NO TIME TO WASTE

Six Ways Canada Can Progress to Zero Plastic Waste by 2025

environmental defence

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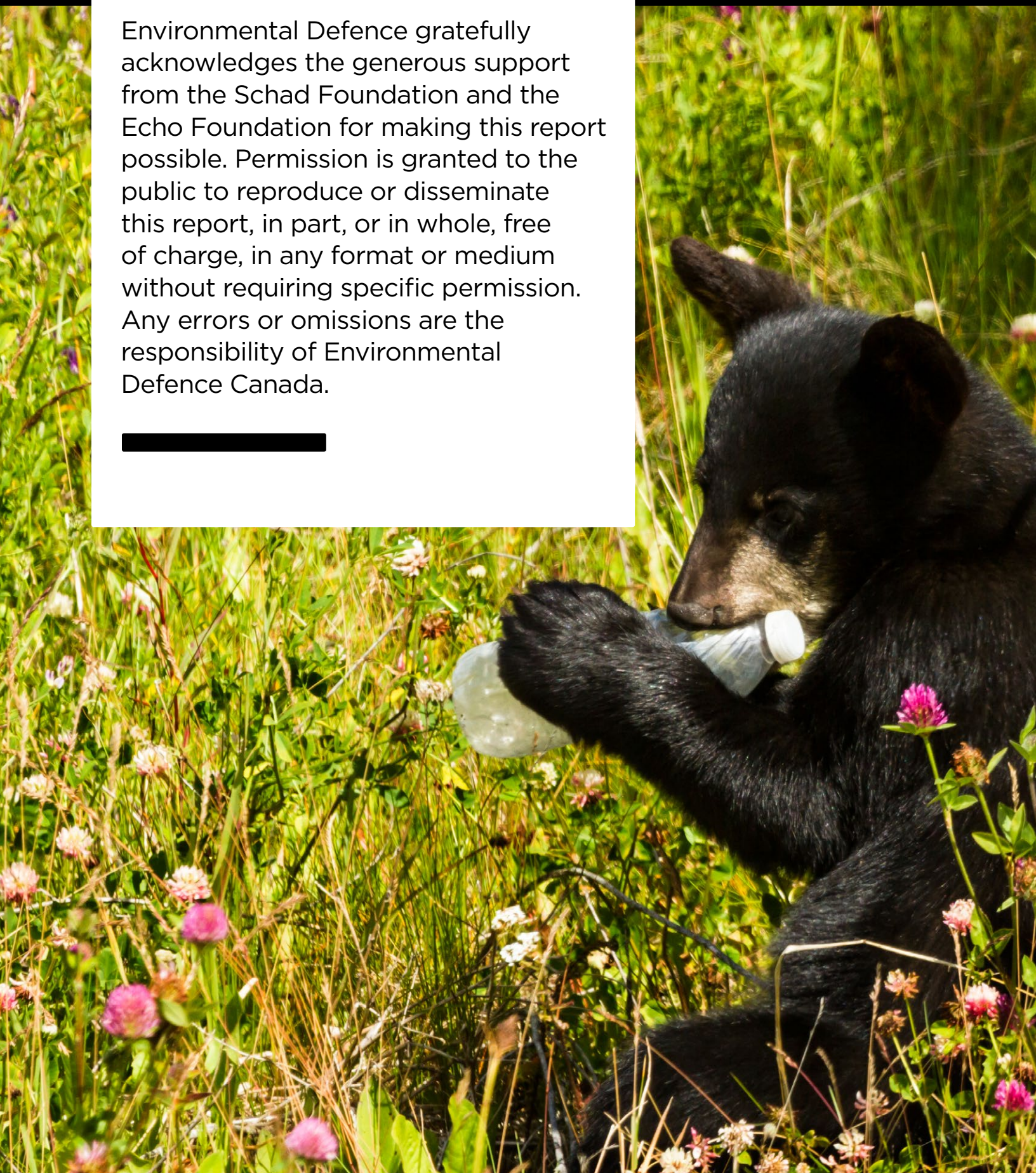

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IT IS ESTIMATED THAT OVER 4.5 MILLION TONNES OF PLASTIC ARE INTRODUCED TO THE CANADIAN MARKET ON AN ANNUAL BASIS.

Introduction

The world is facing a plastic pollution crisis. Plastic pollution has been found practically everywhere scientists look — in the high arctic and the deep sea, in food and water, and even inside us. Images of animals, especially sea life, ensnared, bloated, or choked by plastic have become all too common. Over eight million tonnes of plastic enter the ocean every year[1], and if things don't change that number will continue to rise.

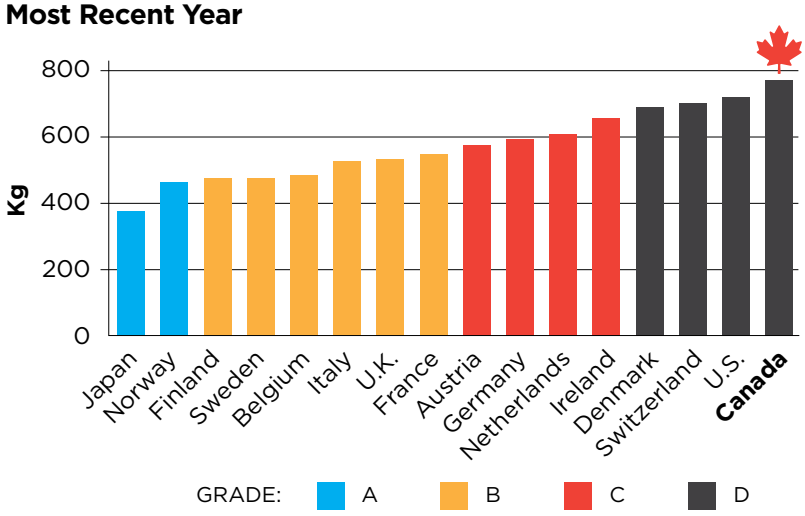
Canada is a significant contributor to this problem. It is estimated that over 4.5 million tonnes of plastic are introduced to the Canadian market on an annual basis—that's more than 125 kilograms per person, only a small fraction of which gets recycled.[2] Across all waste streams, Canadians are the biggest per capita waste generators among developed countries. Each Canadian generates around 777 kilograms of garbage per year, double that of the average Japanese person.[3] Some provinces do better, some worse. For example, the Government of Ontario estimates that the average Ontario resident generates nearly a tonne of waste each year.[4]

Not all of this waste is plastic, but plastics are piling up in this country as they are elsewhere, and our recycling infrastructure is not able to keep up. In Canada, only nine per cent of plastic waste is actually recycled, while four per cent is incinerated and an incredible 86 per cent goes straight to landfill. The rest, around 29,000 tonnes (one per cent), enters the environment, polluting parks, rivers, lakes, and oceans.[5] And those numbers are probably optimistic. Since China and other Asian countries stopped accepting plastic waste from Canada and elsewhere, more plastic from blue bins is being sent to landfill. Municipalities are also accepting fewer items because there is no market for recycled plastics.[6]

One of the biggest contributors of all this waste is single-use plastics*, especially packaging. Most packaging materials have a lifecycle of only six months, yet they are responsible for 47 per cent of all the plastic waste generated in Canada.[7] That means that almost two million tonnes of plastic waste is generated by single-use plastics each year, much of which ends up in the environment. Single-use plastics, like bags, plastic bottles and caps, and straws and stirrers, are the most common types of plastic collected in litter cleanups. Out of the 12 most commonly found types of litter in Canada in 2018, 11 were single-use plastics.[8] Tackling single-use plastics must be a priority.

***NOTE: This report deals primarily with single-use plastics. We define single-use plastics as plastics that can be used only once or plastics that are not designed to be reused numerous times. This report does not cover the medical and pharmaceutical sectors.**

Municipal Waste Generation per person, 2009 or Most Recent Year



Source: Conference board of Canada

The good news is that progress is already happening. In 2018, Environmental Defence and more than 40 other civil society organizations proposed 18 policy actions to achieve zero plastic waste in Canada. Soon after, the federal government announced its commitment to addressing the problem. It plans to launch a package of measures to reduce single-use plastic waste and to hold companies accountable for the waste they generate through Extended Producer Responsibility (EPR)* policies.

To be successful, EPR policies need a range of supportive policies such as restriction on toxic substances, recycled content standards, and waste reduction strategies.[9]

Therefore, the regulatory framework to achieve zero plastic waste in Canada must make sure that individual producers are responsible for all the waste they generate (not only the part that gets collected) to create incentives to design less wasteful products, shift to more reuse, and only use recycling as a last resort.

To create effective EPR and waste reduction policies, Canada needs to implement the following six solutions:

1. Collect data on the amounts and types of plastic packaging that are introduced into the market.
2. Ban unnecessary and non-recyclable single-use plastics.
3. Expand and consolidate the use of deposit return programs to collect single-use plastic containers.
4. Support innovation to shift towards reusing plastic packaging and other plastic products.
5. Use economic incentives to discourage consumers from using single-use plastics.
6. Support the recycling industry through recycled content requirements for new products.

* WHAT IS EXTENDED PRODUCER RESPONSIBILITY?

Extended Producer Responsibility (EPR) is a policy approach in which a manufacturer's responsibility for a product is extended to the waste stage of the product. EPR policies aim at shifting the responsibility upstream toward the producer and away from consumers and municipalities. It also creates incentives for producers to the design their products in an environmentally-conscious manner, so that waste is minimized or eliminated.

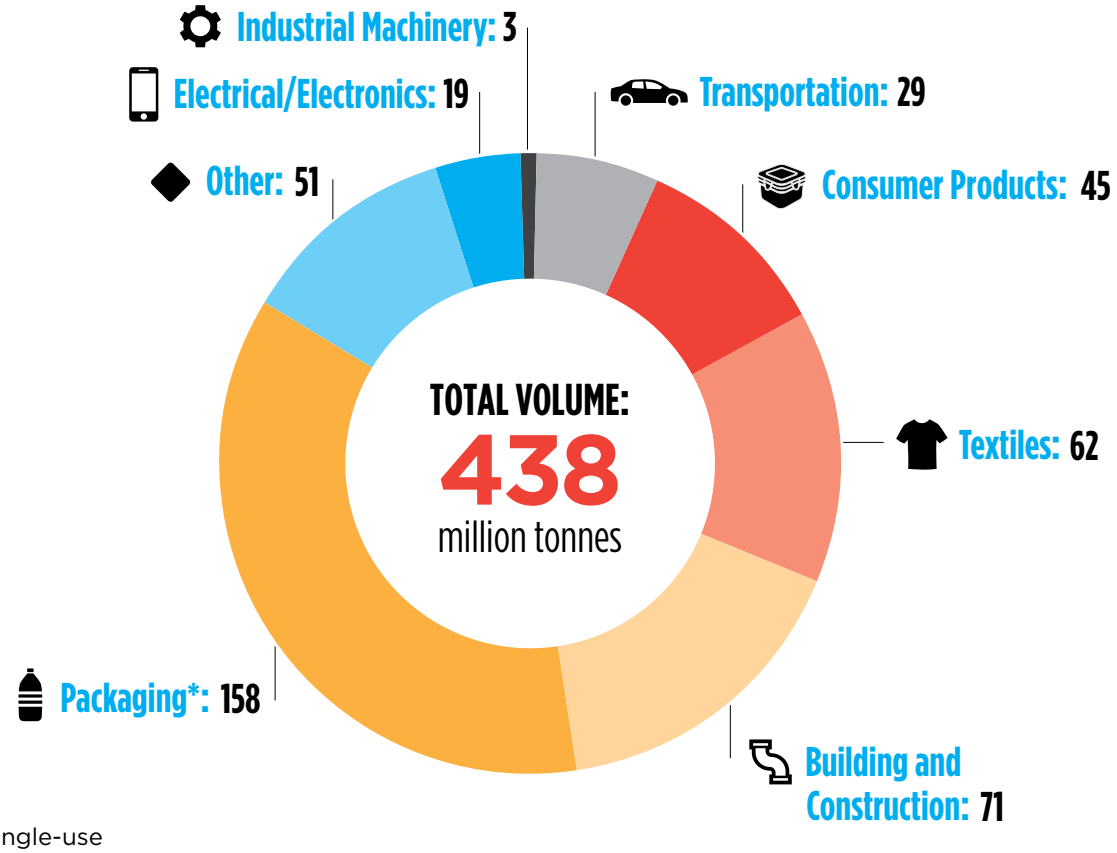
EPR policies in Canada include varying degrees of involvement and responsibility from producers:[10]

- **Product stewardship programs** are usually operated by government-run agencies or quasi-government organizations. These programs have helped increase diversion from landfills in Canada, however, they do not create incentives for producers to change their product designs to minimize waste and increase recyclability. They rarely include enforceable targets.
- **Shared EPR programs**, such as Ontario's Blue Box, are financed and operated together by governments and producers. However, they also fail to incentivize changes in the design of products because the producers only bear part of the cost to manage the program. The materials recovered are managed by the municipalities.
- **Full EPR programs** make producers physically and financially responsible for managing the waste generated from their materials. Producers pay fees that reflect the net cost of recycling, proportionate to the amount of material that each producer generates. In order to be effective, these programs need to have enforceable targets and penalties for producers not meeting those targets. "Economic theory suggests that EPR programs work best when individual producers are assigned complete responsibility over the waste generated from their products."[11]

What do we use plastic for?

Usage by industrial sector, total volume 438 million tonnes, each symbol represents one million tonnes, 2017

Source: *Heinrich Böll Foundation "Plastic Atlas 2019."*



*Mostly single-use

WE NEED TO GET A PICTURE OF WHAT TYPES AND AMOUNTS OF PLASTICS ARE MADE, USED, IMPORTED AND BECOME WASTE.

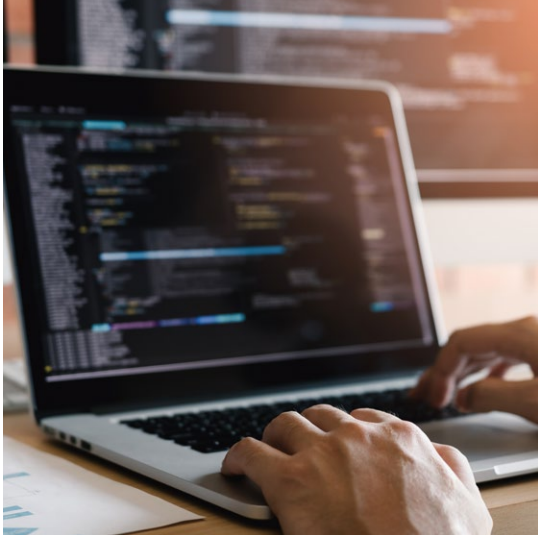
Solution #1

Collect data on the amounts and types of plastic packaging that are introduced into the market

We know that plastic is polluting oceans and filling-up landfills and that only a fraction of it gets recycled. But what the public doesn't know is where this plastic comes from and who is responsible for it. There is very little reliable information about the types, amounts, and uses of plastic that gets produced, imported, and finally become waste.

We cannot reduce what is not measured. If Canada is going to aim for zero plastic waste, it has to have a clear picture of 1) the plastics that are introduced in Canada through imports, and 2) the plastics and packaging that are manufactured and used in Canada at all levels of the plastics supply chain. Also, we need to have reliable information on which plastics get recycled, incinerated, or sent to landfill.

Right now, the information available on waste in Canada is inconsistent and often based on surveys rather than on actual data collection. This means that there is no reliable data for benchmarking Canada's progress towards zero plastic waste. At a minimum, information needs include the types of plastics that are used and what they are used for, how much of it is placed on the market, and where it ends up at the end of its life. By tracking all the relevant data for plastics, we will be able to clearly see which sectors are the most successful at sustainably managing plastic pollution and which ones need further improvement and adjustments to reach waste reduction goals. Finally, to make reporting consistent, all levels of government must agree on a common understanding of terms such as use, reuse, and recycling, and end of life possibilities such as compostable, biodegradable, and recyclable.



Can it be done?

For over 20 years, the European Union has collected data on the packaging consumed and the packaging waste generated within each member state. Additionally, it has data on the types of packaging that are reused, recovered, disposed, and recycled. In 2019, under the Global Commitment, a voluntary commitment spearheaded by the New Plastics Economy[12], 40 companies disclosed the amounts of plastics they place on the market, including Coca-Cola (three million tonnes), Nestlé (1.7 million tonnes), and Unilever (0.61 tonnes).[13] In some cases, the level of information shared was quite detailed, providing insight into their packaging portfolio including type, polymer type, or number of units.[14] This level of transparency is also achievable in Canada and it should not be on a voluntary basis.

KEY RECOMMENDATIONS FOR DECISION MAKERS

Federal government, provinces, and territories

- Introduce consistent reporting requirements for producers of consumer goods to get a picture of what types and amounts of plastics are made, used, imported, and become waste.
- Introduce standardized definitions of reuse, recycling, recovery that are consistent with a circular economy as well as definitions for various types of plastics and their use.

Provinces

- Expand producers' reporting obligation to include all the products they place on the market (not only what is intended for the residential market).

Solution #2

Ban unnecessary and non-recyclable single-use plastics

Single-use plastics have the shortest lifespan of all plastic products. While only about one-third of plastics are used for packaging,[15] packaging is the largest contributor to the generation of plastic waste because much of it is impossible or impractical to recycle. Increasing the recyclability of packaging is important but reducing the amount of packaging created in the first place is crucial. Reduction needs to be central to Canada's journey to zero plastic waste, beginning with eliminating plastics that are unnecessary, harmful, or cannot be recycled.

The good news is that the federal government agrees. As part of its plastics commitment, the government said it plans to ban single-use plastics and packaging that science indicates are harmful to the environment and human health.[16] Although the government has said that socio-economic considerations will be taken into account when deciding which products will be banned, the science prepared by the government is very clear: single-use plastics are harming wildlife, including marine birds, turtles, and whales. And they are accumulating in our environment.[17]

Some of these plastics aren't just harmful to the environment but are also impacting human health. We know plastics are getting inside of us, so exposure isn't in doubt. Some plastics are also made from toxic precursors and act as vectors absorbing harmful pollutants and a "cocktail of contaminants".[18] Therefore, toxic plastics, and hazardous chemicals contained within them, are very difficult to recycle and should be restricted.

There is also an economic cost to cleaning up all of this plastic waste. A 2012 study estimated that local governments of 90 towns in Washington, Oregon, and California spend more than $500 million U.S. a year to clean up their beaches.[19] Toronto spends about $25 million dollars to clean up litter every year and that doesn't account for all the volunteers that participate in cleanup events.[20] Despite such evidence, the Canadian plastics industry continues to claim that plastic is environmentally-friendly and opposes bans on single-use plastics.[21]

The fact remains that a dramatic reduction of single-use plastics is necessary. Many single-use plastics items are sold with the false promise of being recyclable, compostable, or biodegradable. However, although many of these plastics are technically recyclable, we know they do not get recycled, and they should not be allowed on the market.

Also, biodegradable and compostable plastics are unlikely to decompose in nature.

A minimum list of single-use plastic items to ban should include:

- **Plastics that are unnecessary or that have substitutes:** these include plastic stirrers, plates, bowls, trays, cutlery, cotton swabs, balloon sticks, lightweight plastic bags, and plastic beverage containers without tethered caps and lids.
- **Plastics that are made of or contain harmful chemicals, including polystyrene and polyvinylchloride (PVC):** these plastics can leach into human bodies or the environment.
- **Plastics that are not recyclable or cannot be recycled by local recycling programs including:** black plastics and plastic packaging made of mixed materials (e.g. stand-up pouches).
- **Oxo-degradable plastics:** these plastics have been marketed as biodegradable but only break down into small pieces and cause more harm to the environment.
- **Compostable plastics:** plastics that are compostable only in industrial composting facilities but are not accepted by Canadian municipalities.

Can it be done?

Bans on single-use plastics are being introduced around the world. Many island states have adopted at least one nationwide ban on a single-use plastic item (e.g. Haiti, Costa Rica, Marshall Islands, Kenya, France, and

THE EUROPEAN UNION WILL BE IMPLEMENTING A **FULL BAN** ON SEVERAL SINGLE-USE ITEMS AS OF JULY 2021.[23]

Seychelles).[22] On a larger scale, the European Union, which includes 28 countries and a population of over 500 million people, will be implementing a full ban on several single-use items as of July 2021.[23] The ban includes cutlery, plates, straws (excluding accessibility devices), cotton swabs made of plastics, stirrers and balloon sticks, food and drink containers made of polystyrene (Styrofoam), and oxo-degradable plastics. Also, after 2024, the EU is allowing only plastic beverage containers where the caps and lids remain attached to the container during the product's intended use stage.[24]

In response to public pressure to keep our environment clean, several large plastic-users have committed to the Plastics Pact, which promises to phase-out the eight most problematic plastics before the end of 2020. The Plastics Pact was spearheaded by the Ellen MacArthur Foundation, a UK charity working to accelerate the transition to a circular economy.[25] The UK Plastics Pact includes big companies like Coca-Cola, Unilever, and supermarket chains that have gone even beyond the scope of the EU bans. The companies have announced that they will phase-out all polystyrene packaging as well as PVC packaging, which are both harmful to human health and the environment and not recycled.[26]

KEY RECOMMENDATIONS FOR DECISION MAKERS

Federal government

- Include plastics in Schedule I of the *Canadian Environmental Protection Act* (the toxic substances list) due to their environmental harm.
- Ban the use of polystyrene and PVC for packaging because they are problematic for the environment and human health and don't get recycled.
- Ban plastic items that are harmful or that can be easily substituted, such as plastic stirrers, plates, bowls, trays, cutlery, cotton swabs, balloon sticks, lightweight plastic bags, and plastic containers that don't have tethered caps.[27]

Provincial governments

- Prohibit the distribution of single-use plastics that cannot be handled by existing infrastructures (e.g. black plastics, mixed plastics, and compostable plastics).

Solution #3

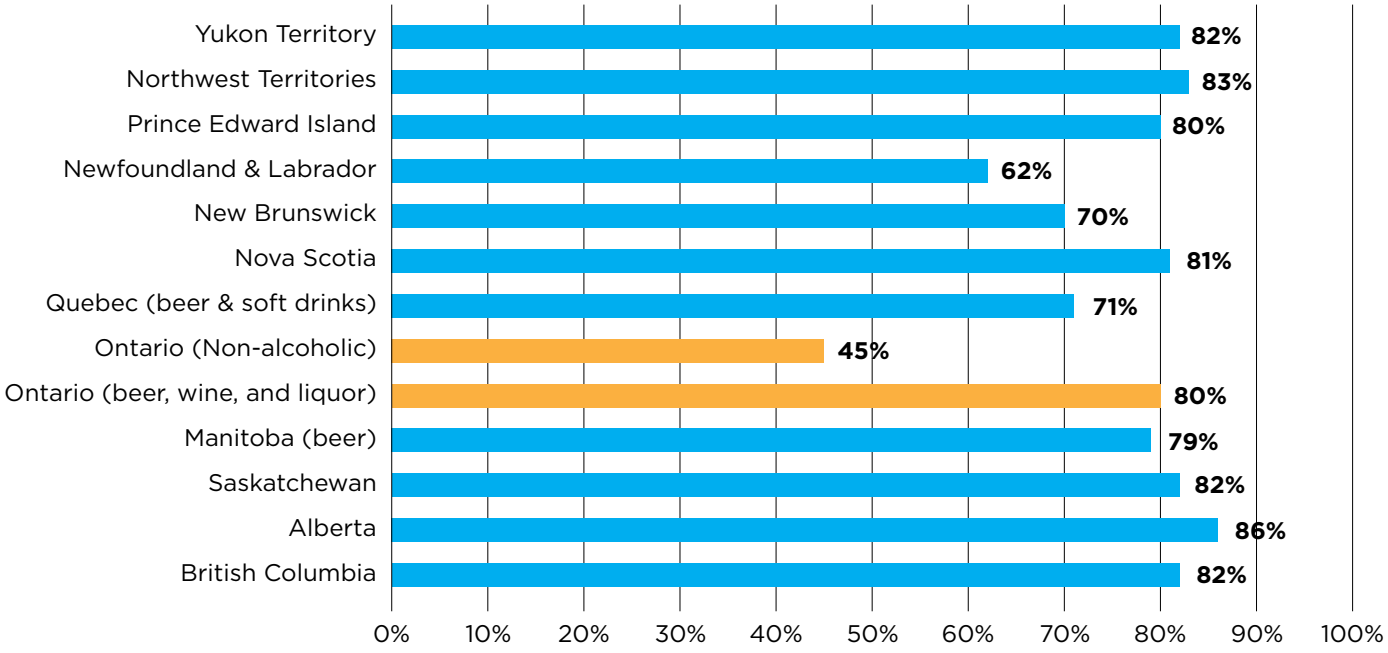
Expand and consolidate the use of deposit return programs to collect single-use plastic containers

Most of the food and beverage products consumers buy come in non-refillable containers. Many of these containers could potentially be reused or recycled. However, without incentives to collect them, they are more likely to end up in landfills or to be littered. As part of its plastics commitment, the Canadian government said it would ensure that companies that manufacture plastic products, or sell items with plastic packaging, are responsible for managing the collection and recycling of their plastic waste. One way to do this is through deposit return programs (DRPs).

DRPs provide a mechanism to effectively capture plastic containers and reduce litter because they provide an economic incentive to return empty packaging. They are also effective in reducing litter as they provide an income for waste pickers, particularly in urban communities. Canadians are already familiar with DRPs. Most provinces and territories have them for plastic bottles, and beer and wine bottles. However, Ontario and Manitoba still do not have a system for non-alcoholic beverage containers and thus achieve the lowest recovery rates in the country (see figure below).[28]

To reduce the amount of waste and litter, Canada should promote DRPs for as many containers as possible in order to promote recycling and, especially, reuse. In addition to PET plastic beverage containers, DRPs can be used for other items such jars, drink boxes, coffee cups, pouches, and gable tops (like milk and juice cartons). If, in the interests of promoting EPR, governments opt not to require a DRP be put in place, they should instead set an ambitious 90 per cent recovery target on plastic beverage containers — which is achievable only through a DRP.

Provincial Recycling Rates for Non-refillable Containers



Source: *CM Consulting "Who Pays What," 2018.*

*The figure for Manitoba includes only beer bottles for which a DRP exists.

NINETY-SEVEN PER CENT OF ALL PLASTIC DRINK BOTTLES IN NORWAY ARE COLLECTED AND 92 PER CENT ARE RECYCLED BACK INTO DRINK BOTTLES.

Can it be done?

There are already examples of DRPs that include a broad range of products. In British Columbia, together with plastic bottles, aluminum cans and alcoholic beverage containers, a DRP exists also for drink boxes, milk cartons, and pouches.[29] In 2019, in order to further increase recovery rates, the province doubled the deposit for all ready-to-drink beverage containers containing soft drinks, juice, water, energy and sport drinks up to and including one litre in size.[30] British Columbia has also proposed expanding its DRP to other containers such as for milk and milk substitutes.[31]

Outside of Canada, an excellent example of a successful deposit return program for plastic bottles can be found in Norway. Ninety-seven per cent of all plastic drink bottles in Norway are collected and 92 per cent of the plastic is recycled back into drink bottles. Some of the plastics get recycled more than 50 times. The government also places an environmental tax on all producers of plastic bottles. The more they recycle, the more that tax is reduced. If they collectively recycle more than 95 per cent, they do not have to pay the tax.[32]

Canada can either adopt a Norwegian system based on targets that creates a financial incentive for companies to do whatever they can to recover the containers, or it can mandate deposit return programs for a number of containers and materials to ensure high collection rates and minimize littering.

KEY RECOMMENDATIONS FOR DECISION MAKERS

Federal government

- Set a 90 per cent collection target for beverage containers as in the EU.
- Set minimum collection targets for provinces and territories that should be reviewed on a regular basis.

Provincial governments

- Set more ambitious collection targets depending on territories and collection capacity.
- Create fiscal incentives and enforcement strategies to make sure targets are met.
- Mandate deposit return programs to achieve high collection rates of beverage containers.

Solution #4

Support innovation to shift towards reusing plastic packaging and other plastic products

Reusing plastics and other items is not a new concept. However, due to the low cost of plastics, disposing of plastics has become convenient for many businesses. That's because the negative impacts of plastic pollution are not borne by the companies that use the plastics. This is why it's important that any strategy to reduce waste includes more reusing.

One of the most effective ways to cut plastic waste and pollution is by reusing the same product as much as possible. Reuse can take many forms. In many cases, consumers use their own reusable items such water bottles, cutlery, and containers. However, reuse can also include other options such as refilling at home or returning the reusable or refillable package to a store or drop off point.[33]

In addition to a positive impact on the environment, reusing can also benefit the economy. According to a 2017 report,[34] if 20 per cent of all packaging becomes reusable, it could represent a $10 billion U.S. market globally. But these initiatives need to be supported either through fiscal incentives or public funding. Canada should stop investing in linear technologies (e.g. incineration with energy recovery) to solve the problem of non-recycled waste and instead support solutions that actually prevent waste.

Coca-Cola has taken steps to have more refillable bottles in Latin America. In 2018, the company standardized the packaging for its products like Fanta, Coke, and Sprite.

*** WHAT IS A CIRCULAR ECONOMY?**

Circular Economy is an economy wherein products and materials should be designed with life cycles that are safe for human health and the environment and that can be reused perpetually through biological and technical metabolisms. This definition therefore does not consider incineration or waste-from-energy to be a form of resource recovery or recycling.

Can it be done?

Here are a few examples of successful initiatives:

Plastic bottle containers: Although Coca-Cola, as a member of the Canadian Beverage Association, won't support a deposit return program for plastic bottles in Ontario,[35] the company has taken steps to implement more refillable models in Latin America. In 2018, it standardized the bottles for its products like Fanta, Coke, and Sprite. Now, seven per cent (by volume) of Coca-Cola products sold in Latin America are in refillable plastic and glass bottles.[36] Refillable plastic bottles can be reused over 20 times before being recycled.

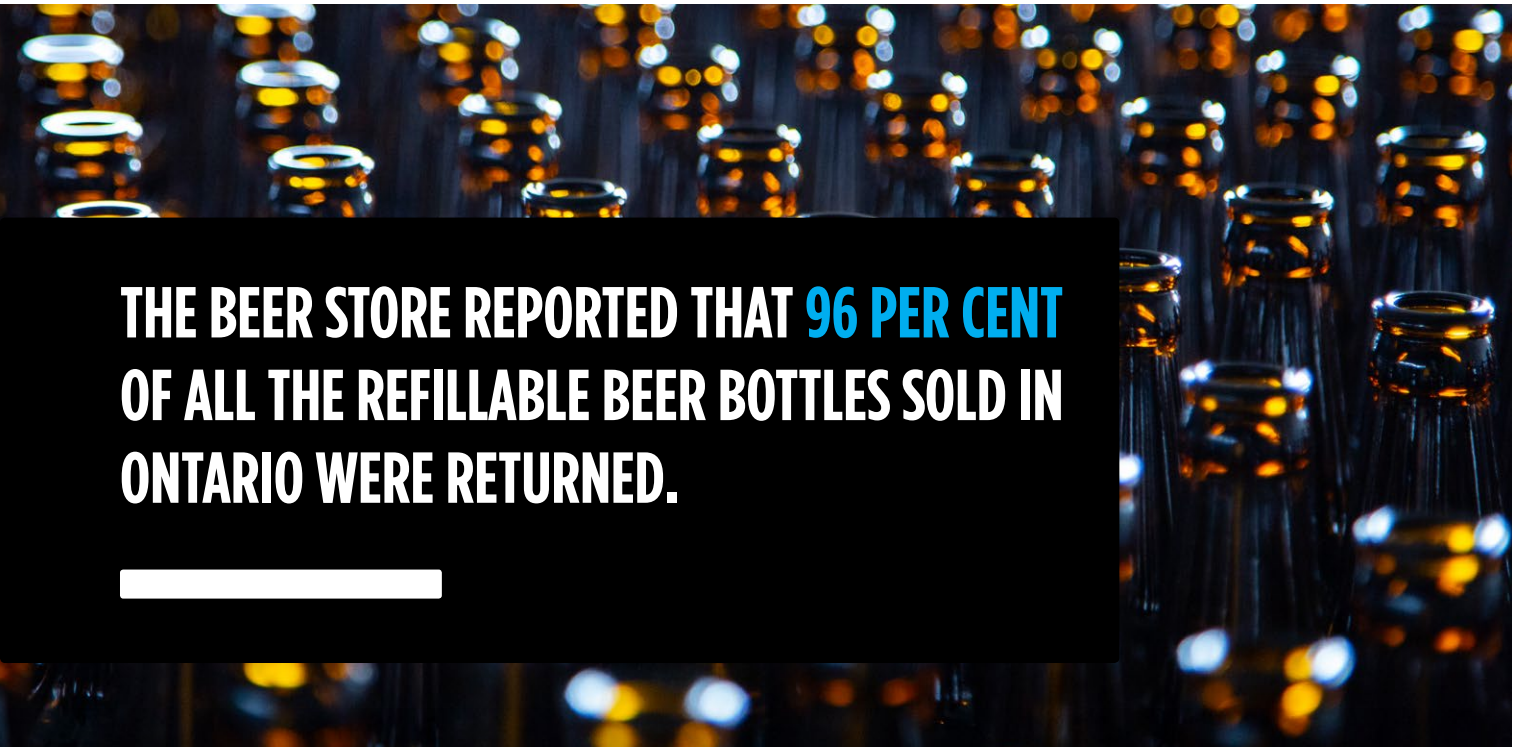
PHOTO: LA TASSE

Coffee Cups: La Tasse, a Canadian initiative popular in Quebec, allows people to make a $5 deposit on a reusable cup when buying coffee on the go. Customers can redeem their deposit by returning the cup to any participating business.[37] The project is similar to one already existing in Germany, Recup, that's available in 3,500 coffee shops including McDonalds.[38]

PHOTO: OZZI

Food containers: OZZI is a system that eliminates traditional disposable take-out containers. It is available at several colleges and universities in North America and allows people to choose a reusable plastic clamshell with reusable cutlery, instead of a disposable one, when getting takeout from university residences. When the container is returned, the costumer gets back a token that they can use for their next use of a container.[39]

Glass beer bottles: In Ontario, the Beer Store has been running a successful deposit return system for many years. In 2018, the Beer Store reported that 96 per cent of all refillable beer bottles sold in Ontario were returned — these bottles are reused an average of 15 times before being recycled into new glass bottles. This is an example of reuse that can easily be expanded.[40]



THE BEER STORE REPORTED THAT 96 PER CENT OF ALL THE REFILLABLE BEER BOTTLES SOLD IN ONTARIO WERE RETURNED.

KEY RECOMMENDATIONS FOR DECISION MAKERS

Federal government

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

Provincial governments

- Support infrastructures that allow the collection and processing of materials for washing and repackaging.

Municipalities

- Adopt by-laws that encourage or mandate that restaurants, food courts, concert and sport venues to supply reusable cups, plates, and cutlery.

Solution #5

Use economic incentives to discourage consumers from using single-use plastics

Fees are an effective way to reduce plastic waste and pollution. The concept is simple: If consumers have to pay for plastic bags, food containers, or coffee cups, they are more apt to use their own reusable items or use a reusable option when offered.

Behavioral economists have been studying the issue for a long time and many companies have used this to their advantage. For example, Tim Hortons and Starbucks offer small discounts for costumers that bring their own cups to their restaurants. However, the discounts are not effective in shifting consumers' behaviors.[41] Meanwhile, when Loblaws decided to implement a plastic bag reduction strategy, it tested both a rebate for costumers bringing their own reusable bag and a fee to purchase a plastic bag. The test resulted in 55 per cent less plastic bags given out when a fee was applied. In comparison, only four per cent less plastic bags were given out when people received a discount for bringing their own bag.[42] Therefore, clearly fees are an effective instrument to reduce single-use plastics.

If Canada mandates the use of fees or allows various levels of government to apply such fees for bags, cups, and containers, the money raised can be used to fund innovative start-ups or reuse models, litter cleanups, and invest in better recycling technologies.

Can it be done?

In Canada, there is no nationally or provincially mandated fee for plastic bags. But fees are in use in Canada and more are being rolled out in future. Supermarket chains like Loblaws have been applying a small fee on bags since 2009. Loblaws claims that it has eliminated more than 11 billion plastic bags from landfill since implementing the fee.[43] The City of Toronto is planning on mandating fees for cups and plastic bags to reduce plastics use.[44] In addition, Ontario applies an environmental tax (8.93 cents) to wine and beer bottles that are non-refillable to encourage reuse.[45]

To date, 30 countries worldwide require charging a levy or a fee to reduce plastic bag use. In 2002, Ireland became one of the first countries in the world to introduce a plastic bag fee. The effect has been dramatic—a reduction in the use of plastic bags by 90 per cent (that's one billion fewer bags used) and EUR 9.6 million generated for a green fund to support environmental projects.[46] Ireland's levy was initially EUR 0.15 but subsequently increased to EUR 0.22 per bag in 2007. The reason for the increase was that, despite the success of the levy, the number of plastic bags used annually had increased from 21 per person in 2002 to 31 in 2006. The impact on the environment has been dramatic. By 2014, plastic bags constituted only 0.13 per cent of litter pollution in Ireland compared to an estimated five per cent prior to the introduction of the levy. As result of the fee, annual bag usage dropped from almost 350 (the number before the levy was introduced in 2002) to 14 per person by 2012.[47] Similar strategies can be applied and expanded to take-out containers, coffee cups, and beverage containers.

KEY RECOMMENDATIONS FOR DECISION MAKERS

Provincial Governments

- Ensure that provincial laws allow municipalities to mandate fees for single-use items and to collect a portion of the fees for better waste management.

Municipalities

- Require all businesses in the hospitality sector to apply a fee for single-use items and use the fees collected to fund waste reduction projects.

Solution #6

Support the recycling industry through recycled content requirements for new products

Recycling is expensive and it has failed to deliver on its promise to turn disposable plastics into new products. With the large supply of subsidized fossil fuels, plastics are cheap to make. Both the federal and the provincial governments subsidize the extraction of fossil fuels and their conversion into single-use plastics.[48] Additionally, the Canadian petrochemical industry is already planning to build or expand facilities that convert fossil fuels into single-use plastics.[49]

To help stimulate demand for recycled plastics and to justify further investment in better recycling infrastructures and technologies, the government must require that plastics producers include a percentage of recycled content in new products. Also, it is crucial that plastics are actually recycled as much as possible (i.e. used to make the same product) and not down-cycled (made into lower quality products that eventually get landfilled). This can be done by introducing legally mandated minimum recycled content requirements. This would ensure that the demand for recycled plastics remains predictable despite the fluctuations of the price of feedstock for virgin materials.

Canada should support the recycling sector by setting a requirement that increases the amount of recycled content in new products or packaging. Alternatively, taxation of fossil-based plastics can be introduced, and the taxes can be decreased as the percentage of recycled content in a product or package increases. In this case, the tax would be zero if the minimum percentage of recycled content is met.[50]

Can it be done?

Several countries (e.g. Italy, Peru, and Colombia) have some obligations to ensure that a minimum amount of recycled content is included in certain plastic products.[51] Many companies have made commitments to have a minimum recycled content for certain plastic products. In Canada, Loblaws[52] and Ice River Springs[53] use 100 per cent recycled plastic for their plastic bottles, while Nestlé committed to 35 per cent recycled content in its plastic bottles worldwide by 2025.[54] Additionally, the signatories of the UK Plastics Pact have committed to include an average 30 per cent recycled content in their plastic packaging by 2025. They also committed that 70 per cent of all single-use plastics will be effectively recycled (or composted) by the same year.[55]

KEY RECOMMENDATIONS FOR DECISION MAKERS

Federal government

- Establish a minimum requirement of at least 30 per cent recycled content for all plastics. This requirement should be achieved by 2025 with an aim of achieving closed-loop recycling.

Federal and provincial governments

- Establish recycling targets to ensure that 70 per cent of plastics collected are recycled (or composted where infrastructures support it) by 2025.
- Define recycling only as closed-loop recycling to make a clear distinction from down-cycling.
- Introduce fiscal incentives to ensure that single-use plastics sold in Canada contain high quantities of recycled content.

Conclusions

Canada cannot continue to rely on a linear economy that sends plastics to landfill, burns them, or lets them escape into the environment. It is a massive waste of resources and environmentally unsustainable. Change is happening and many innovative companies are looking to shift away from a linear economy to a circular one. These companies are showing what's possible. The federal government must move to set standards and ensure that all Canadians can benefit from the circular economy.

Right now, the Canadian government has the chance to be a world leader in creating innovative policies in the areas of plastic waste reduction, reuse, and recycling. It can lead the creation of a real circular economy in which materials are used as much as possible and the extraction of resources is minimized. There is a wide range of solutions available but none of them can solve the problem in isolation. There is an urgent need to reduce the amount of plastic waste that is generated and create incentives to design products and packaging that are durable, reusable, and can be recycled as many times as possible when they reach the end of their useful life.

The plastics crisis is also a chance for Canada to invest in its green technology sector and expand its solid waste recycling infrastructure to turn the tide on plastic pollution, create jobs, and protect the oceans and the Great Lakes.

By implementing these circular solutions, Canada can shift to an economy that is truly sustainable and on track to achieve its goal of zero plastic waste by 2025.

RECOMMENDATIONS

Actions the **federal government** should implement by 2025.

- Include plastics in Schedule I of the *Canadian Environmental Protection Act* (the toxic substances list) due to their environmental harm.
- Ban the use of polystyrene and PVC for packaging because they are problematic for the environment and human health and don't get recycled.
- Ban plastic items that are unnecessary or that can be easily substituted, such as plastic stirrers, plates, bowls, trays, cutlery, cotton swabs, balloon sticks, lightweight plastic bags, and plastic containers that don't have tethered caps.
- Set a 90 per cent collection targets for beverage containers as in the EU.
- Set minimum collection targets for provinces and territories that should be reviewed on a regular basis.
- Support research and development for durable reusable materials (including plastics) and design that can further improve the reusability of packaging.
- Create incentives for the adoption of reusable containers such as taxes for non-refillable containers, and eco-labels and product standards that improve the environmental performance of products and packaging.
- Establish a minimum requirement of at least 30 per cent recycled content for all plastics. This requirement should be achieved by 2025 with an aim of achieving closed-loop recycling.
- Set targets across sectors for reusable packaging.

Actions **all levels of government** should together implement by 2025.

- Introduce consistent reporting requirements to understand what types, and how much, of plastics are made, used, imported, and become waste.
- Introduce definitions of reuse, recycling, and recovery that are consistent with a circular economy as well as definitions for various types of plastics and their use.
- Establish recycling targets to ensure that 70 per cent of plastics collected are recycled (or composted where infrastructures support it) by 2025.
- Define recycling only as closed-loop recycling to make a clear distinction from down-cycling.
- Introduce fiscal incentives to ensure that single-use plastics sold in Canada contain high quantities of recycled content.

RECOMMENDATIONS

Actions that the **provincial and territorial governments** should implement by 2025.

- Expand producers' reporting obligation to include all the products they place on the market (not only what is intended for the residential market).
- Introduce clear and harmonized rules for waste recycling and ensure also the institutional, commercial, and industrial sectors have the duty to separate waste.
- Prohibit the distribution of single-use plastics that cannot be handled by existing infrastructures (e.g. black plastics, mixed plastics, and compostable plastics).
- Set ambitious collection targets based on the collection capacities of the provinces and territories.
- Create fiscal incentives and enforcement strategies to make sure targets are met.
- Create policies that support infrastructures that allow the collection and processing of materials for washing and repackaging.
- Mandate deposit return programs to achieve high collection rates of beverage containers.

Actions that **municipal governments** should implement by 2025.

- Review local waste management plans to achieve reductions in waste generation.
- Adopt by-laws that encourage or mandate that restaurants, food courts, and concert and sport venues supply reusable cups, plates, and cutlery.
- Require all businesses in the hospitality sector to apply a fee for single-use items and use the fees collected to fund waste reduction projects.

GLOSSARY OF TERMS

Circular Economy: Circular Economy is an economy wherein products and materials should be designed with life cycles that are safe for human health and the environment and that can be reused perpetually through biological and technical metabolisms. This definition does not consider incineration or energy-from-waste to be a form of resource recovery or recycling.

Linear: Used in the context of the linear economy; linear refers to any process that follows the straight line of take, make, and dispose. Once a material has been used for its intended purpose it is discarded and lost to the system

Non-recyclable: Non-recyclable refers to products or materials that cannot be recycled, or are not readily recycled.

Recycling: reprocessing, by means of a manufacturing process, of a used packaging material into a product, a component incorporated into a product, or a secondary (recycled) raw material; excluding energy recovery and the use of the product as a fuel (This definition is taken from "ISO 18604:2013 Packaging and the environment — Material recycling".)

Ellen McArthur Foundation: A UK based charity launched in 2010 to accelerate the transition to a circular economy.

Extended Producer Responsibility: an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.[56]

Plastics Pact: The Plastics Pact is a network of initiatives spearheaded by the Ellen MacArthur Foundation that bring together all key stakeholders at the national or regional level to implement solutions towards a circular economy for plastics.

Polymer: Natural or synthetic macro-molecules composed of many repeated sub-units bonded together. Plastics are typically organic polymers.

PVC: Polyvinyl chloride, a type of polymer.

Polystyrene: a type of polymer, also known as styrofoam.

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