

**FAST FASHION’S IMPACT ON CLIMATE CHANGE. AN OVERVIEW OF
A GLOBAL PROBLEM: IF LOOKS COULD KILL**

Climate Change Law, Research & Writing (Spring 2025): Final Paper

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I. INTRODUCTION

In 2022, the fast fashion market globally was valued at 60.50 billion dollars.¹ According to a Zion Market Research report, by 2030, the fast fashion global market is projected to reach 179.50 billion dollars.² Fast fashion is described as a business model that is significantly different from traditional fashion business models that have “two seasons per year” to produce and manufacture clothes.³ Fast fashion models may have, for example, fifty two micro-seasons, or micro trends.⁴ According to Earth.org, since 2000, clothing sales have doubled and due to the rise of social media, “there is this aspect of wearing clothing once and then maybe disposing or getting rid of it.”⁵ In order to make fast fashion clothing very cheaply priced, lower quality materials are being used in fast fashion business models.⁶ For example, it is reported that plastic elements and fibers are “incorporated” into the manufacturing process.⁷

The projected “boom” in fast fashion’s expansion is attributed to the increasing influence of social media’s “micro trends.”⁸ Micotrends are defined as “fashion fads” that become very popular and heavily influence consumers for a short period of time.⁹ Attributed to the rise of the app Tiktok, “microtrends have only become prominent in the fashion industry with the rise of TikTok. . .giving a platform to more trends that may be presented through #ootds, hauls, sponsored posts, or #grwms.”¹⁰ The expected global rise of fast fashion can also be attributed to consumer preference to spend less money on trendy items in addition to increased access to

¹ *Fast Fashion Industry Prospective*, ZION MARKET RESEARCH, <https://www.zionmarketresearch.com/report/fast-fashion-market#:~:text=In%20terms%20of%20revenue%2C%20the,the%20increasing%20number%20of%20buyers> (last visited Mar. 7, 2025).

² *Id.*

³ Molly Flanagan, *Fast Fashion*, ENVIRO. INNOVATIONS INITIATIVE- UNIV. OF PA, <https://environment.upenn.edu/events-insights/news/fast-fashion> (last visited Apr. 11).

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

⁸ *Fast Fashion Industry Prospective*, *supra* note 1.

⁹ Anna Mikhaylyants, *TikTok Core: The Fashion World of Today*, THE HARVARD CRIMSON, (Mar. 9, 2023) <https://www.thecrimson.com/article/2023/3/9/tiktok-aesthetics-microtrends-fast-fashion-style/>.

¹⁰ *Id.*



technology.¹¹ For example, the Zion Market Research report has accounted for more than 590,000 products listed on Shein’s website at a time.¹²

While fast fashion may be bringing satisfaction to its consumers, it has a significant negative environmental impact on the globe.¹³ According to the UN Environment Programme, the global fast fashion industry is the second biggest sector consumer of water and is responsible for around ten percent of global carbon emissions.¹⁴ This article will first conduct a comparative analysis of the countries with the highest production and consumption rate in relation to the fast fashion industry, specifically China and the United States. Then, the article will describe both a how fast fashion’s contribution to climate change is detrimental and how the current regulations – both domestic and foreign - are not as effective as one may expect. Finally, this Article will provide several recommendations for international and collaborative regulatory policy reform to mitigate the fast fashion industry’s negative impacts contributing to climate change.

II. PRODUCTION AND CONSUMPTION

a. China – The Manufacturing Giant

Generally, based on a 2024 report, China is the “world’s sole manufacturing superpower. Its production exceeds that of the nine next largest manufacturers combined.”¹⁵ As of 2022,

¹¹ *Fast Fashion Industry Prospective*, *supra* note 1.

¹² *Id.*

¹³ Rashmila Maiti, *The Environmental Impact of Fast Fashion, Explained*, EARTH.ORG, (Jan. 20, 2025) <https://earth.org/fast-fashions-detrimental-effect-on-the-environment/#:~:text=Fast%20fashion%20has%20a%20significant,flights%20and%20maritime%20shipping%20combined>.

¹⁴ *Id.*

¹⁵ Richard Baldwin, *China is the World’s Sole Manufacturing Superpower: A Line Sketch of the Rise*, CENTRE FOR ECONOMIC POLICY RESEARCH, (Jan. 17, 2024) <https://cepr.org/voxeu/columns/china-worlds-sole-manufacturing-superpower-line-sketch-rise>.



sixty percent of the fast fashion industry's exported production takes place in China.¹⁶ In fact, in 2023, China accounted for thirty-five percent of gross production in the world.¹⁷ Specifically, in 2024, China was reported as both the "largest textile producer and consumer" as twenty-six million tons of textiles are reported to be discarded each year.¹⁸

Additionally, seventy percent of domestic clothing sales exported from China result from the fast fashion market.¹⁹ Fast fashion company Shein, with approximately six-thousand factories in China, received a score of six out of one-hundred and 150 points.²⁰ According to the Shein website, the fast fashion powerhouse exports to more than one-hundred and fifty countries.²¹ Shein operates on an "on-demand" model, which allows the tracking of user data to either boost or shut down the manufacturing of certain products based on the number of sales, views, and searches.²² Shein specifically has been the subject of criticism due to its overproduction of significant amounts of microplastics.²³ The Chinese fast fashion brand soared from ten billion dollars in revenue in 2020 to one-hundred billion in 2022.²⁴ Specifically, Shein's reported "rapid use of virgin polyester and large consumption of oil churns out the same

¹⁶ *Fast Fashion Industry Prospective*, *supra* note 1.

¹⁷ *Id.*

¹⁸ Tian Macleod Ji, *26 Million Tons of Clothing End Up in China's Landfills Each Year, Propelled by Fast Fashion*, AP NEWS, <https://apnews.com/article/china-clothing-fast-fashion-recycling-brands-shein-f0c54f50588c9a4f00073cd5e0e4d086> (last updated Jul. 10, 2024).

¹⁹ *Id.*

²⁰ *Id.*

²¹ Robynne Tindall, *How China's Shein Became a Fast-Fashion Giant*, REUTERS, <https://www.reuters.com/business/retail-consumer/how-chinas-shein-became-fast-fashion-giant-2023-11-28/> (last updated Nov. 27, 2023).

²² *What is Shein? The Chinese Fast Fashion Retailer Explained*, CHINA-BRITAIN BUSINESS FOCUS, (Feb. 29, 2024) <https://focus.cbbc.org/what-is-shein-the-chinese-fast-fashion-retailer-explained/>.

²³ *Id.* See *infra*, Section IV(a).

²⁴ Astha Rajvanshi, *Shein Is the World's Most Popular Fashion Brand- At A Huge Cost to Us All*, TIME, (Jan. 17, 2023) <https://time.com/6247732/shein-climate-change-labor-fashion/>.

amount of CO₂ as approximately 180 coal-fired power plants.”²⁵ Thus, resulting in Shein releasing about 6.3 million tons of carbon dioxide per year.²⁶

Due to the increase in the average Chinese household income, many Chinese consumers are “unwilling” to buy used or thrifted items thus contributing to high amounts of fast fashion consumption as well.²⁷ Additionally, based on a Daxue Consulting report, most purchases from Chinese consumers are based on fast fashion trends.²⁸ In fact, only forty percent of younger Chinese consumer respondents are willing to wear second-hand clothing due to a potential concern around hygiene.²⁹

b. The United States – The Over Consumer

In 2019, eighty-eight percent of United States consumers preferred fast fashion retailers.³⁰ However, studies show that in 2018, the average American consumer disposes of around eighty pounds of textiles a year due to the rise of fast fashion.³¹ Based on a 2023 report from the United States International Trade Commission, the U.S., the largest importer in the world, imported a total \$79.3 billion worth of fast fashion garments, with its’ biggest source being from Asia.³² In February 2024, it was reported that the U.S. apparel imports experienced a 12.9% increase in the quantity of imported apparel.³³ Specifically, the increase can be

²⁵ *Id.*

²⁶ *Id.*

²⁷ Tian Macleod Ji, *supra* note 18.

²⁸ *E-Commerce and Social Media: Driving Forces Behind China’s Fast Fashion Market Success*, DAXUE COUNSELING, (Jun. 30, 2023) <https://daxueconsulting.com/fast-fashion-industry-china/>.

²⁹ *Id.*

³⁰ Emma Williams, *Appalling or Advantageous?, Exploring the Impacts of Fast Fashion From Environmental, Social, and Economic Perspectives*, 13, JR. FOR GLOBAL BUSINESS & COMMUNITY, (2022).

³¹ *Id.*

³² *USITC Releases Report on Apparel Export Competitiveness of Certain Suppliers to the United States*, UNITED STATES INTERNATIONAL TRADE COMMISSION, (Sep. 30, 2024) https://www.usitc.gov/press_room/news_release/2024/er0930_65955.htm#:~:text=The%20United%20States%20is%20the,the%20majority%20sourced%20from%20Asia.

³³ Sheng Lu, *The Puzzling US Apparel Import Data*, SHENGLU FASHION, <https://shenglufashion.com/2024/04/15/the-puzzling-us-apparel-import-data/> (last visited Mar. 7, 2025).



attributed to Shein, in which by 2021, reached 3.1 billion dollars in the U.S. market.³⁴ By 2024, Shein attributed to forty percent of fast fashion sales in America³⁵ and it is reported that the company sends around 600,000 packages to the U.S. every day.³⁶

In fact, America's addiction of consuming fast fashion is contributing to the rise of "dumps" in developing countries such as Ghana.³⁷ Due to the increasing amount of textiles and clothing being donated, "millions of garments are put into bales and shipped abroad every year."³⁸ As the biggest culprit of exporting second-hand clothing, an estimated forty percent of donated clothes end up in Ghana's landfills as upcycling the clothing items becomes difficult due to the "poor quality of fast fashion garments."³⁹

III. FAST FASHION'S GLOBAL IMPACT ON CLIMATE CHANGE

a. Carbon Emissions

According to the United Nations, the release of carbon emissions into the atmosphere traps the sun's heat, and warms up the planet - significantly contributing to climate change.⁴⁰ Due to the warming of the earth, temperatures are rising, "... changing weather patterns and disrupting the usual balance of nature" and posing significant risks to public health and the environment.⁴¹

³⁴ Euromonitor International, *How Fast Fashion Brand Shein is Conquering the US Market*, NIGEL WRIGHT, <https://www.nigelwright.com/us/how-the-chinese-fast-fashion-brand-shein-is-conquering-the-us-market-euromonitor-international> (last visited Mar. 7, 2025).

³⁵ Marianne Wilson, *Shein, Uniqlo Tops in Fast-Fashion Spend in U.S.*, CHINA STORE AGE, (Jan. 1, 2024) <https://chainstoreage.com/shein-uniqlo-tops-fast-fashion-spend-us#:~:text=One%20of%20the%20big%20winners,robust%20growth%20throughout%20the%20year>.

³⁶ Arriana McLymore, et. al., *Focus: Rise of Fast-Fashion Shein, Temu Roils Global Air Cargo Industry*, REUTERS, (Apr. 10, 2024) <https://www.reuters.com/business/retail-consumer/rise-fast-fashion-shein-temu-roils-global-air-cargo-industry-2024-02-21/>.

³⁷ *Fast Fashion in the U.S. is Fueling an Environmental Disaster in Ghana*, CBS NEWS, (Sep. 18, 2021) <https://www.cbsnews.com/news/ghana-fast-fashion-environmental-disaster/>.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Causes and Effects of Climate Change*, UNITED NATIONS, <https://www.un.org/en/climatechange/science/causes-effects-climate-change> (last visited Apr. 11, 2025).

⁴¹ *Id.*



According to the Wisconsin Department of Health Services, exposure to carbon dioxide from carbon emissions can significantly threaten public health by causing a variety of health issues.⁴² Reported symptoms include increased blood pressure, headaches, difficulty breathing, and increased heart rate.⁴³ Through carbon emissions directly contributing to climate change and global warming, the environment is adversely impacted through depletion of wildlife natural habitats, disruption in crop production, and an increase in heat waves.⁴⁴

In January 2025, it was reported that the fast fashion industry globally contributes to ten percent of the earth's carbon emissions.⁴⁵ Specifically, the majority of the industry's carbon emission pollution can be pinpointed to the processes of dyeing clothes, preparing the yarn, and producing fiber.⁴⁶ Known as textile manufacturing, this process contributes to ten percent alone of the fast fashion industry's total release of carbon emissions.⁴⁷ During the material sourcing process, fabrics such as polyester release large amounts of carbon, due to being derived from fossil fuels.⁴⁸ Additionally, the production of cotton is estimated to contribute 220 million metric tons of carbon per year.⁴⁹

Generally, textile manufacturing is an energy intensive process.⁵⁰ Meaning, to manufacture textiles, there is substantial use of electricity and machines powered by fossil fuels, coal, and oil.⁵¹ Specifically, in the fast fashion industry where mass amounts of textiles are being produced

⁴² *Carbon Dioxide*, WISCONSIN DEPARTMENT OF HEALTH SERVICES, <https://www.dhs.wisconsin.gov/chemical/carbondioxide.htm> (last updated Jan. 8, 2025).

⁴³ *Id.*

⁴⁴ Stephaine Osmanski, *How Do Carbon Emissions Affect the Environment?*, GREEN MATTERS, <https://www.greenmatters.com/p/how-do-carbon-emissions-affect-environment> (last updated Mar. 30, 2020).

⁴⁵ Rashmila Maiti, *supra* note 13.

⁴⁶ *Id.*

⁴⁷ *Carbon Reduction in Textile Manufacturing Industry*, CARBON VALUE CHAIN, (May 26, 2023) <https://carbonvaluechain.com/carbon-offsets/carbon-reduction-in-textile-manufacturing-industry/>.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Id.*



at once, a high amount of carbon emissions is emitted into the atmosphere.⁵² In China specifically, due to the previously discussed booming demand for cheap textiles, the production of textiles contributes to forty-three percent of total emissions.⁵³ Due to fast fashion industries in China being “based mostly on e-commerce,” the use of technology in the form of cellphones and computers to place online orders is reported to have the ability to produce up to 3.22 million tons of carbon dioxide daily.⁵⁴

Another factor in the fast fashion industry’s supply chain is the transportation of raw materials used in the manufacturing process and the shipment of the clothing goods to consumers.⁵⁵ In a carbon footprint study of a pair of jeans in the fast fashion business model, it was reported that the carbon footprint of a fast fashion manufactured pair of jeans is eleven times higher than that of “traditional fashion consumption.”⁵⁶ A factor contributing to a high carbon footprint is the long distance and “energy-intensive” air transportation causing higher carbon emissions in developed, consumer countries.⁵⁷ To combat the projected increase carbon emissions from the fast fashion industry, it is suggested that to mitigate the effects, “cooperation and common but differentiated efforts between developed and developing countries” is required.⁵⁸

⁵² *Id.*

⁵³ The Environmental Defense Initiative, *Fast Fashion in China*, MEDIUM, (Oct. 9, 2023) <https://medium.com/@environmentaldefenseinitiative/fast-fashion-in-china-ca54640f0f7c#:~:text=Carbon%20Emissions&text=Due%20to%20the%20high%20demand,greenhouse%20gas%20emissions%20in%20China>.

⁵⁴ *Id.*

⁵⁵ Jolin Li, *Fast Fashion and Emissions: What’s the Link?*, EARTH.ORG, (Aug. 23, 2024) <https://earth.org/fast-fashion-and-emissions-whats-the-link/>.

⁵⁶ Zhikun Li et al., *The Carbon Footprint of Fast Fashion Consumption and Mitigation Strategies- A Case Study of Jeans*, 924 SCIENCE OF THE TOTAL ENVIRO. (2024).

⁵⁷ *Id.* at 7.

⁵⁸ *Id.* at 9. See also, *infra*, Section V.



b. Water

Water is used in almost every aspect of the fast fashion business model.⁵⁹ According a report by Planet Tracker, ninety percent of fashion brands fail to disclose “water-related” risks in documentation.⁶⁰ Water-related risks refer to the overconsumption and pollution of water through the actions of the fast fashion industry, subsequently causing environmental harm.⁶¹ Shein specifically is reported to fail to disclose where it sources its water for its business operations and whether or not the brand “implements wastewater management initiatives, or whether the brand measures and records data on water consumption and wastewater.”⁶²

The fast fashion industry is the second-largest industry consumer of water.⁶³ For example, a single pair of fast fashion jeans requires 2,000 gallons of water.⁶⁴ According to a 2021 report, the fashion industry was reported to use approximately 93 billion cubic meters of water per year.⁶⁵ Based on the “current” trends in 2021,⁶⁶ the water usage amount is suspected to double.⁶⁷ While over two billion people are impacted by water shortages globally, the fast fashion industry is expected to continue to contribute to the issue of water scarcity and resource depletion.⁶⁸

⁵⁹ Maliha Shoaib, *Fashion is Still Neglecting Its Impact on Water*, VOGUE BUSINESS, (Jan. 31, 2024) <https://www.voguebusiness.com/story/sustainability/fashion-is-still-neglecting-its-impact-on-water/>.

⁶⁰ *Id.*

⁶¹ Vanessa Turk, *Fast Fashion: Polluting our Water Millions of Clothing Items at a Time*, THE GW POINT SOURCE, (Oct. 2, 2023) <https://blogs.gwu.edu/law-gwpointsource/2023/10/02/fast-fashion-polluting-our-water-millions-of-clothing-items-at-a-time/>.

⁶² Solene Rauturier, *Fashion’s Water Impacts: The Largest Brands Are Doing the Least*, GOOD ON YOU, (Mar. 22, 2024) <https://goodonyou.eco/fashions-water-impacts/>.

⁶³ Rashmila Maiti, *supra* note 13.

⁶⁴ *Id.*

⁶⁵ *The Issues: Water*, COMMON OBJECTIVE, (Nov. 23, 2021) <https://www.commonobjective.co/article/the-issues-water>.

⁶⁶ See generally, *supra*, Section I (discussing the rise of fast fashion consumption and micro-trends because of social media trends and fads.)

⁶⁷ *The Issues*, *supra* note 65.

⁶⁸ Lena Milton, *Squeezing Us Dry: How the Fashion Industry Pollutes Water*, SUSTAINABLY CHIC, (Jan. 4, 2025) <https://www.sustainably-chic.com/blog/how-the-fashion-industry-pollutes-water>.

In China specifically, the fast fashion industry consumes around six percent of the total national water usage.⁶⁹

According to the World Bank, the fashion industry contributes to twenty percent of global wastewater, making it the second largest industry-source of water pollution.⁷⁰ From the production and manufacturing process, transportation, consumer use, and disposal- the industry significantly contributes to water pollution.⁷¹ In the first phase, fast fashion production and manufacturing, this process alone is responsible for majority of water contamination due to the toxic and hazardous chemicals used.⁷² Specifically, the wet-process phase of production, which occurs when the fabrics are treated with various chemicals, dyed, and stitched.⁷³ To create one “finished” project or clothing items, it takes on average eight thousand “different synthetic chemicals.”⁷⁴ The World Bank additionally identified over seventy toxic chemicals that have been transferred in local waterways.⁷⁵ According to Seaside Sustainability, an American non- profit, manufacturers tend to locate their business operations near large bodies of water in developing countries.⁷⁶ Unfortunately, this causes local communities to lose a significant amount of their fresh water resources essential for drinking water and food sources.⁷⁷ Additionally,

⁶⁹ Chermaine Lee, *Inside China’s Plan to Clean Up Its Textile Industry*, FAIR PLANET, (May 28, 2022) <https://www.fairplanet.org/story/inside-chinas-plan-to-clean-up-its-textile-industry/#:~:text=The%20production%20of%20a%20tonne%20of%20textile,water%20and%20produce%20over%2033kg%20of%20carbon.>

⁷⁰ *The Ugly Truth: How Fast Fashion Pollutes Our Drinking Water*, HYDROTECH, <https://www.hydrotech-group.com/blog/the-ugly-truth-how-fast-fashion-pollutes-our-drinking-water> (last visited Apr. 13, 2025).

⁷¹ *Id.*

⁷² Vanessa Turk, *supra* note 61.

⁷³ *Fast Fashion Series Part 3: What are the Sources of Water Pollution From Fast Fashion?*, SEASIDE SUSTAINABILITY, <https://www.seasidesustainability.org/post/fast-fashion-series-part-3-what-are-the-sources-of-water-pollution-from-fast-fashion> (last visited Apr. 13, 2025).

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.*

transportation of fast fashion products globally contributes to water contamination and soil degradation due to frequent fuel spills in waterways.⁷⁸

In China, seventy-two toxic chemicals were found in Chinese waterways as a result of the textile dyeing process.⁷⁹ According to the World Health Organization, it has been reported that polluted water causes up to seventy-five percent of diseases in Chinese citizens.⁸⁰ In a 2010 report, the southern Chinese province of Xintang, known as the “Jeans Capital of the World,” was reported to have amounts of heavy metal “128 times in excess of national environmental standards.”⁸¹ Individuals in these southern provinces have reported a “strong stench” stemming from water sources and inhabitable conditions for species of fish.⁸² Attributing to the issue of China’s water pollution, is the lack of enforcement and wastewater treatment plans.⁸³

c. Waste

In 2023, it was reported that 92 million metric tons of fast fashion garments end up in landfills.⁸⁴ It is predicted that by the end of the decade, given the boom of the fast fashion industry, the number is expected to reach a whopping 124 million metric tons in landfills.⁸⁵ An alternative is incineration, and is often used as a way to attempt to reduce waste in landfills.⁸⁶

⁷⁸ Sustainable Transportation, STATE OF MATTER, (Mar. 28, 2024) https://stateofmatterapparel.com/blogs/som-blog/sustainable-transportation?srltid=AfmBOorkMuKq_2r3hbrafgLFeSWquJB1_hvXSA3_HfSz8zCt5Hw7Qmpg.

⁷⁹ *The Environmental Cost of Clothes*, CHINA WATER RISK, (Apr. 18, 2011) <https://cwrrr.org/resources/analysis-reviews/the-environmental-cost-of-clothes/#:~:text=In%20China%2C%20according%20to%20the,these%2C%2030%20cannot%20be%20removed.>

⁸⁰ *Id.*

⁸¹ Halley Herbst, *The Price of Fashion: The Environmental Cost of the Textile Industry in China*, 45 FORDHAM INT’L L.J. 907, 913 (2022).

⁸² *Id.*

⁸³ *Id.*

⁸⁴ Martina Igini, *10 Concerning Fast Fashion Waste Statics*, EARTH.ORG, (Aug. 21, 2023) <https://earth.org/statistics-about-fast-fashion-waste/>.

⁸⁵ *Id.*

⁸⁶ Alexandra Caterbow, *Incineration of Textile Waste*, SUSTAINABLE FASHION, (Sep. 23, 2020) <https://sustainfashion.info/incineration-of-textile-waste/#:~:text=Incineration%20of%20used%20clothes%20is,its%20highly%20negative%20polluting%20contributi> ons.

Incineration refers to the burning of clothes or “unsold stock.”⁸⁷ However, this alternative waste disposal method has several complications that “exacerbate global warming.”⁸⁸ Such as, incineration releases a significant amount of greenhouse gases into the atmosphere, furthering the amount of air pollutants that harm the environment and public health.⁸⁹

The predicted soar of clothing waste is attributed to fast fashion’s cheap quality of clothes.⁹⁰ Meaning, cheap clothing items often worn only a few times, are deemed disposable to the consumer thus causing the rapid purchasing of a new product.⁹¹ In fact, individuals with higher incomes are reported to generate seventy-six percent more clothing garment waste versus individuals with low incomes.⁹²

The process of disposable of fast fashion garments in landfills puts the environment and public health at risk in local communities due to toxic substances being released from the landfills.⁹³ According to a self-reported public health survey regarding landfill operations in communities, community members reported various health issues such as gastrointestinal problems, psychological disorders, and increased risks of leukemia.⁹⁴ Additionally, the study revealed that community-based odor complaints were present near landfill waste sites, resulting in an increase of stress-related diseases.⁹⁵ Landfills additionally increase the risk of groundwater

⁸⁷ Chris Baraniuk, *Will Fashion Firms Stop Burning Clothes?*, BBC NEWS, <https://www.bbcearth.com/news/will-fashion-firms-stop-burning-clothes> (last visited Apr. 14, 2025).

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ Graham Matthews, *Fashion Waste Facts and Statistics*, BUSINESS WASTE, <https://www.businesswaste.co.uk/your-waste/textile-recycling/fashion-waste-facts-and-statistics/> (last updated Jul. 16, 2024).

⁹¹ *Id.*

⁹² Dielle Lundberg & Julia Devoy, *The Aftermath of Fast Fashion*, BU SCHOOL OF PUBLIC HEALTH, (Sep. 22, 2022) <https://www.bu.edu/sph/news/articles/2022/the-aftermath-of-fast-fashion-how-discarded-clothes-impact-public-health-and-the-environment/>.

⁹³ Ngan Le, *The Impact of Fast Fashion on the Environment*, PRINCETON STUDENT CLIMATE INITIATIVE, (Jul. 20, 2020) <https://psci.princeton.edu/tips/2020/7/20/the-impact-of-fast-fashion-on-the-environment>.

⁹⁴ Martine Vrijheid, *Health Effects of Residence Near Hazardous Waste Landfill Sites: A Review of Epidemiologic Literature*, 108 ENVIRO. HEALTH PERSPECT. 101, 107 (2000).

⁹⁵ *Id.* at 110.



contamination through a process called leachate formation.⁹⁶ Leachate is a liquid formed by rainwater infiltrating through the waste materials located in a landfill, allowing the leachate to escape the landfill site and contaminate groundwater.⁹⁷ Further, landfills filled with fast fashion waste contributes to land consumption and habitat destruction.⁹⁸

In America alone, on a yearly basis, the overconsuming nation contributes to 11.3 million tons of textile waste, which is the equivalent to around 2,150 pieces of textiles thrown away per second.⁹⁹ Based on logistics company Optoro, the United States contributed to sixteen million metric tons of carbon dioxide emissions from landfills full of textile waste in 2020.¹⁰⁰ This amount of released carbon emissions based on clothing waste is the “equivalent to the emissions of 3.5 million cars on the road for a year.”¹⁰¹ In fact, the United States in 2024 was deemed “the biggest exporter of used clothes in the world.”¹⁰² Sending its rejected and used clothing items to end up in landfills in countries such as Ghana, India, and Chile, causing an “environmental and social emergency.”¹⁰³ The emergency is attributed to the low quality and short longevity of the fast fashion clothing garments.¹⁰⁴

Similarly, in China, textile waste from the fast fashion industry additionally contributes to the global problem.¹⁰⁵ China is reported to dispose of 26 million metric tons of textile waste per year

⁹⁶ *Environmental Impact of Landfills and the Importance of Waste Diversion*, RECYKAL, (Sep. 30, 2024) <https://recyk.com/blog/environmental-impact-of-landfills-and-the-importance-of-waste-diversion/>.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ Marina Igini, *supra* note 84.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* See generally, *supra* Section III(a) (discussing the fast fashion industry’s impact and role on global carbon emissions).

¹⁰² Isabelle Stanley, *Where America’s Clothes Go to Die*, DAILY MAIL UK, (Feb. 11, 2024) <https://www.dailymail.co.uk/news/article-13058075/america-fast-fashion-shame-trash.html>.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ Associated Press, *Fast Fashion Drives Up Textile Waste in China as Recycling Takes a Back Seat*, SOUTH CHINA MORNING POST, (Jul. 10, 2024) <https://www.scmp.com/yp/discover/news/asia/article/3269894/fast-fashion-drives-textile-waste-china-recycling-takes-back-seat>.

due to its plethora of fast fashion manufacturers.¹⁰⁶ Unfortunately, in China, only around twelve percent of textiles are recycled.¹⁰⁷ Attributing to environmental issues stemming from fast fashion waste in China are various Chinese policies.¹⁰⁸ Such as, a policy prohibiting the use of recycled cotton to produce new clothing.¹⁰⁹ However, Shein as of 2024, has introduced a circularity fund that will be used to tackle fast fashion by backing “early-stage companies working on recycled materials and might form alliances with more mature firms using innovative fabrics to promote sustainability.”¹¹⁰

Due to the substantial evidence demonstrating the fast fashion industry’s contribution to carbon emissions, water scarcity and pollution, and textile waste,¹¹¹ regulatory action and enforcement is essential. China and the United States’ regulatory approach and cooperation with international climate agreements have critical role in mitigating the industry’s damage to public health and the environment. As the leading producer and consumer in the fast fashion supply chain, these two nations have a heightened responsibility to enforce effective climate regulations.

IV. REGULATIONS

a. China’s Fashion Climate and Environmental Regulations

Through China’s 14th Five Year Plan for Ecological and Environmental Protection (2021-2025), the country seeks to promote fashion sustainability through multiple policies implementing green manufacturing and increasing the use of sustainable materials.¹¹² The plan

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *China Grapples with Textile Recycling as Shein, Zara Aim to Reposition Fast Fashion*, ETHOS, (Jul. 9, 2024) <https://the-ethos.co/china-textile-recycling-shein-zara-reposition-fast-fashion/>.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ See *supra* Section III.

¹¹² Giulia Interesse, *China Ultra-Fast Fashion Sector: Growth, Challenges, and the Global Impact of the “Shein Effect”*, CHINA BRIEFING, (Mar. 25, 2025) <https://www.china-briefing.com/news/chinas-ultra-fast-fashion-growth-challenges-global->



encourages the development and the implementation of waste management systems,¹¹³ which directly impact the fast fashion industry's reliance on resource-intensive processes harming human health and the environment.

Additionally, in 2022, discussions began to require additional regulatory compliance through the Circular Economy Promotion Law of 2018 that aims hold fast fashion brands “accountable for their products’ entire lifecycle.”¹¹⁴ Through the implementation of the country’s adoption of Extended Producer Responsibility (EPR), there was a focus in Chinese manufacturing on “packaging and electronic equipment products.”¹¹⁵ EPR refers to an “environmental policy approach aimed at compelling producers to expand their responsibility for their products into the post-consumer phase of the product life cycle.”¹¹⁶ The primary goal being, creating economic advantages to incentivize producers and manufacturers to “ensure their products are designed in line with recycling principles.”¹¹⁷ However, “there is currently no EPR- related document in China for the textile sector.”¹¹⁸ As of April 2022, the Chinese government aims to increase its rate of recycling textile waste to thirty percent by 2030.¹¹⁹

b. United States’ Fashion Climate and Environmental Regulations

According to Nate Herman, the senior vice president of policy at the American Apparel and Footwear Association, “at the federal level, there has not been a lot of action” regarding

impact/#:~:text=The%20Chinese%20government%20actively%20promotes,the%20use%20of%20sustainable%20materials.

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *EU-China Benchmark Baseline Study*, SWITCHASIA, <https://switch-asia.eu/site/assets/files/4273/modifiedeu-china-benchmarking-guide-transition-to-circular-economy-in-textile-apparel-industry-13102024.pdf> at 12 (last visited Apr. 14, 2025).

¹¹⁶ *Id.* at 11.

¹¹⁷ *Id.* at 12.

¹¹⁸ *Id.*

¹¹⁹ Chermaine Lee, *supra* note 69.



textile legislation impacting the fast fashion industry.¹²⁰ Therefore, some states have initiated legislative action to regulate the industry.¹²¹ In September 2024, the Responsible Textile Recovery Act of California was signed into law.¹²² The purpose of this Act is to hold brands “responsible for the entire lifecycle of their products, including post-consumer waste.”¹²³

However, more recently in 2025, Congress has introduced the Voluntary Sustainable Apparel Labeling Act.¹²⁴ This Act aims to provide more consumer transparency on clothing apparel products’ impact on climate change through the oversight of the United States Environmental Protection Agency (“EPA”).¹²⁵ Specifically, the voluntary labeling program will enable manufactures to “display labels that summarize the greenhouse gas emissions associated with their products.”¹²⁶ The Act will also empower the EPA to verify the labels to provide accessible information to the greenhouse gas footprint data of the product.¹²⁷ As of July 2024, this Act remains in the House Committee on Energy and Commerce.¹²⁸

With the EPA currently under an “unprecedented” attack by the current Trump Administration,¹²⁹ the United States’ implementation of climate change regulations, specifically within the fast fashion industry is increasingly threatened.¹³⁰ With a plethora of extensive budget

¹²⁰ Siera Nezaaj, *US State Legislatures Take Aim at Fashion’s Sustainability and Safety Concerns*, FASHION DIVE, (Feb. 10, 2025) <https://www.fashiondive.com/news/US-state-legislatures-fashion-sustainability-safety/738813/>.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *New Legislation Introduced: The Voluntary Sustainable Apparel Labeling Act*, THE SUSTAINABLE FASHION FORUM, (Jul. 12, 2025) <https://www.thesustainablefashionforum.com/pages/new-legislation-introduced-the-voluntary-sustainable-apparel-labeling-act>.

¹²⁵ *Id.*

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *H.R. 8979 – Voluntary Sustainable Apparel Act*, CONGRESS.GOV, <https://www.congress.gov/bill/118th-congress/house-bill/8978/text> (last visited Apr. 30, 2025).

¹²⁹ Dana Drugmand, *EPA Under Trump Besieged by Mass Terminations, Axed Programs, Funding Cuts*, SIERRA CLUB, (Feb. 27, 2025) <https://www.sierraclub.org/sierra/epa-under-trump-besieged-mass-terminations-axed-programs-funding-cuts>.

¹³⁰ *Id.*



cuts and deregulatory executive orders, national efforts to mitigate fast fashion’s environmental harm is weakened.¹³¹ Signaling a lack of commitment to participate in global climate agreements and multilateral efforts, the United States undermines the effectiveness of collaboration to regulate the fast fashion industry that operates across borders.

c. International Climate Agreements and Multilateral Efforts

In the battle against climate change, international climate agreements and global multilateral efforts play a key role in mitigating climate change’s disastrous impacts.¹³² For the first time in 2016, a legally binding international treaty on climate change was adopted, bringing countries together to fight against climate change.¹³³ The overarching goal of the Paris Climate Agreement is to “increase in the global average temperature to well below two degrees Celsius above pre-industrial levels and pursue efforts to limit the temperature increase to one and a half degrees Celsius above pre-industrial levels.”¹³⁴

The Paris Climate Agreement requires binding commitments from the Parties to the Agreement to “maintain a nationally determined contributions (NDCs) and to pursue domestic measures to achieve them.”¹³⁵ NDCs refer to national climate action plans countries will pledge to take to reduce their greenhouse gas emissions to comply with the goals of the Paris Climate Agreement.¹³⁶ In addition, NDC actions regarding mitigation and adaptation strategies to “build

¹³¹ *Id.*

¹³² See *supra* Section III (discussing the fast fashion industry’s impact on climate change through the analysis of the effects on carbon emissions, water, and waste).

¹³³ *The Paris Agreement*, UNITED NATIONS CLIMATE CHANGE, <https://unfccc.int/process-and-meetings/the-paris-agreement> (last visited May 1, 2025).

¹³⁴ *Id.*

¹³⁵ *Key Aspects of the Paris Agreement*, UNITED NATIONS CLIMATE CHANGE, <https://unfccc.int/most-requested/key-aspects-of-the-paris-agreement> (last visited May 1, 2025).

¹³⁶ *The Paris Agreement*, *supra* note 133.



resilience to adapt to the impacts of climate change” are to be communicated between the nations.¹³⁷

On Earth Day 2016, the United States and China, the world’s two largest polluters, formally signed the Paris Climate Agreement.¹³⁸ In November 2019, during President Trump’s first administration, the United States began the process to withdrawal from the Paris Agreement due to its “unfair economic burden imposed on American workers, businesses, and taxpayers by U.S. pledges made under the Agreement.”¹³⁹ Yet, in January 2021, new presidential elect Joe Biden announced the United States’ return to the Paris Climate Agreement to “restore U.S. leadership in combating global warming.”¹⁴⁰ With a goal to achieve net-zero emissions by 2050, scientists have expressed satisfaction of reentry due to the need for “steep and swift global cuts” to “avoid the most devastating impacts of global warming.”¹⁴¹ Former U.N. climate chief Christiana Figueres stated, “Biden can regain U.S. creditability by doing the domestic homework of an ambitious climate action at home.”¹⁴²

Additionally in 2021, China reaffirmed its commitment to the Paris Climate Agreement through a new NDC plan of action.¹⁴³ This plan aims to achieve carbon neutrality before 2060 and dramatically increase the country’s capacity of wind and solar power.¹⁴⁴ However, again in

¹³⁷ *Id.*

¹³⁸ Cassandra Marketos, *Here’s Why the U.S. and China Are Signing the Historic Paris Agreement on Earth Day*, THE WHITE HOUSE, (Mar. 31, 2016) <https://obamawhitehouse.archives.gov/blog/2016/03/31/heres-why-us-and-china-are-signing-historic-paris-agreement-earth-day>.

¹³⁹ Michael R. Pompeo, *On the U.S. Withdrawal from the Paris Agreement*, U.S. DEPARTMENT OF STATE, (Nov. 4, 2019) <https://2017-2021.state.gov/on-the-u-s-withdrawal-from-the-paris-agreement/>.

¹⁴⁰ Valerie Volcovici & Trevor Hunnicutt, *Biden Set to Rejoin Paris Climate Accord, Impose Curbs on U.S. Oil Industry*, REUTERS, (Jan. 20, 2021) <https://www.reuters.com/business/energy/biden-set-rejoin-paris-climate-accord-impose-curbs-us-oil-industry-2021-01-20/>.

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Statement: China Releases New Climate Commitment Ahead of COP26*, WORLD RESOURCES INSTITUTE, (Oct. 28, 2021) [https://www.wri.org/news/statement-china-releases-new-climate-commitment-ahead-cop26#:~:text=WASHINGTON%20\(October%2028%2C%202021\),place%20measures%20to%20reach%20them](https://www.wri.org/news/statement-china-releases-new-climate-commitment-ahead-cop26#:~:text=WASHINGTON%20(October%2028%2C%202021),place%20measures%20to%20reach%20them).

¹⁴⁴ *Id.*



2025, President Trump withdrew the United States from the Paris Climate Agreement for a second time.¹⁴⁵ Laurence Tubiana, CEO of the European Climate Foundation, emphasized that while the U.S. pulling out of the Agreement is unfortunate, “international climate action has proven resilient and stronger than any single country’s politics and policies.”¹⁴⁶ However, according to the Chicago Council on Global Affairs, a public opinion survey revealed that sixty- nine percent of Americans are in favor of the U.S.’s commitment to the Paris Climate Agreement.¹⁴⁷

While the Paris Climate Agreement does not explicitly mention the fast fashion industry, its central aim—to strengthen the global response to climate change through mitigation and adaptation efforts—directly relates to the environmental harms driven by the fast fashion industry. Launched in 2019, the United Nations Alliance for Sustainable Fashion works through “coordinated action” in the fashion industry to ensure UN bodies and allied countries work and promote sustainable goals.¹⁴⁸ Specifically, the Alliance commits to reduce “negative environmental and social impacts” such as decreasing water pollution and greenhouse gas emissions.¹⁴⁹ Through the adoption of a UN regulatory body specifically targeting the fast fashion industry, it is a step in the right to direction to a solution.

V. SOLUTIONS

a. Binding International Agreements Requiring Transparency

¹⁴⁵ Nate Perez & Rachel Waldholz, *Trump is Withdrawing from the Paris Agreement (again), Reversing U.S. Climate Policy*, NPR, (Jan. 21, 2025) <https://www.npr.org/2025/01/21/nx-s1-5266207/trump-paris-agreement-biden-climate-change>.

¹⁴⁶ *Id.*

¹⁴⁷ Lama El Baz, *Despite Trump Withdrawal, Americans Back Paris Climate Agreement*, CHICAGO COUNCIL ON GLOBAL AFFAIRS, (Jan. 28, 2025) <https://globalaffairs.org/research/public-opinion-survey/despite-trump-withdrawal-americans-back-paris-climate-agreement>.

¹⁴⁸ *What is the UN Alliance for Sustainable Fashion?*, UN ALLIANCE FOR SUSTAINABLE FASHION, <https://unfashionalliance.org/> (last visited May 5, 2025).

¹⁴⁹ *Id.*



Global and collaborative approaches to regulate the fast fashion industry are needed. Such as, international binding agreements that specifically address the fast fashion industry.¹⁵⁰ Such an agreement, for example, could require full transparency to hold fast fashion brands accountable and keep consumers informed how their products are sourced.¹⁵¹ Additionally, “transparency in the process allows for the opportunity for creative problem solving and collaboration where compliance is exposed to be unachievable for some logistical reason.”¹⁵² The recommended international binding agreement addressing the fast fashion industry should provide enforcement mechanisms in the form of fines “that will offset the environmental impact of non-compliance.”¹⁵³ Through international enforcement mechanisms throughout the global fast fashion supply chain that explicitly regulate the industries, nations can come together to combat the disastrous effects.¹⁵⁴

b. Universal Textile Disposal Standards and Economic Incentives

Along with an international agreement requiring transparency and containing enforcement mechanisms, universal textile disposal standards should additionally be put in place. For example, sustainable organizations such as the Global Organic Textile Standard (GOTS) have enacted a common standard, meaning, “textile processors and manufacturers can export their fabrics and garments with one organic certification that is accepted in all major markets.”¹⁵⁵ Thus, further increasing transparency between consumers to choose from sustainable products –

¹⁵⁰ See *supra* Section IV(c) (discussing the goals of the Paris Climate Agreement and how the Agreement fails to explicitly address the fast fashion industry).

¹⁵¹ Elizabeth Jane Poland, *Fashioning Compliance: The Fashion Charter for Climate Action and Strategies for Forming a More Effective Fashion Industry Agreement*, 49, GA. J. INT’L & COMP.L. 409, 437-438, (2021).

¹⁵² *Id.* at 437.

¹⁵³ *Id.*

¹⁵⁴ *Id.* at 438.

¹⁵⁵ *The Standard*, GLOBAL ORGANIC TEXTILE STANDARD, <https://global-standard.org/the-standard> (last visited May 5, 2025).



to hopefully stray away from the fast fashion industry.¹⁵⁶ If textile companies were to certify their goods, it will better ensure compliance with “each of the 17 UN Sustainable Development Goals.”¹⁵⁷ To comply with a proposed universal textile disposal standard, it is additionally recommended that government and fashion industry leaders economically incentivize participation in sustainable practices through the supply chain process to reduce the amount of textile waste.¹⁵⁸ For example, a tax break if a company effectively recycles a certain percentage of textile waste.

c. Economic Penalties to Fast Fashion Brands

A proposal to slow down the rapid growth and expansion of fast fashion brands, specifically Chinese powerhouse Shein, is implementation of economic penalties that may incentivize more sustainable shopping.¹⁵⁹ For example, in 2024, French lawmakers proposed a bill subjecting Shein to penalties “of up to 50% of their garments’ selling price to offset their environmental impacts.”¹⁶⁰ Additionally, France plans to ban fast fashion companies such as Shein completely, to make fast fashion more expensive to consumers.¹⁶¹ Bans and economic penalties, if globally placed, will deter fast fashion brands to continue to engage in unsustainable practices throughout their business models.¹⁶² Penalizing fast fashion brands will force the industry leaders to comply with more climate change friendly practices.

VI. CONCLUSION

¹⁵⁶ *Philosophy*, GLOBAL ORGANIC TEXTILE STANDARD, <https://global-standard.org/the-standard> (last visited May 5, 2025).

¹⁵⁷ *Id.*

¹⁵⁸ Elizabeth Jane Poland, *supra* note 151 at 433.

¹⁵⁹ *France Mulls Penalties to Rein in Ultra-Fast Fashion Brands*, REUTERS, (Mar. 4, 2024) <https://www.reuters.com/business/retail-consumer/france-mulls-penalties-rein-ultra-fast-fashion-brands-2024-03-04/>.

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*



While studies have shown that the fast fashion industry is expected to “boom” globally,¹⁶³ President Trump’s recently proposed tariffs on Chinese imported products could “shift the U.S.’s love of fast fashion” through decreasing the demand of fast fashion products.¹⁶⁴ Among concern of consumers is that Shein’s prices may face a “steep hike price” and may potentially force fashion consumers to seek alternatives when shopping.¹⁶⁵ However, if the American demand for fast fashion products from China, the manufacturing giant, does not lessen - the climate is in extreme danger.¹⁶⁶ From the negative impacts such as the rise of carbon emissions, increase pollution and overconsumption of water sources, and the generation of mass amounts of global waste – the fast fashion industry needs collaborative regulation on a global scale.¹⁶⁷

While the fast fashion industry is not explicitly discussed and regulated under the Paris Climate Agreement,¹⁶⁸ there is a collaborative effort to protect the planet. However, as of 2025, the over consumer nation of America has withdrawn from the agreement.¹⁶⁹ Without coordinated international policies, such as binding international agreements requiring transparency, universal textile disposal standards with economic incentives, and economic penalties for fast fashion brands,¹⁷⁰ the fast fashion industry will continue to exacerbate the climate crisis. The environmental harm caused by fast fashion is not constrained by national borders – it is a global issue that requires global solutions.

¹⁶³ *Fast Fashion Industry Prospective*, *supra* note 1.

¹⁶⁴ Rosalind Adams, *Price Hike on Shein? How Trump tariffs Could Shift the US’s Love of Fast Fashion*, THE GUARDIAN, (Apr. 13, 2025) <https://www.theguardian.com/us-news/2025/apr/13/trump-tariffs-fast-fashion-prices>.

¹⁶⁵ *Id.*

¹⁶⁶ See *supra* Section II.

¹⁶⁷ See *supra* Section III.

¹⁶⁸ See *supra* Section IV(c).

¹⁶⁹ *Id.*

¹⁷⁰ See *supra* Section V.

