



9 October 2015

Committee Secretary

Senate Environment and Communications Committee

Po Box 6100

Parliament House

Canberra ACT 2600

By email: [ec.sen@aph.gov.au](mailto:ec.sen@aph.gov.au)

Dear Members of the Committee,

## **Inquiry into the threat of marine plastic pollution in Australia and Australian waters**

EDOs of Australia welcome the opportunity to provide input into this Senate inquiry on the science, sources, impacts and mitigation measures for marine plastic pollution.

We are a network of independent not-for-profit community legal centres specialising in public interest environmental law. EDOs have 30 years' experience advising Australian communities on using the law to protect the environment, including advice, casework, education and law reform.

It is widely acknowledged that marine pollution from plastics is a significant and growing environmental problem, as others' submissions will address in detail. Our submission focuses on the legal and regulatory aspects of marine plastic pollution, including options available to address this problem.

In particular we address:

- 1. Scientific understanding of plastic pollution in the marine environment**
- 2. State laws and policies that deal with marine pollution sources**
  - *State laws regulate pollution and waste, but not cumulative impacts*
  - *State-level container deposit schemes and plastic bag bans*
- 3. National coordination**
  - *Voluntary and co-regulatory measures on packaging*
  - *Product Stewardship Act 2011 (Cth)*
  - *Environment Protection and Biodiversity Conservation Act 1999 (Cth).*
  - *Joint regulation of ship-based marine pollution.*

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In summary, the long-term conservation and stewardship of Australia's marine environment requires increased action on land in particular (but also on water) to prevent marine plastics pollution. We believe this requires:

- additional regulatory measures to reduce key *sources* of marine plastic pollution (for example, further implementation of container deposit schemes and reducing or banning disposable plastic bags);
- increased resourcing and implementation of existing measures such as water pollution offences and infrastructure (where possible based on cost recovery options and a *polluter pays* approach, to internalise pollution costs); and
- a timely and cooperative approach between state and federal governments (in addition to international cooperation and capacity building) as necessary.

We therefore recommend that Commonwealth and State/Territory Governments:

- support and develop legislation and policy to reduce production or use (and increase recycling) of plastics that cause the most harm to marine life and biodiversity – based on best available evidence of pollution sources;
- continue via Environment Ministers to collaborate and find effective regulatory options for federal, state and local cooperation to address marine plastic pollution (but national coordination should not delay effective state efforts);<sup>1</sup>
- adopt a 'highest environmental denominator' approach to raise standards and incentives for plastic pollution reduction across Australia. For example:
  - expand bans on single-use plastic bags to NSW, QLD, VIC and WA;
  - support and implement container deposit schemes across Australia;
  - support industry to improve manufacturing, supply chain and disposal standards, with a view to practical phase-out of harmful plastic sources.
- examine the level of domestic oversight under laws that regulate fishing gear and garbage disposal at sea; and consider Australia's capacity-building role on marine plastic pollution in the Asia-Pacific region.

## 1. Scientific understanding of plastic pollution in the marine environment

The environmental harm caused by plastic pollution in the marine environment is well established, and is projected to grow significantly without systemic policy intervention and innovation at many levels. Coastal assessments have shown that 60–80% of marine debris consists of plastic.<sup>2</sup> The precise movements of plastic pollution throughout Australian and international waters remain poorly assessed, but recent research has demonstrated that “*each square kilometre* of Australian sea surface water is contaminated by around 4,000 pieces of tiny plastics”.<sup>3</sup>

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<sup>1</sup> We note and welcome current work by the NSW Government and EPA to identify policy options to reduce plastic bag use, following initial agreement of Environment Ministers in February 2015. See Mr Mark Speakman (Environment Minister), NSW Parliament hansard, 13/8/2015, [http://www.parliament.nsw.gov.au/Prod/parlment/hansart.nsf/V3Key/LA20150813024?open&refNavID=HA8\\_1](http://www.parliament.nsw.gov.au/Prod/parlment/hansart.nsf/V3Key/LA20150813024?open&refNavID=HA8_1).

<sup>2</sup> Derraik, J.G.B., 2002. 'The pollution of the marine environment by plastic debris: a review'. *Marine Pollution Bulletin* 44, 842–852.

<sup>3</sup> (Emphasis added.) Reisser J, Shaw J, Wilcox C, Hardesty BD, Proietti M, et al. (2013) 'Marine Plastic Pollution in Waters around Australia: Characteristics, Concentrations, and Pathways'. *PLoS ONE* 8(11): e80466.

It is clear that marine plastic pollution originating in Australia and elsewhere has both local and global consequences, including impacts on federally protected species such as migratory shorebirds, whales, sharks and turtles. A recent CSIRO study into the sources, distribution and fate of marine debris (and the species that ingest them or are entangled by them) provides important background information on this issue.<sup>4</sup>

Looking at impacts within and beyond the marine environment, UNEP notes:<sup>5</sup>

*The total natural capital cost of plastic used in the consumer goods industry is estimated to be more than US\$75 billion per year. The cost [includes impacts] on oceans and the loss of valuable resources when plastic waste is sent to landfill rather than being recycled. The most significant upstream impact is greenhouse gas emissions related from producing plastic feedstock which [represents] almost a third of natural capital costs ... About 280 million tonnes of plastic is produced globally each year and a only a very small percentage is recycled.*

This UNEP report includes various recommendations for companies to measure, disclose, reduce, innovate, collaborate and research plastic use in supply chains.<sup>6</sup>

## **2. State laws and policies that deal with marine pollution sources**

### ***State laws regulate plastic pollution and waste, but don't deal well with cumulative impacts***

In Australia, the states generally have primary responsibility for environmental laws.<sup>7</sup> Around three quarters of plastic pollution in Australian coastal waters comes from domestic, *land-based* sources.<sup>8</sup> This includes litter from drink containers and plastic bags, other packaging, manufacturing and consumer waste (including microplastics). Marine plastic pollution is therefore a cumulative impact of plastic production, consumption and waste disposal systems.

At the industrial scale, land-based sources of plastic pollution are regulated through state pollution and waste laws. For example, in NSW it is an offence to:

- wilfully or negligently dispose of waste in a manner that harms or is likely to harm the environment (without lawful authority);
- pollute waters including the sea (including with 'refuse, litter, debris' etc); or
- pollute land.<sup>9</sup>

In addition, some types of industrial facilities require an environmental pollution licence, which can limit what substances a facility can legally emit. State planning

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<sup>4</sup> See: [www.csiro.au/marine-debris](http://www.csiro.au/marine-debris)

<sup>5</sup> UNEP (2014), *Valuing Plastic: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*, p 7, <http://www.unep.org/pdf/ValuingPlastic/>.

<sup>6</sup> See <http://www.unep.org/pdf/ValuingPlastic/>, p 14.

<sup>7</sup> Based on residual powers under the Constitution (there is no specific Commonwealth power for environment).

<sup>8</sup> See: [www.csiro.au/marine-debris](http://www.csiro.au/marine-debris)

<sup>9</sup> *Protection of the Environment Operations Act 1997* (NSW) ss. 115, 120 and 142A respectively. Land pollution is defined to include substances causing land degradation or potential harm to humans, animals, other *terrestrial* life or ecosystems (POEO Act Dictionary).

laws and development control conditions may also regulate plastic waste disposal, and other land-based sources of marine pollution (like sewage and fertiliser run-off).

Unfortunately, existing laws don't deal very well with *cumulative* impacts (including to the marine environment); and illegal behaviour can be difficult to detect or prosecute. Governments should increase guidance and enforcement action on a cost-recovery basis, consistent with the *polluter pays principle* that underpins state and federal law.

While governments including NSW have placed recent focus on waste issues, this focus tends to be directed at local-level amenity (including illegal street dumping) rather than specifically targeting harm to marine life or biodiversity from plastic pollution. As part of the solution, we would support state and federal government funding for improved local education and infrastructure such as stormwater traps. We also note that other measures, such as container deposit schemes and plastic bag bans, can stem the tide of litter entering streets and waterways in the first place.

### ***State-level container deposit schemes***

Drink containers, plastic bags and microplastics are all key land-based sources of marine plastic pollution that pose risks to a wide range of marine life. This includes turtles, whales and seabirds already threatened with extinction.

Container deposit schemes have a proven track record in regulating drink container litter, by internalising the costs of littering and creating community incentives to recycle more. Many countries around the world have adopted these schemes, increasingly aided by innovative resource recovery technologies. South Australia (**SA**) has pioneered container deposits in this country, followed by the Northern Territory (**NT**) – despite beverage companies' legal challenge to the NT scheme in 2013. Encouragingly, New South Wales (**NSW**) aims to legislate a Container Deposit Scheme by mid-2017.<sup>10</sup> Queensland and the Australian Capital Territory (**ACT**) are also considering this option. The Committee should support their wide adoption.

### ***State-level plastic bag bans***

Plastic bags are ingested by a range of marine life, especially turtles. Four out of eight Australian jurisdictions now have bans on single-use plastic bags – SA, NT, ACT and Tasmania.<sup>11</sup> We understand NSW and Queensland are considering bans.<sup>12</sup>

Only 1 in 20 bags are recycled, 1 in 5 may be reused, while three-quarters are sent to landfill.<sup>13</sup> In February 2015, state and federal Environment Ministers tasked the NSW Government to 'identify practical solutions to reduce the impact of plastic bags

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<sup>10</sup> Ibid.

<sup>11</sup> See *Plastic Shopping Bags (Waste Avoidance) Act 2008* (SA); *Plastic Shopping Bags Ban Act 2010* (ACT); *Environment Protection (Beverage Containers and Plastic Bags Act 2011* (NT); *Plastic Shopping Bags Ban Act 2013* (TAS). Some local governments have also banned plastic bags, but have been subject to legal challenges.

<sup>12</sup> In August 2015 a petition of 12,400 citizens was presented to NSW Parliament calling for a ban on lightweight single-use plastic bags, led by groups such as Plastic Bag Free NSW, Total Environment Centre and the Boomerang Alliance. See NSW Parliament Hansard, 'Petition – Single-use Lightweight Plastic Bags' [http://www.parliament.nsw.gov.au/Prod/parliament/hansart.nsf/V3Key/LA20150813024?open&refNavID=HA8\\_1](http://www.parliament.nsw.gov.au/Prod/parliament/hansart.nsf/V3Key/LA20150813024?open&refNavID=HA8_1).

<sup>13</sup> Tasmanian Department of Parks, Primary Industries & Environment, <http://www.plasticbags.tas.gov.au/about>.

on the environment, including in marine ecosystems.<sup>14</sup> The NSW EPA will report on policy options by the end of 2015. The Committee may wish to consider progress to date. The Committee should support plastic bag bans as a part of the policy solution.

We also understand that NSW has committed to phasing out *microbeads* (plastics in bodywash, cosmetics etc) although it is not yet clear how this is to be implemented.<sup>15</sup>

### 3. National coordination

On one hand, points of discharge and significant concentrations of marine plastic pollution are within state waters. On the other hand, plastic pollution and harm to marine life does not stop at the 3 nautical mile (nm) mark that defines state coastal waters. Therefore any coordinated *national* response to marine plastic pollution would need effective (and timely) cooperation between the states and the Commonwealth.<sup>16</sup> This section considers various regulatory options for plastic pollution at the national level.

#### *Voluntary and co-regulatory measures*

There has been some national coordination on plastic pollution via voluntary and co-regulatory measures such as the Australian Packaging Covenant (**Covenant**) and the complementary National Environment Protection Measure on Used Packaging Materials (**NEPM**). The Australian Government notes:<sup>17</sup>

*The Covenant is a key national mechanism for implementing Strategy 3 of the National Waste Policy – better management of packaging to improve the use of resources, reduce the environmental impact of packaging design, enhance away from home recycling and reduce litter. ...*

*The Covenant establishes a framework for the effective life cycle management of consumer packaging and paper products delivered through a collaborative approach between all sectors of the packaging supply chain, consumers, collectors, reprocessors and all spheres of government.*

In our view, such measures to reduce plastic packaging have had limited effectiveness (as evidenced by the continued and increasing problems of plastic pollution), and improved regulatory measures have been slow to progress. COAG's Standing Committee on Environment and Water (**SCEW**) was abolished in late 2013, which does not assist national coordination in this area.<sup>18</sup>

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<sup>14</sup> [Speakman Mr Mark](http://www.parliament.nsw.gov.au/Prod/parliament/hansart.nsf/V3Key/LA20150813024?open&refNavID=HA8_1) (Environment Minister), NSW Parliament hansard, 13/8/2015, [http://www.parliament.nsw.gov.au/Prod/parliament/hansart.nsf/V3Key/LA20150813024?open&refNavID=HA8\\_1](http://www.parliament.nsw.gov.au/Prod/parliament/hansart.nsf/V3Key/LA20150813024?open&refNavID=HA8_1).

<sup>15</sup> The *Waste Avoidance and Resource Recovery Act 2001* (NSW) provides for extended producer responsibility schemes (s. 15) – 'for giving effect to an environmental policy in which the producer's responsibility for a product (including physical or financial responsibility) is extended to the post-consumer stage of the product's life-cycle'.

<sup>16</sup> Australia's *State of Environment Report 2011* emphasised the need for nationally integrated management of marine areas, noting:

*The cumulative pressures on our marine ecosystems are rapidly growing.... In addition, present-day management systems lack integration among the various federal, state and local government systems that provide for planning, regulation and management of the marine and estuarine waters.* (p 373)

<sup>17</sup> <https://www.environment.gov.au/protection/national-waste-policy/packaging-covenant>.

<sup>18</sup> The Commonwealth marine debris page above still refers to SCEW and predecessor, NRM Ministerial Council.



### ***Product Stewardship Act 2011***

This Commonwealth Act enables products to be scheduled, and regulated, to make manufacturers and suppliers responsible for reducing the lifecycle waste impacts of their products. In principle, extended producer responsibility is a positive initiative. While this Act is another potential avenue to coordinate national action on plastics manufacture, supply and environmental standards, there tends to be a long lead-time for new product regulations. Packaging was listed for consideration under this Act for four years from 2011, although not in 2015-16.<sup>19</sup> At present, the development of state-based mechanisms (container deposits, phasing-out plastic bags and microbeads etc) appears to be more timely and effective in this case.

### ***Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)***

Commonwealth environmental responsibilities are often tied to international obligations (such as MARPOL below) and domestic intergovernmental agreements. The EPBC Act (Cth) implements Australia's international obligations on biodiversity, migratory species, wildlife trade, wetlands and other matters; as well as federal-state environmental agreements. However, the EPBC Act's project referral, assessment and approval processes are unlikely to capture activities that generate marine plastic pollution.

The EPBC Act is usually triggered by specific 'controlled actions' likely to have a 'significant impact' on one or more Matters of National Environmental Significance (**MNES**) – such as nationally threatened and migratory species, and Commonwealth marine areas.<sup>20</sup> Historically, individual sources of plastic pollution (such as a plastic manufacturing plant) have not triggered the significant impact threshold. This reflects the fact that marine plastic pollution is a *cumulative and systemic* problem.

Nevertheless, we note that entanglement and ingestion of marine debris is a Key Threatening Process for a number of nationally threatened species listed under the EPBC Act.<sup>21</sup> A Threat Abatement Plan to address marine debris was developed in 2009 and is currently under review. Ship garbage (discussed below) has been excluded from this key threatening process.

The EPBC Act also has a 'Bioregional Plan' mechanism. While this under-used mechanism has some potential to improve cumulative impact assessments, it wouldn't address the critical *sources* of marine pollution.<sup>22</sup>

<sup>19</sup> See <http://www.environment.gov.au/protection/national-waste-policy/product-stewardship/legislation>.

<sup>20</sup> See EPBC Act 1999 (Cth), s. 24. These include:

- nationally threatened and migratory species (e.g. whales, sharks, seabirds);
- World Heritage Areas like the Great Barrier Reef and Daintree Rainforest;
- Great Barrier Reef Marine Park and
- Commonwealth marine area (within the EEZ, excluding 3 nm state waters).

<sup>21</sup> i.e. 'Injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful marine debris'. See: <https://www.environment.gov.au/marine/marine-pollution/marine-debris>.

<sup>22</sup> Part 12 of the Act. Under a Bioregional Plan, individual actions done in accordance with the plan don't need EPBC Act approval (s. 37). The federal Environment Minister may consult on and prepare a Plan for a Commonwealth area (e.g. Commonwealth marine area). The Minister may also cooperate to prepare a Bioregional Plan with a State/Territory government or others, where jurisdictions overlap. The 2009 *Report of the Independent Review of the EPBC Act* made recommendations to improve regional planning provisions (rec. 6).

Overall, the EPBC Act alone is not sufficient to regulate marine plastics, as the main sources of pollution originate with plastic production and disposal, which are chiefly within the jurisdiction of state laws.

***Ship-based marine pollution – joint regulation in Australia's territorial sea***

A secondary source of plastic pollution is *ship-based*, such as discarded fishing gear ('ghost nets') and garbage disposal at sea. Australia is a signatory to the International Convention for the Prevention of Pollution from Ships (**MARPOL**). Annex V deals with garbage from ships.

Whether state or federal marine laws apply generally depends on where the pollution would occur. State laws such as the *Marine Pollution Act 2012* (NSW) regulate coastal waters within 3 nm of shore. Commonwealth laws such as the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* regulate the remaining 9 nm of territorial sea, and the rest of Australia's 200-nm Exclusive Economic Zone (**EEZ**).<sup>23</sup> While these laws rely in part on the MARPOL Convention, the International Maritime Organisation and other countries, the Committee could further examine the level of domestic oversight under these laws; and could also consider Australia's role in Asia-Pacific capacity building on marine plastic pollution.

We hope this submission is of assistance to the Committee.

Yours sincerely,  
**EDOs of Australia**

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<sup>23</sup> Territorial sea is sovereign territory of the Commonwealth, extending 12 nautical miles from Australia's coastline. The management of this area is defined by the 1979 Offshore Constitutional Settlement and implemented by the *Coastal Water (State Powers) Act 1980*, *Coastal Waters (State Title) Act 1980*, *Coastal Waters (Northern Territory Powers) Act 1980* and the *Coastal Waters (Northern Territory Title) Act 1980*. The *Seas and Submerged Lands Act 1973* (Cth) formalises Commonwealth jurisdiction over the EEZ and implements the UN Convention on the Law of the Sea (**UNCLOS**). See further S. Palassis, 'Marine Pollution and Environmental Law' in R. Baird and D. Rothwell (eds), *Australian Coastal and Maritime Law*, 2011, 231-253; Australian Maritime Safety Authority: <https://www.amsa.gov.au/environment/legislation-and-prevention/protection-of-the-sea/index.asp>.