GREENWASHING IN THE FASHION INDUSTRY

Executive Summary

The fast-fashion industry with its linear business model and consumers' throw-away culture is inherently unsustainable. Numerous adverse environmental and social impacts can be attributed to clothing production. These include immense greenhouse gas emissions, the pollution of rivers and streams, high pressure on land use and water consumption, waste dumping and terrible working conditions for farmers and industry workers.

As Western Europe is the third-largest region for textile consumption globally (22 kg per person), the EU shares a significant responsibility for enabling the transition to a truly sustainable textile industry (Shirvanimoghaddam *et al.*, 2020). However, responsibility must further be taken by the actors who caused this issue in the first place, namely fashion companies. In fact, fashion brands have started to talk more about sustainability, but unfortunately mainly for Public Relation (PR) purposes. They are advertising, for example, their use of organically grown cotton and their sale of recycled garments. However, many of these green claims are often misleading or simply false, which is also referred to as "greenwashing".

Young people, as European citizens and consumers, are active contributors to the fashion industry's negative environmental and social issues through their purchase decisions. At the same time, the negative environmental externalities of textile production will impact young generations over their entire life. Educating European consumers to understand misleading "green" claims made by industry actors, and the environmental and social issues intertwined with the fashion industry is crucial. Indeed, younger consumers are more receptive to such claims: "71% want brands to be environmentally friendly and ethical, and 61% want them to connect with a cause or social issue" (Keeble, 2013, p. 37). The aim of this paper is to raise awareness and empower consumers in their purchase decisions, by shedding light on the adverse impacts caused by the fashion industry and providing examples of empty green claims.

Furthermore, GCE's goal is to advocate for more stringent policies and regulations at the European level to hold brands accountable on their claims and communications campaigns. No business should be able to market itself, or its products, as "ethical", "sustainable" or "green" without being able to substantiate such claims, and sustainability strategies should always be verifiable and supported by evidence.

The need to develop binding guidelines and policies is emphasised by a study from the Changing Markets Foundation which found that greenwashing in the fashion industry is ripe: the majority of green claims (59%) were not in line with the guidance on green claims by the UK's Competition Markets Authority (2021). The upcoming "EU Strategy for Sustainable Textiles" should address this key issue by providing requirements with regard to sustainability claims and transparency in the supply chains, with a view to providing young consumers with the right information to be able to make informed purchase decisions. In the long term, this will also incentivise brands to take real and effective measures in order to tackle their company's environmental and social impacts.

Circularity in the fashion industry

Main problems caused by the linear business model of the fashion industry:
- Fast fashion relies on continuous consumption of low quality garments
  - In 2014 consumers purchased on average 60% more garments than in 2000 and kept them for only half as long (Remy, *et al.*, 2016; Cobbing & Vicaire, 2016).
- Fast fashion generates an enormous amount of waste. The equivalent of one garbage truck of textiles is estimated to be landfilled or burned every second (Ellen MacArthur Foundation, 2021).
- Collection rates for textile waste are very low. Only around 15-20% is collected in Europe. The remaining 80-85% are brought to landfills or incinerated (Sandin & Peters, 2018).

Popular claims in the fashion industry:
- Brands claim to be sustainable but only include a small percentage of recycled materials in collections and advertise that as "green", or "circular" without being transparent or addressing the entire life-cycle of their products.
- Brands focus on down-cycled materials (PET bottle, fishing nets, etc.) instead of implementing fibre-to-fibre recycling.
- Clothing companies promote in-store take-back programs which actually incentivises guilt free consumption but does not propose a viable solution.

Generation Climate Europe's Recommendations

- Maximise product durability through design requirements, inform consumers, develop warranty schemes to encourage quality purchases over cheap garments.
- Promote repairability: including spare parts are resources to empower consumers, include warranty information and support tailoring and repair businesses through policymaking.
- Facilitate textile reuse: promote take back programs that put clothing back into sales and connect second-hand buyers to sellers.
- Limit resource use: use deadstock fabric rolls, make secondary fibres financially interesting and limit the use of blended fibres.
- Set quality standards and requirements for circularity claims: circular branding is only accurate when taking into account all aspects of circularity and verifiable.
- Encourage a more sustainable mindset among European consumers: through educational material and transparency (via a digital passport).

Climate Impact of the fashion Industry

Main climate-related issues of the fast-fashion industry:
- The fashion industry is highly carbon intensive
  - Its climate impact occurs throughout the entire textile life cycle, from production to the use phase and transport.
- The rapid increase of cheap synthetic fibres since the 1990s in textile production has rendered the fashion industry deeply dependent on fossil fuels.
- Globalisation of the textile supply chain
  - Garments travel during each step of their production process. Europe is especially dependent on textile imports to fulfil consumer demands.

Popular claims in the fashion industry:
- Brands claim to adopt low carbon strategies. However, these usually do not include upstream operations (production and manufacture) which are highly energy intensive.
- Climate neutrality claims are used by brands to demonstrate their commitment to changing their business models. Instead of engaging in actual change, these companies often buy compensation certification to make up for their industry-related emissions.

Generation Climate Europe's Recommendations

- Verifiability and Monitoring: Climate claims should include all greenhouse gas emissions to be considered accurate. Climate targets should be regularly evaluated and updated.
- Enhance transparency in the supply chain: Clothing companies should disclose information about their production facilities, the materials' origin, as well as about the climate impact of each production step, also including sub-contractors.

Environmental impact of natural resource consumption in the textile industry

Main issues stemming from material and chemical use:
- The fast fashion industry has become inherently reliant on the cheap production of synthetic ("plastic") fibres which already make up about 69% of textile production (Changing Markets Foundation, 2021).
- The production of textiles is excessively exploiting resources for the sourcing of fibres and thereby strongly reliant on non-renewable resources and harmful substances which comprise large amounts of pesticides (for natural fibre production) and chemicals (e.g., for dyeing).
- Adverse environmental impacts include pollution of rivers and streams, degradation of soil, resource depletion, drying up of water resources, micro-plastics pollution, global warming and the dumping of huge piles of waste.

Popular claims in the fashion industry:
- Brands claim that synthetic fibres are more sustainable than natural fibres.
- Clothing companies falsely advertise washing bags as a solution to micro-plastics pollution.
- Recycling PET bottles into textiles is promoted as environmentally friendly and sustainable, even though it is material downcycling.

Generation Climate Europe's Recommendations

- Define and set standards for claims about material use: e.g. establish certain thresholds for a product to be advertised as sustainable.
- Promote independent and trustworthy labels to certify material use.
- Disclosure of information about chemical use: implement a Digital Product Passport.
- Restrict chemical use: Implement a more comprehensive and extensive restricted substances list (RSL).

Introduction

Textiles are a part of our daily life, covering a wide range of applications from household items (bedding, curtains) to technical items (car seats) and clothing. Clothes, which will be the focus of this paper, have become an important means to express individuality, especially for young people.

The fashion industry can be counted among the largest globalized markets, with the EU being one of the biggest markets for clothing and the host of many international fashion brands. With the rise of so-called 'fast fashion' – which relies on mass production, low prices and ever-changing trends – the fashion industry is projected to intensify its yearly production from 62 million tons in 2015 to 102 million tonnes by 2030 (Kerr & Landry, 2017, p.8). In the EU, the amount of clothes bought per household has increased by 40% between 1996 and 2012 (European Environment Agency, 2014). In this linear business model, clothes are not regarded by consumers as long-lasting items, but rather as disposable. Thus, they are often thrown away after only 7 or 8 wears (Remy *et al.*, 2016). The steady growth of the fast-fashion industry goes in line with a huge and rising carbon footprint, worrying environmental damages as well as sheer disregard of human rights.

Environmental concerns related to the production of clothing are plentiful: high water consumption and the consequent drying up of water resources; chemical river pollution due to missing wastewater treatment; huge piles of waste taking hundreds of years to degrade; and microplastics pollution of oceans and rivers due to the shedding of fibres. Clothing production emits 1.2 billion tonnes of greenhouse gas emissions annually, which is more than the emissions of maritime shipping and international flights combined (Ellen MacArthur Foundation, 2017). This industry is highly dependent on fossil fuels, as the share of synthetic fibres in global production has already far surpassed natural fibres and is expected to rise up to 73% by 2030 (Changing Markets Foundation, 2021). Furthermore, the extensive waste issue of the fashion industry is still not addressed, as only 1% of clothing finds itself in a closed-loop recycling system while 73% of clothing production is either landfilled or incinerated (Ellen MacArthur Foundation, 2017). In the EU alone, about 16 million tonnes of textile waste are generated every year (Changing Markets Foundation, 2021).

With the increasing level of awareness about climate change, consumers are also becoming more aware of the negative impacts of their clothes, and leading fashion brands have intensified their advertisement of 'sustainability' commitments. A recently published report by the Changing Markets Foundation (2021) has found that most fashion brands are making claims about being sustainable, and that 59% of the products linked to a green claim were not in line with the guidance on green claims by the UK's Competition Markets Authority.

Green claims in the fashion industry cover many aspects of the clothing production process, either linked to climate (neutrality), circularity (recycling), or materials (natural and recycled fibres). In that respect, the European Commission (EC) launched in 2020 an initiative, under the EU Green Deal, on 'substantiating green claims' with the view to tackle the issue of greenwashing. It notably states that 'companies making 'green claims' should substantiate these against a standard methodology to assess their impact on the environment' (European Commission, 2021, p.1).

These issues are especially relevant to young people. In a qualitative study carried out by Generation Climate Europe (2020), young people surveyed expressed their concerns over the environmental and social issues of the fashion industry and called on European decision makers for action. Potential levies mentioned in the results included taxation, regulation over imports, promoting ownership formats based on reuse and sharing, as well as making eco-friendly alternatives more accessible to consumers. Young people, as consumers, are often targeted by sustainability claims of the fashion industry, since they are more sensitive to environmental issues: "71% want brands to be environmentally friendly and ethical, 61% want them to connect with a cause or social issue" (Keeble, 2013, p. 37). Younger generations are also more prone to express ideals and political power through "buycotts", brands call-out campaigns on social media or support to smaller brands through their consumption patterns.

Overall, the transition to a truly circular fashion business model is urgently required and must involve a shift to an increased transparency in the production processes. Young consumers need to be able to get reliable information about the climate and environmental impacts of the clothes they purchase. This will only be possible if fashion brands are held accountable for the marketing or PR information and claims they publish. Indeed, the fashion industry is particularly opaque and unregulated, much so that a coalition of French textile companies released a statement encouraging increased regulation (Le Monde, 2021). Brands have especially taken advantage of globalized value chains to delocalise the environmental and social impacts of clothing production,[1] whilst projecting an image of responsibility and glamour towards consumers. Given the size of the European market, increased regulation regarding the claims communicated to consumers on the environmental and social impacts and practices of brands should be a significant incentive to shift industry practices and promote circular business models.

Disclaimer: The fast-fashion industry is not only responsible for environmental issues, but also for countless human rights violations, including the pay out of hunger wages and extremely poor working conditions. However, as this paper is focused on Greenwashing claims in the fashion industry, we will be focusing on environmental concerns. GCE is aware that the social and economic dimension of sustainability is of equal importance, but due to the scope of the paper, these issues will not be discussed.

Circularity Claims

A. A linear fashion industry

The fashion industry's business model is based on the continuous growth of production and consumption. In 2014, consumers purchased on average 60% more garments than in 2000 (Remy, *et al*., 2016) and kept them for only half as long (Cobbing & Vicaire, 2016). This trend has been encouraged by "fast fashion" retailers relying on the constant turn around of cheap and low-quality products and online brands, often called "ultra-fast fashion sellers", that can get a product from concept to sale in just 2 weeks[2]. The annual consumption of textiles has therefore doubled, from 7 kilos to 13 kilos per person, with Western Europe being the third-largest textile user globally (22 kg per person), after North America (37 kg) and Australia (27 kg) (Shirvanimoghaddam, *et al*., 2020).

Decrease in product quality and high rotation of collections render the industry inherently unsustainable[3]. This is true for two reasons: first, the need to produce low-priced clothing pushes brands towards cheap production practices (low-quality fibres, low labour and environmental constraints, etc.); second, it is at the root of an enormous waste problem, with estimates suggesting, the equivalent of one rubbish truck of textiles are sent to landfill or burned every second (Ellen MacArthur Foundation, 2021).

Disposability is a principle that permeates the industry, exemplified by the destruction of surplus as a way to preserve brand image and exclusivity[4], which is a common practice. Overproduction is mirrored by an increase in textile waste and discarded clothing: 11 kilograms are discarded annually by each European consumer (European Parliament, 2020). Around 15-20% of discarded textiles are collected in Europe, half of which is down-cycled, and the other half is reused as second hand clothing in developing countries (Sandin & Peters, 2018). The remaining 80-85% of European textiles that are not collected, are sent to landfill or incinerated (Sandin & Peters, 2018), both processes that emit greenhouse gases either through combustion or breakdown. Textile recycling processes have yet to reach maturity, with less than 1% of material used to produce clothing recycled into new clothing (Sandin & Peters, 2018). Overall, only 13% of total material input is recycled or rather "downcycled", as garments are destined to lower-value end-applications after being processed (insulation, furniture stuffing) (Sandin & Peters, 2018). The social and environmental impacts of second-hand clothing donations have been the object of recent scrutiny. Indeed, the majority of donations are exported to developing countries, where large inflows of cheap second-hand clothing accounts for more than 30 percent of the total value of imports, and much more than 50 percent in volume of the clothing market (Baden & Barber, 2005). This represents unfair competition for the local clothing sector, motivating restrictions on the import of used clothing, like the ban on used clothing imports by 2019 proposed by member states of the economic grouping of the East African Community in 2016 (Kelley, 2018).

Considering the attention given to textile recycling in current communication campaigns, a clarification of existing processes appears appropriate. The concept of recycling within the fashion industry can be divided into two different kinds: reuse and recycling. Textile reuse consists of extending their life by passing them on to a new owner. This transfer can be done with or without foregoing adjustments (Sandin & Peters, 2018), through borrowing, renting, swapping, or buying clothes in second-hand shops, online marketplaces, or flea markets. The rise of the internet and online marketing has facilitated the second-hand textile market (Manshoven *et al.*, 2019). Recycling involves consumer textile waste being reprocessed to be used again in new textile products (Sandin & Peters, 2018). This currently results in downcycling as clothes are recycled into lower quality products and eventually end up as waste (Cobbing & Vicaire, 2016).

The global market structure and low regulation that have enabled such detrimental practices is also at the root of serious human rights and social abuse. Environmental scandals are intertwined with social ones, including the use of dangerous chemicals and oil-derived products which endanger the health of workers as well as the environment (Pesticide Action Network UK, 2017). The Covid crisis has provided several examples of worker rights abuse, as thousands of workers lost their pay, and sometimes their jobs, in an industry that already severely underpays its working force[5].

B. Sustainability claims and "circular fashion"

Eco-conscious products represent a significant market opportunity in a variety of sectors, including the fashion industry. Consumers pay more attention to the environmental and social impact of their purchases, with "67% of European consumers considering the use of sustainable materials to be an important purchasing factor and 63% considering a brand's promotion of sustainability in the same manner" (Granskog *et al.*, 2020, p. 2). This is especially true for young consumers, who attribute a larger importance to sustainability factors in their consumption habits. As a result, brands have taken care to weave sustainability claims into their communication campaigns, including circularity claims.

1 **Brands claiming to have become sustainable but only improving a negligible part of their collection.**

These green claims often focus on a product's end-of-life instead of tackling its entire life-cycle – a core principle of a truly circular business model. A variety of actors, from luxury brands to high street brands, have included recycled materials in their collections. However, these collections generally represent a marginal share of the overall business and sales (Changing Markets Foundation, 2021). Such initiatives do nothing to address the sheer level of production and consumption that are at the core of the environmental problems caused by the fashion industry.

2 **Brands only downcycle materials instead of focusing on fibre-to-fibre recycling.**

"Recycled materials" are not created equally when it comes to circularity. Whilst producing clothing items from discarded materials such as plastic bottles or fishing nets is certainly beneficial in comparison to other modes of treatment lower in the waste management

hierarchy (landfilling or energy recovery), they cannot be considered as representative of a truly circular fashion industry. A more sustainable alternative would be fibre-to-fibre recycling, where old discarded clothes are fed back into the fashion industry as new products to be used in similar end-applications.

**3**   **Promotion of take-back programs that incentivise guilt-free consumption.**

Another popular initiative has been the instalment of collection points in stores for take-back programs, where consumers drop off their unwanted clothes in exchange for in-store coupons and price reduction (Ellen MacArthur Foundation, 2017). Such initiatives can have an impact in improving collection rates and preventing improper management, but they also have an important potential for rebound effect. The underlying aim of these take-back schemes is to incentivize consumers to purchase new clothing items guilt-free, while increasing clientele royalty. These programs actually counter the fundamental principle of the circular economy to halt the overconsumption of resources.

C. Recommendations

It is important to clarify how we define circularity, since the term is used by an increasing number of actors. Although it shows increasing brand attention to circularity, it creates confusion to a point where the concept of circularity has been emptied of its meaning. Furthermore, many firms in the fashion industry cannot sufficiently support their claims and are not clear on the specific processes and objectives their circular strategies entail. Broadly speaking, GCE's view of circularity matches the main characteristics listed by the Ellen McArthur Foundation (2020). In a truly circular fashion industry, products should be:

- used more and last longer. Design decisions should give priority to durability, timeless style and repairability;
- designed to be worn again. Products and the materials they are made of should be designed with recyclability and re-use in mind;
- made from recycled or renewable inputs. Resources should be used in the most effective and sustainable way. The use of existing materials should be given priority over virgin resources to limit resource extraction.

In addition to these environmental criteria, GCE also believes that a truly circular fashion industry is one that is in line with workers and human rights. Delocalisation and lax environmental standards are at the root of negative environmental and social impacts, which every company should address. Brands must become transparent about their working conditions; guarantee social dialogue through ongoing relationships and negotiations with worker unions; pay living wages; and provide safe working conditions to their employees.
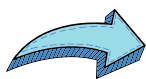
Set quality standards and requirements for circularity claims

Circular branding should only be used in initiatives that take all aspects of circularity into account (as defined before). Circularity claims should be goals that are verifiable and accountable, and therefore applicable to certain criteria. These criteria could comprise a minimum threshold for the content of recycled fibres or durability requirements (i.e. this clothing can be worn and/or washed at least X times).
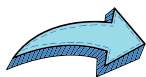
### Maximize product durability with design for circularity

Introducing durability requirements in product design, informing consumers about the proper care to maximize clothing's life, and including information on the expected life duration under intended use are essential. Design for circularity will be key to facilitate the recycling of textiles, for instance by limiting the use of fibre blends. Also, installing warranty over fashion items is a new practice in the industry that also puts forward durable clothes and guarantees a long life span (Ellen MacArthur Foundation, 2017). The EU Sustainable Products Initiative, revising the Ecodesign Directive, should focus on these aspects with the view to increase the overall use of clothing with their end-of-life treatment in mind in order to maximise their uptake. In a "circular" and "slow" fashion system, we believe that featuring durability and quality variables in purchasing decisions help young consumers to make informed decisions and encourage them to buy less items rather than purchasing high volumes of cheap clothing.
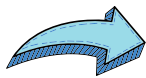
Promote repairability and reuse

With a view to extend textiles' use, the Sustainable Products Initiative should also promote repair, through design with repairability in mind, including spare parts and resources to empower consumers to repair their clothes, such as publishing repair instructions in several languages that are easily accessible (free and easy to find on the brand website for example), include warranty information on purchase and offer in store repairs. This echoes the expectations of European consumers, as underlined by a recent survey[6], in which "57 percent of respondents said they were willing to repair items to prolong usage" (Granskog *et al.*, 2020, p. 2).

It is crucial to support the reduction of discarded clothing and to support initiatives that push for the reselling, repairing, and recycling of clothes. This can, for example, be done through the creation of reselling platforms to engage consumers in greener practices. Patagonia's "Worn Wear Program" is an illustration of a successful and sustainable business practice that actively encourages consumers to reduce their consumption of new garments. EU legislation, such as the strategy for sustainable textiles or the Ecodesign Directive, could set requirements for brands to be transparent in what they do with used clothes that are collected through take-back schemes, returns, and unsold merchandise. Furthermore, new types of ownership, including reuse and long-term ownership, should be encouraged and promoted.
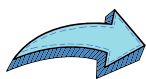
Limit resource-use

The sourcing from fibre-to-fibre recycled materials, through using deadstock fabric rolls and while minimizing waste production along the value chain, shall be promoted. In order to encourage fashion brands to use recycled textile fibres, secondary fibres must be cheaper or at least not considerably more expensive than virgin fibres. This could be incentivised by, for example, exempting recycled fibres from VAT or implementing a resource tax on new fibres. Moreover, the EU Waste Directive is going to legally oblige EU Member States to collect textiles separately by 2025 (European Environment Agency, 2019). This might further incentivise higher recycling rates of textile waste through the provision of an even bigger supply of discarded clothing items.

Encourage a more sustainable mindset among young European consumers

The negative environmental effects of fast fashion (online/social media campaigns, education) and excessive consumption need to be emphasized and widely communicated. The new mindset should focus on the reduction of consumption and a preference to buy from businesses that focus on circularity throughout their entire system. The EU should also ensure that this information is easily available to consumers when they are purchasing textile items. The development of a digital passport would allow for direct access to such information while being adapted to young generations of consumers, which are a key target to promote the transition to a circular textiles industry. Creating a digital product passport is also suggested as a viable means to improve information flows in the Sustainable Products Initiative and should definitely be developed and implemented soon.

Climate Claims

A. The Carbon Impact of the Textile Industry

Textile production is an industry at the source of many environmental and social externalities. The fashion industry is carbon-intensive and is estimated to have emitted about 1.2 billion tons of carbon dioxide equivalent in 2015 (Ellen MacArthur Foundation, 2017). The adverse climate impact of textile and fashion items runs throughout their entire life cycle, as 51% of the total climate impact of textiles occurs during production, 44% in the use phase, and 5% as a result of transport (Beton *et al.*, 2014). Producing one tonne of textiles generates on average between 15 and 35 tonnes of CO2 equivalents depending on the fibre[7], compared to 3.5 tonnes of CO_2 equivalent for plastic and 1 tonne for paper (Hobb & Ballinger, 2015). As a result, it is estimated that each European emitted 1,210 kg of CO_2eq in 2016 due to their apparel consumption (Quantis, 2018).

Before garments have even entered factories, they already carry a significant carbon footprint. Producing natural fibres uses large amounts of agricultural land, water, energy, and chemicals, and often relies on intensive agriculture. The rise of cheap synthetic fibres since the 1990s and their incorporation into textile production has rendered the fashion industry deeply dependent on fossil fuels and big oil corporations. The availability of these cheap plastic fibres was a key enabler for the industry to turn to fast-fashion, as the price for a kg of cotton is double that for polyester (Changing Markets Foundation, 2021).

If the fashion industry follows its current pattern, as much as three quarters of clothing items could be derived directly from fossil fuels by 2030 (Changing Markets Foundation, 2021).

This steep increase is problematic, as synthetic fibres, such as nylon or polyester are resource intensive and derived from oil (Ellen MacArthur Foundation, 2017). Acrylic, followed by polyamide and polyester, are the largest contributing fibres to climate change during their production phase, whilst wool and silk bear the lightest impact (Beton *et al.*, 2014). This reflects the significantly higher impact of synthetic fibres compared to natural ones. For example, it is estimated that substituting polyester with its recyclable counterpart, rPET, would reduce CO_2 equivalent emissions by up to 40% (Textile Exchange, 2018).

Once the production phase is through, textiles continue to emit greenhouse gases when transported from one continent to the other. Textile consumption is highly globalized and garments travel between each step of their production process (production of raw materials, spinning, weaving, dyeing, assembling etc.)[8]. Indeed, a Western European citizen consumes on average about 22 kg of textiles per year (Shirvani Moghaddam *et al.*, 2020), but only 7.4 kilograms were produced within the EU itself. As a result, Europe is highly dependent on textile imports to fulfil consumers' demands. Transportation accounts for 3% of GHG emissions in the apparel industry, with 83% of merchandise transported via maritime freight and 17% via air freight (McKinsey & Company and Global Fashion Agenda, 2020).

The climate impact during the use phase (20% of the total GHG emissions) is linked to the use of detergents, and the washing, drying and ironing cycles, which are estimated to account for 120 million tonnes of CO_2 equivalent (Pakula & Stamminger, 2010). The use phase of apparel is also a source of water pollution, especially garments made of synthetic fibres, which are linked to microplastic pollution.

According to projections by the Ellen MacArthur Foundation (2017), textiles will account for more than a quarter of global CO2 emissions by 2050.

Shifting practices in the fashion industry to reduce carbon emissions are thus key to limiting global warming to well below 1.5°C above pre-industrial levels, in line with the goals of the Paris Agreement on Climate Change (United Nations Framework Convention on Climate Change, 2018).

B. Carbon Claims in the Fashion Industry

Consumer practices are increasingly attentive to fashion brands' climate policies, and they are often the first concern of citizens in regard to environmental issues[9]. Reacting to changing consumer preferences and the resulting growing demand for climate-sensitive products, fashion brands and retailers have adapted their communication to include their alleged climate efforts, though sometimes deceptively.

1 Strategies fall short of the ambition to meet the goals of the Paris Agreement

Current climate strategies have several shortcomings. First, most strategies are not ambitious enough and do not align with the 1.5°C target set by the Paris Agreement. Given the current pace of decarbonization in the fashion industry, the excess emissions of the

industry by 2030 would be twice the maximum amount supported by a 1.5 °C pathway (MacKinsey & Company and Global Fashion Agenda, 2020). A significant proportion of the industry is falling far behind announced trajectories for climate action and has not included environmental and climate performance in their business model and operations (Lehmann *et al.*, 2019).

2 Low Carbon Strategies leave out carbon intensive parts of a brand's value chain

When low carbon strategies have been adopted by brands, they often only account for brand and in-store operations. This means that upstream operations, which are highly energy intensive, are not taken into account, even though emissions resulting from the production of materials, manufacturing and other upstream processes represent more than 70% of greenhouse gas emissions (McKinsey & Company and Global Fashion Agenda, 2020). This is linked to the outsourcing of manufacturing operations, meaning that brands do not own and are not directly responsible for factory practices located in countries with a laxer environmental and social legal framework.

3 **"Climate neutrality" claims**

Several brands have included "climate neutrality" targets in their strategies, and heavily communicate about this goal. However, these targets often fall short compared to the trajectory that is necessary to sufficiently mitigate climate change. Moreover, such vocabulary is confusing for consumers and is disconnected from the concept of carbon neutrality, being only valid on a planetary scale. Carbon neutrality does not apply to a singular organization or product, as it is only valid if all stakeholders simultaneously reduce their emissions to meet the new global carbon budget. Climate neutrality claims convey the impression that a product has no climate impact, which is impossible. Further, such climate claims are often supported by external offsetting schemes or certificates rather than actions to reduce emissions along the value chain (Sophie Benson, 2020).

C. Recommendations

Take all greenhouse gas emissions into account when making climate claims

All climate strategies and claims made should accurately reflect the industry's emissions and thus encompass the entire life cycle of garments. Reliable strategies and claims should always cover Scope 1 (direct emissions on site), Scope 2 (energy, heat and air conditioning fluid purchases), and Scope 3 (covers a product's entire life cycle, from production to end-of-life) emissions, as defined by the Greenhouse Gas Protocol. Strategies should also include sub-suppliers and suppliers, outsourced activities, and manufacturing, as they bear the most significant part of GHG emissions and environmental impacts. This issue should be dealt with in the EU Ecodesign Directive.

Verification and monitoring of progress on brands' climate strategies

Climate strategies should be tools to hold companies accountable for their contribution to climate change. Action plans should be precise and verifiable, with numbered targets tied to specific dates.

Companies should be required by law to report on their progress in regard to their targets, including hard numbers. When companies fall short, they should explain the measure they intend to take to get back on their expected trajectories. Climate strategies should detail concrete actions and their implementation date, as well as the reduction in GHG emissions expected from their adoption. They should also differentiate between measures that allow for direct reduction of a company's GHG emissions, and measures related to offsetting schemes. Claims of progress should always specify the amount of reduction linked to company-wide measures and outsourced offsetting schemes to convey truthful and complete information to European citizens.
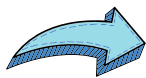
Enhance transparency of supply chains

Transparency is a key issue in the fashion industry. Long supply chains involving many subcontractors in developing countries make it difficult to trace back and document every step of the production process. However, several truly sustainable brands already display the different production steps on their website, including the country of origin of the materials used, the specific manufacturing facilities as well as the place where clothing designs are made. This model should be incentivized with a view to becoming an industry standard. This will support consumers in making informed purchase decisions as well as increase awareness about the long and hidden tail behind e.g. a pair of jeans.

Sustainable brands should also provide detailed information on the environmental and climate impact of their products including the amount of GHG emissions resulting from each step of the supply chain. To make these numbers fully transparent, calculation methods and data used should also be indicated. This information should be transparent, easily available and visible to consumers upon online-purchase or in store (e.g. by providing a QR-code on the label). We believe that a digital product passport could be a solution to provide easy and direct information to consumers, allowing them to make sustainable decisions.

The Commission 2021 work programme includes a legislative proposal for a directive on sustainable corporate governance that would cover human rights and environmental due diligence in companies' own operations and its value chain, which is to be published in the fourth quarter of 2021 (Zamfir, 2020). GCE strongly advocates for a legislatively binding directive on mandatory due diligence that encompasses the above mentioned aspects.

Materials Claims

A. The many environmental impacts of fibres production in clothing

To produce the clothes consumers are purchasing, huge amounts of materials are needed. Indeed, the manufacturing of textiles starts with the production of fibres (natural or synthetic), which amounts to 53 million tonnes annually for clothing alone (Ellen MacArthur Foundation, 2017). The linear business model of the fashion industry relies heavily on harmful or non-renewable resources in the production process. From fertilizers in cotton production, to oil for synthetic fibres and the use of chemicals to dye these fibres, the industry is overexploiting resources and using large quantities of chemicals which contaminate our natural water resources (Ellen MacArthur Foundation, 2017). Environmental impacts of this industry are manifold and ever-increasing: pressure on natural resources, increased use of pesticides and hazardous chemicals, water pollution, microplastics release.

A first key issue stems from an important trend in the fashion industry beginning from the 2000s, which is the shift towards the ever-increasing use of synthetic fibres in clothing, mainly attributable to polyester. In 2017, 37.2 million tonnes of plastics were produced only to be used for synthetic fibres (Boucher & Friot, 2017). This strong dependence on fossil fuel based fibres has made this industry the third-largest consumer of plastics (Ro, 2021). Not surprisingly, synthetic textiles are now identified as the major source of microplastics released in the world's oceans, resulting from shedding during the washing of textiles such as polyester or nylon. However, the leading issue from using synthetic fibres stems from the significant greenhouse gases emitted during the sourcing of crude oil and its consequent conversion into plastics. For instance, around 700 million tonnes of CO_2-equivalents were emitted in 2015, only considering polyester production for textiles alone (Ellen MacArthur Foundation, 2017).

Another major environmental concern linked to fibre production lies in the massive use of chemicals and, as a result, the pollution of nearby waters, as in most cases no proper wastewater treatment is ensured. This issue actually emerges even before the production process, when large amounts of pesticides are used in the cultivation of natural fibres such as cotton, making textiles the fourth-largest consumer of agricultural chemicals (Pesticide Action Network UK, 2017). Stemming from the often direct discharge of large wastewater volumes into the environment, it is estimated that 20% of industrial water pollution is related to the dyeing and treatment of textiles globally (Kant, 2012), illustrated by the changing colour of some rivers in India where many textile factories operate. From a social perspective, it is also important to point out the adverse health impacts of chemical use (i.e., dyes, solvents and fibre dusts) on industry workers involved in clothing production suffering from cough, cold, depression, headaches, sleep disturbances, or skin allergies (Singh, 2015).

Overall, the fashion industry's material consumption poses a significant threat to our environment and the climate. As the increased use of synthetic fibres is alarming, it should not be forgotten that the production of natural fibres (mainly cotton) also causes biodiversity loss, adverse impacts through land-use change and water pollution through excessive pesticide use.

B. Sustainability claims over material choice

For a brand, greenwashing consists of highlighting one good practice or only a small part of its activity while obscuring all others that have negative impacts on the environment, in order to present itself as more sustainable than it really is. In the case of the fashion industry, greenwashing practices regarding materials are aimed at covering up its impacts due to the massive use of synthetic materials made out of plastics, a key source of microplastics release and the use of chemicals in the production process (Wardrobe Change coalition, 2021). Specifically relevant for natural fibres are also large quantities of pesticides used for cultivation.

1 Industry claims over synthetic fibres' sustainability

As the fast fashion industry has turned towards ever shorter production processes, plunging prices, and cheaper and more easily producible fibres, its reliance on synthetic materials has spiked. Cheap plastic fibres, mainly polyester, already account for around 69% of total textile production as compared to 30% in 1975 (Changing Markets Foundation, 2021). As a result, synthetic textiles have now become a symbol of the fast fashion system and its negative environmental impacts.

Admittedly, cotton has its issues with land use change, high water consumption, and pesticide pollution. However, there is simply no evidence suggesting that plastic fibres have less adverse impacts on our environment, as some fashion labels indicate. Carbon footprint analyses show that the footprint of a polyester shirt is approximately 2.5 times higher than the one of a cotton shirt (Ro, 2021). Furthermore, the average lifetime of a polyester shirt in a landfill amounts to approximately 200 years, thereby leaking chemicals, releasing microfibres as well as methane during its decomposition process (Goldsworthy, 2014).

The so-called 'Global Fashion Agenda', a forum for sustainability in fashion, has even encouraged various fashion brands to sign up for an initiative aiming to substitute 30% of their cotton with polyester by 2030 as they claim that synthetic fibres are more sustainable than natural ones (Changing Markets Foundation, 2021).

### 2 Microplastics pollution: a key issue to address

Alarmingly, every year our wardrobes globally shed over half a million tonnes of microfibres into the ocean, which is equivalent to around 50 million plastic bottles (Ellen MacArthur Foundation, 2017).

Fashion companies such as Patagonia promote the use of washing bags in order to stop the release of microplastics in the washing machine. As it is certainly true that Patagonia has taken on a lot of effort in becoming greener, this measure does not offer a viable solution to stop microplastic pollution of our waters and our environment. Without stopping shedding when clothing is worn and when it is discarded, the positive impact of washing bags is non-existent (Ro, 2021). As currently there is no feasible solution that prevents synthetic materials from releasing microplastics, this issue can only be tackled by simply avoiding wearing 'plastic' clothes.

3 Promoting recycled PET in new textiles?

Increasing the uptake of recycled materials in clothing is one viable strategy to decrease textile waste. However, the percentage of clothing that is being recycled is as low as 1% and, more importantly, almost all recycled polyester is produced out of recycled plastic bottles instead of clothing fibres (Ellen MacArthur Foundation, 2017). This trend results in a rising competition for recycled polyethylene terephthalate (PET), which should rather stay in a closed-loop bottle-to-bottle recycling system to achieve optimal material recycling (Changing Markets Foundation, 2021). Furthermore, as garment companies put their main focus on the recycling of PET bottles, they turn away from developing solutions for recycling synthetic textile fibres, i.e. polyester, and thus 73% of discarded clothing goes straight to landfill or for incineration (Ellen MacArthur Foundation, 2017). Another argument against supporting the marketing of the use of recycled plastics fibres is that it does not address the associated issue of microplastics release, which cannot be avoided when using plastic fibres.

C. Recommendations
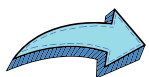
Define and set standards for claims about material use

In order to prevent the unsubstantial use of terms such as "sustainable", "green" or "recycled" certain standards and requirements must be implemented. The term "recycled" shall only be used when a certain threshold of recycled fibres is met. Furthermore, it shall only be used when the recycled material comes from garments, i.e. fibre-to-fibre recycling. In the case of using other secondary materials, e.g. PET bottles, it needs to be indicated where the recycled material comes from. Generally speaking, all claims made should have to be backed by facts and figures supporting the use of terms like "sustainable" or "eco-friendly".

Promote independent and trustworthy labels certifying material use

Claims over sustainable material use should always be backed up by trustworthy and independent labels (e.g. OEKO tex) in order to avoid confusion for consumers due to an excess of labels with different standards, as well as to avoid potentially false claims from examiners commissioned by companies themselves.
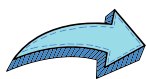
Information and thresholds on chemical use

Information about material composition on clothing labels already exists, but no information about chemicals is provided. Therefore, disclosure of information on chemical use should be required for fashion brands and requirements should be set regarding the maximum permitted levels of chemicals and pesticides used.

These requirements will incentivize brands to prioritize clothes that require less or no chemicals during their production, while gradually opting for chemical-free alternatives such as natural dyes for fabrics. A viable tool for indicating or displaying all necessary information could be the Digital Product Passport (DPP). More regulation on this issue should also be tackled in the Ecodesign Directive.
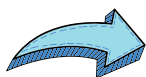
A more comprehensive and extensive restricted substances list (RSL)

Standards on the type and quantity of chemicals used in the production process must be strengthened. This information shall be made publicly available to enhance industry transparency. In this context, it is of utmost importance that the compliance with these standards is ensured also in production and manufacturing processes overseas, as the textile industry is heavily reliant on subcontracting. A manufacturing restricted substance list (MRSL) ensures that the use of specific chemicals is restricted above a certain threshold concentration in the entire manufacturing process (Ellen MacArthur Foundation, 2017).

As a further step, styles with less or no chemicals shall be prioritized through incentive schemes, e.g. tax benefits such as VAT reduction, thereby promoting chemical-free alternatives (such as laser washing for jeans, or natural dyes for fabrics, etc.) to achieve desired looks.

The EU Ecolabel for clothing and textiles acts as a voluntary certification programme which establishes ecological criteria guaranteeing, for example, the limited use of substances harmful to health and environment. However, to implement a truly sustainable EU textile sector these criteria should be legally binding and should therefore be dealt with in the Ecodesign Directive.

Concluding Statement

Ultimately, the misleading green claims of the fashion industry cannot be overlooked, especially in light of their extensive environmental impacts. Action at the EU level is therefore required to ensure that fashion brands are providing accurate and verifiable information to their customers, for them to be able to make informed choices. Supporting regulation on substantiating green claims in the fashion industry will also incentivize brands to shift to a more circular business model, being required to disclose information about the environmental and social impacts of their production processes.

GCE calls on the EU to stand by its commitment as stated in the European Green Deal to address the growing issue of greenwashing in the fashion industry and implement the necessary policies and guidelines that prevent (fast-)fashion brands from disseminating false or deceptive information through green claims about their products, product lines, or brands/companies as a whole.

End Notes

[1] According to the EEA, 85 % of the primary raw materials use, 92 % of the water use, 93 % of the land use, and 76 % of the greenhouse gas emissions linked to textile consumption in the EU take place in other regions of the world.

[2] Compared to an average of 5 weeks for fast fashion brands (Weinswig, 2017).

[3] The average number of collections in European retailers has more than doubled (Remy *et al.*, 2016)

[4] Burberry's 2017/2018 annual report revealed that £28.6 million worth of stock had been incinerated (Burberry, 2018), and high street brands have been accused of similar practices.

[5] According to the August Wage Gap, Indian workers are paid only a third of the amount that is necessary to live in dignity ("Pay Your Workers", 2021).

[6] McKinsey survey conducted in April 2020 across 2,004 German and UK consumers aged over 18 (Granskog *et al.*, 2020).

[7] Producing 1 kg of silk generates on average 14 kg of CO2eq when producing 1 kg of acrylic produces 35.7 kg of CO2eq (Beton *et al.*, 2014).

[8] The globalization and high distances travelled by fashion apparel was addressed inter alia by Pietra Rivoli in her book "The Travels of a T-Shirt in the Global Economy: An Economist Examines the Markets, Power, and Politics of World Trade" where she follows the path of a cotton T-shirt in Target, showing its journey from the US, to China and Kenya.

[9] "Climate change awareness efforts" is ranked as the first trigger for sustainability issues according to the 2019 Pulse of the Fashion Industry report (Lehmann *et al.*, 2019)

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