

Plastic Film in Nova Scotia  
Josiane Gibson  
Grade 12  
Cobequid Educational Centre

## EXECUTIVE SUMMARY

In July 2017, China announced that they would no longer be accepting recyclable waste from overseas, causing many problems for Canada. Nova Scotia, in particular, was hung out to dry left with approximately 300 tonnes of recyclable film plastic and no destination. The question then rises; what should be done with all this plastic? After much thought, most of the waste was sent to landfills in hopes that one day, when the technology was developed, they would fish it out and make use of it. This essay is an analysis of alternate strategies that could be used instead of sending the plastic to a landfill, describing new technologies and addressing that our trash can have a valuable place in the economy. Furthermore, strategies on how to eliminate virgin plastic consumption and production are presented, including the benefits of a plastic bag ban.

Nova Scotia's film plastic problem can be turned into something that creates long-term benefits for the economy if invested properly. Jobs, education, trade, and savings are all results of NS simply investing money into the research and technology that will save our planet.

It is evident that the world's plastic consumption can not be sustained. China's plastic ban has created a tipping point in Canada and the US's waste management- demanding that we change our habits, fast. With over 300 tonnes of plastic waste parked in Halifax (Halifax told it can, 2018) with no destination, a heated topic has taken place as to what can be done with this waste. To solve Nova Scotia's plastic problem, we must address the following: how to manage our existing use of plastic, how to reduce our overall plastic consumption, and how to prevent this surplus from happening again.

Firstly, it should be stressed that the plastic we have is of value and should not be sent to landfills. It is estimated that 95% of plastic packaging, worth \$80- \$120 billion a year is simply lost in the economy because of our lack of motivation to recycle it efficiently (New Plastics Economy, n.d.). With the rise of new technologies and research, our waste could become something we could turn to profit, jobs, resources or even fuel. Nova Scotia economy has potential to benefit from recycling initiatives and turn trash in to treasure domestically. Plastic recycling depots in NS, would create jobs, find a solution for the contaminated plastic problem, and potentially create new resources from the recycled plastic. The current and most common recycling method -open and closed loop- could be used in NS to recycle the plastics that aren't contaminated or degraded. To deal with the contaminated and partially degraded plastic, further options need to be explored. As for now, the only option is to leave it in the mystery landfill until more studies are done about film waste (Corfu, 2018).

An option for recycling the plastic film is to turn it into biofuel. As of now, this method certainly has its negative environmental impacts but it is possible that future research could help avoid the consequences. "Burning plastic in incinerators or so-called 'waste to energy' facilities

causes harmful emissions including persistent organic pollutants, heavy metals, and greenhouse gases” (Arkin, n.d.). This could be a short-term solution as Canada is still dependant on oil fuel, and this could spark enough revenue to look into alternate methods- such as *BioCollection*. A group of students from British Colombia have started the company *BioCollection*, where they are developing a Catalist that is capable of eating plastic and turning it into chemicals in only a few hours. Those chemicals can then be recycled into more complex plastic products. The founder, Miranda Wang says, "we believe that our process is actually cheaper than processes that currently depend on using petroleum to make these chemicals". Wang believes that their methods could completely end the virgin plastic market in the future as it is quite inexpensive. (Saifi, 2018). Nova Scotia’s investment into studies like Wang’s could transform how we look at our waste. For now, storing the excess plastic in landfills while new technologies develop is like putting a band aid on a concussion- things will only get worse. While there currently isn’t another option, it is absolutely necessary that Nova Scotia starts investing in sustainable and permanent solutions to our plastic problem.

In the meantime, we need to reduce our consumption of plastic. While it can be difficult, with the help of individual stakeholders it is completely possible. Communication is key with large changes, people need to be motivated to change their habits and have alternate choices easily available to them. With help from Divert NS, local grocery stores, etc, alternative produce and grocery bags could be made much more appealing and available. Discussion around eliminating plastic bags altogether in NS is currently under consideration by the government (Laroche, 2018), hoping to gradually change the habits of Nova Scotians. A decrease in our use of single-use plastic bags will not solve our film plastic problem, however, it will prevent it from growing. Following the examples set by Italy, China, Bangladesh, and many countries in Africa

who banned plastic bags would be in the upmost best interest of NS (Where else in the world, n.d.).

One of the reasons China stopped accepting our waste was because it was contaminated and creating public health concerns for the people working at the recycling facilities. Now that Canadians are focusing on recycling domestically, we are facing those exact challenges- with around eight hundred swimming pools worth of contaminated, unrecyclable plastics are sent to a waste management site in Toronto every day to be sorted. (Chung, 2018). When dirty or non-recyclable items go into blue bins, machinery is damaged, workers can be injured, and it can damage or potentially contaminate other materials- costing taxpayers' money. There are two possible solutions to contamination problem: encouraging the consumers to change their habits, or forcing the municipal waste management to wash and separate the plastic themselves.

Kamikatsu, a small village in Japan has created a system where practically nothing is wasted. The process of separating and cleaning trash has become habit to the people of Kamikatsu and is part of their daily routine. The citizens are accustomed to separating their garbage into 34 different bins, being sure that everything is clean and in its proper place. The town's recycling facility then double checks and recycles the waste. "The process saves the village a third of its former costs from waste incineration" (Garfield, 2017) – a perfect example that proper recycling techniques pay off. Nova Scotia should be vested in implementing a strict policy for households to separate their waste themselves. Through education, partnerships and incentives, the government can implement a viable program.

The second solution to the contamination problem would be removing the responsibility of cleaning and separating the plastic from the consumer to the municipal recycling organizations. Consumers would simply separate their waste into the usual paper, plastic,

refundable, and compost bins, and then the town would wash all plastic together to eliminate the risk of contamination. This would potentially reduce the amount of water wasted as consumers would not have to try to clean their product before it was cleaned again by the municipality. It would create jobs, ensure the plastics are cleaned to protocol, and be more convenient.

Alternatively, the method of introducing Extended Producer Responsibility would reduce “municipal waste disposal costs as well as the amount of garbage in landfills”.

(<https://www2.gov.bc.ca/gov/content/environment/waste-management/recycling/product-stewardship>). EPR is when the producer’s environmental responsibility of their product is extended to its entire life cycle. British Columbia uses these policies to shift part of the burden of waste management on the producer. There are financial incentives in place for producers to have environmentally responsible products.

A solution to surplus of plastic waste in NS would be through political mobilization, with individuals and NGO’s pressuring government to enact EPR legislation. Because of the structure of our economy, it is cheaper for co-operations to use new plastics on their products. This practice is not sustainable and should not be legal at this point in our environmental crisis. Enacting legislative change to deal with the issue means that it would become more desirable for companies selling their products in NS to use other, more sustainable products.

## References

- Arkin, C. (n.d.). China's Ban on Plastic Waste Imports Is a Wake-Up Call. Retrieved from [http://www.earthisland.org/journal/index.php/elist/eListRead/china\\_ban\\_plastic\\_imports\\_wake\\_up](http://www.earthisland.org/journal/index.php/elist/eListRead/china_ban_plastic_imports_wake_up)
- Chung, E. (2018, April 09). Many Canadians are recycling wrong, and it's costing us millions | CBC News. Retrieved from <http://www.cbc.ca/news/technology/recycling-contamination-1.4606893>
- Corfu, N. (2018, January 04). Halifax sending 300 tonnes of recyclable plastics to out-of-province dump | CBC News. Retrieved from <http://www.cbc.ca/news/canada/nova-scotia/halifax-sends-recyclable-plastics-out-of-province-dump-china-ban-1.4472714>
- Garfield, L. (2017, July 10). The simple way this Japanese town has become nearly zero-waste. Retrieved from <http://uk.businessinsider.com/zero-waste-town-kamikatsu-japan-2017-7>
- Halifax told it can dump film plastics in landfill, but will burn them instead | CBC News. (2018, January 05). Retrieved from <http://www.cbc.ca/news/canada/nova-scotia/halifax-told-it-can-dump-film-plastics-in-landfill-but-will-burn-them-instead-1.4474648>
- Laroche, J. (2018, January 18). Nova Scotia mulling provincewide ban or levy on plastic bags | CBC News. Retrieved from <http://www.cbc.ca/news/canada/nova-scotia/plastic-bags-levy-tax-ban-landfill-garbage-1.4493088>
- New Plastics Economy report offers blueprint to design a circular future for plastics. (n.d.). Retrieved from <https://www.ellenmacarthurfoundation.org/news/new-plastics-economy-report-offers-blueprint-to-design-a-circular-future-for-plastics>

Saifi, Z. (2018, March 09). Miranda Wang wants to close the loop on plastic recycling. Retrieved from <https://www.cnn.com/2018/03/09/world/miranda-wang-tomorrows-hero/index.html>

Where else in the world have governments banned plastic bags? (n.d.). Retrieved from [http://www.torontoenvironment.org/where\\_else\\_in\\_the\\_world\\_have\\_governments\\_banned\\_plastic\\_bags](http://www.torontoenvironment.org/where_else_in_the_world_have_governments_banned_plastic_bags)