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## **The Best-Dressed Polluter – Regulation and Sustainability in the Fashion Industry**

*Olivia Suraci\**

### **ABSTRACT**

The fashion industry, a worldwide fascination, has long been associated with glamour, trends, and innovation. Although the visuals associated with climate change often paint a picture of a world being destroyed by fossil fuels and Big Oil, this article will seek to examine the climate change responsibilities of one of the other most polluting industries in the world. Access to online shopping and “fast fashion,” as well as industry marketing and obsolescence techniques, have increased the consumer demand for clothing, shoes, and accessories. As a society, we are purchasing more fashion items than ever before. Noting this growth, major bodies like the United Nations have identified the need to shift away from industry practices that are detrimental to the environment. Despite this acknowledgement, there has been relatively little by way of increased regulations specific to the fashion industry to encourage a change in standard practices. The fashion industry, which manufactures, ships, and sells at every price point, should be held accountable on a global scale both by the consumer and the law, through supply chain accountability, product life-cycle responsibility, prohibition of unsustainable materials and processes, and voluntary sustainability incentives.

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## INTRODUCTION

It is estimated that the fashion industry's pollution levels are second only to those of the oil industry.<sup>1</sup> Even those who are skeptical of this statistic concede that something must be done about an industry with a foundation built on long, largely unregulated supply chains, high-volume chemical runoff, and titanic carbon output.<sup>2</sup> Since 2000, clothing production has approximately doubled globally.<sup>3</sup> This increase in production can be attributed to industry norms of rotating styles which quickly make clothing obsolete, a trend that has been further influenced by social media.<sup>4</sup> Because of this growth, the fashion industry contributes about 10% of global greenhouse gas emissions and approximately 20% of global wastewater.<sup>5</sup> These staggering numbers are a result of consistent industry use of wasteful materials and unsustainable supply chain practices.<sup>6</sup>

Many industry leaders have attributed increased production to the meteoric rise of "fast fashion" brands, which are producing more garments every year.<sup>7</sup> For example, Zara, one of the largest fashion brands in the world, produced over 450 million items in 2018.<sup>8</sup> Zara and other fast fashion brands have become known for producing inexpensive, trendy clothing, often made from synthetic fibers, to be sold at the highest volume in the industry.<sup>9</sup> This means that today, consumers of all economic means can walk into a number of accessible stores, or easily go online, and load their shopping bags with several of these inexpensive pieces without breaking the bank. Fast fashion brands are able to keep prices low by outsourcing production to low-income countries with little to no

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1. Ash Lauren, *Why Regulations Aren't Solving the Fashion Industry's Environmental Problem*, MEDIUM (Nov. 11, 2019), <https://perma.cc/4L2L-6JMS>.

2. Vanessa Friedman, *The Biggest Fake News in Fashion*, N.Y. TIMES (Dec. 18, 2018), <https://perma.cc/XCL4-R42C>.

3. Morgan McFall-Johnsen, *The Fashion Industry Emits More Carbon than International Flights and Maritime Shipping Combined. Here Are the Biggest Ways It Impacts the Planet.*, BUS. INSIDER (Oct. 21, 2019, 9:22 AM), <https://perma.cc/E4VJ-PSHF>.

4. Robin Givhan, *The Troubling Ethics of Fashion in the Age of Climate Change*, WASH. POST: MAGAZINE (Nov. 18, 2019), <https://www.washingtonpost.com/magazine/2019/11/18/troubling-ethics-fashion-age-climate-change/?arc404=true> (last visited Apr 15, 2021).

5. U.N. Climate Change, *UN Helps Fashion Industry Shift to Low Carbon* (Sept. 6, 2018), <https://perma.cc/QA9K-6QE2>.

6. *Id.*

7. Tatiana Schlossberg, *How Fast Fashion Is Destroying the Planet*, N.Y. TIMES (Sept. 3, 2019) (book review), <https://perma.cc/MA56-BCVP>.

8. Dana Thomas, *FASHIONOPOLIS: THE PRICE OF FAST FASHION AND THE FUTURE OF CLOTHES 1* (2019).

9. Schlossberg, *supra* note 7.

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environmental regulation.<sup>10</sup> This type of off-shore production was once tempered by the Multifiber Arrangement (“MFA”), which imposed quotas on the amount of clothing and textiles developing countries could export to developed countries.<sup>11</sup> The MFA was imposed in 1974 and expired on January 1, 2005; it has not been revisited or renewed since.<sup>12</sup> Prior to the 1960’s, 90% of clothing purchased in the United States was produced domestically; today, only about 3% of clothing falls into that category.<sup>13</sup> If fast fashion brands continue these levels of growth by manufacturing cheaply, at the expense of the environment, the UN predicts that emissions from textile production alone could rise by 60% or more by 2030 (with a baseline of January 2018).<sup>14</sup>

UN Climate Change has already begun working with fashion industry leaders to support the climate action goals of the Paris Agreement within the industry.<sup>15</sup> While identifying the problem with a few key players is an excellent start, it has not been sufficient to enact real, sweeping change as the climate situation worsens. This article will identify rigorous approaches to holding this massive industry accountable for its part in the climate crisis. Part I of this article will identify and expand on the issue of climate change and explain the fashion industry’s part in this global catastrophe. Next, Part II will discuss the major stakeholders of the industry, who, although greatly responsible for ongoing environmental damage, are crucial participants in creating a solution. Part III will outline current action, including global commitments and specific company strategies geared toward creating a more sustainable fashion industry. Part IV will discuss the consumer’s responsibility to drive the market toward more sustainable production. Finally, Part V will detail the author’s proposed strategies for a comprehensive legal overhaul of fashion’s sustainability. These approaches should include regulations in the form of supply chain and life-cycle responsibility, prohibitions on certain unsustainable materials and processes, and incentives for companies who utilize more in-depth, optional sustainability techniques.

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10. Jasmin Malik Chua, *The Environment and Economy Are Paying the Price for Fast Fashion—But There’s Hope*, VOX (Sept. 12, 2019 7:00 AM), <https://perma.cc/M3LH-TVLQ>.

11. Will Kenton, *Multifiber Arrangement (MFA)*, INVESTOPEDIA, <https://perma.cc/V5F3-BTS5>.

12. Kenton *supra*, note 11.

13. Lindsey Reid, *Fast-Fashion: Unethical and Unsustainable*, U. ALA. BIRMINGHAM INST. HUM. RTS. (Apr. 26, 2018), <https://perma.cc/BZ85-MQH7>.

14. U.N. Climate Change, *Fashion Industry, UN Pursue Climate Action for Sustainable Development* (Jan. 22, 2018), <https://perma.cc/L7J4-KF7D>.

15. U.N. Climate Change, *Fashion Industry Charter for Climate Action* (Dec. 2018), <https://perma.cc/4AE9-4B9P>.

## I. CONVENIENT FASHION WITH AN INCONVENIENT TRUTH

The concept of climate change is hardly a novel threat. Many in the younger generations still recall learning about the “greenhouse effect” in elementary school: certain long-living gases trapped in the atmosphere stop heat from escaping, leading to long-term increases in global temperature.<sup>16</sup> Carbon dioxide and other greenhouse gases (GHGs) are emitted through fossil fuel combustion, energy production, agriculture, and using certain products and waste processes.<sup>17</sup> Producing a garment also yields detrimental environmental pollution from beginning to end. Textile production alone emits 1.2 billion tons of GHGs annually.<sup>18</sup> Beyond simply producing the fabric, creating a garment and getting it into the hands of the consumer generates GHG emissions from energy used in design, manufacturing, and shipping around the world.<sup>19</sup> To exacerbate these emissions levels, some countries that are among the largest manufacturers of clothing primarily use coal-based energy.<sup>20</sup> Coal is one of the dirtiest energy sources, emitting more carbon dioxide upon combustion than any other fossil fuel.<sup>21</sup>

The fashion industry also pollutes with chemical runoff from pesticides, fertilizers, and dyes.<sup>22</sup> Textile-dyeing chemicals, usually untreated, account for an estimated 17-20% of global industrial water pollution, while cotton crops alone use more than 10% of worldwide pesticides and 2 billion pounds of man-made fertilizers per year.<sup>23</sup> Runoff from these chemicals is a danger not only to the environment, but to the water supply of a manufacturing nation.<sup>24</sup> An example of this danger was exposed in 2015, when Newsweek reported on severe water quality issues in Tamil Nadu, India, that were a direct result of the booming fashion manufacturing industry in the state.<sup>25</sup> In the mid-2000s, dammed water that was intended to be used for agriculture was so saturated with chemicals that

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16. *The Causes of Climate Change*, NASA, <https://perma.cc/PH8M-WEBJ>.

17. *Energy and the environment explained*, U.S. ENERGY INFO. ADMIN., <https://perma.cc/XR5N-9B2P>.

18. U.N. Climate Change, *supra* note 14.

19. Nathalie Remy et al., *Style That’s Sustainable: A New Fast Fashion Formula*, MCKINSEY & CO. (Oct. 2016), <https://perma.cc/Z4JT-L9FQ>.

20. QUANTIS, *MEASURING FASHION: ENVIRONMENTAL IMPACT OF THE GLOBAL APPAREL AND FOOTWEAR INDUSTRIES STUDY 21* (2018), <https://perma.cc/JF48-QQZ5>.

21. B.D. Hong & E.R. Slatick, *Carbon Dioxide Emission Factors for Coal*, ENERGY INFO. ADMIN. *Q. COAL REP.* (Aug. 1994) at 1, <https://perma.cc/D3JR-68SN>.

22. *CLOTHING AND FASHION: AMERICAN FASHION FROM HEAD TO TOE – VOLUME FOUR: THE POSTWAR PERIOD INTO THE 21ST CENTURY* 106 (Jose Blanco F. ed. 2018).

23. *Id.*

24. Adam Matthews, *The Environmental Crisis in Your Closet*, NEWSWEEK (Aug. 13, 2015, 11:25 AM), <https://perma.cc/84AX-BGU5>.

25. *Id.*

farmers were begging the highest court in Tamil Nadu to stop the release of this water into their fields.<sup>26</sup> The untreated water dumped through the clothing manufacturing process made locals sick and killed wildlife.<sup>27</sup> Unfortunately, these circumstances are not unusual for nations tasked with manufacturing clothing exports.<sup>28</sup>

Even after a garment is manufactured, environmental concerns continue when it is purchased by the consumer. Half a million tons of microfibers are released into the ocean per year simply by consumers washing their clothes, 60% of which are plastics from polyester.<sup>29</sup> The International Union for Conservation of Nature reported in 2017 that an estimated 35% of all microplastics in the ocean were there as a result of laundering polyester clothing and other synthetic textile materials.<sup>30</sup> These microscopic pieces of plastic will never biodegrade.<sup>31</sup>

Once the consumer is done owning a piece of clothing, either through changes in trend or the garment falling apart, the process of disposal comes into question. Although some clothing will be donated or recycled, the short-lived and poorly-constructed nature of fast fashion pieces means an overwhelming majority will end up in a landfill.<sup>32</sup> This is problematic because most synthetic material will slowly or never biodegrade, and even organic materials will emit methane, one of the more potent GHGs, as it decomposes.<sup>33</sup> Because the fashion industry creates environmental, health, and climate change concerns at every step of a garment's lifecycle, it is plain to see why this massive industry should be compelled to adjust to the modern environmental realities our planet is facing today.

## II. THE ROLE OF THE KEY PLAYERS

When seeking out lists of the most environmentally-friendly fashion companies, it is easy to see one thing in common among most: high-cost and luxury brands. This is because sustainable clothing is generally made from expensive non-GMO materials, manufactured through regulated supply chains, and is of a higher and more durable quality so that it can be

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26. Matthews, *supra* note 24.

27. *Id.*

28. *Id.*

29. U.N. Env't Programme, *Putting the Brakes on Fast Fashion*, (Nov. 12, 2018), <https://perma.cc/JX7P-NEP4>; McFall-Johnsen, *supra* note 3.

30. McFall-Johnsen, *supra* note 3.

31. *Id.*

32. Elizabeth Cline, *Where Does Discarded Clothing Go?*, ATLANTIC (July 18, 2014), <https://perma.cc/PV3X-6XW3>.

33. George Arnett, *How Quickly Do Fashion Materials Biodegrade?*, VOGUE BUSINESS (Nov. 28, 2019), <https://perma.cc/C9P4-UWUY>; *Basic Information about Landfill Gas*, U.S. ENV'T PROTECTION AGENCY, <https://perma.cc/E3RM-HS2Z>.

worn wash after wash.<sup>34</sup> Because of the costly product high-end brands put out, it is easy to see why these brands have the resources to create more sustainability within their garment lines. These higher end brands and their higher end resources are more likely to adapt relatively easily to increased legal regulation.

Fast fashion brands present a more challenging barrier to developments in sustainable fashion. Since the late 1980's, fast fashion brands have sought out the cheapest materials to be manufactured in the poorest countries with high-volume production goals.<sup>35</sup> The appeal of fast fashion's low cost and trendy designs transcend income levels, making it an enormously lucrative industry across all demographics.<sup>36</sup> Such a profitable industry would be normally unwilling to change, but a consumer call for sustainable fashion has led some fast fashion brands, like H&M and Zara, to attempt the development of more environmentally-friendly practices.<sup>37</sup> Newer fast fashion initiatives have included developing and growing "eco-conscious" garment collections and setting textile sustainability goals.<sup>38</sup> Unfortunately, even among those brands that are making an effort to be more earth-friendly, there is a lack of consensus about what "sustainability" really means and how to prevent greenwashing (misinformation about the true sustainability of an item).<sup>39</sup>

Fast fashion works as an incredibly profitable business model because companies can manufacture garments that cost so little to make that the shockingly low selling prices are still an enormous markup.<sup>40</sup> Indeed, the owner of Inditex (Zara's parent company) is the wealthiest clothing retailer in the world with a net worth of \$60.1 billion (as of May 10, 2020).<sup>41</sup> These types of companies that provide such wealth to their owners are not likely to voluntarily want to take actions that will potentially alter that model and eat into their profits. This is why all fast fashion brands will need to conform with a universal, legally mandated form of sustainability to make a meaningful impact, whether they like it or not.

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34. Jessica Davis, *How You Can Help Make Sustainable Fashion More Affordable*, HARPER'S BAZAAR (Aug. 28, 2019), <https://perma.cc/76Q3-VG9R>.

35. Thomas, *supra* note 8, at 5.

36. *Id.* at 6.

37. Emily Chan, *What Are Fast Fashion Brands Doing To Tackle Fashion's Sustainability Problem?*, VOGUE AUSTRALIA (July 29, 2019), <https://perma.cc/L4XH-MT43>.

38. *Id.*

39. *Id.*

40. Chua, *supra* note 10.

41. Profile of Amancio Ortega, FORBES, <https://perma.cc/9ZVT-FS4R>.

### III. THE CURRENT STATE OF THE SUSTAINABLE FASHION MOVEMENT

Fortunately, some progress has been made on the front of sustainable fashion. UN acknowledgement, voluntary sustainability efforts from some brands, and increasing normalization and popularity of shopping for secondhand clothing pieces are all examples of movement in the right direction.

#### A. UN CHARTER ON THE FASHION INDUSTRY AND CLIMATE CHANGE

In December 2018, the United Nations Framework Convention on Climate Change (UNFCCC) launched the Fashion Industry Charter for Climate Action, making commitments based on the overarching goal of the Paris Agreement to keep global temperature increases below 2 degrees Celsius.<sup>42</sup> Under the Charter, signatory fashion companies and supporting organizations committed to goals such as a 30% GHG emissions reduction by 2030 and developing a decarbonization pathway.<sup>43</sup> Working groups were outlined within the Charter to target specific areas of the industry, including manufacturing, raw materials, logistics, and policy engagement.<sup>44</sup> Reaffirming the pledge a year later, the signatories then asked the political leaders of major fashion-producing countries, most of which are signed on to the Paris Agreement, to partner with the signatories in developing and setting up legal guidelines to regulate and incentivize sustainability in the industry.<sup>45</sup> As of May 2020, this request did not appear to have made significant headway in the six months since it was published.

Acknowledgement from the UNFCCC of the fashion industry's climate change contribution is important and validating of the issue. Unfortunately, the fact remains that the Charter is not legally binding on the companies that participate, and any signatory, supporting organization, or even the UNFCCC itself may easily withdraw from its commitment at any time.<sup>46</sup> The uncertainty of the Charter shows that concrete, legally-binding regulation is necessary for sweeping, long-term changes in the industry.

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42. U.N. Climate Change, *About the Fashion Industry Charter for Climate Action*, <https://perma.cc/97N4-HGXD>.

43. *Id.*

44. *Id.*

45. U.N. Climate Change, *Comminique: Fashion Industry Invites Governments to Collaborate on Climate Action* (Dec. 9, 2019), <https://perma.cc/XDE7-RF8K>.

46. U.N. Climate Change, *supra* note 16.

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## B. SELF-IMPOSED SUSTAINABILITY INITIATIVES

Despite insufficient regulation, several fashion companies are already “racing to prove their green credentials.”<sup>47</sup> Some companies have developed their brand personas around the idea of sustainability. For example, luxury brand Eileen Fisher has built its design, manufacturing, and shipping processes around being earth- and worker-friendly.<sup>48</sup> Other companies have developed certain sustainable practices that include denim production using less water (Levi’s), using sustainable materials (Patagonia, among others), producing small-batch clothing to limit waste (Amour Vert), and using profits to plant trees (Tentree).<sup>49</sup> To avoid waste, some companies are even helping consumers repair damaged garments and buying back their own used pieces for resale.<sup>50</sup> However, not all ‘sustainability’ initiatives are what they seem. Although some companies are living up to an eco-friendly model, using a vague buzzword like “sustainability” does little for the environment without real follow-through.<sup>51</sup>

## C. INCREASING POPULARITY OF SECONDHAND PURCHASES

Because so much clothing is thrown away each year, the increasing normality and popularity of secondhand clothing purchases is helping consumers discover an environmentally-friendly way to shop. According to a study conducted by secondhand reseller ThreadUp, the secondhand market (resale, thrift, and donations) is expected to be a \$51 billion dollar industry by 2023.<sup>52</sup> The same study showed that shopping secondhand transcended income and age range, with expectations for continued growth in the newest generation, Gen Z.<sup>53</sup> Eileen Fisher, Patagonia, and Nordstrom have already begun to sell secondhand clothing, with more retail executives expressing a plan or desire to break into the resale market in 2020.<sup>54</sup> In addition to limiting the amount of new items purchased, buying secondhand at a reduced price would also increase the consumer’s ability afford typically expensive, sincerely sustainably-made pieces.<sup>55</sup>

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47. Lizzie Knight, *Sustainability in the Fashion Industry Faces an Uphill Climb*, ABC NEWS (Jan. 7, 2020, 8:43 AM), <https://perma.cc/WYY5-Q9AN>.

48. Blake Morgan, *11 Fashion Companies Leading the Way in Sustainability*, FORBES (Feb. 24, 2020, 6:38 PM), <https://perma.cc/2LRN-ETU2>.

49. *Id.*

50. Morgan, *supra* note 48.

51. Emily Dickson, *The Problem with ‘Sustainable Fashion’*, CNN (Oct. 11, 2019), <https://perma.cc/NK9F-GLWE>.

52. THREADUP, 2019 RESALE REPORT (2019), <https://perma.cc/2TUQ-U726>.

53. *Id.*

54. Morgan, *supra* note 48; THREADUP, *supra* note 52.

55. Sam Corbin, *The Personal, Political, and Environmental Case for Buying All Your Clothes Secondhand*, INSIDER (Jan. 29, 2020, 12:10 PM), <https://perma.cc/37KC-FFKF>.

Truly sustainable fashion is environmentally responsible throughout the entire life-cycle of a garment, from design to production to ultimate disposal.<sup>56</sup> Although companies should be doing their part to increase their own sustainability, the consumer is also responsible for making sustainable choices and driving the market with her purchasing power.<sup>57</sup>

#### IV. THE ROLE OF THE CONSUMER

The modern consumer is generally aware of and concerned about climate change and sustainability issues, with a 2018 study showing that 88% of surveyed consumers would like all types of brands to help contribute to an environmentally-friendly movement.<sup>58</sup> Although some companies are not waiting for consumer outcry in regard to their eco-unfriendly practices, a great many more depend on consumers continuing to overlook them.<sup>59</sup> A consumer with concerns about sustainability should buy responsibly where possible, using her dollars to support earth-friendly production in a way that will eventually lead to lower costs for all.

##### A. RESPONSIBLE BUYING

The wide range in need, price point, and access to sustainable clothing make it difficult to prescribe exact specifications for how a consumer should shop. “Responsible buying” is a blanket term that covers how individual and business consumers use their spending power to contribute to local and global sustainability.<sup>60</sup> The author proposes that, where possible within individual means and ability, the consumer should buy responsibly by adopting a “cost per wear” budget, educating themselves and others on greenwashing, and emphasizing secondhand and resale as a significant part of their closet.

Sustainable clothing is generally more expensive than its fast fashion counterpart. Eco-friendly watchdog website Good on You points out that the extra cost of a responsibly-produced garment comes from both the use of sustainable materials as well as paying a living wage to those who manufacture the garments.<sup>61</sup> Good on You suggests looking at a more expensive price tag from the viewpoint of a “cost per wear” rule.<sup>62</sup> This

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56. Amanda Cotler, *Why Sustainable Fashion Matters*, FORBES (Oct. 7, 2019, 11:43 AM), <https://perma.cc/L7F6-PMN8>.

57. *Id.*

58. Solitaire Townsend, *88% of Consumers Want You To Help Them Make a Difference*, FORBES (Nov. 21, 2018, 11:43 AM), <https://perma.cc/E8XN-Z8TF>.

59. Remy et al., *supra* note 19.

60. SUSTAINABLE CMTYS. ONLINE, *Responsible Buying and Consumption*, <https://perma.cc/U8ZH-AKTT>.

61. Isobella Wolfe, *Is Ethical Clothing Really Expensive?*, GOOD ON YOU (Sept. 2, 2019), <https://perma.cc/PY63-Y27C>.

62. *Id.*

means that while shopping, the consumer would set a budget of cost divided by how many estimated wears he or she would get out of an item before it wore out enough for disposal.<sup>63</sup> This model suggests that because we are buying more garments than ever before, it ends up being less expensive and wasteful in the long run to buy, for example, a single \$50 shirt that lasts for years versus buying ten \$5 shirts that only last a few washes before losing their shape or developing holes.<sup>64</sup> Setting a personal cost per wear budget exposes the truth about the disposability of fast fashion and adjusts the consumer's mindset about cost.<sup>65</sup>

Greenwashing is another concern in the fashion industry that a consumer needs to be aware of. Greenwashing is a company's use of marketing tactics to make a product appear environmentally-friendly when it is not.<sup>66</sup> It can be as simple as using certain colors in logos, to touting initiatives that look remarkably 'green', but only make the smallest of dents in the company's overwhelming carbon footprint.<sup>67</sup> One of the most prevalent greenwashing tactics is using buzzwords, such as "green" and "eco-conscious," to mislead consumers.<sup>68</sup> Greenwashing became such a significant issue that the Federal Trade Commission issued "Green Guides" in 1992, and have updated these laws periodically based on principles of eco-friendly claims, interpretations of those claims by the standard consumer, and how companies can substantiate the claims to avoid deceiving their customer bases.<sup>69</sup> However, not all greenwashing is explicitly illegal. For example, a company can still market an "organic cotton" shirt, and the buzzword "organic" could make the consumer think he or she is purchasing an eco-friendly garment – when in reality, the shirt took an unsustainable 2700 liters of water to produce.<sup>70</sup> It is the consumer's responsibility to accurately determine whether he or she is buying responsibly, or simply buying into a falsity.

Finally, consumers should prioritize, or at least try to incorporate, secondhand resold clothing in their closets. As discussed in Part III, the secondhand clothing industry is growing each year.<sup>71</sup> This growth means that consumers can contribute to this sector of the fashion industry by not only purchasing secondhand clothing but also reselling their own items

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63. Wolfe, *supra* note 61.

64. *Id.*

65. *Id.*

66. Madeleine Hill, *How Can You Tell When a Fashion Brand Is Greenwashing?*, GOOD ON YOU (July 27, 2018), <https://perma.cc/Z4L3-4HXX>.

67. *Id.*

68. Emily Chan, *6 Ways To Be Greenwashing Vigilant*, VOGUE BRITAIN (Feb. 12, 2020), <https://perma.cc/KMV4-ARXQ>.

69. 16 C.F.R. Part 260 *et seq.*

70. Bethany Noble, *Fashion: The Thirsty Industry*, GOOD ON YOU (Mar. 21, 2017), <https://perma.cc/X3VG-F5TR>.

71. THREADUP, *supra* note 52.

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either through consignment or on one of several available resell applications that have developed along with smartphone technology. Although secondhand clothing may be less convenient to shop for because of less size and style variety, or may seem unappealing in comparison to attractive trends, a consumer can still make a difference by incorporating at least a few pieces into her closet.<sup>72</sup>

#### B. DEMANDING SUSTAINABILITY TO LOWER THE COST FOR ALL

Another benefit to buying responsibly is that the consumer demands a certain type of product by buying sustainable if and when she can, which will lower the overall price of that type of product in the long term.<sup>73</sup> An example of this comes from the organic foods industry: in 2018, consumers paid approximately 7.5% more for organic foods than non-organic, as opposed to the 9% more they paid in 2014.<sup>74</sup> This price drop is attributed to the change in mindset and growth in popularity of organic foods causing the price to go down as more certified items became available due to demand.<sup>75</sup> Prioritizing sustainable fashion would have the same effect: as the demand for sustainable clothing rises, the price will drop, making it more financially accessible each year.<sup>76</sup> However, the consumer alone is not responsible for a dramatic change in the fashion industry. Legal mechanisms will need to be employed to maximize the benefits of an industry overhaul.

#### V. STICKS AND CARROTS: HOW THE LAW CAN REGULATE THE BEST-DRESSED POLLUTER

For 40 years, the Multifiber Arrangement (MFA) was the primary mechanism the industry had to curb fast fashion imports from manufacturing nations by setting quotas based on types of imported items.<sup>77</sup> The MFA was originally intended to level the playing field among developing countries so that smaller producers could be competitive with countries that had significantly more exporting experience.<sup>78</sup> The World Trade Organization (WTO) developed an agreement to begin the process of transitioning out of the MFA quotas ten years before its expiration.<sup>79</sup> The WTO process and expiry of the MFA allowed for an ‘open season’ on

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72. Corbin, *supra* note 55.

73. Davis, *supra* note 34.

74. *Id.*

75. *Id.*

76. *Id.*

77. Kenton, *supra* note 11.

78. M.S. Alam et al., *The Apparel Industry in the Post-Multifiber Arrangement Environment: A Review*, 23 REV. DEV. ECO. 454, 455 (2019).

79. WORLD TRADE ORGANIZATION (WTO), *Textiles Monitoring Body (TMB) The Agreement on Textiles and Clothing*, <https://perma.cc/YD9K-QW93>.

imports from lower income and still-developing countries.<sup>80</sup> On a smaller scale, some governments have been looking into other regulation techniques. For instance, United Kingdom parliament members recommended a per-garment tax to limit purchases that would eventually end up in a landfill; unfortunately, this recommendation was rejected.<sup>81</sup> Fashion companies, especially fast fashion, continue to thrive on this lack of additional regulation and cost.

Although regulation is severely needed, import quotas and taxes are not the answer if the products being imported are not sustainable. Instead, the author proposes that the fashion industry be legally regulated to hold businesses accountable for their supply chains and the life-cycle of their products. A phase out, and ultimately a ban, on unsustainable materials and processes will force the industry to adapt, while voluntary sustainability incentives will encourage development beyond minimum requirements.

#### A. SUPPLY CHAIN RESPONSIBILITY

A lack of supply chain tracking and transparency in the fashion industry means that consumers rarely know more about their garments than the country of origin.<sup>82</sup> The prevalence of overseas outsourcing in the fashion industry makes the supply chain more difficult to track, and ultimately more detrimental to the environment when shipped among several countries that may or may not have environmental regulations.<sup>83</sup> Additionally, multiple companies will often manufacture out of the same factories at the same time, making the tracking of a product even more difficult.<sup>84</sup> Even when factories are audited by companies or third-party auditing services, the inspections are often done too quickly to be thorough, and fundamental workplace factors are missed.<sup>85</sup> For example, an audit of a Bangladesh factory reported sufficient fire extinguishers and smoke detectors right before a fire killed 112 workers, and the audit form did not even call for further fire safety measures to be audited.<sup>86</sup> Although the idea of audits has

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80. Kenton, *supra* note 11; WTO, *supra* note 79.

81. Damian Carrington, *Ministers Reject Plans for 1p Per Garment Levy To Tackle Fast Fashion*, GUARDIAN (June 18, 2019, 1:01 EDT), <https://perma.cc/2JBW-S76N>.

82. Brian Stauffer, *Follow the Thread: The Need for Supply Chain Transparency in the Garment and Footwear Industry*, HUM. RTS. WATCH (2017), <https://perma.cc/224W-LG5U>.

83. Patsy Perry & Steve Wood, *EXPLORING THE INTERNATIONAL FASHION SUPPLY CHAIN AND CORPORATE SOCIAL RESPONSIBILITY: COST, RESPONSIVENESS AND ETHICAL IMPLICATIONS 3* (2019), <https://perma.cc/W928-K4UY>.

84. Brian Stauffer, *“Soon There Won’t Be Much to Hide”: Transparency in the Apparel Industry*, HUM. RTS. WATCH (2018), <https://perma.cc/5NE8-STVM>.

85. Stephanie Clifford & Steven Greenhouse, *Fast and Flawed Inspections of Factories Abroad*, N.Y. TIMES (Sept. 1, 2013), <https://perma.cc/F8CW-4EAN>.

86. Clifford & Greenhouse, *supra* note 85.

merit in holding businesses accountable, simply checking off boxes is not sufficient to establish that a supply chain is responsibly monitored.<sup>87</sup>

Supply chain tracking in fashion is crucial both for environmental and workers' rights reasons. While textile and garment manufacturing factories located in the United States are subject to strict regulations, outsourced suppliers not subject to the same regulations make it easy for companies to avoid responsibility.<sup>88</sup> Some major companies have already taken the lead in publishing information about supplier factories.<sup>89</sup> Although factory information is a good start, the author proposes that companies also be responsible for reporting on emissions from their own production at each factory, including chemical runoff, and conducting continuous, accurate, and thorough factory audits. Supply chain transparency will be better for the companies in the long run, as it builds trust with consumers who are able to meaningfully decide where to spend their money.<sup>90</sup>

In addition to tracking and reporting, the author suggests that emissions regulations similar to those in more developed countries be enforced upon apparel companies and their supply chains. The dominant fashion companies are typically headquartered in first-world countries, which have laws limiting emissions that contribute to global climate change.<sup>91</sup> The companies are subject to those laws only based on what is emitted on the soil of their home base countries, and are meeting emissions goals by outsourcing.<sup>92</sup> The author's proposed legal mechanism requiring global-scale supply chain responsibility would combine manufacturing and shipping emissions with a company's domestic emissions, yielding a genuine total output. The accuracy of these emissions totals would dramatically change each producer's output levels on paper, forcing the industry to shift its practices and ultimately reducing the GHG emissions and chemical pollution speeding up climate change.

## B. LIFE-CYCLE RESPONSIBILITY

Fashion companies should be held accountable for ensuring their product is responsibly handled throughout its life-cycle. The idea of life-

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87. *Id.*

88. Karen Rogers, *What Kinds of Pollution Do Textile Factories Give Off?*, Chron, <https://perma.cc/X82K-4E8R>.

89. Stauffer, *supra* note 82.

90. *Id.*

91. Mary Hanbury, *20 Companies Dominate the World's Fashion Industry. Here's Who Makes the List.*, BUS. INSIDER (Dec. 9, 2018, 7:10 AM), <https://perma.cc/M7WK-UBUY> [ranking the top 20 fashion brands going into 2019, all of which are headquartered in either the United States or Europe, with the exception of one brand headquartered in Japan].

92. Brad Plumer, *You've Heard of Outsourced Jobs, but Outsourced Pollution? It's Real, and Tough To Tally Up*, N.Y. TIMES (Sept. 4, 2018), <https://perma.cc/XN6V-75AJ>.

cycle awareness is already prevalent in the arena of sustainability.<sup>93</sup> The United Nations Environment Program hosts the Life Cycle Initiative, an organization that works toward sustainability by considering emissions and social impacts at each step of a product's life.<sup>94</sup> Other industries have already implemented a life-cycle responsibility model. For example, the "cradle to grave" scheme of hazardous waste is controlled by the federal Resource Conservation Recovery Act and state-level statutory equivalents.<sup>95</sup> Hazardous waste is monitored from its generation through its disposal with detailed manifests and tracking.<sup>96</sup> Outside of the United States, the European Union issued a directive in 2000 governing end-of-life procedures for vehicles, developed specifically with the goal of reducing those vehicles' impacts on the environment.<sup>97</sup> The directive established materials regulations on the production end to limit harmful materials, encouraged reuse and recycle of vehicle parts, and directed EU members to ensure that "economic operators" (those working in the motor vehicle industry – car producers, distributors, motor vehicle insurance companies, etc.) set up accessible collection systems for all end-of-life vehicles.<sup>98</sup>

The previous implementation of life-cycle systems can serve as the model on which the fashion industry's scheme is developed. The author posits that fashion companies should be held responsible for their product's entire life-cycle by taking back end-of-life clothing pieces, setting up recycling and donation in a sustainable way, or assisting consumers with repairing and reusing their garments so they can be worn for longer. The life-cycle regulation would prohibit the disposal of end-of-life garments in the landfill, which would encourage companies to develop innovative ways to reuse and recycle what would normally have been waste (see subsection iii, below, for an example of the reuse of waste clothing in producing new textiles). Life-cycle responsibility is important to address the climate change issue because it reduces waste and landfill emissions, and when combined with supply chain responsibility, holds a company accountable for each stage of its product's existence.

Although not a requirement of the regulation, the author's hope would be that taking responsibility for the entire life-cycle of a garment would have the added benefit of companies reassessing their production levels. A decrease in the enormous quantity of fast fashion garments manufactured

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93. *Benefits of Life Cycle Approaches*, LIFE CYCLE INITIATIVE, <https://perma.cc/Z2CJ-L6HR>.

94. *Id.*

95. Summary of Resource Conservation and Recovery Act, U.S. ENV'T PROTECTION AGENCY <https://perma.cc/QXS2-WCT3>.

96. U.S. ENV'T PROTECTION AGENCY, *supra* note 95.

97. Directive 2000/53/EC, of the European Parliament and of the Council of 18 September 2000 on End-of Life Vehicles.

98. *Id.*

would automatically reduce emissions levels, further contributing to a climate change solution.

### C. PROHIBITION ON ENVIRONMENTALLY-DETRIMENTAL MATERIALS

From organic material growth, to manufacture, to disposal, many of the textiles used in popular clothing of all price points are either unsustainable or altogether detrimental to the environment.<sup>99</sup> Synthetic textiles such as polyester and nylon, for example, are inexpensive to produce and appealing to many consumers because they can be made into comfortable, stretchy, water-resistant, and wrinkle-proof garments.<sup>100</sup> With each wash however, these fabrics release hundreds of thousands of microplastic particles that make their way through filters in treatment plants, meaning they can end up directly in waterways that lead to the ocean.<sup>101</sup> The effects of this pollution come full circle, as studies have shown that the microplastics are not only harmful to ocean ecosystems and wildlife, but can end up in fish and shellfish consumed by humans.<sup>102</sup>

Even natural fibers can cause great harm to the environment. Rayon, for example, is a fiber made from wood pulp that a company can easily greenwash as being “natural” and “organic.”<sup>103</sup> Unfortunately, the pulp is generally sourced from forests that end up heavily cleared and endangered.<sup>104</sup> Cotton, another natural fiber, heavily relies on chemicals to grow and moves through several production stages, each requiring water consumption and often requiring shipping between stages.<sup>105</sup> The overuse of these already limited resources calls for an adjustment in textile production.

The author envisions a phase-out, and ultimately a ban, on synthetic materials that release microplastics, as well as processes that result in natural fibers causing excessive emissions, pollution, waste, or deforestation. The goal of prohibiting these types of materials and processes would be to force advances in technology to develop affordable, accessible, and sustainable garments. One such sustainable material already on the market is called lyocell, which is generally marketed under

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99. Sarah J. Young, *The Real Cost of Your Clothes: These Are the Fabrics With the Best and Worst Environmental Impact*, INDEPENDENT (Aug. 19, 2019, 8:04 AM), <https://perma.cc/Y2H6-SG63>.

100. Denise Chow, *Fight Against Plastic Pollution Targets a Hidden Source: Our Clothes*, NBC NEWS (May 5, 2019, 1:55 AM), <https://perma.cc/RH85-U9J3>.

101. *Id.*

102. *Id.*

103. D.G. McCulloch, *Deforestation for Fashion: Getting Unsustainable Fabrics Out of the Closet*, GUARDIAN (Apr. 25, 2014, 9:33 AM), <https://perma.cc/7QUB-9NXN>.

104. *Id.*

105. A.K. CHAPAGAIN ET AL., THE WATER FOOTPRINT OF COTTON CONSUMPTION 11 (2005), <https://perma.cc/K5X6-69PN>.

the brand-name Tencel.<sup>106</sup> Tencel is similar to rayon in that it is regenerated from a natural wood material, but unlike rayon the process and supply chain to produce Tencel is transparent, and it is sourced from eucalyptus farms that are noted for forestry stewardship.<sup>107</sup> Although energy use is still a concern surrounding this material, it is biodegradable and overall generally thought of as a better alternative to rayon and other unsustainably sourced natural fibers.<sup>108</sup> Tencel products are currently available from over 170 recognizable and diverse brands, including Patagonia, H&M, TOMS, and Levi's.<sup>109</sup> Levi's also developed its "WaterLess" collection almost ten years ago, using less water when finishing cotton denim by combining steps and eliminating or limiting water when stonewashing.<sup>110</sup>

In much more recent developments, newly-patented textile product 'Circulose' was developed to reuse waste clothing in a new way. According to its website, Circulose is made from 100% discarded cotton textile waste.<sup>111</sup> Fast fashion brand H&M used Circulose for the first time in retail in its 2020 'environmentally-friendly' collection; however, the company only produced one dress made with only 50% Circulose (the other 50% is viscose – another name for the unsustainable rayon fiber).<sup>112</sup> Fortunately, the developers of Circulose are not exclusively partnering with any brands and remain open to working with any brand with a sustainability agenda.<sup>113</sup>

Sustainable lyocell, Circulose, and reduced water denim technology were developed without any prohibition on unsustainable materials and processes. Because of this, the author would suggest that a gradual phasing-out and ultimate outright prohibition of unsustainable materials and production processes would not cripple fashion brands, but will instead force the market to adapt, developing textiles in ways that are already or will become possible. Developments should continue to be sought in creating new sustainable textiles, either natural or synthetic, and adapting existing materials production methods for a modern, climate-concerned world.

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106. *What is Tencel?*, ECOMALL, <https://perma.cc/7UJX-RYEP>.

107. See Tencel, *supra* note 106; Kendall Benton-Collins, *Material Guide: How Ethical is Tencel?*, GOOD ON YOU (July 27, 2018), <https://perma.cc/7Y93-8JY7>.

108. Benton-Collins, *supra* note 107.

109. Tencel, <https://www.tencel.com>.

110. Samantha Critchell, *Soft and Dry? Levi's Launches "Waterless" Denim*, NBC NEWS (Jan. 11, 2011), <https://perma.cc/B5UK-2NWN>.

111. *FAQ*, CIRCULOSE, <https://circulo.se/faq> (last visited May 6, 2020).

112. *H&M To Be the First Retailer To Use Circulose*, H&M GROUP (Feb. 12, 2020), <https://perma.cc/V7BS-AHHY>; Lara Robertson, *Material Guide: Is Viscose Really Better for the Environment?*, GOOD ON YOU (Mar. 9, 2020), <https://perma.cc/BBF5-L49K>.

113. CIRCULOSE, *supra* note 111.

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#### D. INCENTIVIZING OPTIONAL SUSTAINABILITY TECHNIQUES

Incentivizing voluntary “good” behavior is a basic function of behavioral economics: people are more inclined to take an action if something in the context of their decision-making is nudging them in that direction.<sup>114</sup> Broad government incentives already exist for businesses that take steps toward sustainability at federal, state, and local levels.<sup>115</sup> Some of these incentives include tax benefits and deductions for using sustainable energy sources, as well as grants and subsidies from the Environmental Protection Agency and Small Business Administration.<sup>116</sup>

Although these broad incentives are available, the fashion industry needs specific “carrots” geared toward its production to incentivize voluntary sustainable action. Once supply chain and life-cycle accountability are in place, and unsustainable materials are phased out, the author posits that fashion companies should be incentivized to develop innovative eco-friendly materials, low-emission production techniques, and good employment practices. Further, certain design protocols could be incentivized, such as classic cuts and color palettes that are less likely to go out of style, and therefore less likely to end up as waste. If companies can be encouraged to take on these optional initiatives with tax credits, low-financing options for company expansions, and grants to continue development of sustainable practices, many would be more inclined to get on board.

The well-informed, responsibly-buying consumer discussed in Part IV is a crucial element of the success of sustainability incentive programs. At the end of the day, a company’s final decision is likely based on improving its bottom line, or profits, by growing earnings and reducing costs.<sup>117</sup> If a company can make something that the informed consumer wants, and can sell with enough volume to bring in a profit, the company is likely to be satisfied.

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114. Francesca Gino, *The Rise of Behavioral Economics and Its Influence on Organizations*, HARV. BUS. REV. (Oct. 10, 2017), <https://perma.cc/VQX8-LTRA>.

115. *Financial Benefits of an Eco-Friendly Business*, GREEN BUS. BUREAU (Feb. 20, 2021), <https://perma.cc/WJU5-TL5H>.

116. *Id.*

117. Alicia Tuovila, *Bottom Line*, INVESTOPEDIA, <https://perma.cc/9FXB-NYBV>.

## CONCLUSION

According to the UN, the planet has under a decade (at the time of this writing) until the climate change disaster is past the point of no return.<sup>118</sup> With this limited timeline, the fashion industry's enormous contribution to the climate change disaster demands a drastic transformation. Because fashion has become a more profitable business as consumption volume grows while prices fall rapidly, it is unlikely the industry would change its practices without legal regulation.

Of course, pollution is not the fashion industry's only bugaboo. As the industry moves toward more environmentally sustainable techniques, it will likely have to address the human rights of its manufacturing workforce, which is generally poorly compensated and overwhelmingly female.<sup>119</sup> Additionally, economic issues will arise as companies try to develop sustainable techniques and address these potential human rights issues without financial ruin.

These questions, and more, will need answering. However, working through these issues has the potential to lead to major progress in the fashion industry. Forcing a fashion company to be responsible for an item it produces throughout the supply chain, and through its life-cycle, is a viable way to ensure companies are making crucial adjustments. Further, a prohibition on unsustainable processes and fibers known to pollute, either through pesticide treatment, or chemical and microplastic runoff, will come close to eliminating certain concerns entirely. Finally, incentivizing businesses to opt into further sustainable practices will encourage continuous development, keeping the conversation alive for environmentally-friendly practices to come.

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118. U.N.G.A., Meetings Coverage, *Only 11 Years Left to Prevent Irreversible Damage from Climate Change, Speakers Warn During General Assembly High-Level Meeting* (Mar. 28, 2019), <https://perma.cc/4PWS-6XS6>.

119. Givhan, *supra* note 4.