Examining the Impact of Fast Fashion on Textile Waste and Pollution

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Fast fashion has revolutionized the global fashion industry by increasing accessibility, affordability, and the rapidity of trend cycles. But these comforts come with a high environmental and societal cost. This article analyzes how rapid fashion contributes to textile waste and environmental damage. It investigates the life cycle of fast fashion garments, manufacturing techniques, consumer behaviour, and environmental deterioration. The article also assesses viable remedies and sustainable methods for lessening the industry's impact.

Introduction

The worldwide fashion business is one of the largest and most resource-intensive sectors. The fast fashion paradigm, which is characterized by high volume and low-cost production, has increased environmental deterioration. It pushes people to buy more, trash quickly, and [2]perpetuates unsustainable demand cycles. It examines the environmental costs of rapid fashion, specifically textile waste and pollution.

What is Fast Fashion?

Fast fashion is a business model in which fashion shops quickly produce large quantities of low-cost apparel in response to the latest trends. Key features include:

- Short lead times (2–3 weeks from design to store)
- Use of low-quality synthetic fibres
- Outsourced, low-wage labour
- High volumes and frequent stock refreshes[4]

Textile Waste: The Visible Effect

❖ **Statistics for the whole world**

• The fashion industry produces about 100 billion garments every year, resulting in 92 million tons of textile waste globally.

•In wealthy countries, buyers trash clothing after an average of 7-10 wears.

❖ **Landfill Overload**

• Approximately 85% of textiles end up in landfills or are burned.

• Synthetic fabrics like polyester might take up to 200 years to degrade. Textiles decay naturally, producing carbon dioxide, a strong greenhouse gas.

Pollution's Hidden Cost

❖ **Water Pollution**

- Textile dyeing is the second-largest polluter of clean water, following agriculture. 200,000 tons of dyes are lost to water bodies annually.
- Toxic dyes and heavy metals damage rivers in garment-producing countries like Bangladesh, India, and China.

Microplastics
- Synthetic fibers (e.g., polyester, nylon, acrylic) make up 60% of apparel.
- Synthetic clothes can emit up to 700,000 microfibers into the water system, endangering marine life and human health.

Carbon Emissions
- The fashion industry is responsible for 10% of global carbon emissions, surpassing international aircraft and maritime shipping combined.
- Polyester manufacturing produces three times more CO_2 than cotton.

Consumption and Overproduction
Fast fashion feeds on apparent expiry. The average customer purchases 60% more clothes than they did 15 years ago, but wears them for half as long.

Marketing strategies manipulate desire:
- Weekly new arrivals
- Flash sales
- Influencer-driven trends

This behaviour fuels the "throwaway culture," where repairing or reusing clothes is discouraged.[5]

Environmental and Human Health Implications
- Cotton growing causes soil degradation through chemical runoff and pesticide use.
- Unregulated dyeing and finishing methods lead to toxic exposure for workers.
- Persistent organic contaminants from textile treatment can cause respiratory difficulties, hormone disturbance, and cancer.

Mitigation Strategies
Textiles and the Circular Economy
- Prioritizing durability, recyclability, and repair.
- Promoting rental, resale, and garment swap systems.

Sustainable Materials
- Organic cotton, hemp, bamboo viscose, and Tencel (lyocell)
- Biodegradable dyes and low-impact finishing technologies
- Lab-grown textiles and bio-fabricated leather

Policy and Regulation
• Extended Producer Responsibility (EPR) requires brands to handle post-consumer textile waste.

• Textile labeling rules require transparency in fiber content and chemical use • Trade restrictions discourage synthetic, low-grade imports.[7]

Role of Consumers
- Buy less, choose well, and make garments last
- Support brands with environmental certifications (e.g., GOTS, OEKO-TEX, Fair Trade)
- Wash less, air-dry, and use laundry bags to reduce microfiber shedding[8]

Conclusion
Fast fashion has a huge and pervasive environmental impact, ranging from excessive textile waste to widespread pollution of the air, water, and land. Addressing this challenge necessitates structural change—a reassessment of how we manufacture, use, and dispose of clothing. The fashion industry may progress toward a more ethical and environmentally responsible future by implementing legislation changes, fostering sustainable innovation, and educating consumers.

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