

## Reducing Plastic in Nova Scotia Can Go Further

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## Summary

Plastics are a material that do not easily breakdown or are healthy for organisms when broken down. Bioaccumulation like that of pesticides causes harm and sometime death to wildlife. To reduce plastic pollution Nova Scotia's provincial government introduced a ban on single-use plastic bags and opened the door for more regulations on single-use plastics in the future. Some regulations that could be adopted by the Nova Scotian government are an adaptation of a former Prince Edward Island (PEI) ban on the sale and distribution of plastic and aluminum beverage containers and a San Diego ban on the sale and distribution of polystyrene products. Along with borrowed regulations Nova Scotia should work with manufacturers to reduce unnecessary plastic packaging. Young people can and should call on their provincial government to adopt these changes.

Plastics, as we know them today, can be traced back to materials like the early 20<sup>th</sup> century invention by Leo Baekeland called “Bakelite.” It was made of a mixture of phenol and formaldehyde and described as “insoluble in all solvents [and] does not soften.” (American Chemical Society, 1993). Today’s plastics are primarily made of petrochemical (American Chemistry Council, 2010), but still have similar properties. Modern plastics have incredible plasticity, for which they get their name, are durable, impermeable to water, and can last lifetimes. Plastics are used in our everyday life from the lids of coffee cups to parts of spacecrafts. Their cheap monetary cost to manufacture has led to the seeming inescapability of plastic today and the development of a single use mindset of products. But the cheap economic price of the extraction of materials, production, transportation and finally the disposing of these plastics is vastly outweighed by the environmental consequences of our use of these products. The single-use mindset has created a gross over-consumption of goods and the cheapness of the material has led to an addiction to the quantity of products over quality. Pollution caused by the disposing of plastics is undeniable as it litters the ground and contaminates waterways and our oceans. Bioaccumulation of broken-down plastics is akin to the kind observed with pesticides such as DDT and has been observed to be the cause of death to an alarming amount of wildlife.

Fortunately, efforts are being made to reduce our society’s consumption of plastic. In the fall of 2019, the Nova Scotian Government introduced legislation, that will come into affect in the fall of 2020, to ban single-use plastic checkout bags and opened the door for further legislation on banning other single use plastic items. Along with that, the Federal Government of Canada announced in June 2019 the banning of many single use plastics and that they will work with provinces and territories to introduce standards to manufacturers of plastic products and/or products packaged in plastics (Trudeau, 2019). Each of these is a good start, but the Nova Scotian ban of plastic bags is a small piece of a larger puzzle and the announcement by the Federal Government is not clear as to when legislation will come into affect. Strategies from around the world in dealing with the problem of single-use plastics must be explored.

One strategy that comes to mind is one that is unfortunately no longer in place in PEI. The so-called “can ban” prohibited sale of several beverages in aluminum cans and plastic bottles (The Hamilton Spectator, 2008). It was originally created to protect local jobs in PEI, but ultimately, it was a measure that promoted the use of refillable glass bottles on the island and the returning of the bottles for refunds. This policy meant beverage bottles for pop and beer could be cleaned and reused so long as the bottle was intact. This way of managing bottles undeniably used less energy than melting aluminum or plastic containers to be recycled and incentivized that the bottle be returned instead of discarded. The introduction of this kind of policy in Nova Scotia would reduce the overall waste from disposable packaging, common in the fast-food industry. Obviously, this may be more difficult for local brewing companies as the “would be” banned containers are cheaper to obtain. To fix this, the incentive of refund returns could be adjusted to make sure that bottles are returned to their bottlers and refilled with their beverage. This adjustment would be difficult, but the need for a change could very well create jobs. A one-liter plastic bottle takes over six times the amount of energy to produce as a plastic bag (Stromberg, 2014) and therefore should be a target as much, if not more, than plastic bags.

Another regulation, in San Diego, is the banning of the sale and distribution of unnecessary and single-use polystyrene, including bowls, plates, trays, lids, takeout dishes, egg cartons, coolers, pool toys, dock floats, and mooring buoys (Garrick, 2019). Polystyrene is non-biodegradable, energy intensive to make, and contains toxic chemicals suspected of being

carcinogens and neurotoxins (Business Barbados, 2010). This explains why anyone would get rid of it, as we should too. San Diego's ban was considerate of the fact that many of the banned polystyrene objects have much more environmentally friendly alternatives, such as paper and cardboard packaging for food and beverages, and wooden, or less brittle and chemically harmful plastics, for more permanent objects. While alternatives may be more expensive for restaurants, the charge to customers for disposable items could be adjusted to better reflect what restaurants pay. While most meat in Nova Scotia is packaged with polystyrene, butcher's paper or wax paper could be used instead, as a disposable packaging, or reusable containers made out of metal or glass that can be easily sanitized and returned to a grocery store or butcher for a refund. Unfortunately, the ban in San Diego has been halted for the time being (Garrick, 2019), it continues to be an example worth following.

While the announcement by the Canadian Federal government has not revealed the specific standards, the expectation for manufacturers to reduce plastic use was significant. The problem of plastic consumption is often blamed on the consumer, while companies that produce goods are responsible for the plastic packaging that would likely outweigh the grocery bag on an average trip to the store. "The New Plastics Economy Global Commitment", led by the Ellen MacArthur Foundation, is a commitment that is pointed in the direction of producer responsibility. It is an agreement signed, in collaboration with the United Nations Environmental Programme, by over 250 organizations that represent twenty percent of the global production of plastic packaging (Ellen MacArthur Foundation, 2018). The signatories included many well-known brands such as PepsiCo, L'Oréal, Mars and several others. The targets are intended to be reviewed every eighteen months and would become increasingly ambitious over time. Targets included eliminating unnecessary plastic packaging and moving from single use to reusable packaging models, innovating to ensure that all their plastic packaging would be easily composted, reused, or completely recycled, and that their packaging could easily circulate the recycled plastic material to be used in new products. It is described as an important step by its members and supporters. Any retail worker could tell you that the simplest of products likely came to the store wrapped or covered in plastic. That is not the failing of the consumer, but the responsibility of the producer. While consumers can do their best to reduce the plastic they consume, the companies that package products in cases of unrecyclable plastic, have a much greater threshold to reduce waste in packaging. Commitments like this can greatly reduce the amount of plastic, that never needed to be produced, from heading to landfills or ending up in waterways. While, corporations are the root of the packaging problem, governments can do their part by setting standards for companies to meet targets like the ones presented by "The New Plastics Economy Global Commitment." Therefore, the second point of the federal government's announcement should be emphasized and carried out.

As a young person, it is easy to feel powerless in the face of large issues like plastic pollution. Yet, young people are anything but powerless. For one thing, young people who can vote, should vote. They should vote for candidates who will make and support legislation to protect our environment. While young people under the age of eighteen cannot vote, they still have a voice. Young people can educate themselves and others on issues by listening to experts, asking questions, and sharing their thinking. Young people can create pressure on policy makers by demanding better and petitioning for change. Young people have a voice, and if they use it, people will listen. Movements like the "Fridays For Future" and The Youth Climate Movement (YouNGO), which are both youth led movements, are important conduits for young people to

learn from each other and to use their voice to call on policy makers to make changes like banning polystyrene or plastic bottles. The best tools youth can use are education and their speaking out.

Plastics are harmful to our shared environment. The elimination of unnecessary plastics is an important part of shifting society's impact on the planet. Fortunately, steps are being made to reduce single-use and unnecessary plastics. Policies, like Nova Scotia's plastic bag ban, are a good start, but are not enough. Policies, like regulating plastic beverage bottle use and polystyrene bans, can certainly be added to a plastic bag ban. Moreover, initiatives to reduce the amount of waste produced through packaging are integral to the reduction of single-use plastic waste. Young people can play a big part in influencing policy development through grass roots movements aimed at educating decision makers. A future with less waste is attainable, if we put the effort in to achieve it.

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