled materials and changing international markets have also helped to focus attention on Australia’s domestic management of waste.

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6 See footnote 1.
7 See footnote 1.
and the capacity of our manufacturing sector to utilise recycled materials.

The new challenges Australia is facing in waste management require an update to the 2009 National Waste Policy. To address these challenges the updated policy will need to better reflect circular economy principles, consider the economic, technical and regulatory barriers and opportunities in domestic management of Australia’s waste, and clearly set out targets and strategies for collective action.

**Snapshot**

- **64 million tonnes of waste is generated** in Australia per year (this equates to 2.7 tonnes per person).
  - Of this, approximately:
    - 13 million tonnes is from municipal solid waste
    - 31 million tonnes is from commercial and industrial waste
    - 20 million tonnes is from construction and demolition waste.

- **35 million tonnes of Australia’s waste is recycled**, 2.3 million tonnes is used for energy recovery and 27 million tonnes goes to landfill.

- Australia recovers **58 per cent of all waste generated**.

![Figure 1: Australia’s waste, recycling and energy recovery by volume compared to other developed countries (National Waste Report 2016)](image)

Note: The percentages represent the overall rate of recovery of resources (including recycling and energy recovery).
Updating the 2009 National Waste Policy

This discussion paper aims to promote conversation and comment on how we can improve Australia’s recycling, resource recovery and management of waste. Comments received will inform an update to the 2009 National Waste Policy.

On 27 April 2018, Australia’s environment ministers agreed to update the 2009 National Waste Policy by the end of 2018.

An updated policy will need to set a clear roadmap for collective action by businesses, governments, communities and individuals.

It needs to reflect the global shift towards a circular economy. This includes designing systems and products to avoid waste, conserve resources and maximise the value of all materials used. It also includes improving capacity for products to be better designed, reused, repaired and recycled.

Like the 2009 National Waste Policy, the update should be a comprehensive response to the challenges facing waste management in Australia - excluding radioactive waste.

This discussion paper reflects circular economy principles and proposes a number of targets for comment, including:

1. **Reduce total waste generated in Australia per capita by 10 per cent by 2030**

2. **80 per cent average recovery rate from all resource-recovery streams, following the waste hierarchy, by 2030**

3. **30 per cent average recycled content across all goods and infrastructure procurement by 2030**

4. **Phase out problematic and unnecessary plastics by 2030**

5. **Halve the volume of organic waste sent to landfill by 2030**

6. **Fit-for-purpose and timely data to be available for individuals, businesses, and governments to make informed decisions**

Setting a horizon for action to 2030 will provide greater certainty for businesses as they respond to changing markets.

It will also provide a framework for embracing innovations and developing technologies that create new opportunities.

Giving effect to Australia’s international obligations continues to be a critical component of a National Waste Policy.

An updated policy will also continue to support delivery of the United Nations’ Sustainable Development Goals; in particular, Goal 12 on responsible consumption and production.

The updated policy will guide continuing collaboration between Australian governments and businesses. It will not remove the need for governments and businesses to implement tailored solutions in response to local and regional circumstances.
United Nations Sustainable Development Goals

On 25 September 2015, countries around the world, including Australia, adopted a set of goals to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable-development agenda. Each goal has specific targets to be achieved over the next 15 years. Sustainable Development Goal 12 is specifically focused on responsible consumption and production patterns.

“Achieving Goal 12 requires a strong national framework for sustainable consumption and production that is integrated into national and sectoral plans, sustainable business practices and consumer behaviour, together with adherence to international norms on the management of hazardous chemicals and wastes.”

Targets associated with Sustainable Development Goal 12 include:

- Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
- Promote public procurement practices that are sustainable, in accordance with national policies and priorities
- Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle
- By 2020, achieve the environmentally-sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
- By 2030, achieve the sustainable management and efficient use of natural resources
- By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
- By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
- By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.

Other Sustainable Development Goals relevant to improved resource recovery and waste management are:

SDG 3: Good Health and Well Being
SDG 6: Clean Water and Sanitation
SDG 8: Decent Work and Economic Growth
SDG 9: Industry, Innovation and Infrastructure
SDG 11: Sustainable Cities and Communities
SDG 13: Climate Action
SDG 17: Partnerships for the Goals

More information on the Sustainable Development Goals is available at: https://www.un.org/sustainabledevelopment/sustainable-development-goals/
We all have a role to play

All Australians have a role to play in implementing a circular economy, supporting resource recovery and recycling, and reducing the generation of waste.

The choices we make in what we buy, how we use products and how we dispose of them is central to improving the way we manage waste in Australia. Following the ‘waste hierarchy’ (see Figure 2) we can all choose to:

- reduce unnecessary purchases to avoid generating waste
- repair or reuse items rather than throwing them away
- purchase products that can be used multiple times and are long-lived, rather than single-use or poor quality which are thrown away quickly
- improve our recycling habits by sorting our waste appropriately into recycling and compost bins, where available
- choose products that are recyclable and include recycled content.

The role of businesses, including manufacturers and brand owners, is also critical. This includes the design of products for reuse and repair and development of manufacturing systems that avoid waste and use recycled materials. It also includes development of technology and infrastructure to manage, reprocess, and recycle materials.

The role of governments

Regulation of waste management and resource recovery in Australia is directed by the Australian Constitution, international agreements, Commonwealth laws, agreements between all Australian governments, and laws and policies implemented by state and territory government and local councils. The Australian Government’s role in waste is focused on ensuring our international obligations are met, providing effective national leadership and coordination, addressing national market failures and providing national data and reporting.

Australia also has a system of laws that give effect to international commitments and govern import and export of hazardous waste, product stewardship, synthetic greenhouse gases, as well as environment protection and biodiversity conservation.

The regulation and management of waste and resource recovery within Australia is primarily the responsibility of state and territory governments. All state and territory governments have enacted their own laws and policies to protect the environment, conserve natural resources, and regulate and manage waste.

Relevant legislation and international obligations are listed at Appendices 1 and 2.

Figure 2: The waste hierarchy (reproduced with permission of the NSW Environment Protection Authority).
The roles and responsibilities of local governments depend on the requirements of the state or territory in which they are located.

Local governments play an important role in providing household waste collection and recycling services, managing and operating landfill sites, delivering education and awareness programs, and providing and maintaining litter infrastructure.

They may also form cooperative groups to address waste management issues of regional significance and can have compliance and enforcement roles for littering and the illegal disposal of waste.

All governments also have a role to play as responsible consumers. Sustainable procurement practices and increasing the purchase of recycled materials, including recycled paper, plastics, road materials and construction materials, supports a circular economy and helps to grow the recycling and remanufacturing industry.

By working together, all governments have an opportunity to adopt a common approach towards waste management, reduce barriers to market development and increase the efficiency of resource recovery.
Waste as a resource – the circular economy

Updating the 2009 National Waste Policy will reflect a new way to think about waste.

By applying the principles of a circular economy, we can support better and repeated use of our resources.

A circular economy retains the value of materials in the economy for as long as possible, reducing the unsustainable depletion of natural resources and the impacts of material use and waste generation on the environment.

A circular economy has economic benefits. It creates new industries, markets and products, which leads to new revenue streams and creation of jobs. For example, a 5 per cent improvement in efficient use of materials across the Australian economy could benefit Australia’s gross domestic product by as much as $24 billion.\(^8\)

There is a global movement towards applying circular economy principles. For example, in 2015 the European Commission committed to a Circular Economy Action Plan.

When circular economy principles are applied to waste management in Australia, there are many opportunities to avoid, redesign, reduce, reuse, recycle, and recover materials at all stages of a product’s life-cycle. This will help to minimise reliance on virgin materials and maximise the economic value of resources recovered through recycling systems.

A focus on a whole-of-system approach is required, including accounting for the full cost and life-cycle of materials. This means a change in product design, production, use and reuse, recycling and disposal.

Some materials, such as particular hazardous waste products, may still need to be disposed of but most other manufactured goods and materials should be viewed as resources that can be reused, recycled and remanufactured over and over.

Principles that underpin waste management, recycling and resource recovery in a circular economy are:

1. Avoid waste
   - prioritise waste avoidance, encourage efficient use, reuse and repair
   - design products so waste is minimised, they are made to last and materials are more easily recoverable

2. Improve resource recovery
   - improve material collection systems and processes for recycling
   - 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.

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Note: As well as applying circular economy principles to the whole waste management system, there are also opportunities to apply them at each stage of the cycle.

*Figure 3: Representation of a Circular Economy as it applies to resource use (reproduced with permission of the European Union)*
Case study: European Commission Circular Economy Action Plan

The European Commission has adopted a Circular Economy Package which includes a suite of measures to transition to a circular economy. One of these measures is the Circular Economy Action Plan which promotes the efficient use of resources throughout the economy.

The European Commission has estimated that a shift to a circular economy will save €30 billion over 20 years through more efficient waste management, and increase GDP by 7 per cent. By 2035 up to 170,000 jobs will be created in the waste management sector and around three million jobs in the wider economy.

Part of the European Union’s Circular Economy Package are clear targets for reduction of waste. These targets are designed to establish an ambitious and credible long-term path for waste management and recycling. They include:

- A common target for recycling 65 per cent of municipal waste by 2030
- A common target for recycling 75 per cent of packaging waste by 2030
- A binding landfill target to reduce landfill to a maximum of 10 per cent of municipal waste by 2030
- A ban on landfilling of separately collected waste
- Promotion of economic instruments to discourage landfilling
- Simplified and improved definitions and harmonised calculation methods for recycling rates
- Concrete measures to promote reuse and stimulate industrial symbiosis - turning one industry's by-product into another industry's raw material
- Economic incentives for producers to put greener products on the market and support recovery and recycling schemes (such as packaging, batteries, electric and electronic equipment and vehicles)

Applying the circular economy principles to waste

**Principle 1: Avoid waste**
Prioritise waste avoidance, encourage efficient use, reuse and repair
Design products so waste is minimised, they are made to last and materials are more easily recoverable

The total amount of waste we create in Australia is increasing. This is driven partly by population growth and partly by changes in our economy and society, such as increased consumption and increased packaging.

There are many different factors that impact on waste generation, including natural disasters, however a reduction target helps galvanise action and investment in avoiding the creation of waste.

Governments, businesses and communities all have a role to play in waste avoidance.

The simplest way to manage waste is to create less in the first place. The waste hierarchy calls for us to prioritise waste avoidance and minimisation, including through product design, and reuse or repair of products and items.

Changing consumer behaviour is also critical - by reducing unnecessary purchases, repairing or reusing items rather than throwing them away, and purchasing products that can be used multiple times and are long-lived, we can avoid generating waste.

**Principle 2: Improve resource recovery**

Improve material collection systems and processes for recycling
Improve the quality of recycled material we produce

To improve recycling and resource recovery, we need to improve access to waste management processes and ensure that the right infrastructure, facilities and rules are in place. This includes common approaches in regulations and standards.

By increasing the capacity of the recycling and resource recovery sector, reducing contamination of materials that go into resource recovery processes, introducing sustainable packaging and developing markets for recycled goods, we can increase the overall recycling rate and return of resources to the economy.

**Principle 3: Increase use of recycled material and build demand and markets for recycled products**

Improved resource recovery in Australia will be driven by growth in demand for recovered and recycled materials.

This includes paper and cardboard, plastic, metal, glass and organics from kerbside collection systems as well as materials collected from businesses or construction materials collected from demolition sites.

Businesses are critical in driving innovation, developing new markets and designing products that maximise recycling opportunities. Individual consumers can also generate bigger markets for recycled goods by
choosing products that contain recycled materials. Governments also have an important role to play in supporting markets for recycled goods.

**Principle 4: Better manage material flows to benefit human health, the environment and economy**

Waste is often thought of as a problem to be managed, rather than a resource with value.

Applying circular economy principles encourages different ways of thinking about waste, with the aim of keeping materials cycling in productive use rather than being lost to landfill or escaping to the environment through irresponsible disposal.

Some hazardous materials require safe disposal or destruction to protect human health and the environment.

We can better manage material flows, including plastics and organics, in ways that benefit human health, the environment and the economy.

**Principle 5: Improve information to support innovation, guide investment and enable informed consumer decisions**

Good decisions are based on good information. To ensure that efforts to improve Australia’s waste management achieve the best outcomes, we need to improve information on where Australia’s waste comes from and where it goes.

High quality information on flows of resources and materials, and the markets for recycled materials and products is also critical to business development and targeted strategies for influencing consumer behaviour.

By increasing the regularity of our reporting and the granularity of data included in these reports, we can continue to provide high quality information that informs decisions.
Towards an updated National Waste Policy

To set a sustainable path for Australia’s waste and resources, we need to set clear and measurable targets to help drive action and maintain momentum for change.

This discussion paper builds on the strategies presented in the 2009 National Waste Policy.

It proposes a new approach based on circular economy principles, sets new targets and updates the strategies to achieve them. Unless otherwise noted, each target is assumed to be measured from a baseline established by the 2018 National Waste Report (to be published later this year).

Where it will not be possible to establish a baseline through data provided in the 2018 National Waste Report, this discussion paper outlines processes for establishing new baselines.

It is proposed that performance against the targets is reviewed and reported on every two years (aligned with the delivery of the National Waste Report). This will allow regular analysis of progress and refinement of actions as new issues evolve.

Reviewing and reporting processes would be guided by a cross-sector working group involving government, non-government organisations, and business representatives to prioritise action and support implementation.

The updated National Waste Policy would also require the preparation of action plans by 2020 to determine and address priorities, including landfill levies, research and development, regulatory and legislative incentives, financial measures and national energy from waste responses. Action planning will be supported by data and analysis including a Waste Market Study undertaken by the Australian Government Department of the Environment and Energy in late 2018.

The updated policy will guide continuing collaboration between Australian governments and business. It will not remove the need for governments and businesses to implement tailored solutions in response to local and regional circumstances.
Proposed targets and strategies

Principle 1: Avoid waste

The baseline for this target will be determined by data presented in the 2018 National Waste Report (to be published later this year).

In the last 10 years Australians have reduced the total amount of waste we generate by 3 per cent per capita.

The proposed target calls for a three-fold improvement in our reduction of waste.

Proposed strategies and milestones

Strategy 1 – Waste avoidance

Deliver actions that help the community and businesses avoid and minimise waste, including through design, reuse, repair, and sharing of products and services.

Proposed interim milestones:

- Businesses across the food supply and consumption chain become signatories to the voluntary commitment program to reduce food waste by 2019.
- Total waste generated in Australia is reduced by 5 per cent per capita by 2025.
- Food waste is halved by 2030, in line with the National Food Waste Strategy.

Strategy 2 – Design

Design systems and products to avoid waste, conserve resources and maximise the value of all materials used at every stage of a product’s life.

Proposed interim milestone:

- Businesses implement actions to avoid waste and support design of products that increases a product’s lifecycle (including disassembly and repair) by 2020.

Strategy 3 – Knowledge sharing, education and behaviour change

Apply the waste hierarchy and circular economy principles to design, implement coordinated initiatives that address the needs of governments, businesses and individuals, and incentivise the redesign, reuse, repair, resource recovery, recycling and remanufacturing of products.

Proposed interim milestones:

- Infrastructure and information sharing is in place to support reuse, repair and sharing of products by 2025.
- Targeted consumer education strategies in place across Australia with evidenced-based messaging about avoiding waste, improved recycling and waste reduction strategies by 2021.
Questions for comment:

1.1 Do you agree with the proposed target?

1.2 Is there a different target that should be included?
   - should we freeze waste generation at current levels, indexed against population growth?
   - should there be a target to reduce waste to landfill instead of a generation target?
   - should targets be set separately for municipal solid waste, commercial and industrial waste, and construction and demolition waste?

1.3 Do you agree with strategies 1, 2, and 3 and related proposed milestones? If you suggest others, please explain why.

1.4 What other action is required to meet the target?
Principle 2: Improve resource recovery

The baseline for this target will be determined by data presented in the 2018 National Waste Report (to be published later this year).

Australia currently recovers 58 per cent of the waste generated through recycling and initiatives that generate energy from waste.

The proposed target calls for significant national improvement in the rate of resource recovery.

Proposed strategies and milestones

Strategy 4 – Product stewardship

*Develop and implement partnerships across government and business to ensure ownership and responsibility for action to minimise the negative impacts from products, ensure the minimisation of waste and maximise reuse, repair and recycling of products and materials throughout their life cycle*

Proposed interim milestones:

- Prioritisation framework for national action on products, through product stewardship, endorsed and used by all governments by 2019.
- Current product stewardship schemes reviewed in line with prioritisation framework and agreed by 2020.
- Findings and recommendations of the Product Stewardship Act review are implemented by 2020.
- National end-of-life management system for photovoltaic panels and batteries *designed* by 2020.
- End-of-life management process for photovoltaic panels and batteries *in place* by 2025, or earlier.
- 100 per cent of packaging designed to be reusable, recyclable or compostable by 2025.

Strategy 5 – A common approach

*Implement a common approach towards policy and regulation of waste, particularly in relation to national opportunities to support development of markets for recycling*

Proposed interim milestones:

- Action plans on policy priorities agreed by 2019. This will include common approaches towards transportation of waste (particularly to support market development), national energy from waste responses (consistent with the waste hierarchy), landfill levies, and minimisation of regulatory inconsistency.
- National classifications and definitions agreed for data and reporting on wastes and recycling by 2020.
- Priorities for common national standards and specifications agreed by 2020.
- Common approach towards classifications and definitions for data and reporting on wastes and recycling implemented by 2025.

**Strategy 6 – Improving access**

*Identify and improve the ability of regional, remote and Indigenous communities to access, influence and participate in a circular economy*

Proposed interim milestones:

- Programs established in collaboration with regional, remote and Indigenous communities that increase access to resource recovery and waste management infrastructure, and associated education and training, by 2020.
- Access to resource recovery and waste management infrastructure for regional, remote and Indigenous communities increased in every state and territory by 2025.

**Strategy 7 – Increasing industry capacity**

*Identify and address opportunities across municipal solid waste, commercial and industrial waste, and construction and demolition waste streams for improved recycling and energy recovery, to deliver ongoing improvements in diversion from landfill and implementation of the waste hierarchy.*

Proposed interim milestones:

- Identify opportunities for growing skills in the waste management and recycling sectors by 2019.
- Consider opportunities to improve planning for waste infrastructure by 2019.
- Establish or improve recycling and resource recovery infrastructure by 2020.
- Report on capacity of the resource recovery and recycling sector to meet targets by 2020.
- Consider development of voluntary standards for material recovery facilities and the construction and demolition sector by 2020.
- National Packaging Targets, focused on recycling rates, achieved by the Australian Packaging Covenant Organisation by 2025.

**Questions for comment:**

2.1 Do you agree with the proposed target?
2.2 Is there a different target that should be included?
- should targets only refer to recycling?
- should there be separate targets for municipal solid waste, commercial and industrial waste and construction and demolition waste?
2.3 Do you agree with strategies 4, 5, 6 and 7, and related proposed milestones? If you suggest others, please explain why.
2.4 What other action is required to meet the target?
2.5 Who should be responsible for implementation?
Principle 3: Increase use of recycled material and build demand and markets for recycled products

The baseline for this target will be determined by data generated through a new National Waste Account and reported in the National Waste Report to be published in 2020.

Improved resource recovery in Australia depends on a growth in demand for recovered and recycled materials. Australia’s environment ministers have agreed to advocate for increased use of recycled material in the goods that governments and businesses buy, and to collaborate on creating new markets for recycled materials.

Proposed strategies and milestones

Strategy 8 – Sustainable procurement by governments

All Australian governments consider environmental issues in their approach to goods and infrastructure procurement and promote demand for recycled materials and products containing recycled content.

Proposed interim milestones

- All Australian governments to adopt sustainable procurement policies or guidance with measurable targets for use of recycled content by 2020.

- Establish a baseline through a new National Waste Account from which to measure changes in procurement of goods containing recycled materials by 2020.

- 30 per cent average recycled content in goods and products purchased by governments, by total volume, by 2025.

Strategy 9 – Sustainable procurement by business and consumers

Businesses and individuals in Australia take environmental issues into account when purchasing or manufacturing goods and services, and promote domestic demand for recycled materials and products containing recycled content.

Proposed interim milestones


- Innovation in resource recovery and manufacturing uses for recycled content better supported by 2020.

- National standards and specifications for high priority recycled materials or applications in place by 2020.

- National Packaging Targets, focused on recycled content in packaging, achieved by the Australian Packaging Covenant Organisation by 2025.

- Standardised national product labelling indicating percentage of recycled content in packaging in place by 2020.

For comment: a national target of 30 per cent average recycled content across all goods and infrastructure procurement by 2030
- Australian businesses adopt sustainable procurement policies or guidance with measurable targets for use of recycled content by 2025.

- 30 per cent average recycled content in goods and products purchased by businesses, by total volume, by 2030.

**Questions for comment:**

3.1 Do you agree with the proposed target?

3.2 Is there a different target that should be included?

3.3 Do you agree with strategies 8 and 9 and related proposed milestones? If you suggest others, please explain why.

3.4 What other action is required to meet the target?

3.5 Who should be responsible for implementation?
Principle 4: Better manage material flows to benefit human health, the environment and the economy

The baseline for this target will be determined by data presented in the 2018 National Waste Report (to be published later this year).

Proposed strategies and milestones

Strategy 10 – Plastics and packaging

Reduce the environmental impacts of plastic and packaging, reduce plastic pollution, and maximise benefit to the economy and society

Proposed interim milestones:

- Targets established to phase out problematic and unnecessary single-use plastic packaging by 2019.
- Problematic and unnecessary plastics, including single-use plastic packaging identified and prioritised by 2020.
- 100 per cent of microbeads from rinse off cosmetic and personal care products phased out by 2020, and options examined to broaden phase out to other products.
- Problematic and unnecessary single-use plastic packaging phased out through redesign, innovation, or alternative delivery methods by 2025.

Strategy 11 – Sound management of chemicals and hazardous waste

Implement reforms to manage chemicals and wastes throughout their lifecycle to minimise environmental and human health impacts and meet Australia’s international obligations.

Proposed interim milestones:

- Develop consistent, transparent, predictable and streamlined regulation to manage environmental risks of chemicals and wastes for all Australians.
- Better manage the import, export, use, manufacture and end-of-life disposal of products and articles containing hazardous substances.
- Prevent or significantly reduce environmental and human exposure to chemicals and wastes that are known to be hazardous, bio accumulative or persistent.
- Consider the performance of Australia’s hazardous waste management framework in reducing and managing hazardous waste, including new and emerging wastes, by 2020.
- Identify high priority hazardous substances and support development of national plans for reduction and management by 2020.
- Divert batteries from landfill through a product stewardship scheme or other appropriate end-of-life management system, by 2025.

For comment: national targets to

(a) phase out problematic and unnecessary plastics by 2030
(b) halve the volume of organic waste sent to landfill by 2030
Strategy 12 – Organic materials

Reduce the generation and landfill disposal of organic waste, including garden and food waste, by avoiding their generation and supporting diversion of remaining material into soils and other uses, supported by appropriate infrastructure.9

Proposed interim milestones:

- Businesses across the food supply and consumption chain become signatories to the voluntary commitment program to reduce food waste by 2019.
- Work underway in every Australian state and territory to better manage organic material by 2020.
- 25 per cent reduction in organic waste sent to landfill by 2025.

Questions for comment:

4.1 Do you agree with the proposed targets?
4.2 Is there a different target that should be included?
4.3 Do you agree with strategies 10, 11 and 12, and related proposed milestones? If you suggest others, please explain why.
4.4 What other action is required to meet the targets?
4.5 Who should be responsible for implementation?

9 The National Food Waste Strategy complements this outcome by halving food waste by 2030.
Principle 5 - Improve information to support innovation, guide investment and enable informed consumer decisions

For comment: a national target for fit-for-purpose and timely data to be available for individuals, businesses, and governments to make informed decisions

Proposed strategies and milestones

Strategy 13 – Data and reporting

Continue to improve national data and reporting on material flows, wastes and recycling, including economic aspects and reporting indices, to support consumers and manufacturers to make more informed decisions

Proposed interim milestones:

- Publish biennial National Waste Reports, and include data generated through a new National Waste Account by 2020.
- Investigate options for the production of infrastructure, trade and market information, including imported product and packaging information and material flows, by 2020.
- Data and reporting improvements program implemented by 2020.

Strategy 14 – Market development and research

All Australian governments and businesses generate and report information to support creating and maintaining markets for recycled materials, both domestically and internationally.

Proposed interim milestones:

- Review existing recycling data collection methodologies by 2020.
- Analyse barriers and opportunities in markets for goods containing recycled content by 2018, and review every five years.
- Improve support for innovation and research and development in waste management and recycling by 2025.

Questions for comment:

5.1 Do you agree with the proposed target?
5.2 Is there a different target that should be included?
5.3 Do you agree with strategies 13 and 14 and related proposed milestones? If you suggest others, please explain why.
5.4 What other action is required to meet the target?
5.5 Who should be responsible for implementation?
## Appendix 1 – Key legislation for waste management in Australia

<table>
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<tr>
<th>Jurisdiction</th>
<th>Key Legislation for waste management</th>
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| **Australian Capital Territory** | *Environment Protection Act 1997*  
*Clinical Waste Act 1990*  
*Litter Act 2004*  
*Waste Management and Resource Recovery Act 2016*  
*Waste Management and Resource Recovery Regulation 2017*  
*Dangerous Substances Act 2004* |
| **Commonwealth**           | *Hazardous Waste (Regulations of Exports and Imports) Act 1989*  
*Product Stewardship Act 2011*  
*Product Stewardship (Oil) Act 2000*  
*National Environmental Protection Council Act 1994* |
| **New South Wales**        | *Protection of the Environment Operations Act 1997*  
*Waste Avoidance and Resource Recovery Act 2001* |
| **Northern Territory**     | *Waste Management and Pollution Control Act*  
*Environment Protection (Beverage Containers and Plastic Bags) Act*  
*Litter Act 2017*  
*Marine Pollution Act 2016*  
*Nuclear Waste, Transport, Storage and Disposal (Prohibition) Act*  
*Water Act 2004*  
*Dangerous Goods Act 2012* |
| **Queensland**             | *Waste Reduction and Recycling Act 2011*  
*Waste Reduction and Recycling Regulation 2011*  
*Environment Protection Act 1994*  
*Environment Protection Regulation 2008* |
| **South Australia**        | *Environment Protection Act 1993*  
*Environment Protection Regulations 2009*  
*Environment Protection (Waste to Resources) Policy 2010*  
*Environment Protection (Movement of Controlled Waste) Policy 2014*  
*Green Industries SA Act 2004*  
*Plastic Shopping Bags (Waste Avoidance) Act 2008* |
| **Tasmania**               | *Environmental Management and Pollution Control Act 1994*  
*Environmental Management and Pollution Control (Waste Management) Regulations 2010*  
*Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010* |
| **Victoria**               | *Environment Protection Act 1970*  
*Environment Protection (Industrial Waste Resource) Regulations 2009*  
*Sustainability Victoria Act 2005* |
| **Western Australia**      | *Waste Avoidance and Resource Recovery Act 2007*  
*Waste Avoidance and Resource Recovery Levy Act 2007*  
*Waste Avoidance and Resource Recovery Levy Regulations 2008*  
*Environment Protection Act 1986* |
Appendix 2 – Key international agreements relevant to waste management in Australia:

- Basel Convention on Transboundary Movement of Hazardous Wastes and Their Disposal
- Stockholm Convention on Persistent Organic Pollutants
- Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
- Vienna Convention for the Protection of the Ozone Layer
- Montreal Protocol on Substances that Deplete the Ozone Layer
- United Nations Framework Convention on Climate Change
- Minamata Convention on Mercury
## Appendix 3 – Proposed actions

<table>
<thead>
<tr>
<th>Principle 1: Avoid waste</th>
<th>By 2019</th>
<th>By 2020</th>
<th>By 2025</th>
<th>By 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Businesses across the food supply and consumption chain become signatories to the voluntary commitment program to reduce food waste by 2019</td>
<td>Businesses implement actions to avoid waste and support design of products that increases a product’s lifecycle (including disassembly and repair) by 2020</td>
<td>Total waste generated in Australia is reduced by 5 per cent per capita by 2025</td>
<td>Reduce total waste generated in Australia per capita by 10 per cent by 2030</td>
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<tr>
<td>Targeted consumer education in place across Australia with consistent and evidenced-based messaging about avoiding waste, improved recycling and waste reduction strategies by 2021</td>
<td>Infrastructure and information sharing is in place to support reuse, repair and sharing of products by 2025</td>
<td><strong>Food waste is halved by 2030, in line with the National Food Waste Strategy</strong></td>
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</table>

**Principle 2: Improve resource recovery**

<table>
<thead>
<tr>
<th>By 2019</th>
<th>By 2020</th>
<th>By 2025</th>
<th>By 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritisation framework for national action on products through product stewardship endorsed and used by all governments by 2019</td>
<td>Findings and recommendations of the Product Stewardship Act review are implemented by 2020</td>
<td>End-of-life management process for photovoltaic panels and batteries in place by 2025, or earlier</td>
<td>80 per cent average recovery rate from all resource-recovery streams, following the waste hierarchy, by 2030</td>
</tr>
<tr>
<td>Action plans on policy priorities agreed by 2019. This will include common approaches towards transportation of waste (particularly to support market development), national energy from waste responses (consistent with the waste hierarchy), landfill levies, and minimisation of regulatory inconsistency.</td>
<td>National end-of-life management system for photovoltaic panels and batteries designed by 2020</td>
<td>100 per cent of packaging designed to be reusable, recyclable or compostable by 2025</td>
<td><strong>Common approach towards classifications and definitions for data and reporting on wastes and recycling implemented by 2025</strong></td>
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<tr>
<td>Identify opportunities for growing skills in the waste management and recycling sectors by 2019</td>
<td>Current product stewardship schemes reviewed, and process for escalating to co-regulatory or mandatory schemes (where warranted) agreed by 2020</td>
<td>Access to resource recovery and waste management infrastructure for regional, remote and Indigenous communities increased in every state and territory by 2025</td>
<td><strong>Access to resource recovery and waste management infrastructure for regional, remote and Indigenous communities increased in every state and territory by 2025</strong></td>
</tr>
<tr>
<td>Consider opportunities to improve planning for waste infrastructure by 2019</td>
<td>National classifications and definitions agreed for data and reporting on wastes and recycling by 2020</td>
<td>Priorities for common national standards and specifications agreed by 2020</td>
<td><strong>National Packaging Targets focused on recycling rates achieved by the Australian Packaging Covenant Organisation by 2025</strong></td>
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<tr>
<td></td>
<td>Priorities for common national standards and specifications agreed by 2020</td>
<td>Programs established in collaboration with regional, remote and indigenous communities that increase access to resource recovery and waste management infrastructure, and associated education and training, by 2020</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Programs established in collaboration with regional, remote and indigenous communities that increase access to resource recovery and waste management infrastructure, and associated education and training, by 2020</td>
<td>Establish or improve recycling and resource recovery infrastructure by 2020</td>
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<td></td>
<td>Establish or improve recycling and resource recovery infrastructure by 2020</td>
<td>Consider development of voluntary standards for material recovery facilities and the construction and demolition sector by 2020</td>
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<tr>
<td></td>
<td>Consider development of voluntary standards for material recovery facilities and the construction and demolition sector by 2020</td>
<td>Report on capacity of the resource recovery and recycling sector to meet targets by 2020</td>
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</tr>
<tr>
<td>Principle 3: Increase use of recycled material and build demand and markets for recycled products</td>
<td>By 2019</td>
<td>By 2020</td>
<td>By 2025</td>
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<tr>
<td>All Australian governments to adopt sustainable procurement policies or guidance with measurable targets for use of recycled content by 2020</td>
<td>Establish a baseline through a new National Waste Account from which to measure changes in procurement of goods containing recycled materials by 2020</td>
<td>30 per cent average recycled content in goods and products purchased by governments, by total volume by 2025</td>
<td>30 per cent average recycled content across all goods and infrastructure procurement by 2030</td>
</tr>
<tr>
<td>National Packaging Targets focused on recycled content in packaging achieved by the Australian Packaging Covenant Organisation by 2025</td>
<td>Australian businesses adopt sustainable procurement policies or guidance with measurable targets for use of recycled content by 2025</td>
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</table>

<table>
<thead>
<tr>
<th>Principle 4: Better manage material flows to benefit human health, the environment and the economy</th>
<th>Targets established to phase out of problematic and unnecessary single-use plastic packaging by 2019</th>
<th>Problematic and unnecessary plastics, including single-use plastic packaging identified and prioritised by 2020</th>
<th>Problematic and unnecessary single-use plastic packaging phased out through redesign, innovation, or alternative delivery methods by 2025</th>
<th>Phase out problematic and unnecessary plastics by 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Businesses across the food supply and consumption chain become signatories to the voluntary commitment program to reduce food waste by 2019</td>
<td>100 per cent of microbeads from rinse off cosmetic and personal care products phased out by 2020, and options examined to broaden phase out to other products</td>
<td>Divert batteries from landfill, through a product stewardship scheme or other appropriate end-of-life management system, by 2025</td>
<td>Halve the volume of organic waste sent to landfill by 2030</td>
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<tr>
<td>Consider the performance of Australia’s hazardous waste management framework in reducing and managing hazardous waste, including new and emerging wastes, by 2020</td>
<td>Identify high priority hazardous substances and support development of national plans for reduction and management by 2020</td>
<td>25 per cent reduction in organic waste sent to landfill by 2025</td>
<td>Develop consistent, transparent, predictable and streamlined regulation to manage environmental risks of chemicals and wastes for all Australians</td>
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</tr>
<tr>
<td>Work underway in every Australian state and territory to better manage organic material by 2020</td>
<td>Problematic and unnecessary single-use plastic packaging phased out through redesign, innovation, or alternative delivery methods by 2025</td>
<td></td>
<td>Better manage the import, export, use, manufacture and end-of-life disposal of products and articles containing hazardous substances</td>
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<tr>
<td>Phase out problematic and unnecessary single-use plastic packaging phased out through redesign, innovation, or alternative delivery methods by 2025</td>
<td>Consider the performance of Australia’s hazardous waste management framework in reducing and managing hazardous waste, including new and emerging wastes, by 2020</td>
<td>Prevent, or significantly reduce environmental and human exposure to chemicals and wastes that are known to be hazardous, bio accumulative or persistent</td>
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</table>

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<thead>
<tr>
<th>Principle 5: Improve information to support innovation, guide investment and enable informed consumer decisions</th>
<th>Analyse barriers and opportunities in markets for goods containing recycled content by 2018, and review every five years</th>
<th>Publish biennial National Waste Reports, and include data generated through a new National Waste Account by 2020</th>
<th>Improve support for innovation and research and development in waste management and recycling by 2025</th>
<th>Fit-for-purpose and timely data to be available for individuals, businesses, and governments to make informed decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigate options for the production of infrastructure, trade and market information, including imported product and packaging information and material flows, by 2020</td>
<td>Data and reporting improvements program implemented by 2020</td>
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