

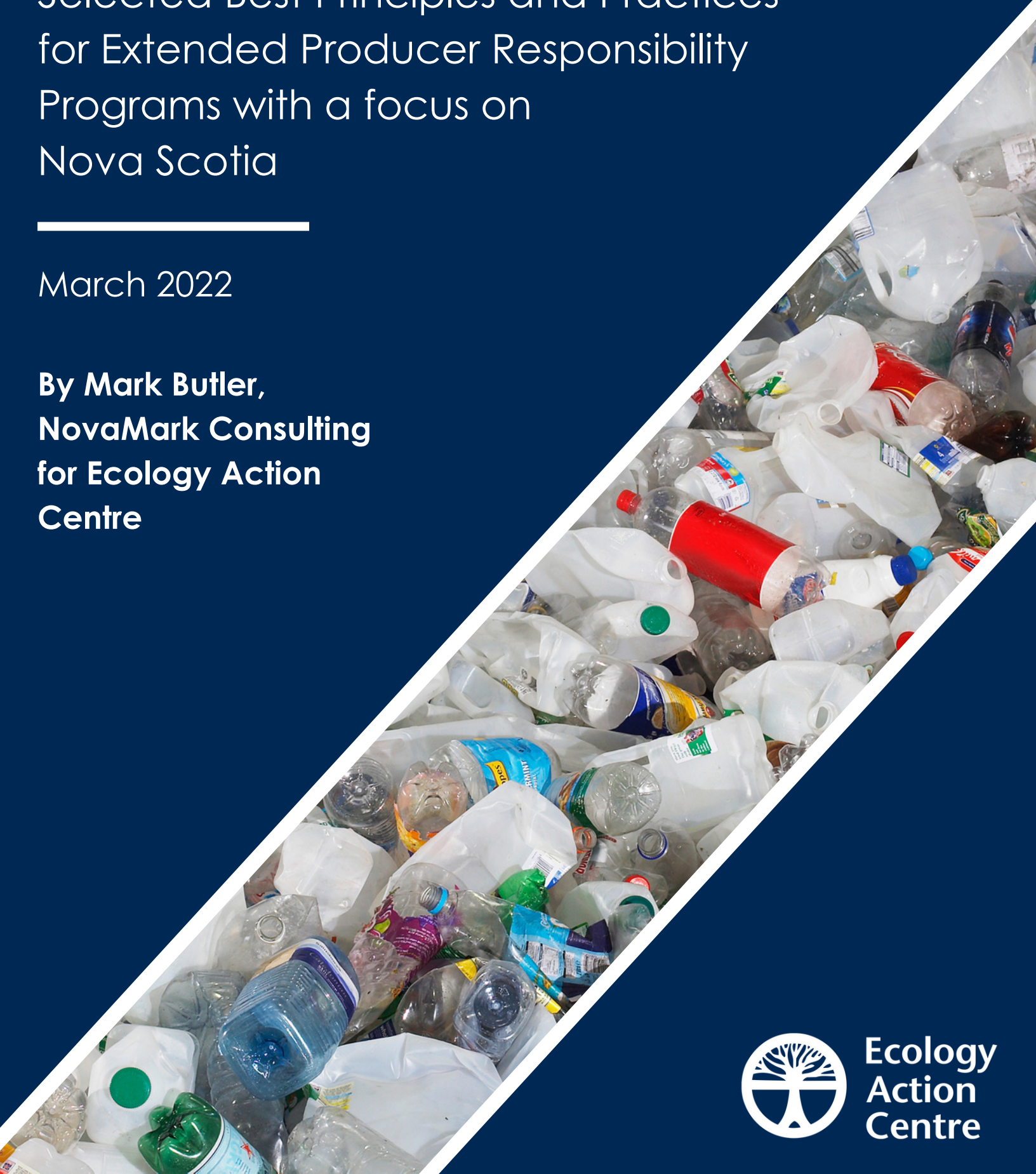
# EPR Unpacked:

Selected Best Principles and Practices  
for Extended Producer Responsibility  
Programs with a focus on  
Nova Scotia

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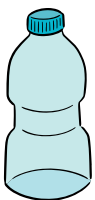
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*“EPR at its essence is nothing more than a policy tool to hold individual producers legally responsible for meeting performance standards (such as recycling targets). Everything else precipitates from that one simple idea and it does not really matter whether this idea is applied to PPP or appliances, a residential collection and recycling system or a deposit-return based collection and recycling system. It also does not matter whether the program is financed by producers or through an advanced disposal fee levied by producers on consumers.”*

**-Usman Valiante, Letter to Recycling Council of Alberta, July 2020**

*“Indeed, the best packaging is that which local governments and communities never have to manage.”*

**-Model Law for State Packaging Reduction and EPR, CLF, 2022**



## **Introduction:**

### A Renewed Interest

**In many countries there is a growing or renewed interest in extended producer responsibility (EPR) in response to the waste crisis, or, to be more precise, the plastic crisis. There also appears to be growing ambition in a number of jurisdictions around what EPR can and should achieve.**

Nova Scotia already has several EPR programs, e.g., waste oil, and stewardship programs, e.g., pop bottles, in operation in Nova Scotia. These programs increase recycling rates and keep plastics and toxins out of the environment. Other provinces, such as Ontario and BC, have provincially regulated EPR for printed paper and packaging (PPP) already in place.

The EPR program for PPP announced by the Nova Scotia Government in December 2021 will be the largest EPR program in Nova Scotia and will touch many items used by Nova Scotians on a daily basis (1). As government, working with industry and citizens, expands EPR programs, we have the benefit of learning from the successes and failures of existing programs here and in other provinces.

In this report I have tried to draw out some of the best principles and practices of EPR based on interviews, a review of the literature and analysis. I have tried to keep the language simple and accessible. This is not an in-depth, technical report.

There is a lot of impressive research and writing on EPR and related topics. There are also good EPR programs in action in Nova Scotia, Canada and other countries. At the end of this report, I have highlighted some of the resources I found most useful.

I spoke to only a few of the many people who are knowledgeable about EPR in Nova Scotia and Canada. If I had been able to speak to more, this could have been a more comprehensive report. However, what Nova Scotia and Canada needs right now is not more long reports on EPR, but action.

We are used to hearing, however unfortunately, terms such as tipping point and planetary boundaries used in reference to climate change or biodiversity loss. A new paper suggests that we should start thinking about toxic chemicals, in particular plastics, in this way particularly as the ubiquity of plastic in the environment has outstripped our ability to monitor and assess its impacts on human and planetary well-being (2).

Nova Scotians have been diligent about recycling. Recycling rates for some materials we put in our blue bags, such as paper and cardboard, are excellent. For other materials, such as plastic, the rates are much lower. Without public participation and support, collection and recycling programs will not work. Thus, it is crucial that EPR delivers on its promise.

## **Personal Note**

In our family we work fairly hard to minimize the amount of plastic (and other packaging) we bring into the house. We recently got rid of shampoo and conditioner bottles in favour of locally made bars with little or no packaging. Yet as I was working on this report, I walked by our blue bin in the kitchen, and it was full of plastic. It is really difficult at the individual level to reduce plastic use even when motivated, particularly I find, if you have children. We need societal and government level action.

## People

In writing this report I spoke to the following people Jim Cormier, Avalon Diggle, Doug Hickman, Bob Kenney, Frank LeBlanc, Mark Miller (written response), Teresa Quilty, Stephen Rayworth, Bill Simpkins, Tom Taggart, Usman Valiante, Valda Walsh and Karen Wirsig. Thank you for your time and thoughts.

## A Few Definitions

### *Printed Paper and Packaging (PPP)*

PPP includes paper, glass, metal and increasingly plastic. PPP can include Tim Hortons cups, flyers, cereal boxes, electronics packaging, candy wrappers and so on. It makes up much of the litter we find on our beaches, ditches and school yards. PPP includes most of the material Nova Scotians put in their blue bags. Of these materials plastic is by far the most difficult material to recycle and for which to find markets. And the challenge will only continue to grow as plastic production, including for packaging, continues to grow in Canada. A recent study commissioned by the Government of Canada estimated that only 9% of plastic waste in Canada is recycled (3).

As you will read below in some jurisdictions EPR has delivered promised environmental outcomes. In other cases, it has not. Good design and implementation are key.

### *Extended Producer Responsibility (EPR)*

EPR places the responsibility and cost for collection and recycling of waste/end of life material on those who produce it. It's the application of the polluter pay principle to waste. One of the hoped-for results of shifting this responsibility, typically from municipalities to producers of the materials, is that this will encourage those producers to make their products easier to recycle and reduce packaging. Changes or modulation of fees charged to producers can drive other desired outcomes like reuse, refill, repair or even reduction in toxins.

Nova Scotia has a number and variety of stewardship and EPR programs in place. The bottle deposit program is considered a stewardship rather than an EPR program because it is the purchaser not the producer that pays for the program and the producers are not involved in running the program. With the EPR programs for electronics, the producers run it, but the purchaser still pays a non-refundable fee at point of purchase.

- Bottles - A stewardship program run by DivertNS where purchaser pays deposit and gets partial refund
- Tires - A stewardship program run by DivertNS where the purchaser pays a fee
- Used oil and containers - an EPR program run by industry
- Electronics - an EPR program run by industry with a non-refundable fee at purchase
- Paint - an EPR run by industry with a non-refundable fee at purchase
- Milk Containers - a voluntary EPR program run by industry
- Household Hazardous Waste - a collection program run by municipalities

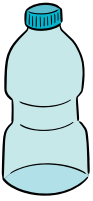
Overall, the thinking is that the more a producer is directly responsible for the end-of-life management of a product including costs, the better the outcome.

### *Producers and Producer Responsibility Organizations (PRO)*

The producers referred to in the term Extended Producer Responsibility are the first importers, manufacturers, or brand owners. As Avalon Diggle and Tony Walker point out in their paper, given the complexity of modern supply chains, there are some obvious challenges in defining who a producer is (4). Typically in Canadian programs, a producer is an importer, brand owner or franchisor. Because of the exclusion of smaller producers in PPP programs in Canada, the producers are typically large companies like Wal-Mart, Sobeys, Canadian Tire, etc. Producers usually combine forces and form a not-for-profit producer responsibility organization. This is the case for electronics and used oil in Nova Scotia and will presumably happen for PPP.

**The EPR program for PPP announced by the Nova Scotia Government in December 2021 will be the largest EPR program in Nova Scotia and will cover most of the material Nova Scotians put into their blue bag.**





## Best Principles and Practices

### 1) Set Targets, Collect Data, Enforce Penalties

To be credible, an EPR Program must set strong targets to reduce and recycle materials, collect data related to those targets and require serious penalties if producers do not meet those targets. The collection of data requires measuring how much material comes into the province or is produced here and then measuring how much of it is recycled.

Progressive targets, targets that increase over time, would give producers and other players time to set up programs before having to meet full targets.

British Columbia, often cited as being a leader in EPR, does not have legally binding targets for PPP and as a result the Ministry of Environment lacks any real recourse if targets are not met (5).

The principles in this report are not listed in order of priority but if legislators and government officials do not embed targets and compliance in the bones of a program, the rest doesn't matter.

### 2) Set Targets for Individual Producers

EPR typically applies to producers or brand owners over a certain size. These producers usually get together and form a Producer Responsibility Organization to share the costs of administering the program. This makes sense. However, if one producer doesn't pull their weight, their lack of compliance can undermine the collective effort. There must be a mechanism to ensure both a PRO and individual producers within a PRO are meeting their targets. In his report to the Recycling Council of Alberta, Valiante recommends that individual producers have legal liability for meeting targets (6).

### **3) Set Targets for Reduction and Other Rs**

If designed well, EPR should greatly increase the amount of plastic being recycled and reduce the amount of plastic entering the environment.

However, the production and use, particularly of plastic packaging, continues to increase in Canada and with it, the associated environmental impacts from plastic pollution to GHG emissions, thus undermining the benefits of increased recycling rates. As a result, those designing EPR programs are increasingly looking at ways for EPR to advance the other Rs, like reuse, refill, repair, reduce and reject. Designing products or programs so they achieve better and expanded environmental outcomes is referred to as design for the environment or DfE.

DfE can be achieved through eco-modulated fees which involves setting or modulating fees for materials in a way that encourages desired ecological outcomes like less packaging or reuse. France has had EPR in place since 1992 and recently added another 10 products to the 12 already under EPR. As part of this expanded initiative, they are redesigning their fee system so it drives change not just at the end of life of a product but through a product's entire life cycle.

The new French law introduces two major modifications to correct this failure. No longer will eco-modulations be calculated solely according to the difficulty of processing the waste (the end-of-life approach), but according to a wide range of criteria based on the product's environmental performance (the lifecycle approach) including "quantity of material used, incorporation of recycled material, use of renewable resources, durability, repairability, possibility of being reused, etc." (Z).

France has also adjusted the fee structure to allow fees to be set at much higher levels up to 20% of the cost of the product which is very high.

Some organizations are also encouraging eco-modulated fee as way to get toxic chemicals out of plastics or reduce the carbon footprint of a product.

### **4) Make Data and Results Publicly Accessible**

While how many plastic clam shell containers were used and recycled in 2023 may not be a top issue for most Nova Scotians, it is incredibly important for the long-term credibility of an

EPR program that its results are easily accessible to the citizens and media. Recycling programs and measures to reduce packaging, particularly residential programs, require the buy-in and participation of all Nova Scotians. Making the data publicly available is the best way to maintain public confidence.



**The Nova Scotia program will cover Tim Horton cups, at least those, that end up in residential stream. Cups disposed of at Tim Horton franchises or at workplaces will not be covered, at least initially because the ICI sector is not included.**

## **5) Industry Operate, Governments Regulate**

Typically, industry, or specifically the PRO, operates the EPR program while governments oversee it. This arrangement harnesses the strengths of the private sector while ensuring public control, particularly to drive reduction and other Rs. There are also practical benefits to having one provincial organization collect and find markets for materials, rather than numerous small municipalities trying to do the same in a global market.

Structuring programs this way also aligns with the basic premise of EPR that making producers fully responsible for the packaging they produce will incentivize them to cut costs by reducing the amount of packaging they have to collect and recycle and by making it easier to recycle the collected material. In this regard, the trend in EPR is away from shared cost or responsibility to producers assuming the full cost of a program.

Again, this structure will only be successful and engender public support if governments set strong targets and ensure producers meet them.



## **6) Allow New EPR Programs Time to Get on their Feet**

Governments should set strong but fair deadlines for producers to register, submit plans and implement programs. When it comes to setting up programs and infrastructure, it will likely make sense, including to producers, to continue with most existing municipal collection systems rather than setting up a new programs and infrastructure. Governments should recognize that it will take time for municipalities and PROs to negotiate this transfer.

## **7) Harmonize with Other Provinces**

Everyone I spoke to agreed that it made sense to harmonize regulations across provinces. For producers who operate in multiple provinces, which is presumably most large producers, having to contend with different rules would be inefficient and frustrating. The one and important caveat, is harmonize up, not down. In other words, provinces should harmonize their regulations to the highest, not lowest, standards.

## **8) Everybody has a Role: ICI Sector, Newspapers and Small Producers**

### *ICI Sector*

The industrial, commercial and institutional sector (ICI) contributes significantly to the waste stream in Nova Scotia/Canada. At the beginning it appears that EPR for PPP will only apply to residential PPP. The good news is that it will include apartment buildings which up to now have not directly been part of municipal collection programs. Once the EPR program for residential PPP is on its feet, ICI materials should be brought in, or a comparable program set up.

### *Newspapers*

There has been some hesitancy in the past about including newspapers in EPR for PPP because of the fragile state of this important sector. However, British Columbia has included newspapers in their EPR programs for PPP and New Brunswick intends to do the same. In some cases, newspapers are able to cover their fees through in-kind advertising credits. Newspapers have had some time to adjust to the new social media world and generally it is not good practice to create exceptions.

### *Small Producers*

Most if not all EPR programs exclude small businesses or producers, measured in sales or volume of waste produced. New Brunswick is not requiring producers who have less than two million dollars in gross annual revenue or who generate less than 1 tonne of packaging annually to register for EPR. Even though small producers are exempt, the paper and packaging they produce will still get collected under the EPR program with the costs being covered by the larger producers. The reason for excluding small producers is because of the regulatory burden. Some jurisdictions, such as Manitoba, do require small businesses to register but not participate (8).

It has been pointed out that there could be businesses under the two million dollar de minimis who generate a lot more than 1 tonne of packaging and consideration should be given to making the de minimis 2 million dollars and (vs. or) 1 tonne of packaging. That is if you are a small business (under 2 million dollars) but you generate 6 tonnes of packaging, you're in.

**EU looking to put fast fashion out of fashion through EPR programs. [CLICK HERE](#) to read more!**



### **9) Jobs and Economic Activity**

It is often said that recycling is a volume business. However, one respondent countered by saying that recycling is also a dollar business by which they meant that if, regardless of volume, you can make it money, it's viable.

Respondents recognized that even with all three or four Atlantic Provinces participating in EPR for PPP much of the material will be shipped to Quebec or Ontario. However, others counselled an open mind.

When New Brunswick brought in a paint recycling program it wasn't anticipated that a New Brunswick facility would repurpose itself to produce recycled paint. The Laurentide Paint Plant in Richibucto now collects and recycles paint into new paint (9).

The 2018 Government of Canada study of the plastic industry called plastic recycling a 7.8-billion-dollar opportunity (10).

## 10) Process Materials Close to Home

There are several media stories of Canadian materials collected through recycling programs not getting recycled and ending up in incinerators, landfills or on beaches in Asia and Africa. These stories were particularly common after China set very high standards for plastic imports effectively shutting the door to imports from Canada and other countries (11). The Canadian Government has taken steps to prevent the export of waste but there are still loopholes.

If materials are processed in Canada rather than being exported, provincial governments and their citizens will have greater assurance that the materials are being recycled responsibly. Provinces should require reporting on the end destination of all materials collected.

## 11) Build in Environmental Justice

As scholars like Ingrid Waldron have demonstrated, there is a strong intersection between waste management and environmental racism (12). In Nova Scotia, landfills and polluting industries are disproportionately sited next to African-Nova Scotian, Indigenous and low-income communities.

Oregon passed the Plastic Pollution and Recycling Modernization Act in August 2021 and built environmental justice into the legislation. The Act requires the State to assess the equity of the new measures including wages in the sector, access to recycling and siting of facilities (13, 14).

EPR is intended to reduce the amount of material going into landfills and the need for them, but recycling still has a toxic footprint, and every effort should be made to ensure that vulnerable communities are not disproportionately affected.



The State of Oregon recently introduced an EPR program and the Government built environmental justice into its program.

## 12) Plastic is the Problem

There is a growing body of scientific literature on the pervasiveness and mobility of micro- and nano-plastic pollution. Everywhere scientists look they are finding microscopic plastic pollution be it indoor air, the food we eat, or even in breast milk. A 2022 study found plastic particles in human blood raising numerous questions ([15](#)). A recent paper on exceeding planetary boundaries for 'novel entities' highlighted the growing threat of plastics ([16](#)).

The environmental impacts of plastics are heightened by the continued growth in plastic production, its increasing share of the waste stream, and the difficulty in finding markets for and recycling many types of plastics. The continued increase in the global production of plastics will strain EPR and other legislative and regulatory responses.

Scientists have detected microplastics in human blood for the first time, with 80% of samples they examined containing the tiny particles.



### 13) Waste to Energy is at the Bottom of the Waste Hierarchy

Some respondents rightly point out that there are certain materials that are simply not recyclable because they are contaminated, contain mixed materials, or there is no market for them. This presents a current challenge for waste managers. These materials typically get incinerated or landfilled.

Incineration and other forms of waste to energy are at the bottom of the waste hierarchy alongside or just above landfilling. Incineration is also a poor climate choice and, depending on the facility, can have consequences for local air quality. Incineration also creates toxic ash that then has to be disposed of safely.

As Karen Wirsig says in a recent blog, waste burning is a greedy process (17). By that she means that a waste to energy facility, once built, requires large volumes of waste for decades undermining recycling and reduction efforts. Even facilities, like cement kilns, that are burning waste materials as a side business create demand for plastic, undermining effort and commitment to creating a truly circular economy.

The long-term solution is not to produce materials that can't be recycled and attention to the other Rs. In the short-term the International Pollution Elimination Network has recommended landfilling unrecyclable plastics (preferably by polymer type) (18).

### 14) Mattresses to Textiles

Currently, in Canada and the United States, the focus of new programs is on printed paper and packaging which makes sense as it is a significant and growing proportion of the waste stream. However, it is hard to think of a product on the market that can't be dealt with through extended producer responsibility.

France recently expanded its EPR program to include the following items:

- building and construction products and materials
- commercial packaging
- toys
- sports and leisure items
- DIY and gardening items
- motor oils
- plastic-tipped tobacco products

- synthetic chewing gum
- single-use sanitary textiles, including pre-soaked wipes
- fishing gear that contains plastics

Upon the launch of EPR for PPP, Nova Scotia and other Atlantic Provinces will want to look at expanding EPR to other items including mattresses, textiles and fishing gear. Existing EPR programs, such as the electronics programs, could also be expanded to include more items.



**Cigarette butts on the ground. Chewing gum on your shoe. France is adding many new items to its already robust EPR programs including cigarette butts and chewing gum. EPR can be applied to practically any item.**

## 15) What Other Metrics to Include in EPR?

As interest in EPR grows, there also appears to be a growing effort to expand what EPR can do. New EPR schemes are going beyond recycling to include reduce, reuse, refill and repair. Maine and Oregon in their EPR programs for PPP have included toxins in plastic. Oregon has explicitly included equity. Environmental organizations are advocating for EPR programs to include targets around recycled content, removing toxics and considering GHGs. These measures can be brought into an EPR Program or implemented outside of an EPR program.

## 16) Toxics

Plastics can contain toxic chemicals with some plastic containing higher levels. Particularly worrying is a very recent 2022 study that found recycled bottles can contain higher levels of toxic chemicals than bottles made from virgin plastic ([19](#)). As part of the solution the authors of

the study encouraged 'greater adoption of design-for-recycling principles and improvements at the waste management infrastructure level'. Maine and Oregon have included reduction of toxics in their EPR legislation.

**As a result of an EPR program for paint in Nova Scotia and New Brunswick a recycling paint plant in New Brunswick has remained open, providing jobs and an importance service in the region.**



## 17) Cost

The cost of running an EPR program is borne by industry. It is estimated that a switch to EPR for PPP would provide municipalities with \$14-17 million in revenue/year and there might be additional savings through avoided costs. And the cost of EPR for PPP is not expected to increase the cost of products covered by this program in Nova Scotia in part because producers have already built EPR costs into the price of products because Canada's largest provinces already have EPR for PPP in place.

## 18) Competition

As mentioned, under EPR producers usually get together under the umbrella of a single PRO to minimize costs and maximize economies of scale. This makes sense. However, when there is only one PRO, this can create a monopolistic environment. Valiante (2020) recommends that producers and their PRO are not afforded shelter from the Competition Act Canada through plan approval or any other means. The intent is to protect smaller producers from discriminatory pricing and other abuses that might arise when there is only one PRO. This is not an area where I have any great expertise, but it seems a reasonable measure for Governments to include.

## 19) Litter

It is appropriate to end with litter. Litter attracts as much or more attention and comment from Nova Scotians and the media as any other facet of solid waste. And apart from aesthetic concerns, there is growing scientific concern about plastics in the environment. If EPR can reduce litter in Nova Scotia this would bolster public support for EPR in Nova Scotia. Various jurisdictions have or are considering folding the cost of litter clean-up into the cost of EPR ([20](#)). In other words, producers would assume some of the costs that municipalities and other agencies incur in picking up and collecting litter. Once again, the polluter pay principle.



**Various jurisdiction have or are considering folding the cost of litter clean-up into the cost of EPR. In other words, producers would assume some of the costs that municipalities and other agencies incur in picking up and collecting litter. [CLICK HERE](#) for more!**

## Conclusion

A few years ago, Nova Scotians and Canadians were disappointed to learn that recycling rates for plastics, versus other materials such as paper and metal they put in their blue bags, was low.

EPR offers a valuable kick in the pants for recycling and waste reduction. If done well it can bring a rigour to recycling by increasing the amount of materials being recycled, reducing the amount of plastic entering the environment, and streamlining collection and processing. With further care and diligence by all involved, it can reduce plastic use, increase transparency on targets, reduce toxics in plastics, address environmental inequities and augment jobs and economic activity in the region.

EPR is not new, so we can learn from other programs and jurisdictions to design an effective program for PPP and finally meet our 2030 target of 300 kilograms of waste person/year in Nova Scotia.



## Annotated Bibliography

Below are some of the reports, papers and websites I made use of in writing this report. They are only a small slice of the many useful and insightful materials available on EPR, recycling, the circular economy and plastic pollution.

### Reports and Publications

*Review of the Environmental Law Center (Alberta) Society's report Extended Producer Responsibility: Designing the Regulatory Framework, Usman Valiante, July 29th, 2020.*

An incisive review of current recycling programs and the potential of EPR. Well worth the read.

<https://recycle.ab.ca/wp-content/uploads/2020/08/290720-Usman-ELC-EPR-Critique.pdf>

*Environmental and Economic Impacts of Mismanaged Plastics and Measures for Mitigation, Avalon Diggle and Tony Walker, 2022.*

A comprehensive tour of everything plastic from production, to pollution, to prevention.

<https://www.mdpi.com/2076-3298/9/2/15>

*Implementation of Harmonized Extended Producer Responsibility to Incentivize Recovery of Single-Use Plastic Waste in Canada, Avalon Diggle and Tony Walker, 2020. Waste Management 110 (2020) 20-23.*

This paper provides an excellent overview of EPR in Canada and provides a case study of the benefits EPR for PPP could provide for Nova Scotia.

<https://bit.ly/3JJ8x4X>

*Determining Potential Business Impacts of Extended Producer Responsibility Programs on the Printed Paper and Packaging Waste Stream in Nova Scotia, Avalon Diggle and Tony Walker, March 2021.*

A review of the possible impacts of EPR on businesses in NS but also a comprehensive and informative overview of EPR including programs in other Canadian provinces.

[https://divertns.ca/sites/default/files/researchreportsfiles/2021-09/EPRforPPP\\_DiggleWalker.pdf](https://divertns.ca/sites/default/files/researchreportsfiles/2021-09/EPRforPPP_DiggleWalker.pdf)

*Implementation of Harmonized Extended Producer Responsibility to Incentivize Recovery of Single-Use Plastic Waste in Canada Waste Management 110 (2020) 20-23*

*Economic Study of the Canadian Plastic Industry, Markets and Waste: Summary Report*, Deloitte and ChemInfo Services Inc, 2018.

Environment and Climate Change Canada commissioned this 2018 study on plastic recycling in Canada. The study documented that only 9% of plastics are getting recycled and described this as Canada's \$7.8 billion missed economic opportunity. Good reference document on plastics in Canada.

<https://www.canada.ca/en/environment-climate-change/services/managing-pollution/publications/plastic-waste-report.html>

*Extended Producer Responsibility: Updated Guidance for Efficient Waste Management*, Dr. Hajime YamaKawa, 2016, OECD.

Description of an EPR program for packaging waste in Japan including some of the successes the program has had in increasing recycling and reducing packaging.

<https://www.oecd-ilibrary.org/sites/9789264256385-18-en/index.html?itemId=/content/component/9789264256385-18-en>

*Modulated Fees for Extended Producer Responsibility Schemes, 2021*, OECD.

A review of EPR programs with eco-modulated fees that increase recyclability and reduce packaging

[https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/WKP\(2021\)16&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/WKP(2021)16&docLanguage=En)

*Plastic Waste Management Hazards: Waste to Energy, Chemical Recycling, and Plastic Fuels*

The International Pollutants Elimination Network has produced a comprehensive report on plastic pollution and the environmental impacts of incineration of plastic, plastic to fuel and downcycling.

<https://ipen.org/sites/default/files/documents/ipen-plastic-waste-management-hazards-en.pdf>

*Outside the Safe Operating Space of Planetary Boundaries for Novel Entities, 2022*, Linn Person et al.

This 2022 paper by a large number of authors puts 'novel entities' with an emphasis on plastics in the same category as climate change and biodiversity loss.

<https://pubs.acs.org/doi/10.1021/acs.est.1c04158>

## Government

*Solid Waste Regulation Public Discussion: What We Heard, 2015, Nova Scotia Environment*

A 2015 report from Nova Scotia Environment on extensive 2014 consultations on waste management in particular EPR. In the introduction the then Minister, Randy Delorey, remarks that Nova Scotia is overdue for an expansion of EPR.

<https://novascotia.ca/nse/waste/docs/Solid-Waste-What-We-Heard-Report-March-2015.pdf>

A 2019 report prepared for the Municipal-Provincial Priorities Group (Divert NS) by Aecom Canada on EPR as well as on more broadly streamlining waste management in Nova Scotia. Includes a scan of best waste management practices across jurisdictions.

<https://divertns.ca/sites/default/files/researchreportsfiles/2021-09/MunicipalEfficiencyEffectivenessStudy.pdf>

*The Environmental Goals and Climate Change Reduction Act, 2021, Government of Nova Scotia.*

This newly passed Act sets a goal of expanded producer responsibility and reduction of single use plastic as well setting a goal for a waste diversion rate of 300 kg person/year by 2030. Nova Scotia has had the goal of 300 kg since 2007. The current figure is 400 kg.

[https://nslegislature.ca/legc/bills/64th\\_1st/1st\\_read/b057.htm](https://nslegislature.ca/legc/bills/64th_1st/1st_read/b057.htm)

*Paper and Packaging Regulations, Clean Environment Act, New Brunswick (October 2021)*

<https://laws.gnb.ca/en/ShowTdm/cr/2008-54>

Recycle NB, a provincial body created under New Brunswick's Clean Environment Act, administers EPR for Paper and Packaging and other programs in NB.

<https://recyclenb.com/packaging-and-paper-products>

Maine is moving ahead with EPR for packaging. This page provides an overview of the program. You can sign up for a quarterly newsletter on their progress.

<https://www.maine.gov/dep/waste/recycle/epr.html>

*Canada-wide Action Plan for Extended Producer Responsibility, CCME, 2009*

A federal-provincial action plan for EPR which is largely unfulfilled.

[https://ccme.ca/en/res/cap-epr\\_e.pdf](https://ccme.ca/en/res/cap-epr_e.pdf)

*A Proposed Integrated Management Approach to Plastic Products to Prevent Pollution and Waste, Environment Canada, 2017*

<https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/plastics-proposed-integrated-management-approach.html>

## **Industry and ENGOS**

*State Packaging and Extended Producer Responsibility: Summary of Model Bill*

Summary of a bill developed by Conservation Law Foundation, BreakFreeFromPlastic.org and other groups.

[https://docs.google.com/document/d/1gL2sl2quvWjZmjLIO\\_SduU-gR4K0C64w/edit](https://docs.google.com/document/d/1gL2sl2quvWjZmjLIO_SduU-gR4K0C64w/edit)

Electronics Products Recycling Association

In Nova Scotia and other Canadian provinces computers, printers and certain other electronics are now managed under an EPR program.

<https://recyclemyelectronics.ca/ns/what-can-i-recycle/>

Used Oil Management Association of Canada

This association runs programs in most Canadian provinces including most recently, Nova Scotia, collecting and recycling used oil, filters and fluid containers.

<http://usedoilrecycling.com/>

An article on increased plastic production, the recently agreement at UN to draft a Plastics Treaty (2022), and problems with chemical recycling.

<https://www.ft.com/content/901c78e6-b4d0-467c-ab87-6fc44c8a004c>

A Blog on why burning plastic is a bad idea.

<https://environmentaldefence.ca/2022/03/18/burning-plastic-is-a-terrible-idea/>

And to finish, the guy who came up with EPR

[https://en.wikipedia.org/wiki/Thomas\\_Lindhqvist](https://en.wikipedia.org/wiki/Thomas_Lindhqvist)