OUR STARTING GATE

2020 Baseline Report

Data to inform a circular plastic packaging future for Canada

JULY 2022

CANADA PLASTICS PACT

About the Canada Plastics Pact

The Canada Plastics Pact (CPP) is tackling plastic waste and pollution, as a multi-stakeholder, industry-led, cross-value chain collaboration platform.

Specifically, the CPP is focused on circularity for plastic packaging. The CPP brings together over 85 companies, governments, and organizations across the plastics value chain who are united behind a vision of creating a circular economy in Canada in which plastic packaging waste is kept in the economy and out of the environment. It unites businesses, government, non-governmental organizations, and other key actors in the local plastics value chain behind clear actionable targets for 2025.

The CPP is a member of the Ellen MacArthur Foundation's Global Plastics Pact network. It operates as an independent initiative of The Natural Step Canada, a national charity with over 25 years' experience advancing science, innovation, and strategic leadership aimed at fostering a strong and inclusive economy that thrives within nature's limits.

July 2022

Find out more

plasticspact.ca

info@plasticspact.ca

@CanadaPact

@canadapact

Canada Plastics Pact

Canadapact

Suggested Citation
Canada Plastics Pact (CPP). (2022). *Our Starting Gate: CPP 2020 Baseline Report to inform a circular plastic packaging future for Canada.*

CONTENTS

This is an interactive document. Click on the navigation and contents to explore.

Part 1

INTRODUCTION

A Message from the Advisory Council

In the two years since the CPP began, we are pleased to have united manufacturers and producers, retailers and brand owners, recyclers, processors, governments, not-for-profit organizations, stewardship agencies and industry associations, and academic and research institutions around a common cause—moving toward a circular economy for plastic packaging in Canada.

As part of this effort, we have developed Canada's first comprehensive Roadmap to 2025 focused on this issue that includes four ambitious targets in line with the Ellen MacArthur Foundation's New Plastics Economy framework.

This Baseline Report is an initial step that will be essential for measuring our future progress toward our targets—the first time such a comprehensive baseline of information and data has been established through so many stakeholders across the plastics packaging value chain. It is this kind of collaboration and transparency that will help steer Canada toward a more circular model for plastic packaging at an accelerated pace.

The challenge is complex and will require us to find solutions to harmonize and innovate the needed policies, infrastructure investments, technology and innovation, and supply-chain collaboration. But it is clear that CPP Partners are committed to achieving this.

We are grateful for the ongoing support and focus of the CPP Partners, and appreciate the learnings and support from the Ellen MacArthur Foundation (EMF) and other stakeholders along the way. We recognize that we are just beginning, but we look forward to progressing our commitments to delivering a fully circular economy for plastic packaging in Canada.

CPP Advisory Council Members

Catherine O'Brien
Nestlé
Chair

Jennifer Barbazza
Walmart Canada
Co-Chair

Nicole Fischer
The Kraft Heinz Company
Co-Chair

Paul Tas
NOVA Chemicals

Leonardo Giglio
Tempo Flexible Packaging

Jim Dowham
PAC Global

Kimi Walker
Canadian Tire Corporation

Niki King
Unilever North America

Allen Langdon
Circular Materials

Chris Underwood
National Zero Waste Council

Pascal Lachance
Danone

Crystal Howe
Ice River Sustainable Solutions

Guy West
Alberta Beverage Container Recycling Corporation

Charles David Mathieu-Poulin
Circular Plastics Taskforce and TC Transcontinental

Foreword

The need for circularity has never been clearer or more urgent—and it is evident that the problem of the unsustainable status quo for plastics cannot be solved by any single organization alone.

The purpose of this Baseline Report is to understand where we started, clarify areas of strength, and identify key gaps where we need to work collectively and boldly to address the issue of plastics pollution in the current linear status quo.

Acknowledging the need for concerted efforts and collaboration, the Canada Plastics Pact (CPP) launched in January 2021 with 41 Founding Partners, working toward a common vision for a circular system for plastic packaging in Canada.

Prior to the launch of the CPP, efforts were already underway, as evidenced in this report. However, much of this work was siloed. Fragmented approaches, as well as actors in the system not talking or working together, hindered strategic collaboration. The CPP emerged as a response to the desire within the system to achieve a circular plastics packaging economy for Canada in the absence of a pre-competitive body to convene the system as a whole. As a member of the Ellen MacArthur Foundation (EMF), the CPP is connected to other Plastic Pacts around the world, not only leading local efforts, but also trying to bring harmonization on a global scale.

The purpose of this Baseline Report is to understand where we started, clarify areas of strength, and identify key gaps where we need to work collectively and boldly to address the issue of plastics pollution in the current linear status quo. This report also provides the data we need to measure progress made in the years to come. It captures the state-of-play of the year prior to the launch of the CPP and helps identify where we need to focus our attention going forward. The content of this report is informed by a combination of the quantitative and qualitative survey responses and what we have collectively learned throughout the launch year of the CPP.

In short, we see this 2020 Baseline Report as an important first step toward the longer-term vision of the CPP and its Partners to end plastics waste in Canada. It is also important to recognize, however, that this initial data gathering and reporting exercise has demonstrated notable gaps in the data; primarily, but not limited to, the industrial, commercial, and institutional (IC&I) sector. Current and future efforts will look to address these gaps.

The CPP is committed to transparency and sharing annual data that will help to measure progress towards ending plastics packaging waste in Canada. By becoming CPP members, Partner organizations committed to sharing their relevant data from 2020 to inform this baseline that serves as an initial benchmark. Many CPP Partners used this Baseline Reporting process to collect the data and establish their own internal reporting mechanisms for future years. While it is clear we have a lot of work to do – and quickly – this Baseline Reporting process has set us up well for future reporting, as well as for enabling continuous improvement.

Definitions

While there is considerable work to arrive at a set of nationally agreed definitions and standards (as outlined as part of Outcome 3.2), below is an explanation of some key terms used in this document.[1] As a member of the Ellen MacArthur Foundation's Global Plastics Pact network, these are generally consistent with the extensive work that EMF has undertaken on definitions.

Collected and collection: Plastic packaging received from a consumer, whether residential, business or institutional, following the consumer's use. Collection rate refers to the materials collected as a percentage of materials generated.

Composted and compostable: The breakdown of an organic chemical compound by micro-organisms in the presence of oxygen to carbon dioxide, water and mineral salts of any other elements present (mineralization) and new biomass. A packaging or packaging component is compostable if it is in compliance with relevant international compostability standards and if its successful post-consumer collection, (sorting), and composting is proven to work in practice and at scale.[2]

Generated: Plastic packaging supplied to consumers and available for collection from consumers.

MRF: Material recovery facility.

PCR: Post-consumer resin, plastic that has already been recycled and is ready to use again in new products or packaging.

Plastic Packaging: All products made of plastic used for the containment, protection, handling, delivery and presentation of goods, from raw materials to processed goods, from the producer to the user or the consumer.[3]

Recycled: Plastic packaging that is reprocessed into products, packaging, materials or substances whether for the original or other purposes, excluding energy recovery. The recycling rate is materials recycled as a percentage of materials generated.

Recyclable: A package or packaging component is recyclable if its successful post-consumer collection, sorting, and recycling is proven to work in practice and at scale.[4]

Reuse and reusable: Plastic packaging that is refilled or used for the same purpose for which it was conceived. Packaging is reusable if it has been designed to accomplish or proves its ability to accomplish a minimum number of trips or rotations in a system for reuse.[5]

Sorted: Plastic packaging that is sorted and prepared for shipment to an end-market. Note that shipments typically include a proportion of contamination. The sorting rate is materials sorted as a percentage of materials collected.

[1] These are consistent with the terms used in the CPP Foundation Research and Study of Canadian Plastics Packaging Flows.
[2] See section 4.3 of the EMF New Plastics Economy Commitments, Vision and Definitions
[3] Adapted from https://wrap.org.uk/sites/default/files/2020-12/European-Plastics-Pact-Roadmap.pdf
[4] See section 4.2 of the EMF New Plastics Economy Commitments, Vision and Definitions
[5] See section 4.1 of the EMF New Plastics Economy Commitments, Vision and Definitions

About This Report

As part of our commitment to transparency, Partners that join the Canada Plastics Pact agree to share annual data related to our targets. This is the model for all Plastic Pacts within the EMF network, giving better insights to the global plastic packaging industry.

This Baseline Report provides aggregated data outlining current use of plastic packaging, and actions or initiatives undertaken by Partners in 2020 to align with achieving our targets and delivering on a circular economy for plastics. **This report is not designed to show progress within the CPP to date, nor is it a status update.** Rather, this report reflects existing activity in the year prior to the launch of the CPP and, in particular, the plastics packaging landscape in Canada in 2020.

In total, 41 founding Partners who joined the CPP in 2021 provided data for this report. There were inputs from 21 Signatory Partners, who contributed to the quantitative data presented in this report on specific packaging types, resins, and recycling rates. Their information was complemented by additional qualitative data from the 20 Implementation Partners who are part of the broader plastics packaging ecosystem in Canada.

With this Baseline Report, we aim to provide a common language and understanding of the starting landscape of plastics packaging for the CPP constituency using a consistent set of metrics. Data is a critical component to driving systemic change, and this is the first time the CPP has collected data on this scale across the plastics supply chain. We have collated and published this information to help inform the meaningful and measurable actions required to

About This Report

transform the plastics industry, and to address critical measurements and reporting gaps. Specifically, this baseline information helps us to understand and track the CPP's progress between 2020 and 2025 and inform strategic decision-making for longer-term planning.

This report is anchored around each of the four targets, in the context of a longer journey toward full circularity. We know it is important to execute quickly and effectively on Target 1 and Target 2 if we are to be successful delivering on Target 3 and Target 4. When considering the implications of the findings within this report, it is important to consider what can be done by individual Partner action, as well as actions through our various working groups and within the broader system.

Future CPP annual reports will measure our impact and progress against this 2020 baseline. This will help us continuously identify where changes are most critical and how they could and should be executed to effect greater change.

It is important to note, however, that gaps in data availability and information are significant, particularly with respect to the IC&I sector. Although there is an increasing focus across Canada to undertake research that will help fill some of these information gaps, the issues are complex and challenges remain. These issues will take time to solve, although we are optimistic that the situation will improve with each reporting cycle.

The CPP has **two** primary member categories

CPP Signatories

composed of those businesses that "touch" the plastics packaging value chain, including manufacturers, producers, converters, retailers, recyclers, and processors.

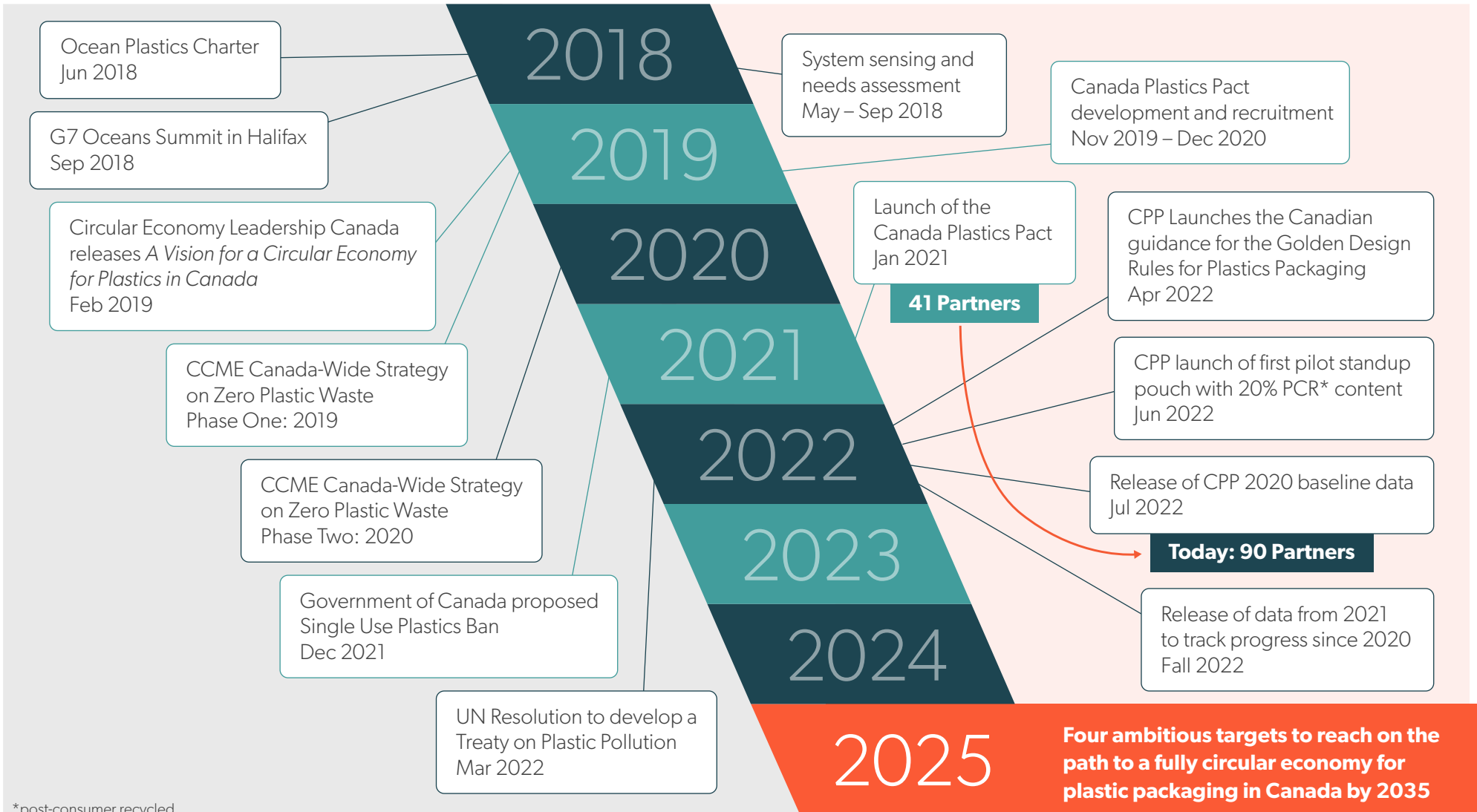
Implementation Partners

who represent the wider system of associated research, policy and standards development, stewardship, and other relevant ecosystem activities.

Timeline

Global and Canadian Context

Canada Plastics Pact Achievements



*post-consumer recycled

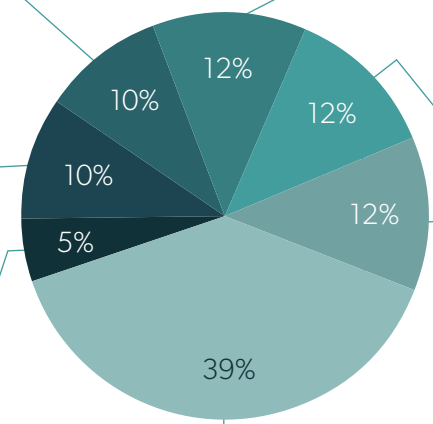
Canada Plastic Pact Partners (2020)

41 CPP partners submitted information for the 2020 Baseline Report, of which approximately 50% were Signatory Partners who provided quantitative data with the balance being Implementation Partners providing more qualitative information.

4 Advocacy NGOs

4 Stewardship Agencies

2 Governments

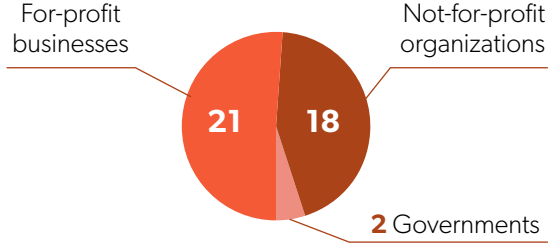


5 Processors / Recyclers

5 Associations

5 NGO / Academic Organizations

16 Retailers/Consumer Goods Producers



CANADA PLASTICS PACT

For a full, updated list please visit
plasticspact.ca/partners

CPP Partners

Thank you to all of the CPP's Partners for their contributions. This list reflects the CPP's Partners as of June 2022. For a full, updated list please visit plasticspact.ca/partners.

SIGNATORIES

The CPP considers Signatory Partners to be business organizations committed to achieving the CPP's four targets.

Aduro Clean Technologies
Bimbo Canada
BOSK Bioproducts
Canadian Tire Corporation
Club Coffee
Coca-Cola Canada
Colgate-Palmolive Company
Co-op
Danone Canada
EFS-plastics Inc.
Emterra Group
erthos
FGF Brands
Fraser Plastics
GDI Packaging Solutions Inc.
General Mills
GFL Environmental
Heffco Elastomers Inc
Ice River Sustainable Solutions
Keurig Dr Pepper Canada
Kimberly-Clark
Kraft Heinz Canada
Kruger Products L.P
Kwik Lok
Loblaw Companies Ltd.
Maple Leaf Foods
Mars Canada
Merlin Plastics
Mondelēz Canada Inc.
Nature's Touch
Nestlé Canada
Polytainers
Primo Water North America – Canada
Pyrowave
Reckitt Benckiser Canada
Ryse Solutions
Save-on-Foods
SPUD.ca
Tempo Plastics
Terracycle
Unilever Canada
Walmart Canada
Wentworth Technologies

IMPLEMENTATION PARTNERS

The CPP considers Implementation Partners to be organizations across the plastics packaging value chain supporting the CPP's vision.

Alberta Beverage Container Recycling Corporation
Canadian Beverage Association
Canadian Beverage Container Recycling Association (Recycle Everywhere)
Canadian Bottled Water Association
Canadian Produce Marketing Association
Circular Economy Leadership Canada
Circular Innovation Council (formerly Recycling Council of Ontario)
Circular Materials
Circular Plastics Taskforce
City of Edmonton
City of Toronto
Cleanfarms
Communauté métropolitaine de Montréal (CMM)
Council of the Great Lakes Region
CSA Group
Dairy Processors Association of Canada (DPAC)
David Suzuki Foundation
Divert NS
Éco Entreprises Québec
Environment and Climate Change Canada
Food, Health & Consumer Products of Canada
Government of British Columbia
GS1 Canada
International Institute for Sustainable Development
Metro Vancouver
Mind Your Plastic
Multi-Material Stewardship Manitoba
Multi-Material Stewardship Western
National Zero Waste Council
Ocean Wise
PAC Packaging Consortium
Pollution Probe
Recycle BC
The Recycling Council of Alberta
Retail Council of Canada
Return-It
Smart Prosperity Institute
The Natural Step Canada
Resource Recovery Alliance (formerly CSSA)
The Recycling Council of British Columbia

KNOWLEDGE PARTNERS

The CPP considers Knowledge Partners to be organizations who provide professional, technical and commercial systems knowledge that is critical to achieving the CPP's targets.

Enerkem
NOVA Chemicals

Our Starting Point

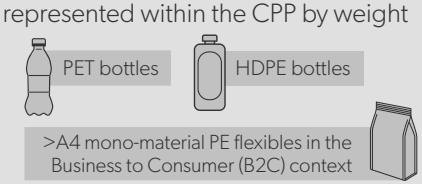
In 2019 Canada generated
1.89 million tonnes
of plastic packaging on to market*

21 CPP Partners
responded with data including
100% of our founding Signatory Partners

At least 11.8%
of plastic packaging
in the Canadian market
was from CPP Partners

222,447 metric tonnes (MT)
total weight of plastic packaging
placed on the market by
CPP's Partners that reported for 2020

Top 3 formats
for plastic packaging
represented within the CPP by weight



*As per the CPP Foundational Report

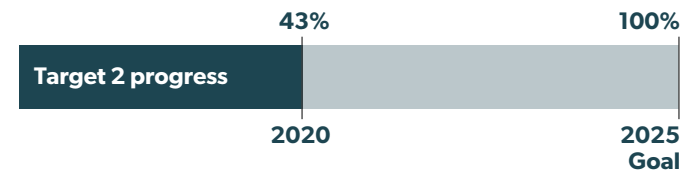
TARGET 1

Define a list of plastic packaging that is designated as problematic or unnecessary and take measures to eliminate them by 2025.

66% of CPP Partners had already taken specific action to eliminate certain types of plastic packaging in 2020.

TARGET 2

Support efforts towards 100% of plastic packaging being designed to be reusable, recyclable or compostable by 2025.



43% of plastic packaging placed on the market by CPP Partners is designated as reusable, recyclable, or compostable.

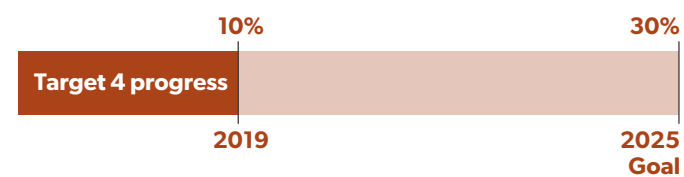
TARGET 3

Undertake ambitious actions to ensure that at least 50% of plastic packaging is effectively recycled or compostable by 2025.

12% of plastic packaging is estimated to have been recycled in Canada in 2019; and only **1%** flexible packaging.

TARGET 4

Ensure an average of at least 30% recycled content across all plastic packaging (by weight) by 2025.



10% was the average amount of post-consumer recycled (PCR) content (by weight) across plastic packaging produced by CPP partners.

Part 2

TARGETS

Actionable Targets for 2025

The CPP is driving toward four targets for plastics packaging in Canada:

Target 1

Define a list of plastic packaging that is designated as problematic or unnecessary and take measures to eliminate them by 2025

Target 2

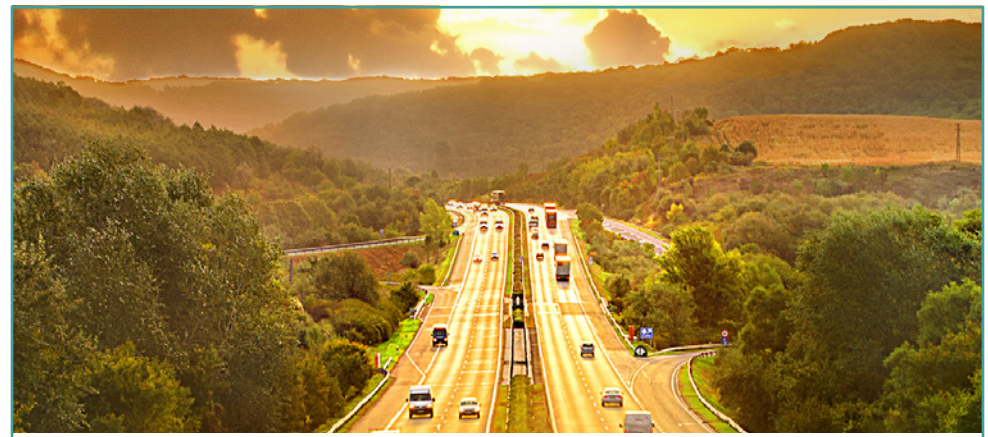
Support efforts towards 100% of plastic packaging being designed to be reusable, recyclable or compostable by 2025

Target 3

Undertake ambitious actions to ensure that at least 50% of plastic packaging is effectively recycled or compostable by 2025

Target 4

Ensure an average of at least 30% recycled content across all plastic packaging (by weight) by 2025



Targets in Today's Landscape

Establishing a circular economy for plastics will mean:

- eliminating unnecessary and problematic plastics packaging
- innovating to ensure that necessary plastics packaging is reusable, recyclable, or compostable
- circulating all plastic packaging items to keep them in the economy and out of the natural environment

We will do this by focusing on the four targets set out by the EMF New Plastics Economy initiative. Because this Baseline Report is based on responses from our Founding Partners, we anticipate the potential scope and influence of the CPP members in relation to the total Canadian market will increase as the network's membership continues to grow in the coming years.

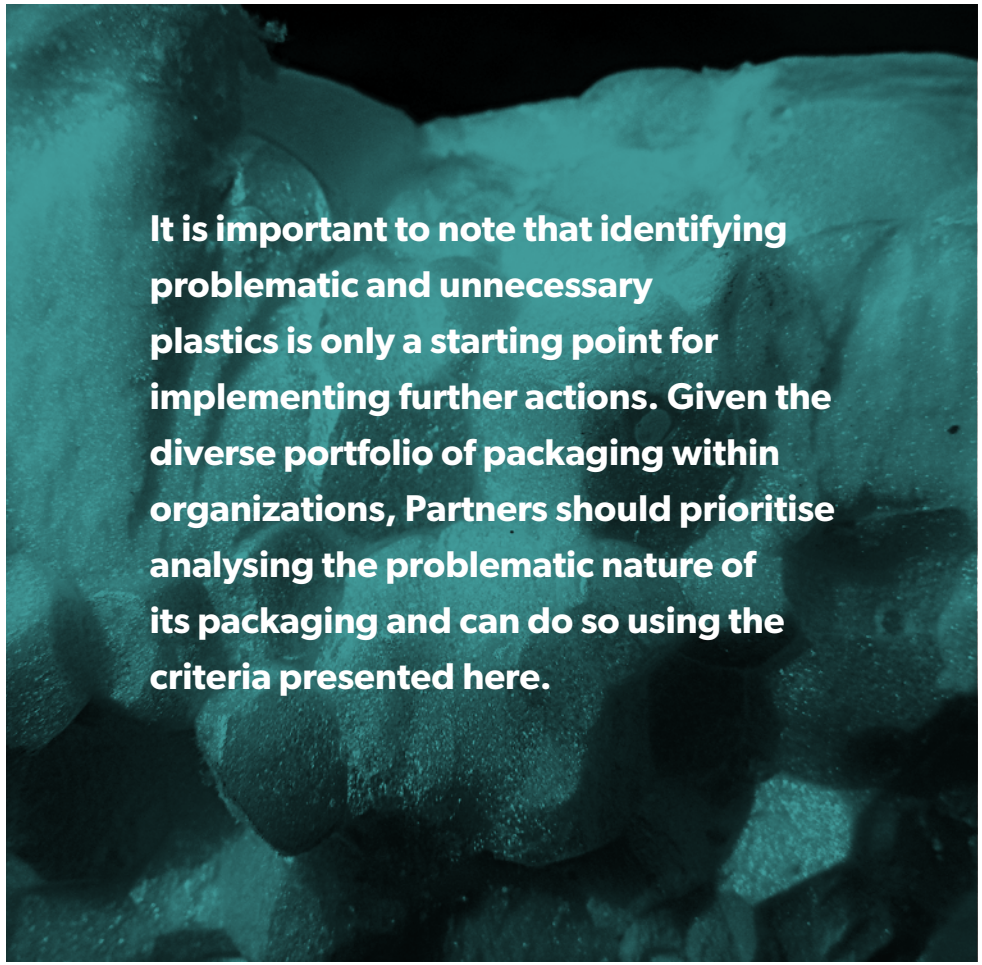
Target 1

Define a list of plastic packaging that is designated as problematic or unnecessary and take measures to eliminate them by 2025.

66% of CPP Partners that contributed to the Baseline Report were taking action to eliminate certain types of problematic plastics

In 2020, many of CPP's Partners were taking actions to eliminate or reduce problematic and unnecessary plastic packaging materials without a path to circularity, taking into consideration the infrastructure required for scalability and collection. This included:

- Developing internal guidance to support the elimination of unnecessary or problematic plastic packaging
- Eliminating single use plastic straws, stir sticks, cutlery, and bags
- Undertaking waste composition audits to understand waste streams and related diversion opportunities
- Educational campaigns focused on multi-use plastics
- Eliminating or reducing uncommon and hard-to-recycle plastics
- Developing baseline metrics for plastic usage in packaging components
- Undertaking procurement reviews of vendor contracts
- Reducing virgin material use through headspace reduction and lightweighting



Target 1

Problematic or Unnecessary Plastics

The CPP is aligned with the Ellen MacArthur Foundation's definition of problematic plastics. Their list of criteria helps identify problematic or unnecessary plastic packaging or plastic packaging components as follows:

1. It is not reusable, recyclable, or compostable
2. It contains, or its manufacturing requires, hazardous chemicals that pose significant risk to human health or the environment
3. It can be avoided (or replaced by a reuse model) while maintaining utility
4. It hinders or disrupts the recyclability or compostability of other items
5. It has a high likelihood of being littered or ending up in the natural environment

Where items are technically considered recyclable but remain on the problematic plastics list, the CPP has taken into consideration end-to-end factors specific to the Canadian market such as access to collection and sorting infrastructure, end markets, and the scalability of existing and near-term technologies and solutions.

Tonnage of problematic items, by categories

2020		
Problematic items	**Tonnage sold annually by reporting CPP members**	**% of tonnage sold annually by reporting CPP members**
Checkout bags	596	8%
Stir sticks	-	0%
Beverage six-pack rings	3	0%
Cutlery	-	0%
Straws	46	1%
Undetectable carbon black	128	2%
PVC/PVDC	82	1%
PETG	68	1%
EPS or PS	6,934	88%
Oxo-degradables	-	0%
Total	**7,857**	**100%**

Target 1

EMF Global vs. Canada Recyclability Assessment

The EMF consults on global recyclability based on its definition. Like the other national and regional Plastic Pacts, the CPP reviews Canada's recyclability assessment using the CPP definitions derived from EMF.

This table highlights which categories of plastic packaging can be considered recyclable in practice and at scale in the Canadian market in 2019.

Global Recyclability Assessment

The table indicates which categories of plastic packaging can be considered recyclable in practice and at scale globally (i.e., currently achieve a 30% post- consumer recycling rate in multiple regions, collectively representing at least 400 million inhabitants), based on the New Plastics Economy 2021 Recycling Rate Survey.

Canadian Recyclability Assessment

Evidence found that a "system for recycling" exists in practice and at scale today (i.e., 30% post-consumer recycling rate is achieved in the Canada Plastics Pact market).

Packaging category	Evidence found that a "system for recycling" exists in practice and at scale today	
	Globally	In Canada
PET Bottle	✔	✔
PET Thermoforms	✘	✔
Other PET Rigid	✘	✔
HDPE Bottle	✔	✔
HDPE Other Rigid	✔	✔
PP Bottle	✔	✘
PP Other Rigid	✘	✘
PE Tubes	✘	✘
EPS Rigid	✘	✘
PS Rigid	✘	✘
PVC Rigid	✘	✘
>A4 Mono-Material PE Flexibles in B2B Context	✔	✘
>A4 Mono-Material PE Flexibles in B2C Context	✘	✘
Other >A4 Flexibles	✘	✘
<A4 PE Flexibles	✘	✘
<A4 PP Flexibles	✘	✘
<A4 Multi-Material Flexibles	✘	✘
Other <A4 mono-material flexibles	No Data	✘

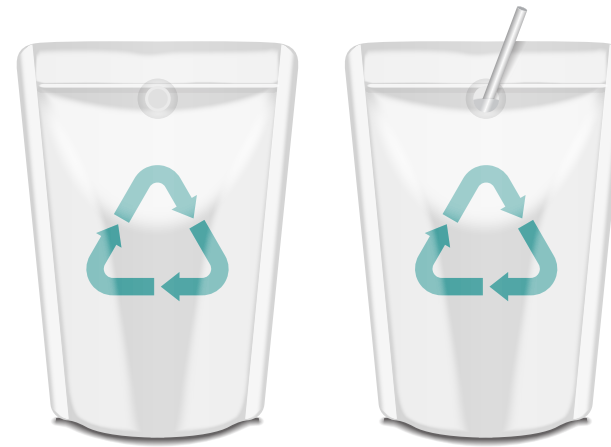
Target 1: Case Studies

Kwik Lok

The Need:
Kwik Lok's bakery customers in Canada were looking for a closure that would work in their existing Kwik Lok closing machines, keep their bakery products fresh and safe, is strong enough to be reusable throughout the life of the product, is metal-free and uses less plastic.

The Solution:
Kwik Lok developed Fibre-Lok, a bag closure made from 100% natural wood fibers. This means there is zero plastic used in manufacturing. The material is standard paper grade that is often used in food packaging. There are no petroleum chemical components or derivatives. The wood pulp used in Fibre-Lok comes only from Forest Stewardship Council certified suppliers and renewable sources. Fibre-Lok is also strong enough that it can be reused throughout the product life to keep food fresh.

ACBRC



Drink pouches, such as juice pouches and the inner bladders from bag-in-box drinks, have been historically hard to recycle. However, ABCRC is working with Canadian cleantech company Enerkem who proposed a solution to recycling these containers, in which the pouches are cryogenically frozen and ground into small pieces that are fed into a chemical recycling process to extract the plastic polymers.

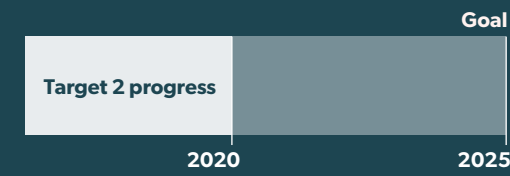
ABCRC provided pouches to Enerkem, to analyze and determine if there may be a viable solution for these containers.

Enerkem has determined that the pilot was successful and ABCRC is in the process of sending more pouches for processing. Next steps include determining the recycling rate and the amount of target material from the pouches that is available after being chemically processed.

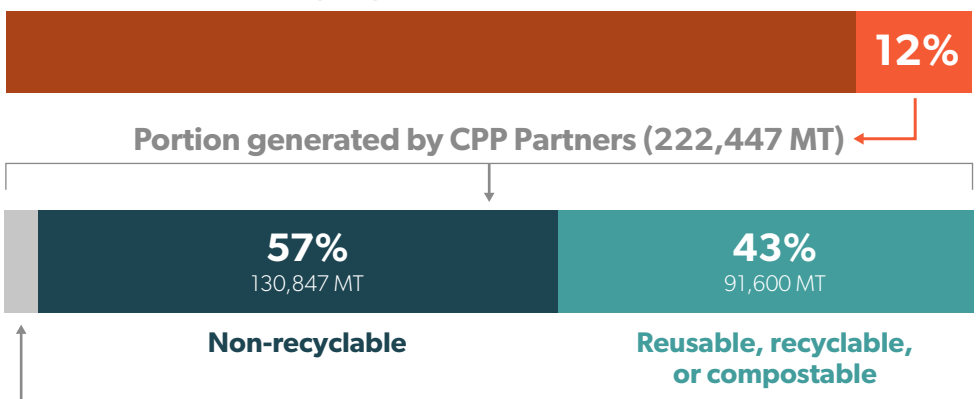
Target 2

Support efforts towards 100% of plastic packaging being designed to be reusable, recyclable, or compostable by 2025.

43% of plastic packaging placed on the market by CPP Partners is designated as reusable, recyclable, or compostable

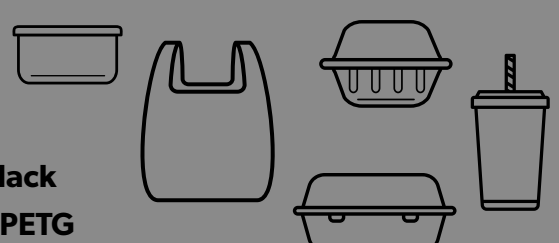


All plastic packaging on the Canadian market in 2020



6% problematic plastics 7,857 MT

Polystyrene
Expanded Polystyrene
Checkout Bags
Undetectable Carbon Black
Straws, PVC/PVDC and PETG



For a detailed breakdown of the above data, see Appendix 1

43% of plastic packaging placed on the market was reusable, recyclable, or compostable. Of this percentage, the top 3 packaging categories were:

- PET Bottles (26%)
- HDPE Bottles (8%)
- PET Thermoforms (4%)

57% of plastic packaging placed on the market was considered non-recyclable. Of this percentage, the top 5 packaging categories were:

- >A4 mono-material poly-ethylene (PE) flexibles in B2B context (9%)
- Other rigid plastics (9%)
- Poly-propylene (PP) other rigid (8%)
- <A4 PE flexibles (7%)
- <A4 multi-material flexibles (6%)

In 2020, Partners had already started taking action to achieve plastic packaging circularity. These data serve as a useful indicator of materials that are considered recyclable and in line with the global recyclability assessment, but are not yet recycled in line with Target 4's 30% goal for recycled content (i.e., PCR) integration, helping to inform which materials we need to move away from in order to achieve a circular economy. There is an urgent need to further this progress: eliminating problematic plastics and finding opportunities to leverage better packaging design, and reviewing existing design factors that inhibit recyclability such as colourants, additives, and labelling.

Target 2

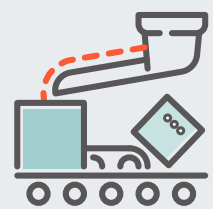
Reuse Models

Forty-one percent (41%) of CPP Signatory Partners reporting baseline data for 2020 confirmed that they had some form of reuse model in place or in progress in 2020.

It is pleasing to see almost half of our reporting Partners were leveraging some form of reuse in 2020, however we still have a long way to go in this space. One of the most effective methods for reducing the consumption of single-use plastic packaging is the introduction of reuse models. In 2020, these solutions were not common at scale in the Canadian market, although it has been recognized as an area with large potential. Reusable packaging is one of the priority focus areas for the CPP and shows promise for investment and expansion.

Defining terms

The CPP refers to terms such as "reusable," "recyclable," and "compostable." These common definitions are aligned with the EMF Global Commitment Definitions. Partners of the CPP agree to use and refer to this terminology as a basis for their commitments and reporting progress. Additionally, these plastic packaging designs need to be in practice and at scale:



In practice

A significant recycling rate is achieved for that type of packaging.

At scale

Proof needs to be more than a lab test, pilot, or a single small region. It needs to be proven to work, in practice, in multiple regions. This is to indicate that the recycling in practice is replicable and effective, therefore "at scale" means at least 30% of what is put on market is recycled.

Common actions

Reuse model expansion

Amendment to label formats

Supplier engagement

Removing colour additives

Removing problematic materials

Some examples of steps already taken by CPP Partners in 2020 that align with this target area included:

- Developing and launching new packaging standards
- Developing recycling education and information that is readily available, standardized, and digestible for consumers
- Increased collaboration between brands, suppliers, and retailers to find innovative solutions around recyclable, reusable, and compostable packaging
- Investing in R&D to develop recyclable polymers and compostable materials, which are recyclable in practice and at scale
- Business-to-consumer (B2C) reuse programs and pilots with a view to execute at a broader scale
- Business-to-business (B2B) reuse programs increasing across food and retail chains

Kraft Heinz / CLUB COFFEE

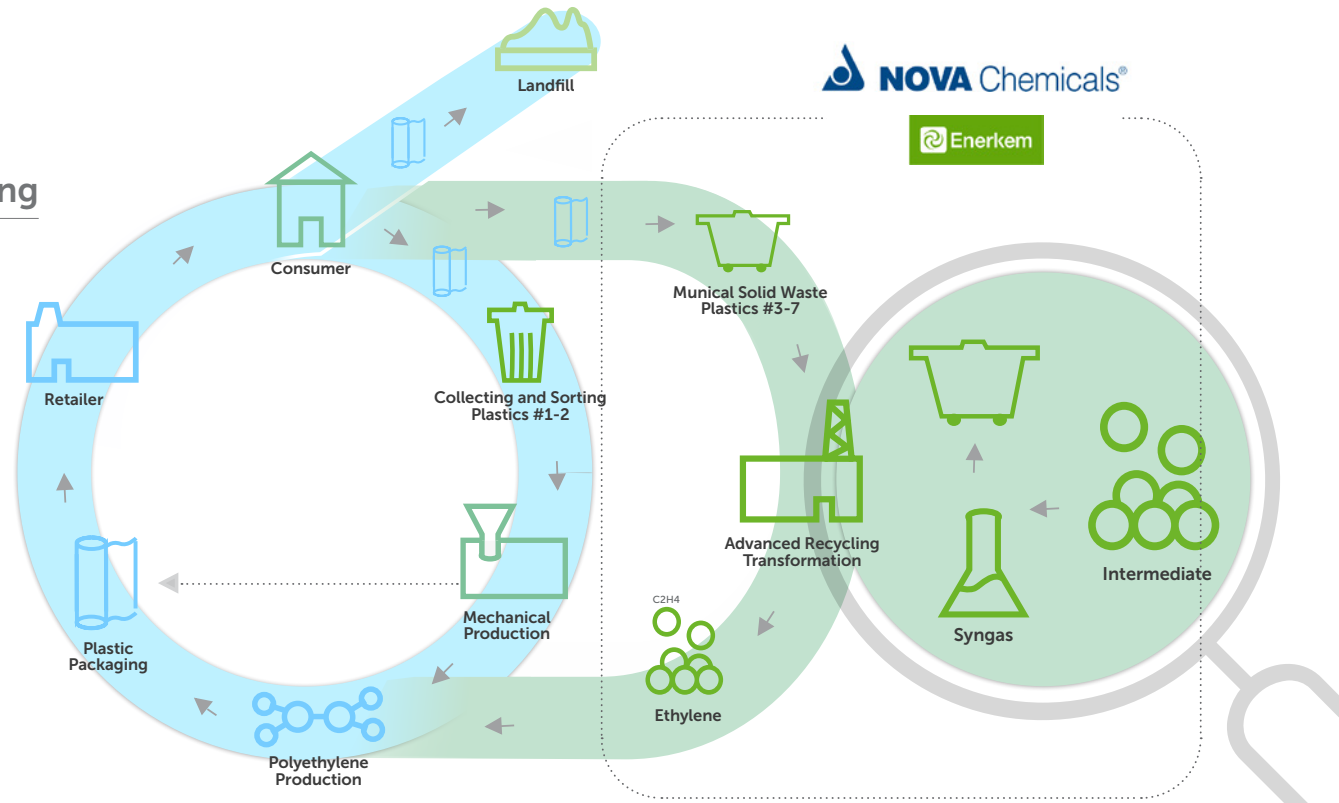
Kraft Heinz wanted to help Canadians reduce their waste without sacrificing on the convenience of single serve coffee pods or the rich flavor of the coffee they know and love. As a result they partnered with Club Coffee to transition from plastic to 100% compostable coffee pods on both the Maxwell House and Nabob brands. Made from plant-based materials, all pod components and its inner bag are 100 percent compostable, plus the outer carton is 100 percent recyclable. The compostable coffee pods are made up of 85 percent coffee grounds with a paper lid, a coffee filter made from cornstarch and a plant-based compostable ring made from over 20 percent coffee bean husks. Certified by the Biodegradable Products Institute, this designation verifies that the compostable coffee pod meets global scientific standards for industrial compostability and is formulated to break down in a period of about seven weeks.

Target 2: Case Study

Enerkem / Nova

NOVA Chemicals and Enerkem Closing the Loop on Plastics Recycling

Alberta-made Chemical Recycling Technology Moving to Pilot Stage

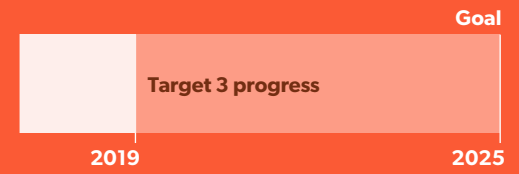


Since 2020, Enerkem Inc and Nova Chemicals have been working together to explore advanced recycling pathways that will play a critical role in increasing recycling rates for mixed and laminated plastic materials, as well as highly contaminated plastics typically found in municipal solid waste and food packaging. In order to maximise carbon efficiency, Enerkem and Nova are focusing on pathways that use carbon from non-recyclable plastic and waste and return that carbon back into plastic products that can be used directly in the current supply chain. In addition to traditional advanced recycling pathways (methanol to olefins, and ethanol to ethylene), Enerkem and Nova have identified a pathway that converts syngas directly to the raw materials that are used by existing infrastructure to make plastics. In 2021, the team secured funding from Alberta Innovates and TIER to accelerate development of this new advanced recycling process. The development continues to progress and holds great promise in enabling the recycling of mixed and highly contaminated plastics to new, virgin grade materials that can be used in the existing plastics manufacturing processes.

Target 3

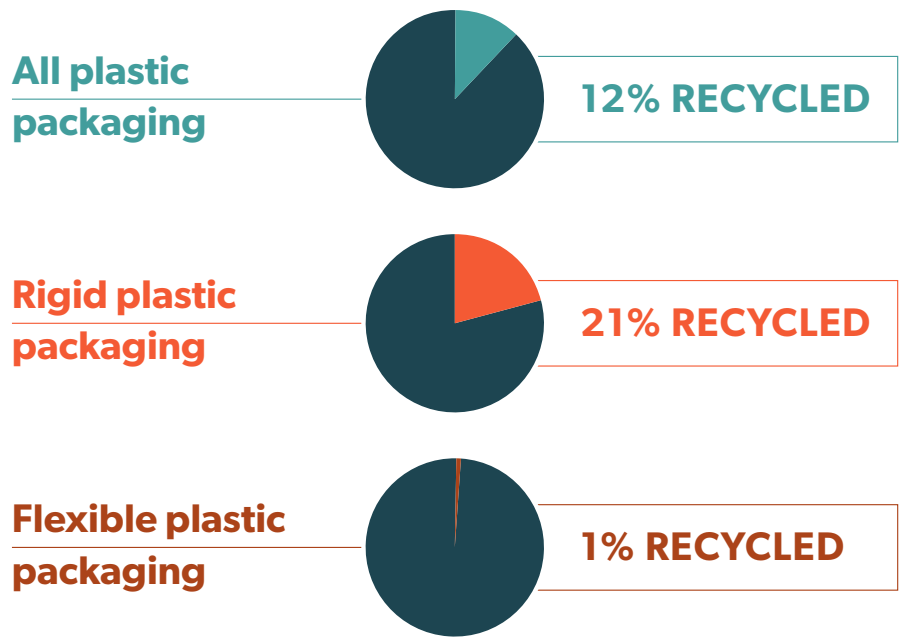
Undertake ambitious actions to ensure that at least 50% of plastic packaging is effectively recycled or compostable by 2025.

12% of plastic packaging is estimated to have been recycled in Canada in 2019[1]



This target is difficult to measure in today's landscape because it is an external measurement and harder to control. In this sense, it is an outlier relative to the other targets. We therefore used the CPP Foundational Report to identify a baseline recycling rate of 12% as the national recycling rate in Canada in 2019. Of this, 21% of rigid plastic packaging is recycled and just 1% of flexible plastic packaging.

As the CPP continues to mature and invest in enhanced information and data collection, our ability to collect data for both the recycling and composting rates of plastic packaging will improve. In 2020, we found that PET bottles, HDPE bottles, and larger mono-material flexible packaging are the top-three plastic packaging materials represented within the CPP by tonnage. Given these items represent almost 45% of the plastic packaging generated by our reporting Partners in 2020, we need to understand how effectively these are being recycled.



Estimate for Canada, 2019

1. Canada Plastics Pact 2019 Foundational Report; This is the national Canada rate and not specific to reporting CPP Partners in 2020.

Target 3

The extended producer responsibility (EPR) frameworks emerging in many provinces will incentivize reuse, recyclability, and redesign for lower environmental impact. They may also offer flexibility for deposit return systems (DRS) to increase beverage packaging recycling rates. The success of Target 3 is an important dependency for Target 4, driving the supply of quality PCR content across plastic packaging, thus advancing towards a circular economy.

In order to deliver against Target 3, CPP Partners identified through the survey for this Baseline Report a number of enabling factors, including:

- Greater access to recycling at places of residence, work, education, and infrastructure within the general public
- Increased drop-off programs
- Collection of film and flexible packaging for recycling via all recycling means, including drop-off collection and standard residential programs such as curbside collection
- Improved labelling and education to enhance consumer understanding of recycling process
- Simplified packaging to reduce likelihood of consumer error when recycling
- Investments in infrastructure and technologies, including Artificial Intelligence, infra-red and digital technologies, and robotics for material sorting

Target 3: Case Study

Walmart Canada

In January 2019, Walmart Canada launched their Charter on Plastics as part of a commitment to reduce plastic waste across our operations. The Charter is part of Walmart's three-pronged approach to reduce plastic waste (use less plastic, increase recycling, support system improvements) and includes a goal to become the first Canadian retailer publicly committing to using How2Recycle labels on all our own private brand products by 2025.

Walmart encourages their national brand suppliers to make similar commitments through their Project Gigaton platform and launched the Recycling Playbook to provide guidance on packaging best practices. Their merchants also engage with suppliers to develop more recyclable packaging—including labelling packaging with consumer-friendly recycling information, such as the H2R logo.

Target 4

Ensure an average of at least 30% recycled content across all plastic packaging (by weight) by 2025.

10% average post-consumer recycled content (by weight) across plastic packaging produced by CPP Signatory Partners in 2020.

In order to deliver against this target, CPP Partners need to take responsibility for that which is within their control, while CPP continues to work with policy-makers on legislative changes. The commitment is to prioritise post-consumer resin content packaging while also considering:

- Quality of material
- Cost-effectiveness
- Ease of production
- Food safety regulations
- Consumer affordability
- Material resilience & performance
- Continuous improvement

CPP Partners have made commitments to increase the purchase and integration of recycled content. This is critical to increasing demand for recycled materials. As mandates in this space continue to develop, in principle, so does the access to quality PCR content. However, this also comes with challenges. If Partners are to deliver on this target, it is essential there is a sufficient supply of high-quality PCR content available. This concern was a prevalent theme in the survey responses across all sizes of business. Many expressed concerns that those who were currently using a significant percentage of PCR within their portfolios might struggle to continue to do so if demand increases in line with regulatory mandates, exceeding available supply of PCR and causing some portfolios to take a step backwards. At present, there is not sufficient supply, further highlighting the interdependencies between Targets 3 and 4. In order to take steps to solve for this, we will need to understand the size of this gap, and the packaging categories most affected.

PCR mandates are important drivers to increase demand for PCR content; the dependency on Target 3 to drive the supply of this content is also acknowledged. This also aligns with Target 2, achieving 100% reusability, recyclability, or compostability by 2025.

Target 4

Average recycled content by categories

Packaging category	Plastic tonnage total (MT)	Recycled content tonnage (MT)	Recycled content (%)
PET Bottle	58,295	17,085	29%[1]
PET Thermoforms	9,170	522	6%
Other PET Rigid	2,286	83	4%
HDPE Bottle	17,225	2,182	13%
HDPE Other Rigid	4,625	73	2%
PP Bottle	6,445	38	1%
PP Other Rigid	16,715	108	1%
PE Tubes	416	-	0%
EPS rigid	2,016	65	3%
PS rigid	7,806	328	4%
PVC rigid	1,874	1	0%
Other rigid plastic	20,841	1,839	9%
>A4 mono-material PE flexibles in B2B context	6,183	85	1%
>A4 mono-material PE flexibles in B2C context	21,120	-	0%
Other >A4 flexibles	2,750	62	2%
<A4 PE flexibles	14,655	97	1%
<A4 PP flexibles	3,162	-	0%
<A4 multimaterial flexibles	14,435	12	0%
Other	12,429	8	0%
Total	**222,447**	**22,590**	**10%**

In 2020

reporting CPP Partners had an average of

10% recycled content

across all types of plastic packaging

Packaging categories with highest percentage of recycled content:

29% PET bottles

13% HDPE bottles

9% Other rigid plastics

6% PET thermoforms

4% PS rigid

4% Other PET rigid

Average recycled content by packaging group

Packaging group	Plastic tonnage total (MT)	Recycled content tonnage (MT)	Recycled content (%)
Rigid	147,713	22,325	15%
Flexible	62,305	256	0.4%
Other	12,429	8	0.1%
Total	**222,447**	**22,590**	**10%**

1. This means that of the overall plastic tonnage placed on the market for PET Bottles, 29% of it was made up of recycled content. For a detailed breakdown of this data, see Appendix 2.

Target 4: Case Study

Ice River

Ice River Sustainable Solutions is a Canadian, family-owned, and operated company with a unique perspective on the circular economy. Recycling PET for over a decade and being involved in each step of the value chain allows us to fully understand the impact that one process has on the next and drove us to venture into LDPE recycling. In 2018 we invested in state-of-the-art blown film technology so that we could start introducing recycled content into our own collation shrink film. We produce thin gauge, high strength engineered film that reduces the plastic required to package heavy products. In 2020, we achieved 20% recycled content to help build a stable end market that keeps flexible film in the value chain and out of the environment. Because we own and operate our own facility, we can test and develop new processes that support advancement in film recycling technology and drive improvements in domestic recycling with a future goal far beyond 20%.

BMP Extrusion blowing 20% recycled content shrink film (above); 100% recycled content PET bottle with 20% recycled content film (right).

Part 3

CONCLUSION

Key Takeaways and Actions

As in all complex efforts around systems change, there are both opportunities and challenges: all challenges are opportunities for learning, growth, and transformation.

The following are key areas of importance that will affect the CPP's ability to accelerate the transition from a linear to a circular plastics packaging economy in Canada. Effective and generative collaboration is how we will unlock the value of each.

Policy, regulatory & standards landscape

Currently, the policy, regulatory, and standardization landscape for plastics packaging in Canada lacks coherence and is somewhat fragmented. Differences in jurisdiction, levels of authority, and, at times, conflicts between municipal, provincial, and federal policies and regulations, and standards create barriers, issues, and inherent risks for investment in and the scalability of solutions.

Ultimately, we aim to see common definitions, performance standards, policies and regulations, and measurement and assessment protocols that create administrative efficiencies, reduce transaction costs for participants in the plastic packaging life-cycle, support innovation around redesign and alternative options, and facilitate the scale-up of reverse supply chains for the recovery and recycling of secondary materials.

Therefore, the CPP will focus on building relationships and trust between key actors; stewarding cross-value chain conversations designed to inform and harmonize policy development at all levels of government; and commission research to build common definitions and understandings across the value chain.

Key Takeaways and Actions

Infrastructure & technology investment

Currently, there are significant challenges to recirculating certain plastics, both in the supply of plastics to the recycling system, as well as on the demand side. Additionally, there are technical challenges that go beyond supply and demand: if PCR cannot be safely integrated into packaging then we know demand will be limited. Based on CPP member feedback from the baseline report survey, there are inconsistent collection systems across all provinces and jurisdictions, which create consumer confusion and insufficient investments in the needed sorting and recycling infrastructure.

Ultimately, there is a need to scale-up national and international recycling supply chains for the collection and sorting of Canada's plastic packaging. To do this, we need producer-funded, regional recycling programs to drive scale in the collection, consolidation, transfer, sorting, and processing of materials; considering innovative solutions to change behaviours. We need harmonized EPR programs at scale. Finally, we need Materials Recovery Facilities (MRFs) to develop and implement state-of-the-art technologies and infrastructure to ensure the maximum value is recovered from packaging materials and resources.

Therefore, there is a need to improve and innovate a functional and effective collection system, and enhance both the sorting and recycling systems. Together, the CPP will focus on improving the quality of inputs to the recycling system by supporting industry-wide adoption of circular packaging design standards; gather and share evidenced-based research to ensure producers and others that are financing the recycling system have the best information to make infrastructure investment decisions; and continue to work closely with key actors to better understand barriers to recycling and how we can inform relevant policies.

Key Takeaways and Actions

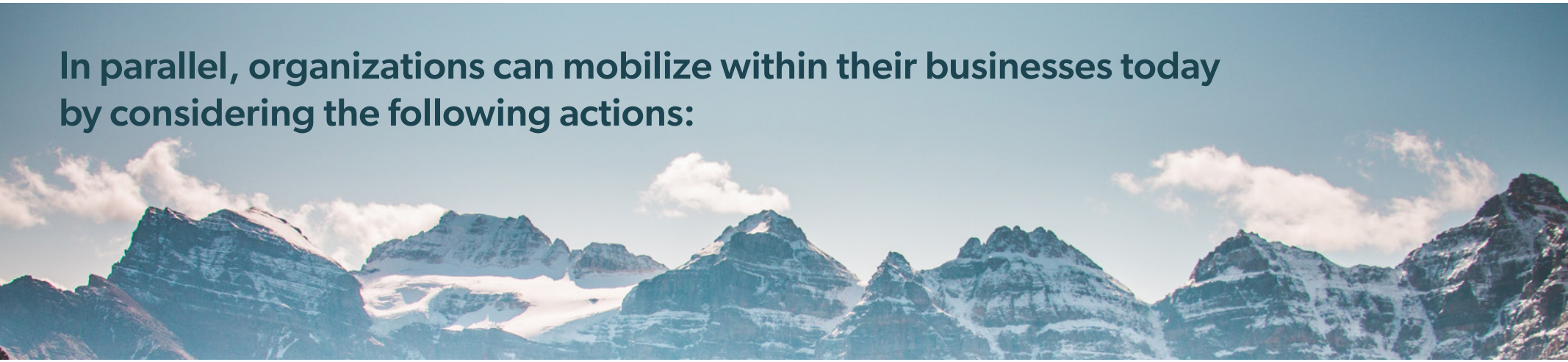
Supply chain collaboration & information sharing

Currently, there are significant challenges to identifying the most crucial activities and strategies to accelerate the circular economy transition for plastic packaging. There is an absence of common language, poor communication between key actors, and a lack of information for many resins and packaging formats about what is being generated, where it goes, how it is used, and how it is collected and recycled. This is particularly the case for the institutional, commercial, and industrial (IC&I) sector, which is responsible for up to 52% of all plastic packaging put on the Canadian market, only 5% of which is recycled.

Ultimately, we want an integrated supply chain of production and recycling for plastic packaging in Canada, with strong collaboration across stakeholders. This can lead to a mature market for accessing PCR materials to meet an increasing demand for recycled content by Canada's producers and retailers.

Therefore, we need to prioritize upstream innovation in addition to downstream changes in the recycling system. The CPP will continue to support businesses undertaking portfolio-wide changes to eliminate unnecessary and problematic plastics packaging. Organizations need to enable rapid piloting, testing, and scaling of returnable, refillable, and reusable packaging systems to supplement and reduce the need for recycling. And, we need to collaborate across the value chain to boost demand for recycled resin through focused efforts to address some of the technical challenges for incorporating resins, particularly in food and beverage-related and flexible applications. The CPP will also work with key actors to drive investment into better real-time data and monitoring.

In parallel, organizations can mobilize within their businesses today by considering the following actions:



Portfolio changes

Responses provided many examples of businesses assessing their portfolios and making changes to plastic packaging by identifying and eliminating unnecessary plastics and those that remain problematic for recycling systems. It is vital that these activities continue to take place, at scale. While there are many external factors outside the immediate control of our Partners, taking action to technically design packaging for recyclability is something companies do have within their control. Examples shared through the CPP baseline survey of changes to reduce contamination in 2020 included:

- Sizes and dimensions that are too small to be mechanically sorted
- Multi-material or multi-layer packaging
- Packaging of similar design made from different resins
- Incongruent labels
- Adhesives, non-bleeding inks, and additives
- Heavily pigmented packaging
- Consumer confusion with inconsistent or inaccurate labelling

Pilots

We are encouraged by the number of pilots that were already underway in 2020 prior to the launch of the CPP, and we must leverage the CPP community to increase business engagement in rapid pilots and testing to develop viable, scalable solutions for returnable, refillable, and reusable packaging systems to supplement the need for recycling.

Knowledge share and collaboration

Exchange of information, co-learning and pre-competitive collaboration to advance a circular plastics packaging economy must be prioritized, within the bounds of competition guidelines.

Procurement and vendor guidelines

Partners can and should review and refine the plastics packaging principles their procurement and vendor guidelines have in place and ensure they are helping to stimulate and signal the drive toward circularity.

Looking Ahead

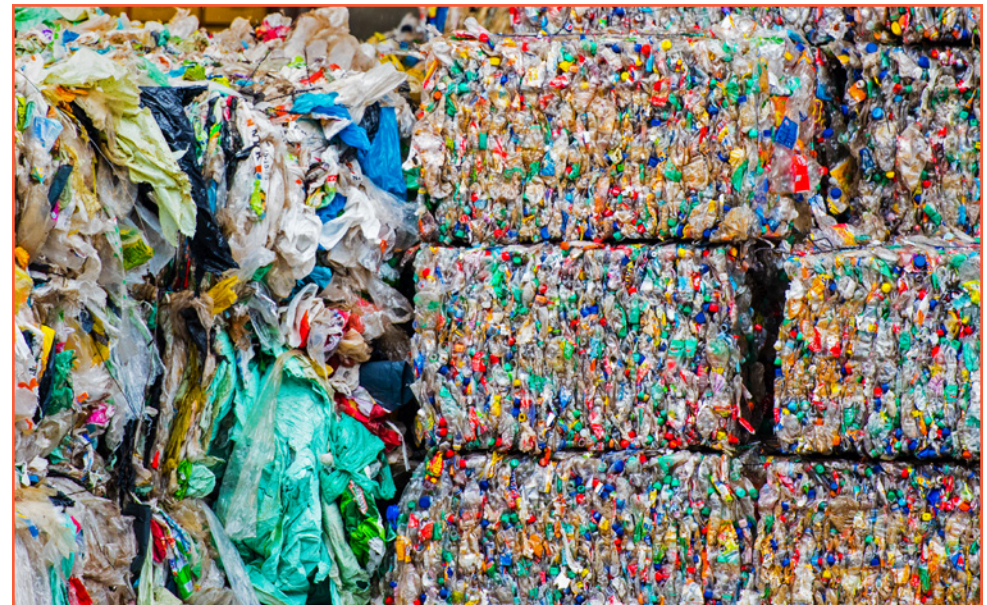
Canada's transition to a circular economy was advanced with the launch of the Canada Plastics Pact in January 2021. The vision for this transformation, as well as the four targets that will make that vision a reality, are clearly articulated in our Roadmap to 2025. We share a common goal to end plastic waste and pollution, and in order to do this, we must continue to create value, hold each other accountable, and drive systems change.

The Bottom Line

This 2020 Baseline Report serves as a source of motivation and guidance by providing benchmark data and a snapshot of case studies that lay the groundwork for future action. Future annual reporting by the CPP will measure progress against this baseline data toward the targets in our Roadmap to 2025.

It is clear there is an increasing demand from all players across the full plastics packaging value chain to improve the system, and we are optimistic that we will deliver on the key opening moves in our Roadmap through the remainder of 2022 and beyond. We are pleased with the level of information and transparency provided in the data responses, and it is encouraging to see the activities that were already underway prior to the launch of the CPP, including:

- Efforts to increase the use of PCR content in plastic packaging
- Shifts away from non-recyclable plastic packaging
- Innovation to increase efficiencies within the recycling process
- Pilots for reuse and other technologies
- Increased education and awareness campaigns to make recycling easier for Canadians



The Road Ahead: A Long Way from Circularity

It is important to acknowledge that the data presented in this Baseline Report highlight the challenges we face. We are a long way from circularity, underpinned by the fact we are starting with just 10% average use of PCR content and only 12% of packaging being placed on the market being recycled.

It is equally important to recognize the limitations of this Baseline Report given the notable data gaps as a result of the relative immaturity of the processes and mechanisms in place today. Through continuous improvement, these gaps are expected to decrease over time, but this is not something that will happen quickly and, until then, there will be limitations to the data collected and reported out in our annual reports.

Achieving Full Circularity Together

The CPP launched in 2021 with 41 founding Partners, since then we have approximately 90 stakeholders across the plastics packaging value chain in Canada that have come together to focus on increasing circularity, while eliminating waste and pollution.

Since our launch, we have seen an increase in collaboration across organizations to share knowledge, best-practices, and implement pilots. In 2022, we launched the Canadian guidance for the Golden Design Rules for Plastics Packaging. We have done this despite unprecedented times in an uncertain environment, including the COVID-19 pandemic which is disrupting supply chains, influencing behaviours, and shifting business priorities.

There continues to be a clear need to address solutions around composting, food-grade resin, reusable packaging options, and quality supplies of recycled plastic materials. Priority areas for the CPP to activate in order to support a circular economy for plastics packaging in Canada include:

- Harmonization of policies, regulation, and standards, to drive ecosystem-wide transformation
- Extended Producer Responsibility (EPR) for packaging
- Mandates for post-consumer recycled content
- Pilots for scalable solutions and demonstration proof-of-concepts for reuse, collection, sorting, and recycling
- Technology assessments and scale-up, as well as infrastructure investment
- Data and measurement systems and information sharing platforms
- Cross-sectoral collaboration between value chain actors
- Continued reduction of problematic and unnecessary plastic packaging

Achieving Full Circularity Together

A circular economy for plastics packaging will depend on our willingness to challenge ourselves, and each other, to continuously look for more effective solutions and systems change. We will do this by committing to open ourselves to new ideas, to think differently, to be transparent, and to have open and brave conversations. We welcome all actors in the plastics packaging ecosystem to join us on this collective journey. We cannot do this alone and will only achieve full circularity for plastics packaging together.

Join the Canada Plastics Pact

Everyone has a vital role to play in realizing a circular economy for plastics.

Contact us

Plastic waste is no longer viable.
The future of plastics is circular.
Together, let's make that future a reality.

Find out more

plasticspact.ca

info@plasticspact.ca

@CanadaPact

@canadapact

Canada Plastics Pact

Canadapact

TAKE ACTION

CANADA PLASTICS PACT

APPENDICES

Appendix 1

Target 2: Recyclable vs Non-recyclable plastic packaging

Packaging category	Recyclable (MT)*	Non-recyclable (MT)*	Total (MT)*	Total (%)*
PET Bottle	58,295	-	58,295	26%
PET Thermoforms	9,170	-	9,170	4%
Other PET Rigid	2,286	-	2,286	1%
HDPE Bottle	17,225	-	17,225	8%
HDPE Other Rigid	4,625	-	4,625	2%
PP Bottle	-	6,445	6,445	3%
PP Other Rigid	-	16,715	16,715	8%
PE Tubes	-	416	416	0%
EPS rigid	-	2,016	2,016	1%
PS rigid	-	7,806	7,806	4%
PVC rigid	-	1,874	1,874	1%
Other rigid plastic	-	20,841	20,841	9%
>A4 mono-material PE flexibles in B2B context	-	6,183	6,183	3%
>A4 mono-material PE flexibles in B2C context	-	21,120	21,120	9%
Other >A4 flexibles	-	2,750	2,750	1%
<A4 PE flexibles	-	14,655	14,655	7%
<A4 PP flexibles	-	3,162	3,162	1%
<A4 multimaterial flexibles	-	14,435	14,435	6%
Other	-	12,429	12,429	6%
Total	**91,600**	**130,847**	**222,447**	**100%**

* sold annually by reporting CPP members

Appendix 2

Target 4: Recycled Content in Plastic Packaging

Packaging category	Plastic tonnage total (MT)*	Recycled content tonnage (MT)*	Recycled content (%)*
PET Bottle	58,295	17,085	29%
PET Thermoforms	9,170	522	6%
Other PET Rigid	2,286	83	4%
HDPE Bottle	17,225	2,182	13%
HDPE Other Rigid	4,625	73	2%
PP Bottle	6,445	38	1%
PP Other Rigid	16,715	108	1%
PE Tubes	416	-	0%
EPS rigid	2,016	65	3%
PS rigid	7,806	328	4%
PVC rigid	1,874	1	0%
Other rigid plastic	20,841	1,839	9%
>A4 mono-material PE flexibles in B2B context	6,183	85	1%
>A4 mono-material PE flexibles in B2C context	21,120	-	0%
Other >A4 flexibles	2,750	62	2%
<A4 PE flexibles	14,655	97	1%
<A4 PP flexibles	3,162	-	0%
<A4 multimaterial flexibles	14,435	12	0%
Other	12,429	8	0%
Total	**222,447**	**22,590**	**10%**

* sold annually by reporting CPP members