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# **Green is the New Black: A Dissection of Sustainable Fashion**

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**Abstract**

*The paper explores the multiple facets of the fashion industry and emphasizes the importance of incorporating sustainability at each level. The fashion industry has a clear opportunity to act differently, pursuing profit and growth while also including social and ethical practices in its management priorities. The paper will look at the controversies around greenwashing, foul labour practices and provide an insight into the gloomy world of fast fashion and how it is deteriorating the environment ecologically as well as ethically. To get an idea of behavioural trends and fashion acumen of the masses, a case study has been compiled with a data set of 200 people. Further comparative analysis was drawn between fast fashion and slow fashion to spread awareness and promote conscious-driven shopping. The paper establishes an awareness drive and elucidates the need to shift to an environment-friendly path which can be achieved through thrift shopping, making informed decisions, encouraging charity, workshops by entrepreneurs, designers on how to incorporate sustainability and upcycle old clothes, and how the government can play an active role in spreading awareness about the ill effects of fast fashion and incentivise sustainable homegrown brands. As the process of producing a garment is stepwise, this paper recommends setting up a regulatory body to regulate the activities from harvesting to the point when the cloth reaches the warehouse making sure that pollution, energy loss, foul labour practices are minimised.*

**Keywords:** *Fashion, sustainability, fast fashion*

## **1.0 Introduction**

An ancient proverb articulately goes “we do not inherit the earth from our ancestors, we borrow it from our children”. It is crucial to remind ourselves of this transient nature of our existence on this planet and the responsibility that comes with it. The word ‘sustainable’ means something that lasts long, long enough to maintain a desired ecological balance. Conversely, ‘Fashion’ is associated with the latest, trendy, popular styles. An initial glance at the definitions leads one to the conclusion that the two cannot go linked when it actually is an oxymoron in the true sense. While it may seem to appear as a relatively new subject matter, it all traces back to an advertisement published in the 1990s in the Black Friday edition of The New York Times by Patagonia that said: “DON'T BUY THIS JACKET” which broached the discussion around eco or sustainable fashion. In 1992, ESPERIT became one of the first companies to launch an e-collection. These two companies played a major role in initiating conversation around the need for sustainable fashion. (*Don't Buy This Jacket, Black Friday and the New York Times*, n.d.)

An addition to the popular world of fashion came in the late 20th century when ‘fast fashion’ gathered pace with the fast production model of newly opened Zara stores (Schiro, 1989). However, this did come at a cost, one accruing to the environment and the other being payment of unfair wages to workers and making them work overtime in unhealthy environments. The West should now undertake a larger responsibility to curb it and promote holistic sustainable growth in the fashion industry along with the third world.

To sell their products in a similar design as on the ramp but at lower prices, these brands use cheap and non-eco-friendly material. Therefore, the time frame from stores to wardrobes and the landfills has been reduced, which has given a thrust to the 4% of total waste generated. The paper discusses the ordeals created by this Quick Response Manufacturing (QRM) model and the steps that ought to be taken to curb it.

It is important to educate the consumers on how every choice made by them in the world of fashion is actually a vote. Consumers vote towards a sustainable or unsustainable future with each piece of clothing they buy. It is imperative that every person in this economy from the consumer that buys the clothes to the producer that procures them, to the authorities that regulate the market realise the significance of their role and how even small greener steps taken by them can bring about a profound change.

We will further delve into the forthcoming realm of sustainable fashion and discuss everything from the role of an individual to global institutions. The price paid for fashion is not restricted to the amount a consumer pays for it, it is important to realize that a significant amount of it goes into the fabric that we wear.

## **2.0 What Is Fast Fashion And How It Came Into Being?**

Before the 19th century, the fashion industry had different standards of production and consumption. People sourced their own fabric and wove their own clothes, thus the production and consumption cycle started and ended at home. It was the invention of the sewing machine in 1846 and the Industrial revolution that expedited the manufacturing process making it possible to produce and sell enormous quantities at cheaper prices. Standardized mass production and fabric restrictions gained momentum during World War II, and the middle class was driven to buy the cheap mass-produced clothes, hence fast fashion was born. In the 1960-70s fashion became a form of self-expression allowing people to communicate through clothing regardless of their social and economic background. The giant fashion retailers like H&M, ZARA, and Topshop that control the fast fashion market today started as small shops around Europe and grew exponentially due to the prevailing high demand in the period 1960-2000s. The origin of the term ‘fast fashion’ is traced back to the beginning of the 1990s when ZARA opened in New York and the New York Times coined the term to describe ZARA’s quick manufacturing model which required only 15 days to take the clothes from the ramp to the rack. Thus, the idea of fast fashion is to get the trendiest styles while they are at the height of popularity into the market as quickly as possible, nevertheless, this implicates huge costs and harms, which are described further in this paper. (Idacavage, 2018)

According to Rauturier (2020), “It plays into the idea that outfit repeating is a fashion faux pas and that if you want to stay relevant, you have to sport the latest looks as they happen”.

Some key factors common to all fast fashion brands include:

- Thousands of styles, which touch on all the latest trends;
- Extremely short turnaround time between when a trend or garment is seen on the catwalk, or in celebrity media, and when it hits the shelves;

- Offshore manufacturing where labour is the cheapest, with the use of workers on low wages without adequate rights or safety;
- A limited quantity of a particular garment—this is an idea pioneered by Zara. With new stock arriving in store every few days, shoppers know if they do not buy something they like they'll probably miss their chance; and
- Cheap, low-quality materials, where clothes degrade after just a few wears and get thrown away.

### **3.0 Social Media: A Catalyst For The Fast Fashion Industry**

Fast fashion occupies a major portion of the intersection of social media and the fashion industry since the former has made everything instantaneous. According to BBC (Hope, 2016), McKinsey's research, based on an analysis of 7,000 shoppers, found that three out of four luxury purchases are influenced by what consumers see, do and hear online. Fast fashion reacts to demand, social media creates this demand by providing a space for fashion 'trends'. Social media influencers on Instagram, YouTube, and Pinterest play a major role in this catastrophic glorification. A massively popular YouTube trend is 'clothing hauls' where these influencers (often sponsored by clothing brands themselves) spend an unreasonable amount of money to purchase the latest trends. This promotes mindless consumerism as people ape the behaviour of these influencers to stay in trend, making repeating outfits a fashion faux pas. Pinterest is flooded with the latest trends and has made the transition from browsing to buying smoother by linking the images with shops and stores from where people can buy these, quite literally with a single 'click'.

People do not want to wait six months for a trend anymore, thus the quick response is directly related to the profits of these fast fashion brands. Earlier, the production cycle followed by legacy brands was a 21-month process where they spent months buying and sourcing fabrics and designing the clothes and manufacturing and distributing in bulk, but since the advent of social media, a tremendous amount of information is available at our disposal which has led to the pioneering of a new quick response manufacturing model where fast fashion brands can complete this process in less than 4 months by making only what was popular using cheap fabrics and outsourcing labour to the less developed countries. Fast fashion started because people wanted to experience the feeling of luxury without paying for it.

The 2019 tussle between Fashion Nova (a fast fashion brand) and Kim Kardashian shows how ‘quick’ this manufacturing model is when a Mugler dress worn by her hit the retail store’s website in less than 24 hours for pre-order. Lee Lucas, principal, and CEO of the Fashion Retail Academy, one of the UK’s leading fashion schools, explains: “Fashion inspiration was once the domain of glossy magazines and photoshoots, but now more and more people are making money by styling themselves and sharing pictures on social media” (Skeldon, 2019). Social media acts as a catalyst for the fast fashion industry because fast fashion starts and thrives due to social media

#### **4.0 Detrimental Effects Of Fast Fashion**

##### **4.1 Environmental damage**

According to a report by the Ellen Macarthur Foundation, clothing and textile production release 1.2 billion tonnes of greenhouse gases every year –that is more than the combined emissions of all international flights and shipping, which means the clothes one carries in their bag cause more damage to the environment than the flight one is travelling on. And if that is not alarming enough, one garbage truck of clothing and textiles is sent to a landfill or burned every second, while just 1% of clothing is recycled into new clothing (The costly environmental impact of fast fashion 2020).

The fashion industry is the third-largest manufacturing sector after the automobile and technology industries (How Much Do Our Wardrobes Cost to the Environment?, 2019) and that comes with catastrophic repercussions for the environment.

According to figures from the United Nations Environment Programme (UNEP), it takes 3,781 litres of water to make a pair of jeans, from the production of the cotton to the delivery of the final product to the store. That equates to the emission of around 33.4 kilograms of carbon equivalent. If that is for just one pair of jeans, imagine the environmental cost for everything in our wardrobes. The fashion industry is the second largest polluter of clean water globally after agriculture. The statistics published by the Ellen Macarthur Foundation and Circular Fibres Initiative (2017, p. 38) indicate that “Every year the fashion industry uses 93 billion cubic meters of water — enough to meet the consumption needs of five million people”.

#### **4.2 Water Consumption By Cotton/ White Gold**

The light and natural fabric of cotton is not as light on the environment. The most abundantly produced natural fibre in the world, in 2017 it was estimated that 25 million tons of cotton are produced every year. It can take more than 2,700 litres of water to produce enough cotton for just one t-shirt. Thus, when we are buying cotton, we need to be cautious of the *virtual water* that comes along with it. In India alone, a country where 100 million people have no access to safe drinking water, the water used in cotton production would be sufficient to provide 85% of the country's 1.24 billion people with 100 litres of water every day for a year. Irrigation, inefficient usage of water, and pesticides used to account for this water wastage. Genetically Modified (GMO) cotton seeds account for 89% of the cotton planted in India. These seeds are known to contain 'Bt toxins' which are pest resistant, especially to bollworm which can be calamitous for cotton. Due to the increasing demand of cotton, farmers in India are forced to buy them from the black market at a price three to eight times higher than the conventional seeds, thereby pushing the farmers into a vicious debt web. It is tragic to know that most farmers in India commit suicides by swallowing the pesticides used to procure this cotton. Many of the chemicals used in these sprays are banned in the West, yet are used by these farmers without any protective wear or training further endangering themselves (Hymann, 2019).

#### **4.3 Polyester**

Polyester accounts for an annual production exceeding 52 million metric tonnes worldwide. It is non-biodegradable meaning that the polyester fabric shirt you bought last season will not decompose for 20 years at best and 200 years at worst, depending on conditions. Polyester is, in part, derived from petroleum and the oil manufacturing industry is the world's largest pollutant. The 'disperse dyes' that make polyester stain-resistant are even worse. They are insoluble and do not decompose readily. Not only does the toxic untreated water from polyester textile cause serious harm to marine and aquatic life, but dye workers worldwide also report higher incidences of cancers and lung disease than the general population (Uren, 2018).

#### **4.4 Leather**

The processing of leather also impacts the environment, with 300kg of chemicals being added for every 900kg of animal hides tanned. Most of the leather purchased in Australia is processed in developing countries like India, China, and Bangladesh. These countries often lack the required legislation regarding the responsible disposal of toxic chemicals.

Leather-making is also one of the thirstiest industries, with recent estimates suggesting that 17,000 litres of water are needed to produce just 1kg of leather; that is over 60 full bathtubs worth of water! People are often disillusioned to believe that leather is a by-product of the meat industry when in fact that is not true. Some animals are raised and killed only for their skin and thus leather is a co-product in most cases. Worldwide, a huge variety of animals suffer for the leather industry, including pigs, goats, sheep, crocodiles, snakes, stingrays, seals, emus, deer, fish, kangaroos, horses, cats and dogs. In some countries where leather is manufactured, animal welfare laws are minimal or non-existent. Even in Australia, animals raised for leather and food are not given the same legal protection as companion animals or pets. For example, these creatures routinely undergo painful medical procedures without anaesthetic, including castration, dehorning, branding, and mulesing (Rauturier, 2017).

#### **4.5 Pollution Caused By Micro Fibres**

According to research (Microfiber Pollution: Our Clothes Pollute the Oceans, n.d.), every time we do our laundry, an average of 9 million microfibers are released into wastewater treatment plants that cannot filter them. When we wash synthetic clothes or any clothes in fact, using harsh washing detergents, clothes shed tiny plastic fibres into the wastewater, they are so tiny that they can easily move through sewage treatment plants and they are not biodegradable and hence only fragmentize into smaller pieces called microfibres. The aquatic animals and other species consume these harmful microfibres which not only kills them but also enters the food chain.

#### **4.6 Catastrophic Amount Of Waste Generated**

The exorbitant speed at which these garments are produced, in addition to the transient nature of fashion trends and cheap fabrics, generates a scary amount of waste. According to Ross (2019), in Australia alone, more than a 501million kilos of unwanted clothing ends up in landfills across the nation each year. Globally the fashion industry pumps out more than 100 billion garments per year. If demographic and lifestyle patterns continue as they are now, global consumption of apparel will rise from 62 million metric tons in 2019 to 102 million tons in 10 years and that is alarming. Globally, 87% of all disposed textiles are sent to landfill or incinerated; 12% are mechanically recycled by cutting them or shredding them into a fibre, insulation material, or rags; and less than 1% are chemically recycled back to reusable raw materials. In 2018 British brand Burberry caused a massive outrage by burning £28m worth of clothes and perfume but as rightly said by Orsola de Castro, co-founder and creative director of *Fashion Revolution* “Incorrect disposal of clothing happens throughout the entire supply chain... What happens to the finished product is literally the tip of the iceberg”. All in all, at each stage of the production process right from the cheap fabric to the quantity produced, the environment is bearing the enormous burden of our unsustainable practices.

#### **5.0 Ethical Damage To The Developing Countries And Foul Labour Practices**

One key factor to identify a fast-fashion brand is the outsourcing of labour from developing countries. Fast fashion is demanded because it is cheap and thus these companies must cut corners for which they turn to the developing countries due to the lack of stringent labour laws there making it easier to cut costs and exploit the poor.

It has been 7 years since the Rana Plaza tragedy took place in Bangladesh, killing over 1,000 people. The lives of these garment workers are still murky; not only are they underpaid but are also exposed to toxic lethal chemicals that violate their right to safe working conditions and this is just the tip of the iceberg, some aspects of this ethical damage are discussed below.

#### **5.1 Child labour**

Around 260 million children are in employment around the world, according to the International Labour Organisation (ILO). Of them, the ILO estimates that 170 million are engaged in child labour and many of them in the fashion industry.

According to research (Moulds, n.d.), these fast fashion companies make false promises of well-paid jobs, comfortable accommodation, three nutritious meals a day, and opportunities for training and schooling to lure parents in impoverished rural areas in India to send their daughters to spinning mills. Their field research shows that “in reality, they are working under appalling conditions that amount to modern-day slavery and the worst forms of child labour”. Due to the lack of supervision or social control mechanisms, these children are easy targets. The lack of transparency and the complexity of the supply chain is the major reason why these companies get away with such horrifying practices. According to a recent report, (SOMO - Centre for Research on Multinational Corporations & ICN - India Committee of the Netherlands, 2014) Egypt, Uzbekistan, Pakistan, India, China, Thailand, and Bangladesh are particularly notorious for child labour in the textile and garment industry. The Stichting Onderzoek Multinationale Ondernemingen (SOMO) report found that 60% of workers at the mills it investigated in India were under-18 when they started working there; the youngest workers were 15 when they joined. Children are being put to work at all stages of the supply chain – from the production of cottonseed, cotton harvesting, and yarn spinning mills to all the phases in the cut-make-trim stage. In garment factories, children perform diverse and often arduous tasks such as dyeing, sewing buttons, cutting and trimming threads, folding, moving, and packing garments.

## **5.2 Exposure To Appalling Circumstances**

The production processes of these fabrics expose the workers to lethal circumstances. For instance, the production of polyester requires ‘disperse dyes’ which are toxic for human beings, and dye workers worldwide report higher incidences of cancers and lung disease than the general population. As discussed above the cotton industry also has a dubious past and the debt web has caused farmers to consider committing suicide. Even leather has a heavy cost for human welfare. People living in polluted areas and tannery workers in particular, commonly suffer health problems like skin diseases and respiratory illnesses.

People have even been known to die from exposure to high concentrations of dangerous chemicals. In Colombian mines, Bangladeshi factories, or Vietnam textile mills, labour standards are so low that even though apparel is the largest employer of women globally, less than 2% of these women earn a living wage, according to The Huffington Post.

These women cannot even afford to buy the cheap, fast fashion they are producing to ship overseas (Donato, 2018).

### **5.3 In Light Of The Coronavirus Pandemic**

According to a report by the Clean Clothes Campaign (Grant, 2020), factory workers in countries including Bangladesh, Indonesia and Pakistan are owed between USD 3.2bn and USD 5.8bn in unpaid wages for the period from January to March alone. As the virus spread around the globe at the start of the year, clothing companies experienced a sharp drop in consumer demand, leading many brands to cancel and refuse to pay for shipments of completed orders and goods in production. Consequently, these workers were dismissed without pay or notice, and workers in the developing countries do not have savings so when they lose their jobs they have no means to fulfil even their basic needs. According to a survey by Worker Rights Consortium (WRC), an independent labour-rights watchdog, “the average take-home pay of workers surveyed before the pandemic was \$187 per month. By August, it had dropped to \$147 per month, a 21% decrease”. The survey also asked workers to identify which companies they had recently sewn products for. The most common answers included Adidas, Gap, H&M, Nike, Walmart, Express, and others. Lower incomes and unemployment caused by the COVID-19 pandemic have forced garment workers across the world further into poverty and imperilled their access to food, a new study has found.

### **5.4 Infringement Of Intellectual Property Rights**

Once a design hits the social media platforms, it's only a matter of time before multiple brands start making copies of them and the original creator gets lost in the cycle. These copies are called “knock offs”. There is only a slight difference between knockoffs and counterfeits. Counterfeits use the same logo as the original designer and are illegal, while knockoffs closely resemble the original. There are no proper copyright laws that cover this. Popular brands like ZARA, H&M, and Forever 21 have been accused of ripping off original designs and selling them at cheaper prices. According to a report by Lieber (2018), Forever 21 has imitated everything from a phone case made by an LA indie brand to a popular feminist tee, to Instagram-famous swimwear to a coat from a CFDA/Vogue Fashion Fund finalist — and these are just examples from 2017.

Brands continue indulging in these unethical practices because of a lack of proper and clearer copyright laws while the original designers which often include small less renowned companies do not get any credit for the design they worked on for hours.

## **6.0 Controversies Around The Fast Fashion Brands: Greenwashing**

Nowadays words like ‘sustainable’, ‘green’, ‘eco-friendly’ can be spotted in the advertisements of almost all brands. On the one hand, it may look like we are finally creating space for sustainable clothing but on the other hand, these claims may not be true at all and this is where the term ‘greenwashing’ comes into play. Greenwashing simply means providing misleading information to give a false idea that a company is environmentally sound. This may be done in two ways; first, when companies try to cover up their unsatisfactory environment performance by investing a large sum of money in other greener initiatives backed up by strong PR campaigns. The other way is when companies aimlessly use the words ‘green’, ‘eco friendly’ and ‘sustainable’ to just look good on paper.

### **6.1 Some Ways To Spot Greenwashing**

1) *Huge promotions of initiatives that are not directly related to supply-chain emissions*

If the company maintains some discourses regarding installing solar panels on roofs or “recyclable” packaging then these initiatives are great but simply not enough to make up for production processes that cause huge amounts of waste and pollution. Production accounts for a massive 70 per cent of the overall carbon footprint of the fashion industry. Brands should look at production facilities, transport and shipping methods, and the environmental impacts of source materials. When brands like these talk about reducing waste, without changing their business models, then the greenwashing alarm bells should be ringing.

2) *The glorification of measures that are just law.*

The minimum wage required to be paid by companies is often different from the living wage required by a person to feed themselves, their families, and to pay rent, healthcare, transportation, and education. Companies that shout about ensuring the minimum wage is being paid are doing the very least and do not deserve a pat on the back.

3) *Launching sustainable ‘ranges’*

This is an increasingly common marketing tool with high-volume, fast fashion labels. Often this range of clothing is a tiny portion of their overall production, and it does not mean that these labels have made a complete overhaul of their business models overnight. What a brand is really doing here is hoping that the green glow of one initiative will rub off on the company. Unless the brand has set clear targets to increase its ethical range to more than 50% of its products or is working towards making its whole business ethical – it’s greenwashing (Hill, 2018).

In 2019 H&M, a thriving fast-fashion brand launched its ‘sustainable’ line of clothing called “Conscious”. Its mission stated, “Shop our selection of sustainable fashion pieces that make you both look and feel good” and they claimed to use sustainable and recycled materials. A deeper look into it revealed that it was just a glossy campaign to ‘look’ green on paper because H&M did not explain how exactly these materials are better for the environment. It used ambiguity to sell people a feeling of responsibility. It is shocking to note that there is not a single legal definition for marketing-friendly words such as “sustainable,” “green,” or “environmentally-friendly” and therefore companies get away with it so easily (Patriot Act, 2019).

## **7.0 Slow Fashion And Key Challenges**

As the research progresses especially in this section, there will be an overlapping analysis of slow fashion and sustainable fashion. Slow fashion is sustainable, however, there is a thin line between the two. While the latter is more production-oriented and aims to produce in a way that is considerate of the planet, the former concerns the clothing itself.

The term “slow fashion” was coined by Kate Fletcher, professor of Sustainability, Design, and Fashion at the University of the Arts London’s Centre for Sustainable Fashion after the slow food movement grew popular to slow the pace of the fashion industry.

Though it is not defined as clearly as fast fashion, it is somehow rebuked to the latter. In a layman’s language, slow fashion entails anything slow in production as well as in disposal, ethically produced using organic fabrics (linen, hemp), upcycled, provides a personalized experience, and above all, minimises the wastage of resources keeping the planet on the front seat. According to Study NY, it encourages slower production schedules, fair wages, lower carbon footprints, and (ideally) zero waste.

Apart from second-hand clothing, we can expect higher prices for slow fashion products due to longevity, exclusivity among other factors. According to Holt, slow fashion can include a variety of items, including a customized dress that costs five dollars, or a piece of clothing that costs seven hundred dollars and is made by hand from clothing scraps (Štefko & Steffek, 2018, p.1).

According to BBC globally the fashion industry is responsible for 10% of all greenhouse gas emissions. Vast amounts of water are also needed to produce the clothes we wear too and the fashion industry is responsible for 20% of global wastewater. While the numbers are shocking, they show an upward trend, hence there is a dire need than ever to shift to slow and sustainable fashion.

One of the few such Indian brands is Hooman, founded in January 2019 by Harshil Vora, it is India's first cause wear brand and contributes 30% of its profits to social causes. The brand features a range of fun clothing, which is plant-based with less than five per cent synthetic fibres. The clothes are made-on-demand, thereby ensuring they are truly zero-waste. We need more brands like Hooman and informed masses to expedite the shift to slow fashion. Having said that, there are many challenges faced by designers when it comes to creating sustainable fashion. Some of them are listed below-

**1. Exposure-** Although the desire for these goods is only growing, existing shopping platforms rarely highlight sustainable items, and often focus on aesthetics. Only recently have successful accessory and clothing brands begun to give more back story about where and how their goods are produced. For designers with small amounts of investment and backing, it is difficult to get noticed in the sea of advertisements on the internet. Often, they are compared to items that are similar but that are not produced ethically/in an eco-friendly manner. This comes at a time when there is not much transparency around fast fashion which is disconcerting.

**2. Production Challenges-** One form of sustainable fashion is circular fashion. Circular fashion can be defined as clothes, shoes, or accessories that are designed, sourced, produced, and provided to be used and circulated responsibly and effectively in society for as long as possible in their most valuable form before returning safely to the biosphere when no longer of human use (Alexander, 2019). Some of the principles of “circular fashion” include: designing for resource efficiency, recyclability, without toxicity, and with renewables.

Either in the initial conception, sampling, production, packaging and in the item itself, it is almost impossible to limit all waste factors, even with using recyclable materials.

Design/manufacturing is a business that must employ people. For cost and strategic reasons, it can be impossible to truly embrace all points of circular fashion. Focusing on a few achievable points is more reasonable and closer to reality for many firms, despite which they cannot cut a lot of costs.

**3. Finding Work-** Many corporations still do not put sustainability and ethical fashion at the forefront of their priorities (despite their marketing efforts). For designers coming out of school, it can be difficult to find positions in companies that align with their values. Small design companies are working on sustainable/fair trade goods, but not a lot of jobs are available overall. This means this generation needs to create its own sustainable design work. The more there is support for sustainable fashion businesses, the more it provides a chance for other designers to work in this space.

**4. Finding Resources-** Since these brands promote fair and local trade, they need a network of local artisans that can be sparsely located. It is because of this reason that the whole process from getting raw materials to processing to manufacturing to marketing can take a month or more than that, especially in rural regions. Designers should have more open access to factories, artisans, and information that can help them manufacture to be closer to the circular fashion model.

**5. Pricing-** There is a lot of ambiguity surrounding the pricing policy of slow fashion brands. Challenges exist for some brands on how to make their products affordable to consumers in the presence of the transparency that exists in slow fashion unlike in fast fashion. According to Textile technologist RS Balagurunathan, founder of Anandi Enterprises and a steering committee member of Global Recycle Standard volume plays a big role in textile and pricing. In countries like India, the sustainable market has still not picked up the pace. There is comparatively less awareness among buyers. As prices have an inverse relation with the quantity demanded, an increase in demand will therefore help bring down the prices to some extent.

## **8.0 Case Study: Behavioural Analysis Of Fashion Trends**

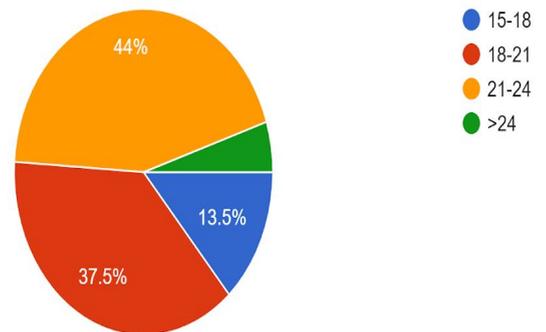
To get a deeper insight into the fashion acumen, a case study was conducted on a sample of 200 people residing in India belonging to the age group of 15-35 approximately.

The rationale behind the case study was to understand the awareness of sustainable fashion and if the term was understood in its true sense or not. It also aimed at understanding where, why, and how frequently people shopped and the key factors that drive people to opt for a particular brand, and how well people are versed with its disposal.

Out of 200 people the breakup of responses from different age groups was as follows:

AGE GROUP	NO. OF PEOPLE
15-18	27
18-21	75
21-24	88
>24	10
TOTAL	200

Which age group you belong to ?  
200 responses



### 8.1 Which Brands Do People Shop From Regularly?

Age group: 15-21

From the data collected it was inferred that only 19% of people did not shop from giant fast-fashion retailers namely ZARA, forever21, and H&M. While a whopping majority of 81% actively shops from these three brands.

Age group: 21- above 24

The older age group on the other hand exhibited less affinity for these fast fashion brands. 38% of people in this age group did not shop extensively from these fast fashion brands. Even though still a majority of 62% of people prefer ZARA, H&M, and forever21.

From this, two things can be deduced. First, people shop actively from fast fashion brands primarily ZARA, H&M, and forever21. Second, people in the age group 15-21 are more inclined towards these fast fashion brands than the people in the age group 21- above 24.

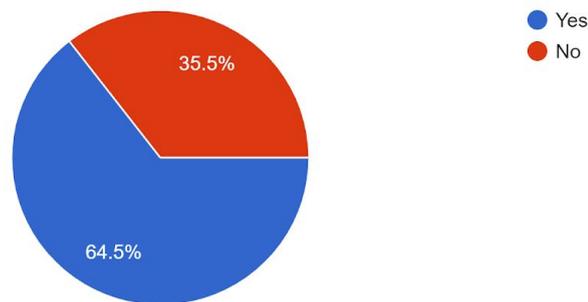
### 8.2 Reasons For Preferring These Brands

There are multiple reasons why people prefer these brands. Our survey found out that variety, affordability, and brand value were the key reasons for this preference. Nearly 128 people listed variety as one of the reasons for their preference, followed by goodwill and brand value at 115 and affordability being the third major reason as voted by 108 people.

### 8.3 Awareness About Sustainable Fashion

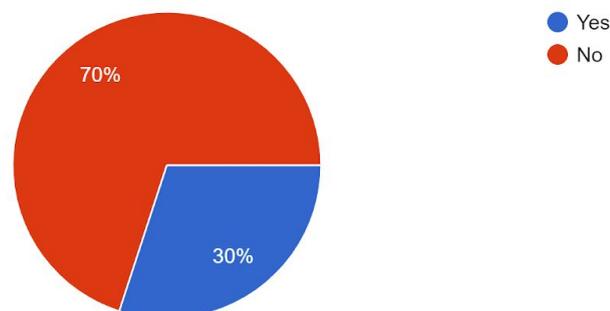
Are you familiar with the concept of sustainable fashion?

200 responses



Have you ever shopped from a thrift store?

200 responses

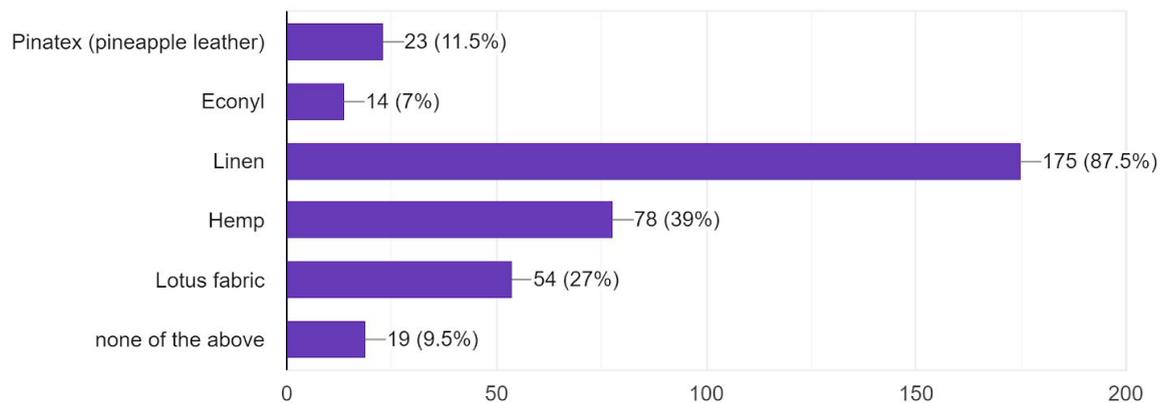


It was surprising to note that most people (64.5%) said that they were familiar with or had come across the term 'sustainable fashion', while only 30% of people had shopped from thrift stores which are a part of sustainable shopping. This indicates that people only know and talk about sustainable fashion passively.

In India, there seems to be a stigma around thrift shopping. Either people are not aware of the concept, or it is associated with cheap, old clothes.

The data collected also showed that a majority of people (91.5%) do not throw their discarded clothes and rather donate them locally or reuse them for other household purposes here and there. As discussed further in this paper, simply using your clothes 9 months longer can make significant reductions in carbon footprints.

Please select the materials you have heard of from the options below-  
200 responses



The above figures indicate that advertising plays a major role in creating awareness. The majority of the people said that they had heard about linen which is the most actively advertised and used fabric among these. The remaining fabrics are also sustainable alternatives but are not as popular as indicated by the figures. The potential of these aforementioned eco-fabrics can be tapped if awareness is raised about them and they are more actively publicised.

## **9.0 Comparative Analysis Between Fast And Slow Fashion**

Having looked at the concepts of fast and slow fashion individually, this paper will now draw a comparative analysis between the two. The purpose of this analysis is to show the ethical and environmental edge of slow fashion over fast fashion and to prove why the former is better.

<b>BASIS</b>	<b>SLOW FASHION</b>	<b>FAST FASHION</b>
COST OF PRODUCTION	Slow fashion brands follow a more <i>ethical and environmentally friendly</i> approach, due to which their cost of production tends to be <i>higher</i> than that of fast fashion brands. They follow labour laws and choose their fabrics thoughtfully thereby resulting in higher costs.	To cut the corners they outsource their labour from the developing countries where they <i>exploit the lax labour laws</i> , use <i>cheap non-biodegradable fabrics</i> , and thus their cost of production is <i>less</i> compared to the sustainable fashion brands.
PRICE	Due to the higher costs of production, the price of these clothes is higher.	They cut their costs by adopting unethical practices to produce cheap trendy clothes, therefore the price of fast fashion clothes is much cheaper.
QUALITY	Durability and longevity are kept in mind in sustainable fashion. They <i>prefer quality over quantity</i> to avoid excessive consumption and generate less waste. More time and care taken during the design and manufacturing processes results in better build quality.	Cheap quality of clothes promotes the sales of these brands because when one buys cheap, one buys twice. The clothing is of low quality and usually made of <i>polyester, viscose</i> . These fabrics are manufactured cheaply using energy, water, and chemically intensive procedures impacting the environment. Fast fashion prioritises quantity over quality.

QUANTITY	Since slow fashion is quality-oriented, it offers timeless designs but at a lesser frequency. They have a few seasonal releases. Local brands prefer to make good on a 'made to order' basis and therefore they stop making goods when they are not selling very well.	They use the concept of mass production. With nearly 52 new varieties a year it is evident that fast fashion brands are quantity driven. Fast fashion brands thrive on excessive consumerism, and release new clothes almost every week. Therefore fast fashion brands produce abnormal amounts of stock and that too very frequently
DRIVING FORCE	The primary driving force is the need to be sustainable and adopt ethical practices to move with nature and not against it.	The primary driving force is demand. Being ethical and eco-friendly is not on the list of management priorities of these brands. They are merely driven by profit.
EXAMPLES	Some Indian sustainable brands include- Khadi India, Hemp Kari, No Nasties, MixMitti, and many more.	The big players in the fast fashion industry are H&M, ZARA, Topshop, fashion nova, forever21, and Primark.

### **10.0 Ecologically Green Fabrics**

As discussed in the above sections, the fashion industry is one of the most polluting and water-consuming industries in the world. To address this issue, this paper will be suggesting some sustainable fabrics that are changing the game.

- **Khadi** - Designers are changing the perception of the textile that was once the symbol of India's freedom struggle to a sustainable fabric that belongs to the runway. The spinning of khadi uses no machines or energy and thus has a low carbon footprint. A metre of khadi fabric consumes three litres of water, while one metre of mill-produced fabric requires 55 litres of the precious resource. Plus, khadi clusters also generate direly needed income to rural Indian communities.

As per the Indian Today report of August 2017, in May Khadi and Village Industries partnered with Aditya Birla Fashion and Retail Ltd to launch a new line of khadi products under the Peter England brand. The same month, Raymond announced the launch of its khadi label, Khadi by Raymond. It has also signed an MoU with NIFT for better design development and training at different khadi institutions.

- **Hemp-** Hemp is a densely growing plant and the first one cultivated by humans for the use of textiles and can grow up to 0.31 meters in a week, making it a desirable plant for production due to its fast-growing qualities (Duque Schumacher et al., 2020, p. 122180). The fabric has various advantages like keeping warm in winter, cool in summer and protecting from UV rays.

It also returns 60-70% of the nutrients it takes from the soil. Taking into account processing, hemp uses less than a fourth of water as compared to cotton and also requires relatively small land to cultivate. However, in converting into a fabric many companies may employ non-eco friendly-choices, it is always preferable to be informed and make sure companies are not just “greenwashing” their hemp.

- **Organic cotton-** Organic cotton producers fix the environmental issues at both the growing and manufacturing steps. It is grown from non- Genetically modified organisms (GMO) seeds and without the use of fertilizers. It uses insects instead of harmful pesticides. Growing organic cotton keeps farmers and their families safe. They are not exposed to toxic chemicals in the field or through their food and water supply. By 2025, two-thirds of the world’s population may face water shortages. But organic cotton is 80% rain-fed, which reduces pressure on local water sources. While the price of organic cotton clothing might be on the higher side, look at it as a way of investing in water conservation, cleaner air, better soil, and farmer livelihoods.
- **Piñatex-** Designed by leather expert Carmen Hijosa, this leather is a vegan, biodegradable, and recycled product, manufactured from Pineapple leaves. It is an alternative for leather which raises disturbing questions about animal cruelty and death and the notoriously used large amounts of water and chemicals. According to reports, she said it was only pineapple leaves fibres that had the strength and durability that would match with leather. Even Puma designed shoes using Pinatex instead of leather and its customers loved it. This has also given an additional income to the farmers of the Philippines by recycling a product that was earlier a waste.

## **11.0 The Forthcoming Realm Of Sustainable Fashion**

### **1) Global Campaigns For Sustainable Fashion-**

**Sustainability on the ramp-**While these fashion weeks and awards nurture young talents in the field of fashion, they play a huge role in determining what comes next in the market.

- *Lakme Fashion Week-* Along with the above, pushing mindful fashion and bringing conscious designer labels forward has also become part of Lakmé Fashion Week's ethos. Many trends were spotted at the Lakme Fashion Week 2018. What was worth noticing was that Indian fashion is truly becoming responsible with its cleaner and greener look. Everybody was talking loudly and walking the ramp portraying the sustainability of fashion. The major theme that came across was using more eco-friendly materials for making clothes. Similarly day two of the summer 2020 season featured the Circular Design Challenge which is a sustainable fashion award. The competing fashion designers showcased pieces crafted from waste materials such as discarded textiles, plastic scraps, and even coconut water.
  
- *London Fashion Week-* The 68th London Fashion Week focussed on sustainability and some of the new age designers put forward upcycling transforming items using waste materials. In February 2019, the designer showrooms at London Fashion Week became a "positive fashion" exhibition, showcasing new brands with a focus on sustainability, craftsmanship, and ethics. The British Fashion Council has been a leader in eco-friendly fashion initiatives for many years, starting with Estethica launched by Fashion Revolution founders Orsola de Castro and Filippo Ricci in September 2006, to promote sustainable fashion during London Fashion Week.
  
- *2021 International Woolmark Prize-* The International Woolmark Prize has been fashion's foremost award for emerging designers since 1954 when Karl Lagerfeld became its first winner. Six decades later, the IWP has evolved in step with fashion, but perhaps never more so than in the past few years. The February 2020 winner Richard Malone's ideas were about upcycling, regenerative agriculture, and made-to-order fashion which felt genuinely radical, and he's since become one of the industry's leading voices on sustainability. The 2021 International Woolmark Prize Will Focus on Sustainability and Supply Chain Innovations.

## **2) Institute of Substance - Better Cotton Initiative**

Better Cotton Initiative established as an independent organisation in 2009 is the largest cotton sustainability program in the world and as its US country manager, Scott Exo said the aim of the same is to make cotton better for people who grow and the environment it grows in.

Better Cotton has been defined by upholding the following seven principles-(Better Cotton Initiative, n.d.)

1. BCI Farmers minimise the harmful impact of crop protection practices
2. BCI Farmers promote water stewardship
3. BCI Farmers care for the health of the soil
4. BCI Farmers enhance biodiversity and use land responsibly
5. BCI Farmers care for and preserve fibre quality
6. BCI Farmers promote decent work
7. BCI Farmers operate an effective management system

By adhering to the above principles the farmers can produce in a way that is environment and farming communities friendly. Initially started with cotton-producing countries Pakistan, China, India, it has now spread to over 24 countries around the world. It is a close-knit network and makes sure to rectify if there are any disruptions in the supply of any remote factory.

In 2016 The Better Cotton Growth and Innovation Fund was launched to identify, support, and invest in field-level programmes while fostering the adoption of the Better Cotton Standard System by governments and trade associations.

In 2018 BCI and its 69 implementing partners trained more than two million cotton farmers on more sustainable practices and were able to produce 19% of global cotton. BCI Retailer and Brand Members sourced more than one million tonnes of Better Cotton and many set time-bound sustainable cotton sourcing targets.

Since better cotton uses water efficiently, reduces the use of harmful chemicals, it is an improvement over traditional cotton and hence it is advisable to buy cotton products from a BCI Retailer.

### **3) Role of the Fashion Industry in Climate change - Paris Agreement**

A binding international treaty on climate change Paris Agreement adopted by 196 parties at COP 21 is enhancing the implementation of the United Nations Framework Convention on Climate Change (UNFCCC) by bringing all the nations under one umbrella to combat the exacerbating climatic conditions with ambitious efforts. The objective is to limit global warming well below 2, preferably 1.5 degrees celsius as compared to pre-industrial levels.

Fashion Industry Charter for Climate Action, published by UNFCCC in 2018 contains the vision to achieve net-zero greenhouse gas emissions by 2050 along with keeping global warming below 1.5 degrees celsius. The fashion industry is a major global player so there is a need to imbibe a deeper, holistic, and more systematic approach to achieve the same. While the charter talks of mitigation and adaptation in the industry, it emphasizes the role of fashion stakeholders in reducing harmful emissions as a result of their operations since the manufacturing phase within the industry contributes to the majority of climate impact.

In response to this, the Signatories and supporting organisations of the Charter will come together in realising the goal by figuring out loopholes and working in collaboration towards achieving climate targets. There should be coherency between the partners, finance community, and policymakers to catalyse reasonable, pioneering solutions for a low-carbon economy throughout the sector. While it is not an overnight journey, the efforts need to be consistent and symbiotic to have a spillover effect across countries so that all can reap the benefits of the same in the long run.

### **12.0 Trend Report On Future Of Sustainable Fashion**

The global change award is an innovation challenge by the H&M foundation, it released a trend report on the future of sustainable fashion in which it identified five megatrends that will lay the foundation of sustainable fashion in the future. The first being "Power of Nature" which emphasised using natural sustainable materials. The second was "Rent a Closet" which is self-explanatory, followed by the third megatrend "Long Live Fashion" which aims at reviving vintage clothing. The second last megatrend was "innovative recycling" which focuses on finding value in waste. The last megatrend was "Connected Clothes" which recommends digitizing clothing for personalization and increasing transparency through live tracking.

This paper believes that these five megatrends can emerge as the five pillars of sustainable development (H&M foundation, 2017).

### **13.0 Institutional Measures**

The whole world should come together to fight this menace. Both R&D and innovation will play vital roles in delivering short-term sustainability targets and in reinventing fashion's economic model for long-term transformation. While the degree of implementation will depend on the country's current situation, strong institutional measures will act as a catalyst in our goal of achieving sustainability. The following are the policy recommendations on similar grounds.

1. With developing countries like Bangladesh, India, China, Indonesia being the manufacturing hubs of fast fashion, it is pertinent for these countries to have a government regulatory body in place to prevent any foul practices and take the required action against the one found guilty. This will help spread awareness among the masses as to what goes behind fast fashion and will help save the soul of the workers who might endure such an unethical working environment.

The regulatory body can also play an important role in assessing loopholes if any and reduce the impact on the environment at every stage of production. It should also give e-star ratings to every brand so that consumers know how eco friendly the brand they intend to purchase is, and make informed choices. These ratings should also be printed on the tags of these products to make them more accessible. While buying local is important, the larger goal of sustainability can be achieved only when these giant fast-fashion retailers adopt sustainable practices and that necessitates the need for a strong regulatory body to ensure this.

2. Frequent workshops by designers, entrepreneurs in schools, colleges, NGOs on how to incorporate sustainability, for instance, upcycling, choice of fabrics, update on the innovations going around the world can go a long way in encouraging new generation self-driven designers and spread awareness among masses as to how their fashion choices can save the planet.

3. A certain per cent of GDP can be diverted towards research and development in the field of fashion. This will encourage more ideas. With all the research, time, and money that goes certain slow fashion brands charge exorbitantly high prices and hence affordable for few. To prevent this, part of the cost can be borne by the government which will keep the designers, startups, entrepreneurs from raising prices too much, and also encourage more homegrown traditional startups that will promote sustainability.

#### **14.0 Possible Alternatives At An Individual Level**

It is extremely important to realize that every piece of clothing that we buy has a direct impact on the environment as explained above in this paper. This individual realization is imperative to make a transition into the world of sustainable fashion. There are numerous small steps that we can take at an individual level that can bring about a profound change, some of them are listed below.

##### **1) Buy less, choose well, make it last**

These wise words were spoken by iconic British designer Vivienne Westwood. By organizing our closets, finding new potential alternatives from existing clothes we can minimize our consumption by a large amount which will, in turn, generate less waste, and by now it is clear how important that is. Avoiding the trends and going for 'timeless styles' is fundamental to choosing well. It also includes looking into the ethical and environmental credentials of the brands one intends to purchase from. A third of its carbon footprint can be saved in its aftercare of a garment, so put away that iron, stop using the drier, and make sure you invest in a high-quality, long-lasting piece. (Hill, 2018b). Washing clothes less at lower temperatures makes the clothes last longer, however, it is not reasonable in the case of nylon, polyester, acrylic since they shed fibre with every wash, these are microplastic which is detrimental to the environment. It is therefore recommended to use sustainable alternatives of the same. Capsule wardrobes are also a good way of organizing and filtering your closet to several versatile basic pieces that can be worn throughout a season.

## **2) Reduce your returns**

While online shopping platforms have made the shopping experience all the more feasible with easy returns, it has an adverse impact on the environment due to the return distance travelled and the packaging waste.

## **3) Thrift shopping**

Simply switching to thrifting would not provide a definitive solution within the fashion and textile industry, but it is one way we can work to minimize our carbon footprints and make small steps towards a better future. Several stores sell second-hand and vintage clothes. Some Indian based thrift stores operating through Instagram include *Lulu Thrift*, *Luu Liu*, *The Fine Finds* among others. Most clothes are made of polyester and other synthetic fibres which can be lethal for the environment so buying pre-loved clothes will be keeping the plastic out of landfills and hence contributing to decreasing waste. When you choose second-hand over fast fashion, it decreases the demand and as a result, causes less pollution. Second-hand items do not require more resources to produce- they are already made!

## **4) Vocal for local!**

Buying local food has a lot of benefits. First, it makes it easier for brands to produce ‘made to order’ goods. This means they can simply stop the production of items that are not selling very well, solving the common problem of deadstock (fabric leftover from production that is often thrown away). Getting clothes from A to B is another huge contributor to pollution in the fashion industry. When global fashion brands make the move away from sea and air transportation and instead shift clothing by short sea freight or rail, the reduction in carbon dioxide emissions is enormous; when we buy locally, this is one of the biggest benefits. Buying locally-made clothes has the bonus of increasing accountability. In many countries, producers and garment workers face exploitative conditions that result in human rights violations such as excessive hours, forced overtime, lack of job security, sexual harassment, and discrimination. It is also very important to be informed- Some brands might make false green claims, despite following the unsustainable model of fast fashion, so it is better to poke around the internet, their website as to know about the fabric they use, whether they have paid wages to the workers, etc. (Brown, 2019).

### **5) Upcycling and recycling: an entrepreneurial approach**

Globally, only 20 per cent of clothing waste is collected for reuse and recycling (just 12% of the material used for clothing ends up being recycled) while the majority ends up in landfills or is incinerated, according to a 2017 report by Global Fashion Agenda and The Boston Consulting Group; but upcycling is becoming increasingly popular in the contemporary fashion industry. There are numerous DIYs and videos available online using which we can transform our old/worn out pieces into new ones. This is based on the 4R's of fashion: reduce, reuse, repair, and recycle.

Most of the time people are apprehensive or lazy to upcycle their clothes. This paper recommends that the government can introduce upcycling and recycling groups under short-term or part-time employment schemes, where women from rural areas can take part and earn additional income and a sense of financial independence and stability. They can also organize themselves into Self Help Groups and set up 'upcycling stores'. Women can be trained in basic stitching since that is the only prerequisite for this approach. Old clothes can be collected for upcycling into new designs and resold. The excess fabric that is left after mass production in huge textiles can also be collected to make small scrunchies, *potli bags* (traditional bags made out of cloth along with tassels affixed on the drawstrings), and carpets. Not only would this generate employment but will also help in the optimization of fashion waste (leftover fabrics) and recycling of old clothes thereby reducing waste and the carbon footprint.

### **6) Charity**

It is always a better idea to donate your clothes to charities or needy people around you than sending them to landfills. It is a proven fact that extending the life of clothes by just nine extra months of active use can reduce carbon, water, and waste footprints by around 20-30% each. One challenge that comes into play here is making sure that the donated clothes reach the charity since most of them end up being sent to landfills. Therefore, it is always better to donate locally or to organizations that have a clear ethical and environmental background.

## **15.0 Conclusion**

There is a thin line between consumers and citizens and this is where sustainable practices come into play. A deep understanding of the gloomy world of fast fashion and its catastrophic effects on the environment has given rise to the need for a more sustainable alternative. The repercussions of fast fashion may not be visible directly but it is clear that a lot goes behind the clothes that we wear and someone is bearing the cost of it. At each step of production right from the materials we use, the techniques of production followed, to the consumption of the clothes and their disposal, there are consequences. This is an alarming situation and global actions like the Better Cotton Initiative, United Nations Framework Convention on Climate Change can go a long way in bringing about a change. However, it is also important to realize the significance of our actions and choices if we want to bring about a profound change. There is a lot that we can do as individuals to make an impact by simply wearing our clothes longer, thrift shopping, investing in timeless styles and local brands, and making informed decisions. These individual steps are crucial but there is a need for immediate implementations of institutional measures which include setting up of a regulatory body to take care of the loopholes in the fashion industry and sensitise the world about sustainable fashion because it is not a matter of preference or choice anymore but a need. These two will produce a change that is gradual and everlasting. This research aimed to identify the problem of fast fashion, analyse it, and recommend measures and alternatives available at various levels of the supply chain. In the words of Ecoalf founder Javier Goyeneche, “what you do is not enough anymore, how you do it is much more important” and it makes much more sense now.

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