

# Waste reduction and recycling policies

Submission to the Australian Senate  
inquiry

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## About Doctors for the Environment Australia

Doctors for the Environment Australia (DEA) is an independent, self-funded, non-government organisation of medical doctors in all Australian states and territories.

DEA's work is based on the premise that humans need a future with clean air and water, healthy soils capable of producing nutritious food, a stable climate, and a complex, diverse and interconnected humanity whose needs are met in a sustainable way. We are therefore interested in environmental protection and restoration to promote human health and social stability.

### Acknowledgement of Country

Doctors for the Environment Australia's members live and work around Australia. We would like to acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Owners of these lands, in the spirit of reconciliation.

We recognise that First Nations peoples have cared for Country and lived sustainably for millennia, and that sovereignty of this land was never ceded. We pay our respects to First Nations Elders past and present, and to emerging leaders

## Summary

- Our current linear economy drives many health hazards - from contributing to climate change, polluting our biosphere to the emerging harms of micro and nano-plastics.
- Restrictions on exporting waste limit the carbon footprint of the waste, potential leakage into the environment as well as avoiding transferring our waste burden to resource poor countries and stimulating domestic recycling and circularity.
- Australia is trailing our global counterparts in circular economy deliverables.
- The EU Circular Economy Action Plan offers Australia numerous areas for improvement such as more ambitious legislation driving the transition to circularity, improving standardisation and consistency between states and territories, more extensive Product Stewardship Schemes, and more attention to innovation, research and collaboration.
- A health-specific circular economy roadmap is required due to the complexity of the sector, and should be coordinated with other existing policies.
- Consistent procurement policy standards are required. The UK NHS provides guidance with its Net Zero Supplier Roadmap, providing clear expectations for industry to meet sustainability standards.
- Waste streams in healthcare services must be expanded and standardised, with the appropriate infrastructure supports.
- Extended producer responsibilities would require manufacturers to take responsibility for their entire life cycle of their products.

- Reusable healthcare products must be prioritised over single-use items, due to their lower carbon footprint, improved cost-effectiveness over the entire life cycle, and equivalent sterility in most circumstances.

## Background

DEA welcomes the opportunity to respond to the Senate’s inquiry into the ‘effectiveness of the Albanese Labour Government’s waste reduction and recycling policies in delivering a circular economy’. We commend the inclusion and focus on a transition to a circular economy. This is an essential yet inevitable paradigm shift, as our current economic model generates vast amounts of waste which contribute to local and global health conditions.

[Malik’s team found](#) that Australian health care contributes to 7% of our national carbon dioxide equivalent emissions and sends 240,000 tonnes of waste to landfill each year. Thus as healthcare providers we are indirectly harming our patients through the care we deliver.

DEA advocates for a just transition to a sustainable model of healthcare that embraces the concepts of the triple bottom line of social, environmental and economic factors, as well as a circular economy.

There are many health consequences of not changing our practice.

## Contribution to climate change

In particular, ongoing reliance on single-use items leads to significant expenditure of resources with the full potential of materials not being utilised. Throughout the short life-cycles of these products, carbon emissions are [produced at every stage](#) from the extraction of often virgin materials (usually petrochemicals for plastics) to their refinement, manufacturing and transportation as well as from waste mismanagement upon disposal. In this way, maintaining a linear system of economy directly drives climate change.

It should also be noted that the disposal of organic food and garden waste into landfill also contributes to this, as organic waste produces very potent [methane-rich greenhouse gases](#) during decomposition.

## Contamination of air, soil and water

Exponential volumes of waste are being produced without adequate systems in place to handle them, and as a result it has been estimated that [43% of plastic waste will be mismanaged](#) at the end of its life. Methods such as open dumping or burning of waste can lead to the release of harmful pollutants into the atmosphere which worsens air quality. Furthermore, leakage of landfill leachate that contains toxic pollutants can also [contaminate soil and waterways](#).

## Micro- and nano-plastics

Plastics break down over time into particles of microscopic size – known as micro- and nano-plastics. These particles are now ubiquitous in our environment and are easily ingestible or inhalable, with some nanoparticles and chemicals being [small enough to pass through skin](#) and cell barriers to directly act on

internal tissues. These degradation products can have harmful effects on a wide range of health conditions, including [heart disease](#).

Perhaps the most well-known example of a harmful plastic additive is Bisphenol A (BPA), which studies have shown is [associated with a range of health conditions](#) including cardiovascular disease, hypertension, type 2 diabetes mellitus and polycystic ovarian syndrome. However, there are [significant knowledge gaps](#) as to the full extent of direct human health impacts caused by microplastics and the majority of known chemical additives are still yet to be studied.

## Addressing the inquiry terms of reference

Here we address the specific points raised in the Senate's Inquiry.

### a) Recycling export regulations imposed through the Recycling and Waste Reduction Act 2020

We support the recycling export regulations limiting exportation of many types of waste.

Exporting waste overseas will significantly increase the carbon footprint of recycling that waste. We strongly endorse domestic recycling over exporting it.

This also presents an opportunity to expand the recycling industry domestically, driving further employment and innovation.

Furthermore, exporting waste increases the chances of plastic leaking into the environment during transport and unpacking. If not recycled, then we would also be contributing to the waste burden in potentially [more resource poor countries](#) which also usually have [laxer occupational health and safety laws](#). The ultimate result is greater negative impacts financially, environmentally and on human health.

The Australian Government has limited control over waste management policy in countries to which we export waste. We know that [the bulk of ocean plastic comes from countries in South-East Asia](#) where plastic waste is often exported, due to less stringent waste management controls.

### b) Efficacy and progress on circular economy deliverables

Australia is performing poorly against international standards on progress toward a circular economy. The CSIRO [Material flow analysis to progress to a circular economy](#) report shows that Australia's circularity rate is only 4% compared to a global average of 8%. It has climbed only 0.5% since 2015.

Comparison with the [EU Circular Economy Action Plan](#) shows potential areas for improvement for Australia.

- Broader scope and scale of the regulatory framework legislating transition to a circular economy with increased cohesion between states and territories.
- Increased focus on mandated Product Stewardship Schemes instead of post-consumer recycling schemes, which are often not mandatory for suppliers to engage in.
- Increased emphasis on innovation, research and collaboration such as demonstrated through the [EU Circular Economy Stakeholder Platform](#).

Australia requires a Circular Economy Roadmap if we are to close the gap between our current circularity and the global average, or better still, become a world-leading circular economy.

Specific to the healthcare sector, current [Australian Health Facility Guidelines](#) do not provide adequate space in dirty utility/waste rooms for the multiple required waste streams, [such as providing only sufficient space for 2 bins](#). These standards must be updated to allow better waste segregation and streaming for hospitals.

Waste service providers are currently not required to provide thorough and transparent data on waste to customers, specifically in health. A clear baseline understanding of waste stream content, volume and contamination is an essential part of effective audit and improvement of waste management. This should be mandated for all waste providers to supply to customers of all sizes.

A health sector specific circular economy roadmap is required given the complexity of the sector. This should ensure that circularity is coordinated with existing policy structures such as the [Health Technology Assessment Policy and Methods Review](#) that is currently underway.

Clear and internationally consistent procurement policy and expectations of industry must be agreed upon and incorporated into federal policy. The UK National Health Service has led the development of a [net zero supplier roadmap](#) with clear expectations for all NHS suppliers outlined to 2030.

Improved support and co-ordination of expanded waste streams must be provided through state and federal funding for health organisations. Individual healthcare services are required to arrange waste recovery streams on their own, making it ad hoc, ineffective, and often expensive. For example:

- Polypropylene recycling is currently organised through individual plastic manufacturers. St Vincent's Hospital in Sydney, arranged recycling of needle caps through AllMould Plastics, but they are one of the only health services in Sydney with this contract. Moreover, AllMoulds Plastics hands the cost of transport onto the hospital system, making it more cost effective to dispose of the polypropylene in landfill.
- Reusable medical devices need to be identified and arranged for sterilisation and reuse with each supplier.
- Composting initiatives require individual negotiations with waste collectors. The costs will often be higher for composting than disposing of in landfill.

## c) Progress on implementation of mandated product stewardship schemes

Comparison with the European Union's policy frameworks on product stewardship highlights areas for improvement for Australia.

EU frameworks such as the [Waste Framework Directive](#) and [Circular Economy Action Plan](#) set more stringent requirements such as:

- Extended Producer Responsibility (EPR) requires manufacturers to take responsibility for the entire life cycle of their products
- There are a greater number of mandatory EPR schemes in the EU compared to Australia where participation in product stewardship is more likely to be voluntary. Examples include:
  - electrical and electronic equipment
  - packaging waste
  - batteries and accumulators
  - vehicles
  - tyres
  - a range of chemicals.
- Despite variation between EU states the legislation provides greater consistency than exists in Australia with significant variation between states and territories.

Specific to the healthcare sector, DEA applauds the inclusion of 'plastics in healthcare products in hospitals' inclusion on the [DCEEW Minister's Priority List 2023-24](#), recognising that 85% of healthcare waste is non-hazardous and that plastics in this waste stream can have sustainable end-of-life pathways.

These items were first listed in 2022, and we encourage greater engagement with industry, more stringent requirements for industry to engage with these efforts and penalties for those suppliers that fail to demonstrate meaningful change.

We applaud exemplar industry partners such as [MedSalv](#) here in Australia as well as overseas initiatives such as [Stryker Sustainability](#) and encourage Federal efforts to reduce barriers to medical device reprocessing in collaboration with the Therapeutic Goods Administration.

Other exemplar products in healthcare exist, such as reusable rather than single-use sterile surgical gowns and drapes. These have been shown to be vastly more environmentally sustainable and are [just as effective at preventing surgical site infections](#) as single-use versions. This is supported by the Royal Australasian College of Surgeons in their [position statement](#) which has been endorsed by:

- The Australasian College of Infection Prevention and Control
- The Australian College of Peri-Operative Nurses
- The Australasian College of Ophthalmologists
- The Australasian College of Obstetricians and Gynaecologists
- The Australian and New Zealand College of Anaesthetists

It is also important to consider that although reusable products may have higher initial purchase prices in comparison with single-use products, reusable items may prove to be more cost-effective in the long term due to the elimination of costs associated with product replacement and disposal. For example, an Australian study into the implementation of reusable isolation gowns in an intensive care setting demonstrated savings of over \$1 for each use of a reusable gown compared to a single-use gown ([Angelopoulos 2022](#)).

#### d) Any other related matter

We are concerned about the potential air quality and greenhouse gas emissions that would be generated by any **Waste-to-Energy** (WtE) combustion plants that may be considered as part of the solution to waste generation and disposal. However, this solution sits toward the bottom of the waste hierarchy and should be considered much less important than reducing, re-using and recycling waste products.

The safest form of energy generation with the lowest impact on air quality and global heating remains renewable energy sources. Although claims have been made that modern WtE plants produce less air pollution than older models there remains evidence that these plants produce carcinogenic emissions [such as chromium and dioxins](#). There is also no question that WtE plants produce [more greenhouse gas emissions than renewable energy sources even though these plants are becoming more efficient](#).

WtE plants should be considered a last-resort approach to waste management and if utilised must be carefully managed to minimise emissions and air pollution.