

December 9, 2020

# RESPONSE TO PROPOSED INTEGRATED MANAGEMENT APPROACH TO PLASTIC PRODUCTS TO PREVENT WASTE AND POLLUTION

Presentation to Environment and Climate Change Canada



December 9, 2020

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**Re: Response to Environment and Climate Change Canada's proposed integrated management approach to plastic products to prevent waste and pollution discussion paper**

Dear Mr. Parmenter,

Thank you for the opportunity to comment on the proposed integrated management approach to plastic products to prevent waste and pollution (the proposed management approach). Oceana Canada welcomes the Government of Canada's vision to achieve zero plastic waste by 2030. As you know, the volume of plastic produced worldwide keeps growing: by 2035, it is expected to double<sup>1</sup> and by 2050, almost quadruple.<sup>2</sup> Therefore urgent action on this critical issue is needed to safeguard the environment and our oceans from persistent plastic pollution.

We support the Minister of Environment and Climate Change and the Minister of Health's recommendation that the Governor in Council make an order adding "plastic manufactured items" to the List of Toxic Substances, under Schedule 1 of the *Canadian Environmental Protection Act, 1999*.

As described in the federal Science Assessment on Plastic Pollution (the Science Assessment):

*Given the increasing amounts of plastic pollution in the environment and the demonstrated ability of macroplastics to harm biota, it is anticipated that the frequency and occurrence of physical effects on individual environmental receptors will continue to increase if current trends continue without mitigation measures. In accordance with the precautionary principle, action is needed to reduce macroplastics and microplastics that end up in the environment.*<sup>3</sup>

The recommendations of the Science Assessment justify the Government enacting regulations that "target sources of plastic pollution and change behaviour at key stages in the lifecycle of plastic products, such as design, manufacture, use, disposal and recovery in order to reduce pollution."<sup>4</sup> Oceana Canada supports such a regulatory approach to plastic products.

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<sup>1</sup> European Environment Agency. (2019). The plastic waste trade in the circular economy, Briefing no. 7/2019. <https://www.eea.europa.eu/themes/waste/resource-efficiency/the-plastic-waste-trade-in>

<sup>2</sup> Ibid.

<sup>3</sup> Environment and Climate Change Canada, Health Canada. (2020.) Science Assessment of Plastic Pollution. <https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/science-assessment-plastic-pollution.html>

<sup>4</sup> Environment and Climate Change Canada. (2020). A proposed integrated management approach to plastic products: discussion paper. <https://www.canada.ca/content/dam/eccc/documents/pdf/cepa/proposed-approach-plastic-management-eng.pdf>

After careful consideration, we have outlined the following recommendations regarding the proposed management plan.

### **1. Expand the proposed ban list to include additional problematic plastic items, resins and material types.**

Banning single-use plastic items is a core component of Canada’s regulatory approach to plastic products and supports the government’s objective to “eliminate certain sources of plastic pollution.”<sup>5</sup> However, the six single-use items identified in the proposed ban list do not significantly contribute to the 3.3 million tonnes of plastic waste that is thrown away every year in Canada.<sup>6</sup> As stated by the Minister, the ban covers less than one per cent of Canada’s current plastic use – less than 47,000 metric tonnes.<sup>7</sup> Even if this is an underestimate, it is nowhere near what’s needed and will not keep up with predicted growth: Canada’s plastic use is expected to increase by 30 per cent by 2030.<sup>8</sup> Any reductions resulting from the proposed ban will be overtaken almost immediately.

Instead, the proposed management approach relies almost exclusively on enhanced recycling capability and capacity, despite recent studies illustrating the need for urgent and coordinated action that combines upstream and downstream solutions.<sup>9,10</sup> Even with maximum foreseen growth and implementation rates, recycling is only predicted to reduce plastic pollution rates by 45 per cent by 2050 compared to business as usual.<sup>11</sup> We need to dramatically reduce plastic production and use *and* improve collection and recycling to achieve zero plastic waste by 2030.

At a minimum, the ban list should be expanded to include the following items:

1. Those that are similar to other items on the list, such as hot and cold drink cups and lids.
2. Those that have already been banned in other jurisdictions, such as plastic-stemmed cotton buds, cartons for eggs and produce and lightweight produce bags.

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<sup>5</sup> Environment and Climate Change Canada. (2020). A proposed integrated management approach to plastic products: discussion paper. <https://www.canada.ca/content/dam/eccc/documents/pdf/cepa/proposed-approach-plastic-management-eng.pdf>

<sup>6</sup> Deloitte and Cheminfo Services Inc. (2019). Economic study of the Canadian plastic industry, markets and waste: Summary Report to Environment and Climate Change Canada, p. i. [http://publications.gc.ca/collections/collection\\_2019/eccc/En4-366-1-2019-eng.pdf](http://publications.gc.ca/collections/collection_2019/eccc/En4-366-1-2019-eng.pdf)

<sup>7</sup> Tunney, Catharine. (2020). “Liberals’ 2021 single-use plastic ban includes grocery bags, takeout containers.” *CBC News*. 7 October. <https://www.cbc.ca/news/politics/single-use-plastics-1.5753327>

<sup>8</sup> Deloitte and Cheminfo Services Inc. Environment and Climate Change Canada. (2019). Economic Study of the Canadian Plastic Industry, Markets and Waste, Summary Report, p. iv. [http://publications.gc.ca/collections/collection\\_2019/eccc/En4-366-1-2019-eng.pdf](http://publications.gc.ca/collections/collection_2019/eccc/En4-366-1-2019-eng.pdf)

<sup>9</sup> Lau, W.W.Y., et al. (2020). Evaluating scenarios towards zero plastic pollution. *Science*, 369. 1455-1461. <http://doi.org/10.1126/science.aba9475>

<sup>10</sup> Borelle, S.B. et al. (2020). Predicted growth in plastic waste exceeds efforts to mitigate plastic pollution. *Science*, 369. 1515-1538. <http://doi.org/10.1126/science.aba3656>

<sup>11</sup> Lau, W.W.Y., et al. (2020). Evaluating scenarios towards zero plastic pollution. *Science*, 369. 1455-1461. <http://doi.org/10.1126/science.aba9475>

3. Materials that are known to be particularly harmful to the environment and/or human health, including oxo-degradable plastics, all forms of polystyrene and polyvinyl chloride and multi-material packaging.
4. Items that are prevalent in the environment, contain toxic chemicals and litter our shorelines, including cigarette filters and convenience food packaging like candy bar wrappers. (Note: because many of these products do not currently have a mass-produced alternative, a phase out period may be required to spur industry innovation.)

## **2. Create a defensible methodology to determine which plastic products should be banned.**

The Science Assessment and more recent scientific research justify restrictions on a variety of plastics due to their adverse impacts on biota and ecosystems:

*Macroplastics have been demonstrated to cause physical harm to environmental receptors on an individual level and to have the potential to adversely affect habitat integrity. Organisms have been shown to ingest macroplastics and to become entangled in macroplastics, which can result in direct harm and in many cases, mortality.<sup>12</sup>*

Wildlife are choked, strangled and drowned by macroplastics,<sup>13</sup> and exposure to and ingestion of microplastic (both primary and secondary) result in a variety of ecotoxicological effects, including changes in gene expression and death.<sup>14</sup>

Bioplastics present similar issues:

- They do not readily decompose in the environment, meaning they contribute to plastic pollution.
- They are value recovery problematic, as they contaminate recycling and industrial compost systems.
- They perpetuate a linear disposable economy, where materials are used only briefly before being thrown away.

Additionally, research published in the peer-reviewed journal *Environment International* found that biobased/biodegradable materials and conventional plastics are similarly toxic.<sup>15</sup>

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<sup>12</sup> Environment and Climate Change Canada, Health Canada. (2020.) Science Assessment of Plastic Pollution. <https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/science-assessment-plastic-pollution.html>

<sup>13</sup> Warner, K. et al. (2020). Choked, strangled, drowned: the plastics crisis unfolding in our oceans. *Oceana*. <https://>

<sup>14</sup> Environment and Climate Change Canada, Health Canada. (2020.) Science Assessment of Plastic Pollution. <https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/science-assessment-plastic-pollution.html>

<sup>15</sup> Zimmerman, L., Dombrowski, A., Völker, C., & Wagner, M. (2020). Are bioplastics and plant-based materials safer than conventional plastics? *In vitro* toxicity and chemical composition. *Environment International*, 145, 1-11. <https://doi.org/10.1016/j.envint.2020.106066>

The current methodology proposed in the discussion paper appears to justify banning only the easiest products to ban, such as items for which alternatives are readily available. This approach fails to recognize that banning, restricting, or phasing out plastic products, resins or material types will incentivize developing no-harm alternatives. Furthermore, the lack of a readily available alternative should not be an obstacle to banning a product. Instead, government could establish a phase-out period to spur industry innovation.

Canada's risk-based approach for banning plastics should require consideration of the following:

1. Presence: is it frequently found littered in the environment in either macro- or microplastic form?
2. Toxicity: does it introduce harmful substances into the environment or recycling systems?
3. Persistence: does it biodegrade into non-toxic organic material in a range of ecosystem conditions?
4. Necessity: does it provide an essential purpose for which no alternative exists?
5. Recyclability: is it readily managed via closed-loop recycling?

### **3. Establish pre-consumption and post-consumption targets that contribute to a defined goal and environmental objective.**

The Government of Canada has committed to a zero plastic waste vision.<sup>16,17,18</sup> Unfortunately, the discussion paper lacks a defined goal and environmental objectives, making it unclear how this vision will be achieved within this decade.

Deloitte's Economic Study of the Canadian Plastic Industry, Market and Waste (the Deloitte Study) estimates that 4.7 million tonnes of plastic goods are introduced to the Canadian market annually, and that 3.3 million tonnes are discarded.<sup>19</sup> That means, in order to meet the zero plastic waste target, the discussion paper needs to account for 3.3 million tonnes of plastic waste reduction, based on 2016 plastic use.

To achieve these goals and objectives, the discussion paper should include both pre-consumption and post-consumption targets. Pre-consumption targets contribute to overall reductions in plastic use and production. Bans, material substitution, reuse and recycled content requirements reduce plastic consumption. Post-consumption targets improve waste collection and diversion and are achieved via collection and recycling targets.

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<sup>16</sup> Government of Canada. (2020). *Zero Plastic Waste: Canada's Actions*. <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/zero-plastic-waste/canada-action.html>

<sup>17</sup> Canadian Council of Ministers of the Environment. (2019). Canada-wide action plan on zero plastic waste: phase 1. [https://www.ccme.ca/files/Resources/waste/plastics/1289\\_CCME%20Canada-wide%20Action%20Plan%20on%20Zero%20Plastic%20Waste\\_EN\\_June%2027-19.pdf](https://www.ccme.ca/files/Resources/waste/plastics/1289_CCME%20Canada-wide%20Action%20Plan%20on%20Zero%20Plastic%20Waste_EN_June%2027-19.pdf)

<sup>18</sup> Government of Canada. (2018). Ocean plastics charter. [https://www.canada.ca/content/dam/eccc/documents/pdf/pollution-waste/ocean-plastics/Ocean%20Plastics%20Charter\\_EN.pdf](https://www.canada.ca/content/dam/eccc/documents/pdf/pollution-waste/ocean-plastics/Ocean%20Plastics%20Charter_EN.pdf)

<sup>19</sup> Deloitte and Cheminfo Services Inc. (2019). Economic study of the Canadian plastic industry, markets and waste: Summary Report to Environment and Climate Change Canada, p. i. [http://publications.gc.ca/collections/collection\\_2019/eccc/En4-366-1-2019-eng.pdf](http://publications.gc.ca/collections/collection_2019/eccc/En4-366-1-2019-eng.pdf)

The present integrated management approach (and the Deloitte Study) is overly reliant on post-consumption efforts, focusing almost exclusively on mechanisms to enhance recycling and 'recovery,' and considering only limited product bans to reduce plastic use overall.

Canada must reject recovery, incineration, energy-from-waste, pyrolysis and other thermal treatments of plastic pollution as form of waste diversion. Firstly, burning plastic releases toxic emissions – including known cancer-causing agents like dioxins and furans – that contaminate our air, water and soil and threaten the health of people living near incinerators.<sup>20</sup> Secondly, energy-from-waste plants and pyrolysis are extremely inefficient means of generating energy that distract from investing in renewable and sustainable solutions.<sup>21</sup> Lastly, these expensive pieces of infrastructure need a steady supply of plastic to feed them – which discourages waste reduction – and when plastics are burned, the polymers are no longer available to manufacture new plastic products, meaning more virgin material is needed.<sup>22</sup>

If Canada is to achieve zero plastic waste, improve the quality of the environment and oceans and minimize environmental harm, it must include production, use and disposal reduction targets for plastic waste, as well as reuse and material substitution requirements in its management approach.

#### **4. Require Extended Producer Responsibility (EPR) and establish high diversion targets, and recycled content requirements.**

To ensure end-of-life responsibility, Canada should require that producers of plastic goods and packaging be obligated to manage their products at end-of-life (also called extended producer responsibility or EPR), as well as achieve high material-specific recycling targets and recycled content requirements. While recycling on its own will not end the flow of plastic into our environment and oceans, it will play a role Canada's overall plastic pollution policy framework.

EPR regulations should ensure transparency, accountability and consistency. Canada must require that obligated parties report on plastic imported, manufactured, collected, recycled and disposed. The current dearth of data makes it nearly impossible to set appropriate reduction, recycling and reuse targets, let alone to track progress toward Canada's zero plastic waste vision.

Recycling must be limited to closed-loop recycling, where plastics are recycled into products of similar value and application. Currently, most recycling (80 per cent) occurs via cascading recycling systems, where plastics are downcycled into lower value purposes before being landfilled or incinerated. Without substantial growth in closed-loop recycling capacity, recycling will remain at odds with a circular economy and instead be a detour on plastics' seemingly inevitable trip to our oceans.

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<sup>20</sup> GAIA. (2019). Plastic pollution and waste incineration. <https://www.no-burn.org/wp-content/uploads/Plastic-x-Incineration-2019.pdf>

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

## 5. Enforcement and Compliance

Despite the *Canadian Environmental Protection Act, 1999* (CEPA) including a number of enforcement tools, available analysis suggests that prosecutions and convictions are extremely small when compared to the number of inspections, warnings and investigations.<sup>23</sup> This raises concern about the overall effectiveness of the CEPA enforcement regime. A credible threat of prosecution is a crucial deterrent to non-compliance. Penalties for contravening the single-use plastic ban, or for producers who fail to meet their obligated targets, must be stringent enough to motivate compliance.

### Conclusion

Thank you for the opportunity to provide feedback regarding Canada's proposed management approach to plastic products. Oceana Canada commends the government for its vision of zero plastic waste by 2030. We feel that the recommendations presented above are important to make this vision a reality and welcome the opportunity to meet with you, your team, and the Minister to discuss our comments more thoroughly.

Sincerely,



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### ABOUT OCEANA CANADA

Oceana Canada is an independent charity and part of the largest international advocacy group dedicated solely to ocean conservation. Oceana Canada believes that Canada has a national and global obligation to manage our natural resources responsibly and help ensure a sustainable source of protein for the world's growing population. Oceana Canada works with civil society, academics, fishers, Indigenous Peoples and the federal government to return Canada's formerly vibrant oceans to health and abundance. By restoring Canada's oceans, we can strengthen our communities, reap greater economic and nutritional benefits and protect our future.

cc: Jonathan Wilkinson, Minister of Environment and Climate Change

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<sup>23</sup> Ecojustice. (2011). Getting tough on environmental crime: holding the Government of Canada to account on environmental enforcement, p. 38. <https://www.ecojustice.ca/wp-content/uploads/2014/08/Getting-Tough-on-Environmental-Crime.pdf>