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# **Standing Committee on Environment and Sustainable Development**

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**EVIDENCE**

**Wednesday, April 10, 2019**

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**Chair**

**Mr. John Aldag**



## Standing Committee on Environment and Sustainable Development

Wednesday, April 10, 2019

• (1535)

[English]

**The Chair (Mr. John Aldag (Cloverdale—Langley City, Lib.)):** Good afternoon, everyone. Welcome to our study on plastic pollution.

Welcome to our witnesses. We'll begin in just a minute.

For those of you who have been at committee before, you may be familiar with the card system. Here we use the yellow card when you have one minute left in the time you've been given for your opening statement or the round of questions, and then the red card simply means you're out of time. Don't stop mid-sentence, but wind it up, and we'll move on to the next person.

We have Mr. Matt Jeneroux joining us today. Welcome, Matt.

**Mr. Matt Jeneroux (Edmonton Riverbend, CPC):** My pleasure, thank you.

**The Chair:** I think you're our only guest today.

We're going to start with our witness Dr. Peter Ross from Ocean Wise, by video conference. We'd like to do that because we have the technology working, so we'd like to jump into it.

From there, we'll move to our witnesses who are here with us. We'll probably go with Jim Goetz from the Canadian Beverage Association, and then we'll hear from the Chemistry Industry Association of Canada, with Bob Masterson and Isabelle Des Chênes. Then our colleague Nathan Cullen will get in there as well for opening statements.

Everyone has been given 10 minutes. If you take less time, it gives us more time for questions and answers. I'll let you know when your 10 minutes is up for each of the opening statements, and then we'll go into a series of six-minute rounds of questions.

With that, Dr. Ross, I'll turn it over to you to start us off.

**Mr. Peter Ross (Director, Ocean Pollution Research Program, Ocean Wise):** Thank you very much.

I'm delighted to join you today from rainy Vancouver via video link. My apologies for not being there in person.

My name is Dr. Peter Ross. I'm vice-president of research at the Ocean Wise Conservation Association in Vancouver.

We at Ocean Wise, formerly the Vancouver Aquarium, have been showcasing for over 25 years the harm that plastic can cause.

Through a range of research, engagement and action initiatives, we have engaged individuals, communities, the private sector and the public sector in a number of positive, practical and solution-oriented ways. We believe that in order to solve the plastic pollution crisis, we need a team approach, one that is inclusive and speaks to the role and the potential of each and every Canadian. After all, plastic is all around each and every one of us: at home, at school, at work, at play and on the road.

I'll simply touch on a few key points that are important to us and salient in terms of the plastic pollution crisis, and steps that we can take as a country.

The first point I'll make is that plastic is everywhere. The plastic pollution issue is widespread and very real. Our great Canadian shoreline cleanup has been documenting the "dirty dozen" items on beaches across Canada for over 25 years. Our plastics laboratory first documented the widespread distribution of microplastics in the north Pacific Ocean in 2014, and we are currently finding tiny microplastics throughout the waters of the Arctic Ocean. Simply put, plastics of all sizes, shapes and kinds are found everywhere in the Canadian aquatic environment.

Second, plastic is being consumed by all creatures, big and small. Everywhere we look, we find plastic: from rubber boots found in the stomach of whales to microplastics found in oysters. Our researchers even discovered that zooplankton, the foundational group of animals that sustain life in the ocean, are mistaking tiny pieces of plastic for food in the north Pacific Ocean. Plastic now appears to be found throughout aquatic food webs.

Third, plastic is harmful. In that, I refer to plastic pollution being harmful. Plastic is frequently confused for food by albatross and sea turtles—as we've known for decades—and it represents a serious conservation threat to several species and populations. Plastic can block or damage the gut; it can smother, suffocate or drown; it can entangle, slow down or get in the way; it can deliver a cocktail of endocrine-disrupting chemicals to the consumer. Simply put, plastic is not nutritious. Our marine mammal rescue team, together with the Department of Fisheries and Oceans, has been disentangling sea lions off the coast of British Columbia for several years, a costly and dangerous operation that is important but cannot deal with the many hundreds of marine mammals that are presently swimming about the ocean with packing straps, nets and lines around their necks.

Fourth, plastic pollution threatens the quality of traditional seafoods for indigenous communities on Canada's three coastlines. Coastal communities along our three ocean coastlines rely heavily on seafoods. In coastal British Columbia, we have shown that the average first nations consumer eats up to 15 times more seafood than the average Canadian. In the Arctic, this can be as much as 25 times more seafood than the average Canadian. This means that seafood is far more important to these individuals in these communities, and it means that plastic pollution in the oceans threatens the quality and safety of their seafood.

Fifth, plastic pollution is not just about unsightly litter. Litter and marine debris present obvious risks to sea life, but the smaller pieces of plastic, the barely visible or invisible to the human eye plastics, which we call microplastics, have emerged as a significant new concern over the past decade. Canada's leadership in banning the microbead, a deliberately manufactured microplastic particle, through CEPA regulations was novel and forward-looking, an easy win. It was low-hanging fruit, but while conducting research in the ocean, we rarely run into microbeads.

What we run into, rather, are broken-down bits of larger plastics. These are called secondary plastics or, in the case of very small ones, secondary microplastics. Where do these come from? There is evidence from our group and others that larger products and items like old bags, containers, shipping materials and microfibres from textiles are actually escaping their intended use or leaking into the environment.

● (1540)

Our plastics lab has partnered with Mountain Equipment Co-op, Arc'teryx, REI, Patagonia, Metro Vancouver, and Environment and Climate Change Canada to track fibres from clothing—that's right, clothing—from home laundry through municipal waste-water treatment plants to the ocean, using high-end forensic science technologies and study designs.

In 2018, we published the first study documenting microplastics in a Canadian waste-water treatment plant. That was here in Vancouver. In this study, we estimated that 1.8 trillion particles of plastic enter the plant every single year.

Some of this, of course, is very bad news, but I view the bad news as an opportunity. Bad news can lead to good news. Everyone seems to understand that we have a problem, be they school children or professionals, and this offers everyone today an attentive audience and an invaluable opportunity to engage and to lead. Every year, the world throws away 150 billion dollars' worth of single-use packaging materials. A sizeable reward awaits the innovator, and this is a leadership opportunity for Canadian industry.

I'd like to suggest that Canada can take advantage of opportunities in the following key areas.

Number one is innovation and collaboration. If we are to effectively tackle this problem, we'll need to identify the sources of plastics in the ocean so as to be able to track those back to source. This understanding is key to engaging the public, the private sector and waste management agencies, and it will support green design, source control, recycling and regulations.

Number two is expert advice. Science is needed to support the identification of solutions. This includes the application of engineering technologies and designs. Our approach at Ocean Wise has been to establish partnerships with industry and government to identify and facilitate solution-oriented opportunities. These include our microfibre partnership with apparel retailers, the hosting of stakeholder workshops, participation in G7 discussions in support of the ocean plastics charter, and invited presentations across Canada and around the world.

Number three is education and engagement. If we are to solve the plastic pollution crisis, we'll need to arm Canadians with a better understanding of the topic. Engaging Canadians of all walks of life should be a very high priority. We designed our plastic wise program with this in mind. Plastic wise was designed to reach millions of people in Canada and around the world through our Vancouver Aquarium exhibits, our digital stories and online content, our media interactions, and through lectures, panels and workshops.

I put it to you that the time is right. We have an audience. Canadians are waiting, and never in my career as a pollution expert have I encountered such a desire for answers, such an appetite for positive change and such an expression of interest from virtually every sector in society.

Canada can help with a cohesive, forward-looking approach that nurtures scientific discovery, industrial innovation, best practices, green design and a circular approach to the plastic economy. Plastic is not the only threat to the world's oceans, but it is a significant one. The plastic pollution crisis offers us a chance for creativity, discovery and innovation.

Thank you for your time.

● (1545)

**The Chair:** Excellent. Thank you for those opening comments.

We'll move now to our in-person panellists. We'll go to Mr. Jim Goetz from the Canadian Beverage Association for 10 minutes.

**Mr. Jim Goetz (President, Canadian Beverage Association):** Thank you, Mr. Chair, and thank you to the members of the committee for providing the opportunity to speak about the leadership role that the beverage sector is playing in Canada to help build our circular economy.

We share the Government of Canada's goals to reduce waste and increase recycling. Our members actively participate in recycling programs across the country and use some of the most environmentally efficient packaging on the market.

The plastic beverage containers that our sector uses are made from PET, which is a lightweight, durable, 100% recyclable plastic material. It is one of the most valuable materials supporting Canada's recycling systems. Once collected, PET containers are recycled into several new products and packaging, such as new beverage containers, carpet, rope and upholstery fabrics. The reintegration of collected PET back into our economy reduces the need for raw materials, lowers greenhouse gas emissions and generates sustainable growth in the circular economy.

Because of the value of the packaging our members use, we have placed a high priority on collecting and recycling empty beverage containers. Across Canada, CBA members play a leadership role in the management of recycling programs in practically every province and are focused on collecting as many beverage containers as possible.

Our sector was instrumental in starting Canada's first-ever blue box program in Ontario, and we brought beverage producers together to launch Manitoba's highly successful recycle everywhere program. These are just two examples of the many provincial recycling programs that are supported with hundreds of millions of dollars every year.

As a result of our sector's leadership and our partnership with governments, Canada's beverage container recycling program collects and recycles more than 75% of our PET bottles. Although this rate far exceeds the overall plastic recycling rate, which is just 11%, our members are committed to delivering even better results.

The beverage sector has made significant global commitments to advance sustainable packaging, build the circular economy and reduce marine litter.

First, beverage companies have committed to making all plastic packaging 100% reusable, recyclable or compostable by 2025, as part of the Ellen MacArthur Foundation's new plastics economy initiative.

Second, the beverage sector is supporting Closed Loop Partners, a North American investment platform that is advancing the development of recycling technologies and sustainable packaging. For example, it recently invested \$3 million in Brantford, Ontario into GreenMantra Technologies for the recycling of fibre, film and plastic bags.

At home, CBA members continue to light-weight PET containers to reduce the amount of plastic needed to make each bottle. Additionally, our members have made individual commitments to increasing recycled content in their packaging as capacity expands for the processing of collected PET back into food-grade PET.

Those commitments, along with those made by other companies, are creating more demand for recycled plastics. However, to increase recycled content further across the economy, domestic capacity for processing collected plastic material needs to be expanded. Expanding recycling capacity is a key priority outlined in the national strategy on zero plastic waste, and it is an area where the federal government could indeed provide support.

As outlined in the G7 ocean plastics charter, the federal government has committed to “[i]ncreasing domestic capacity to

manage plastics as a resource” and “strengthening waste diversion systems and infrastructure to...recapture the value of plastics in the economy”. The federal government could deliver on these G7 commitments by working closely with the provinces and supporting innovation, new processing technologies and facilities.

That support should help advance the implementation of the 2009 guidelines on extended producer responsibility that were drafted by the Canadian Council of Ministers of the Environment. All members of the CCME agreed that they would work towards the development of extended producer responsibility legislation and regulation. The goal of the CCME was to harmonize EPR programs. Still, many provinces have not begun to transition existing recycling programs into EPR programs. The federal government should use the opportunity of the June CCME meeting to outline a harmonized approach to EPR that provides the consistency needed for producers, while respecting the role of the provinces and territories in managing recycling programs.

• (1550)

I would like to conclude today by saying that this committee's study on this issue is timely and important. Again, I would like to thank members of the committee for the opportunity to speak today, and I look forward to your questions.

**The Chair:** Excellent. Thank you for those opening comments.

Now we'll go to the Chemistry Industry Association of Canada. I don't know which one of you would like to speak. You both can, as long as you keep it within the 10 minutes.

**Mr. Bob Masterson (President and Chief Executive Officer, Chemistry Industry Association of Canada):** Thank you, Mr. Chair.

We're very pleased to be with you today on behalf of Canada's leading chemical and plastic resin manufacturers.

It will be no surprise to this group, but over the last year global citizens have demonstrated a very deep concern about plastic waste and marine litter. Last year, we took that as an opportunity to survey 1,500 Canadians, and we found that their views were very much in line with global attitudes—nine out of 10 Canadians surveyed indicated strong concerns about plastics.

While plastics and plastic litter are not a new issue for our industry and the work we've been doing—and Mr. Goetz just talked about that—certainly the speed with which public perception has changed caught our industry off guard. Our industry, both in Canada and globally, has responded very quickly and very meaningfully. The North American industry has struck a leadership position and made clear its support for a circular economy for plastics.

Ambitious goals have been established that would ensure that 100% of plastic packaging is designed to be recycled and recovered by 2030. We've also committed to working with all the other partners to make sure that by 2040 all plastic packaging is indeed reused, recycled and recovered. These goals were advanced before, but they fully align with the G7 ocean plastics charter, which was agreed to by Minister McKenna last year.

Additionally, this past January, our industry's global leaders launched the Alliance to End Plastic Waste. This was a partnership with the United Nations Environment Programme, the World Business Council For Sustainable Development, and Circulate Capital. Industry endowed that alliance with \$1.5 billion U.S. to kick-start marine litter prevention projects in key developing countries. Imagine that. In six months, the global industry got together, agreed that this was a difficult problem, and pledged \$1.5 billion towards it.

If we turn back to our survey results, we know that a strong majority of Canadians feel that they as consumers are responsible for the plastic litter problem. That result echoes what you would've seen in the CBC *Marketplace* survey issued last week. Canadians report that despite having broad access to recycling programs, they are extremely frustrated by the confusing rules for recycling and how those rules differ from home, to work, to play.

In Ontario, there are over 250 different municipal blue box programs. This is very frustrating to people. Personally, I can share with you that it's very confusing. In my household, we have four university degrees, and another one on the way, and we spend endless time arguing about the proper approach to recycling.

It shouldn't be that hard. We have to find a way to better educate people and to make the system work. There are jurisdictions that outperform us by seven to one in the amount of plastic material and other waste recovered and recycled. Surely if Japan and Scandinavia can figure it out, so can we in Canada. It does not have to be so confusing.

This confusion and lack of consistency contribute to the nearly 80% of post-consumer plastics that end up in Canadian landfills. As the other speakers have said already, that's a terrible waste of energy and precious resources.

I know the public has concerns about the amount of plastic in their lives. Before proposing any measures or actions, I think it's important that this committee understand why we're seeing that tremendous increase in plastic in our lives, at about twice the rate of global GDP growth.

Much of this committee's work over the past year has focused on the pressing issue of climate change. In many instances, plastics are the solution to the climate change problem, and that is a key contributor to the drive in growth. That includes lightweight, high-strength plastic composites in the automotive sector, improved insulation in the building sector, enormous quantities of plastic resins that are vital to the production of renewable energy from wind turbines and solar panels, as well as the very important role of plastic packaging in reducing food waste. I do hope you come back and ask the difficult question about why your cucumber is wrapped in plastic in your grocery store. Please ask that question.

We urge this committee to ensure that the proposed actions on post-consumer plastics do not undermine ongoing efforts to achieve our climate change objectives.

• (1555)

We're also aware that this committee has questions regarding chemicals in plastics, and we would ask you to reflect on the months dedicated to your review of the Canadian Environmental Protection Act, including Canada's world-leading chemicals management plan. We urge the committee to recognize that CMP is the appropriate process for considering the risks of chemical substances, including plastics, in any aspect of commerce.

Indeed, over the past several years, many of the substances that have been identified as possible concerns with respect to plastics have been assessed and, where appropriate, risk management actions have been implemented through CMP. These include BPA, phthalates, flame retardants, dyes, pigments, microbeads in personal care products—which we've just heard about—and more than 350 different plastic polymers. I could provide a longer list, but my point is to encourage this committee to place its emphasis on the areas that most need attention: improved plastic reuse, recycling and recovery. There would be very little value for this study to repeat the ground covered by your comprehensive CEPA review.

Instead, our advice to you is to focus attention on defining the appropriate role for the activities of the federal government to support the national zero plastic waste action plan to be delivered this June. From our perspective, we see three key areas for the federal government to play a role.

The first is certainly working with provinces and municipalities to better educate Canadians and to standardize the collection and the sorting, as well as the functioning of EPR markets for post-consumer materials.

Second, consider the needs and means to expand what we have, which is a paucity of modern recycling and recovery infrastructure across Canada. Many of the plastic materials going to the landfill could be easily recycled with investments in more modern infrastructure. We often hear people talk about black polystyrene, that we can't recycle that. Maybe you couldn't 20 years ago, but with optical readers in modern facilities now, it's just another material. It's very easily recovered, but you have to have more modern infrastructure.

Finally, we would encourage this committee to forgo short-term actions on bans covering a limited range of plastic products. This will distract attention from the need for a very comprehensive shift to a circular economy for plastics and could lead to unintended environmental outcomes.

I'll conclude by saying again that the study by this committee is very important and welcome. We thank you for this opportunity to share our perspectives, and we certainly look forward to whatever questions you may have.

Thank you, Mr. Chair.

**The Chair:** Excellent. Thank you for your opening comments.

Mr. Cullen, I believe you have a private member's bill related to plastics pollution that has been tabled in the House. I'll turn it over to you for your opening 10 minutes.

**Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP):** Thank you very much, Chair.

I think this is only the second time I've appeared as a witness in my time as a parliamentarian. Rest assured that you're quite an intimidating group from this point of view. It's much easier sitting where I typically sit.

That's except for you, Ed. You're not so intimidating.

**Hon. Ed Fast (Abbotsford, CPC):** Thank you.

**Mr. Nathan Cullen:** Indeed, Mr. Chair, I have introduced a bill that is in the next order of replenishment so it will be in front of the House for our deliberations. I may refer to it, particularly if you have questions about it, but I'll try to focus on the initiative and why I think it was important to this very important study that you're engaged in. Congratulations for taking this on now. I think the timing is excellent, given the momentum, as some of our friends here have talked about, not just within Canada but around the world.

The problem has been well stated. If we are able to recycle only 11% of plastics that go into the blue box, we have an identifiable problem. We have been running blue box recycling programs in this country for almost 40 years. This is a generation that has struggled—and I would argue, unsuccessfully struggled—at all levels of government to fulfill the promise of what it is when a Canadian buys a product, uses the product, and then seeks to recycle it, creating the circular economy that my friends have talked about. We are not fulfilling that promise right now.

Very specifically, what should the role of the federal government be? I think it's in setting the parameters and the rules. The federal government, I would argue, might not be well suited to start dipping into every recycling program within the country in every jurisdiction and every town and city, deciding what exactly their recycling program needs to look like, but we can certainly talk to industry and work with industry to set down the parameters of the products at the initial point of the plastic being manufactured. Because there are so many types of plastics available and so many are used for packaging, which is what my bill deals with, we don't have a consistent ability to promise Canadians that if they buy a certain product the odds of its getting recycled are very high.

We have also been relying—and my colleagues here would do a better job than I would—on foreign markets taking what we seek to recycle. That reality has shifted dramatically within the last number of years. With the recent changes in Chinese law and in some of the other receiving countries, Canada and Canadians can no longer rely on our recycled materials ending up somewhere else and being dealt with. Eighty-two per cent of Canadians want more done on this. As an active politician, though maybe not in the next round, I know the appeal of trying to get in front of issues and address issues that our constituents deeply care about.

From an economic point of view, we also have to realize that a successful and more efficient recycling program is very good for the economies of those countries that have been able to achieve much higher rates of recycling. I look to my friend from Toronto, and even with the issue of, say, contaminated plastics, which is about 25% or 26% of what happens in Toronto, for every 1% we take down—clean up the stream, if you will—we save Toronto taxpayers \$1 million. With every 1% that we get better at what goes into those blue boxes and then ends up at the sorting centre, we can save that constituency \$1 million just in taxes.

The last time I appeared at committee was 14 years ago. I introduced a bill to ban phthalates, a plastic softener, out of products that were being given to children in Canada, because that particular chemical has an endocrine disruptor effect. That bill eventually passed unanimously in the House of Commons. What was important for me is that there was initial resistance from industry. I don't want to step on Mr. Masterson's toes, but there was a resistance saying that you can't replace or that replacements are worse. I think we need to be courageous in talking about how to make sure that everything that is manufactured can truly be recycled in this country and that promise is actually fulfilled. It is no one's fault but everybody's responsibility.

For those looking to pin the blame on industry, municipalities, the federal government or the consumer making choices alone, that's not correct. I put my recycling out on the curb this morning. I felt good doing it. I felt like it was the most natural and normal thing to do: go through the sorting, stand out there in the snow—which seems wrong on so many levels in mid-April—and then take it to the curb. Even though I've drawn up a private member's bill that I'm trying to introduce to make that process better, once I put it on the curb I thought my job was done. I feel like I ticked that box as a good Canadian citizen and that the plastic will go away and turn into something useful again, even though I've read the literature and come to realize that this process is not complete and the economy is not circular.

What can the federal government do? I think it's simply about understanding what is truly recyclable. I don't mean that it simply has the little triangle on the back with a number inside, but that it can be recycled legitimately in Canada. I think Mr. Masterson was referring to this at the end of his comments. Those plastics are what should be produced. Plastic packaging that can't be recycled, which is what I deal with, shouldn't be produced. I don't know why, given the plastic waste crisis that our first guest talked about, the plastic pollution crisis—I want to get the term correct—we would continue to say that it's acceptable that by the end of 2050 we will have more plastics in the ocean than fish, by weight.

● (1600)

It is, in fact, in its own way, an insidious circular economy. The plastics do come back to us. They don't come back to us in the form of products. We eat them; our children eat them. We consume them because they end up in the fish. They end up in the biosphere that we are a part of.

I want to be brief with my comments, because we have a lot of witnesses today.

I think that aspirations are good. I laud the current federal government for its aspirational statements of where we're getting to. We also need to have concrete promises to make that achievable, that we aspire to recycle this much by such-and-such a date. If we aren't fixing the upfront part of the problem, the production, and if we're not solidifying how to make sure that industry can work with us and then find a way to make sure that the promise is made complete, then they will remain aspirations. A future environment committee will be sitting here five or 10 years hence, on the eve of that deadline, and it will have to push the deadline off again because of whatever reasons/excuses may be available to it.

I want to end with this. I think that the statement on climate change, which this committee has spent a great deal of time on... Right now, globally, 8% of all oil that we consume is used in the manufacturing of plastic. At our current rate of use, that will hit 20% of all oil produced in the world by 2050. It's both solution and problem, I would say, if one looks at it solely through a climate change lens.

Again, yet another argument for creating that truly circular economy when it comes to plastic is that single-use plastic, and the \$150 billion of plastic waste that ends up in the oceans and in our landfills, is insidious. It's economically stupid, and it is going to cost us even more down the road.

I'll end there, Mr. Chair. I look forward to any questions folks might have about the bill or about any comments I have made today.

Thank you.

• (1605)

**The Chair:** Thanks, Mr. Cullen.

I have to say that you're probably the first politician who's left time on the clock, so I appreciate it.

**Some hon. members:** Oh, oh!

**The Chair:** With that, we'll go over to Mr. Amos, who has the first six-minute round of questions.

**Mr. William Amos (Pontiac, Lib.):** Thank you, Mr. Chair.

Thanks to all of our witnesses.

I agree. This is timely and a great opportunity for constructive suggestions.

First off, Mr. Masterson, it's nice to see you once again.

**Mr. Bob Masterson:** Thank you, sir.

**Mr. William Amos:** I'm wondering, for the public who may see the plastics issue through the lens of single-use plastics—cigarette butts, plastic straws and forks, etc.—what response does your association have? Can we not just take action right now and start prohibiting, under existing law, specific types of plastics that are just less necessary than the alternatives that are available?

**Mr. Bob Masterson:** There are a couple of things we would say.

One is, yes, if appropriate, but you need to take an evidence-based approach to that. Banning one thing doesn't mean the problem goes away; you could be replacing it with something else. We have seen authorities such as the Quebec government, the Danish Environ-

mental Protection Agency and others say that, on a life-cycle basis, a plastic bag is better than some of the alternatives. We would encourage you to take, as in any decision a government would make, an evidence-based approach.

Second, we think there are cautions when you make choices on behalf of consumers and citizens. You're suggesting that they don't have the ability to do that. Certainly our industry strongly supports education and the right to a straw if you have a reason. Keep it behind the counter. Allow people to ask for it. Refusing them the opportunity, if that's the product they need... Where does that stop? At what point of commerce do you make those decisions? We don't ban people from smoking today.

I think there are a couple of pieces there that we would encourage governments to think about when they make decisions: evidence-based decisions and the role of consumers in making their own informed decision on any aspect of the economy.

**Mr. William Amos:** As a follow-up, we've seen plastic straws banned in Europe and in various other jurisdictions. I have used a non-plastic straw, and it works. I'm sure—

**Hon. Ed Fast:** It doesn't work for me.

**Mr. William Amos:** It might not have worked for MP Fast, but we won't go there.

On the specific issue of plastic straws, for example, does your association oppose the banning of single-use straws?

**Mr. Bob Masterson:** We would encourage an informed decision-making and the right to choose one if that's what you wish. Have the straws available.

**Mr. William Amos:** Okay. I think—

**Mr. Bob Masterson:** Again, our point in this discussion would be that it is holistic, when you look at the volumes of material here. I have the numbers. Hopefully, the Environment Canada participants provided you with the study they commissioned for the CCME.

When you look at the amount of plastic in the economy, you can see that packaging alone is 33%. By the time you get down to straws and other things, you're probably well below a couple per cent. If we want to drive societal change, change across all levels of government, we need to focus on the real issue, which is creating that circular economy.

I worry that if you say to the public, "Here are 10 things we wish to ban", by the time you've done that you've lost their attention and they believe they've solved the problem. You'll be back where Mr. Cullen warned you that you may be 10 years down the road.

• (1610)

**Mr. William Amos:** I appreciate that, and I think the point of the Environment Canada officials was that the percentage of single-use plastics in relation to the broader plastics industry output is small. I totally appreciate that. I also appreciate that in order to get to a low-carbon economy, we're going to need plastics. They're in fact a key part of the innovations that we're going to need. In no way should my comments on your industry be perceived as anti-plastics.



Wouldn't you agree that the public opinion right now, which you yourself have measured, not only wants a circular economy approach but also wants very concrete measures that express society's values around the creation of single-use plastics that inevitably find their way into ecosystems?

**Mr. Bob Masterson:** We surveyed Canadians, and I think you have a copy of our more detailed report. You'll see some of the numbers in there. The majority of Canadians, when asked the question in isolation—"Do you support a ban on certain single-use plastics?"—said yes. When you ask that same question on how we should best manage single-use plastics and you give them five choices, number five out of five is the ban. The first thing is better recycling, and then better education to know what they should do. Yes, they will support a ban in isolation, but Canadians themselves understand that it is not a sufficient answer to the challenge they face.

**Mr. William Amos:** You've mentioned long-term aspirational targets. What specific policy measures would you support in order to achieve those targets?

**Mr. Bob Masterson:** I think we've set aspirational targets for ourselves. I wouldn't say that, for any industry, including ours, to undergo the type of transformation that's required a mere 10 years from now is the "long term". The year 2030 is tomorrow, in an industry of this scale and the number of products we produce. This is incredibly ambitious. If governments and industry get there, which they should, it will be nothing short of what we've accomplished in going to the moon. This is no long-term undertaking.

**Mr. William Amos:** I've asked a specific question, though, about what specific policies you're willing to endorse to get to those aspirational targets. If you could respond in writing, that would be appreciated.

Thank you.

**The Chair:** Mr. Fast, you have six minutes.

**Hon. Ed Fast:** Thank you very much to all of you for appearing.

I'm going to go to Mr. Masterson as well, at least for now.

I'm glad to hear you say that you support the full circular economy, but when we have a discussion like this, we have to place it in context. We have a federal sustainability act that calls on government to take three things into consideration: the environment, the economy and the social environment.

Could you tell us what the size of your industry is? What does it contribute to our economy?

**Ms. Isabelle Des Chênes (Executive Vice-President, Chemistry Industry Association of Canada):** Our 2018 data was just recently released. We are a \$55-billion industry.

**Hon. Ed Fast:** Did you say five-five?

**Ms. Isabelle Des Chênes:** Yes. We have \$40 billion in exports and \$20 billion in industrial chemical exports. We employ over 600,000 Canadians directly and indirectly. Directly, it's close to 92,000 Canadians.

We also work under the ethic and principles of responsible care. It's something that we introduced as an association over 30 years ago. It is recognized by the UN Environment Programme and

practised in 67 countries around the world. It ensures that all of our companies and their operations operate to ensure a healthy environment for their employees, for the communities and for the economic sustainability of their operations.

As a result of that, we've reduced our emissions by almost 70% since 1992, but we continue to work on a continuous basis for continual improvement of that environmental footprint. That means working on things like product design, building markets and, in some cases, with some of our members, introducing new ways to collect difficult-to-recycle plastics to ensure they are captured within that circular economy.

• (1615)

**Hon. Ed Fast:** We have this very significant contributor to economic health and prosperity in Canada, yet you said that you support a full circular economy. I think we can draw from this that you don't believe that a circular economy would undermine the profitability of your industry. Am I correct in saying that?

**Ms. Isabelle Des Chênes:** That's correct.

**Hon. Ed Fast:** Do you want to comment on that?

**Ms. Isabelle Des Chênes:** Absolutely. One of the key elements of the sustainability strategies for all of our companies is really looking at the circular economy. We work very closely with our friends in the United States, the American Chemistry Council. Our industries are very much integrated and the members cross borders. It is clear that every CEO, whether in Canada or in the U.S., is keenly aware of the issue related to plastics and what that means in terms of their reputation, but also in terms of the trust of global consumers. They have really put their money where their mouth is in providing billions of dollars to help support that circular economy.

**Hon. Ed Fast:** My time is short, unfortunately.

You have heard the testimony of Mr. Cullen, whom I have the highest respect for, by the way. I think he's worth listening to. He has said—and I'm paraphrasing here—that we need to understand what is truly recyclable and reusable, and then produce only that which is truly recyclable and reusable. He referenced a portion of the plastics that are produced today that may not be truly recyclable and reusable.

What is your response?

**Ms. Isabelle Des Chênes:** Absolutely. He is correct. There are portions of those plastics that aren't. Our companies have this window and this commitment to ensure that all their products are recyclable and recoverable by 2030. We have a 10-year window. It takes time for the R and D. They are working diligently at it and already have introduced a number of products that previously weren't recycled—things like stand-up pouches for food—that are now becoming inherently more recyclable. That's their commitment in terms of ensuring we arrive at that by 2030 so that any new product that comes on the market has a recovery strategy attached to it.

**Hon. Ed Fast:** So it's worthwhile listening to Mr. Cullen.

**Ms. Isabelle Des Chênes:** It's totally worthwhile. He has it straight.

**Mr. Bob Masterson:** I think it's important for this committee to understand that, yes, the most important driver for that change in the industry is the consumer at the end of the day, but it comes from the companies that are in Jim's membership, the brand owners, the Procter & Gambles, the Unilevers. They are telling our plastics industry how the world has to change, and they want it to change very quickly.

**Hon. Ed Fast:** Mr. Ross, you talked very broadly about the problem. I didn't hear a lot about what your solutions might be. I'm going to ask you a more targeted question. What is the biggest challenge facing the plastics pollution industry, so to speak?

**Mr. Peter Ross:** That's a great question.

As a scientist, I'm trained to identify problems and inform solutions. In my view, the solutions come from the private sector that designs and produces products and looks at the life cycle of that product, at the procurement and design of that product. Our intended target is also the general public: to improve consumer education and look at better recycling. I think an EPR national recycling framework would go a long way to reducing the complexity, and we heard about that from other witnesses today.

It's not our intent to preach. We're looking at the ocean and we're identifying issues in the ocean. We're identifying problems pertaining to microplastics and plastics. We're trying to use the best available science and innovation to track that back to source.

I think the basic discovery or curiosity that's driving our understanding of the problem is contributing to that team effort and allowing multiple players. I would point to our microfibre partnership with apparel retailers that we're working very closely with. They are very supportive of understanding the nature and scale of this problem. They were not aware of the issue in the past, and they would like to use a better awareness of that problem to inform their material design, procurement, life-cycle analysis, etc.

I'll simply end by saying that recycling must improve and can improve. There is an issue, because we always face leakage. We want to improve recycling, improve recyclability, but we always face a leakage.

I look at our great Canadian shoreline data from a couple of years ago, and 17,654 straws were found on Canadian beaches. That's a tiny amount of what actually went into the environment. There were 50,285 plastic beverage bottles, and 22,724 plastic bags. This is not done by people deliberately throwing these things out.

We need better recycling and more informed consumers. There is always going to be leakage, and that's a big concern of ours. At the end of the day, those seals, sea lions, turtles, albatross, baby salmon, zooplankton and beluga whales, and the traditional food for indigenous communities, are the things we have to use as a metric. That's not just semantic or goal-oriented. We need positive metrics.

We have to use those numbers and those risks to inform and strengthen our solutions—as I put it to you earlier—as a team. Plastics are in every one of our lives.

• (1620)

**Hon. Ed Fast:** Thank you.

**The Chair:** Mr. Stetski.

**Mr. Wayne Stetski (Kootenay—Columbia, NDP):** Thank you, Chair.

I'd like to thank the witnesses for being here.

I'd like to thank Mr. Cullen in particular: past vice-chair of this committee, past environment critic for the NDP and long-time environmental and indigenous champion. We're certainly going to miss you.

I know that, as part of your bill, you looked around the world to see what other countries were doing. I wonder if you could take a minute to tell us some of the great things going on in other countries that we might want to achieve, hopefully in the short term.

**Mr. Nathan Cullen:** Let's start with the latest Conference Board of Canada research on Canada's waste management system. As a whole, we ranked 17th, which is pretty bad, but it's really bad when you realize there were only 17 countries ranked in that study.

We've talked a lot about the manufacturing system and the recycling system, and one of the gaps we have is in Canadians' lack of self-awareness about where we stand in the world and how we're doing.

I want to get back to Mr. Fast's comment about the economy, because I think that's an important piece. I'll take Ontario again as an example, because it's relevant to a number of members here. If the 25% that is diverted from the waste stream right now moved up to, say, 65%—which is achieved in many other OECD countries and some European countries we're familiar with—it would add \$1.5 billion to the Ontario GDP. It would create upwards of 13,000 jobs. That's a number that most of us, as elected people, can really understand and appreciate the significance of.

Oftentimes we see this in terms of the cost and the impact on industry as it currently stands. I would argue that we also need to flip that around and say, "What is the current cost of inaction or of the status quo?" I'm not saying we are not acting, but are we acting aggressively enough? Are we making all of the smart moves? This is just from the economic lens, never mind the other two lenses. It also costs our fishing industry something in the order of \$1 trillion a year. To a west coast MP, that matters.

You asked about other jurisdictions. The European Union certainly has been in the lead. We have also seen...not just on the producing side but on the receiving side. As I mentioned before, it's not just China. There are a number of other developing nations that traditionally received recycled materials from the west but are no longer receiving them and are changing their own standards.

You can look around globally. There are seven major rivers in the world that contribute most of the waste we see in the Pacific Ocean. We can say that this is a China problem or a Sri Lanka problem. Well, they didn't create the plastic, necessarily. They received it from us. Some of it was recycled, but a bunch of it wasn't. A bunch of it ended up in the streams that end up in the ocean, and we look at the gyre in the middle of the Pacific Ocean as a problem.

Getting back to Mr. Amos's question, the U.K. government has been very aggressive around banning single-use plastics. I've had drinks out of non-plastic straws. They worked fine. Ed and I will have to compare notes. You're not meant to reuse them over and over again. That might be too aggressive a Conservative position.

**Hon. Ed Fast:** How about first-time use? There is a White Spot straw.

**Mr. Nathan Cullen:** Some of those other straws are meant for one-time use.

Six states in Australia have banned plastic bags. In India, more than half of the country's 29 states have aimed legislation at single-use plastics. Taiwan has already had a 12-year ban on single-use plastics in place.

Jurisdictions have done it. People have acclimatized. Industry has moved in different directions.

I agree. The mechanism I'm using in my bill is CEPA, so it has to be a science-based decision in order to list types of plastics that we no longer want in the economy. I think it should be evidence-based. I think it should be science-based.

I suppose one hopeful thing about Canada being a laggard is that we have many countries that have gone out in front of us on a number of these issues and have tried and sometimes failed but sometimes succeeded. I would hesitate for Canada to think we have to reinvent that wheel, because we simply don't.

•(1625)

**Mr. Wayne Stetski:** Thank you.

To the Chemistry Industry Association, what do you think your association's and your industry's role should be in the full spectrum of producing, reusing, recycling and recovering, in terms of funding those initiatives?

**Mr. Bob Masterson:** There are two parts, I think.

The first is entirely within our realm of control, and that's design of the materials to be recycled in the first place. Certainly, there is a role. We think things like the superclusters, the strategic innovation fund or the federal government's SDTC can play a really strong role in bringing people together. Ultimately, the research and development of new materials and new products will be funded entirely by industry, because they'll benefit from it at the end of the day.

The second part—and I would encourage you to raise the question with Mr. Goetz—is really about extended producer responsibility. What role do the people who put those products into the market, the products that end up in your blue box, play in funding? I think what you see in jurisdictions like British Columbia is that industry says that they're happy to take 100% of the costs of the blue box recovery

program, provided they have 100% control of how it operates. We do not have that in many jurisdictions.

**Mr. Wayne Stetski:** You don't necessarily feel responsibility for the full life cycle of plastics, then, in terms of providing funding.

**Mr. Jim Goetz:** Bob is right to bring up various provinces. It's not very well known that across the country, at various rates, industry is paying for that extended producer responsibility already.

That includes Ontario, for example, where industry pays 50% of the blue box cost, which is shared with municipalities in more of a partnership. In British Columbia, industry pays 100% of that. Our beverage programs are funded. They're large programs and have to be funded. The away-from-home consumption or use of plastics—which is something we're very interested in—gets very expensive. About 30% of our products are consumed on the go, where you buy at a convenience store and walk down the street.

To Bob's point, industries that are involved in single-use plastics support the concept of extended producer responsibility. It means that. It doesn't mean just the costs; it means the responsibility for it as well, such as the control of the system and the design of the system. Governments should set targets, but then allow industry to figure out the best way and the most economic way to get to those end goals.

**The Chair:** Please answer quickly.

**Ms. Isabelle Des Chênes:** I have a small addition as well. Some of our members are also investing in pilot programs to help build collection capacity and help introduce new technologies like pyrolysis and chemical recycling. I believe you'll hear from Dow in the next couple of weeks. They have a program in the States that they will also initiate as a pilot here in Canada in the next few months. It's called the Hefty EnergyBag program, and it allows consumers to place their difficult-to-recycle plastics in an orange bag. It gets brought to the MRF and it's processed through a facility that allows pyrolysis. It can then be converted into biodiesels and synthetic fuels.

They're investing in those pilot programs to really help communities understand the potential of these kinds of technologies attached to their collection systems. We also have a number of small chemical recycling companies. GreenMantra was mentioned earlier. Companies like Pyrowave are working with industry to try to develop technologies that will—for instance, in the case of polystyrene—really convert those products that don't have to be cleaned back to their original molecules, so that you can then have 100% recycled polystyrene products.

There's a lot of investment and innovation at this point.

**The Chair:** Perfect, thank you.

We are now going to move over to Mr. Fisher.

**Mr. Darren Fisher (Dartmouth—Cole Harbour, Lib.):** Thank you very much, Mr. Chair.

Thank you very much to our guests today.

I want to start with Mr. Ross. You used the line “plastic is everywhere”. We do our community cleanups as MPs on the east coast. My riding is Dartmouth—Cole Harbour, Nova Scotia.

We can collect tons and tons of plastic, and we can go back several weeks later and do the same thing over again. I'm guilty of thinking of plastic as that big piece of ghost fishing gear or a big rubber boot that gets eaten by a whale, but it's really telling when you speak about plankton eating microplastics at one end of the food chain.

Ghost fishing gear is a major issue on all of our coasts. You're probably aware of the pilot project that the Government of Canada has with Nova Scotia through the Nova Scotia fisheries fund to study the effectiveness and practicality of ropeless fishing gear technology for the commercial lobster industry. That seems to me like major innovation, a major opportunity for jobs and innovation to reduce plastics from the beginning.

You work with industry. I'm interested in your thoughts on what the federal government could do to reduce plastics in commercial fishing.

• (1630)

**Mr. Peter Ross:** Hello to the east coast of Canada, one of our three very important coastlines. The billions and billions of dollars in terms of natural resources and commercial, sport, recreational and indigenous fisheries are something we want to protect.

The first point I would make in response to your line of questioning is that, once plastics are released into the ocean or into the environment, the genie has been let out of the bottle. We all do the right things, as you do—and thank you for doing so—in cleaning up where we can. That is an important activity; it does clean up a small amount. It generates data, and it gives us a direct channel of communication to Canadians. For example, last year we had more than 60,000 Canadian volunteers cleaning up more than 3,000 kilometres of shoreline.

That's important in terms of education and data collection. It does—you said it yourself—cosmetic justice to the big issue out there, and that speaks to the need to turn off the tap at the source to prevent these things from getting into the ocean. These huge ocean cleanups are worth exploring, but they're never going to address the problem. We really have to turn off the tap at the front end, and that's understanding where these things are coming from.

Of course, there are many different sources of plastics in the ocean. You mentioned the fishing sector's plastic: polypropylene nets, polyethylene pipes, tubes, lines, ropes, fishing gear of all shapes and sizes, often made largely of plastic. There are best practices on board vessels in terms of fishing as well as design, like the use of hemp, for example, as an alternative to polypropylene, and cleaning up of derelict fishing gear.

This is one example of macroplastic, large plastic items, that is really worth looking at. Derelict fishing gear is killing hundreds of thousands of seabirds, turtles, fish and marine mammals every single

year—that's the ghost gear. There are really good programs in other parts of the world, and we're just starting to look down that pathway in Canada. I think that's very important to address.

Another point I would make is that, when we see a plastic bottle, a plastic bag, a net or a bottle cap on the beach, we can either clean that up or leave it there. My example is used to illustrate the life cycle of that item. If we choose not to clean up that plastic bag, it's going to be here five, 10, 50 or 100 years from now. It may not be intact, but chemically it's still going to be out there, because plastic is basically geological material. It's not going to degrade chemically; it's going to degrade physically into smaller and smaller bits of microplastics, translating that risk from charismatic creatures down into the zooplankton.

I think you touched on a number of points that are really worth taking home, and it really speaks to the need for better design and better practices in the field, certainly continued cleanup and investment in innovation and discovery that help us create a forward-looking, practical solution or a set of solutions that will help protect the Canadian economy.

**Mr. Darren Fisher:** Thank you, Mr. Ross.

I know we only have a minute. Mr. Goetz, you say you collect 75% of single-use beverage containers, or is it all beverage containers, including ones with a deposit?

**Mr. Jim Goetz:** The 75% is a Canadian average across all jurisdictions. The data is kept at the provincial level, so that's on average across all of the provinces. That includes deposit and non-deposit jurisdictions.

• (1635)

**Mr. Darren Fisher:** Do you have a breakdown? Is the majority of that the deposit containers? I assume it is.

**Mr. Jim Goetz:** Well, not necessarily. We have blue box jurisdictions that are reaching the same levels as deposit jurisdictions. The main issue right now for data in Ontario—which someone mentioned earlier—is that each blue box program, for example, is controlled at the municipal level, so you literally have a couple of hundred different programs. There's no real provincial clearing house for that data, although we have gone out in the field and done waste audits through an organization called Stewardship Ontario.

I should mention that the province is now in the process of changing that, and we expect to be able to get better data. But as of right now, according to the recycling affiliates in each of the provinces, not just from us, the average rate across the country is 75% for PET bottles. It's even higher for other materials.

**The Chair:** You're out of time.

Mr. Godin.

[*Translation*]

**Mr. Joël Godin (Portneuf—Jacques-Cartier, CPC):** Thank you, Mr. Chair.

I want to thank the witnesses for joining us today. We're studying an important topic, and I think that we're all aware of the need for action. You're experts and we're parliamentarians. I'm counting on you to help us prepare a good report.

My first question is for you, Mr. Ross. In your presentation, you spoke about the importance of educating consumers. You said that people are waiting to take action. Can you elaborate on this attitude of Canadians?

**Mr. Peter Ross:** Thank you, Mr. Godin.

I'm very pleased with your question, because it emphasizes the importance and relevance of starting a national discussion on what must be done, particularly with regard to consumption, product choices or recycling.

To advance the debate on plastics, which permeate our lives, we must move beyond simply discussing them with individuals or the general public. There are options, but consumers lack choices and don't know enough to make good decisions at the store, at work or at home. We must establish grounds for discussion to help Canadians make responsible choices. We must also take the opportunity to speak with private sector companies so that the companies can develop proper products to sell to Canadians and inform Canadians of the choices available to them. This is done on several levels.

Lastly, plastic pollution presents a challenge for everyone involved in this issue in Canada. Canadians are waiting for us to help them. We have the opportunity to establish leadership and a discussion at the national level. It all starts with education.

**Mr. Joël Godin:** Thank you, Mr. Ross. I think that you're absolutely right. The window is there and people are beginning to show interest. We saw how companies and consumers reacted to plastic straws. This may not have a major impact on the environment, but it's a concrete step. It's a great opportunity.

I'll now turn to the representative of the Canadian Beverage Association.

Mr. Goetz, you said something interesting. How would the industry react and what solutions would it put forward if, tomorrow morning, Canadian consumers decide to stop buying water, soft drinks or other products sold in plastic containers?

• (1640)

[*English*]

**Mr. Jim Goetz:** I would say that, of course, as with all consumer packaged goods, we are at the will of the consumer. We buy and sell things in the marketplace, and that's what we do.

I would point out, however, that the move—not only in the beverage industry but in other companies and industries for consumer packaged goods—has been done for a reason. Although there are some great glass products out in the market and many of our members put out some of their products in glass, there's a reason that the industry moved away from glass, to a certain degree, many years ago. A lot of that has to do with environmental outcomes.

For example, for a majority of the manufacturers in Canada that use PET bottles for their products, the actual PET bottle arrives at the factory and is about this big. They use what they call blow mould technology at the facility, where the bottle is blown up. It's not trucked there like that. Just doing the simple math on the size, a lot more of those bottles can be put in one truck, as opposed to being put in five or six trucks, which dramatically lowers greenhouse gas emissions. For one bottle of the small tubes.... I think you would need about seven or eight trucks if those bottles were completely filled up. There's also a weight issue that affects greenhouse gas emissions as well.

The final thing I would say is that PET is a valuable resource when recycled. When we look at our blue box programs across Canada, we see that PET and aluminum are two of the most valued commodities. There is a lot of material that goes in the blue box that's not worth a lot in the open market, into the circular economy. Aluminum and PET are worth money. Where municipalities run the blue box system—in Toronto, for example—they keep that money from the sale of the commodities.

[*Translation*]

**Mr. Joël Godin:** Sorry to interrupt you, Mr. Goetz. I need further information and I'm running out of time.

I was just thinking about aluminum bottles. This could be a solution, and Canada is a major aluminum producer. Could aluminum bottles replace plastic bottles?

[*English*]

**Mr. Jim Goetz:** Absolutely. The beverage industry is still heavily involved in aluminum packaging, which is, again, highly recyclable.

[*Translation*]

**Mr. Joël Godin:** Thank you, Mr. Goetz.

[*English*]

**The Chair:** Thank you.

Mr. Bossio.

**Mr. Mike Bossio (Hastings—Lennox and Addington, Lib.):** Thank you, Chair.

Thank you all for your presentations.

I have to say that I'm actually very disturbed by the discourse so far in this discussion. Everything has been focused on recycling, and we all know that the three Rs—reduce, reuse, recycle—start with “reduce”. I'd actually like to see a change to “reduce, repair, reuse and upcycle”. As long as we keep defaulting to recycle, we always think of downcycle, whereas if you think of upcycle, you're actually thinking of adding value, so that the product you're trying to recycle has a value that will incentivize people to take care of the product at the end of its life.

As I said, reducing has to be one of the chief goals here. The reason PET is so valuable is that the market keeps expanding infinitely. Therefore, the more you can get back, the better it is for your bottom line. I'm not trying to say that your bottom line isn't important, but reductions are vitally important.

The other concern I have—which hasn't been discussed but it was brought up by a previous witness, Dr. Liboiron from Memorial University—is that plastics actually have toxins that cling to them as they break down. This has always been a big fight I've had with the chemical industry and chemical management planning. We don't look at bioaccumulation. We look at the chemical in and of itself, as separate from that impact of bioaccumulation.

Mr. Cullen, do you not agree that reduction is really where we have to get to here, when it comes to plastics? That's how we'll actually solve the plastics problem in the future.

**Mr. Nathan Cullen:** I am reminded of an expression that we sometimes utilize in question period: "If you're in a hole, stop digging." If for every man, woman and child on this planet right now there's a tonne of plastic, we've been digging. Of all the plastic ever produced, 50% has been produced in the last 18 years. Take that in for a moment. If you have an 18-year-old child, half of all the plastics ever produced in the history of the world happened within that child's lifetime.

I think it's wise for you to call us to the higher order—do no harm; don't create the problem in the first place—and mesh that with your strategy to deal with the problem as we see it right now. There is so much plastic entering our environment that is treated as waste. I think that's a term we should perhaps consider striking from our lexicon. It's not waste. I consider waste something that has no use at all. It has ended its life in terms of utility, and we have to get rid of it. If we're throwing away, according to the industry itself, the value of \$150 billion a year and we call it waste, we're not being very intelligent, on any level.

The part of the solution that I have offered up is to simply say that we're in this hole that keeps getting deeper; there have been industry initiatives here, here and here, yet at a global level, and certainly at a national level.... What's the responsibility of the federal government?

• (1645)

**Mr. Mike Bossio:** As we've already pointed out, too, after 40 years' worth of recycling, we're recycling only 11%.

**Mr. Nathan Cullen:** That's right.

**Mr. Mike Bossio:** It's not working. It's broken.

I would take it to the next level. Would industry agree to a mandatory target ensuring that 90% or 100% of all plastics are recyclable and recovered, say by 2030?

**Ms. Isabelle Des Chênes:** We've already committed to having all of our plastics—

**Mr. Mike Bossio:** That's on the packaging side. I'm saying all plastics. As you said, packaging is 33%.

I would ask the bottlers the same question. Do you feel that achieving a mandatory level...? You're saying that 80% of bottle plastics are recyclable now. Would you agree to a mandatory level of 90% by 2030?

**Mr. Jim Goetz:** I can only speak for my industry and not all plastics, but I believe that we have a target set for our industry in every province. That has already been put there.

I would also say that, as for other jurisdictions that were discussed before, the EU's directive for a plastics ban set a collection target for beverage containers of 77% by 2025, and in Canada we're at 75% already.

**Mr. Mike Bossio:** Would you have a problem with a mandatory target to ensure that we actually meet those targets, rather than making it voluntary?

**Mr. Jim Goetz:** As I just said, we have targets in almost every province.

**Mr. Mike Bossio:** Are they to reach 90%?

**Mr. Jim Goetz:** No, right now they're generally between 75% and 80%.

**Mr. Mike Bossio:** I'm asking if you would have a problem with a mandatory target of 90%.

**Mr. Jim Goetz:** We're already on our way. Of course, the EU set a 90% target for 2029. We can certainly have a conversation about targets, but just for the record, the beverage industry specifically has targets in place in almost every province.

**Mr. Mike Bossio:** To the plastics sector, would you have a problem with there being mandatory targets? I know you're saying aspirationally that you want to get there, but we're seeing that the voluntary targets aren't working. Do we move to a mandatory system to try to achieve those targets?

**Mr. Bob Masterson:** Some part of it is the same answer as Mr. Goetz'. Some of the provinces do have targets. It depends on the specifics of that policy, but the commitment is there from industry.

I do want to answer your question, though, about the different types of plastics. There are a lot of different plastics. It is a ubiquitous material for many good reasons, its design features and otherwise. Here's an example. There is an amazing amount of plastic material in a wind turbine. The good thing about a wind turbine is that it's meant to be very durable and withstand a strong wind—

**Mr. Mike Bossio:** I'm sorry to cut you off, but I have one quick final point. Would you be okay, then, if we prohibit all plastics that aren't recyclable by a certain date, by 2030?

**Mr. Bob Masterson:** I'm sure there would be problems with that in some applications. You have to be cautious and look at the exceptions.

**Mr. Mike Bossio:** Once again, the only way you're going to drive innovation is to put industry on notice and have it so that 100% of the plastics are recyclable by 2030.

**The Chair:** If you would you like to respond, I'm happy to allow it.

**Mr. Bob Masterson:** I would just say that you have the industry's commitment on plastic packaging. You talk about single-use plastics and the concerns of Canadians. You have our commitment to work with you on that. Let's get success on that and see what more can come after that, but I think that lumping all plastics together would make for a very difficult conversation when you get into automotive, building materials, medical applications and others. These are very different materials, depending on the application.

**The Chair:** Thank you.

Mr. Jeneroux, you have six minutes.

**Mr. Matt Jeneroux:** Thank you, Mr. Chair. I'll just take a short bit of that six minutes and perhaps give the rest of it to my colleague here and share the time.

I appreciate your comments and I thank you, everybody, for taking the time out of your very busy days to join us.

I particularly want to pick up on a comment about plastic straws.

I appreciate your comments, Mr. Cullen. I don't think every paper straw is created equal at this point. There are certainly some that seem to stand up to that single use—I'm not packing them in my pocket here—better than others. I'm wondering if any of you are aware—and I know it might get a little bit out of your personal jurisdiction—of an economic analysis that has been done on the changes from plastic to paper straws. I'm certainly not opposed to drinking out of a paper straw if it's guaranteed to work and doesn't melt in the glass. I'm just curious if there is something you can point the committee to that we can use as an economic base or standard when taking these decisions into account, particularly from the industry side. I think of what this may mean to Restaurants Canada.

It's a question for everybody or anybody.

•(1650)

**Mr. Bob Masterson:** I can't speak to straws specifically, but on the question of so-called single-use plastics or plastics in consumer goods, work was done by our industry with the support of the United Nations in 2016, and updated last year. It was done by Trucost. What it said was that there are replacements for many of the plastics that are of concern, including those top 10 in the European Union, but when you look at the alternatives, the environmental and economic costs will be over \$400 billion, four times as much for those alternative materials.

That comes back to our point: We have to be cautious when solving a problem that we don't simply replace it with a bigger problem. There will be applications where perhaps aluminum is equivalent, but perhaps aluminum is also much more expensive. You need to look at the picture as holistically as you can before simply making a ban on one material without thinking of the consequences of how consumers and industry will replace that with alternative materials. What are the implications of that? That is in our report, and the references are there if you wish to dig deeper.

**The Chair:** Does anybody else want to comment?

Mr. Cullen.

**Mr. Nathan Cullen:** I think it's an important question to ask, whenever we're looking to ban or replace something. What are the practical implications? What's the impact on the economy and jobs?

A report just this week cited the figure that every tonne of plastic that ends up wasted costs \$33,000 to marine industries, tourism sectors, the municipalities. It's one of those questions you probably had from citizens who may look at their tax bill and say, "It's costing me \$6 a month for recycling. Why am I paying more in my tax bill?"

Particularly if you can take \$6 off your municipal waste cost for the diversion out of your landfill.... Anyone who wants to see large numbers should talk to a municipal leader when they're having to plan a new landfill. What is the cost of retiring the old one? I would always put these questions. A proper approach I think is full cost accounting, not simply the one moment in time, but the life cycle cost of anything we're talking about, the current product or the replacement we're considering.

If we just take the cost of a paper straw to produce and the cost of a plastic straw to produce and one is 3¢ and the other is 1¢, we say that clearly we should do the cheaper option. My question would be, what does it cost for the entire life of that straw? That's all. I've seen industry move dramatically in the last 15 years from a place of maybe not considering full cost to a place now where the implications are better understood. The analysis should be done completely—not in the one moment of time in which you put that straw into the cup—and then we should decide what the cost actually is.

[Translation]

**Mr. Joël Godin:** Thank you, Mr. Chair. I have something to add.

I have a question for you, Mr. Masterson. You said in your opening remarks that 100% of plastic packaging should be recyclable or recoverable by 2030. Is that realistic? It's one thing to announce targets, but another thing to reach them.

**Ms. Isabelle Des Chênes:** We would say yes.

•(1655)

**Mr. Joël Godin:** I was sure you would answer that, but let's be honest.

**Ms. Isabelle Des Chênes:** We decided on 2030 because it gives us the chance to study and market the technology needed to achieve our goal. In some cases, the technology doesn't exist yet. Are we absolutely sure that we'll succeed? The answer is no, because this is a major challenge for us.

We've been working on this goal for a few years now. We want to have the technology needed to recycle any product, including chemically, and to reuse or recover the product. Given our time frame, we can work on this technology.

**Mr. Joël Godin:** I gather that the current technology and manufacturing formulas can't produce 100% recyclable or reusable plastic. Is that correct?

**Ms. Isabelle Des Chênes:** The plastics or the capacities do exist. However, manufacturers must meet certain criteria when packaging their products. For example, if a container must provide health and safety guarantees, the container may be made from non-recyclable plastic. That said, our companies are working on solving this problem.

**Mr. Joël Godin:** I must interrupt you, Ms. Des Chênes. I gather that there's a domino effect. For example, a consumer buys a soft drink at an affordable price from a producer that uses a certain type of container. Until the producer requires 100% recyclable or reusable containers, you won't necessarily make the effort to develop and market those products.

**Ms. Isabelle Des Chênes:** Not at all, Mr. Godin.

[English]

**The Chair:** Ms. Dzerowicz, we'll move over to you now for six minutes.

**Ms. Julie Dzerowicz (Davenport, Lib.):** Thank you, Mr. Chair.

One of the things I heard fairly consistently in all presentations was education, education, education. If I had to ask each one of you to make a recommendation specifically on that, what would that be? I'll start with you, Mr. Masterson. Then I'll go to Mr. Goetz, and then to our colleague on the phone, Mr. Ross.

**Mr. Bob Masterson:** Is that in the context of the federal government or municipal governments?

**Ms. Julie Dzerowicz:** It would be in terms of the federal government.

**Mr. Bob Masterson:** I think the federal government could provide more information to consumers about the materials that can be recycled and the best way to allow them to be recycled. Some beverage containers—and Mr. Goetz can talk about this better—are best recycled if the contents are emptied out so that people aren't worried about the material that's in there, for instance. Clearly it's about what types of materials could be recycled, but I think that education needs to take place not just with individual Canadians but also with municipalities.

In response to that last question of whether we can get there, the answer is that 100% we will not get there if we continue on the current path we're on. We do treat post-consumer materials as waste. Municipalities themselves have to be encouraged and educated to think of these as valuable materials. If we continue to manage them as waste within narrow municipal geographies, we'll come nowhere near reaching our goals.

British Columbia has a very interesting system, in which municipalities have been educated. There's buy-in to create that economy of scale in which materials can be used.

I think the federal government has a strong role, not just with individual Canadians—that's important—but also with municipalities, to talk about what's necessary to create a viable infrastructure so we can achieve these goals.

**Ms. Julie Dzerowicz:** Would you add anything, Mr. Goetz?

**Mr. Jim Goetz:** That's a really good question. Obviously, industry has a big part to play in this, and we are willing to step up, as everyone else on the panel has said today.

When it comes particularly to the consumer product goods side of the plastics debate, there is a big part for the consumers to play as well, and I would point to two things. In Ontario, for example, there is no harmonization of blue box programs across the province. In certain communities, you can put certain things in the blue box or recycling bin; in other ones you can't. That creates consumer confusion, and eventually someone is just going to pitch something in the garbage bin because they don't know where it goes, or they put the wrong materials in the blue box, which speaks to what, I think, Mr. Cullen said before about contamination.

On the second item, I would point to Ontario again. There has been no province-wide education program about recycling since the 1970s, when the blue box was put in place. Municipalities obviously do some. With the beverage industry, for example, in Manitoba right now with our new program, recycle everywhere, we're spending \$1.50 per Manitoban on public education. You can't go anywhere without seeing our recycle everywhere logo, which has 90% recognition, which means it is the second most recognized logo in Manitoba, just slightly below that of the Winnipeg Jets.

Education plays a really big part in this, and that's the way you get the consumers to have more skin in the game: harmonization as well as education.

● (1700)

**Ms. Julie Dzerowicz:** Great.

Mr. Ross, would you add anything?

**Mr. Peter Ross:** Sure. Thank you very much.

When we talk about education and we combine it with plastic, we create a very complicated spectrum of opportunities in Canada. The first thing I would say is, let's talk about plastic.

Plastic is in all walks of life. We at Ocean Wise espouse a “plastic wise” approach—that is, the smart use of plastic. Plastic is a finite resource. Let's treasure it. Let's value it. Let's close the loop on that plastic economy. So, plastic wise is our approach to defining the problem or the issue.

In terms of education, we're very keen on individuals of all walks of life, because educating consumers and individuals is going to be very, very important. But those consumers and individuals won't be able to vote with their wallets when they choose products unless they have proper consumer labelling and recyclable materials, as well as, in many cases—



**Ms. Julie Dzerowicz:** Just to be clear on that, the recommendation to the federal government would be to ask for proper labelling of plastics in products. Does that not happen right now? I get number 7 for recycling, number 5, number 3.... There are different numbers, and then there are different numbers that can actually be recycled depending on where you are. Is that not happening already?

**Mr. Peter Ross:** That is one kind of categorization, but if you're wearing polyester clothing or nylon clothing, there's no recycling of that, and there's no labelling of that. If you have plastic packaging, a lot of the single-use disposable plastic packaging is not labelled.

The problem with plastics right now is that the very simple but effective approach to categorizing the seven types of plastic often fails to incorporate the issue of adulteration through chemical additives, dyes and other things that reduce the recyclability and value of that material.

**Ms. Julie Dzerowicz:** Okay, thank you.

I don't mean to ignore you, Mr. Cullen, but I think that you made an initial point that at the federal level we can create consistency across all the provinces, and I think we're hearing some of that.

If you have anything to add, do it very quickly, because I do have one more question.

**Mr. Nathan Cullen:** The federal government has a great deal of interaction with the municipalities through the FCM, and the sponsorship of various programs could come, coupled with some of the information that municipalities.... They're busy people, or they're elected for two or three years and they simply don't know. Many municipal leaders aren't aware, within their own municipality, what their recycling rates are, and I think a report card system from the federal government, when handing out money, might not be a bad idea.

**Ms. Julie Dzerowicz:** Okay, that's helpful.

I just have one quick question. I am very interested in the toxins that are produced by plastics and the use of some plastics. We see that they end up in the oceans and they're toxic to other life forms.

In terms of looking at the chemicals and trying to reduce plastics, but also maybe reduce their toxicity, is that something that's actually looked at? Is there a role for the federal government in reducing the toxicity of plastics that we use?

**Mr. Bob Masterson:** Again, I would say yes, and yes. You do that, and you do that very well. Canada's chemicals management plan is the top one, or certainly in the top two, of all chemicals management plans anywhere in the world.

I gave you a brief list of plastic-specific chemicals that have been assessed and found toxic in certain applications, where risk management actions have been initiated by the Government of Canada: BPA, phthalates, flame retardants, dyes, pigments, microbeads in personal care products, and 350 different plastic polymers, just to begin with.

We could give you a very extensive list of all the regulatory actions the Government of Canada has taken on chemicals that are used in the plastic industry.

**Ms. Julie Dzerowicz:** You're saying we're among the best in the world.

Mr. Ross, how—

**The Chair:** Sorry, we're out of time now. It's six minutes.

**Ms. Julie Dzerowicz:** One more minute, please....

**The Chair:** You had a minute and a half extra.

I know a couple of people have been making eye contact with me, trying to figure out what's going on. We had said we were going to go until five o'clock with witnesses. We need to go for some in camera committee business, but we do have a bit of time. I don't need the full half hour, so we will go to Mr. Stetski for the last round of questions. He is given three minutes, so if you can bear with me for one more round, then we'll wrap it up.

Wayne, it's over to you.

• (1705)

**Mr. Wayne Stetski:** I'll try to get in two questions.

First of all, Mr. Masterson or Ms. Des Chênes, the report we had from department officials, if I remember correctly, said that the second most littered plastic was cigarette butts. There are several trillion cigarette butts littered every year, and there are plastics in the filter part of those cigarettes. Are you aware of any initiatives, either by your industry or the tobacco industry, to potentially come up with some recycling of cigarette butts?

There is an attitude issue, as you know, first of all. Our lakes, our rivers, our sidewalks are not ashtrays and should not be used as such, but they are. So there is an attitude thing, but what about industry perspective on cigarette butts, if any?

**Mr. Bob Masterson:** I don't think that we are in a position to answer that at this time. Perhaps the tobacco industry might be better, but I think we're part of that value chain and we can find the people who can get an answer to you.

**Mr. Wayne Stetski:** If you could look into that, I would really appreciate that.

My second question is for Mr. Ross, and it's partly about attitudes as well, particularly with the Strait of Georgia. Have you looked into the source of the plastics that are going into the Strait of Georgia? There is recreational fishing, commercial fishing, industry, ships coming in and out of the harbour. Whose attitude needs to change? Who needs to be educated for a different outcome going forward?

**Mr. Peter Ross:** I think I can safely say that it's our opinion that it's all of us. We are all contributing to this problem, and we all have to increase our awareness and understanding of the issue and to step up.

If we look at Canadian shoreline cleanup data, we can find identifiable items like plastic beverage bottles, cigarette butts, bottle caps or sometimes pieces of polymer fragments, so there is clearly a consumer element to that, coming from activities on or in the water, or upstream in the watershed.

We know that there is a heavy aquaculture and commercial fishing fleet, and there are a lot of efforts right now to evaluate the potential role they play in releasing, surreptitiously or deliberately sometimes, plastics into the receiving environments.

A lot more awareness there.... I think this is a good opportunity for education, in particular with the activities on the water.

In terms of microplastics, one of the interesting discoveries we made is that in the Strait of Georgia we have over 3,000 particles of plastic in every cubic metre of sea-water. These are all microplastics, smaller than five millimetres. Most of those, 75% of those are fibres.

In our extensive surveys up in the Arctic with Fisheries and Oceans Canada and One Ocean Expeditions where we are collecting sea-water, we find that 91% of the microplastics up in the Arctic in sea-water are fibres. The majority of these, in both situations, are polyester.

So we are very interested in furthering our very good work with the textile makers and apparel retailers, and our work with the waste-water treatment plant operators, because we're really finding a significant release of microfibrils into local waters from the clothing that we are washing.

**Mr. Wayne Stetski:** Thank you.

**The Chair:** Do you want to do a fast one?

**Mr. Wayne Stetski:** Just quickly then, since I've been given a little more time, do you think the federal government has a role in setting standards going forward, for example for what's coming out of some of the sewage treatment plants?

**Mr. Peter Ross:** I think there's certainly a role to encourage monitoring through liquid waste discharge permits at the provincial

scale, but also in studying what ends up in the plant versus what goes to biosolids or solid waste, because there is that distinction. Based on our initial study last year, my fear is that a lot of the microplastics are going into biosolids, which are then redistributed on land as fertilizer in agroforestry operations.

Yes, there's absolutely a role for the federal government to better understand and step in here under existing regulations and requirements for waste-water treatment plant operators.

I think there's also a great opportunity for Ottawa leadership in trying to nurture innovation to better understand this and identify solutions. We run into a lot of industry players who didn't think they were culprits in some kind of bad story in the ocean, so they're stepping up very seriously and responsibly. They want answers; they want solutions, but often understanding the full nature of the issue is a little beyond their financial realm.

Encouraging discovery, innovation, best practices, green design—I think there's a really good opportunity for Canada to continue on its path of leadership with regard to the plastic pollution crisis.

• (1710)

**Mr. Wayne Stetski:** Thank you.

Thank you Mr. Chair.

**The Chair:** Okay, that's good. Thanks.

That ends this particular panel. I'd like to thank each of the witnesses for being here. You've given us more great information on our fairly abbreviated study on a very large issue. We're hoping our report will be out sometime in early June.

I'm going to suspend the meeting. We'll get anybody who is not a member or a staff member of a member to clear the room. We're going to go in camera for some committee business.

*[Proceedings continue in camera]*







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