Divert NS Scholarship 2024- Reducing end-of-life textiles in Nova Scotia

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April 4th 2024

Executive Summary:

Textile waste is an environmental issue in Canada, as the average Canadian throws out 37 kilograms of textiles each year. This ecological concern has recently accelerated as the disposal of textiles has increased by 58% since 2017. This is due to an increase in fast fashion and microtrends from social media. Textiles end up in landfills, which negatively affect the environment as when they decompose they produce methane and carbon dioxide, which are greenhouse gasses. Landfills are also toxic and can also contaminate bodies of water, destroying habitats and land. Therefore, textile consumption must be reduced to eliminate harmful environmental effects. Action is required on both a provincial level and an individual level.

The government should implement education reforms within the province to ensure students understand the consequences of purchasing textiles and how to use the "Reduce, Reuse, Recycle" phrase in their daily lives. The government should also fund businesses to encourage customers to donate textiles to their companies. This fosters an environmentally friendly community and allows citizens to contribute to environmental conservation causes. On a more individual level, citizens should be aware of their textile purchasing to remain ethical. Online trends and fast fashion have contributed significantly to harmful practices toward the environment due to increased textile production that is poorly made, thus ending up in landfills sooner. Individuals can also shop locally and second-hand to reduce the yearly number of textiles in landfills. People within schools or communities can organize second-hand shops to encourage the circulation of pre-existing textiles. Personal and governmental initiatives and policies are crucial in environmental protection in Nova Scotia.

Essay:

Textiles refer to any kind of fabric, fiber, or yarn that can be natural or synthetic. These materials are used to produce clothing and household items such as upholstery, curtains or clothes. After these textiles are used, they become end-of-life, where 80% of global textiles end up in landfills (Moazzam et al., 2021). Fabrics make up 20% of global waste production, significantly impacting the environment (Chen et al., 20121). Different materials take different lengths of time to disintegrate completely. For example, natural fibers such as cotton or linen take a few months, whereas wool takes 1-5 years, and synthetic fibers can take over 200 years to decompose (Egan & Salmon, 2021). Therefore, different textiles harm the environment differently, resulting in a hierarchy of materials.

Growing up in Annapolis Valley, Nova Scotia, I have been fortunate to live in a community that prioritizes environmental conservation and actively takes measures to fight climate change. Despite these measures, Canadians dispose of 500M kilograms of textiles a year (Nielsen, 2023). Therefore, Nova Scotia must continue to accelerate its action on reducing textile waste to become a cleaner, more environmentally responsible province. The province and individuals must take action to reduce the amount of textiles that are wasted every year. Nova Scotia can work towards a cleaner environment by providing sufficient education to students, incentivizing businesses and organizations and encouraging individuals to take action.

Valley Waste-Resource Management is responsible for managing garbage in the Annapolis Valley, recycling, and composting. They offer many services, including collecting garbage from citizens' homes, and taking it to the two landfill locations in Annapolis Valley,

which are in Kentville and Lawrencetown. When collected, garbage is divided into compost, paper, recycling, and garbage; where only garbage is placed in landfills. Unfortunately, textiles are considered garbage and will, thus, end up in landfills (Valley Waste Resource Management, 2024). However, there are several locations in the Annapolis Valley where clothing articles can be dropped off as donations for the Big Brothers and Big sisters organization. These dropoff areas are accessible to all citizens. Other businesses, such as Consigners or Value Villages, accept donations, and all unsold items are donated to the flower cart industries. This creates a community where textiles are recirculated in the community, giving them longer lives.

The government should encourage students to take individual actions by implementing education for students that specifically addresses textile waste. To ensure that students become environmentally conscious, they must be educated at a young age. Although ecological topics are taught to students in elementary schools, more teaching regarding textiles, especially "Reducing, Reusing, and Recycling, is vital. The phrase "Reduce, Reuse, Recycle" is often combined together and not properly understood. Students should learn the difference between each "R" and be aware of the hierarchy within the phrase. For example, students should firstly focus on reducing their consumption, especially textiles. However, if this is not possible, and items have already been purchased, students should consider reusing them, such as repurposing and finding a new use for them. If students cannot reuse it, the textiles should be appropriately disposed of and recycled. Students must consider "Reducing, Reusing, and Recycling", where recycling is the last step when determining what to do with waste. Although recycling is a responsible action, only 9% of recyclables in Canada get adequately recycled. This is often because items put into recycle containers frequently contain excess food or pieces of garbage which cannot be recycled

(Saxe, 2019). Many Canadians do not know which materials can be recycled, so incorrect items are placed into recycling. With proper education in elementary and middle schools, students will grow up to have the correct knowledge to properly dispose of their trash, especially textiles.

By incentivizing businesses to start second-hand recycling stores, Nova Scotia can motivate shoppers to donate second-hand items. Individual shoppers may be more inclined to shop at a particular location if they can donate clothes to receive something in return. This would boost small businesses and encourage a more sustainable economy. Customers would also feel more environmentally conscious about shopping and supporting an organization which prioritizes the environment. Many small businesses in Nova Scotia may not be able to afford to give discounts or vouchers to customers. Therefore, the government should fund clothing businesses to motivate customers to bring in their own second-hand items and continue to reuse textile items. Customers may receive discounts or vouchers in return for textile donations. This way, customers will be encouraged to bring in their used textiles instead of throwing them away to ultimately end up in landfills.

People can make everyday changes in their lives, such as organizing a thrift store in their school or shopping second-hand. Horton High School is the only school in Annapolis Valley which has a "prom shop", where businesses donate dresses to the school to be reworn by students over several years. This ensures students have access to outfits for prom, so that dresses and suits, which are normally only worn once, can be reused. Consumers should also aim to shop sustainably and acknowledge how microtrends lead to environmental degradation. Fast fashion companies produce clothing at mass rates to appeal to current trends (Hayes, 2024). These

companies will exploit workers and the environment to get clothing to consumers quickly. These articles of clothing are almost always cheap and poorly produced, resulting in a shorter life span of the article of clothing, ending up in landfills sooner. The production of clothing is harmful as it takes around 2700 liters of water to make one cotton shirt (Drew & Yehounme, 2017). Microtrends generally last a week to a few months before they are no longer popular and end up being disposed of (Spellings, 2023). Therefore, consumers should consider purchasing staple pieces of better quality clothing and consider the longevity of an item before purchasing. People can also avoid shopping fast fashion by thrifting and buying second-hand clothing to give a new life to clothing items. This ensures textiles stay in circulation where they have been owned by more than one customer.

With more education in reducing, recusing, recycling, fast fashion, and sustainable shopping, students may be more inclined to repurpose items to start their own climate action projects. Teaching students the importance of sustainable shopping may motivate them to use their education and creative skills to develop their own ideas. For example, adolescents can organize their own thrift store at their school to encourage students and community members to donate old clothes to recirculate them. That way, other people can purchase the thrift clothing for a small price that is accessible to all individuals. The funds raised can go to local organizations or charities which work towards helping the environment. Individuals can also use creative skills to find a new life for a piece of textile and make it into something new. For example, old tee shirts can be created into tote bags, which can be used on a daily basis. This will not only limit textiles in landfills, but also limits plastic consumption. Other pieces of clothing can be cut up to be used as rags or cleaning materials when they become worn out and no longer wearable. Social

media can give people the opportunity to sell items where customers can buy items at a reduced price. This supports a circular economy where textiles can be reused, repaired, refurbished, and recycled rather than being disposed of when no longer wanted (Reike et Al., 2018). People can participate in online communities such as Depop or Facebook in order to shop second-hand online. Thus, Social media can influence and facilitate a space for consumers to shop sustainably.

Due to the harmful effects that end-of-life textiles have on the environment, it's imperative that the government, along with individuals, work collaboratively to find a solution. As a resident of Nova Scotia, I have seen firsthand the dedication citizens have toward being environmentally responsible. Valley Waste provides several waste services to ensure garbage is positively sorted. They also provide education and outreach to ensure citizens correctly dispose of their trash. Despite these initiatives Valley-Waste takes, increasing concerted efforts are required to address textile waste and promote more ethical practices in Nova Scotia. Education is vital, not only to students but to community members, to ensure everyone has the correct information in order to dispose of their waste correctly. Engaging in teaching often leads to students having the opportunity to take their own actions and make changes in their individual lives to help the planet. The government can also incentivize businesses to encourage people to bring their second-hand items to be resold for discounts. This will not only help the environment but will foster a circular economy.

Bibliography:

Chen, X., Memon, H. A., Wang, Y., Marriam, I., & Tebyetekerwa, M. (2021). Circular Economy and Sustainability of the Clothing and Textile Industry. *Materials Circular Economy*, *3*(1), 12. https://doi.org/10.1007/s42824-021-00026-2

Drew, D., & Yehounme, G. (2017, July 5). *The apparel industry's environmental impact in 6 graphics*. World Resources Institute.

https://www.wri.org/insights/apparel-industrys-environmental-impact-6-graphics

Egan, J., Salmon, S. Strategies and progress in synthetic textile fiber biodegradability. *SN Appl. Sci.* **4**, 22 (2022). https://doi.org/10.1007/s42452-021-04851-7

Hayes, A. (2024). *Fast fashion: How it impacts retail manufacturing*. Investopedia. https://www.investopedia.com/terms/f/fast-fashion.asp

Moazzem, S., Wang, L., Daver, F., & Crossing, E. (2021). *Environmental impact of discarded apparel landfilling and recycling*. Science Direct.

https://doi.org/10.1016/j.resconrec.2017.08.027

Nielsen, K. (2023, January 23). Canadians dump 500m kilograms of textiles a year. Ontario researchers hope to change that. Global News.

https://globalnews.ca/news/9430446/textile-waste-fast-fashion-ontario-research-recylcle

Reike, D., Vermeulen, W. J. V., & Witjes, S. (2018). The Circular Economy: New or refurbished as CE 3.0? — exploring controversies in the conceptualization of the circular economy through a focus on history and resource value retention options. *Resources, Conservation and Recycling*, 135, 246–264. https://doi.org/10.1016/j.resconrec.2017.08.027

Saxe, D. (2019, May 2). Why your recycling may not actually get recycled | CBC Radio. CBCnews.

https://www.cbc.ca/radio/sunday/the-sunday-edition-for-april-21-2019-1.5099057/why-your-recy cling-may-not-actually-get-recycled-1.5099103#:~:text=In%20Canada%2C%20for%20example %2C%20only,choking%20oceans%20and%20killing%20wildlife.

Spellings, S. (2023, December 12). *The aesthetics, -cores, and microtrends that defined 2023*. Vogue. https://www.vogue.com/article/core-aesthetic-microtrends-2023

Valley Waste-Resource Management . (2024, March 29). *Home - valley waste-resource management*. Valley Waste-Resource Management - Partners in Waste Reduction. https://www.vwrm.com/