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Dear Mr. Ryan Parmenter, Director, Plastics and Marine Litter Division,

The world is facing a plastic pollution crisis and Canada is a significant contributor to the problem. It is estimated that over 4.5 million tonnes of plastic are introduced to the Canadian market on an annual basis—more than 125 kilograms per person.¹ Across all waste streams, Canadians are the largest per capita waste generators among developed countries.²

Environmental Defence, The David Suzuki Foundation, The Broadbent Institute and Ecology Action Centre are supportive of the federal government's commitment to "ban harmful single-use plastics next year and ensure more plastic is recycled".³ We also 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*.

However, more needs to be done to address the growing plastic pollution crisis.

¹ Deloitte and Cheminfo Services Inc. Environment and Climate Change Canada. 2019. *Economic Study of the Canadian Plastic Industry, Markets and Waste, Summary Report*. Page i. Available at: http://publications.gc.ca/collections/collection_2019/eccc/En4-366-1-2019-eng.pdf

² The Conference Board of Canada. 2013. *Municipal Waste Generation*. Available at: <https://www.conferenceboard.ca/hcp/Details/Environment/municipal-waste-generation.aspx?AspxAutoDetectCookieSupport=1>

³ Parliament. House of Commons. 2020. *A Stronger and More Resilient Canada. Speech from the Throne, 23 September 2020* [Julie Payette]. 43rd Parliament, 2nd Session. Ottawa: Her Majesty the Queen in Right of Canada. Available at: <https://www.canada.ca/en/privy-council/campaigns/speech-throne/2020/stronger-resilient-canada.html>

We recommend that Canada:

1. Enforce a ban on a variety of single-use plastics products and materials by the end of 2021.
2. Expand the proposed ban list to include additional problematic plastic items, resins and material types.
3. Create a transparent methodology to determine which plastic products should be banned and apply that methodology consistently.
4. Establish an enforceable collection target for plastic beverage bottles and introduce targets for refillable beverage containers.
5. Support the shift toward reusing packaging and products.
6. Require producers be financially and operationally responsible for their products' end-of-life.
7. Set and enforce high, material-specific recycling targets for plastics.
8. Establish a minimum requirement of at least 30 per cent recycled content for all plastics by 2025, with an aim of achieving closed-loop recycling by 2030.
9. Impose restrictions, including bans on so-called 'compostable' and bio-based plastics.
10. Reject recovery, incineration, energy-from-waste, pyrolysis and other thermal treatments of plastics as ways to manage plastic waste.

1. Enforce a ban on a variety of single-use plastics products and materials by the end of 2021

Banning single-use plastic items is a welcome step in Canada's efforts to address plastic pollution. Bans demonstrate a federal commitment to reducing unnecessary plastic production and use. Canada should move to have a variety of single-use plastic products and materials banned by the end of 2021 in keeping with the commitment made by Prime Minister Trudeau.

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

The ban list proposed in the discussion paper should be expanded to include additional problematic items and material-types. As Minister Wilkinson stated on October 7, 2020, "the ban is probably a fraction of...one per cent of the products".⁴

⁴ Tunney, Catharine, 2020. "Liberals' 2021 single-use plastic ban includes grocery bags, takeout containers." *CBC News*. 7 October. Available at: <https://www.cbc.ca/news/politics/single-use-plastics-1.5753327>

While improvements in material collection and recycling infrastructure and technology are welcome, Canada's management approach to plastic products must prioritize overall reductions in plastic production, use and disposal, and lend support to durable, non-toxic materials that can be reused and recycled over and over again without a loss of quality (for example glass and metal).

In addition to the six plastic items (straws, stir sticks, 6-pack rings, cutlery, checkout bags, and food packaging and service ware made from problematic plastics) identified in the discussion paper, the list should be expanded to include the following items banned or restricted under the EU Single Use Plastics Directive EU/2019/904:

1. Plastic plates (including paper plates with plastic lining);
2. Plastic sticks to be attached to and to support balloons;
3. Plastic cotton bud sticks;
4. Oxo-degradable plastics, which are plastic materials that include additives which, through oxidation, lead to the fragmentation of the plastic material into micro-fragments or to chemical decomposition;⁵ and,
5. Plastic beverage containers without tethered caps.

The list should also include:

6. All forms of polystyrene (PS) and polyvinyl chloride (PVC) food and beverage containers due to the known toxicity of styrene⁶ and vinyl chloride;⁷
7. All plastic packaging made of mixed materials, as these products cannot be efficiently recycled, and have limited end-markets; and
8. Plastic hot and cold drink cups and lids based on the criteria described in the discussion paper and the results of the Science Assessment on Plastic Pollution (the Science Assessment).

⁵ Council directive 2019/904 on the reduction of the impact of certain plastic products on the environment. 2019. *Official Journal*. L155, p. 1.

⁶ International Agency for Research on Cancer (IARC). *List of classifications, volumes 1-122*. Available at: <https://monographs.iarc.fr/list-of-classifications/>

⁷ International Agency for Research on Cancer (IARC). *Vinyl chloride monograph*. Available at: <https://monographs.iarc.fr/wp-content/uploads/2018/06/mono100F-31.pdf>

3. Create a transparent methodology to determine which plastic products should be banned and apply that methodology consistently

The criteria used in the discussion paper to determine which products are to be banned are problematic. The consideration of environmental harm is not well defined. For example, in addition to the well-documented harmful impacts of macroplastic pollution on wildlife (entanglement, suffocation, etc.), section 6.2.2 of the Assessment, describes a number of adverse ecotoxicological effects resulting from microplastic exposure and ingestion, including changes in gene expression and death,⁸ and yet microplastics are not included on the list of items to be banned. Furthermore, all plastic pollution is harmful to the environment, so environmental harm cannot be a reason for excluding items—such as hot and cold drink cups and lids—from the ban.

Environment and Climate Change Canada should revise the proposed criteria, and adopt a risk-based methodology for determining which plastic products should be banned. The methodology should consider the following:

Presence—is it found littered in the environment, in either macro- or microplastic form?

Toxicity—does it introduce harmful and/or toxic substances into the environment, and/or recycling and/or reuse systems?

Persistence—is it readily biodegrade into non-toxic organic material in a range of ecosystems conditions?

Recyclability - is it readily and practically managed in closed-loop recycling systems?

Necessity—does it provide an essential purpose for which no alternative exists?

Needless to say, the methodology also needs to be applied consistently to ensure that Canada's ban list is well supported and defensible.

⁸ Environment and Climate Change Canada. 2020. *A proposed integrated management approach to plastic products to prevent waste and pollution: discussion paper*. Available at: <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/plastics-proposed-integrated-management-approach.html>

4. Establish an enforceable collection target for plastic beverage bottles and introduce targets for refillable beverage containers

Plastic beverage bottles and caps contribute significantly to Canada's Plastic pollution problem. These items consistently rank in the top 12 most collected items during shoreline cleanup events in Canada.⁹

To address this issue, the federal government should:

1. Follow the EU's lead and establish a 90 per cent enforceable collection target for beverage bottles.¹⁰ This target will encourage broader adoption of deposit return systems, which in addition to improving collection and recycling rates for plastic bottles, will allow for critical reuse and refill infrastructure.
2. Introduce enforceable targets for refillables so that 25 per cent of beverages are sold in refillable bottles by 2023, increasing to 40 per cent in 2025, and 55 per cent in 2030 as per Austria's example.¹¹

5. Support the shift toward reusing packaging and products

Reusing products has positive impacts on the environment, and can also benefit the economy. According to a 2017 Ellen MacArthur report, if 20 per cent of plastic packaging were reusable, it would represent a \$10 billion USD market globally.¹² Reuse systems, where businesses collect, sterilize and refill containers, are becoming increasingly common around the world.

These kinds of initiatives need to be supported through fiscal incentives, or public funding. The Canadian government should not be investing in linear technologies (like incineration with energy recovery) to solve the problem of non-recyclable waste, and instead support solutions that *prevent* waste.

⁹ Great Canadian Shoreline Clean-Up. 2019. *Annual Data: 2019 Dirty Dozen*. Available at: <https://www.shorelinecleanup.ca/impact-visualized-data>

¹⁰ Council directive 2019/904 on the reduction of the impact of certain plastic products on the environment. 2019. *Official Journal*. L155, p. 1.

¹¹ EUWID Recycling and Waste Management. 2020. "Austria plans deposit for single-use beverage containers, quota for refillable bottles". 9 July. Available at: <https://www.euwid-recycling.com/news/policy/single/Artikel/austria-plans-deposit-for-single-use-beverage-containers-brquota-for-refillable-bottles.html>

¹² Ellen MacArthur Foundation. 2017. *A USD 10 Billion Reuse Opportunity for Plastic Packaging*. Available at: <https://www.newplasticseconomy.org/about/publications/new-plastics-economy-reuse>

To support increased reuse of packaging the federal government can:

1. Support research and development for durable reusable materials and design that can further improve the reusability of packaging;
2. Create incentives for the adoption of reusable containers, such as non-refillables taxes, eco-labels, and product standards that improve the environmental performance of products and packaging; and
3. Set targets across sectors for reusable packaging.

6. Require producers be financially and operationally responsible for their products' end-of-life

The management approach proposed in the discussion paper is overly reliant on provincial leadership via the CCME, but the policy approach being proposed (Extended Producer Responsibility, EPR) is one that the provinces have stalled on in the past. The CCME committed to EPR in 2009, and as of 2019 Ontario, Quebec, Saskatchewan, Manitoba and British Columbia had EPR systems, however each provincial system is different and achieves varying levels of success, and BC was the only EPR system where producers were *both* financially *and* operationally responsible for recycling.¹³

To ensure end-of-life responsibility the federal government should require that producers of plastic goods and packaging be financially and operationally responsible for managing their products at end-of-life (full EPR), and that they be obligated to achieve high material-specific recycling targets. If all three of these conditions are not met, the incentives are not aligned in a way that supports product innovation.

EPR regulations should ensure transparency, accountability, consistency and enforcement. If Canada is going to aim for zero plastic waste, it has to have a clear picture of the plastics imported, manufactured, used, and disposed of (landfill, recycling, incineration) at all levels of the plastics supply chain. To make reporting consistent, Canada must establish standardized definitions of use, reuse, recycling, recycled content and recovery. Canada must also standardize end-of-life possibilities such as 'compostable', 'biodegradable' and 'recyclable'.

¹³ Canadian Council of Ministers of the Environment. 2009. *Canada-wide Action Plan for Extended Producer Responsibility*. Available at:
https://www.ccme.ca/files/current_priorities/waste/pn_1499_epr_cap_e.pdf

7. Set and enforce recycling targets for plastic waste streams not subject to the ban

EPR is only one piece of the puzzle. To ensure EPR leads to innovation in product design and delivery, high and material specific diversion targets need to be established and enforced. Penalties for producers that fail to meet their obligated targets must be stringent enough to ensure compliance.

In support of this, Canada should establish recycling targets to ensure that a minimum of 70 per cent of plastics are recycled by 2025, and that 90 per cent are recycled by 2030.

Recycling must be limited to closed-loop recycling, where plastics are recycled into products of similar value and application. Currently most recycling 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 journey to the environment.

If certain plastics cannot be recycled in closed-loop systems, plastics producers should be forced to acknowledge that those products are not consistent with a circular economy and will need to be phased out or reengineered.

Furthermore, producers should be held financially responsible for costs associated with managing all of their waste, including residual waste beyond the diversion target. In practice that means producers paying for landfill, and litter clean-up costs even for the material they are not obligated to recycle.

8. Set minimum recycled content standards

As described in the discussion paper, recycled content targets will support the transition to a circular economy by encouraging investments in recycling operations and allowing recycled material to compete with the cost of virgin resin.

Recycling is expensive and it has failed to deliver on its promise to turn disposable plastics into new products. With the large supply of subsidized fossil fuels, plastics are cheap to make. Both the federal and the provincial governments subsidize the

extraction of fossil fuels and their conversion into single-use plastics.¹⁴ This is at odds with Canada's desire for a circular economy, especially one that is low-carbon and non-toxic.

To support the recycling sector, Canada should establish a minimum requirement of at least 50 per cent recycled content for all plastics. This requirement should be achieved by 2025 with an aim of achieving closed-loop recycling by 2030.

9. Impose restrictions, including bans on so-called 'compostable' and bio-based plastics

Non-conventional plastics, including 'compostable' plastics are a false solution to Canada's plastic pollution crisis. The switch to 'compostable' single-use plastic alternatives distracts from overall waste reduction efforts, and stalls the transition to reusable and/or highly recyclable non-toxic materials like metal and glass.

Furthermore, these materials present many of the same challenges as traditional single-use plastics:

1. They do not readily decompose in the environment under natural conditions, meaning they contribute to litter and pollution;
2. They are value recovery problematic, as they contaminate recycling and industrial compost systems; and
3. They perpetuate a linear make-use-dispose economy, where materials are used only briefly before being thrown away.

For these reasons, Canada should not exempt non-conventional plastics, such as compostable and bio-based plastics from a ban or restriction on single-use plastics.

10. Reject recovery, incineration, energy-from-waste, pyrolysis and other thermal treatments of plastics pollution as ways to manage plastic waste

All forms of thermal treatment of plastic waste (incineration, energy-from-waste, pyrolysis, etc.) promote waste generation and are inconsistent with a circular economy.

¹⁴ Rabson, Mia, 2018. "Ottawa gives plastics giant \$35M grant despite commitment to reduce use of single-use plastics". *The Canadian Press*. 18 February. Available at <https://www.thestar.com/news/canada/2018/02/15/ottawagives-plastics-giant-35m-grant-despite-commitment-to-reduce-use-of-single-use-plastics.html>

Energy-from-waste requires expensive, purpose-built power generators, creating a need for a steady supply of plastic to feed them. As a result, waste reduction is disincentivized. Furthermore, when plastics are burned the polymers from which they were made are no longer available to manufacture new plastic products, meaning more virgin materials are needed, thus reinforcing the existing linear economy.

So-called 'advanced' or chemical recycling is often just a version of the same. Pyrolysis breaks plastics down into petrochemicals that are used to make synthetic fuel, which is burned to create energy.

Pyrolysis and the like, are false solutions to the plastic pollution crisis as they further entrench our reliance on virgin fossil resources and our investment in the linear economy. Canada should not recognize recovery, incineration, EfW, pyrolysis and other thermal treatments of plastics pollution as forms of waste diversion.

Conclusion:

We thank you for the opportunity to provide feedback into Canada's approach to managing plastics and striving for zero plastic waste. It's important to note, however, that the plastics pollution problem cannot be solved by recycling alone. Canada needs to shift to a circular economy, where products are reused over and over again in a closed loop system - and products that do not fit within that system will need to be phased out over time.

We applaud the government for committing to eliminating plastic pollution in Canada, and banning or restricting certain harmful single-use plastic products. We are supportive of an integrated management approach to plastics, including regulations under the provisions of the Canadian Environmental Protection Act, 1999 (CEPA).

Sincerely,



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