November 23, 2020

The Honourable Jonathan Wilkinson, P.C., M.P.

Minister of the Environment
c/o The Executive Director Program Development and Engagement Division
Department of the Environment
Gatineau, Quebec K1A 0H3
eccc.substances.eccc@canada.ca

#### Dear Minister Wilkinson:

RE: Notice of Objection and Request for Board of Review in relation to the Proposed Order to add plastic manufactured items to Schedule 1 to the *Canadian Environmental Protection Act, Canada Gazette*, Part I, Volume 154, Number 41: Order Adding a Toxic Substance to Schedule 1 to the Canadian Environmental Protection Act, 1999. (October 10, 2020).

#### Formal Request for Board of Review:

This letter is in response to the October 10, 2020 Gazette Notice in which the Governor in Council, on the recommendation of the Minister of the Environment, proposed an Order to add "Plastic Manufactured Items" to Schedule 1 of the Canadian Environmental Protection Act, 1999 (CEPA).

GDI Packaging Solutions Inc. formally objects to the proposed Order and requests the establishment of a <u>Board of Review</u> (under section 333 of CEPA) to review the recommendation. We have attached our reasons to support the objection and including our response to the ECCC Management Approach for plastics management.

#### **About GDI Packaging Solutions Inc.**

GDI Packaging Solutions is one of Canada's most well established packaging sales agencies. Established in 2007 the ownership brings a combined 60 years of packaging expertise to the Canadian marketplace.

GDI represents large Canadian and US packaging manufactures who sell to Canada's largest grocery and retail chains.

This representation includes manufactures of plastic shopping bags that are manufactured and recycled in Canada.

The Canadian plastic industry is a significant economic sector – a \$28 billion sector that directly employs over 93,000 Canadians and which indirectly employs over 279,000 (ECCC – Economic Study of the Canadian Plastics Industry, Markets & Waste - 2019). One third of employment in the entire plastic value chain (beyond construction, transportation, medical, textiles, agriculture, white goods and other plastics) is in plastic packaging.

#### Plastic Manufactured Items are not Toxic:

The Science Assessment of Plastic Pollution identifies the potential harm associated with the presence of plastic in the environment as a result of pollution. There is broad agreement within industry and society that elimination of plastics litter, mismanaged waste released to the environment and keeping the valuable benefits of plastics resources available to Canadians is a priority. We must continuously improve to address

the **less than 1%** of all plastics in the economy released through unmanaged landfills and litter caused by errant human behaviour.

To declare all plastic manufactured items as "CEPA Toxic" when multiple subsequent intervening acts contribute to the adverse outcome ignores the true cause(s) of the unacceptable risk. The risk to the environment comes not from the item, but the behaviours, decisions and/or contract obligations of consumers, waste management groups and municipalities.

To put Canada's performance in managing plastics in perspective in global terms, Canada is #187 out #192 countries with China the number one contributor of ocean plastics (<u>Jambeck Study - Plastic waste inputs from land into the ocean</u>). **Canada is managing ocean plastics pollution well versus other jurisdictions** as evidenced by the Jambeck study. However, Canada can always do better. Canada, through the CCME Zero Plastic Waste Strategy, is already implementing solutions to reach the Oceans Charter goal of "zero plastic waste".

There are two significant types of plastic litter that need to be addressed. The first is **mismanaged waste** from the waste system (e.g. windblown litter from waste bins or landfills) and the second is **intentional litter** caused by people who knowingly/willingly discard trash into the environment. A discussion about litter and waste must draw on a clear distinction between a product, which has value to a consumer for one purpose, that product's alternative uses, and the material(s) it is made of.

Canada is recognized for its advanced waste management and recovery systems (e.g. United Nations recognized Ontario Blue Box) to manage plastic and other waste resources. A solution exists that is supported by all levels of governments, industry and stakeholders - the Canadian Council of Ministers of Environment (CCME) Zero Plastic Waste Strategy. This strategy was developed collaboratively with all levels of government, industry and other stakeholders to eliminate plastic waste.

The strategy is being implemented through the provinces, who through **Canada's Constitution** are responsible for their own waste management and resources. Industry partners are active through extended producer responsibility and design changes to their products to support reduction, reuse, recycling and recovery of plastic resources. Federal government action through CEPA (using specific bans) is not required, not the appropriate legislative mechanism, interferes with provincial waste resource recovery plans and will be an impediment to establishing the Plastics Circular Economy.

Plastics manufactured items are not toxic. Not only is the sector a large and critical part of the economy, but plastics are also among best materials available to meet the needs of consumers in an environmentally sustainable manner. Plastics manufactured items, used in most industrial and consumer products today, have played an important role in improved health care (including in the response to COVID-19), and were designed and implemented in many instances to reduce unintended environmental impacts from alternate substrates. To equate fighting climate change to bans on single-use plastic packaging is erroneous and misleading. The use of plastics helps advance many of the sustainability goals we have in modern society such as lighter cars for greater fuel efficiency and reduced GHG emissions, electricity production through windmills, and light-weight packaging that has a lower environmental footprint than alternative materials.

#### **Government Commitment to Strengthen Science in Decision-Making:**

<u>GDI Packaging Inc.</u> is requesting that a non-partisan scientific panel be established to review government's work. We believe an independent review will evaluate the current proposal under CEPA schedule 1 and conclude that Plastics are indeed <u>not</u> toxic. The Federal government admitted to scientific gaps in Science Assessment that preclude the ability to conduct a quantitative risk assessment – an independent review panel could fill these gaps.

#### Conclusion

<COMPANY> would argue that Schedule 1 of the CEPA was designed to safely manage substances that are of urgent, acute, or long-term concern to human health (e.g., asbestos). Lumping specific material classes like plastic manufactured items into a similar categorization and labeling it as a toxic substance – due to improper end of use management – is inappropriate and will lead to many unintended consequences. We believe Federal participation/legislation should instead be focused on the following outcomes:

- Harmonized Extended Producer Responsibility: to eliminate confusion around what gets recycled; increase collection rates; grow end-markets for recycled content, and; reduce costs.
- **Expanded Infrastructure** to recover value from ALL used plastics, including investments in: advanced collection and sorting systems; advanced plastics recycling and recovery initiatives including mechanical and chemical recycling, and; removal of regulatory barriers.
- **Support for innovation**: ensure that ALL plastics products are designed for durability, reuse and recyclability, and; support new and emerging chemical recycling innovation. Canada needs to keep plastics in our economy but out of our environment.
- A life cycle approach: We need to look at the entire life cycle of a product. If the replacement to the plastic product is worse for the environment in the long-term, this does not provide a viable solution.
- Working with Provinces and CCME Zero Plastic Waste Strategy: We support the important work of the CCME as it uses science and data to avoid the negative unintended environmental, economic and social consequences of bans. Canada is recognized for its advanced waste management and recovery systems (e.g. United Nations recognized Ontario Blue Box) to manage plastic and other waste resources. A solution exists that is supported by all levels of governments, industry and stakeholders the Canadian Council of Ministers of Environment (CCME) Zero Plastic Waste Strategy. This strategy was developed collaboratively with all levels of government, industry and other stakeholders to eliminate plastic waste.

The strategy is being implemented through the provinces, who through Canada's Constitution are responsible for their own waste management and resources. Industry partners are active through extended producer responsibility (EPR) and design changes to their products to support reduction, reuse, recycling and recovery of plastic resources.

**CEPA** is not the right tool: Creating an impression that safe, sanitary plastic materials are toxic through the Canadian Environmental Protection Act (CEPA) will ultimately make it more difficult for Canada to achieve its ZERO WASTE objectives. We need a strategy that deals with plastic waste specifically and effectively. The federal government action through CEPA (with bans) is not required, not the appropriate legislative mechanism, interferes with provincial waste resource recovery plans and will be an impediment to establishing the Plastics Circular Economy.

Sincerely,
Richard Gubb
President
GDI Packaging Solutions
416 540 7075
richardg@gdisales.net

## Appendix #1

# **Supporting Comments to < COMPANY** > Notice of Objection

# Scientific Issues within The Environment and Climate Change Draft Science Assessment of Plastic Pollution

The plastics industry is a science and technology-driven sector. It is heavily involved in research and development and understands scientific processes and what constitutes valid science. There are numerous scientific issues present in the Draft Assessment we would like to highlight:

- 1. The authorship of this report is unknown. This is not standard scientific protocol and makes reasoned dialogue about the Draft Assessment almost impossible in practice.
- 2. The scope of the actual plastics problem in Canada is not adequately assessed. No effort is made to quantify the amount of plastic in the environment in Canada and therefore the extent of or magnitude of the problem.
- 3. There appears to be a dismissal of the fact that many plastics are inert and not inherently toxic. The Draft Assessment glosses over research concerning the toxicity of plastics. It is stated that
  - "Many of the chemicals observed to be bound to plastic particles have been assessed by various programs at Environment and Climate Change Canada (ECCC) and Health Canada" (p.9), but is not acknowledged that over 2,275 plastic polymers have been approved by Health Canada Safety Branch and the US Health Safety Branch.
- 4. The Federal Government has previously analyzed styrene, a building block of polystyrene, using the CEPA definitions, and determined that it is not "toxic" because it does not enter the environment in quantities large enough to pose a concern. Styrene is actually a naturally occurring element and is found in commonly consumed foods such as strawberries, peaches, cinnamon, beef and coffee.
- 5. The Draft Assessment advocates using the precautionary principle to take action to reduce plastic in the environment. However, it does not provide enough evidence to trigger the use of the principle and a declaration of toxicity under CEPA. It fails to identify any toxic properties of plastics for either macroplastics or microplastics. Therefore, the use of the precautionary principle is inappropriate. The evidence of harm does not meet the threshold outlined in the preamble CEPA to trigger the precautionary principle.
  - The preamble to the Canadian Environmental Protection Act describes the precautionary principle as follows: "Whereas the Government of Canada is committed to implementing the precautionary principle that, where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

Other statements in the Draft Assessment that support the conclusion that plastics are non-toxic are as follows:

#### On Page 7 on Draft Assessment Purpose

The Draft Assessment states that it is not intended as a substitute for a chemical risk assessment of plastics (or their presence in nature) used under CEPA. The writers of the Draft Assessment make clear that they did not carry out an assessment regarding the toxicity of plastic. Rather, the Draft Assessment is in fact a survey, catalogue or literature review: "The purpose of this report is to summarize the current state of the science regarding the potential impacts of plastic pollution on the environment and human health."

#### On Page 9 on Impacts on Biota

"In addition to physical impacts, there are concerns that plastics may serve as a means of transport for other chemicals. ... The current literature suggests that, while the transport of chemicals via plastics is possible, the impact to biota is likely limited, and recent international reviews indicate that there is likely a low health concern for human exposure to chemicals from ingestion of microplastics from food or drinking water (EFSA 2016; FAO 2017; WHO 2019)."

#### On Page 9 – On Microplastics Impact on Human Health

"Plastics can also provide a habitat for microorganisms, including potential pathogens, through the formation of biofilms. There is currently no indication that microplastics-associated biofilms would impact human health. In addition, despite very limited data, it is anticipated that drinking water treatment would inactivate biofilm-associated microorganisms."

#### On Page 40 – Occurrence in Food and Drinking Water

"...to date, there is no conclusive scientific evidence that food packaging materials, when used as intended (i.e., under normal conditions of use), are a source of microplastics in food or bottled water."

#### On Page 60 – No Impact on Human Health

"The World Health Organization (WHO) recently carried out an assessment of human exposure to microplastics in drinking water using conservative worst-case estimates of the levels of additives and absorbed chemicals on microplastics (WHO 2019). These evaluations concluded that exposure to microplastics and/or chemicals associated with microplastics are considered to be a low concern to human health (EFSA 2016; FAO 2017 WHO 2019)."

#### **Unintended Consequences of this Ban**

#### **Public Health Effects**

Covid-19 has exposed the critical role that all single-use plastics plays in ensuring health, hygiene and safety for customers. The importance of sanitary single-use food and beverage service packaging is undeniable.

It is time to take the relevant science seriously and protect public health through sensible policies around single-use food containers and packaging. These food packaging materials are engineered and designed to prevent the spread of disease, protect our food supply, extend shelf life, minimize food waste, prevent tampering, keep the cost of food affordable while providing what is typically the best alternative for the environment.

Over the past number of years, public health has increasingly taken a back seat to reduction, reuse and recycling. Ignored in this discussion have been health risks posed by reusables. If not properly cleaned between uses, reuse can pose health risks. Major unions, Canadian retailers, and even governments have moved to suspend bans on single-use items and restrict the use of reusables during the Covid-19 crisis. This is because there is considerable research that has been done that shows reusables being less sanitary than single-use items. For instance, reusable bags have already been implicated in bacterial infection of consumers.

One example of this research by The University of Arizona, Department of Soil, Water and Environmental Science, found that bacteria were found in 99% of reusable bags tested in its study "Assessment of the Potential for Cross-contamination of Food Products by Reusable Shopping Bags".

In March, Starbucks announced it was pausing the use of refillable containers in stores. Other companies have since followed their example and begun to limit the use of reusable containers. At the same time, takeaway has continued in Canada making single-use packaging a necessity. Single-use food & beverage service packaging and related items were originally invented for health and safety reasons and this is a role they have fulfilled ever since. They will continue to be needed in Canada; eliminating them is dangerous to public health.

#### Effects of Bans on the Economy

The economic stakes of a ban of single-use plastics are high. As stated before, the food packaging sector employs thousands of Canadians across the country. A third of employment in the entire plastics sector is in food packaging and that employment is concentrated in Ontario, Quebec and Alberta.

According to Deloitte, 46% of all plastics establishments are in Ontario and the province is responsible for 55% of national output. Economic study of the Canadian plastic industry, markets and waste: summary report to Environment and Climate Change Canada).

Quebec is a leader in field of plastics innovation, packaging redesign and recycling. Montreal is home to the largest concentration of next generation and traditional recyclers in Quebec – Pyrowave, Polystyvert, Klockner Pentaplast, Groupe Lavergne, Loop Industries, Groupe Gagnon, Polyform, Plastiques Cascades, Plastiques Terra Nova, Exxel Polymers, Plastrec, Berga, and Plastimum, to name a few.

#### Impact of a CEPA toxic designation

The impact of the CEPA-toxic designation will be devastating to the plastics sector across Canada. It will affect all sectors of the plastics supply chain economy. The response of the financial and investment communities will be punitive and swift. Banks, which are averse to uncertainty, will likely put all plastic enterprises under a microscope examining their exposure in the sector. Prudent financial institutions will make decisions to divest themselves of these now high-risk investments.

Foreign investment outflows from Ontario and Quebec from the plastics sector will most likely happen and job-creating investments in the sector will be deferred/cancelled. The industry is already feeling the effects of the potential bans. One major bag manufacturer was recently refused a long-term lease for warehouse space because "the products are going to be banned". This bag manufacturer's experience is the "canary in the mine" on the future the plastics sector will face.

The CEPA toxic declaration will cause irreparable damage our economy at a moment when it is most fragile as a result of the Covid-19 crisis. This federal regulatory approach will also undermine the development of local circular economy recycling chains across Canada. It moves in the wrong direction by banning recyclable packaging and replacing it with packaging that can never participate in the circular economy. Reusable bags are currently unrecyclable and end up in landfills. Polystyrene foam food packaging is 100% recyclable whether soiled or clean, and plastic bags are recyclable. Technologies that make recycled PET beverage packaging are commercialized, in operation and producing 100% recycled content bottles.



# Appendix #2

# **<COMPANY>** Response to the ECCC Management Approach to Plastics

#### <DATE>

Jacinthe Sequin,

Director of the Plastics and Marine Litter Division of ECCC

Email: ec.plastiques-plastics.ec@canada.ca

Dear Ms. Sequin,

Re: A proposed integrated Management Approach to plastic products to prevent waste and pollution

Thank you for the opportunity to submit our comments in response to "A proposed integrated management approach to plastic products to prevent waste and pollution discussion paper" (referred to as Management Approach).

There is broad agreement in society that the elimination of plastics litter, mismanaged waste released to the environment and keeping the valuable benefits of plastics resources available to Canadians is a priority. We must continuously improve to address the less than 1% of all plastics in the economy released through unmanaged landfills and litter caused by errant human behaviour across all sectors – construction, medical, transportation, packaging, textiles, electronics and other uses. To put Canada's performance in managing plastics in perspective in global terms, Canada is #187 out #192 countries with China the number one contributor of ocean plastics (Jambeck Study - Plastic waste inputs from land into the ocean). Canada is managing plastics well versus other jurisdictions as evidenced by the Jambeck study. We support continuous improvement and recognize Canada can always do better. Canada through the CCME Zero Plastic Waste Strategy is implementing solutions to reach the Oceans Charter goal of zero plastic waste.

Addressing litter, there are two types, the first is mismanaged waste from the waste system (e.g. windblown litter from waste bins or landfills) and the second is intentional litter caused by people who knowingly/willingly drop/throw trash. Intentional litter by consumers is primarily reflective of consumer behavior and attitudes, while waste has broader and more complex societal, economic and technological dimensions. A discussion about litter and waste must draw on a clear distinction between a product, which has value to a consumer for one purpose, that product's alternative uses, and the material(s) it is made of.

Keeping these distinctions in mind, the federal government should continue to work collaboratively with the provinces, industry and other stakeholders to manage plastics and by its own very words keep plastics value in the economy as it plays an essential role in our healthy living style and more recently the benefits of single use plastics (SUP) in the fight to prevent the spread of COVID-19.

Our comments on the discussion paper will be found in greater detail in the Appendix, but we will highlight our main suggestions and recommendations to the discussion paper and the governments CEPA policy approach:

- Plastics management through CEPA and Schedule #1 Toxic List is not appropriate and is not supported by the governments own Science Assessment. The government needs to reassess its CEPA approach before permanent and irreparable harm is done to the provincial and Canadian economy and environment due to the negative unintended impacts of this policy.
- 2. We recommend the Management Approach be used as a tool for continuous improvement to identify areas requiring additional attention and treatment to meet the Zero Plastic Waste goals of the provinces, Canada and the Oceans Charter.
- 3. We have identified in our review that the Management Approach requires extensive upgrades to be truly integrated, holistic and comprehensive. For the approach to be useful in providing guidance that results in improved performance in environmental, economic and social sustainability, the federal government should work in collaboration with the CCME, industry and other stakeholders to ensure key factors are addressed and included in the approach.
- 4. The Management Approach needs to be dynamic by recognizing innovation and technology in the reduction, reuse, recycling and recovery of plastic products that will support utilizing and conserving the \$7.8 Billion in lost opportunity by transforming used plastic resources into new feedstocks for manufacturing, new products and energy. The benefits from this approach in our estimation will exceed \$7.8 B since plastics throughout its lifecycle conserves resources and energy that the alternatives do not.
- 5. The Management Approach should incorporate the complimentary approaches of <a href="Circular Economy"><u>Circular Economy (CE)</u></a> and <a href="Sustainable Material Management (SSM)"><u>Sustainable Material Management (SSM)</u></a> which examines efficiency over the whole lifecycle of a product.

#### About <COMPANY>

<COMPANY> (company website about)

## **Canada's Plastic Economy**

The plastics value chain employs thousands of Canadians across the country. That employment is significant, and according to the governments <u>Deloitte Touché Plastics</u> report – national direct employment is 93,000 Canadians in the plastics sector while indirect employment sits at 279,000 people. A third of employment in the entire plastic sector is in packaging with that employment concentrated in Ontario, Quebec and Alberta. We have already experienced the chilling effect on new investment in Canada due to the Prime Ministers ban plastic ban announcement June 2019.

#### **Comments on the Management Approach, CEPA and Science Assessment**

The Management Approach discussion paper cannot be addressed in isolation. We will comment on the government making an order through the Canadian Environmental Protection Act (CEPA) by including "plastic manufactured items" in CEPA Schedule #1 Toxic List. This enables the use of the Management Approach to plastic products including bans and other actions to manage designated plastic products and future designations that can "unilaterally" be made by the government. We will also comment on the Science Assessment Report where the government has used the report to enable the use of CEPA toxic. We contend the governments own Science Report does not support the toxic designation for plastics and CEPA is the wrong legislation to manage plastics.

#### **CCME Zero Plastic Waste Strategy**

We support the important work of the CCME as it uses science and data to avoid the negative unintended environmental, economic and social consequences of bans.

Canada is recognized for its advanced waste management and recovery systems (e.g. United Nations recognized Ontario Blue Box) to manage plastic and other waste resources. A solution exists that is supported by all levels of governments, industry and stakeholders - the Canadian Council of Ministers of Environment (CCME) Zero Plastic Waste Strategy. This strategy was developed collaboratively with all levels of government, industry and other stakeholders to eliminate plastic waste.

The strategy is being implemented through the provinces, who through Canada's Constitution are responsible for their own waste management and resources. Industry partners are active through extended producer responsibility and design changes to their products to support reduction, reuse, recycling and recovery of plastic resources. The federal government action through CEPA with bans is not required, not the appropriate legislative mechanism, interferes with provincial waste resource recovery plans and will be an impediment to establishing the Plastics Circular Economy.

The Management Approach under discussion falls miles short of being integrated and holistic in its approach to protect the environment, fails to support a build back a better economy post-COVID and fails to address the key priority of protecting the health of Canadians by banning single use plastics that have been essential protection for Canadians in this pandemic. The approach does not assess the alternatives unintended impacts and the impact of the very instruments the government proposes to manage plastics and waste. The costs economically, environmentally, jobs lost/gained, investment & disinvestment in local and provincial economies by province are absent in governments proposed Management Approach.

The government Management Approach only assesses one half of the issue with a pure focus only on environment with the goal to eliminate plastics from the economy with alternatives that have not been equally assessed.

Science Assessment – Does Not Support Government Plastic Toxicity Statements
The Government of Canada states in the Management Approach discussion paper that the
Science Assessment recommended pursuing actions through the precautionary principle, which
moved the government to mange plastics using CEPA (and designating plastics toxic in CEPA
Schedule 1).

The plastics industry is a science, innovation and technology-driven sector. It is heavily involved in research and development, understands scientific processes and what constitutes valid science. There are numerous scientific issues present in the Draft Assessment we will highlight:

- 1. The authourship and peer reviewers of this report is unknown. This is not standard scientific protocol, not transparent and makes reasoned dialogue about the Assessment impossible in practice.
- 2. The scope of the actual plastics problem in Canada is not adequately assessed. No effort is made to quantify the amount of plastic in the environment in Canada and therefore the extent of or magnitude of the problem.

- 3. There appears to be a dismissal of the fact that many plastics are inert and not inherently toxic. The Assessment glosses over research concerning the toxicity of plastics. It is stated that "Many of the chemicals observed to be bound to plastic particles have been assessed by various programs at Environment and Climate Change Canada (ECCC) and Health Canada" (p.11), but is not acknowledged that over 2,275 plastic polymers have been approved by Health Canada Safety Branch and the US Health Safety Branch.
- 4. The Federal Government has previously analyzed styrene, a building block of polystyrene, using the CEPA definitions, and determined that it is not "toxic" because it does not enter the environment in quantities large enough to pose a concern. Styrene is actually a naturally occurring element and is found in commonly consumed foods such as strawberries, peaches, cinnamon, beef and coffee.
- 5. The Assessment advocates using the precautionary principle to take action to reduce plastic in the environment. However, it does not provide enough evidence to trigger the use of the principle and a declaration of toxicity under CEPA. It fails to identify any toxic properties of plastics for either macroplastics or microplastics. Therefore, the use of the precautionary principle is inappropriate. The evidence of harm does not meet the threshold outlined in the preamble CEPA to trigger the precautionary principle.

Other statements in the Assessment that support the conclusion that plastics are non-toxic are:

## On Page 14 - Science Assessment

The report states that it is not intended as a substitute for a chemical risk assessment of plastics (or their presence in nature) used under CEPA. The writers of the report make it clear that they did not carry out a chemical risk assessment regarding the toxicity of plastic. Rather, the Assessment is in fact a survey, catalogue or literature review: "The purpose of this report is to summarize the current state of the science regarding the potential impacts of plastic pollution on the environment and human health."

#### On Page 9 – On Microplastics Impact on Human Health

The current literature suggests that, while the transport of chemicals via plastics is possible, the impact to biota is likely limited, and recent international reviews indicate that there is likely a low health concern for human exposure to chemicals from ingestion of microplastics from food or drinking water (EFSA 2016; FAO 2017; WHO 2019). Many of the chemicals observed to be bound to plastic particles have been assessed by various programs at Environment and Climate Change Canada and Health Canada.

#### On Page 44 – Occurrence in Food and Drinking Water

"...to date, there is no conclusive scientific evidence that food packaging materials, when used as intended (i.e., under normal conditions of use), are a source of microplastics in food or bottled water."

#### On Page 64 – No Impact on Human Health

The World Health Organization (WHO) recently carried out an assessment of human exposure to microplastics in drinking water using conservative worst-case estimates of the levels of additives and sorbed chemicals on microplastics (WHO 2019). These evaluations

concluded that exposure to microplastics and/or chemicals associated with microplastics are considered to be a low concern to human health (EFSA 2016; FAO 2017; WHO 2019).

# Management Approach Review –Alternative Application & Improvements to the Approach

The management approach is a direct result of the governments narrow focus to use the expediency of CEPA to manage plastics by declaring plastics toxic in CEPA Schedule 1. The Science Report does not support or provide evidence on toxicity. The mismanaged plastics issue is a less than 1% waste management challenge that should be addressed through more appropriate instruments such as EPR and the CCME Zero Plastic Waste Strategy implemented at the provincial level to meet local economic, environmental and social needs. A made in Ottawa CEPA approach one size fits all, will not be sensitive to local needs on many levels.

With that perspective, we believe the government should withdraw its plan to utilize CEPA to manage plastics based on the overwhelming evidence that plastics are not toxic.

However, we believe the management approach does has value with improvements to make it truly integrated and holistic to assess all products so that they can be continuously improved to meet economic, environmental and social sustianability goals.

The ECCC Management Approach like Life Cycle Assessment Tools (LCA), should be utilized to provide guidance and direction on "additional waste management needs" to improve environmental goals and objectives and not used to implement policy decisions such as bans.

# Recommended Improvements Needed to Be a Value-Added Guidance Tool

#### 1. Integrated & Holistic approach

The current approach needs to be more integrated and holistic to assess plastics and all alternatives to truly drive continuous improvement in environmental outcomes. Currently the approach is narrowly focused on plastics with no assessment of alternatives which may or may not provide improved environmental performance with regards to carbon footprint, energy use, greenhouse gas potential, water and air emissions and other key criteria.

2. Categorization Criteria – Environmental & Value Recovery Problematic
The Management Approach tool only examines the "plastic manufactured items" through
the narrow lens of Circular Economy (CE) which does not address full lifecycle impacts
and other critical factors that a complimentary approach such as Sustainable Material
Management (SMM) would provide.

Data, considerations and tools that should be included in the ECCC Management Approach to inform good guidance and policy direction are:

#### Source Reduction:

SSM would inform material efficiency over reuse versus CE re-use over efficiency. Tradeoffs in order to identify best ways to reduce overall material and resource demand. The integrated Management Approach through its narrow use of CE principles prefers material reuse over efficiency leading to increased negative environmental and economic outcomes.

### Quality:

 SSM would examine the need for virgin material as needed and degradation of quality to ascertain best value. CE focus does not address quality by only seeking to avoid feeding virgin material back into system.

#### • End Markets:

SSM evaluates flow of materials between processes and across geographies.
 Includes evaluation of disruptions to, or lack of, end markets. CE Infers local and assumes markets will grow with demand.

# • Life Cycle Assessment (LCA) Data & Tools:

The lack of any data and use of LCA tools is a critical and severe omission from the integrated Management Approach. The alternatives the ECCC is examining have not been assessed in terms of the full lifecycle impacts and as with all bans the negative unintended impacts have not been revealed in the Management Approach.

#### 3. Economic Costs

The management approach must include an economic assessment across the full life cycle of the products (e.g. cost to consumer to end-of -life management). This will inform stakeholders on improvements required to develop more sustainable systems to addressing the cost of living consumers face every day to ensuring Canadian businesses are competitive. The cost of alternatives can be 2 – 4 times more expensive than the plastic packaging they are replacing. Those costs include environmental and social costs (Trucost Plastics Study)

# 4. Include Priorities Such as Public Health & Food safety

- The management approach takes a narrow approach to assessing the value of products and materials in its value recovery definition using a strict adherence to CE.
- The management approach to have value to society must be improved by addressing critical public health and food safety issues that have been brought into focus by the pandemic.
- Over the past number of years, public health has increasingly taken a back seat to the environment, reduction, reuse and recycling. Ignored in this discussion have been health risks posed by reusables. If not properly cleaned between uses, reuse can pose serious health risks. Major unions, Canadian retailers, and even governments have moved to suspend bans on single-use items and restrict the use of reusables during the Covid-19 crisis. This is because there is considerable research that has been done over the last 10 years that shows reusables being less sanitary than single-use items. For instance, reusable bags have already been implicated in bacterial and norovirus infection of consumers (International Outbreak Museum) and a recent survey in Canada found over 55% of consumers never wash their reusable bags.
- Food safety is critical to our healthy lives. Food packaging materials were
  developed, engineered and designed to prevent the spread of disease, protect
  our food supply, extend shelf life, minimize food waste, prevent tampering, keep
  the cost of food affordable while providing what is typically the best alternative
  for the environment and economy.

#### 5. Management Approach Needs to Be Dynamic

- The management approach is currently static and does not recognize or address the fast changing, innovative and dynamic marketplace with new products and packaging that bring new benefits to the economy and environment.
- The approaches value recovery recycling threshold set at 22% and identification
  of current barriers to recycling that may exist, are in themselves a barrier to
  innovation and establishing a circular economy for materials ECCC categorizes
  as value problematic.
- Keeping plastics (and other materials) in the economy will require multiple
  options that involve reduction, reuse, recycling and recovery, advanced
  technologies and innovations in a fully integrated resource recovery system. The
  use of the complimentary approaches of CE and SMM would lead to positive
  overall environmental and economic performance.
- The management approach should include an assessment of a materials current and future potential for value recovery across all recovery options. The approach for example, recommends banning foam products as being environmentally and value recovery problematic. The Management Approach does not recognize that polystyrene foam is now being processed commercially in new advanced depolymerization technologies. This infrastructure is expanding and will create for PS Foam a perfectly circular economy with expanded markets across all sectors of the economy.
- If the current definition of value recovery was applied in the early 1990's, PET would have been classed value recovery problematic. However, this has changed with the plastic industry and recyclers developing and investing in new optic sort technologies that make PET products one of the most highly recycled and valued resins.

#### Conclusion

<COMPANY> and the plastics industry is committed to protecting the environment, economy and consumers health and safety through the responsible management of our products. Plastics as acknowledged by the government play an essential role in our healthy lifestyle and protection of the environment and economy. The Management Approach is best utilized as a tool for continuous improvement to reach our societal goals of Zero Plastic Waste

We recommend the governments CEPA Toxic policy and bans approach be reversed based on the Science Report which failed to identify any toxic properties of plastics – for macroplastics and microplastics. The Report also does not provide enough evidence to trigger the use of the precautionary principle and a declaration of toxicity under CEPA.

Our industry continues to support the CCME's approach to implement the Zero Plastic Waste Strategy. Its development was a collaborative approach between federal, provincial, municipal, industry and other stakeholders to determine how to best manage plastic waste in the environment and maintain and improve plastics benefits in the Canadian economy.

Thank you for allowing us to contribute to this consultation and ask that our detailed response in the appendix be reviewed. We would appreciate the opportunity to meet with you to discuss our position and better ways to manage plastics.

Sincerely,

# XXXXXXXXXXXXXXXXX

cc: Hon. Jonathan Wilkinson, Minister of the Environment and Climate Change

Hon. Patty Hajdu, Minister of Health

Hon. Mary Ng, Minister of Small Business, Export Promotion and International Trade

Hon. Chrystia Freeland, Deputy Prime Minister and Minister of Intergovernmental Affairs

APPENDIX #1 - < COMPANY > Detailed Response to the Discussion Paper

# **APPENDIX 1**

<COMPANY> Detailed Response to the Discussion Paper

# **Questions for discussion**

# Managing single-use plastics

1. Are there any other sources of data or other evidence that could help inform the development of the regulations to ban or restrict certain harmful single-use plastics?

#### Comment:

We believe it should be a tool to identify areas where additional or special treatment should be applied to products and not bans. As mentioned earlier in our response, the ECCC integrated Management Approach is not an integrated approach to managing plastics as it does not address alternatives and their impacts. The approach requires extensive upgrades and expansion to assess alternatives and impacts beyond the environment dealing with economics, life cycle impacts, health and safety among many other factors.

Scientific research informs us that banning products is not the solution for reducing plastics waste and environmental impacts. Bans will instead lead to unintended consequences such as increased greenhouse gas (GHG) emissions, increased energy usage and more waste in our environment from alternatives substituting plastics. Developing sustainable end markets, investments in advanced technologies for processing, design and recyclability requirements, post-consumer recycled content requirements and greater consumer education and awareness are the keys to reducing the amount of plastics going into landfills or waterways.

The approach does not include the examination of the alternatives across a wide variety of factors, local, domestic, environmental, economic and social impacts (i.e. food health & safety). The Management Approach tool only examines the plastic manufactured items through the narrow lens of Circular Economy (CE) which does not address full lifecycle impacts and other critical factors that a complimentary approach such as Sustainable Material Management (SMM) would provide.

We believe CE and SSM approaches are complimentary and both required to make a full assessment of all materials that would inform stakeholders on additional management practices required to meet the environmental, economic and social goals and objectives. Some of the data, considerations and tools that should be included in the ECCC Management Approach to inform good policy direction are:

#### Source Reduction:

 SSM would inform material efficiency over re-use. Tradeoffs in order to identify best ways to reduce overall material and resource demand. The integrated Management Approach through its narrow use of CE principles prefers material reuse over efficiency leading to increased negative environmental and economic outcomes.

#### Quality:

 SSM would examine the need for virgin material as needed and degradation of quality to ascertain best value. CE focus does not address quality by only seeking to avoid feeding virgin material back into system.

#### • End Markets:

SSM evaluates flow of materials between processes and across geographies.
 Includes evaluation of disruptions to, or lack of, end markets. CE Infers local assumes markets will grow with demand.

## Life Cycle Assessment (LCA) Data & Tools:

 The lack of any data and use of LCA tools is a critical and severe omission from the integrated Management Approach. The alternatives the ECCC is examining have not been assessed in terms of the full lifecycle impacts and as with all bans the negative unintended impacts have not been revealed in the Management Approach.

# 2. Would banning or restricting any of the six single-use plastics identified impact the health or safety of any communities or segments of Canadian society?

#### Comment:

The government ban on plastics will impact Canadian society negatively. It will introduce risks on Canadian's health on a number of levels which includes environment, economic, quality of life, food safety & health, workplace safety and cost of living for all segments of society but especially for lower income groups.

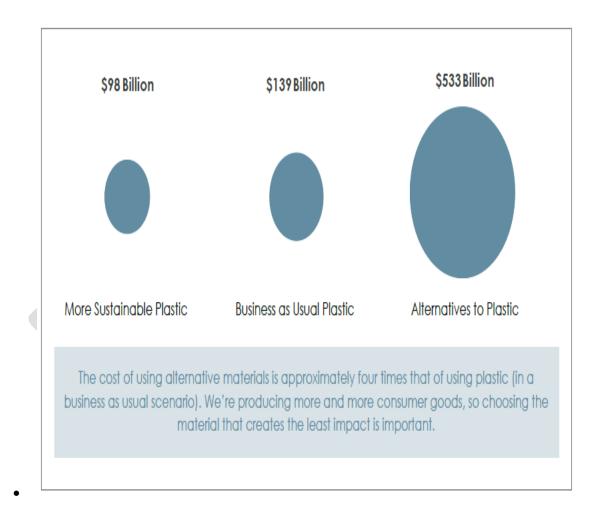
The bans create negative unintended consequences that the ECCC Management Approach has not assessed and cannot assess because it is not a fully integrated approach to managing plastics resources and other alternatives, all externalities associated with material use and preservation of natural capital.

#### **Environment:**

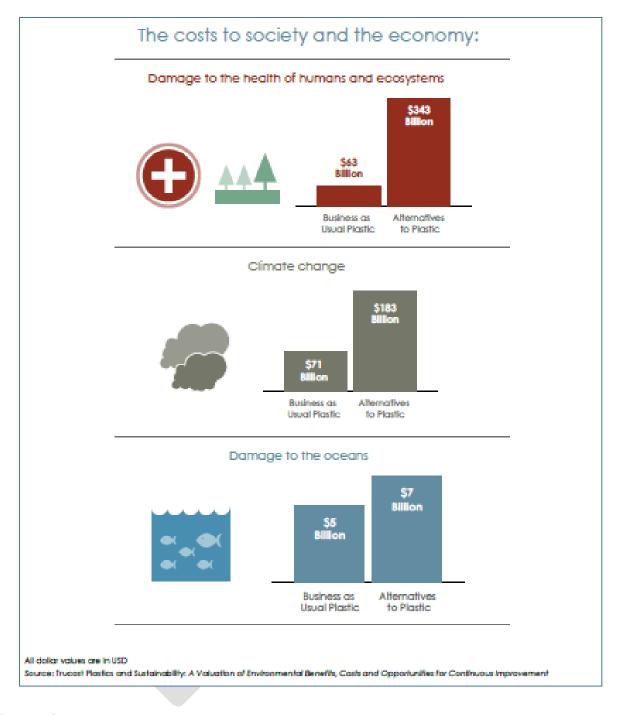
The move to alternatives which generate a number of negative environmental outcomes
that affect all Canadian communities and sectors of society is the higher carbon footprint
of many of these alternatives which contributes to higher energy use in our food delivery
systems leading to greater global warming potentials.

- This runs totally counter to reducing Canada's carbon footprint. Another impact on communities is the creation of more waste, water, air, solid waste by the alternatives that will replace the banned plastics. In the case of paper packaging it can be as much as 3 – 4 x's more solid waste and much more in terms of water and air emissions in the production of these alternative materials.
- This is confirmed by life cycle assessments and more recently by the <u>Trucost Study</u> which found the cost of using alternative materials is approximately four times that of using plastic):

What is the environmental cost associated with the materials we use in consumer products and packaging?



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#### **Economic:**

• The government bans and move to declare plastic manufactured items in CEPA Schedule 1 Toxics List along with real toxic materials such as mercury, asbestos and other poisonous substances will have a chilling effect on investment and jobs across Canada in all provinces and communities – Ontario, Quebec and Alberta will be seriously impacted. Single use plastics (SUP) manufacturers are instrumental in the fight against COVID. They quickly ramped up the production of hygienic SUP's to meet the request of governments and retail for first use packaging such as bags, PS foam food packaging and installed production to manufacture PPE such as face shields. A ban on

- SUP's will destroy this capacity leaving Canada to rely on imports from other countries in the next pandemic, never mind risking Canadians health day to day with reusables that cannot be trusted to be hygienic.
- The "CEPA toxic halo effect" will impact investment/jobs not only in the plastics industry but sectors of industry using plastics such as the food industry and other consumer products manufacturing forcing them into more expensive alternatives.
- The plastics industry employs over 93,000 Canadians in over 2,000 locations at risk and another 200,000 to 300,000 jobs indirectly from the reputational harm resulting from the CEPA Toxic halo that will touch all plastics.
- Canada is in the grip of pandemic wave #2 and serious pandemic recession. The loss of
  jobs in the plastic sector and disinvestment in the Canadian plastics industry will add to
  the unemployment numbers during a time when Canada needs to rebuild and strengthen
  its economy.

## **Quality of Life:**

- The ban on the six items and the governments indication that other food packaging and plastic manufactured items will be examined (and likely banned based on the Management Approach) will negatively impact quality of life and the health of Canadians. The governments ban is also creating anxiety among Canadians worried about Wave 2 and how it will impact their lives now and, in the future, when single use packaging and products are banned and leaves them defenseless against the spread of COVID and every day bacteria, pathogens and viruses.
- The government has acknowledged the important and essential role plastics plays in all sectors of Canadian society in our healthy lifestyle and sustainable future. Through plastics efficiency in conserving resources, reducing waste through light weighting, hygienic properties to protect and keep our food supply healthy and reduce spoilage, ease of manufacturing complex shapes and parts and its recyclability, reuse and recovery alternatives.
- Plastics benefits to society go beyond their convenience in single use packaging and products as the pandemic has highlighted the role plastics play in preventing the spread of COVID as evidenced by federal, provincial governments along with retail suspending the use of reusable bags and other reusable packaging in favour of first use packaging and products that ensure hygienic packaging.

## **Workplace Safety**

- Bans on bags and other single use plastics will leave workers and consumers defenseless in the fight to stop the transmission of COVID, other pathogens, viruses and bacteria.
- As highlighted by the current pandemic, governments restricted the use of reusables such as reusable shopping bags to protect against the spread of COVID. It is a scientific fact proven by numbers of studies since 2010 that consumers rarely wash their reusable bags after use which then become a source of pathogens, viruses, molds and viruses.
- These unwashed bags endanger not only retail workers but also consumers who visit
  their local retailer and grocery store. Consumers cannot be trusted to clean their
  reusable bags as recent surveys found over 55% of consumers never wash their bags.
- The impact of unwashed bags and also their spread of pathogens throughout a grocery store has been documented in numerous studies including the following research:

- o The International Outbreak Museum Reusable Bags Norovirus
- Study: The Spread of a Norovirus Surrogate via Reusable Grocery Bags in a Grocery Supermarket - University of Arizona reusable bag study

#### **Cost of Living**

- The cost of living will increase and impact Canadians especially those out of work due to the pandemic and low-income groups. The alternatives are 2-3 times more costly than the plastics they are replacing.
- The use of non-plastic alternatives will not protect and extend the life of food supplies resulting in higher levels of spoilage. These costs will be passed onto the consumer and will impact all Canadians driving up the cost of the nation's grocery bills.
- A study by the <u>Canadian Produce Marketing Association</u> dealing with plastic packaging found the following impacts: "The premature withdrawal of current plastic packaging could have far-reaching unintended consequences. Lack of effective packaging could lead to almost a half a million metric tonne increase in food losses and waste (FLW) above current levels. Valued at CA\$2.5 billion, based on average Toronto wholesale prices for 2018, this estimate is conservative. Externalities associated with the premature withdrawal of plastic packaging suggest that the true economic cost would reach \$5 billion, perhaps more. This is due to the withdrawal of current plastic packaging creating enormous wider economic consequences for industry and consumers alike."
- This supports our contention bans have far reaching negative unintended consequences that will severely impact Canadian's economically and hit them where they can least afford it in their wallets during this pandemic and future events."
- 3. How can the Government best reflect the needs of people with disabilities in its actions to ban or restrict certain harmful single-use plastics?
  - This question is inappropriate to suggest single use plastics are harmful since they were developed to protect people's health, safety and security of their food supplies.
  - The government can best reflect the needs of all Canadians including those with disabilities by recognizing the essential role single use plastics and the banned items play in providing Canadians a healthy lifestyle by working collaboratively with industry and the provinces to manage all plastics and maintain plastics benefits in the economy.
  - This is a waste management and litter issue that is addressed through education to reduce littering behaviour and implementing recovery programs for used plastic resources to be feedstocks in the economy.
- 4. Should innovative or non-conventional plastics, such as compostable, bio-based or biodegradable plastics be exempted from a ban or a restriction on certain harmful single-use plastics? If so, what should be considered in developing an exemption that maintains the objectives of environmental protection and fostering a circular economy for plastics?

#### Comment:

- We do not agree for many reasons stated previously with the governments ban approach (i.e. negative unintended consequences) and goal to have packaging that is anything but plastic by tagging single use plastics as harmful in any of the questions.
- It is our position that the marketplace will choose its packaging types and materials whether they be plastic, paper, metal, glass, composites, compostables and innovative

- plastics base on the application needs and end-of-life options available to manage the packaging or products.
- Each material, package or product types have their own set of characteristics to meet
  the needs of the marketplace. The criteria if applied to compostable should ensure it is
  third party certified compostable and meets all the performance criteria of the
  certification.

# **Establishing performance standards**

5. What minimum percentage of recycled content in plastic products would make a meaningful impact on secondary (recycled resin) markets?

#### Comment:

- A meaningful number will depend on a number of factors including application such as food contact and non-food contact, supply, ability to track feedstocks/chain of custody and technology available to incorporate post-consumer recycled (PCR) content in products.
- PCR in food contact applications is governed by safety concerns which are: 1)
  contaminants from the PCR material may appear in the final food-contact product made
  from the recycled material, 2) PCR material may not be regulated for food-contact use
  may be incorporated into food-contact article, and 3) that additives in the PCR plastic
  may not comply with the regulations for food-contact use.
- It is recommended that any recycled content targets be set in collaboration with the plastic industry value chain with non-food and food contact sectors.
- A phased in approach using minimum PCR plastic content targets growing over time to an average of 50% for non-food contact packaging and products where applicable should be examined as this would be a positive step in developing pull demand for plastics.
- Food contact applications PCR plastic content depends on resin types and qualified supplies of feedstock that will meet food contact specifications. Currently technology and examples of 100% PCR r-Pet Bottles and packaging already exists commercially. Polypropylene PCR plastic content is also making advances. New depolymerization technologies that treat polystyrene foam and rigid packaging.
- 6. For which resins, products, and/or sectors would minimum recycled content requirements make the greatest positive impact on secondary (recycled resin) markets? Why? and:
- 7. Which resins, products or sectors are best-placed to increase the use of recycled plastic and why?

#### Comment:

- The non-food applications sectors using polyethylene resins (e.g. HDPE, LDPE) are best placed for immediate results such as non-food products (e.g. cleaners, lubricants, chemicals), construction (e.g. vapour barriers, road construction, additives, plastic wood), automotive (e.g. various parts and structures), electronics and appliances. The use and amount of PCR plastics would be dictated by the performance, appearance, manufacturing and even government standards requirements in these various sectors.
- In food application areas, food grade r-PET technologies already exist and are commercialized. Good examples are water bottles manufactured from Blue Box curbside

- programs already in the marketplace. These technologies can be used to produce medical grade items to other food grade applications.
- Polystyrene (PS) foam, rigid packaging and other product processing technologies are being commercialized and can recycle these polystyrene products into the monomer styrene. Styrene is the feedstock to make new polystyrene products. These new depolymerization technologies make this material perfectly circular in the economy and expand its market access to all products made from polystyrene such as packaging, medical devices, appliances, aerospace parts and more. The governments ban on PS single use packaging does not recognize this innovation in its Management Approach and runs counter to creating a Circular Plastics Economy.
- Polypropylene (PP) is a valuable highly used resin. PP is used in automobile interiors, food and beverage packaging, consumer good packaging, electronics, construction materials, home furnishings and many other products. New technologies recycle used PP to its near virgin form that also expands market access for r-PP to more market sectors.
- Polyvinyl chloride (PVC) is found in pipes, flooring, siding, medical devices, sports and other products. New recycling programs are emerging for PCR PVC that include medical tubing and equipment found in hospitals.
- 8. Which plastic products are not suitable for using recycled content due to health, safety, regulatory, technical or other concerns?

#### Comment:

- This is changing due to new innovations in processing and recycling plastics, but generally food contact products have stringent controls on recycled feedstock and the contaminants that accompany these recycled materials including additives. New chemical recycling processes are emerging to take used plastics back to their virgin form.
- 9. What should be considered in developing timelines for minimum recycled content requirements in different products?

#### Comment:

- Before any minimum recycled content targets are set there must be a high level of collaboration with industry experts from the plastics value chain such as manufacturers of products to recyclers. This should be sector specific.
- Considerations should include health & safety, performance requirements specific to the
  product and sector, government regulations on product or sector, feedstock supply &
  availability timing, flexibility in application of minimum requirements (i.e. lack of available
  supply).
- 10. What would be the advantages and disadvantages to setting minimum percentage requirements that are distinct for each product grouping, sector, and/or resin?

#### Comment:

- Overarching principle: "One size does not fit all" each sector, product and or resin
  types have specific performance requirements distinct to their applications and in some
  cases government regulation on the health and safety of a product.
- Advantages of distinct requirements

- Meets the sector and consumer expectations on performance requirements
- Will recognize any target set may negatively affect the life cycle impact of a manufactured item and its cost. Could force the use of other materials that have higher life cycle impacts and costs.

## Disadvantages of distinct Requirements

- No disadvantages as the overarching principle must be respected. The government should realize this will require a highly collaborative approach which requires staffing, additional costs to manage on industry and government
- 11. How could compliance with minimum recycled content requirements be verified? How can the Government and industry take advantage of innovative technologies or business practices to improve accuracy of verification while minimizing the administrative burden on companies? **Comment:** 
  - Keeping administrative burdens to a minimum is important for long term sustainability
  - There are emerging third party verification processes worldwide that have audit processes industry can contract.
  - It is recommended that industry access approved certification service providers recognized by the compliance organizations to verify PCR content.
- 12. Besides minimum recycled content requirements, what additional actions by the government could incentivize the use of recycled content in plastic products?

  Comment:
  - Government Procurement Governments spend billions on procuring goods and services. Setting recycled content specifications on all goods and services and where applicable would support PCR plastic content products and their use.
  - Labelling and/or consumer information on PCR content that is standardized across all sectors to educate consumers on the products they buy.
  - R&D funding for the development of new technologies to recycle and create new feedstocks from plastics resources
  - Infrastructure funding for plastics recycling and recovery processes
  - Accelerated depreciation rules for plastic technologies and operations recycling and recovering used plastic resources collected in Canada to support the establishment of domestic Plastics Circular Economy and Resource Recovery operations.

# **Ensuring end-of-life responsibility**

13. How can the Government of Canada best support provinces and territories in making their extended producer responsibility policies consistent, comprehensive, and transparent?

#### Comment:

• The Government of Canada has been collaborating with the Provinces and Territories through the Canadian Council of Ministers of Environment (CCME). Through this collaboration and consultation with industry and stakeholders the <a href="CCME Strategy on Zero Plastic Waste">CCME Strategy on Zero Plastic Waste</a> was finalized November 2018. The strategy outlines a vision to keep all plastics in the economy and out of the environment. Extended producer responsibility (EPR) is a crucial part of the strategy in managing our plastics and other waste resources.

- The responsibility of waste and resources through Canada's Constitution resides with the provinces & territories. The provinces know best what local solutions are required to meet their environmental, economic and social sustainable development goals. A one size fits all with waste & resource management centrally controlled from Ottawa does not serve provincial interests and local needs.
- The federal government has made its intentions clear by using CEPA and including plastic manufacture items in Schedule 1 Toxic List, that it is the quickest and easiest route to banning plastics and allows the federal government a free hand to implementing future bans on other plastic products and packaging at the whims of the Minster of Environment. This will impact the provinces economies, environment and will affect communities across Canada in lost jobs and investment. In fact, the provinces and municipalities have now lost control to Ottawa of the local economic development plans and ability to attract new investment.
- The Government of Canada can best support the provinces and territories by not impinging on the provinces powers to manage their local economies, environment and social needs.
  - The provinces are already implementing the Zero Plastic Waste Strategy. The Extended Producer Responsibility programs include the management of the proposed banned items by the federal government but the bans and uncertainty of future bans on plastics jeopardize consistent and harmonized programs across Canada
  - The Government of Canada can best support the provinces and territories by working collaboratively in the federation to promote harmonized EPR programs across Canada through the CCME.
  - The federal government support the plastic value chain with Research & Development funding, accelerated depreciation on plastics recovery/recycling infrastructure, education programs targeting all Canadians on managing plastics and other used resources, all of which will support provincial programs on keeping plastics in the economy and out of the environment.
  - The federal government can support provinces with coastal shorelines by engaging foreign governments to manage and implement more effective waste systems. It is a well-known fact 90% of ocean plastics originates from 10 rivers in China, Asia and Africa. These plastics end up on Canada's coastlines in British Columbia and Eastern Canada. Mismanaged landfills and litter in Canada are less than 1% of all plastics in the Canadian economy (Deloitte Touché Plastics Report). Banning plastics in Canada will not solve the ocean plastics issue.
  - The federal government can significantly reduce ocean plastics by having fisheries "better manage" fishing gear and "ghost gear" that contributes to the ocean plastics pollution problem which is acknowledged as the largest threat to our marine environments