



## **Australia's submission to the United Nations Secretary-General's report on the topic of marine debris, plastics and microplastics**

### **Executive Summary**

Australia welcomes the opportunity to provide input into the Secretary-General's report on marine debris, plastics and microplastics.

Australia notes that marine debris is a global challenge that would benefit from regionally applied solutions. Common global challenges include the increasing production and use of plastics worldwide, inadequate disposal of plastic debris, impacts on marine wildlife and ecosystems, and potential impacts on human health.

Australia is committed to finding ways to reduce debris entering the ocean from land-based sources, including by reducing the amount of plastic produced and by identifying and adopting economically sustainable uses for plastic already in existence (such as conversion to materials or energy).

Australia supported the development of Sustainable Development Goal 14 to conserve and sustainably use the oceans, seas and marine resources for sustainable development, including to, by 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities.

Australia welcomes consideration by the International Maritime Organisation of proposals for the development of standards for shipboard gasification waste to energy systems and associated amendments to regulation 16 of the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, with a target completion date of 2017.

Australia welcomes the United Nations Environment Assembly study on microplastics, focussing on possible measures and best available techniques to prevent and reduce the level of microplastics in the marine environment. Australia looks forward to an update on the study's recommendations and options for implementation at the United Nations Environment Assembly in May 2016.

Australia encourages future work on treatment options identified in the October 2015 Ocean Conservancy report "Stemming the tide: land-based strategies for a plastic-free ocean", namely:

- Accelerated development of collection infrastructure and plugging of post collection leakage.
- Development and rollout of commercially viable treatment options to convert plastic waste to material or energy.

- Innovations in recovery and treatment technologies to ensure a more sustainable plastic life-cycle.

Australia once again welcomes the focus on marine debris and appreciates the opportunity to provide input into this process.

## Introduction

1. Recalling the commitment of States in “The Future We Want” and in Goal 14 of “Transforming Our World: the 2030 Agenda for Sustainable Development” and re-affirming our commitment to General Assembly resolutions on oceans and the law of the sea and resolutions on sustainable fisheries that relate to marine debris, plastics and microplastics, Australia welcomes the opportunity to provide input into the Secretary-General’s report on the topic of marine debris, plastics and microplastics.
2. Australia notes that marine debris is a global challenge that would benefit from regionally applied solutions.
3. Australia also notes that the large majority of plastic found in the ocean was disposed of on land. It is therefore essential to find ways to prevent, reduce and manage debris from land-based sources, as well as to address marine-based sources and to remove accumulated marine debris from the coastal and marine environment.
4. This submission focuses on marine debris entering the ocean from land-based sources by reducing the amount of plastic being produced and sustainable uses for plastics already in existence. It also recognises the need to remove accumulated plastics from the coastal and marine environment and notes the need for further research on all of these processes.

## Challenges

5. Plastic marine debris is a ubiquitous global problem. Based on findings reported in the journal *Science* in 2015<sup>1</sup>, the Ocean Conservancy<sup>2</sup> calculated that the ocean may already contain upward of 150 million metric tons of plastic and approximately 8 million metric tons of plastic are estimated to leak out of the global economy and into the ocean each year. This plastic mostly accumulates in the convergence zones of each of the five major gyres forming marine debris vortices.
6. Common global challenges include the increasing production and use of plastic worldwide, inadequate management and disposal of plastic debris, and impacts (both lethal and sublethal) on marine wildlife and ecosystems. The potential for human health impacts is also being examined.
7. Plastic debris is continuously broken down in the ocean, with waves and radiation from the sun fragmenting it into smaller and micro particles. At each stage plastic can cause impacts to marine wildlife:
  - Large debris, such as lost or discarded fishing gear, may entangle wildlife and cause significant mortality and population impacts.

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<sup>1</sup>Jambeck, J. R., R. Geyer, C. Wilcox, T. R. Siegler, M. Perryman, A. Andrady, R. Narayan, and K. L. Law, “Plastic waste inputs from land into the ocean,” *Science*, 2015, Volume 347, Number 6223.

<sup>2</sup> Ocean Conservancy (2015). Stemming the Tide: Land-based strategies for a plastic-free ocean

- Small plastic pieces can be ingested by wildlife, causing physical blockage, internal injuries and death by starvation.
  - Microplastics particles (<5mm) may carry chemical contaminants that pose an ecotoxicological risk. These particles can be transferred upwards through the marine food chain causing adverse effects and may serve as a global transport mechanism for accumulated contaminants such as persistent organic pollutants. Microplastic can result from breakdown of larger plastic pieces in the ocean, while manufacture at that scale is also widespread (for example beads in cosmetics that enter the environment through various pathways).
8. The range of management approaches needed to address these global challenges includes research and monitoring, public outreach and education, preventing and reducing debris from land-based sources as well as addressing marine-based sources and removing accumulated marine debris from the coastal and marine environment.
  9. Differences in the capacity of countries to implement management approaches means that solutions identified at the global level would most effectively be implemented at the national and sub-national level, and at the regional level through partnerships and existing international and regional forums.
  10. The actions and activities undertaken by Australia at national, regional and global levels to reduce the incidence and impact of marine debris, plastics and microplastics on the marine environment are outlined below.

#### **Australia's actions**

11. Australia is actively engaged in the United Nations Environment Programme (UNEP) Global Programme of Action for the Protection of the Marine Environment from Land-based Activities. Australia, through the Commonwealth Scientific and Industrial Research Organisation (CSIRO), is contributing scientific expertise to the UNEP core study on strengthening the evidence base about microplastics through participation in the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (WG40; <http://www.gesamp.org/>). CSIRO is also leading UNEP's project on "Modelling and monitoring marine litter movement, transport and accumulation" and also undertakes research in Australia to help better understand marine debris type, occurrence and source, as well as wildlife impacts.
12. Australia supports technical cooperation initiatives in the Asia-Pacific and Indian Ocean regions to encourage consistent application of international conventions related to shipping, including implementing Annex V of the International Convention for the Prevention of Pollution from Ships (MARPOL). We have also provided technical support to the Secretariat of the Pacific Regional Environment Programme (SPREP) with regard to the implementation of relevant conventions adopted under the International Maritime Organisation (IMO). For example, Australia provided assistance to SPREP for the development of a Regional Reception Facilities Plan (RRFP) for the small island developing states (SIDS) in the Pacific region to enable SIDS to satisfy their MARPOL obligations to provide port waste reception facilities through a regional approach. Australia hosted a SPREP regional workshop to update the Pacific Ocean Pollution Prevention Programme (PACPOL) strategy. The PACPOL strategy was updated in 2014 and recognises marine plastics, and marine debris more generally, as a significant source of pollution. Australia also produces a range of communication materials to educate maritime users of the requirements of MARPOL Annex V and works collaboratively with industry and non-government organisations to share data, develop

solutions and raise awareness of Australian legislation and MARPOL requirements related to marine debris.

13. Australia ratified the Noumea Convention in 1989. The Convention relates to the protection, development and management of the marine and coastal environments in the South Pacific region and obliges Parties to endeavour to take all appropriate measures to prevent, reduce and control pollution from any source.
14. Australia is a member of the joint International Maritime Organisation/Food and Agriculture Organisation of the United Nations (FAO) Working Group on Illegal, Unreported and Unregulated (IUU) Fishing and Related Matters, which looks at the significant contribution IUU fishing makes to the volume of lost and discarded fishing gear. The Australian Government, fishing industry and non-government organisations are working in partnership to reduce ghost nets in the area of the Northern Prawn Fishery, in particular in the Gulf of Carpentaria. Ghost nets sighted by fishery operators are reported to World Animal Protection and removed by the operator, Australian Border Force or the Australian Fisheries Management Authority.
15. Australia works through the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF) to improve fishing practices (including net retrieval and waste management) in Arafura Sea communities. Australia, Indonesia and Timor Leste are working together to support the Strategic Action programme over the next five years, which includes reducing land-based and marine sources of pollution.
16. Australia is helping reduce the impact of marine debris on migratory species through the Convention on the Conservation of Migratory Species of Wild Animals (CMS) by sponsoring a resolution on marine debris (Resolution 10.4) and providing \$AU75,000 to support its implementation (Resolution 11.30 refers).
17. The Australian Government also contributed its expertise to two IWC workshops assessing the impact of marine debris on cetaceans.
18. The Australian Government implements the *Threat Abatement Plan for the Impacts of Marine Debris on Vertebrate Marine Life 2009* to help prevent harmful marine debris from entering the oceans. This plan supports actions to facilitate the prevention, removal, mitigation and monitoring of marine debris. The plan also contains actions to strengthen relations at a regional and international level to address sources and impacts of marine debris. A five-year review on progress under the plan took place in 2014. A revised plan is due to be completed in 2016 and will incorporate emerging issues, including microplastics.
19. In December 2015, under the leadership of the Australian Government, Australian states and territories agreed to reduce the amount of microbeads in 'rinse-off' products reaching the marine environment and affecting the health of aquatic organisms, ecosystems and the food chain. Work is being progressed to secure a voluntary agreement from industry to phase out microbeads in personal care, cosmetic and cleaning products no later than 1 July 2018. Some major Australian supermarkets have committed to stop using microbeads in their own products from 2017. The Australian Government is also supporting the national phase-out of light-weight plastic bags and partners in the Australian Packaging Covenant - an industry-government partnership that seeks to change the culture of business to design more sustainable packaging, increase recycling rates and reduce packaging litter.

20. The Australian Government has committed to a range of activities, including the Reef 2050 Plan, Reef Trust, Working on Country (within the Indigenous Advancement Strategy) and the Indigenous Protected Areas Programme to support local residents, community groups and Indigenous rangers to undertake on-ground activities to reduce the volume of debris generated or entering the marine environment. A number of ranger groups perform regular patrols to remove marine debris and ghost nets to minimise its impact on our marine environment. As a result of the dedicated work of the rangers, many marine turtles and other sea creatures are rescued from entanglement in ghost nets and returned to the wild each year. Data collected from annual Great Barrier Reef clean-ups is entered into the Australian Marine Debris database to advise future management and reduction plans with local communities and government.

#### **Further action**

21. Australia supported the development of Sustainable Development Goal 14 to conserve and sustainably use the oceans, seas and marine resources for sustainable development, including to, by 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
22. Australia welcomes consideration by the IMO of proposals for the development of standards for shipboard gasification waste to energy systems and associated amendments to regulation 16 of MARPOL Annex VI, with a target completion date of 2017.
23. Australia also welcomes the United Nations Environment Assembly of the United Nations Environment Programme study on microplastics, focussing on possible measures and best available techniques to prevent and reduce the level of microplastics in the marine environment. Australia looks forward to an update on the study's recommendations and options for implementation at the United Nations Environment Assembly in May 2016.
24. Australia notes that marine debris will also be considered at the April 2016 Convention on Biological Diversity (CBD) meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA). The CSIRO participated in the CBD's Marine Debris Working Group.
25. Australia recognises the importance of finding ways to capture the economic value of plastic wastes to incentivise plastic waste treatments, such as conversion to materials or energy that would reduce the amount of plastic entering the ocean and provide socio-economic benefits to local communities.
26. Australia encourages future work on treatment options identified in the October 2015 Ocean Conservancy report "Stemming the tide: land-based strategies for a plastic free ocean", namely:
  - Accelerated development of collection infrastructure and plugging of post collection leakage.
  - Development and rollout of commercially viable treatment options to convert plastic waste to material or energy.
  - Innovations in recovery and treatment technologies to ensure a more sustainable plastic life cycle.
27. Australia once again welcomes the focus on the important global issue of marine debris and appreciates the opportunity to provide input into this process.