



Canadian Council
of Ministers
of the Environment

Le Conseil canadien
des ministres
de l'environnement

CANADA-WIDE ACTION PLAN ON ZERO PLASTIC WASTE

Phase 2

PN 1606

1. Introduction

In November 2018, the Canadian Council of Ministers of the Environment (CCME) approved in principle the Canada-wide Strategy on Zero Plastic Waste (the Strategy), to reduce plastic waste and pollution and recover the value of plastics through reuse, repair, remanufacture, refurbishment and recycling.

Through CCME federal, provincial and territorial governments agreed to develop an Action Plan to implement the Strategy.

In June 2019, ministers approved the Phase 1 Canada-wide Action Plan on Zero Plastic Waste focusing on the Strategy's result areas that require actions along the life-cycle of plastics to increase their recovery in the economy: product design, single-use plastics, collection systems, recycling capacity and domestic markets for recycled material.

Highlights of Phase 1 actions include:

- facilitating consistent programs for extended producer responsibility (EPR)
- developing a roadmap to address single-use and disposable plastics that are commonly released into the environment
- establishing national performance requirements and standards for plastics
- promoting incentives for a circular economy
- assessing waste management infrastructure needs and promoting innovation for improved plastic life-cycle management
- identifying tools for government procurement practices and greening operations to reduce plastic waste.

The Phase 2 Action Plan targets the remaining result areas of the Strategy that address actions to reduce plastic pollution and serve as enablers to achieve our goal of zero plastic waste. The Phase 2 Action Plan focuses on actions to:

- improve consumer, business and institutional awareness to prevent and manage plastic waste responsibly
- reduce plastic waste and pollution generated by aquatic activities
- advance plastics science to inform decision-making and measure performance over time
- address plastics in the environment through capture and clean-up
- contribute to global action on plastic pollution reduction.

Together, these two Action Plans will implement the Strategy, helping Canada reduce plastic pollution, create economic opportunities to recover the value of used plastics and achieve our goal of zero plastic waste.

About the Strategy on Zero Plastic Waste

Plastics play a valuable role in the Canadian economy and everyday lives of Canadians. They provide environmental benefits such as reducing energy and greenhouse gas emissions in the use and transportation of products, they prolong the shelf life and maintain the safety of food products and are widely used in the medical sector.

However, the mismanagement of plastics has resulted in too much plastic ending up as waste rather than being recovered in the economy. This lost value burdens economies. Deloitte estimates that only 9% of all plastic waste in Canada is recycled.¹ This includes plastic that is hard to collect and recycle, such as plastics found in packaging, clothing, cars, and construction and commercial waste.

Of concern, is that 1% of Canada’s plastic waste is released into the environment every year.¹ In 2016, that represented 29,000 tonnes of plastic pollution that threatens the health of our terrestrial and aquatic ecosystems and the animals that depend on them, including species at risk. Plastics in the environment can damage habitats, transfer contaminants, entangle or be ingested by wildlife.

This is a Canadian and a global issue. Around the world, it is estimated that an average of 8 million tons of plastic waste enters the oceans from land every year.² Plastic pollution results in at least \$13 billion USD of damage to marine ecosystems each year,³ including costs to remove debris and impacts to nature-based economies such as fisheries and tourism.

Canada with the longest coastline in the world, and home to vast marine and freshwater resources, must continue to take ambitious actions to reduce and prevent plastic waste and pollution. This will help protect the environment for current and future generations and contribute to global efforts.

The Strategy and Action Plans aim to reduce the economic and environmental impacts of plastic waste and pollution through a variety of actions to improve prevention, collection and value recovery to achieve a circular plastics economy (Figure 1). Circular economies keep materials and products in use as long as possible by recirculating them back into the economy through reuse, recycling, refurbishing or repurposing. Retaining materials and products in a circular economy not only reduces demands and impacts on the environment but also has significant economic benefit. For example, it is estimated that a zero plastic waste economy could help Canada save \$500

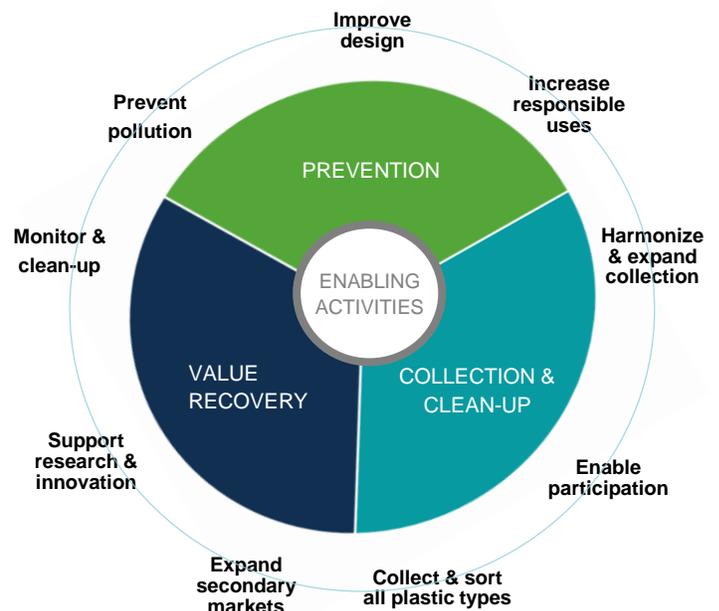


Figure 1: Main areas of action for a circular plastics economy in Canada

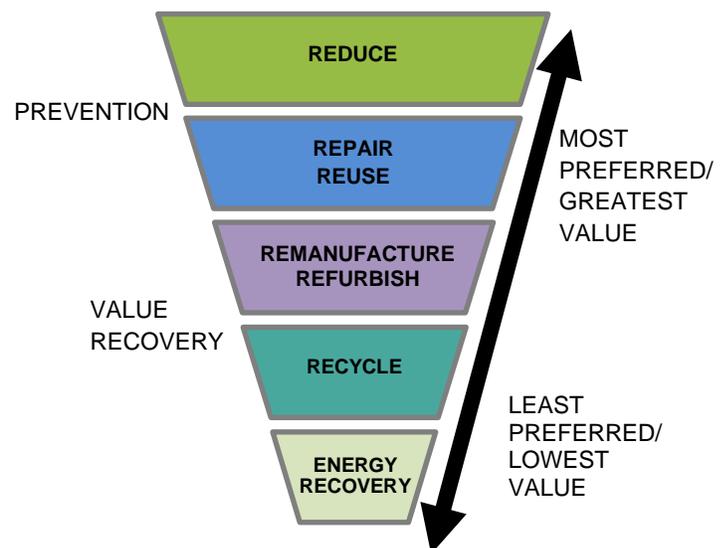


Figure 2: Waste Management Hierarchy

million of annual costs, create 42,000 direct and indirect jobs, and prevent 1.82 megatonnes of CO₂ equivalent greenhouse gas emissions by 2030.¹

The Strategy's approach aligns with the Ocean Plastics Charter, championed by Canada during its G7 Presidency in 2018, and the principles established in the waste management hierarchy (illustrated in Figure 2). The hierarchy ranks the preferred ways to reduce, repair, reuse, refurbish and recycle materials according to the value each method retains in the economy. Removal of plastics that have entered the environment can be costly but are essential to protect the health of our ecosystems.

2. Taking Action

Everyone has a role to play to reduce plastic waste and to tackle plastic pollution. This requires a suite of solutions at the Canada-wide, regional and community level. CCME member governments continue to implement actions that enable efforts by Canadians to better prevent, reduce, reuse, recover plastic waste and address plastic pollution in our environment.

Concerted actions are needed to implement the Strategy. Building on the momentum of Phase 1, CCME engaged a broad range of stakeholders from across Canada to inform the development of the Phase 2 Action Plan. Individuals, local governments, Indigenous organizations, industry, academia and non-profit organizations shared their ideas and solutions to inform the development of the Action Plan.

CCME conducted a survey, convened three regional engagement sessions with stakeholders and other interested parties, and sought input from across its working groups and the Canadian Council of Fisheries and Aquaculture Ministers (CCFAM) to solicit a range of expertise and identify government actions to address Phase 2.

Their collective advice informed six priority action areas for Phase 2:

1. Information exchange and awareness
2. Management of waste from aquatic activities
3. Fishing and aquaculture
4. Capture and clean-up
5. Research
6. Global leadership.

CCME developed the following actions for each of these areas.

Priority Action 1: Information exchange and awareness

Empowering Canadian governments, Indigenous communities, businesses, institutions and the public to reduce plastic waste and pollution involves effective collaboration between the public and private sectors to provide clear and consistent information to consumers. Awareness about sustainable plastic use, management and the impacts of plastic pollution is on the rise. Continued government support is needed to engage and inspire Canadians to make sustainable choices, inform consumers and influencers, including youth, and provide guidance to industry.

Jurisdictions will work with stakeholders and interested parties to facilitate information exchange. This will involve creating and promoting tools that share activities underway in Canada; identifying funders and stakeholders taking action; and housing best practices, open data and other relevant resources. CCME will develop guidance on the use of labels and terms to support common understanding across jurisdictions. The guidance will better inform purchasing, recycling or disposing of plastic products, including compostable plastic. Jurisdictions will promote and support organizations to develop best practices to strengthen awareness of plastic waste and pollution issues and move to solutions. This may include promoting best practices or guidance through residential and industrial, commercial and institutional (IC&I) recycling programs, extended producer responsibility programs, educational curricula and information for targeted sectors through recreational fishing permits or boating proof of competency.

Priority Action 2: Management of waste from aquatic activities

Keeping plastics in the economy and out of the environment requires strengthened management systems for waste derived from commercial and recreational aquatic activities, such as fishing, aquaculture, shipping, boating, and offshore exploration. Improved management of plastic waste from these activities will support greater value recovery and will help reduce plastic litter found in our water and on our shorelines.

There is a need to better understand the types of plastic waste and litter found at marinas, ports and harbours, what is generated by recreational and commercial users, as well as the capacity and opportunities to manage this waste more effectively. For example, while ships are obligated to collect and sort their waste onboard, ports, harbours and marinas may have inadequate infrastructure to manage these materials when ships come to shore. Alternatively, onshore facilities may face challenges to direct the recyclables and organic waste to appropriate local facilities.

Building upon Phase 1 Action Plan work on waste management infrastructure, the Government of Canada and Nova Scotia will assess the capacity for improved collection of waste and recycling at marinas, harbours, and ports, assess access and system alignment to nearby waste management facilities and identify the opportunities for collaboration with provincial, territorial and municipal waste management systems and requirements. Jurisdictions will review the assessment results and work with partners to identify what next steps may be required.

Priority Action 3: Fisheries and aquaculture

Abandoned, lost or otherwise discarded fishing gear (ALDFG) can damage habitats, lead to entanglements and cause ghost fishing – when discarded gear captures and traps wildlife. Globally, more than 640,000 tonnes of fishing gear is lost every year, representing nearly 10% of marine litter by volume.⁴ An estimated 5% - 30% of harvestable fish stocks worldwide are impacted by ALDFG including nets, lines, ropes, pots, traps and floats.⁵ While there are many reasons that gear is lost in the environment, it primarily occurs when gear is snagged on rocks or other fishing gear, or abandoned for safety purposes during severe weather. Rarely is fishing or aquaculture gear discarded intentionally. Innovative solutions to reduce plastic waste and pollution, including lost gear, are needed to protect the environment from these impacts and support the fishing and aquaculture sectors.

The Government of Canada will work with the fisheries and aquaculture sector to reduce plastic waste from operations and facilitate the prevention and retrieval of lost gear. This will include strengthening lost gear reporting, supporting industry and organizations to track and retrieve lost gear, and advancing innovations and technologies to reduce the occurrences and impacts of lost gear. CCME will assess the best policy options to increase the collection, end-of-life management and reuse, repair and recycling of fishing and aquaculture gear, such as the potential role of extended producer responsibility programs.

Priority Action 4: Capture and clean-up

Plastic pollution is found across Canada, on land, in waters, sediments, and sea ice, and comes from many sources – littering, poor waste management, storm and wastewater, tire wear and tear, etc. Plastic pollution impacts ecosystems, entangles or is eaten by wildlife, and burdens livelihoods including industries such as tourism, fisheries, and agriculture, and can be costly for communities to manage or remove.

It is estimated that almost 10,000 metric tons of plastic waste enters the Great Lakes each year from Canada and the United States⁶. Direct costs to address plastic pollution in the Great Lakes through clean-ups, street sweeping, storm drain maintenance and public campaigns, is estimated to cost \$468 million USD annually (on an on-going basis, for Canada and the United States combined).⁷

Governments, industry, civil society and the public all play a role in preventing plastic pollution and cleaning up plastics already in the environment. Capture devices, removal activities, and other remediation efforts can help rid the environment of plastic pollution before it harms wildlife or breaks down into microplastics.

Jurisdictions will guide and facilitate capture and removal measures on land, waterways and the nearshore areas, as these are diverse and ecologically important areas. CCME will develop guidance or identify best practices to reduce the release of plastics into the environment. The Government of Canada will support capture, clean-up and prevention efforts and advance research and development on effective technologies and approaches to reduce plastic pollution in the environment.

Priority Action 5: Research

Science is key to support evidence-based policy and decisions needed to move Canada toward a zero plastic waste future. Research and monitoring activities are being advanced across the entire plastics value chain — by the private sector, academia, non-government organizations and governments — to support pollution reduction measures and innovative sustainable alternatives, and improve plastic waste value recovery.

Recognizing that Canada has a broad and diverse science enterprise, Canada's Plastics Science Agenda⁸ serves as a unifying strategy to orient science, research and innovation towards impactful results in support of a circular plastics economy. Efforts are needed to fill priority knowledge gaps, support innovations and strengthen research collaboration.

The Government of Canada will lead the implementation of Canada's Plastics Science Agenda and work with jurisdictions, academia, industry, and funding organizations to advance plastics research. This includes targeting investments in plastics-related science and innovation along the plastics value chain to better understand the effects of plastic pollution and identify opportunities for plastics design and management for improved circularity in the economy.

CCME will develop guidance for Canada-wide monitoring to detect and assess plastic pollution in Canada using harmonized approaches across jurisdictions and regions. This will enable data to be compared across jurisdictions to support evidence-informed decision-making. Jurisdictions will promote or participate in collaborative networks to advance plastics science and innovations to encourage dialogue among the research community, businesses, and decision makers.

Priority Action 6: Global leadership

Unmanaged plastic waste and their release as pollution into the environment is an issue gaining increasing global attention and momentum to achieve positive change. Governments pushed these issues to the forefront in 2014 when 193 countries adopted the first marine plastic litter and microplastics resolution during the United Nations Environment Assembly. In 2015, a global commitment was made via the United Nations Sustainable Development Goals to prevent and significantly reduce marine litter by 2025.

Governments, businesses and organizations are deploying efforts around the world. Their actions embrace a shift to a more resource efficient and circular economy approach by improving plastics management along the life-cycle and reducing plastic pollution. Actions range from advancing science, policies, and innovation to deployment of technologies and techniques that address the entire plastics value chain.

Canada has committed to take action to reduce plastic pollution and to support global efforts. This includes implementing its obligations under international agreements that help prevent waste and litter, and participating in global campaigns (e.g., United Nations Clean Seas Campaign and the Global Ghost Gear Initiative).

Canada demonstrated significant leadership during its 2018 G7 presidency when it spearheaded the Ocean Plastics Charter (the Charter). As of March 2020, twenty-six governments and 70 companies and organizations worldwide have endorsed the Charter, committing to more sustainable approaches to produce, use and manage plastic and reduce plastic pollution. To support the Charter, the Government of Canada committed \$100 million to developing countries to improve waste management, prevent plastic waste from entering the environment, address plastic waste on shorelines, and better manage existing plastic resources. In its global efforts, Canada also considers the roles of gender in addressing plastics consumption, coastal activities and waste management practices, and how youth could play a significant role as agents of positive change.

The Government of Canada will continue to play an active role supported by its efforts under the Strategy, working in key bilateral and multilateral forums, as well as with industry and civil society, to advance global efforts, demonstrate leadership and deploy strategic investments to sustain the momentum and help partners find solutions. This includes the continued recruitment of governments, business and industry leaders in Canada and abroad to endorse the Charter, and engagement with existing Charter endorsers to turn commitments into action.

Jurisdictions will participate in global leadership by implementing the Action Plans, exchanging expertise, sharing CCME guidance and other best practices for improved plastics management, and participate, as appropriate, with international partners on plastics and clean technologies.

3. Summary of Actions

CCME and jurisdictions will work with stakeholders and other interested parties in the development and implementation of the following actions.

Actions	Completion Date
1. Information exchange and awareness	
<ul style="list-style-type: none"> ▪ Develop guidance on the use of labels and terms such as recyclable and compostable to facilitate common understanding 	2021
<ul style="list-style-type: none"> ▪ Develop and promote tools to identify active organizations, funders, initiatives, best practices and plastic waste and pollution data 	2023
<ul style="list-style-type: none"> ▪ Promote and support best practices, toolkits or initiatives to inform governments, Indigenous communities, public, children and youth, and businesses on the plastics value chain and impacts of plastic pollution 	Ongoing
2. Management of waste from aquatic activities	
<ul style="list-style-type: none"> ▪ Assess infrastructure gaps and opportunities to improve waste collection and recycling for marinas, harbours and ports as well as assess access and system alignment to nearby waste management facilities 	2022
<ul style="list-style-type: none"> ▪ Jurisdictions will work with partners to identify how they will address the assessment results 	2023
3. Fishing and aquaculture	
<ul style="list-style-type: none"> ▪ Work with fishing and aquaculture harvesters and industry to: <ul style="list-style-type: none"> ▪ develop requirements or best practices for the use of plastics in commercial and recreational operations and to increase reporting, tracking and retrieval of lost gear ▪ identify and address federal regulatory barriers to retrieve lost gear ▪ support the development of new designs and technologies to prevent, mitigate and retrieve lost gear ▪ share results on plastic waste reduction efforts and on lost gear prevention and retrieval 	Ongoing until 2022
<ul style="list-style-type: none"> ▪ Evaluate best policy options to increase collection and end-of-life management of fishing and aquaculture gear including the role of extended producer responsibility and other measures 	2023
4. Capture and clean-up	
<ul style="list-style-type: none"> ▪ Support capture, clean-ups and prevention efforts as well as research and development for effective technologies to reduce plastic pollution on land, in waterways, and nearshore areas of oceans and lakes, and share the results 	Ongoing until 2023
<ul style="list-style-type: none"> ▪ Develop guidance or identify best practices to reduce plastic waste entering the environment from: 	

Actions	Completion Date
<ul style="list-style-type: none"> ▪ natural disasters (e.g., floods) and spill events (e.g., lost cargo, pellet loss during manufacture or transport) 	2025
<ul style="list-style-type: none"> ▪ stormwater, wastewater and industrial discharges 	2025
<ul style="list-style-type: none"> ▪ food and organic waste processing and sewage biosolids (e.g., contamination from plastics in compost) 	2025
5. Research	
<ul style="list-style-type: none"> ▪ Identify opportunities and develop guidance for Canada-wide monitoring to achieve consistent data gathering on plastics in the environment that: <ul style="list-style-type: none"> ▪ prioritize natural systems (e.g., water, wildlife) to improve the understanding of the effects of plastic pollution ▪ harmonize approaches to detect, monitor, characterize and quantify plastic pollution and assess environmental impacts 	2025
<ul style="list-style-type: none"> ▪ Conduct and support research: <ul style="list-style-type: none"> ▪ to better understand the effects of plastic pollution, particularly microplastics, on wildlife, the environment, and potentially human health ▪ for consistent scientific methods to detect and assess plastic pollution ▪ innovative plastics designs, alternatives and technologies that reduce plastic pollution and waste, and enable circularity and scaling up their implementation 	Ongoing
<ul style="list-style-type: none"> ▪ Through Statistics Canada and other mechanisms, develop and maintain Canada-wide data on plastic use in the economy, how they are managed and where they end up 	Ongoing
<ul style="list-style-type: none"> ▪ Facilitate collaborative networks to accelerate plastics science and mobilize knowledge among researchers, innovators, decision-makers, and other organizations 	Ongoing
6. Global participation and leadership	
Continue to play an active role internationally:	
<ul style="list-style-type: none"> ▪ Recruit new endorsees to the Ocean Plastics Charter and identify opportunities to showcase their leadership and share best practices 	Ongoing
<ul style="list-style-type: none"> ▪ Share CCME and jurisdictional expertise in bilateral and multilateral initiatives to advance policy development, research, and best practices, and participate as appropriate 	
<ul style="list-style-type: none"> ▪ Support developing countries to reduce land and aquatic-based sources of plastic pollution and better manage plastic resources 	

4. Follow-up and Reporting on Progress

Moving toward zero plastic waste will take time and considerable effort. Leadership from and collaboration among all jurisdictions, industry, and consumers is needed.

Federal, provincial and territorial governments are working together to advance the priorities of the two Action Plans. Additional actions may be completed by jurisdictions to complement the Phase 2 Action Plan. CCME will continue to report on progress to ministers regularly. The first update on this Action Plan will be provided at the 2021 Council of Ministers meeting. CCME will prepare a report on implementation of both Action Plans for ministers in 2026. This will ensure continued progress on our common goals, and accountability to Canadians.

¹ Deloitte Canada. (2019). Economic Study of the Canadian Plastics Industry, Market and Waste. <http://publications.gc.ca/site/eng/9.871296/publication.html>

² Jambeck, J., Geyer, R., Wilcox, C., Siegler, R., Perryman, M., Andrady, A., Narayan, R., & Law, L. (2015). Plastic waste inputs from land into ocean. *Science*. 347, 6223.

³ United Nations Environment Program. (2014). Valuing Plastic: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry. <http://wedocs.unep.org/handle/20.500.11822/9238>

⁴ Macfayden, G., Huntington, T., & Cappell, R. (2009). Abandoned, lost or otherwise discarded fishing gear, regional seas reports and studies no. 185, fisheries and aquaculture technical paper no. 523. *United Nations Environment Programme (UNEP)*, Rome, UNEP/FAO.

⁵ Global Ghost Gear Initiative. (n.d.). FAQ. <https://www.ghostgear.org/faq>

⁶ Hoffman, M. and Hittinger, E. 2017. Inventory and transport of plastic debris in the Laurentian Great Lakes. *Science Direct*. 115 273-281.

⁷ Driedger, A.G.J., Durr, H.H., Mitchell, K. & Van Cappellen, P. (2015). Plastic debris in the Laurentian Great Lakes: A review. *J. of Great Lakes Res.* 41(1): 9-19.

⁸ Environment and Climate Change Canada. (2019). Canada's Plastics Science Agenda. <https://www.canada.ca/en/environment-climate-change/services/science-technology/canada-science-plastic-agenda.html>