



**REDRESS**  
DESIGN AWARD  
**ADDITIONAL RESOURCES**

Below are resources that demonstrate some of the fashion industry's pressing issues in terms of environmental impact, consumption, production and waste which continue to be devastating, with the industry being one of the most polluting industries in the world. These have been compiled by Redress to aid in dissemination of key supporting information from external resources.

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The areas covered below are:

- Consumer and industry textile and clothing waste
- Scale of fashion and textile production
- Environmental impacts of fashion and textiles
- Fashion consumption
- Benefits of clothing and textile reuse
- Potential for designers, consumers and companies to drive change

## **CONSUMER AND INDUSTRY TEXTILE AND CLOTHING WASTE**

- Every second, the equivalent of one garbage truck of textiles is landfilled or burned globally.  
Source: Ellen Macarthur Foundation (2017), A New Textiles Economy: Redesigning Fashion's Future
- An estimated 92 million tons of textile waste is created annually from the fashion industry.  
Source: Global Fashion Agenda and The Boston Consulting Group, Inc. (2017), Pulse of the Fashion Industry
- Consumers are becoming increasingly aware of the environmental impact of the traditional linear apparel production modes, and the public outcry concerning overstock liquidation is becoming louder. Some 78% of respondents stated that sustainability is also somewhat or highly likely to be a key purchasing factor for mass-market apparel consumers by 2025.  
Source: McKinsey & Company (2018), 'Is apparel manufacturing coming home?'
- Textile waste is estimated to increase by about 60% between 2015 and 2030, with an additional new 57 million tons of waste being generated annually, reaching an annual total of 148 million tons which is equivalent to annual waste of 175kg per capita across the planet.  
Source: Global Fashion Agenda and The Boston Consulting Group, Inc. (2017), Pulse of the Fashion Industry
- Approximately 15% of textiles intended for clothing ends up on the cutting room floor.  
Source: Timo Rissanen (2005), 'From 15% to 0: Investigating the creation of fashion without the creation of fabric waste'
- After use, less than 1% of material used to produce clothing is recycled into new clothing. This take-make-dispose model not only leads to an economic value loss of over US\$500 billion per year, but also has numerous negative environmental and societal impacts.  
Source: Business of Fashion (2017), The State of Fashion 2018
- In China the total annual production of pre and post-consumer textile waste is estimated to be around 20 million tonnes, and the textile waste recycle rate is less than 10%.  
Source: CBG (2016), 中国废旧纺织品回收利用情况分析; 中国工程院发布的《废旧化纤纺织品资源再生循环技术发展战略研究报告》
- In Hong Kong, approximately 125,195 tonnes of textiles were sent into landfills in 2016, which is an average of 343 tonnes per day.  
Source: Hong Kong SAR, Hong Kong Environmental Protection Department (2018) Monitoring of Solid Waste in Hong Kong - Waste Statistics for 2016
- Each year, around half a million tonnes of plastic microfibrils, which is equivalent to more than 50 billion plastic bottles, are estimated to be released into the ocean as a result of washing textiles.  
Source: Ellen Macarthur Foundation (2017), A New Textiles Economy: Redesigning Fashion's Future



## SCALE OF FASHION AND TEXTILE PRODUCTION

- The number of garments produced annually has doubled since 2000 and exceeded 100 billion for the first time in 2014, representing nearly 14 items of clothing for every person on earth.  
Source: McKinsey & Company (2016), *Style that's sustainable: A new fast-fashion formula*
- In 2017, China's clothings and accessories exports had a value of USD\$158.8 billion.  
Source: China National Garment Association (2018), 《2017-2018 中国服装行业发展报告》( 缩减版·上)
- The global textile industry's fibre production volume in 2017 increased to approximately 103 million tonnes, from 86 million tonnes in 2011. Manmade fibers now occupy 69% of the global market.  
Source: The Fiber Year Consulting (2012), *The Fiber Year 2012*; The Fiber Year Consulting (2018), *The Fiber Year 2018 World Survey on Textiles & Nonwovens*

## ENVIRONMENTAL IMPACTS OF FASHION AND TEXTILES

- Fashion is widely cited as being one of the most polluting industries.

### Air

- The global apparel and footwear industries account for an estimated 8% of the world's greenhouse gas emissions. That is nearly 4 metric gigatons CO<sub>2</sub> equivalent almost as much as the total climate impact of the European Union.  
Source: Quantis (2018), *Measure Fashion – Insights from the Environmental Impact of the Global and Apparel and Footwear Industries study*

### Water

- The volume of freshwater consumed by the fashion industry is 79 billion cubic meters annually, enough to fill nearly 32 million Olympic-size swimming pools. This figure is predicted to increase by 50% in 2030. The top 3 areas of water use in the fashion industry are: production of raw materials (most significant), textile processing, consumers washing of clothes.  
Source: Global Fashion Agenda and The Boston Consulting Group, Inc. (2017), *Pulse of the Fashion Industry*
- 20% of freshwater pollution comes from textile treatment and dyeing.  
Source: Raybin, A (2009), *Water pollution and textiles industry* as cited in *The Sustainable Academy (SFA)* and *The Global Leadership Award in Sustainable Apparel (GLASA)* (2015), *The State of the Apparel Sector – 2015 Special Report: Water*

### Land

- The cultivation of cotton covers 3% of the Earth's agricultural land, but its production consumes 16% of all insecticides and 7% of all herbicides. It is predicted that by 2030, the fashion industry will use 35% more land for cotton, forest for cellulosic fibers, and grassland for livestock - over 115 million hectares altogether.  
Source: Global Fashion Agenda and The Boston Consulting Group, Inc. (2017), *Pulse of the Fashion Industry*

## FASHION CONSUMPTION

- Greater China is expected to overtake the US as the largest fashion market in the world in 2019, according to McKinsey FashionScope.  
Source: *Business of Fashion* (2018), *The State of Fashion 2019*
- India's apparel market will be worth \$59.3 billion in 2022, making it the sixth-largest in the world, and comparable to the UK (\$65 billion) and Germany (\$63.1 billion), according to data from McKinsey's FashionScope.  
Source: *Business of Fashion* (2018), *The State of Fashion 2019*
- The total retail sales of consumer goods in China reached US\$5475.6 billion in 2017.  
Source: National Bureau of Statistics of China (2018), *中华人民共和国 2017 年国民经济和社会发展统计公报*
- The average consumer now buys 60% more clothing items a year and keeps them for about half as long as 15 years ago.  
Source: McKinsey & Company (2016), *Style that's sustainable: A new fast-fashion formula*

## BENEFITS OF CLOTHING AND TEXTILE REUSE

- Exchanging one metric ton of virgin polyester for recycled polyester can save 80% in toxins, around 60% in



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energy consumption, and up to 40% of CO2 emissions.

Source: Textile Exchange (2017). Preferred Fiber Materials Market Report 2017.

- Extending the active life of 50% of UK clothing by 9 months would decrease the UK's carbon footprint by 8%, water footprint by 10% and waste footprint by 4%, per tonne of clothing.  
Source: WRAP (2017), Valuing Our Clothes: the cost of UK fashion.
- It is anticipated that today's 20% clothing collection rate could be tripled by 2030—worldwide. With a 60% collection rate, and the same allocation to end-of-use processing as today, the industry could save more than €4 billion in value to the world economy.  
Source: Global Fashion Agenda and The Boston Consulting Group, Inc. (2017), Pulse of the Fashion Industry

### POTENTIAL FOR DESIGNERS, CONSUMERS AND COMPANIES TO DRIVE CHANGE

- Around 80% of a product's environmental impact is locked in at the design stage.  
Source: WRAP (n.d.), WRAP and the circular economy
- There is a potential to create US\$185.6 billion every year for the world economy through more efficient use of scarce resources in the fashion industry by making progress on a range of issues up and down the value chain.  
Source: Global Fashion Agenda and The Boston Consulting Group, Inc. (2017), Pulse of the Fashion Industry
- Between 2012 and 2016 CO2 emissions were reduced by 3% through having people wash their clothes at lower temperatures, and ironing and tumble drying less frequently, representing a 700,000 tonne reduction.  
Source: WRAP (2017), Valuing Our Clothes: The Cost of UK Fashion Consumer awareness and demand on the topics of sustainability is on the rise.
- In emerging markets, more than 65% of consumers have been found to actively seek out sustainable fashion.  
Source: Cotton Lifestyle Monitor (n.d.) as cited in Business of Fashion (2016), The State of Fashion 2017
- Millennial consumers are more likely than non-millennial consumers to attempt to buy products from companies who support the causes they care about (52% versus 45%).  
Source: Barkley (2011), American Millennials: Deciphering the Enigma Generation, p.78, cited in Forbes.
- By realising the benefits of leading by sustainability, companies have the chance to grow their profitability by 1-2%.  
Source: Global Fashion Agenda and The Boston Consulting Group, Inc. (2018), Pulse of the Fashion Industry