



SUBMISSION

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WWF-Australia submission to the House Standing Committee on Climate Change, Energy, Environment and Water's inquiry into plastic pollution in Australia's oceans and waterways

WWF-Australia is part of the WWF International Network, the world's largest independent conservation organisation. WWF's global mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature. WWF works in more than 100 countries and has around five million supporters worldwide.

WWF-Australia is one of Australia's largest and most trusted environment organisations. We work with more than two million financial and non-financial supporters to save species and protect the places we love.

WWF-Australia's No Plastics in Nature initiative works to eliminate the leakage of plastic into the environment by reducing unnecessary and problematic single-use plastics, building a circular economy for plastics, and driving global action to address plastic pollution.

This work comprises deep expertise and engagement in global negotiations on a plastic pollution treaty. We annually produce the '[The state of plastics in Australia](#)' scorecard, assessing states' and territories' action on single-use plastics. We leverage the knowledge and experience of more than 20 WWF country offices around the world in support of Australia's transition to a circular economy grounded in reduction of virgin resource consumption, excellence in design, a focus on re-use and elimination of waste.

We value previous and ongoing engagement with the Australian Government on the issue of plastic consumption and pollution and other issues on which we work. WWF-Australia welcomes the opportunity to input into work of the current inquiry.

Environmental impacts of plastic pollution, particularly in oceans and waterways

The environmental impacts of plastic pollution specifically in waterways and the marine environment was investigated and reported on in 2016 by the Senate Standing Committees on Environment and Communications' inquiry into the threat of marine plastic pollution in Australia. This inquiry focused substantially on the state of the evidence in relation to plastic pollution in waterways and the marine environment, and to a lesser extent, on solutions (measures and resourcing for mitigation). WWF-Australia

welcomes the broader terms of reference for the current inquiry, which covers all plastic pollution, and the focus on the extent to which measures taken to date have been effective.

Around one quarter of the recommendations of the 2016 Senate inquiry focused on the need for further research (2, 3, 4, 5, 6, 11 in part). Since 2016, the evidence documenting plastic pollution and its impacts has grown exponentially. Given this exponential growth, a summary of programs, bodies or research reviews is better suited than an overview of individual studies. WWF-Australia regards the following reviews and research programs as being the most relevant to the work of this inquiry:

- **CSIRO** has undertaken extensive research on the incidence and impact of abandoned, lost and discarded fishing gear, and entanglement and ingestion of plastics by specific species, with a particular focus on Australian species. High quality research has been published by academics from a number of Australian universities and research institutes.
- **The Alfred Wegener Institute** was commissioned by WWF-Germany to undertake the most extensive review to date of the impact of plastic pollution on biodiversity, establishing that more than 2,000 species have encountered plastic pollution in their natural environments, with mounting impact of harm not only on animals but also coral reefs and entire ecosystems.¹
- **Boston Consulting Group's** review for WWF-Australia modelled volumes of plastic leakage into nature, based on the most leaked single-use plastic products in Australia, and explored solutions targeted at plastic bottles, soft plastics, disposable foodware, disposable packaging and containers, cigarette butts and microplastics.
- **WWF and the Minderoo Foundation** have both done extensive work to model the externalised and unquantified costs of plastic. WWF's research estimates the lifetime cost of plastic produced globally in 2019 is around \$5 trillion, of which an estimated \$17 billion will be borne by Australia.² Minderoo estimates the cost to society from plastic pollution exceeds US\$100 billion per year.³
- **The United Nations Environment Programme's** extensive research on plastic pollution and marine litter is consolidated in the comprehensive 'From pollution to solution' publication, which focuses not only on plastic pollution impacts but also on existing and emerging solutions from around the world.⁴

Effectiveness of Australia's plastics management framework

Australia's approach to plastics management has for the past decade been focused largely on downstream and mid-stream measures, underpinned by a co-regulatory and largely voluntary approach. In WWF-Australia's view, **upstream and mandatory measures are essential** to effectively tackle plastic pollution, and to unlock the social, environmental and economic benefits of a circular economy for plastics. These should include reduction of production and consumption of the most leakage-prone plastic products, ensuring that the plastics we do need are kept in the economy for as long as possible and safely circulated, and strengthening management of plastics at the end of their life.

While we are in the midst of a shift in focus to consider the importance of design and other upstream measures and areas of intervention, there has been little concrete progress within this agenda. Circular economy principles are gaining traction but remain in their infancy in Australia and are not yet driving economy-wide reform, particularly with regard to a plastics reduction agenda.

¹ Tekman, M. B. , Walther, B. A. , Peter, C. , Gutow, L. and Bergmann, M. (2022): Impacts of plastic pollution in the oceans on marine species, biodiversity and ecosystems, 1–221, WWF Germany, Berlin.

² Dalberg Advisors and WWF, 2021. Plastics: The costs to society, the environment and the economy.

³ Merkl A & Charles D 2022, The Price of Plastic Pollution: Social Costs and Corporate Liabilities, Minderoo Foundation.

⁴ United Nations Environment Programme (2021). From Pollution to Solution: A global assessment of marine litter and plastic pollution. Nairobi.

Critical data gaps exist to enable a robust assessment of the effectiveness of Australia's plastics management framework, particularly in relation to leakage rates and assessment of policy impact. We have substantial data collected through clean-ups, but this is indicative rather than comprehensive. Best estimates of plastic leakage into the environment suggest up to 145,000 tonnes are leaked annually.⁵ This has not been estimated or tracked over time, but based on data and modelling at the global level, and in other countries, it is reasonable to expect that the increase in leakage volumes correlate with increasing levels of plastic (particularly single-use plastic) consumption.

Australia's National Plastics Plan

WWF-Australia welcomed Australia's National Plastics Plan as an important step forward. Compared with other National Action Plans on plastic, however, the level of overall ambition is fairly limited. For example, The EU's work on extended producer responsibility and plastic pollution sits within its comprehensive circular economy agenda, which sets out ambitious targets and control measures in relation to single-use plastics, right-to-repair, materials use, waste reduction and other matters.

A comparative analysis of National Action Plans from eight countries shows that the detail, scope and ambition of Australia's National Plastics Plan is comparatively limited. For example:

- **Canada:** By 2030, Canada will be free from plastic waste.
- **France:** By 2025 plastic pollution at sea in metropolitan France and its overseas territories will be eradicated.
- **Indonesia:** Reducing plastic waste by up to 70% by 2025.
- **New Zealand:** We envisage a New Zealand where plastic use is sustainable and innovative, and where plastics are used in a way that protects the environment and benefits society.

There appears to be a general assumption that plastic consumption in Australia will continue to grow, and no measures exist to cap or reduce levels of consumption. This is a major concern, particularly given that Australians already consume more single-use plastic per person than any other country in the world except Singapore.⁶ The National Waste Action Plan's Target 2 is to reduce total waste generated in Australia by 10% per person by 2030. This is a modest target that has not been disaggregated by material type. The 2025 National Packaging Targets, if achieved, would reduce virgin plastic consumption as a proportion of all plastics consumption, but we have no clear and overarching plastic consumption reduction target or strategy.

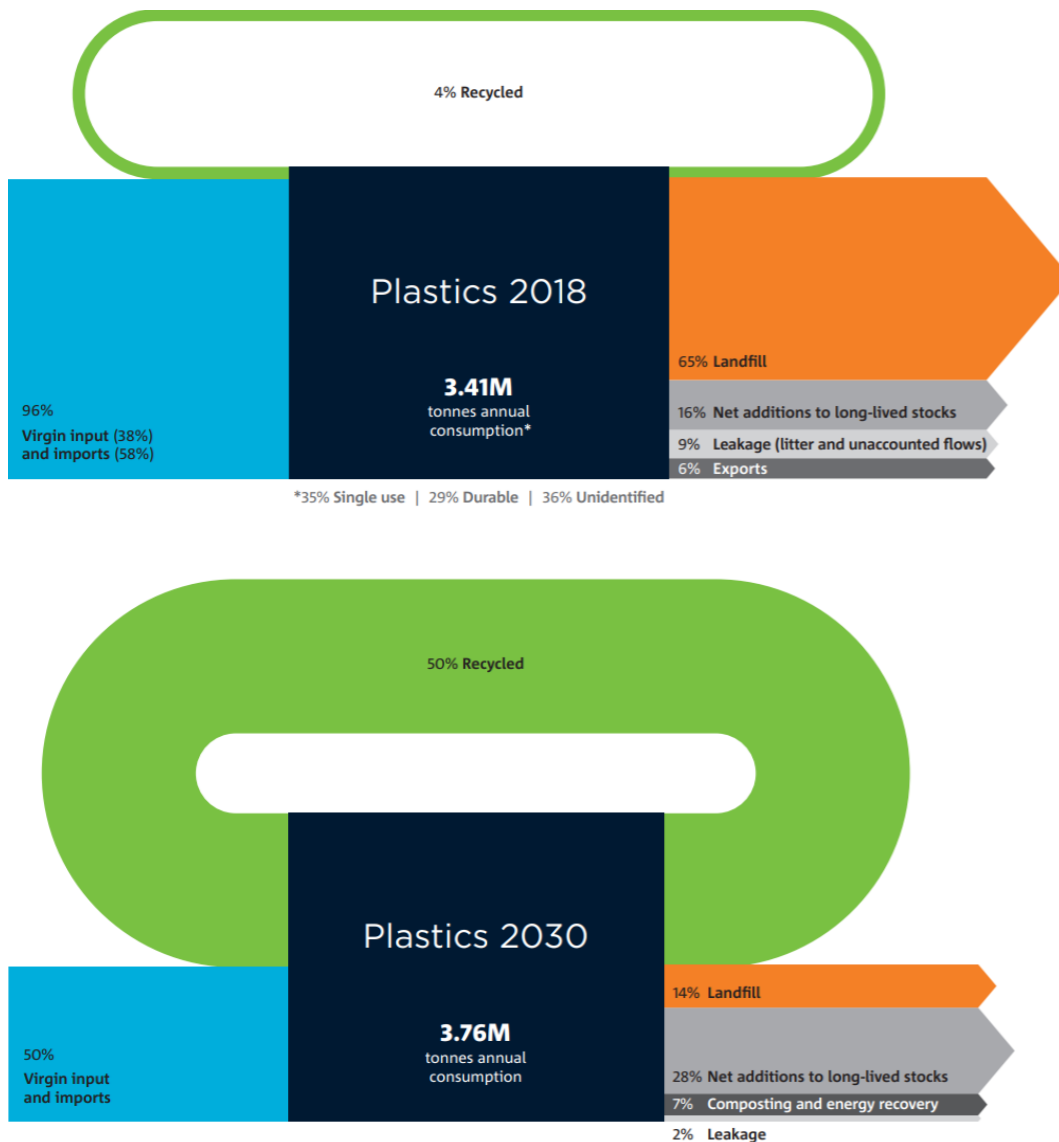
WWF-Australia believes there is an opportunity for Australia to set more ambitious objectives, chart a robust and detailed course to plastic consumption reduction as well as pollution mitigation, and situate these measures within a coherent circular economy framework to drive economy-wide transition. The current gaps, combined with current global negotiations on a UN plastic pollution treaty, provide the current government with a significant opportunity to break our over-reliance on plastics and build a more regenerative economy for generations to come.

One possible basis for a robust National Plastics Plan, that would be fully integrated with a wider, whole-of-government circular economy strategy, is contained in CSIRO's Circular Economy Roadmap (see Figure 1). While the Roadmap is more of a background and options paper than a roadmap, it does provide a solid basis for further work. These infographics do not depict an optimal circular economy – continued reliance on 50% virgin plastic inputs and imports is envisaged by this scenario, and WWF-Australia's view is that we can and should build a much more ambitious agenda. But they do represent a major improvement on the status quo.

⁵ O'Farrell, K., Harney, F. & Chakma, P. 2021. Australian Plastics Flows and Fates Study 2019-20.

⁶ Charles, D., Kimman, L. & Saran, N. 2021. The Plastic Waste Makers Index, Minderoo Foundation.

Figure 1: Quantifying a more circular economy for plastics in Australia



An alternative to building a reform agenda around CSIRO's work, is the model adopted in the EU's circular economy action plan, one of the key building blocks of the European Green Deal. The EU action plan covers a very wide range of industries and materials and includes a range of legislative and non-legislative measures. Given that it introduces explicit requirements on recycled plastic content and other restrictions on products coming onto the EU market, Australian exports will be directly affected in the coming years, and there is a strong rationale for a plan that aligns with this agenda, which is also likely to be incorporated to some extent in a global plastics treaty given the EU's leadership within this process.

Policies related to the National Plastics Plan

Australia's National Waste Strategy (2018) and Action Plan (2019) are primarily waste focused, despite being framed within a circular economy narrative. CSIRO's 'A circular economy roadmap for plastics, tyres, glass and paper in Australia' (2021) made a strong contribution to our emerging conversation on circular economy and is referenced in the Plastics Plan, but its status remains unclear.

There is growing acknowledgement of the need to reduce consumption of many materials through transition to a circular economy. In June 2018, the Senate Environment and Communications References Committee reported on an inquiry into the waste and recycling industry in Australia, which recognised the need to reduce the consumption of materials, and made a clear recommendation on circular economy transition:

The committee is of the view that the Australian Government must act urgently to transition away from a linear economy to a circular economy which prioritises the collection, recovery and re-use of products, including within Australia. This transition must include a suite of regulatory and policy changes aimed at influencing behaviour, as well as investments in infrastructure and technology.

The Committee also recommended immediate action on plastics to respond to the growing plastic pollution crisis, including phasing out certain fossil fuel-based plastic products by 2023 and full implementation of an earlier inquiry on marine plastic pollution.

WWF has set a global goal of halving the footprint of consumption and production of all materials, with a particular focus on virgin materials. This goal is supported by a growing body of evidence on sustainable planetary boundaries, and the extent to which we have already transgressed numerous specific boundaries. We are urging economy-wide planning and transition towards a circular economy in Australia grounded in the reduction of all virgin materials use and as close to elimination of waste as possible. Reducing pressure on the system, and placing a value on resources, will have a significant impact on plastic pollution reduction, as well as a range of associated economic, social and environmental benefits.

To this end, we urge the Australian Government to develop and deliver on an overarching circular economy strategy, consisting of an immediate and urgent focus on plastics. This would include:

1. **A circular economy package for Australia** would consolidate and build on current waste and plastics plans at the federal level, and waste and circular economy strategies at state and territory level. This is a substantive program of work, but there are numerous existing sector-specific strategies that can inform this agenda, for example CSIRO's circular economy work and the Fight Food Waste Cooperative Research Centre. Australia has around a decade of experience from the EU to draw on, and the opportunity to adapt and strengthen approaches and mechanisms that have been tried and tested in the EU and elsewhere.
2. **A Circular Economy (Plastics) Act** would be the initial legislative measure to enact the plastics-component of the wider circular economy strategy, and would provide the basis for further strengthening and/or alignment with international treaty obligations from 2025. It should legislate single-use plastic product bans, national packaging targets, a new plastic consumption reduction target, certification and labelling requirements, and recycled content requirements. Economic levers to reduce plastic consumption should also be considered for inclusion.

The Australian Government's recent announcement of a Ministerial Advisory Group on the Circular Economy, is very welcome and charts a path to development and delivery of a potentially bold circular economy agenda and transition process for Australia.⁷ This is an important step that provides an enabling framework for the proposals outlined above.

Effectiveness of the Australian Government's engagement with stakeholders

Over the past decade, the private sector has largely been charged with addressing systemic problems in relation to plastic pollution. State and territory governments have enacted a range of plastic pollution prevention and circular economy policy solutions, resulting in a complex regulatory landscape. ENGOs have received some support to address consumption, primarily through programs largely focused on community-level engagement and individual behaviour change.

⁷ <https://minister.dcceew.gov.au/plibersek/media-releases/new-expert-group-guide-australias-transition-circular-economy>

This section provides outsider observations in relation to the effectiveness of the Australian Government's engagement with stakeholders. The section on engagement with NGOs draws directly on our own experience of engaging with the Australian and state/territory governments over the past five years on plastics, and several decades on other environmental issues.

States, territories and local governments

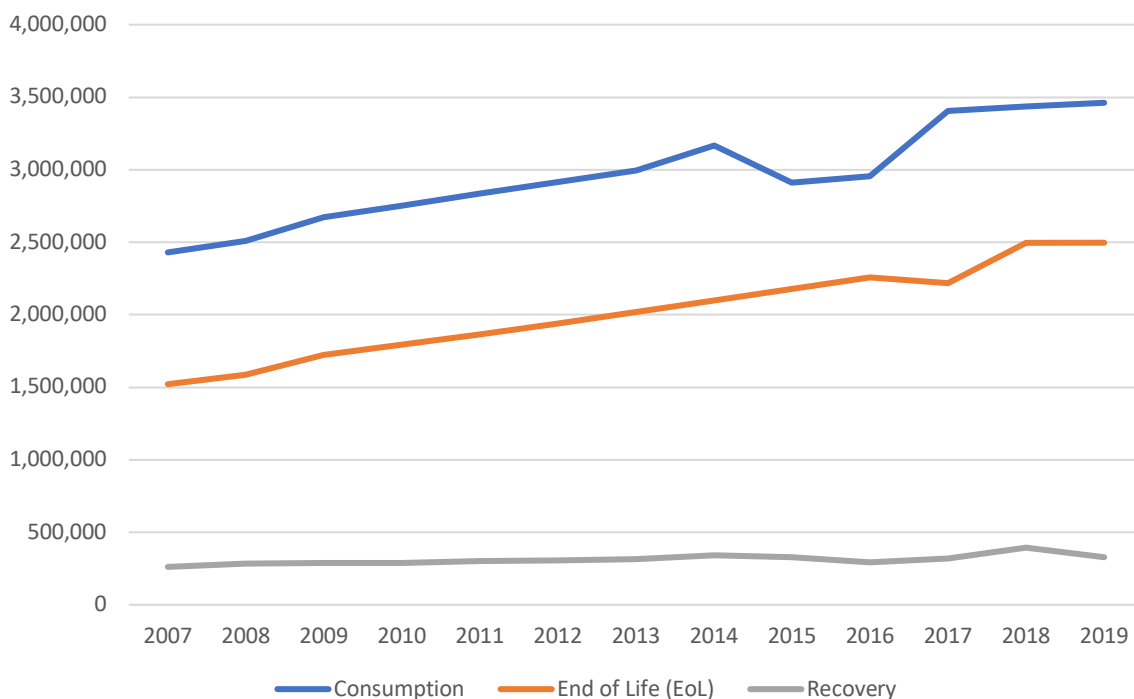
Policy action and traction on waste has increased substantially over the past five years at all levels of government – from local through to subnational, national, regional and international. It is only recently, however, that the focus has started to fundamentally shift from managing growing levels of waste, to envision a circular economy where waste is designed out, materials are kept in the economy for as long as possible (and out of nature), and residual waste is drastically reduced and safely managed.

While there is clearly an increasing focus on and understanding of the problem, the historical primary responsibility for waste reduction and management sitting with the states and territories has resulted in a patchwork of policies and practices across the country, that are becoming increasingly challenging for businesses to navigate, and involve a great deal of duplication of effort. WWF-Australia welcomes recognition from all environment ministers at the Environment Ministers Meeting in October 2022 of the need for a shared agenda on this issue and the need for harmonisation of regulatory approaches, standards, definitions and other matters; this is an essential starting point.

Industry

Australia's approach has thus far focused on the lower end of the waste hierarchy, not on the circular hierarchy and upstream measures, and is grounded in a co-regulatory approach that places significant onus on businesses to achieve voluntary targets. Under this approach, plastic consumption has increased and recovery rates have been stagnant, as evidenced by Figure 2.

Figure 2: Plastic consumption, end-of-life arisings, and recovery in Australia 2007-present (tonnes)



Most stakeholders – including packaging producers and retailers – are of the view that Australia won't meet the existing and modest commitments set out in the 2025 Packaging Targets. In this context, there is appetite

among industry for a more robust approach to regulation – from strengthened and harmonised single-use plastic bans to container deposit schemes and packaging regulation.

Areas other than packaging will require bespoke solutions, some of which are flagged in the National Plastics Plan (still for industry-led action). These should be further explored and concretely addressed as part of Australia's circular economy framework and action plan.

Non-government organisations

WWF-Australia appreciates previous and ongoing engagement with the Australian Government on the issue of plastic pollution. In our view, this engagement has at times been very productive, resulting in the needs and plans of both government and ENGOs informing each other. It has not, however, been consistent and fully integrated into decision-making and Australia's participation in regional and international environmental processes. Our brief comments below focus on government engagement with environmental non-government organisations that work on and specific expertise in plastic production, consumption and pollution.

Limited informal consultation with Australian ENGOs underpinned development of the National Plastics Plan, and there was no formal consultation process. This remains the only and therefore very important guiding document that sets out Australia's high-level plan to address plastic production, consumption and pollution. While many of the measures within the Plan were welcomed by ENGOs, deeper and more structured engagement with individuals and organisations that have been working on this issue for many years could have resulted in a more collaboratively designed, substantive and comprehensive plan, in addition to a shared understanding of the intent and direction underpinning the plan.

We also note that compared with ongoing and substantive stakeholder engagement by some state governments leading up to and throughout their single-use plastic bans, engagement directly with government has been fairly siloed. For example, Western Australia, Queensland and South Australia all currently have single-use plastic working groups comprising multi-sectoral representation. This does not seem to be the case at a national level, though there is some cross-sectoral engagement on these matters from a regional perspective via the ANZPAC Plastics Pact.

Effectiveness of community campaigns to reduce plastic pollution

Australia is home to some of the most creative and long-running community and behaviour change campaigns in the world. These include Plastic Free July, Take 3 for the Sea and Plastic Free Places – to name just a few of the most widely recognised. These organisations routinely measure uptake and impact, including through third-party independent research services. We commend submissions from the organisations involved in those campaigns to the inquiry, and encourage the inquiry to seek the views of entities that have undertaken research on this matter in Australia, including Ipsos and Monash University's BehaviourWorks.

In relation to WWF-Australia's policy work and its intersection with public engagement, one critical area in which community engagement and interest have had an indirect but critically important impact is in relation to driving policy reform at all levels of government. A significant majority of Australians are alert to and care deeply about plastic consumption and pollution. In our view, this constituency has played no small part in driving initiatives and change in their communities, cities, and action by all levels of government.

Behaviour change has inherent limitations, and has historically been a focus for plastic reduction measures, particularly initiatives implemented by producers of plastic products. Individual responsibility is important, and the action of individuals and communities can be powerful drivers of change. Individuals cannot, however, drive the systemic reform required to achieve change at scale and pace. An effective national approach needs to balance education and engagement with a bold policy agenda, and Australia could do and resource this work much better.

Global initiatives to reduce plastic pollution particularly in oceans and waterways

- **International:** In 2022 UN member states agreed to start negotiations on a treaty to end plastic pollution, with the aim of agreeing the treaty text by 2025. This decision recognises the fragmented nature of regulation of plastic production, trade and pollution at the global level, despite the clear transboundary nature of the problem. International instruments that do exist are mostly voluntary and focus on maritime-based sources; there are 'no global, binding, specific, and measurable targets' to reduce plastic pollution.⁸
- **Regional:** There are a growing number of regulatory measures to ban unnecessary and problematic single use plastics at national level within the Pacific. Very strong support across the region for a comprehensive and ambitious plastics treaty, evidenced by the Pacific Regional Declaration 2021, particularly for upstream measures that address production, standards, labelling and trade.
- **Academic:** The Nicholas Institute at Duke University has set up a Plastics Policy Inventory, providing a searchable database of more than 500 international, national and subnational policies, from 2000 to the present day. Some analysis on the effectiveness of policies has been undertaken, including a major review of two decades of government responses to plastic pollution.

Other relevant matters

There is strong and growing support from Australians for bold thinking and action on plastic pollution, responsible resource management and circular economy transition. Eight in 10 Australians support global regulation of plastics, and even higher levels of support exist for domestic regulation. For example, 86% of Australians think manufacturers and retailers should be responsible for reducing, reusing and recycling plastic packaging. 82% want to buy products that use as little plastic packaging as possible.⁹

Traction and policy reform on this issue domestically, which aligns with global treaty negotiations from 2022-24, means the world's eyes will be fixed firmly on problems and solutions over the coming two years. This represents a tremendous opportunity for policy alignment in relation to plastics. Australia should urgently seize this opportunity to sharpen its focus and efforts on circular economy transition and embark on a reform agenda that sets and meets world class standards, and delivers a more responsible, sustainable and regenerative economy for all Australians and Australian nature. This will also contribute to ensuring that global standards, rules and other measures help drive circular economy transition in the region and internationally.

WWF-Australia would welcome further engagement in this inquiry. For further information please contact Kate Noble, WWF-Australia's No Plastic in Nature Policy Manager, on [REDACTED]

⁸ Nicholas Institute at Duke University, 2020. 20 years of government responses to the global plastic pollution problem.

⁹ WWF & the Plastic Free Foundation, 2022. Rising Tides: Global opinions on actions to stop plastic pollution in 28 countries.