

## **Executive Summary:**

The management of textile waste in Nova Scotia presents significant challenges, as demonstrated by recent findings indicating a troubling 58% increase in textile disposal since 2017. Despite efforts to promote textile recycling, a substantial amount of these materials still end up in landfills, highlighting shortcomings in waste management practices. Complicated by global fast fashion trends, which contribute to the excessive accumulation of inexpensive clothing in landfills, urgent action is required. Additionally, the intricate composition of composite textile items presents formidable hurdles for recycling programs, necessitating innovative solutions.

While initiatives such as curbside collection programs and partnerships with charitable organizations contribute to diverting textiles from landfills, approximately 30,000 tonnes still find their way into Nova Scotia's landfills annually, underscoring the need for more effective strategies. This issue extends beyond provincial borders, reflecting a broader national concern driven by unsustainable consumption patterns and environmental degradation. The disposal of clothing in landfills poses significant environmental threats, with both natural and synthetic fibres contributing to emissions and long-term pollution.

However, amidst these challenges, community members hold the power to make a difference. Through actions such as donating used clothing to local charities and participating in thrifting and textile recycling programs, residents can actively contribute to waste reduction efforts. Moreover, advocating for regulations prohibiting textile disposal in landfills and implementing Extended Producer Responsibility (EPR) programs can hold producers accountable and encourage sustainable practices. Public awareness campaigns and collaborations between government, industry, and non-profit organizations are vital in fostering a culture of sustainability and driving systemic change.

In conclusion, addressing textile waste in Nova Scotia requires a comprehensive approach involving collaboration, innovation, and individual engagement. By leveraging existing initiatives and embracing sustainable practices, the province can transition towards a circular economy where textile waste is minimized, and resources are utilized efficiently.

**Essay:**

**End-of-life Textile Waste Management: Strategies for a Sustainable Future- Hayat Daeia**

Textile waste management in Nova Scotia faces significant challenges, as evidenced by the findings of a waste audit conducted by Divert NS in 2023. The audit revealed a troubling 58% increase in textile disposal since 2017, indicating a growing problem (Divert NS, 2024). Despite ongoing efforts to promote textile recycling, a substantial portion of end-of-life textiles in the province still ends up in landfills, highlighting the inadequacy of current waste management practices. The impact of global fast fashion trends exacerbates this issue, contributing to the rapid accumulation of inexpensive clothing in landfills (Acres, 2021). For instance, statistics show that Canada annually disposes of approximately 500,000 tonnes of apparel, with fast fashion playing a significant role in this waste stream (Acres, 2021). Additionally, the decline in the average number of times a garment is worn before being discarded by 36% over the past 15 years reflects unsustainable consumption patterns (Acres, 2021). Furthermore, the complexity of composite textile items poses significant challenges for recycling programs, as these items require separation into individual components for effective recycling (Bibeau, 2018).

Typically, end-of-life textiles collected from donation bins undergo sorting according to potential use. Approximately 30% of donated textiles are resold for reuse, while the remaining 70% are shipped to overseas markets (Chenoweth, 2018). However, some textiles that are not eligible for reuse are redirected to new end markets as wiping rags or shoddy for alternative products, with only a small percentage (5%) ultimately ending up as waste (Chenoweth, 2018). Curbside collection programs, such as those implemented in municipalities like Colchester, have seen success in diverting significant amounts of textiles from landfills by sorting them alongside other recyclable materials (Chenoweth, 2018). Partnerships with organizations like the Canadian Breast Cancer Foundation (CBCF) through Enviro Depots contribute to the collection and distribution of textile donations, primarily sold out of province to reduce landfill waste (Chenoweth, 2018). These efforts, coupled with educational initiatives promoting textile donation bins, contribute to diverting textiles from landfills and reducing environmental impact (Chenoweth, 2018). Despite these efforts, approximately 30,000 tonnes, still end up in Nova Scotia's landfills annually, emphasizing the need for further action and improvement (Divert NS, n.d.). A significant portion of our discarded textiles still finds its way to landfill sites, highlighting the inadequacy of our current waste management practices and efforts..

The textile waste crisis is not unique to Nova Scotia but is part of a broader national issue. Canada annually disposes of approximately 500,000 tonnes of apparel, with fast fashion contributing to the rapid accumulation of cheap, unethical clothing in landfills (Acres, 2021). The decline in the average number of times a garment is worn before being discarded reflects the unsustainable nature of current consumption patterns (Acres, 2021). Moreover, the complex nature of composite textile items presents challenges for recycling programs, as they require separation into individual components for effective recycling (Bibeau, 2018).

The disposal of clothing in landfills poses significant environmental threats. Natural fibres such as cotton and wool generate methane as they decompose, contributing to greenhouse gas emissions (Ellen MacArthur Foundation, 2017). Synthetic fibres derived from fossil fuels, such as polyester, can persist in landfills for hundreds of years, further exacerbating environmental pollution (Ellen MacArthur Foundation, 2017). The process of producing clothing involves resource-intensive practices, including water consumption, chemical usage, and energy consumption. Globally, the fashion industry is one of the largest consumers of water and generates pollution through dyeing and finishing processes (Ellen MacArthur Foundation, 2017).

Amidst the challenges faced in textile waste management, individuals in our vibrant community can make meaningful contributions to waste reduction. Donating used clothing to local charities such as Dress for Success Halifax not only diverts textiles from landfills but also supports community members in need. Moreover, initiatives like the Halifax Mending Collective promote a culture of repair and reuse, encouraging us, Haligonians, to mend garments rather than discard them. These grassroots efforts empower our individuals to take tangible steps towards mitigating textile waste. Additionally, thrifting clothes from Value Village and The Salvation Army contribute significantly to waste reduction efforts. By purchasing second-hand clothing, we extend the lifespan of garments and reduce the demand for new clothing production. This reduction in demand helps mitigate the negative environmental impacts associated with clothing production, including resource depletion, pollution, and greenhouse gas emissions. We can then donate used textiles to local charities like the previously mentioned Salvation Army, Diabetes Canada, and Dress for Success Halifax, which collect and redistribute donated items. Participating in textile recycling programs offered by municipalities is another way to ensure textiles are diverted from landfills and sent for recycling. We can repair and repurpose old

clothing rather than discarding it, extending its lifespan and reducing the need for new materials. When purchasing new textiles, opting for sustainably produced and ethically sourced items also helps minimize waste. Lastly, educating others about the importance of textile waste diversion through social media, community events, or educational workshops, inspires collective action towards waste management practices. By incorporating these actions into our daily lives, we can make a significant contribution to reducing textile waste in Nova Scotia and subsequently starting a domino effect, pushing for change from province to country.

Nova Scotia has implemented commendable waste management initiatives over the years, yet textile diversion remains a pressing issue. For instance, while the province has significantly reduced active landfills by 75% since 1995, textiles still constitute 12% of the municipal waste stream, indicating room for improvement (Bibeau, 2018). To address this, expanding domestic recycling markets for textiles is essential to reduce reliance on out-of-province markets (Bibeau, 2018).

Increasing awareness and transparency of existing recycling markets is crucial to encourage greater participation from industrial, commercial, and institutional sectors (Bibeau, 2018). Understanding the end destinations and final impacts of diverted textiles is also essential for assessing the effectiveness of current diversion efforts (Bibeau, 2018). Exploring new management options for unrecyclable end-of-life textiles, such as repurposing or alternative disposal methods, can further minimize landfilling and promote a more sustainable approach to waste management (Bibeau, 2018). Nova Scotia can further expand domestic recycling markets to manage recycle-grade textiles more efficiently (Bibeau, 2018). A lack of disposal options for uniforms, scraps, and other recycle-grade textiles inhibits higher levels of diversion among organizations (Bibeau, 2018). Increasing transparency of current recycling markets is crucial for

organizations to divert scrap and other recycle-grade material from landfills (Bibeau, 2018). One key strategy is to implement regulations banning the disposal of textiles in landfills, acting on our considerations to do so since 2014 ( CBC News, 2014). Authorities considered prohibiting the disposal of textiles in landfills, as these materials constitute 11% of the total waste destined for landfills. This proposal was part of a comprehensive government assessment of solid waste regulations, with officials urging individuals to refrain from discarding torn jeans and worn-out socks in the trash. Concurrently, the launch of the Association for Textile Recycling project was announced. This initiative involves charitable organizations in Nova Scotia collecting donations of shoes and clothing, totalling approximately 7,000 tonnes of material annually (CBC News, 2014). By enacting such regulations, Nova Scotia can create a clear mandate for diverting textiles to recycling or reuse programs, thereby reducing the amount of textile waste destined for landfills. Implementing Extended Producer Responsibility (EPR) programs specific to textiles can hold producers accountable for the end-of-life management of their products, incentivizing them to design textiles for recyclability and invest in infrastructure for textile recycling. Investing in establishing collection points for textiles at recycling centres, partnering with local businesses to accept textile donations, supporting the development of textile recycling facilities within the province, and expanding recycling infrastructure are other crucial steps in diverting textiles from landfills. Moreover, public awareness and education campaigns play a vital role in changing consumer behaviour and encouraging participation in textile recycling programs. By educating the public about the environmental benefits of textile recycling and providing information on how and where to donate or recycle textiles, Nova Scotia can increase participation in textile diversion efforts. Incentivizing textile recycling through measures such as tax credits or subsidies for businesses can further encourage participation and investment in

textile waste diversion efforts. Collaborating with charities and non-profit organizations specializing in textile reuse and recycling can facilitate the collection and distribution of textile donations while providing valuable resources in managing textile waste effectively. Additionally, investing in research and innovation to develop new technologies and processes for textile recycling can improve the efficiency and effectiveness of textile waste diversion efforts. By implementing these measures, our province can significantly reduce the amount of textile waste that ends up in landfills and move towards a more sustainable waste management system for textiles.

In conclusion, addressing textile waste in Nova Scotia requires a multifaceted approach involving collaboration between government, industry, and individuals. By leveraging existing initiatives, implementing innovative strategies, and fostering a culture of sustainability, Nova Scotia can move towards a circular economy where textile waste is minimized, and resources are utilized efficiently.

### **References:**

- Acres, T. (2021, November 17). *Skeletons in the closet: How textile recycling works in Canada*. Digits & Threads.  
<https://www.digitsandthreads.ca/skeletons-in-the-closet-how-textile-recycling-works-in-canada/>
- Bibeau, E. (2018, April). Characterizing ICI&I Textile Waste In Halifax, Nova Scotia.  
<chrome-extension://efaidnbnmnnibpcajpcglclefindmkaj/https://dalspace.library.dal.ca/bitstream/handle/10222/76513/EmilyBibeau.pdf?sequence=1>

- Chenoweth, L. (2018). Advancing Textile Waste Diversion in Nova Scotia.  
[https://divertns.ca/sites/default/files/researchreportsfiles/2021-09/NSTextileWasteDiversi  
on.pdf](https://divertns.ca/sites/default/files/researchreportsfiles/2021-09/NSTextileWasteDiversi<br/>on.pdf)
- Foundation, E. M. (2017). *Ellen MacArthur Foundation, A new textiles economy: Redesigning fashion's future (2017)*. A New Textiles Economy: Redesigning Fashion's Future. <https://www.ellenmacarthurfoundation.org/a-new-textiles-economy>
- News, C. (2014a, May 21). *Nova Scotia contemplating ban on textiles in Landfills* | *CBC News*. CBCnews.  
[https://www.cbc.ca/news/canada/nova-scotia/nova-scotia-contemplating-ban-on-textiles-i  
n-landfills-1.2649758](https://www.cbc.ca/news/canada/nova-scotia/nova-scotia-contemplating-ban-on-textiles-i<br/>n-landfills-1.2649758)
- NS, D. (n.d.). *Textiles*. Textiles | Divert NS.  
[https://divertns.ca/textiles#:~:text=Over%207%2C000%20tonnes%20of%20textiles,up%  
20in%20Nova%20Scotia's%20landfills.](https://divertns.ca/textiles#:~:text=Over%207%2C000%20tonnes%20of%20textiles,up%<br/>20in%20Nova%20Scotia's%20landfills.)
- NS, D. (2024, March 27). *Nova Scotia's Landfill Waste Audit 2023* .  
[https://divertns.ca/sites/default/files/researchreportsfiles/2024-04/2023%20NS%20Provin  
cial%20Waste%20Audit.pdf](https://divertns.ca/sites/default/files/researchreportsfiles/2024-04/2023%20NS%20Provin<br/>cial%20Waste%20Audit.pdf)
- Zvaniga, B. (2017, September 20). *Halifax Environment and Sustainability Standing Committee* .  
[https://www.halifax.ca/sites/default/files/documents/city-hall/boards-committees-commis  
sions/171102ESSC1211.pdf](https://www.halifax.ca/sites/default/files/documents/city-hall/boards-committees-commis<br/>sions/171102ESSC1211.pdf)