

Solutions to Plastic Film Waste in Nova Scotia

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Executive Summary

This paper explores the methods that communities outside of Nova Scotia, and countries aside from Canada, are currently using to reduce or eliminate the use of plastic films. China's recent restrictions in their recycling industry have left Nova Scotian facilities with so much plastic waste it had to be moved into a landfill. This of course, is not ideal, so measures to greatly reduce the use of single-use plastic films in our province must be considered in order to avoid such a buildup.

Legislation in several countries has already been passed to ban or tax the use of plastic bags, but Canada (and Nova Scotia specifically) has yet to do so. The methods of plastic bag reduction around the world is discussed throughout the research essay. This includes not only government regulation, but also companies using plastics to make positive social and/or environmental impact.

The following investigation highlights the possibility of Nova Scotia eliminating the use of plastic shopping bags entirely, as well as the urgency to do so. Canada is known for its wonderful natural landscapes and ecosystems, and with plastics having such a negative environmental impact, it only makes sense to heavily reduce (and ultimately eliminate) our countries use of it.

Research Essay

Nova Scotia is a beautiful province consisting of a peninsula and offshore islands, home to diverse marine life such as seals, whales, porpoises, and seabirds, and popular for water sports like kayaking and surfing. Nowhere in Nova Scotia is more than 67km from the ocean, and with seafood being one of the provinces main exports, many of the people here rely on the ocean and other waterways for their livelihood. Unfortunately, the increase of single-use plastic production in the last decade has taken a toll on our oceans and coastal regions. As of 2014, only 67% of plastic shopping bags were brought to recycling facilities (Recycling Today, 2015), leaving the remaining 33% to end up elsewhere. There have been countless stories showing the horrendous state of our oceans, many involving or caused by plastics. Recently China, which buys recyclables from North America, has implemented strict regulations regarding contaminant levels on recyclable materials. This has caused recycling facilities in areas like Nova Scotia to hold on to masses of plastic that are not up to selling standard, as well as causing a decline in revenue for organizations that previously sold the plastics. Halifax, Nova Scotia, has had to get the permission of the provincial government to ship some of its film plastic to a landfill outside of the province because it has no use here (Bula, 2018).

Some companies have taken it upon themselves to try to reduce the use of plastic shopping bags. Walmart, for example, charges 5 cents for every plastic bag used by a customer. This somewhat hinders the use of plastic bags, but many customers still choose to buy them at such a low price. For a few months after introducing a plastic bag fee, Walmart sold their

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reusable tote bags for only 25 cents, but they have since risen the price to anywhere from 77¢ - \$1.47, depending on the size. Raising the fee of plastic shopping bags equal to the price of the reusable shopping bags sold by the same companies would certainly encourage shoppers to purchase the reusable bags. Of course the ultimate goal would be for companies to eliminate the use of plastic shopping bags entirely, whether that be the decision of the company or enforcement from governments. Either way, the public needs to express their concerns directly to these organizations in order for such a change to occur.

Many other countries have already made the steps towards a plastic free world by controlling, eliminating, or taxing single-use plastics. In Rwanda, it is illegal to import, produce, use, or sell plastic films such as plastic packaging and shopping bags, except within specific industries like hospitals and pharmaceuticals (Freytas-Tamura, 2017). Rwanda is just one example of this. Several other countries including Italy, China, Kenya, South Africa (Toronto Environment Alliance, n.d.), and France have implemented some form of a ban or tax on single-use disposable plastics (Eastaugh, 2016). Eliminating the use of plastic bags would certainly be possible for Canada. In 2007, the town of Leaf Rapids, Manitoba became Canada's first community to ban single-use plastic shopping bags (CTV News, 2007). Other North American locations that have imposed bans on plastics include the states of Hawaii and North Carolina, as well as the cities of San Francisco, Seattle, Los Angeles, Portland, and Mexico City (Toronto Environment Alliance, n.d.). The people in these areas live similar lifestyles to the residents of many Canadian cities, so it would not be unreasonable to think that areas of Canada could implement a ban of plastic shopping bags.

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Until such legislation is passed, alternative solutions must be considered for the reduction of plastic waste. One thing to consider is making recycling easier and more convenient for consumers, and holding manufacturers accountable for their products. In 1991, Germany became the first country to pass packaging laws forcing plastic manufacturers to be responsible for the recycling of any packaging they sell, so the industry set up an organization to oversee plastic waste collection. Plastic bottles can be taken to almost any supermarket, and there is a machine that they can be put in to be recycled. This machine reads a barcode that indicates the type of plastic it is, that it is recyclable, and which retailer it has come from. The consumer gets a deposit from every bottle and the retailer gets the plastic, which they can sell to recyclers (The Economist, 2007).

Governments could also do more to encourage the development of circular supply chains for plastics. A lot of recycled plastics can be used back into the same products, which does happen with bottles, for example, but there are other outlets where items like a short-life piece of packaging can go into a long-life application. New technologies are breaking through that are making it possible to recycle these types of plastic that are typically thrown in the garbage. In making vehicles, the performance of recycled materials can be just as good as that of a virgin material. BMW, for example, has already made air vents and headlight casings from 100% recycled plastics (Leeson, 2016). Another company, named 'The Plastic Bank,' makes plastic waste a currency so that people in developing countries with high levels of poverty and plastic pollution can earn an income while creating a positive environmental impact (The Plastic Bank, n.d.). Their recycling system in Haiti exchanges plastic for items like solar cell phone charging and cooking stoves, or money, so that people in need can collect plastic and bring it to these

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recycling facilities, creating a small economy around recycling (The Plastic Bank, n.d.). All of the plastic collected through The Plastic Bank is sold as what is called “social plastic” to be used in manufacturing and 3D printing (Leeson, 2016). New technology also means that waste can now be converted into energy. Cynar, a waste-to-fuel company, turns plastic films such as candy and snack wrappers, which aren’t usually recyclable, into diesel through pyrolysis. While the negative environmental impacts of using diesel are also an issue, making it from plastic waste would be better for the environment than extracting the oil from the earth.

Ultimately, in order for any kind of plastic waste control or legislation to be implemented by companies, organizations, or governments, customers and citizens must voice their concerns about our plastic problem. Consumers should demand that their supermarkets deliver products in paper (as an alternative) or just as they come. Residents of Nova Scotia must pressure their government, and tell them that they do not accept the plastic content in the environment. For such a social push to occur, people must be educated about recycling processes, the impact of plastics on our environments, and what other countries and organizations are already doing to help solve the global issue of plastic pollution. It should become common knowledge that we will all be better off if less plastic is manufactured in the first place, and that you cannot simply throw something “away” and expect that it is really gone. Publicly highlighting this issue is the easiest way to change it, “because from knowing comes caring, and from caring comes change.”

Bibliography

- Bula, F. (2018, January 9). China's Tough New Recycling Standards Leaving Canadian Municipalities in a Bind. Retrieved from <https://www.theglobeandmail.com/news/national/chinese-ban-on-foreign-recyclables-leaving-some-canadian-cities-in-the-lurch/article37536117/>
- CTV News. (2007, April 02). Plastic Bags Officially Banned in Manitoba Town. Retrieved from <https://www.ctvnews.ca/plastic-bags-officially-banned-in-manitoba-town-1.235770>
- Eastaugh, S. (2016, September 20). France Bans Disposable Plastic Cups and Plates. Retrieved from <https://www.cnn.com/2016/09/19/europe/france-bans-plastic-cups-plates/index.html>
- Ecology Action Centre. (n.d.). Don't Waste a Crisis, Ban the Bags! Retrieved from <https://ecologyaction.ca/plastic>
- Freytas-Tamura, K. D. (2017, October 28). Public Shaming and Even Prison for Plastic Bag Use in Rwanda. Retrieved from <https://www.nytimes.com/2017/10/28/world/africa/rwanda-plastic-bags-banned.html>
- Leeson, C. (Director). (2016). *A Plastic Ocean* [Documentary film]. United Kingdom.
- Recycling Today. (2015, February 06). Plastics Recycling Rate in Canada Reaches Record. Retrieved from <http://www.recyclingtoday.com/article/plastics-recycling-canada-report/>
- The Economist. (2007, June 07). The Truth About Recycling. Retrieved from <https://www.economist.com/node/9249262>
- The Plastic Bank. (n.d.). What We Do. Retrieved from <https://www.plasticbank.org/what-we-do/>
- The Plastic Bank. (n.d.). What's Happening. Retrieved from <https://www.plasticbank.org/whats-happening/>
- Toronto Environment Alliance. (n.d.). Where else in the world have governments banned plastic bags? Retrieved from http://www.torontoenvironment.org/where_else_in_the_world_have_governments_banned_plastic_bags