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Suicide By Garbage: Solving The Pollution Crisis In Canada

Canada has always been known as a relatively green and eco friendly country. However this is far from the case. Canada is a beautiful location home to outdoor enthusiasts, and morally correct people - for the most part. We can see this with the ongoing support of the green party. Canada, however, suffers from one of the most overlooked problems on the planet. This paper will examine the pollution crisis at a larger scale, then will dive into two particular solutions to the crisis. It's important to note that almost every person is aware of the pollution crisis; it's not that the problem doesn't have exposure. People are not directly affected by the pollution crisis in their everyday lives, and quite frankly, don't know what to do about it. Therefore, it goes over the radar for most people. However, we are approaching a state that could potentially be irreversible. Now, there are many things that will not change. Canadians tend to think that if more countries were like Canada, the planet could be saved. However, if every country was like Canada, in terms of all-out consumerism and waste, the world would be in even more crisis than anticipated. In this paper, I'm going to talk further about the waste crisis that Canada is facing. Moreover, I'll propose several solutions to the crisis that could help put our ecosystems back on track.

To begin, the underlying problem of pollution is a very difficult one to solve. I noticed this the more I researched about the topic, and discovered the flaws of the pollution argument. There is without a doubt a huge problem of pollution, and it's growing every year. Many radical claims state that the pollution crisis is a catastrophic mess. A recent title from *NPR* reads that "Earth has 11 years to cut emissions to avoid dire climate scenarios." (Neuman, 2021)

See, climate change is a real bottleneck, because you have to assume certain metrics when it comes to predicting the future of action we take today. The errors will accumulate and grow massively.

Therefore, it is very hard to measure what the effect of pollution will have on the planet in the future. So how can you make a valid claim when you can't even accurately measure the future effects of the pollution problem? And even then, what are we going to do about it? Switch to wind and solar?

However, It's very difficult to separate science from the polotics. (Peterson, 2019) Even if the radical claims are true, there is little we can actually do about it. Switching to wind generated power is a common solution/idea that is often brought forwards. However, with this method "you can't store the power. Germany tried it, they produced more carbon dioxide than when they started because they had to turn on their coal fired plants again." (Peterson, 2019) Many of these so-called solutions actually introduce more issues than in the first place. Another point that makes pollution a hard topic is, "A multiplicative error structure, common in air pollution exposure estimates, can alter the shape of the exposure-response curve." (Girguis, 2021) This means that the data points that contribute to pollution are unreliable, and will ultimately hold errors. Climate change projections/claims are quite unreliable to begin with. The unreliability of the measurements magnify as you move forward in time as the errors accumulate. Therefore, we can't even accurately measure the effects that climate change will have on our planet, or anything we do right now. This is a massive flaw in the radical eco-friendly claims.

All things noted, there is definitely still a problem. It may be a very sticky one, with no clear resolution, but this adds to why I believe pollution will be the most significant problem we will face in the 20'th century. Canada plays a large role in the production of waste in particular, which is why our community needs to step up and make a change. Studies say, "Our production is seven per cent higher than per capita output of waste in the United States." (Hird, 2017) The garbage deposit is larger than anywhere else on the planet in Canada per person. Without change, the problem will spiral out of control. Garbage dumps are so big that workers at the dumps call them "lakes or oceans. However these oceans aren't filled with water, but garbage." (Hird, 2017)

Canada has the leading amount of garbage waste per person on the entire planet, and this is not something to be proud of. “Canada leads the developed world in per capita production of garbage.“ (Wilkinson, 2017) According to officials, a “never-ending avalanche of recyclables that pours into the facility at a rate of about two tonnes a minute.” (Wilkins, 2017) In fact, some people are even quoting the problem as, “suicide by garbage,” (Harrison, 2017). Even more scary is the unawareness of the problem. Professionals say waste companies “deal with its municipal waste so efficiently that the average person doesn’t see how much of it there is or where it goes. Out of sight, out of mind, sort of thing” (Hird 2017). The 720 kilos per capita of waste produced annually by every Canadian is about twice what is produced per capita in Japan and as much as 10 times what is produced by a half-dozen countries in Africa (Pg. 7). Ontario is the worst province in Canada, racking up an alarming “200,000 tonnes of recyclables”. Its residents produce household garbage (the stuff we put in green bags) at a rate of 10,000 tonnes a week, or half a million tonnes a year (Pg. 7).

On the contrary, Canada's source of energy is for the most part renewable and eco-friendly. “From 1989 to 2017, the number of coal mines in Canada decreased by almost 50%.” (Statistics Canada, 2020). Unfortunately, energy sources like Solar are not the most effective in countries like Canada because of the high altitudes. Unlike countries like Australia with over %15 of their energy coming from solar, “ESPC data shows that solar panels in Canada generate significantly more electricity in the spring and summer than they do in the fall and winter.” This means the amount of sunlight received by solar panels is highly seasonal, making it inefficient. Today, “Solar PV electricity currently accounts for less than 1% of our total electricity production.” (Government of Canada, 2022) Although solar powered energy may not be the most effective option, hydro electricity is the major production energy in Canada. The natural flow of water in rivers offers kinetic power that can be transformed into usable energy. Currently, “more than half of the electricity in Canada (60%) is generated from hydro sources.” (CER, 2022). Hydropower plants can generate power to the grid immediately, and provide essential backup power during major electricity outages or disruptions.

The first solution that seems obvious is to introduce a charge for waste per person in Canada. This has already been introduced in England where they charge you if you exceed the maximum monthly waste amount. This incentivises people to use less waste. This should also be introduced for businesses. Even though there will be a large pushback, especially for the biased media, it will be the most sustainable route forwards for Canada. "Variable waste charging provides an incentive for households to reduce their waste and recycle more" (Dresner, 2010) This solution is most effective for domestic use, and is "Since 2010, the volume of waste collected per person has fallen by roughly six percent." (Statista 2020). England introduced the law in 2015, "Before then over 7.6 billion single-use carrier bags were given to customers by major supermarkets in England during 2014." Therefore the law largely cut down domestic waste in the country. Large companies could use some sort of reward or incentive program for using less packaging

Although Canada may not have the best source for solar powered energy "All regions of Canada have hydropower resources available for development, making it a truly national resource. With a reservoir to store energy, hydropower becomes more flexible than any other energy source and can support the integration of other renewable but variable power sources such as wind or solar power." (Canada Hydropower Association, 2022). This makes hydro power a no-brainer solution for canada. Although there are many drawbacks such as risky infrastructure, the potential energy that could be created with hydro-powered plants is the highest in Canada than any other place on earth. Therefore, this would be a huge step in an economically sustainable country.

These are also two solutions that won't cut off businesses from making money. Solutions such as nuclear and wind to *replace* coal fired plants are a recipe for disaster. However there are some precautions we can take, one being: charge money for waste. Another being the construction of more hydro plants in

Canada. Why? People will use less waste, there will be less waste sent to the incinerator, and less harmful chemicals will end up in our atmosphere.

The topic of pollution is important because it will directly affect our ancestors, and the future of the planet. Canada needs to introduce a domestic waste cost to combat the waste problem and introduce more Hydroplants around the country to combat greenhouse gasses being released into the environment. Although Canada already has many eco-friendly energy sources in place, there is still a huge margin for improvement in these categories. With the right reach, people will become more aware of the possibility and benefit of a greener, and more sustainable country.

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