



# Synthetics Anonymous

Fashion brands' addiction to fossil fuels

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## List of abbreviations

BCI	Better Cotton Initiative
CELC	European Confederation of Flax and Hemp
CMA	Competition and Markets Authority
EPR	Extended Producer Responsibility
GOTS	Global Organic Content Standard
GRS	Global Recycled Standard
M&S	Marks & Spencer
OCS	Organic Content Standard
OST	Ocean Science Trust
PET	Polyethene terephthalate
RCS	Recycled Content Standard
SKU	Stock-keeping unit
TMC	The Microfibre Consortium

## Executive summary

This report investigates the behaviour of some of the biggest fashion brands and retailers regarding their use of synthetic fibres and transparency about doing so. The fashion industry and its prevailing fast-fashion business model rely heavily on the use of cheap synthetic fibres, which are produced from fossil fuels, such as oil and gas. Since the early 2000s, fashion production has doubled – as has the use of polyester, which is now found in over half of all textiles.

Synthetic fibres represent over two-thirds (69%) of all materials used in textiles, which is expected to reach nearly three-quarters by 2030.<sup>1</sup> Fossil fibres are a key enabler of the fast-fashion business model, and their production already requires more oil than the annual consumption of Spain. Produced and sold cheaply, these items are often discarded after just seven or eight uses, ending up in landfills, incinerators or dumped in nature.<sup>2</sup> Cheap synthetic fibres not only facilitate the production of low-quality clothing that ends up as waste but also perpetuate the fashion industry's dependence on continued fossil-fuel extraction in the midst of a climate emergency. While other companies and sectors are decarbonising and aiming for a circular economy, it is clear that, given its addiction to synthetic fibres, the fashion industry is heading in entirely the wrong direction.

In this report, we seek to establish what brands are saying and doing regarding their reliance on synthetic fibres. We reached out to 46 brands with a questionnaire, and conducted desk research into their policies and public disclosure of relevant information on this topic. According to this, brands and retailers were classified into four categories - *frontrunners*, *could do better*, *trailing behind* and *red zone*. We conducted additional research to zero in on 12 brands' online shops, chosen specifically to represent a range of brands - from ultra-fast fashion to luxury, sports brands and those keen to advertise their sustainability credentials. We carried out a meticulous assessment of these brands' Spring/Summer 2021 collections, analysing data on synthetic fibre use and what sustainability claims the companies made around these products.

The findings of this research not only expose fashion brands' addiction to synthetics but also demonstrate rampant greenwashing across their voluntary commitments and products. In light of the European Commission's pledge to address greenwashing and the recent guidance from the UK's Competition Markets Authority (CMA) on environmental claims, the unsubstantiated claims found in our research may soon lead to legal repercussions for brands.

## Key findings

### Brands knee-deep in fossil fashion

The results of our analysis of 46 clothing companies are deeply concerning and show that fashion brands are still largely ignoring growing plastic pollution and the waste crisis stemming from their addiction to synthetic fibres.

In addition to a significant lack of transparency about the amount and source of synthetics in their collections, fashion brands resort to greenwashing tactics - such as downcycling polyethylene terephthalate (PET) bottles to clothes - rather than moving to truly circular solutions, in which products are designed to be more durable, reusable, repairable and recyclable.

Fashion brands have no systematic approach to addressing the environmental and health risks of microplastic pollution.

### Lack of leadership to detox from fossil fashion

- Despite a high response rate of 83% (38 out of 46 brands), companies' disclosures about their policies, practices and use of synthetics was underwhelming. Only about half (26 brands) provided some level of transparency about their use of synthetics by percentage and weight - although this was not always broken down fibre by fibre.
- No company has made a clear commitment to phase out the use of synthetic fibres from their collections, leaving our *frontrunner* category empty.
- Only six companies - Dressmann, Esprit, Hugo Boss, Puma, Reformation and United Colors of Benetton - indicated they want to avoid or reduce synthetics altogether. When asked why, some cited the fact that they are produced from fossil fuels, or mentioned concerns associated with microfibres or general impacts on the environment.
- Most of the sports brands analysed (Adidas, Asics, Nike and Reebok) reported that the majority of their collections is based on synthetics, and expressed no plans to curtail this. Only Puma indicated that synthetics represent 'just' half of their total fabric material, and said it is endeavouring to gradually reduce the proportion of polyester used, showing that a lower reliance on synthetics is feasible in sportswear.
- Of the worst-performing brands assigned to our *red zone*, 15 are a combination of sports, high-street, luxury and department-store companies, the majority of which (11) are North American-based (US or Canada) - including Nike, Patagonia, Target and Walmart. Their complete lack of engagement, commitments or even transparency clearly shows that the issue of fossil fashion is not on their agenda.
- A surprising member of the red zone was Patagonia - a brand that has built its reputation on sustainability. We put it in the red zone because it has failed to publicly disclose any meaningful information about its use of synthetics and plans to phase them out nor did it engage with us on the questionnaire.

### Downcycling adopted as a magic pill

- 'Recycled' polyester, made from PET bottles, is the principal way brands are planning to curb the impacts of fossil fashion and embrace more 'sustainable' synthetics - despite this being a false solution to today's plastic-pollution and waste problem. The majority of companies (85%) indicated they aim to achieve their 'recycled' polyester targets by using polyester from downcycled PET bottles.
- In contrast, none of the brands reported a high level of fibre-to-fibre recycling targets, nor a clear goal to move towards this type of recycling. Neither are companies making the necessary investments to ensure a future in which clothes can be recycled back to clothes, hindering a move to a true circular economy.

### Lost in a sea of green claims

- Many brands still make misleading claims about how they are making their products more 'recyclable', despite having neither a takeback scheme nor fibre-to fibre recycling technology in place. Greenwashing was rampant across the targets the brands disclosed to us, including claims of using 'sustainable', 'preferred', 'sustainably sourced' or 'sustainably made' materials, the criteria for which were often ill defined and constitute unsubstantiated claims that mislead consumers.
- Further examples of greenwashing include brands promoting their sustainable image by claiming to use ocean plastic or recycled fishing nets in their products; for example, Patagonia and Adidas advertise their use of ocean plastics as a better alternative - or an '*eco-innovative replacement*' - for virgin plastic, and several companies market regenerated nylon made from fishing nets and other waste. Such an approach only deals with the aftermath of the plastic-pollution problem, and does very little to curtail the plastics crisis at the source.

### Microplastics remain a blind spot for the fashion industry

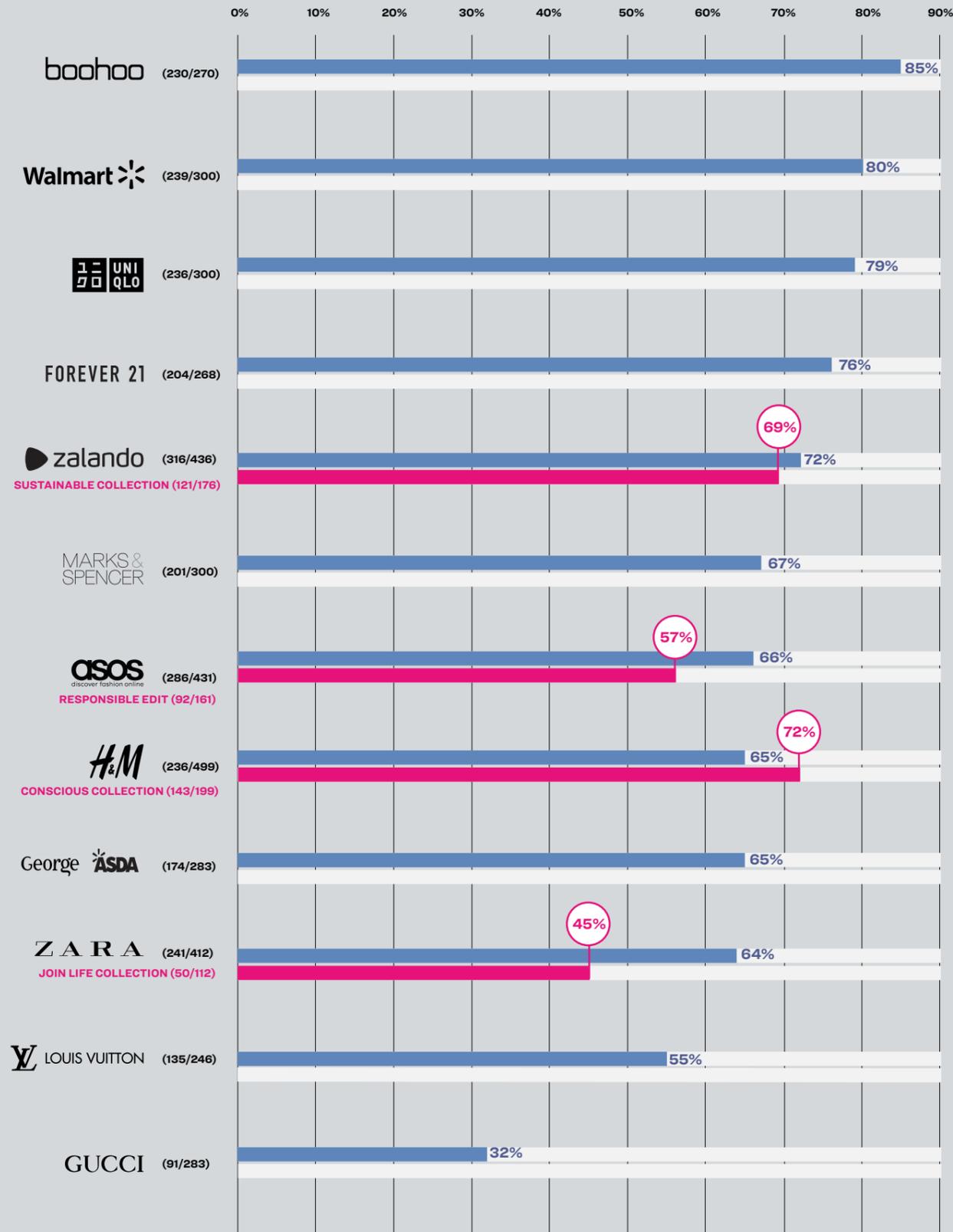
- Brands' approaches to the growing impact of microplastics on the environment and human health is largely delay-distract-derail; most companies stick to business as usual until '*more research*' is done. Most brands only consider end-of-pipe solutions - such as washing-machine filters and wastewater-treatment plants - which merely shift the problem elsewhere. Some brands have joined industry initiatives to develop unified measuring methods.

### Online shopping: All style, no substance

In our sweep of online shops, we analysed 4,028 products in the Spring/Summer 2021 collections of ASOS, Boohoo, Forever21, George at Asda, Gucci, H&M, Louis Vuitton, Marks and Spencer (M&S), Uniqlo, Walmart, Zalando and Zara. The findings lay bare the proliferation of synthetic fibres in our clothes, with 67% containing some type of synthetics. On average, garments containing these fibres consisted of 53% synthetic composition.

NUMBER AND % OF ITEMS THAT CONTAINED SYNTHETICS FOR EACH BRAND

BRANDS (total number of items that contained synthetics/total number of products reviewed)



% OF ITEMS THAT CONTAINED SYNTHETICS IN SUSTAINABLE COLLECTIONS

OVERALL % OF ITEMS THAT CONTAINED SYNTHETICS PER BRAND

Riddled with greenwashing

- Our research found that greenwashing is rife: The majority of brands made sustainability claims, and 39% of the products studied had a green claim attached to them. A closer look at brands' policies, targets and commitments revealed that greenwashing is clearly this season's hottest trend.
- Using the UK Competition and Markets Authority's new guidelines on green claims, we found that, of the 39% of products accompanied by a sustainability claim, a shocking 59% flouted green-claims guidelines in some way.
- Brands' scores varied significantly on this front. Zara and Gucci made the fewest claims in contravention of the guidance; on the other end of the spectrum, 96% of H&M's claims, 89% of ASOS's and 88% of M&S's flouted the guidelines in some way.
- Our findings highlight the scale of the problem, and should be considered against the backdrop of increasing consumer mistrust of brands' sustainability claims - only 18% of UK shoppers reportedly trust the sustainability information brands provide.<sup>3</sup> As such, our research shows the timeliness of the EU Commission's and other government bodies' plans to clamp down through legislation.
- Throughout this report, we present *Greenwashing Alerts* - examples of egregious greenwashing in which a brand markets a product as sustainable despite that product containing glaringly unsustainable elements. These included clothes claimed to be monomaterial or recyclable that are actually made from blended synthetics impossible to separate; garments tagged 'responsible' - with no explanation - yet containing blends of up to seven different types of fibre; and products made from 100% polyester, with no sustainability credentials, that are nonetheless included in a 'sustainability' collection.

Conscious collections not addressing fossil fashion

- Four of the brands had dedicated 'sustainable', 'conscious' or 'responsible' collections, but our research reveals that synthetics - particularly polyester - remain omnipresent in these collections.
- H&M's Conscious Collection actually contains a *higher* percentage of synthetics than its main collection (72% versus 61%, respectively).
- Zalando also uses a higher amount of polyester per garment in its sustainable range than its main collection. Considering these fibres are fossil-fuel based, this is highly incongruous with the green label applied to the collection.
- Of the products analysed across all brands, 6% contained recycled synthetics coming from PET bottles, yet - despite the lack of true circularity for recycled synthetics - this was brands' primary (token) gesture towards synthetics' sustainability.

Why legislation is needed

Our report clearly demonstrates that the fashion industry's addiction to synthetics is glaring - and will inevitably worsen, as no brand has made a clear commitment to changing course. Instead of addressing the root of the



problem - curtailing plastic-fibre overproduction at source - fashion companies continue to rely on delaying and distraction tactics, including greenwashing their questionable products to consumers. This is why it is more urgent than ever for policymakers to step up and find effective legislative solutions to put the fashion industry on a more sustainable track.

Policymakers must take measures to break the vicious cycle of cheap, synthetic material reliance and ensure the industry shifts to responsible production based on the principles of a truly circular economy. The upcoming EU textile strategy presents a significant opportunity to do this. The European Commission should commit to addressing the excesses of the fast-fashion model, which is inherently unsustainable. The Commission should introduce Extended Producer Responsibility (EPR) schemes, with mandatory and ambitious ecodesign measures,

and brands must become responsible for the end of life of their products - which should be separately collected, reused, repaired and ultimately recycled in a viable, environmentally benign, fibre-to-fibre process.

We also need EU regulation on green claims, as our investigation confirms that, in the Wild West of greenwashing, brands are currently getting away with making a sea of misleading claims that go entirely unchallenged. The European Commission is currently working on 'Empowering Consumers for the Green Transition' and 'Substantiating Green Claims',<sup>4</sup> two new legislative initiatives that should include measures to avoid greenwashing and make sustainability claims more reliable. The Commission should propose mandatory rules to address misleading claims.

The commission should also pay special attention to increasing supply-chain transparency and oblige companies to adopt due diligence with regards to human rights and environmental violations.

Specific recommendations for the European Commission, fashion brands, retailers and consumers are available at the end of this report.



## 1. Background: Fast fashion's dependence on fossil fuels

The fast-fashion business model has fundamentally transformed how clothes are produced and consumed. Over the last two decades, clothes production has doubled; clothing sales are growing faster than the world's population or GDP.<sup>5</sup> The average consumer now buys 60% more items of clothing than 15 years ago, yet we wear each garment far fewer times before disposal.<sup>6</sup> The global fashion industry is now a rapacious \$3.3 trillion industry - and it continues to grow faster, under a business model propelled by excessive consumption and overproduction, while generating huge profits built on the exploitation of cheap labour and environmental degradation.<sup>7</sup>

Cheap and constantly changing fashion has developed, in part, due to a business model in which fashion brands and retailers push down prices by aggressively cutting costs and using inexpensive materials - notably cheap synthetic fibres (e.g. polyester, nylon, acrylic and elastane) produced from oil and gas. As explored in the Changing Markets Foundation's report *Fossil Fashion: The Hidden Reliance of Fast Fashion on Fossil Fuels*,<sup>8</sup> the fashion industry's dependence on fossil fuel-derived synthetics has become the backbone of the catastrophic fast-fashion model. *Fossil Fashion* exposed the strong correlation between the increased use of synthetic fibres - of which polyester is the dominant and fastest-growing - and brands' ability to sell increasing volumes of cheap, disposable clothes. From production to end of life, synthetic fibres cause significant environmental issues, including via landfills, incineration, generating greenhouse-gas emissions and pollutants, consuming non-renewable resources and shedding microplastics.<sup>9</sup>

Cheap synthetic fibres are not only harmful, because they enable low-quality clothing that ends up as waste, but also perpetuate the fashion industry's dependence on fossil-fuel extraction in the midst of a climate emergency. As the transport and energy sectors' demand for oil and gas declines, the oil and gas industry is increasingly betting on the growth of petrochemicals for its survival.<sup>10</sup> The production of synthetic fibres currently accounts for 1.35% of global oil consumption, which exceeds the annual oil consumption of Spain. It is estimated that, by 2030, synthetic fibres will represent 73% of fibre production, of which 85% will be polyester.<sup>11</sup> This is a continuation of the trend over the past 50 years, during which the production of polyester has grown almost ninefold.<sup>12</sup> To exacerbate the situation, polyester is also produced from fracked gas, and there are investments on the way for producing it from coal, moving the industry in the exact opposite direction from where it should be heading.

# FAST FASHION AND THE RISE OF POLYESTER

THE MAJORITY OF FIBRE PRODUCTION IS SYNTHETIC AND COMES FROM FOSSIL FUELS

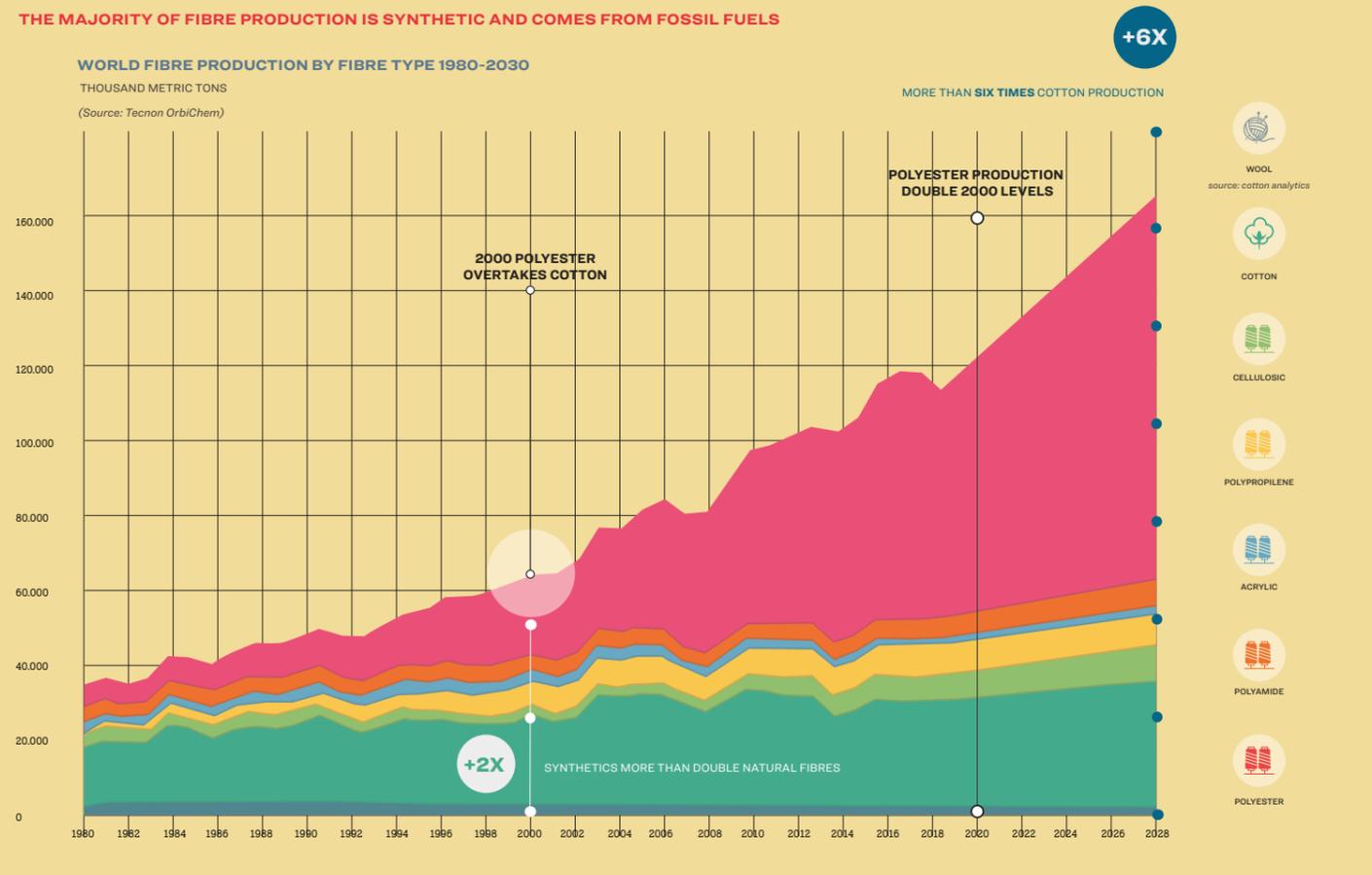


Figure 1.1: Fast fashion and the rise of polyester: world fibre production by fibre type 1980-2030

The fashion industry has embraced this recent growth in the production and consumption of polyester, and some of its initiatives even present synthetics as a more sustainable option than natural fibres. At the same time, no brand or initiative addresses the harmful impact of the oil and gas feedstock underpinning all plastic fibres, nor plastics' increasing role in shoring up fossil-fuel consumption. In addition, most industry initiatives ignore the massive problem of microfibres (see Chapter 2, Box 2.4).

At end of life, most garments end up in landfills or incinerators; fewer than 1% of items of clothing are recycled to produce new clothes. Globally, roughly one garbage truck of clothes ends up in landfill every second.<sup>13</sup> But despite a mountain of clothes being thrown away every year, there is still a lack of investment in scaling fibre-to-fibre recycling technology. The vast majority of recycled polyester in the textile sector comes not from recycled garments but from polyethylene terephthalate (PET) bottles.<sup>14</sup> Yet many fashion brands promote such garments as more 'sustainable' or 'responsible', despite this being a one-way road to landfill or incineration at end of life.



While all textile materials are associated with negative environmental and social impacts, today's unsustainable fast-fashion business model is deeply rooted in the fashion industry's dependence on fast-growing synthetic fibres. The solution is not replacing one type of fibre with another, but rather a radical slowdown of fashion, which is the principal cause of untenable volumes of waste, harmful microfibres and widespread pollution.

This report delves deeper into the practices of some of the biggest fashion brands. As part of our investigation, we first analysed the use, policies and practices around synthetic fibres of 46 clothing companies, based on their individual responses to a Changing Markets questionnaire. We then took a closer look at their commitments using the publicly available data on their websites. The second part of our investigation looked at the online stores of 12 brands and retailers, critically analysing their garments' composition and the claims they make to their consumers. In total, we analysed 4,028 items from the brands' and retailers' Spring/Summer 2021 collections. We chose a range of brands for this stage of our research, varying from high-end, luxury and sports brands to ultra-fast-fashion brands. Based on this research, *Synthetics Anonymous* aims to show the scale of fashion's use of synthetic fibres, reveals companies' greenwashing tactics and misleading claims regarding their products and targets, and highlights a way forward for the companies and regulators that truly want to change course to make the sector more responsible.

## BOX 1.1: Greenwashing claims and guidelines

Sustainability claims and product advertising based on green credentials are coming under increased scrutiny by legislators. Recent data from the European Commission showed that companies in the fashion industry are guilty of greenwashing – exaggerating their sustainability credentials without supporting evidence. According to the Commission, marketing products as 'conscious', 'eco-friendly' or 'sustainable' could potentially qualify as unfair commercial practices under EU rules.<sup>15</sup>

In response, a new wave of legislation is gearing up to push back against these overzealous and unsubstantiated claims. At the EU level, the Commission is currently working on 'Empowering Consumers for the Green Transition' and 'Substantiating Green Claims',<sup>16</sup> two new legislative initiatives that should include measures to avoid greenwashing and make sustainability claims more reliable. This initiative will require companies to 'substantiate claims they make about the environmental footprint of their products/services by using standard methods for quantifying them',<sup>17</sup> thus making claims reliable, comparable and verifiable across the EU. This initiative should not only inform consumers' purchasing decisions and protect them from false impressions but also lead investors towards making more sustainable decisions – and increase consumer confidence in green labels and information.<sup>18</sup>

In the UK, the Competition Markets Authority (CMA) has published draft guidance on consumer-protection law for all businesses making environmental claims. This guidance will indicate which products and services that claim to be 'eco-friendly' might actually mislead consumers. Likewise, this guide intends to help businesses understand their obligations and comply with regulations under consumer-protection law.<sup>19</sup> To examine the data presented in this report, we have used the CMA guidance for our analysis to establish when brands are making misleading environmental claims and false or deceptive statements. According to these guidelines, misleading environmental claims occur (among other circumstances) when a 'business makes claims about its products, services, brands or operations as a whole including falsely claiming to be a signatory to a code of conduct; or omits or hides information, to give the impression they are less harmful or more beneficial to the environment than what they really are'.<sup>20</sup> This could include advertisements, product labelling and packaging, or any other accompanying information – and even product names.<sup>21</sup> While the guidelines are not legislation, the CMA can take civil action and criminal enforcement against companies found in breach of them.



## 2. Where do brands stand on policies and commitments to curb fossil fashion?

In March 2021, the Changing Markets Foundation - along with Clean Clothes Campaign, Ethical Consumer, Fashion Revolution, No Plastic in My Sea, Plastic Soup Foundation and Stand.earth, WeMove Europe, and Zero Waste Alliance Ukraine - contacted 46 clothing brands (via email and letter) asking a series of questions about their synthetic-fibre use and policies. When brands responded at the group level (Kering and PVH Corp), or when public information on brands is largely at the group level (VF Corporation), we reported this at the group level. We did not consider these three groups in our statistical analysis because they were answering on behalf of their brands.

These brands were selected based on their high scores in the *Fashion Transparency Index 2020*,<sup>22</sup> and were combined with some of the most well-known brands to use synthetics, as well as with companies that have signed up to the Changing Markets' Foundation *Roadmap towards Responsible Viscose and Modal Fibre Manufacturing*.

Overall, 83% (38 brands) responded. In cases where parent groups - such as Kering - clearly answered on behalf of their brands, we considered the individual brands to have responded. We did not count a response that did not answer our questionnaire as an engagement. Only eight companies (17%) failed to respond to any of our questions: Gap, Gildan, Nike, Patagonia, Target, The North Face, Timberland and Walmart (see 'red zone' in section 2.1.3). The responses were reviewed, along with the information about synthetic-fibre use, recycling policies and supply-chain disclosures available on each company's website.

Three-quarters (34 out of 46) of the brands provided some level of transparency about their use of synthetics - either by percentage or weight - although this was not always broken down fibre by fibre. Only about half (26) disclosed both percentage and weight. No company made a clear commitment to phase out the use of synthetic fibres from their collections, while only six brands (Dressmann, Esprit, Hugo Boss, Puma, Reformation and United Colors of Benetton) indicated they want to avoid or reduce synthetics to some extent.

The research revealed that 'recycled' polyester made from PET bottles is the principal way in which brands are planning to curb the impacts of fossil fashion and embrace more 'sustainable' synthetics - well over three-quarters (85%) of brands indicated they used PET bottles as a recycled polyester feedstock. In contrast, none of the brands reported any high levels of fibre-to-fibre recycling targets or indicated a clear numerical or time-bound goal to move towards this type of recycling. Indeed, truly circular solutions are far from reaching commercial maturity, and many companies were focusing their energy more on delay-distract-derail tactics, such as using 'materials with a story' in their apparel - including ocean plastic and fishing nets - to signal their green credentials. Companies are deliberately shutting their eyes to the fact that using materials from other waste streams (such as PET bottles) to fulfil their 'recycled material' targets is a false solution to circularity. Similar disregard was found in the industry's approach to microplastics; most companies were sweeping this issue under the carpet by delaying any meaningful action on synthetic fibres until 'more research' is done. Summaries of these findings are set out in the following sections.

### 2.1. Use of synthetic fibres and commitments to move away from them

To evaluate the scale of brands' reliance on fossil fuel-based fibres, we asked them to provide information on their use of synthetics, including the share and tonnage they use for their collections. Three-quarters (32 out of 46) of brands gave some indication of the percentage of synthetic fibre used in their clothing, although in some cases this was not a breakdown by weight but rather a percentage of items that included synthetics. Slightly fewer (29 out of 46) brands reported their use of synthetics by weight - either directly to the Changing Markets Foundation or on their websites - and some provided full breakdowns per type of synthetic fibre.

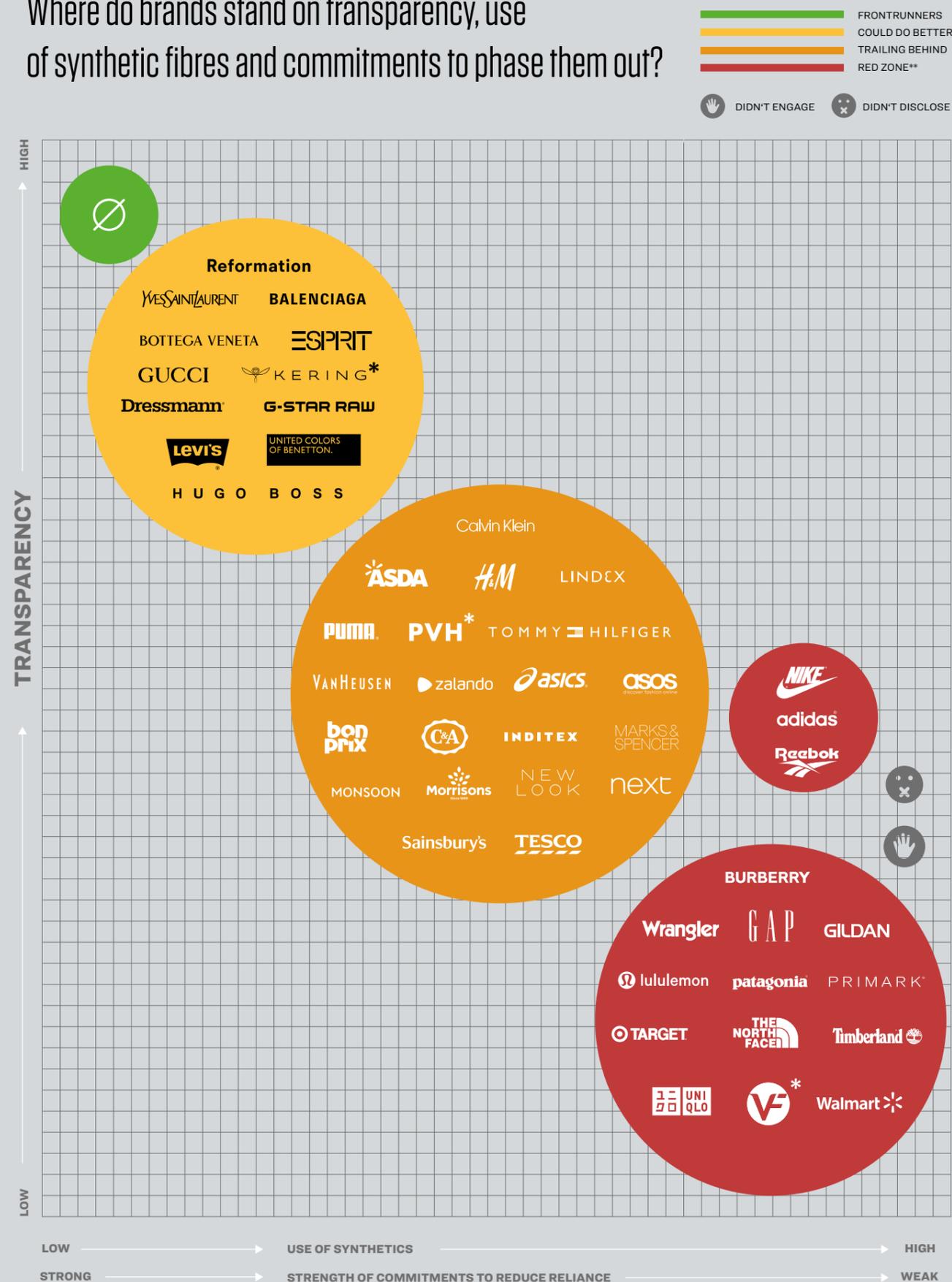
Companies were then assessed based on their level of transparency, as well as their policies and commitments to decrease or phase out fossil fuel-derived synthetic materials. Based on these assessments, they were classified into four categories according to the following criteria:

- 1. **Frontrunners:** Do not use synthetics, or have clear commitments to phase out the use of synthetic fibres from their collections. Since none of the 46 companies met these criteria, this category remains empty.
- 2. **Could do better:** Transparent about use, and either already use relatively few synthetics (under 25% of their total material use) or have clear plans to reduce their reliance on synthetics.
- 3. **Trailing behind:** Limited transparency about use, and either use a high percentage of synthetics or a relatively low - but rising - percentage.
- 4. **Red zone:** Little to no transparency at all.

The results are displayed in the infographic on page 21 and the questionnaire and full information disclosed in the brand table available in the annexes.

Please note that this brand table is a categorisation of brands based on their responses to us and their publicly available policies and disclosures. It is not a ranking. Companies in the categories are listed alphabetically.

## Where do brands stand on transparency, use of synthetic fibres and commitments to phase them out?



This is a simplified representation of companies' performance and not a ranking. More detailed information is available in the league table in Annex II.  
 \* Parent groups VF Corporation, PVH Corporation and Kering are included for references purposes only, because they replied on behalf of their brands or policies are set at the group level.  
 \*\*Many brands in the Red zone landed there due to lack of transparency and disclosure, rather than necessarily high use.



### 2.1.1. Could do better

This category consists of 11 companies that are making significant efforts to use relatively few synthetic fibres (under 25% of the materials they use), reduce further reliance on them and be transparent about the share and/or tonnage of synthetic fibres in their textile products.

Most brands in this category provided a detailed breakdown of their synthetic use fibre by fibre – either by tonnage or percentage use – including Asda, Dressmann, Esprit, G-Star, Kering (Balenciaga, Bottega Veneta, Gucci, Saint Laurent) and United Colors of Benetton.

The Kering group's luxury brands reported the lowest percentage of textile products made of synthetic fibres. Synthetic fibres made up 4% of the raw materials used by the Kering group as a whole, although one of its brands (Saint Laurent) reported that less than 1% of their raw material was synthetic. Levi Strauss & Co – primarily a denim company – reported that 9% of its fibre mix is synthetic.

Some brands indicated they were trying to avoid or reduce their use of synthetics. Dressmann – which reported that 16% of its total fibre consumption in 2020 was synthetic – said that, until there is more scientific evidence on microfibres, it will continue keeping its share of synthetic fibre fairly low.

US brand Reformation reported that 4–5% of its textiles are made with synthetics, but that synthetics don't generally meet its fibre standards, because they are fossil-fuel based and can lead to issues such as microplastic shedding. Reformation only uses synthetics in its main apparel items when '*needed for fabric performance and stretch*' – and even then, only in a less-than-10% blend with other fibres. Majority-content synthetics are allowed in its swim and activewear products, however, and it reported an increase in its use of synthetics since launching its athleisure and swim product categories.

Esprit stated that, although it does not have a concrete goal, it is working on reducing its use of synthetic fibres and using them only when certain features are needed. It reported a reduction to 24% in the financial year 2019/20 – down from 29% in the financial year 2018/19.

United Colors of Benetton said 80% of the fibres in its garments are of natural origin, and therefore have a lower impact on the environment. In addition, the company said, about half of garments are made of monofibre material, making recycling easier. However, Benetton did not elaborate on any practices it has to recycle clothes into new clothes, and said it does not invest in fibre-to-fibre recycling technologies.

Hugo Boss said it is aware that synthetic fibres can have a potentially negative impact on the environment, and has therefore implemented various measures to keep the proportion of such fibres as low as possible. It added that the proportion of synthetic fibres it used increased slightly in 2020 compared to 2019, but said this was related to a decreased demand for formalwear due to Covid-19, and that its usage of synthetics did not increase in total.



### 2.1.2. Trailing behind

Almost half (20) of the companies contacted provided some level of transparency about their synthetic use and whether they had plans to scale it up or down. Some brands in this category acknowledged the environmental issues associated with the use of synthetic fibres, but they largely failed to make strict commitments to reduce their dependence on them.

Online retailer Zalando, which now makes a quarter (26%) of its items from synthetic fibres, said it had decreased its polyester use in the past years (from 28% in 2018 and 31% in 2019 to 16% in 2020). It said it '*fully supports*' the

shift away from synthetic fibres based on virgin fossil-fuel feedstocks towards '*safe and recycled or renewable feedstocks*', but made no clear commitment to do this itself. In comparison, ASOS reported a 16% increase in its use of synthetic fibres since 2019, and 29% of its textile products now come from synthetics. Like Zalando, ASOS did not indicate any plans to move away from fossil fuel-based fibres.

High-street giant H&M said 27% of its fibre use, by weight, was synthetic in 2020, but did not disclose its tonnage use. However, considering it is the world's second-biggest fashion group, we can assume its tonnage use is substantial. H&M said it has been reducing its dependency on conventional synthetic fibres over the past years, and has '*aggressive plans*' to reduce it further. However, this primarily hinges on its aim to increase its use of recycled synthetics (see section 2.2.2).

In comparison, Inditex said synthetics represented 38% of its total fibres in the financial year 2020 and reported one of the highest use of synthetics by weight – comparable to that of sports giant Nike (Inditex used 151,239 tonnes of synthetics in the financial year 2020, while Nike used 152,723 tonnes of polyester). Inditex did not disclose plans to phase out synthetics.

Asda said its synthetic-fibre use reduced from 36% in 2018 to 30% in 2020, but that it does not currently have any plans to reduce it.

Luxury group PVH Corp. – which includes brands Calvin Klein, Tommy Hilfiger and Van Heusen – did not disclose its share of synthetic fibres; however, based on the tonnage figures it publicly reports, it is at least 20%.<sup>A</sup> Neither did the group disclose any plans to decrease its use of synthetics. Based on the figures disclosed to Changing Markets for the financial year 2019, and the figures published in PVH Corp.'s *2019 Corporate Responsibility Report* from financial year 2018, polyester use increased while nylon use stayed at a similar level.

Similarly, New Look – which reported the highest share of synthetics, after sports brands (see Box 2.1), and makes two-thirds (66%) of its products from synthetic fibres – said it has no policies relating to synthetic-fibre use and no plans to phase it out.

Other high-street companies in this category with a substantial use of synthetics are M&S (54% by product volume in 2020) and Morrisons (47% of textile products made of synthetic fibres).

#### BOX 2.1: Where do sports brands stand on synthetic-fibre use?

All sports brands analysed indicated they use very high proportions of synthetic fibres. Adidas, which also replied on behalf of Reebok, landed in the red zone and said approximately 90% of its apparel articles are made or blended with synthetics – the highest share of synthetic use reported. Likewise, Asics also said the '*vast majority*' of fibres used in its sports products are synthetic.

Nike, which also landed in the red zone, did not disclose its share of synthetic fibres, although we can assume it is sizeable. Moreover, it is one of the biggest users of synthetics by tonnage, and figures show it uses far more synthetics than cotton (publicly reported using 152,723 tonnes of polyester in FY2020).<sup>23</sup> While its use of polyester fluctuated during the past years, its public figures show that it has increased overall by 9% since 2015.

In comparison, only around half of Puma's total fabric materials are synthetics, showing a lower percentage is feasible in sportswear. Puma also said it is endeavouring to gradually reduce the proportion of polyester it uses over the next five years. While Puma did not set out a clear-cut commitment, this signal of direction contrasts with other sports brands, which report a very high use of synthetics and no plans to curtail it.

<sup>A</sup> Based on use of individual materials reported in PVH's *2019 Corporate Responsibility Report*, synthetics made up at least 19.5% of materials in the financial year 2018, as it used approximately 161,000 MT of total material and at least 31,400 MT of synthetics. Available at: <https://www.pvh.com/responsibility>.



### 2.1.3. Red zone

The 15 worst-performing brands, assigned to the bottom category, are those with minimum-to-no transparency about their use of synthetic fibres and/or that failed to engage with the issue entirely. The majority of brands in this category (11 out of 15) are North American (US or Canada).

Twelve of these brands either did not respond to our questionnaire or responded but did not disclose information on synthetic use, and have no numerical information on synthetic use on their websites. These were: Burberry, Gap, Gildan, Lululemon, Patagonia, Primark, Target, The North Face, Timberland, Uniqlo, Walmart and Wrangler.

For example, luxury brand Burberry said synthetics - namely nylon and polyester - account for a *'small amount'* of its main materials, but did not disclose further information, while Lululemon said a *'material portion'* of its products are synthetic. Lululemon said it will report its material mix in its impact report later this year.

Despite numerous sustainability claims, Patagonia did not respond to our questionnaire, and its website neither provides information about its overall use of synthetics (in tonnage or percentages) nor outlines any specific commitment to reduce reliance on them. Its *'buy less demand more'* webpage clearly acknowledges the climate impact of clothes, and encourages people to *'join the fight against irresponsible, fast-fashion manufacturing'*. However,

its webpage also states: *'We use polyester in most of our products, which mix both virgin and recycled materials'*, and: *'We still use a great deal of nylon'*, indicating that synthetics still represent a significant portion of production.

## 2.2. Recycled synthetics: the pressure-release valve of fast fashion

The second part of our questionnaire focused on brands' policies and practices around the use of recycled fibres. This included questions on policies or goals regarding the use of recycled synthetics, the percentage of synthetics that currently comes from recycled synthetic fibres, the share of clothing currently recycled to new clothing, the feedstock and production method, and any investment they are making into fibre-to-fibre recycling technologies.

While many companies provided insight into their recycled synthetic collections and plans or commitments to increase their use of recycled synthetics - especially recycled polyester - our findings show these predominantly cover downcycling of PET bottles into textiles, instead of fibre-to-fibre recycling. Indeed, fibre-to-fibre recycling is miniscule, representing 0.1-1% of material use - either from offcuts during processing or as post-consumer waste.<sup>24</sup> While some brands are rolling out technologies, pilots and apparel collections based on fibre-to-fibre recycling, the numbers remain very small; it seems that companies are not making the necessary investments to ensure a future in which clothes can be recycled back into clothes. Instead, downcycling PET bottles to textiles is being presented as the main circular solution. In Box 2.2, we explain why this will not solve fast fashion's synthetic-fibre problem. For this reason, we have decided to present the information but not categorise or rank companies on their commitments to increase their recycled-fibre use. More detailed information is presented in Table 2 (Annex II).



## BOX 2.2: Downcycling plastic bottles to clothes

In response to the growing spotlight on the fashion industry's unsustainable business model – and the waste crisis it is creating – brands have increasingly adopted recycled polyester and nylon as an easy fix. Recycled polyester has been heavily marketed as a sustainable and responsible material, and presented to consumers as a more conscious choice. However, looking beyond brands' marketing reveals that today's recycled polyester is a false solution – and a far cry from a truly circular business model. Further examples of greenwashing include brands promoting their sustainable image by claiming to use ocean plastic or recycled fishing nets in their products; for example, Patagonia and Adidas advertise their use of ocean plastics as a better alternative – or '*eco-innovative replacement*' – for virgin plastic, and several companies (Bonprix, Gucci, Dressmann, H&M, Reformation and United Colors of Benetton), marketing their use of Econyl, a regenerated nylon made from fishing nets and other waste. But current volumes of extraction from the ocean are miniscule; they do little to stop the flow of plastics into the environment in the first place, nor to reduce the industry's addiction to plastic-based fibres.

The vast majority of recycled polyester is sourced from recycled PET bottles that have been mechanically recycled into polyester fibre for clothes, the total share of which has increased from 9% to 14% in the space of a decade.<sup>25</sup> While recycled polyester is applauded for requiring 59% less energy to produce (but still more than cotton, wool and hemp)<sup>26</sup> and emitting less CO<sub>2</sub> than its virgin counterpart,<sup>27</sup> these figures do not take into account the impacts of the production of its feedstock – the plastic bottles.

The method of downcycling PET bottles to polyester is problematic in several ways. First, PET bottles can generally already be recycled a number of times – in a closed-loop, bottle-to-bottle recycling system – if collected through clean collection streams, such as through deposit-return systems.

Indeed, because mechanical recycling makes the fibre lose its strength, recycled PET clothes are not guaranteed to be infinitely recyclable, and often lose durability when repurposed multiple times. For this reason – depending on the fibre – recycled PET fibre requires mixing with virgin synthetic to achieve the required material property and performance.<sup>28</sup> In other words, downcycling PET bottles to clothes is not a circular solution, and eventually these products end up in landfill. In comparison, PET bottles can be recycled back into PET bottles many times if they are part of clean, separated waste streams. Refillable PET bottles can be reused or refilled up to 15 times before recycling, eliminating the need to manufacture new bottles and avoiding many of the environmental impacts associated with their production and end-of-life management. As such, turning plastic bottles into clothes should be considered a one-way ticket to landfill, incineration or being dumped in nature.

Second, there is direct competition between the packaging and clothing industries for PET bottles. The introduction of legislation in the EU, and several jurisdictions around the world, regarding recycled content targets for PET bottles will significantly influence demand from bottle manufacturers. This means competition from fibre production will stymie the amount of recyclable PET bottles being used for bottle-to-bottle recycling. In a circular economy, materials should be reused and recycled like-for-like to prevent waste and unnecessary extraction of virgin materials – in other words, clothes should be made into new clothes, and packaging into new packaging, rather than poaching from other waste streams.

This prompts questions about why the industry is using PET bottles instead of the millions of tonnes of textile waste going into landfill at a rate of one garbage truck per second.<sup>29</sup> Unfortunately, textile-to-textile recycling is still in its infancy, accounting for less than 1%,<sup>30</sup> and the industry has invested very little in making this a reality. With currently available technology for recycling polyester, cotton and wool fibre, the maximum percentage of fibre-to-fibre recycled material that can be used is only 20–30% – the rest is topped up with virgin material.<sup>31,32</sup> While recycling monomaterials is already tenuous, clothing is often made from blended textiles, which are highly complicated, costly or impossible to separate and recycle. For example, for elastane – a common addition to today's clothing – virtually no recycling methods are currently available. As a result, elastane is a serious barrier to recycling clothes.<sup>33</sup> Additionally, chemicals are often part of production, remain in products and, thus, are recycled into new garments along with the fibre.

Third, recycled polyester does not restrict the shedding of microplastics, meaning billions of plastic particles still end up reaching the ocean, the air we breathe and our food chains (see section 2.2.3).

Moreover – as highlighted in a recent report, published by a large number of civil-society organisations, setting recommendations for the upcoming EU textile strategy<sup>34</sup> – basing sustainability strategies on the idea that we can continue to consume disposable plastic goods (because they can be recycled into more products) is highly problematic. This idea does not address the fundamental issue of perpetuating disposable solutions and over-consumption of natural resources. Indeed, these strategies encourage users to buy more clothes or throw away garments sooner, in the belief they can be recycled in some magic machine.

At such a small scale, and with significant technological obstacles to overcome, it is unlikely that recycling synthetics will tackle fast fashion's problems in the short to medium term. While it is crucial for the industry to ramp up investment and focus efforts on truly circular recycling technologies, the only way to bring down the growing waste and plastic-pollution crisis – which these industry tactics supposedly aim to achieve – is to curtail overproduction in the first place.



### 2.2.1. Brands' commitments to recycled synthetics

The majority of brands have a numerical goal of some kind to increase the use of recycled synthetic fibres. However, none of these are accompanied by goals to reduce overall synthetic use. No brands set out an intention to move to only fibre-to-fibre recycled synthetics, and investments in this solution are highly limited and slow-moving, hindering a move to a circular economy. Brands' emphasis was squarely on recycled fibre from other waste – principally PET bottles – although some brands outlined initial policies to incorporate some fibre-to-fibre recycling (see section 2.2.2).

Some brands only set targets for recycled polyester, while others covered all synthetic fibres. These goals are of varying ambition; while some companies (e.g. Esprit, Inditex, Patagonia) aim to use only fully recycled synthetics in the next five years, others aim for smaller percentages (Asda, Nike, Walmart, Zalando) and/or longer timeframes (H&M, The North Face, Timberland). Many brands have a target to replace all virgin polyester with its recycled equivalent within the next decade (Adidas and Reebok by 2024, Burberry and Lululemon by 2025, Asics by 2030).

#### BOX 2.3: 2025 Recycled Polyester Challenge

Several clothing companies have signed up to the 2025 Recycled Polyester Challenge, launched by the Fashion Industry Charter for Climate Action and Textile Exchange. The challenge asks signatory companies to commit to replacing their use of virgin polyester with a recycled equivalent, and challenges them to increasing the overall industry share of recycled polyester from the current average (14%) to 45% by 2025. This means that signatory brands need to hit much higher targets; as such, the initiative 'encourages' brands to commit to 80–100% recycled polyester. However, this is a voluntary target – not a requirement – and has no enforcement mechanism. Textile Exchange plans to annually report the results, using 2019 volume data as a baseline; however, it is not clear whether the results will be brand-specific or reported for the industry as a whole.

Neither does the challenge stipulate what feedstock or recycling technology should be used to achieve its targets. It notes that recycled polyester from plastic water bottles makes up the vast majority of recycled polyester today, although it does add that 'textile to textile recycling will be a necessary part of reaching our goal'.<sup>35</sup> Furthermore, the initiative does not require the products made from this recycled feedstock to themselves be recyclable, meaning that responsible end-of-life options for clothes could be hampered.

The website lists several signatory brands, including Adidas, G-Star RAW, H&M, Inditex, Lululemon, Reformation and VF Corporation (parent group of The North Face and Timberland). Companies committing to this initiative are required to annually report their polyester consumption to Textile Exchange's Corporate Fiber and Materials Benchmark survey;<sup>36</sup> as such, it is surprising that many of these companies – including Adidas, H&M, Lululemon and VF Corporation – failed to disclose their polyester tonnage to us.

Many of the targets that brands disclosed to us are lost in a sea of green claims and highly misleading to consumers. These include targets to use 'sustainable', 'preferred', 'sustainably sourced' or 'sustainably made' materials (Dressmann, H&M, Inditex, Lindex, M&S, Monsoon, Nike, PVH, Reebok, The North Face and Wrangler's). The criteria for these claims are often ill defined and lead to greenwashing. Focusing on 'sustainable' materials could also open the door for switching to biobased rather than recycled synthetics (see Bonprix, Esprit, G-Star RAW, Reebok and Wrangler) – a route that could create other environmental problems, such as requiring large areas of land to grow crops for these materials. Additionally, most of the companies claiming their products are recyclable do not have takeback schemes in place to ensure these items are actually collected and recycled into new clothing.

Such targets could carry major ramifications for brands in the future. In light of upcoming European Commission initiatives on substantiating green claims,<sup>37</sup> and the UK CMA's plans to regulate greenwashing and misleading

marketing claims about brands' products and commitments,<sup>38</sup> many brands could risk violating regulations by being ambiguous, deceitful and exaggerating sustainability credentials without supporting evidence.

### 2.2.2. How are brands planning to achieve their recycled synthetic targets? Recycling vs downcycling

Brands' responses, and the information publicly available on their websites, clearly indicate that fashion brands are using and selling recycled PET as a perceived antidote to the fossil-fashion problem. Where brands disclosed their main feedstock for recycled polyester, this was always PET bottles. Well over three quarters (85%) of the brands either said PET bottles were their main source of recycled polyester or mentioned PET bottles as their only recycled polyester feedstock. For example, Adidas said that, for polyester, feedstock predominantly comes from used PET bottles, while Asda said 12% of its total 16.5% recycled materials is made from PET bottles. REPREVE was a commonly mentioned brand of recycled PET polyester.

In some cases, other plastic feedstocks were given, such as 'ocean-bound' plastic waste. On its website, Patagonia emphasises it is looking beyond plastic bottles, that one option could be recycled ocean plastics, and that it will use NetPlus Recycled Fishing Nets<sup>39</sup> in its Spring 2021 season. Similarly, Adidas uses Parley Ocean Plastic – from which it produces around 15 million pairs of shoes – as an 'eco-innovative replacement' for virgin plastic.<sup>40</sup>

Brands reported a larger variety of feedstocks for recycled polyamide and nylon, such as fishing nets, old carpets and industry waste. Several mentioned the use of Econyl<sup>41</sup> – a regenerated nylon made from fishing nets, fabric scraps, carpet flooring and industrial plastic. While using feedstock such as ocean plastic and fishing nets may help raise awareness of how much recyclable material is thrown out, and/or ends up in the ocean, making garments out of plastic waste does very little to stop the flow of plastics into the environment in the first place<sup>42</sup> – and can, in many cases, justify the continuous use of plastic.

A number of brands either said they had no visibility over the feedstock used for their recycled synthetic collection or failed to disclose any information about it, including New Look, Target, Zalando and the Kering group's brands (Balenciaga, Bottega Veneta, Gucci and Saint Laurent).

In contrast to over three-quarters of brands jumping on the bandwagon of downcycling PET bottles to meet their 'recycled' polyester targets, none of the brands reported a high level of fibre-to-fibre recycling targets, nor indicated a clear goal to move towards this type of recycling. The majority either did not disclose any amount of fibre-to-fibre recycling (e.g. M&S, Monsoon) or said they do not have visibility of this figure (New Look). Several brands (e.g. Morrisons and Esprit) noted the difficulty of tracking products once they are sold.

There were some nods towards using pre- or post-consumer waste, but in most cases companies did not disclose a percentage. H&M said its recycled polyester is made from 10% pre- and post-consumer textile waste, although 90% still comes from PET bottles. It also said around 99% of its recycled polyamide comes from pre-consumer sources – largely in-house wasted yarn.

While Kering said it 'encourages' its houses to choose recycled polyester from the internal recycling processes of suppliers' fabric scraps over PET packaging, it did not provide further details. Similarly, Uniqlo's parent group, Fast Retailing, said its recycled products currently incorporate collected used polyester clothing and scraps, as well as PET bottles, without disclosing proportions. Closer investigation of Uniqlo's clothing collection (see Chapter 3) found no products made from recycled synthetics within the sample. Asics said it uses some recycled polyester made from textile waste and pre-owned clothing, although most still comes from PET bottles. Next said its aim is for its recycled fibres to come from fibre-to-fibre recycling in the longer term, but did not give any concrete dates or details.

Adidas is making some efforts to create a circular product, with the launch of the successor to its UltraBOOST DNA LOOP<sup>43</sup> shoes, available in larger volumes in Spring 2021. The shoe is made from a single material, fused together without glue, and can - according to the company - be returned to Adidas, where it is shredded and reused to produce a new shoe. Adidas said its pilot projects include fibre-to-fibre recycling technologies, and its website says it is working to make products easy to recycle, with the goal of 'completely eliminating waste'. Similarly, Nike's Reuse a Shoe programme<sup>44</sup> recycles used trainers into other materials, and its Grind programme<sup>45</sup> recycles manufacturing scrap, unsellable products and worn-out sneakers back into Nike's own products and for other purposes. However, these companies provides few details of the recycling technology used for these products, nor the environmental impacts associated with it; neither do they disclose what percentage of their overall products is currently recycled this way.

While many brands indicated they are planning to invest in - or work to advance - fibre-to-fibre recycling technology, Inditex and Target were the only brands to disclose how much they have invested into it. Inditex said it has invested €3 million (\$3.5 million) to fund textile recycling-related activities, including the MIT-Spain Inditex Circularity Seed Fund. Target's 2020 corporate responsibility report<sup>46</sup> says it has invested over €819,530 (\$1 million) in 'textile-recycling' technologies. Broadly, the industry as a whole exhibits an overwhelming lack of focus on scaling up investments into closed-loop recycling solutions, as opposed to increasing their capacity for bottle-to-clothes recycling.

H&M, Asics and Kering mentioned support of or investment in Worn Again Technologies,<sup>47</sup> which is developing recycling technology to convert polyester and polycotton blended textiles and PET plastic into 'circular' raw materials. While a promising technology, the degradation of the fibre chains over time means it will not allow the infinite recycling of plastic materials without virgin input.<sup>48</sup> H&M and the Hong Kong Research Institute of Textiles and Apparel have a number of other technologies in production, focusing on polycotton blends. The Green Machine Technology uses a method to recover polyester fibre from cotton blends.<sup>49</sup> H&M also launched Loop [sic] in-store technology, which is a mechanical recycling technology that shreds old garments and re-spins the fibres to produce new clothing. While this is certainly a positive step for the industry, the material input requirements for the process are not clarified. This type of technology also requires fibres to be mixed with virgin material, as reinforcement, to ensure sufficient durability - the extent of which is also not detailed.<sup>50</sup>

To foster a circular model, the big elephant in the room - in addition to the need to have technological infrastructure in place for commercial-scale fibre-to-fibre recycling - is the implementation of takeback schemes, through which brands can guarantee that, at end of life, discarded clothes are actually collected for repair, reuse or recycling. Without this, any claims about brands' items or collections being 'recyclable' or 'circular' are misleading and incorrect.

Our research shows that, while a growing number of brands (Adidas, Inditex, Monsoon, Nike and Puma) are offering takeback options for used clothes, few - if any - of these programmes are currently geared towards fibre-to-fibre recycling. While the existence of these schemes could help to support this in the future (if brands choose to put greater emphasis on it), none of the companies indicated that the clothes they currently collect are for recycling into new clothes. Indeed, many brands didn't disclose what happens to the clothing upon collection. A recent study by Textile Exchange found that the majority (52%) of companies using in-store clothing-takeback schemes do not actually know what happens to their collected materials, or 'have little visibility' of this.<sup>51</sup> Others (C&A, Dressmann, H&M, M&S, Monsoon, Morrisons and Tesco) offer takeback schemes for reuse or recycling of clothing via charity schemes, where brands have no overview of what happens to collected items. In some cases, collected items are downcycled into different items,

such as industrial used fabrics (Monsoon) or emergency clothing aid for refugee camps (Fast Retailing) - or are even used to produce energy from waste (Fast Retailing, Nike) - which would surely surprise consumers who return the clothes for recycling.

Several brands offer credits, to be spent in-store, in exchange for donating old clothes. As such, not only are the clothes collected not guaranteed to be recycled or reused, but the store credit also aims to retain customers and persuade them to buy more cheap clothes, further fuelling overconsumption and the growing waste crisis. This also encourages consumers to throw away clothes with a clearer conscience, in the belief they will be repurposed. For example, Monsoon's website<sup>52</sup> says customers get a £10-off voucher to spend on new purchases of £50 when they donate unwanted Monsoon clothing. Gap, Levi Strauss & Co., The North Face and Timberland also have second-hand programmes that give customers store credit in the form of discounts.

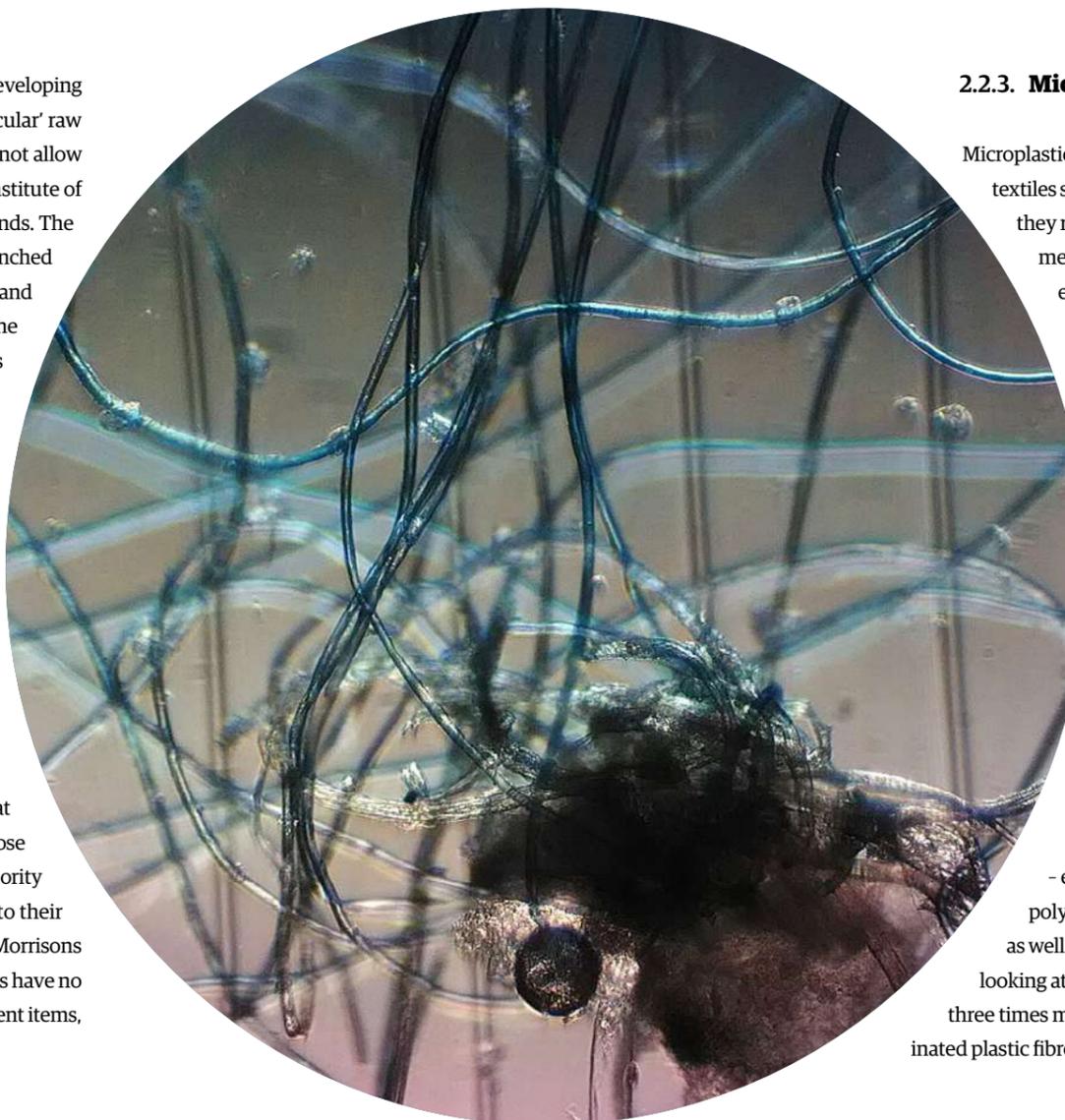
In principle, the rise in the number of takeback schemes and repair-and-reselling platforms reported by brands - such as Asda, Gucci, H&M, Kering, Patagonia and Tommy Hilfiger - is applaudable; but the current fashion system, established on overproduction, diminishes the impact of such initiatives. Making small, incremental changes to companies' business models while continuing to promote the sale of thousands of cheap products - with a huge environmental and climate impact - will neither lead to transformational change in the industry nor curb the tremendous environmental externalities of fast fashion.

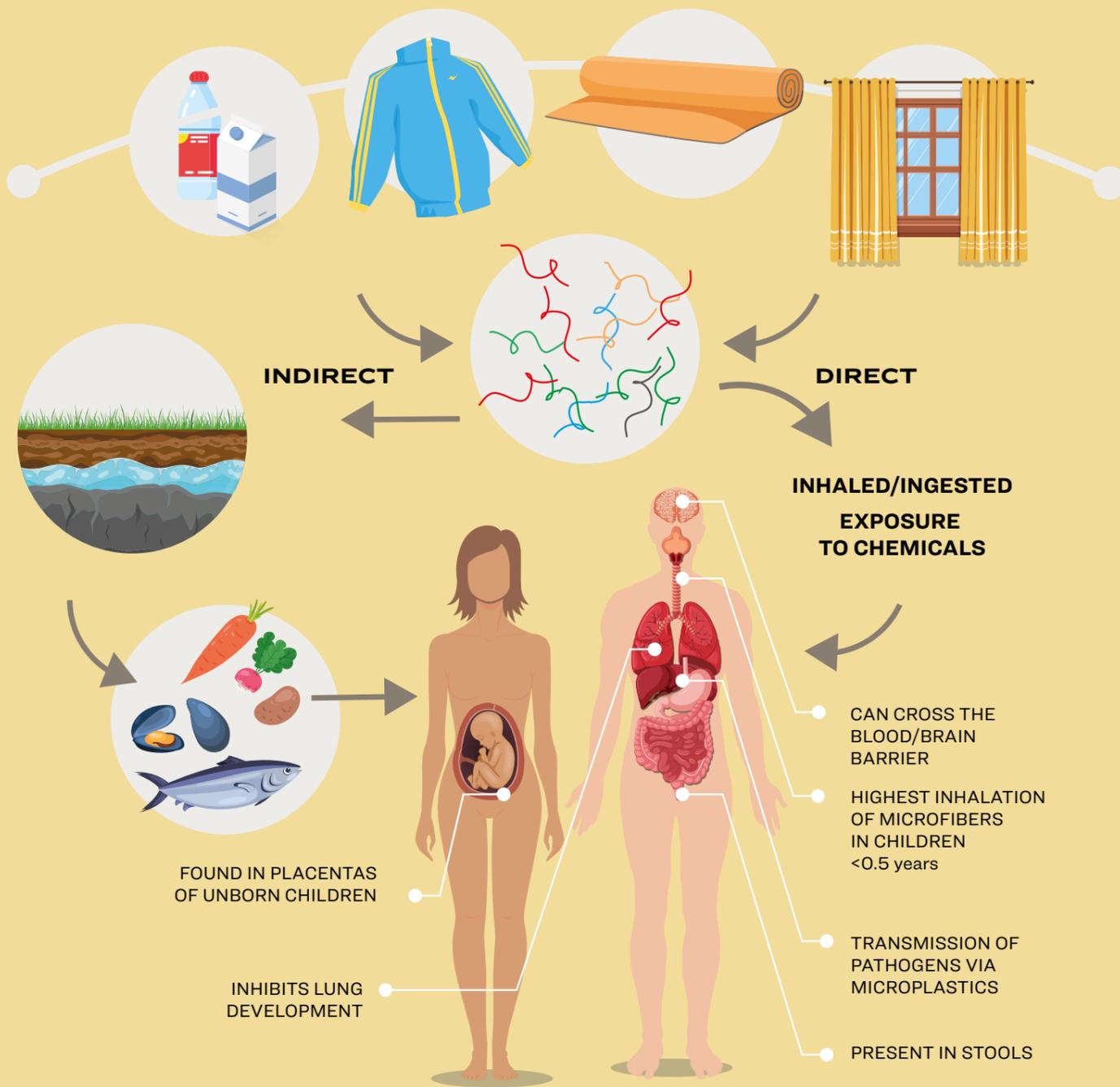
### 2.2.3. Microplastics: Swept under the carpet

Microplastic pollution has become a global challenge, a significant proportion of which is caused by textiles shedding. Every time synthetic clothes are manufactured,<sup>53</sup> worn, washed or disposed of, they release microplastics. These tiny particles have already tainted the most remote environments on the planet - from 2,000 metres below sea level to the remote Arctic.<sup>54</sup> They have even been found falling in the form of 'plastic rain'; a recent study found that 1,000 metric tonnes of microplastics (equivalent to over 120 million plastic water bottles) - mostly from synthetic fibres used for clothing - fall on 11 protected areas in the US every year, deposited there by wind and rain.<sup>55</sup>

Moreover, research increasingly warns that microplastics end up in the bodies of animals and humans. An estimated one in three fish eaten by humans contains microplastics. The smallest microplastics can also be consumed by zooplankton, which are then eaten by creatures such as oysters,<sup>56</sup> as well as by larger animals such as whales.<sup>57</sup> They are also found closer to home - we are eating and drinking plastic fibres found in both outdoor and indoor environments.<sup>58</sup> Indeed, about one-third (33%) of fibres in indoor environments are plastic fibres,<sup>59</sup> and we breathe in at least 13,000-68,000 plastic microfibrils from our clothing, carpets, curtains and other textiles every year.<sup>60</sup>

While the research on the health impacts of microplastics is ongoing, several studies already show alarming results. They are now present in human lung tissue, stool, stomachs - even the placentas of unborn babies.<sup>61,62</sup> Microplastics from textiles (namely nylon and polyester) have been found to inhibit the lungs' ability to repair damage caused by Covid-19, as well as to inhibit the development of lung tissue in children.<sup>63</sup> A recent research from Australia looking at microplastics present in people's homes, warned that children under six inhale around three times more microplastics than the average adult.<sup>64</sup> Recent studies have also found that contaminated plastic fibres from waste may even lead to Covid-19 transmission through the air that we breathe.<sup>65</sup>





A 2021 study by the California Ocean Science Trust and a group of interdisciplinary scientists concluded that precautionary measures, such as reducing the sources of microplastics, may be the most effective way to tackle the problem.<sup>66</sup> The study acknowledges that microfibres from textiles are among the most common microplastic materials found in the marine environment to date, and are bound to grow; as such, they need to be cut back at their source.



#### BOX 2.4: How are brands addressing microfibres?

The evidence highlights that microplastic pollution will become an ever-worsening environmental problem, and that measures need to be taken now, but our research found that very few clothing companies are taking any concrete action to stop the immediate release of microfibre from their clothes. Most companies analysed are addressing this issue by joining voluntary industry groups, or are holding off on any meaningful action until 'more research' is done.

Important as research is, the idea that much more testing needs to be done to confirm that microplastics are a big problem is a dangerous abdication of responsibility – especially after years of studies. Many brands (Fast Retailing, Gap, H&M, M&S, New Look, Next, VF Corporation) said they are investing in new research, or collaborating with research institutes, without outlining what precautionary actions they are undertaking in the meantime. Even certain brands' stronger-sounding actions appear to still be stuck in the stage of testing or understanding the impacts of microplastics. For example, Adidas said it is proactively working on microfibre pollution, and that it 'recognise[s] the importance of taking responsibility for this topic as a sporting goods company'. It said it has established a cross-functional working group and is collaborating with supply-chain partners, research institutes and external industry working groups, including The Microfibre Consortium. Its website says it is working on a common test method, which it 'expect[s] to be available in 2019', to create products that shed a minimum of microfibres and develop new material solutions for textiles.<sup>67</sup> However, at the time of writing (2021), nothing new has been reported on this issue.

Similarly, despite saying on its website that microfibre shedding has taken on a 'heightened urgency' for the company in the past two years, Patagonia is still at the stage of investing in studies on microfibres and organisations working to address marine-plastics pollution, with an aim to better understand its own impacts and – 'ultimately' – find ways to improve its practices.<sup>68</sup> G-Star launched a call in 2016, alongside the Plastic Soup Foundation, to support the international Ocean Clean Wash initiative to develop solutions, but has not reported any individual progress as a company since.

Worse still, companies such as Asda, Nike and Primark appear to emphasise uncertainty over the extent of the clothing industry's impact as a reason for their hesitance to act against microfibre shedding. Nike – one of the champions of synthetic use, by tonnage – says on its website that 'microfibres can originate from synthetic or natural materials', and argues that the science behind the major sources and potential environmental impacts of microfibres is not fully understood.<sup>69</sup>

While indeed all fibres – including natural ones – shed microfibres, which end up in our environment, the problem of synthetic microfibres or microplastic is amplified by several additional factors. First, synthetic fibres already account for 69% of all textiles

produced in the world, and projections are that this share will grow further.<sup>70</sup> Cheap clothes made from plastic fibres are also often much less robust, and some fashion brands' garments have been found to start disintegrating after only a few washes.<sup>71</sup> For this reason, they are a significant source of microplastic pollution. Synthetic textiles are the main source of primary microplastics in developing regions; in Asia, Africa and the Middle East.<sup>72</sup> According to a 2021 study, conducted by the Galway-Mayo Institute of Technology in Ireland, synthetic fibres account for 35% of marine microplastic pollution.<sup>73</sup> This is echoed by a one-year-long study, sampling from Florida's coastline, according to which over one-third (34.8%) of microplastic pollution comes from washing synthetic textiles.<sup>74</sup> Another recent study (2020) found that synthetic clothing contributes vast amounts of terrestrial plastic pollution, and that 176,500 metric tonnes of synthetic microfibrils – chiefly polyester and nylon – are released annually onto land across the globe.<sup>75</sup> Polyester appears to be particularly problematic, with another study finding that 73% of synthetic microfibrils throughout the Arctic Ocean came from this fibre.<sup>76</sup>

Second, while the biodegradability of natural fibres can be hindered by processing and dyeing, synthetic fibres made from fossil fuel are fundamentally not biodegradable – they persist in our oceans, soil, air and even bodies. A recent study on biodegradation in the marine environment showed that cellulosic fibres degraded 100% within 30 days in the marine environment, while fabrics containing polyester remained relatively intact after more than 200 days in seawater.<sup>77</sup> Furthermore, as mentioned, the increasing evidence on the deleterious effect of synthetic microfibrils on human health calls for prompt and precautionary measures to prevent this pollution from escalating.

Excuses and delays from the fashion industry because '*all materials shed microfibrils*' and '*more research is needed*' do not stand up to scrutiny – and are an industry tactic to distract and delay meaningful action while continuing to grow their reliance on cheap synthetic fibres.

What's more, nearly a quarter of companies analysed (12) mentioned nothing whatsoever about microfibrils on their websites and/or their responses, including Asics, Bonprix, Burberry, Gildan, Levi Strauss & Co, Lindex, Sainsbury's, Target, United Colors of Benetton, Walmart, Wrangler and Zalando.

A common response from brands was that they are part of an industry grouping, such as The Microfibre Consortium (TMC) or the Zero Discharge of Hazardous Chemicals foundation task team developing guidance on microfibre release. TMC aims to develop an industry-aligned approach through practical solutions for microfibre release for the textile industry via several streams of work, including a Cross Industry Topic Roadmap,<sup>78</sup> test methodology development, scientific support for policy development and development of industry guidelines.<sup>79</sup> However, despite running since 2018, the TMC has not established any commitments to concrete actions. Brands that are members of, or collaborate with, TMC include Adidas, Asda, ASOS, Gap, Kering (Balenciaga, Bottega Veneta, Gucci, Saint Laurent), Lululemon, M&S, Morrisons, Next, Nike, Patagonia, Puma, Primark, Target, Tesco, Uniqlo (via Fast Retailing) and The North Face. For some of these brands (such as Asda, ASOS and Morrisons), membership of TMC is their main or only microfibre policy. Next indicated that, through TMC, brands already have access to data that informs higher loss areas within manufacturing, '*so that the most appropriate filtration can be instructed*'. However, neither of these industry initiatives seems to require or suggest reducing reliance on synthetic fibres as an immediate solution to microplastic pollution.

Even individually, most brands are looking only at end-of-pipe solutions, such as improving filtering systems for dyeing, washing machines and wastewater-treatment plants, working with manufacturers to minimise the shedding of garments, and developing filters for domestic washing machines (to name a few).

Only a few brands said the way to address this problem is to curb the use of synthetic fibres. Reformation noted that synthetics do not meet its fibre standards because, among other issues, they can lead to microplastic shedding; they are therefore limited to a maximum of 10% in the fibre mix of products other than athleisure and swim products. Dressmann said that pre-washing the textile products before use only moves the problem from the consumer market to the production country. Until there is more scientific evidence on microfibrils, it says, it will keep the share of synthetics fibre fairly low (currently at 16%). Esprit acknowledges the issue of microplastic pollution on the synthetic fibres page of its website, and says it is working to decrease the amount of synthetics it uses and instead select more sustainable options wherever possible.<sup>80</sup> Inditex said it updates its designers on microfibre research findings to encourage the most responsible choices to reduce shedding. As a priority, it is working to swap out synthetic fibres in textile fabric structures with other materials, it said.

Alarmingly, while Hugo Boss said it is implementing various measures to keep synthetic fibres as low as possible, it added that it deliberately uses synthetic materials in its outerwear styles because they need to be washed '*less often if at all*', which means '*we counteract the process of washing out microplastics*'. Such a 'solution' is not rooted in scientific research. A recent study found that pre-consumer textile manufacturing releases the amount of microfibrils of similar magnitude to that of the consumer use phase (e.g. laundering).<sup>81</sup> Other studies suggest that even more microfibrils are released from wearing clothes made of polyester materials than washing them.<sup>82</sup> Hugo Boss added that it is looking at minimising microfibrils through improved production techniques and '*exploring the possibility*' of degradability of synthetic fibres.

## 2.3 Supply-chain transparency

Our inquiry into brands' and retailers' synthetic suppliers – including the names and factories of their synthetics suppliers, up to the raw-material production stage – did not yield significant results. Brands were generally extremely untransparent about where their synthetics came from, especially with regards to raw-materials suppliers. Many listed some kind of suppliers on their website, but did not specify which clothing factories used synthetic materials, nor any synthetic raw-materials suppliers.

Only four brands provided a list of some of their tier-3 spinning mills – including synthetic-materials suppliers – to Changing Markets, including Asda, Esprit, Next and Tesco. Inditex said it will disclose its '*nominated*' tier-4 synthetic suppliers after a review process of its tier-3 suppliers (spinning units).



### 3. What are brands doing in practice? A brand analysis of Spring/Summer 2021 clothing collections

#### 3.1. Analysis of companies' online shops

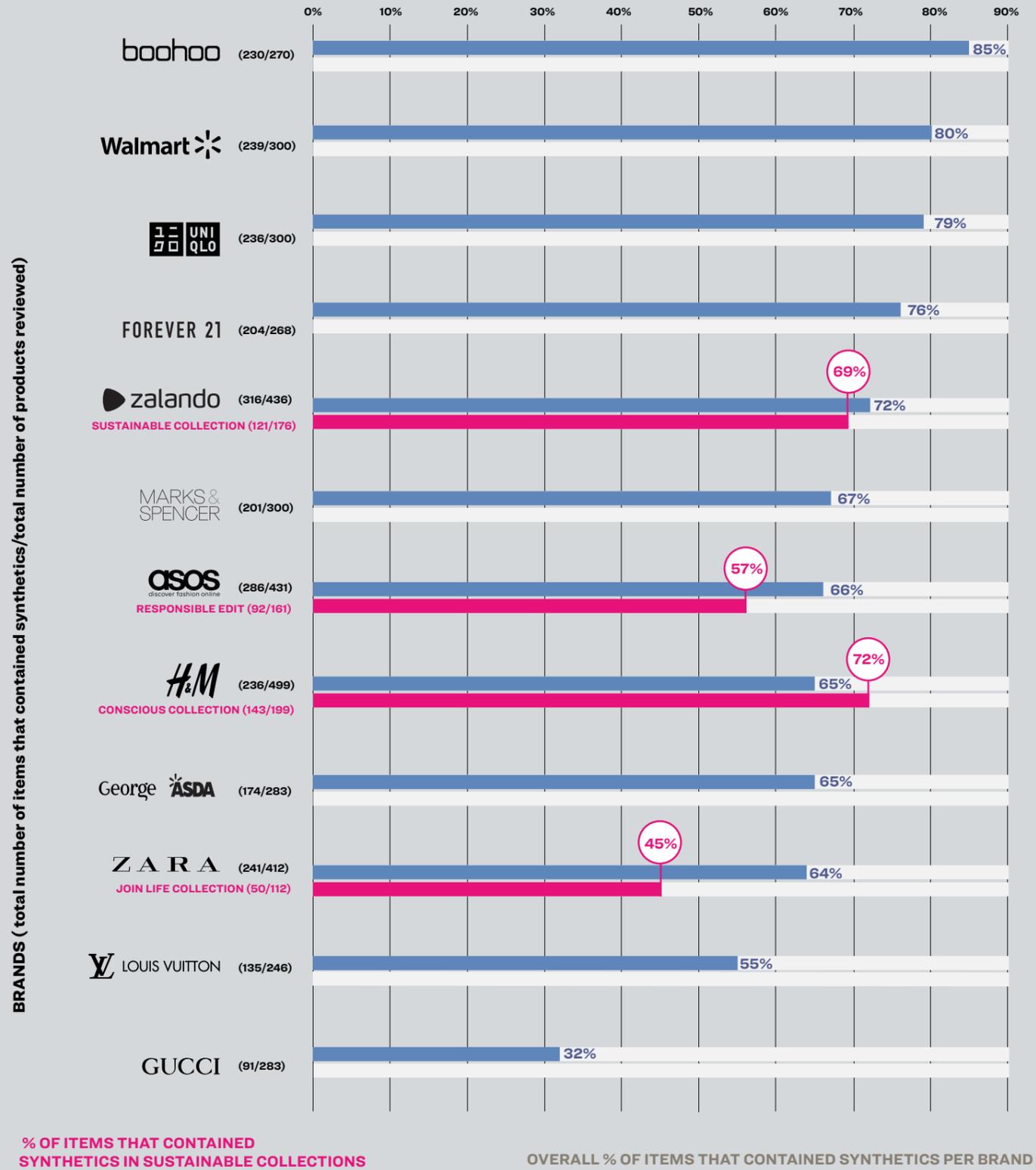
We analysed over 4,000 products from 12 brands' online Spring/Summer 2021 collections to assess the prevalence of synthetic fibres in today's fashion. We wanted to better understand the scale of fashion's synthetic addiction *in practice* - and how this contrasts with what policies and commitments they choose to disclose. The brands we investigated were: ASOS, Boohoo, Forever21, Gucci, George at Asda, H&M, Louis Vuitton, M&S, Uniqlo, Walmart, Zalando and Zara. These were chosen to represent a range of brands: from luxury to low-cost, department stores and online-only, those who put sustainability at the forefront of their communications and ultra-fast-fashion brands for whom this is not a consideration. For the analysis, a selection of products was chosen across the following male and female categories: shirts/tops, non-jeans-based trousers, jackets/coats, dresses, kidswear and hoodies/sweatshirts, with data collected on material composition, sustainability claims and certifications to support such claims. The full research methodology can be found in Annex IV.

#### 3.2. Key findings and trends

The data analysed revealed striking evidence on the pervasiveness of synthetics in fashion. For the 4,028 products recorded across all 12 brands, 67% contained synthetics and a startling 50% contained polyester, while only a marginal portion of 229 products (6%) contained recycled synthetics. Across the 2,679 items that contained synthetics, the average volume of polyester used in each individual garment's material composition was 59%. More specifically, for those that contained polyester, the average total volume of polyester used in each garment was 57%. It is important to note that the analysis covers only Spring/Summer 2021 collections, meaning that lighter, breathable clothes with higher percentages of natural fibres may be more present on brands' websites; Autumn/Winter may include more outerwear, which tends to contain a higher percentage of synthetics.

The five brands that used the highest proportion of synthetics, as a percentage of their total collection, were - in order from highest to lowest percentage - Boohoo, Walmart, Uniqlo, Forever 21 and Zalando (Figure 3.1).

### NUMBER AND % OF ITEMS THAT CONTAINED SYNTHETICS FOR EACH BRAND



AVERAGE COMPOSITION OF GARMENTS CONTAINING POLYESTER ( ALL BRANDS)



AVERAGE COMPOSITION OF GARMENTS CONTAINING POLYESTER ( SUSTAINABLE COLLECTIONS)



### NUMBER OF ITEMS WITH SUSTAINABILITY CLAIMS THAT ARE CERTIFIED

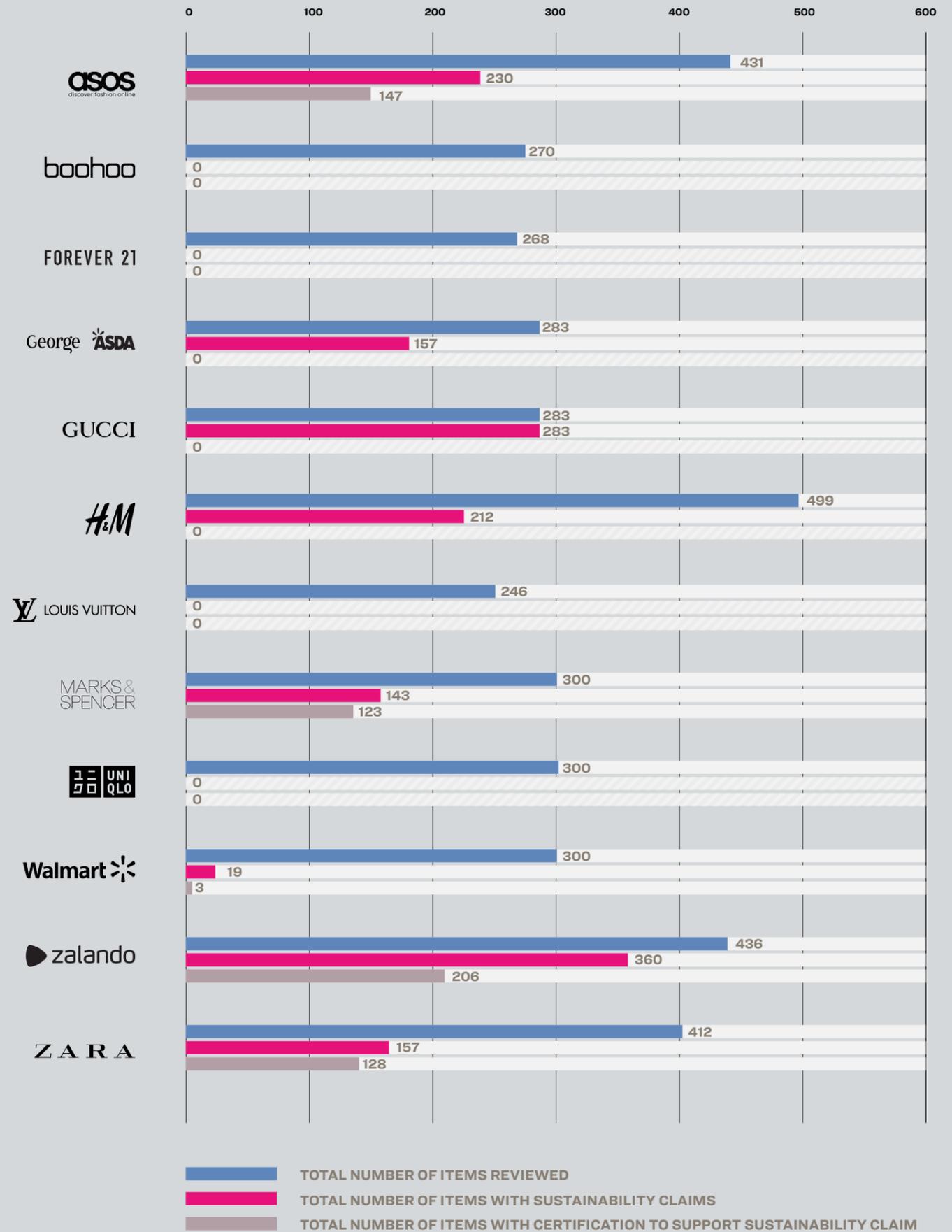


Figure 3.1: Ranking of the 12 brands by percentage of items containing synthetics

Figure 3.2: Ranking of the 12 brands according to number of items with sustainability claims and number of items with sustainability certification

### 3.2.1. Sustainability claims and greenwashing

Across the brands, ASOS, H&M, Zalando and Zara each have dedicated 'sustainable' or 'responsible' collections. When comparing the composition of brands' main and 'sustainable' collections, the findings reveal that synthetics - and polyester in particular - are still omnipresent. H&M's Conscious Collection actually contains a higher percentage of synthetics than its main collection, standing at 72% versus 61% respectively. Similarly, 57% of the garments in the Conscious Collection use polyester, in contrast to 52% of the H&M main collection. Zalando's sustainability offering depicts a similar story: 68% of the collection marked with the 'sustainability' tag contain synthetics, and 48% contain polyester. This underscores the marginal difference between Zalando's sustainability range and its main collection, 75% of which contain synthetics.

Thirty-nine per cent of items had a sustainability claim of some sort. When a product was placed in the 'sustainable' collection, it was assumed that a sustainability claim was being made for it. However, only 38% of these items with a sustainability claim had a third-party certification or standard to support the claim made on the individual product page, meaning the majority of sustainability claims (62%) are unsupported by a third party. Notably, George at Asda, Gucci and H&M make a high number of sustainability claims about their products, but these are not backed up by third-party certifications. It is important to note, however, that - due to the weakness of many certification schemes - third-party certification does not mean a sustainability claim is substantiated. Further assessment of the certifications used on product pages reveal wide use of standards such as Better Cotton Initiative (BCI) cotton, a weak scheme that cannot guarantee the cotton in the product is indeed 'better' (see Box 3.1).

Greenwashing is rife across the majority of brands making sustainability claims. In the *Greenwashing Alert* sections throughout this report, we highlight egregious examples (per brand) and analyse what makes these claims misleading.

We assessed each sustainability claim made in our study against the new CMA guidelines (see Annex IV) to help businesses comply with consumer-protection laws when making environmental claims on goods and services. We found that 59% of claims made across the study fell short in some respect of the new principles. We deemed products using BCI cotton to be misleading, due to the scheme's weaknesses. We also considered sustainability claims on items that contain recycled synthetics, but do not disclose the proportion included, to be in breach of the guidelines.

Brands scored very differently on this front: Zara and Gucci had the fewest claims in contravention of the guidance, while 96% of H&M's claims, 89% of ASOS's and 88% of M&S's flouted the guidelines in some way.

#### BOX 3.1: The false promise of certification



Over 100 textile-related sustainability certification schemes are listed under the Ecobel Index. As exposed by our landmark report on the issue in 2018, *The False Promise of Certification*,<sup>83</sup> certification schemes that satisfactorily address sustainability performance across the whole supply chain can be counted on one hand. For this reason, while we note where a brand takes steps to support a product's green claims with certification, this does not necessarily mean the green claim is substantiated or accurate.

In this analysis of online products, various certifications were referenced - including Global Organic Content Standard (GOTS), Global Recycled Standard (GRS), Recycled Content Standard (RCS), BCI cotton and European Confederation of Flax and Hemp (CELC) - each of which has varying strengths and blind spots. Of particular note is BCI, used by the majority of brands in the study. BCI cotton is sourced through a system known as 'mass balance', whereby it is mixed with ordinary cotton throughout the supply chain. As a result, BCI cotton cannot guarantee that any of the fibre in the end product does actually come from so-called 'better' production practices. BCI is not fully traced across the supply chain; indeed, it was recently revealed that over one-fifth of its 'better cotton' was produced in Xinjiang, China - a region now known for its enforced-labour cotton production.<sup>84</sup> BCI also falls short of setting sufficiently high environmental standards; it tolerates high use of pesticides (some of which are banned in the EU) and synthetic fertilisers, and is agnostic towards the use of genetically modified cotton.<sup>85</sup>

Due to the weakness of this certification, and the widely publicised concerns regarding its failings, we do not consider BCI cotton to be sufficient to substantiate any environmental claims. BCI is also a good example of why certification on its own should never be used as a proxy for sustainability - brands themselves should ensure they investigate the quality and robustness of any standards they use.

### 3.2.2. Secondary materials and blends

A high prevalence of synthetics was discovered, both as secondary materials (e.g. in linings, trimmings or embellishments) and as part of complex blends - most often polycotton, but sometimes multi-synthetic and natural blends of six or more fibres. Gucci was notable for its commitment to 100% unblended natural fibres, in contrast to the other luxury house in the study - Louis Vuitton - which features blends including PVC, crystal, glass fibre and synthetics. Zalando frequently features complex blended garments in its sustainable collection. Such blends are problematic for separation and recycling, and lack of full disclosure about this could mislead consumers about the true sustainability of the product.

Another key finding is that secondary materials - including lining, decorations, ribbing, filling and coating - compromise what could otherwise be a garment void of synthetics. For example, half of the Uniqlo male hoodies we analysed claimed to be 100% cotton, yet contained synthetics such as spandex or polyester in their lining, which impacted the overall score.

### 3.2.3. Synthetics rebranded

M&S and Uniqlo have also rebranded blended synthetics to highlight particular properties and give the material a high-tech cachet. Uniqlo uses BLOKTECH™ and HEATTECH™; M&S has created CASHMILON™, a virgin synthetic faux-cashmere knitwear; H&M has COOLMAX®, a quick-drying polyester material used in shirts.

### 3.2.4. Recycled synthetics

Recycled synthetics - whether polyester, elastane or nylon - are the chief way in which brands are attempting to source more sustainable synthetics. All brands - excluding Boohoo, Forever 21, Louis Vuitton and Uniqlo - declare their use of recycled synthetics. Only three brands - ASOS, George at Asda and Zara - communicate the feedstock of these recycled synthetics, which predominantly originate from textile waste and plastic bottles.

Five of the retailers share the approximate volume of recycled synthetics used on each individual product page: Gucci, H&M, Walmart, Zalando and Zara. However, from the data collected, only Zara has attempted to certify its recycled synthetics under the GRS and RCS. The H&M Conscious Collection used the most recycled synthetics of all collections: nearly one-third (32%) contained either recycled polyester or recycled polyamide. This was followed by Zalando's sustainability range, in which 18% of the collection analysed included recycled polyester. When the data was analysed, neither H&M nor Zalando disclosed the type of feedstock of recycled synthetics used on individual product pages.

We also discovered some inaccurate reporting relating to amounts of recycled content. For example, a pair of ASOS 'monomaterial' trousers was actually made from 54% nylon and 46% polyester, and accompanied by descriptions claiming the item is 'designed to be remade, so it's easier to recycle when you're done with it'. This is not only misleading but also factually inaccurate, and relates to a wider issue of transparency regarding material composition, whereby ASOS, M&S and Forever21 frequently use 'other fibres' to describe garments' material composition.

### 3.2.5. Synthetic use in different clothing types

Synthetic composition varied hugely by clothing type, with the highest amount of synthetic fibres found in outerwear (jackets and coats), hoodies and sweatshirts, and sportswear (including leggings). British retailer John Lewis reported a twelfold spike in loungewear and leggings sales<sup>86</sup> - an increase of 1,303% - in 2020 due to more people staying at home during the COVID-19 pandemic. It can be presumed that the fashion brands included in this study also experienced this trend.

### 3.2.6. Kidswear

Although most brands generally use fewer synthetic fibres in children's clothes, this has not been the case across the board. Concerningly, US brands Walmart and Forever21 - alongside Uniqlo - use high levels of synthetics in kidswear. Inhalation of microfibrils into the lungs has been shown to cause issues with lung-tissue development in children, as well as in those recovering from respiratory conditions.<sup>87</sup> For the aforementioned brands to put children in close proximity with synthetic microfibrils is a serious oversight, and contrasts with many of the European retailers in this study, which opt mostly for natural fibres in kidswear; for example, Zalando had the lowest incidence of synthetic fibres in kidswear - only 16% - and did not use polyester.



### 3.2.7. Microfibrils

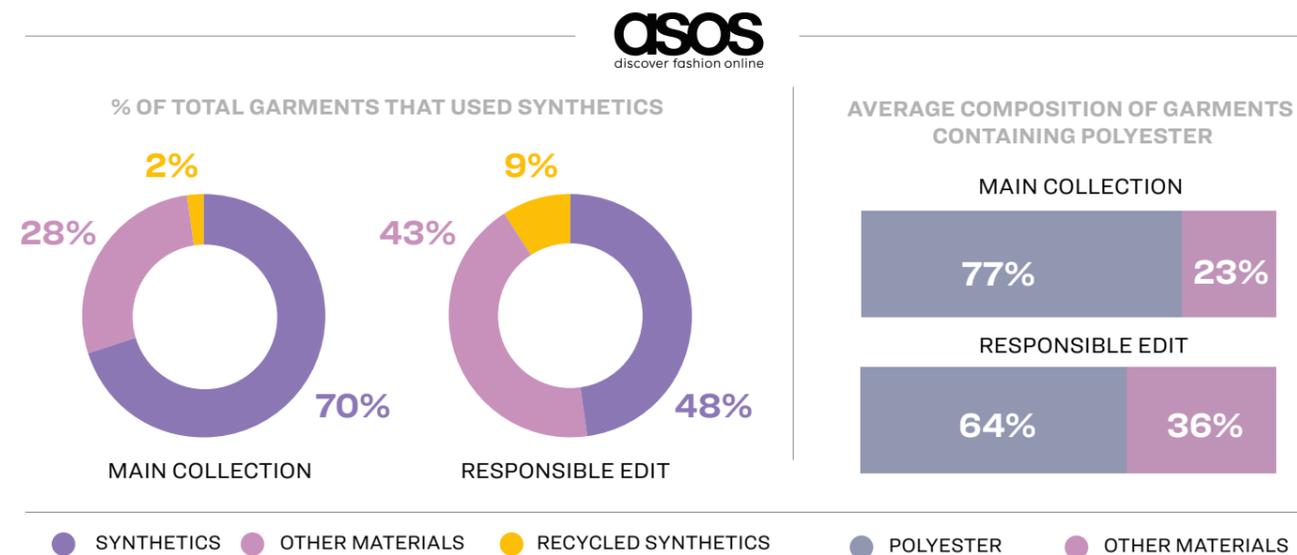
Across all 4,028 garments, no single product page made direct reference to the link between synthetic materials and the impact of microfibrils pollution on human health and marine and terrestrial pollution, let alone offering any solutions to the problem. In combination with the direct responses we received to our questionnaire, this confirms microfibrils to be a blind spot for brands - something they prefer to neither talk about nor seriously address.

## 3.3. ASOS

Across the products analysed in both collections, 66% contained synthetics, with 46% containing polyester and 2% containing recycled synthetics. The average amount of synthetic fibre per garment (of the garments that contained synthetics) was 63%, and the average amount of polyester was 77%. For ASOS's Responsible Edit, 57% had synthetic composition and 29% contained polyester. Of the items containing synthetics, 9% used recycled synthetic content. The average amount of synthetic fibre per garment was 48%, and the average amount of polyester was 64%. A remarkable 89% of ASOS's sustainability claims were deemed to flout CMA guidelines.

Clothing categories with the highest incidence of synthetics in the main collection were male trousers and male jackets/coats. Due to the prevalence of polyester in puffer jackets, fleeces and outerwear, 93% of the male-jackets category contained synthetics and 83% of the category contained polyester; the average polyester count was a substantial 91%. Of this, 10% of recycled polyester was only used in the lining and filling to replace virgin synthetics.

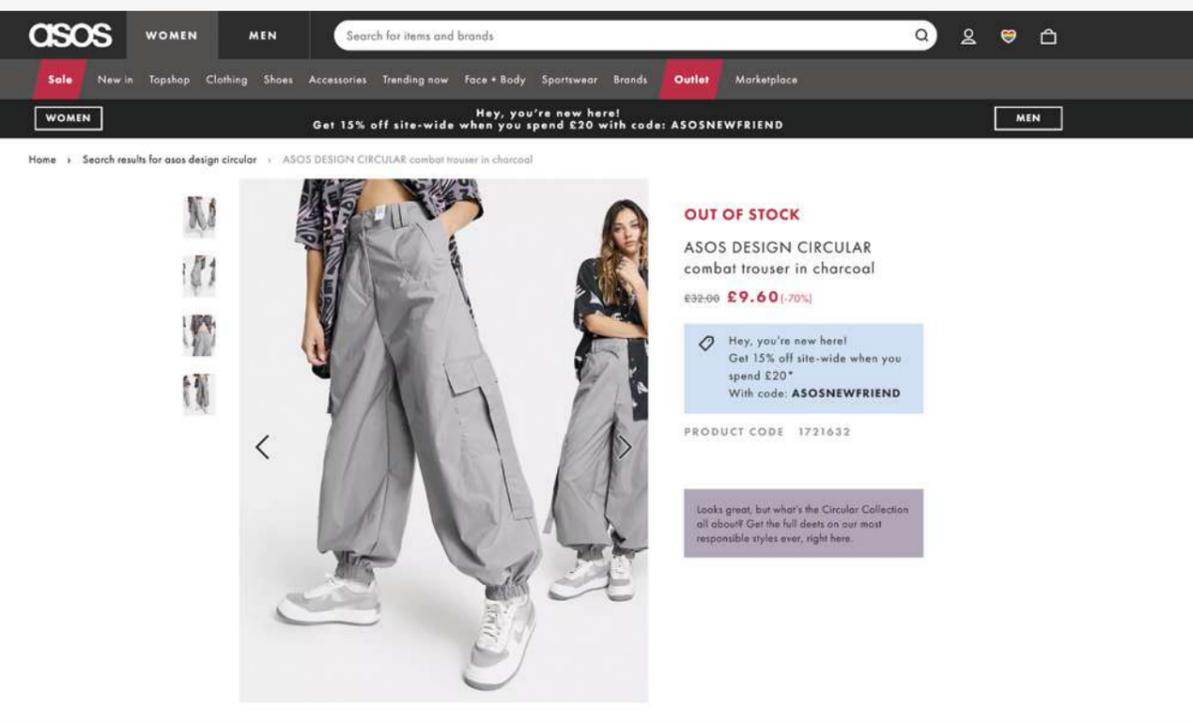
The ASOS 'Responsible' Edit is extremely generous with the garments included in this collection - similarly to Zalando's over-frequent use of its 'sustainability' tag, or H&M's 'Conscious' mark. Often, BCI cotton is used as a prop to justify an item belonging in the Responsible Edit. This occurs even when BCI cotton is only used in small quantities for the trims or lining.



### Greenwashing alert

The ASOS Circular Design Collection, launched in September 2020, has many incidences of problematic or unsupported claims. Monomaterials are celebrated and considered circular, even when they are 100% virgin synthetic; for example, a 'zero waste' designed female shirt, which is 100% polyester. Another example of

**Figure 3.3:** The ASOS circular trousers that claim to be a monomaterial but actually contain virgin polyester and nylon



false advertising for circularity and recyclability is a pair of female trousers, which the brand claims to be a monomaterial product of 100% nylon. However, the detailed material composition actually states they are made up of 54% nylon and 46% polyester. The description claims it is 'designed to be remade, so it's easier to recycle when you're done with it'. This is highly misleading, especially given the lack of fibre-to-fibre recycling technology and the absence of any takeback scheme.

### 3.4. Boohoo

Boohoo makes no pretence of being responsible or sustainable, and this is reflected in its high use of synthetics, blended materials and the sheer number of products listed. Extensive use of synthetics places Boohoo as the worst offender in our study; 85% of its products contained synthetics, of which 78% contained polyester, with an average of 73% synthetic composition per garment and 76% average polyester composition - the highest in the study. The brand does not use any recycled synthetics.

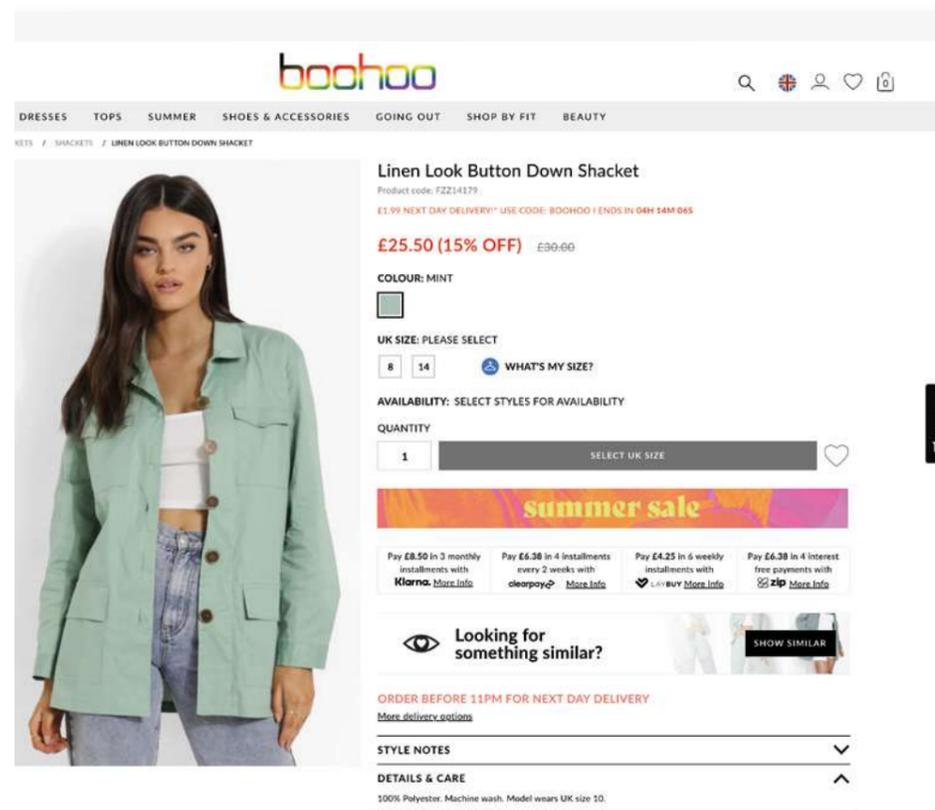
With regards to product categories, 29 out of 30 male jackets analysed contained synthetics, and 22 consisted of 100% polyester. Of 30 female jackets analysed, 29 contained synthetics and 27 contained polyester specifically, with the average polyester count at 84%. One-third of these female jackets were faux-leather pieces that solely contained polyurethane and polyester. One of these jackets masquerades as linen, when it is actually made from 100% polyester 'linen look'.

### Greenwashing: Coming soon

While Boohoo currently makes no claims of sustainability, Boohoo Australia has launched a small collection of products made from 95% recycled polyester and 5% recycled elastane.88

Plans to roll this out to the wider Boohoo group are still to be confirmed89 (and the company's 2021 sustainability report is light on details),90 but garments that meet Boohoo's internal sustainability criteria bear the tag 'Ready for the Future' - a broad, ambiguous claim, which appears to be more about tapping into the green dollar than actually providing more sustainable products. Simply switching to recycled synthetics will do nothing to reduce the brand's overreliance on fossil fuel-derived fibres, let alone tackling pernicious issues like microfibre release, and the culture of disposable ultra-fast fashion that the brand epitomises and promotes will continue - with added greenwashing.

**Figure 3.4:** Boohoo's 'linen look' jacket

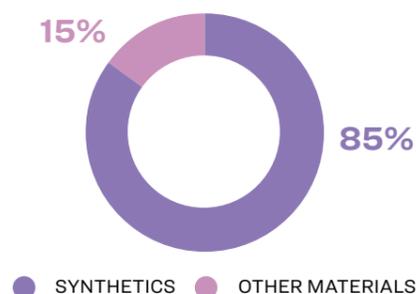


Only 7% of Boohoo's dress category were free from synthetics. The brand ranked joint-highest with Zalando for the dress category, with the highest percentage of overall synthetics. Boohoo dresses also contained the second-highest incidence of polyester (73%), following ASOS (83%). Of these 30 pieces, 13 consisted of 100% polyester.

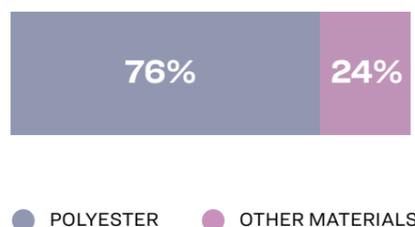
Finally, throughout the data collection, numerous items failed to carry product material descriptions at all. We strongly encourage the brand to rectify and update its website merchandising, so as to communicate material composition to customers effectively.

## boohoo

% OF TOTAL GARMENTS THAT USED SYNTHETICS

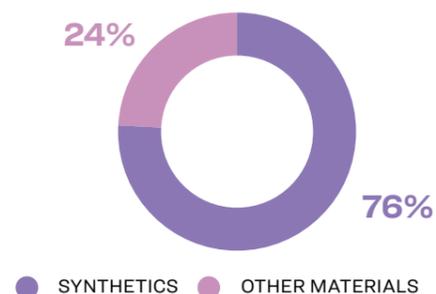


AVERAGE COMPOSITION OF GARMENTS CONTAINING POLYESTER



## FOREVER 21

% OF TOTAL GARMENTS THAT USED SYNTHETICS



AVERAGE COMPOSITION OF GARMENTS CONTAINING POLYESTER



### 3.5. Forever 21

Forever 21 has not made any sustainability claims for the garments we analysed. The brand ranks as the fourth highest user of synthetics, with 76% of products containing this type of fibre. Forever21 shows a particular preference for polyester, with the average amount of polyester per garment at 69%, as well as for nylon and spandex.

Synthetic blends are common for the brand. For example, in the male hoodies/sweatshirts category, 28 out of 30 items used synthetics, and each garment contained an average of 44% synthetics per item. Similarly, in the female category, only 3 out of 30 items consisted of 100% cotton; 26 out of 30 were cotton and polyester blends.

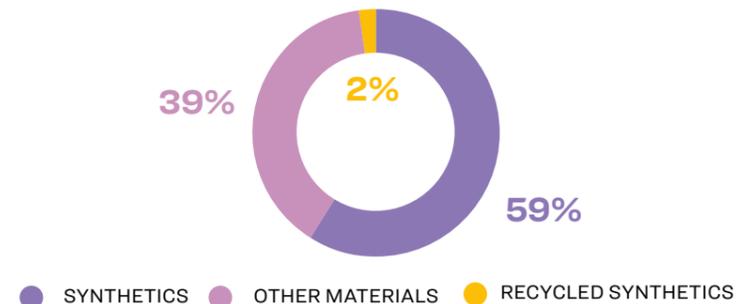
Like Walmart, the American brand uses significantly more synthetics in kidswear than European retailers. Out of 30 (80%) items in this category, 24 contained synthetics and two-thirds contained polyester, with an average polyester content was 72%. While Walmart has a higher incidence of synthetics (87%), this is a stark contrast to European retailer Zalando's main kidswear range, only 16% of which contained synthetics, and in which polyester doesn't feature at all.

A handful of Forever 21's clothing categories contained a lower incidence of synthetics than its UK fast-fashion counterpart, Boohoo; for example, the female jackets category ranks as the seventh-lowest category for the brand for use of synthetics. This can partly be explained by the sample collected, which reflected Spring/Summer trends as opposed to traditional Winter outerwear (like puffer jackets). However, it must be noted that female jackets contained a high average of 83% synthetic fibres per item, and that one-third of the category contained 100% polyester. Only two items consisted of 100% cotton. Elsewhere, 57% of the dress category contained synthetics, versus 90% of Boohoo dresses and 87% of Zalando dresses. Still, one-third of all dresses contained polyester, with a high average of 81% composition. Additionally, 9 out of 30 dresses contained MMCF 100% rayon.

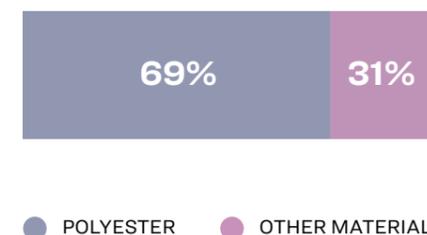
In a handful of instances, Forever 21 includes the ambiguous category 'other fibres' in its garments' material composition. This includes female jacket #5: '8% polyester, 30% acrylic, 7% nylon, 3% other fibres, 2% wool', and dress #9: '50% rayon, 36% polyester, 12% linen, 2% other fibres'. In addition to drawing attention to the complexity of textile blends the brand uses, this highlights a lack of transparency, which could be misleading to consumers.

## George ASDA

% OF TOTAL GARMENTS THAT USED SYNTHETICS



AVERAGE COMPOSITION OF GARMENTS CONTAINING POLYESTER



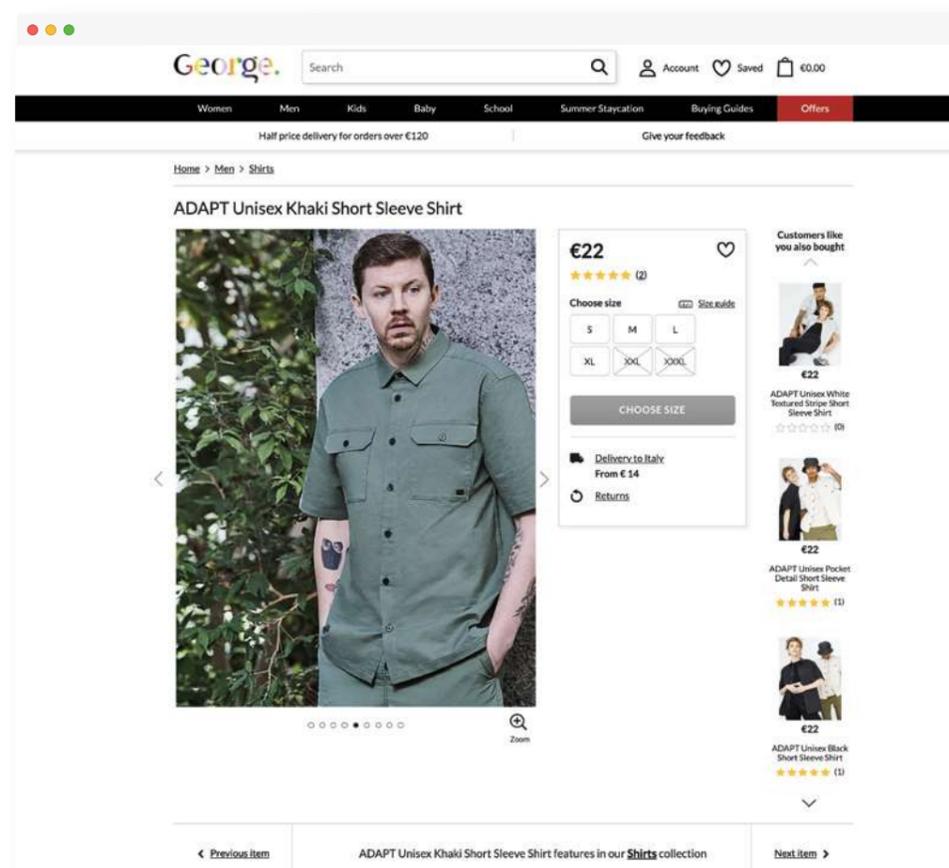
### 3.6. George at Asda

Across the products analysed, 65% contained synthetics. The average amount of synthetic fibre per garment was 65%, and the average amount of polyester was 69% per garment. George at Asda has the fourth-lowest usage of synthetics across the brands analysed, but is still just below the average of 67%.

While the retailer has clearly made demonstrable efforts to source more 'sustainable' materials, there is a substantial gap between the sustainability claims it makes and the certifications or third-party standards used to substantiate these. For example, 63% of the dress category has some form of sustainability claim relating to viscose or recycled polyester, yet none are supported by certifications. This differs significantly from Zara, which has worked to publish certifications on each product page.

Much like ASOS, M&S and Zalando, George at Asda uses BCI cotton as a sustainability prop - despite BCI cotton not guaranteeing safe and fair working conditions, and despite the fibre's lack of traceability across the supply chain.

Figure 3.5: Shirt included in George at Asda's 'sustainable' range; there is no indication, on the product page, of whether the cotton is responsibly sourced

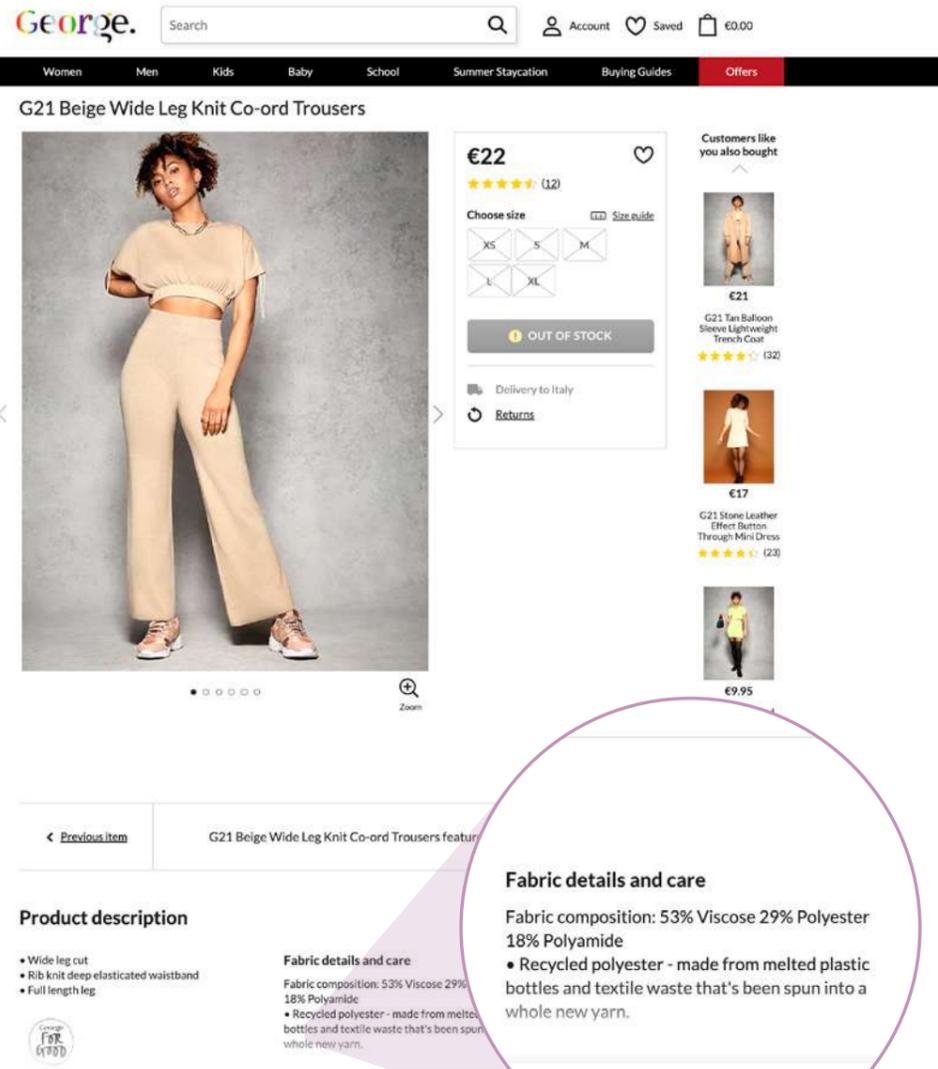


**Greenwashing alert**

Among George at Asda products portrayed as having 'sustainable credentials' is a Khaki Short Sleeve Shirt, consisting of 98% cotton and 2% Elastane. It's unclear where this cotton is from, and blending it with synthetic material reduces its end-of-life options. As per CMA guidelines, providing inaccurate information or not substantiating claims is misleading to consumers; in this case, the 'sustainable credentials' are not properly backed up, and there is not enough evidence to justify the claim.

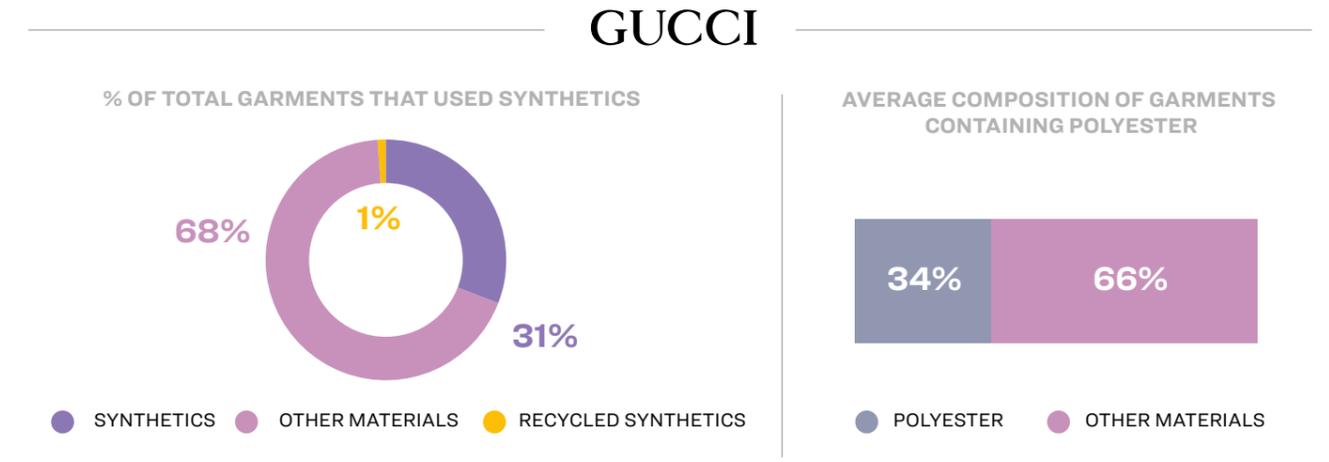
Another product - the G21 Beige Wide Leg Knit - has a fabric composition of 53% viscose, 29% polyester and 18% polyamide, and claims to contain recycled polyester from plastic bottles. It's unclear, in this product, what percentage of the material is actually made out of recycled polyester.

As with other brands, jackets/coats are the repeat worst offenders; George at Asda appears male jacket category has some of the highest incidences



**Figure 3.6:** George at Asda trousers containing recycled polyester, but with no indication of how much

**Figure 3.7:** Gucci's luxury metallic aesthetic contains a high synthetic content that uses materials such as metallised fibres, acetate and polyester



All items analysed bear the 'responsible' tag, which states: 'Gucci guarantees—both internally and along its entire supply chain—that internationally recognized social and environmental responsibility standards are respected and consistent with the company's own commitment to the ethical and sustainable management of its operations'. Additionally, Gucci includes an 'eco-features' tag on some items containing recycled or organic materials, which states: 'In line with the House's vision for responsibly sourced materials and/or sustainable production, Gucci promotes the use of alternative materials for lower environmental impact such as recycled, regenerated, organic or bio-based materials and emphasizes circular manufacturing processes'. However, beyond a short explanation for what is meant by organic silk, cotton or responsible viscose, neither third-party verification nor specific standards or certification are given on the product page to back up these assertions.

**Greenwashing alert**

Among Gucci's products tagged as 'responsible' is a short lamé dress, consisting of 47% cotton, 33% Polyester, 16% Metallised Fiber, 4% Polyamide; Lining: 73% Acetate, 27% silk – an incredible stew of fibres, making the garment impossible to recycle. With a high amount of synthetic fibres present, it's unclear what about this product is particularly 'responsible'. As per CMA guidelines, providing inaccurate information or not substantiating claims is misleading to consumers; in this case, the 'responsible' tag and its description do not provide enough evidence to substantiate the claim.

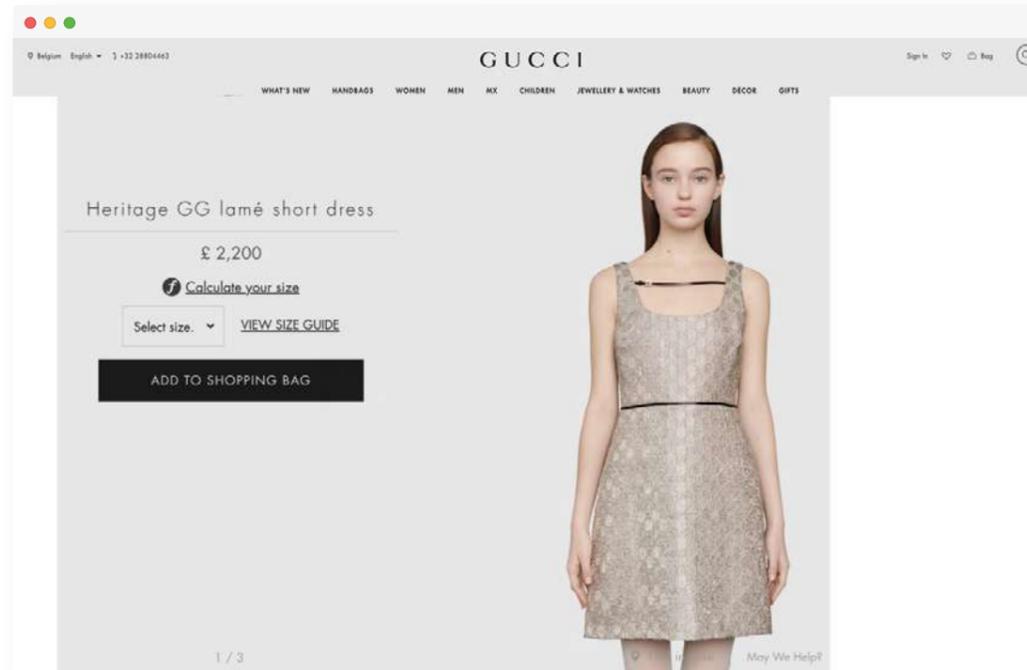
of synthetics across the study. While there were fewer products in the category to analyse - 13 instead of 30 - 10 of those 13 items contained polyester, with an average of 100% polyester.

Dresses by George at Asda incurred the lowest incidence of synthetics for the brand. This is explained by the fact that 17 of the 30 dresses used 100% viscose. The items that did contain synthetics had a high average synthetic content (91%), and only 33% of the category contained polyester. This differs from ASOS's main collection (whose dresses contain 83% synthetic content) or Walmart's (67%).

### 3.7. Gucci

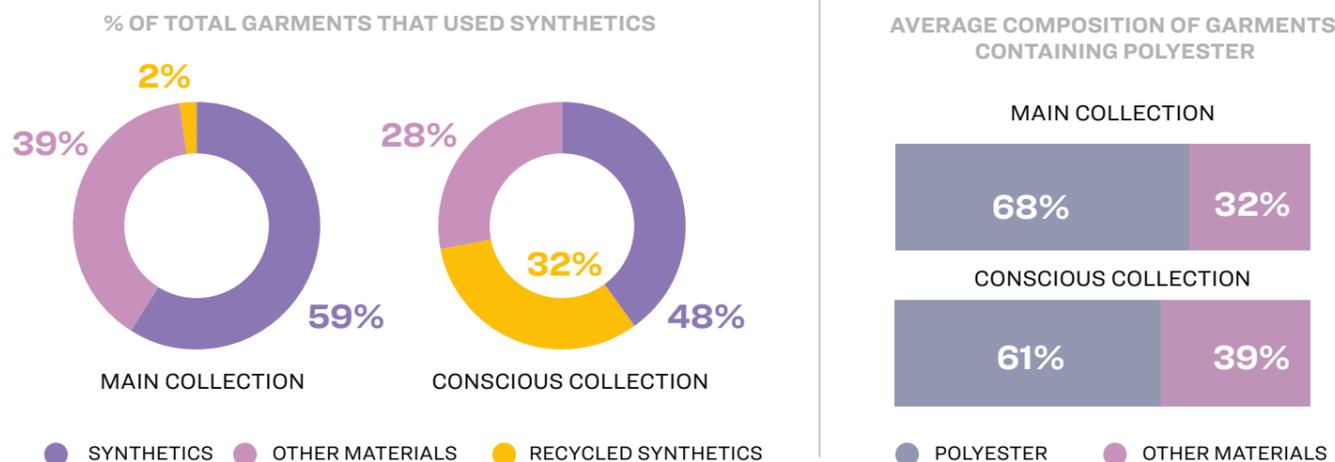
Gucci was one of two luxury brands assessed in the research. Of the Gucci products assessed, 32% contained synthetics - the lowest of all brands. Only 13% of these items contained polyester, at an average of 34% per garment; 1% of these items contained recycled synthetics.

Gucci seems to have made significant steps towards sustainable sourcing and reducing synthetic fibres in its garments. The collection uses organic silk and cotton as well as recycled synthetics, such as recycled polyamide and Econyl, made from recycled nylon.



Gucci is the only organisation in the study that uses language to encourage the uptake of seasonless and timeless designs. For example, the description of a plain white male shirt reads: 'A message about leaving fashion's old rules behind, the Epilogue collection conveys the idea that pieces should be timeless—not just in fashion for one season'.

As highlighted in the Key Findings section of this report, Gucci uses significantly fewer synthetic fibres than Louis Vuitton; for example, only one of 30 male shirts contained synthetics. This is in clear contrast to fast-fashion retailers like Boohoo; 97% of Boohoo's male jackets contain synthetics, compared with just 3% of Gucci's. There is a clear focus on the use of monofibre garments, such as 100% silk, 100% cotton and 100% wool. There is also a preference for using viscose or silk for lining, as opposed to virgin synthetics like polyester. Fabric blend overcomplexity occurs less frequently than in Louis Vuitton collections; however, it is still present and problematic.

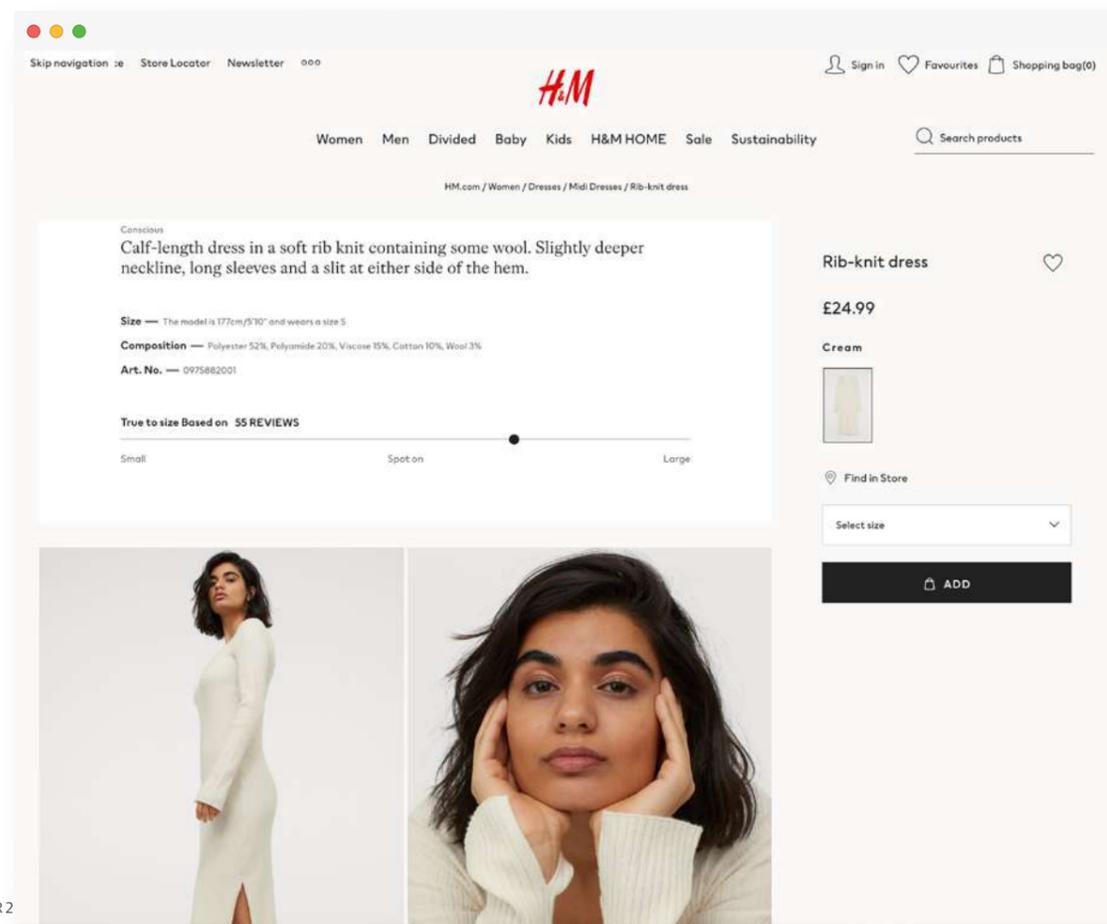


### 3.8. H&M

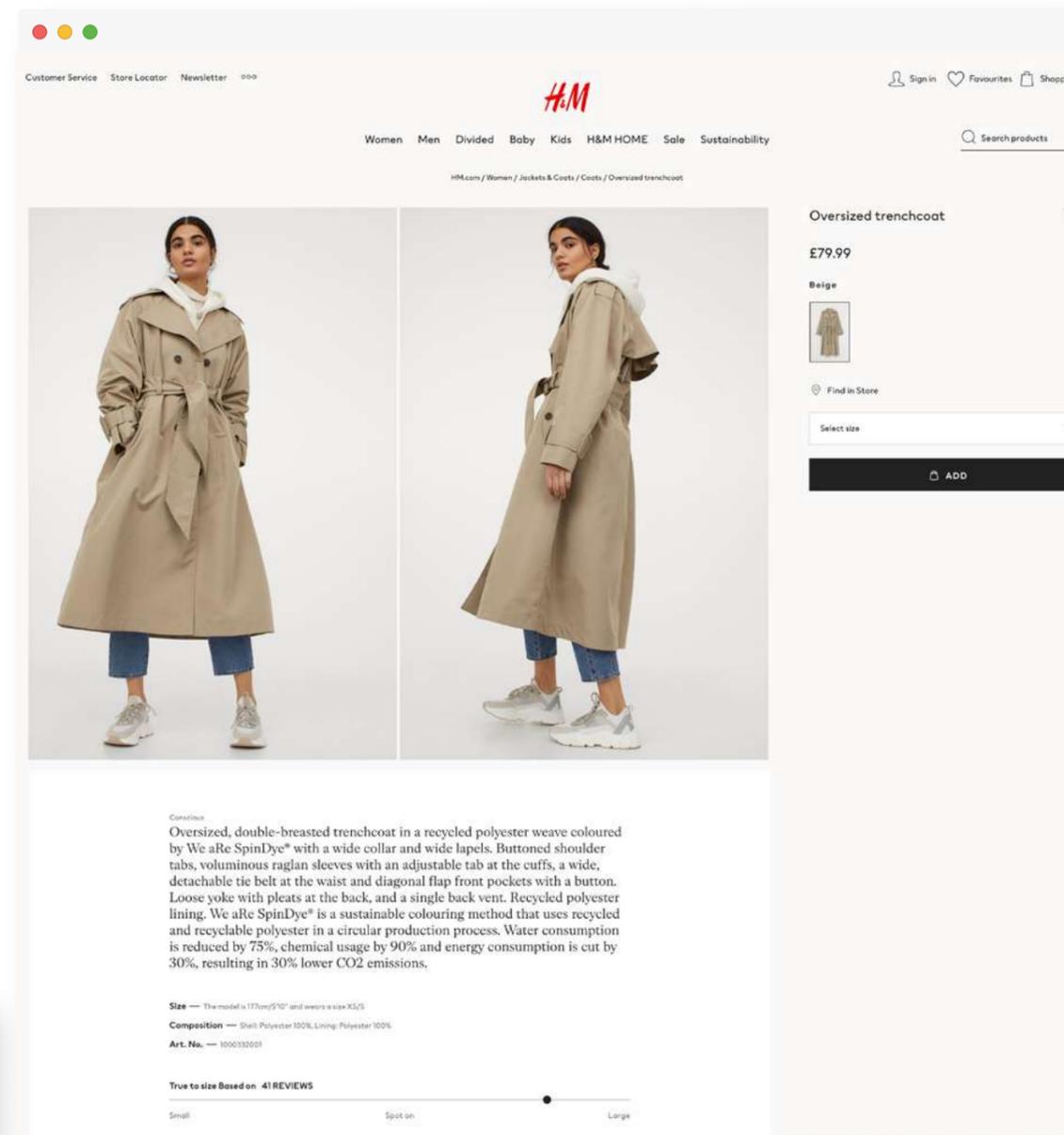
Across the products analysed, nearly two-thirds (65%) contained synthetics, with 54% containing polyester. For H&M's Conscious Collection, nearly three-quarters (72%) had a synthetic composition - over 10% more than the main collection - and 57% contained polyester. Of the items containing synthetics, 32% used recycled synthetic content. The average amount of synthetic fibre per garment was 56%, and the average amount of polyester was 61%. Sustainability claims were made for 42% of all products analysed, but 96% were found to be in breach of CMA guidelines - the highest in the study.

H&M makes a big deal of its Conscious Collection. To qualify for that collection, 'a product must contain at least 50% sustainable materials, such as organic cotton and recycled polyester'.<sup>91</sup> However, little further information is given as to what qualifies as a 'sustainable material'. Recycled polyester is the main reason why H&M's Conscious Collection has a higher percentage of synthetics than its main collection; given that recycled polyester representing a one-way street to landfill or incineration, it is hard to see how this material makes a product more 'conscious' or 'sustainable'. Furthermore, some product pages contain no information on recycled feedstock, and organic and recycled materials are not supported by any third-party certification. Unlike Zara, H&M does not publish the country of origin, or provide clickable links through to any sustainable supply-chain policies.

**Figure 3.8:** H&M's highly blended rib knit dress



**Figure 3.9:** An H&M coat included in the Conscious Collection despite being 100% synthetic



## Greenwashing alert

A Conscious Collection dress is listed as containing 'Polyester 52%, Polyamide 20%, Viscose 15%, Cotton 10%, Wool 3%' - a heady blend of fibres, totalling 72% total synthetics. And yet, in addition to the end-of-life complexity entailed in such a blend, there is no further indication of what makes this product 'conscious' at all. Another Conscious Collection pair of trousers is, surprisingly, made up of no less than 100% polyester, none of which is claimed to be recycled - even though, to qualify for the Conscious Collection, an item must have at least 50% recycled content.

Another item, a 100% polyester trench coat, states that it uses the 'We aRe SpinDye' method using 'recycled and recyclable polyester' - yet as fibre-to-fibre recycling technology is still more myth than reality, with only 0.06% of all materials coming from post-consumer textile waste,<sup>92</sup> and with no information about how H&M's clothes are used in its takeback scheme, this appears to be an empty promise.

H&M is clearly misleading consumers by placing such items into the Conscious Collection and seems to be using the sustainability cachet to assuage consumers' guilt and sell 100% synthetic clothes. Both these and many other products in this collection flout CMA guidelines on sustainability claims.

For H&M's female hoodies and sweatshirts, polyester appeared in 97% of the sample, with the average polyester content at 41%. This reflects H&M's tendency to use a blend of 60% cotton and 40% polyester in loungewear items, including sweatpants. Many brands, including ASOS and M&S, also use this material composition for their loungewear.

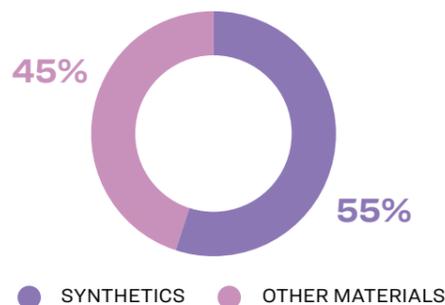
Design collaboration with Simone Rocha - who is a keen promoter of sustainability, and gave this as a reason why she was excited to work with H&M<sup>93</sup> - represented a missed opportunity to use more sustainable fibres. Instead, a combination of virgin synthetic tulle and mesh appear in the majority of H&M's designs and decorations. For example, a dress in the main collection consists of: *'Lining: 60% Acetate, 40% Viscose, Shell: Acetate 39%, Polyamide 32%, Silk 29% and Mesh: Polyester 100%'* - both a problematic blend and high percentages of synthetic fibre.

As with other retailers, jackets/coats continue to be problematic for their high incidence of synthetics. In H&M's main collection, 27 out of 30 jackets/coats contained polyester, and the average polyester content was extremely high: 90%. This is partly explained by the presence of numerous faux-leather items, which contain: *'Coating: Polyurethane 100% Lining: Polyester 100% Shell: Polyester 100%'*. It is also caused by the prevalence of synthetic sports and puffer jackets, an example of which comprises: *'Shell: Polyester 100%, Lining, Polyester 100%, Padding: Polyester 100%, Hood lining: Polyester 100%'*.

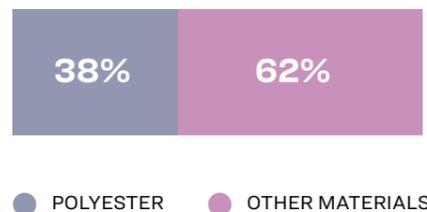
H&M has also branded specific virgin synthetic items, like fitted male shirts, as COOLMAX®. This is a *'functional fabric, a unique, soft, comfortable and fast-drying polyester fibre that efficiently wicks moisture while regulating temperature'*. This celebration of virgin synthetics is similar to M&S Stormwear™ and Cashmilon™.



% OF TOTAL GARMENTS THAT USED SYNTHETICS



AVERAGE COMPOSITION OF GARMENTS CONTAINING POLYESTER

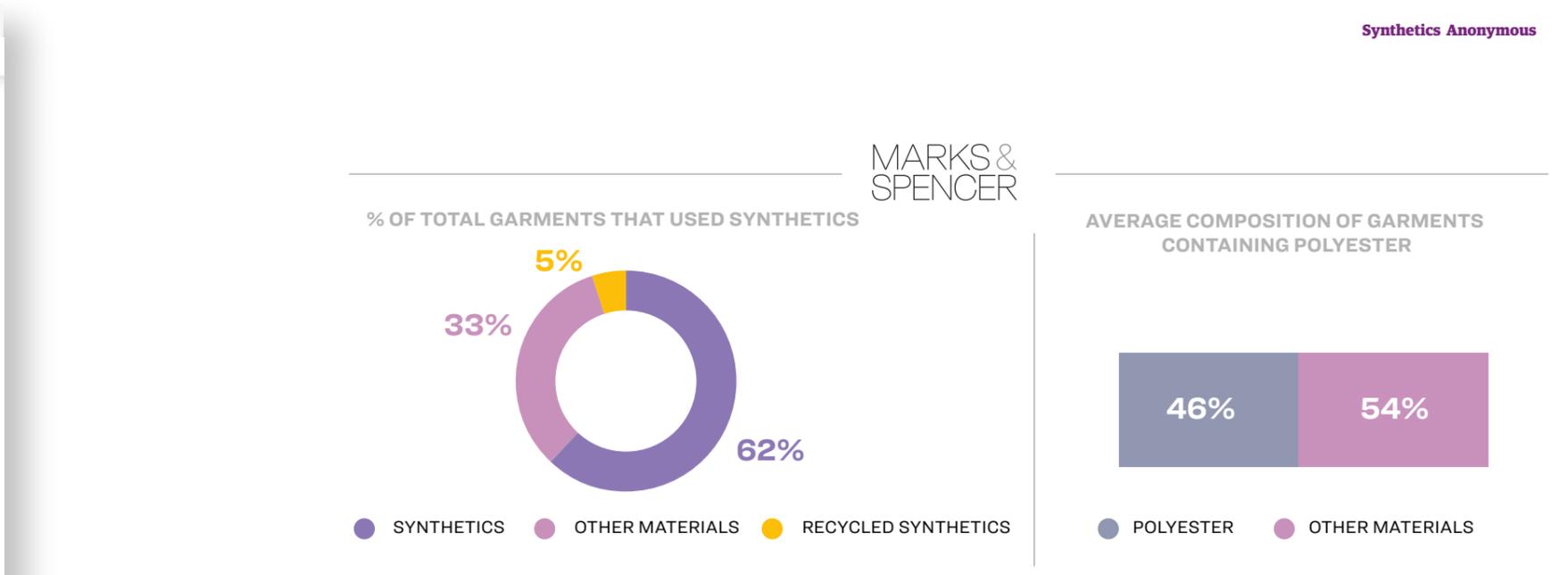
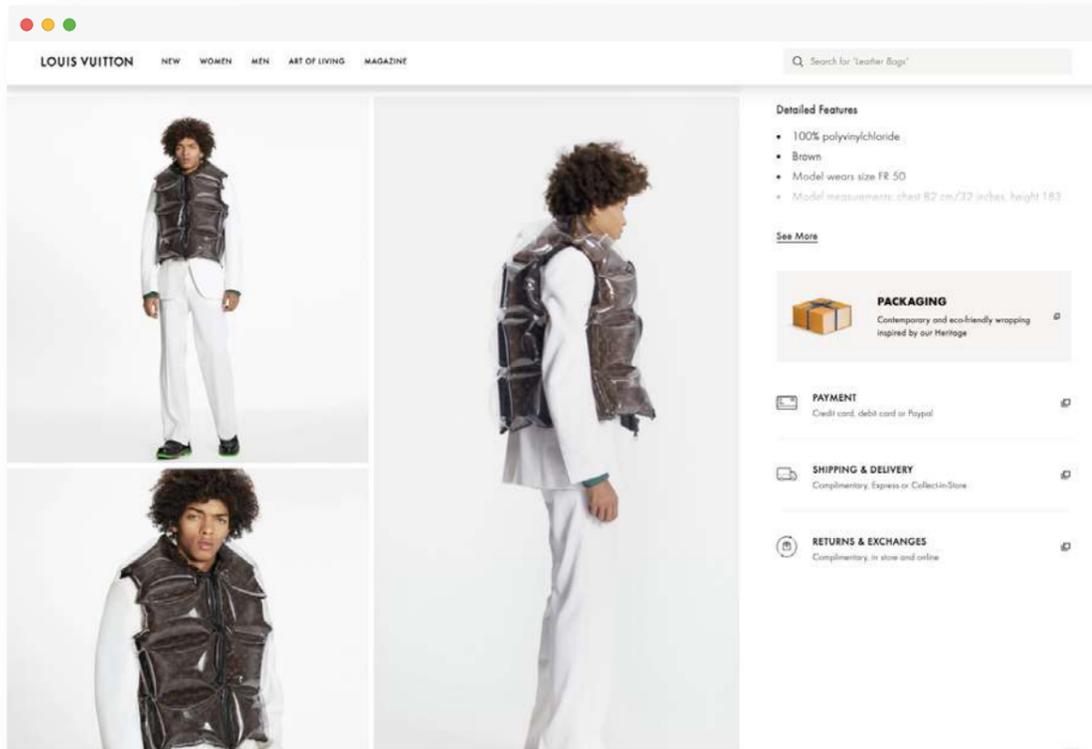


### 3.9. Louis Vuitton

Luxury brand Louis Vuitton came in as the second-lowest user of synthetics - but, with 55% of its products containing synthetics, used 23% more than Gucci, and just 2% lower than Zara. This indicates that a higher price point does not necessarily lead to higher usage of natural or responsibly sourced materials. Of its synthetic items, 21% contained polyester and none containing recycled synthetics. The average percentage of synthetic fibres used in each individual garment was 45%, and the average percentage of polyester used was 38%.

Louis Vuitton's collection reveals that luxury is not always synonymous with sustainability or quality. Its relatively heavy use of synthetics and complex blended materials underscores this. From the sample collected, no sustainability claims were made on product pages, no certifications were featured and no recycled synthetics were used.





**Hybrid horror**

Unlike luxury fashion house Gucci, which uses some product descriptions to encourage timelessness and lack of seasonality to designs, Louis Vuitton sells trend-led pieces of highly questionable material composition; for example, a clear plastic designer 'lifejacket' chimaera, made from 100% 'natural' PVC. Aside from 'natural' PVC being nonexistent, the dangers of PVC should not be underestimated; it is deemed the most environmentally damaging material of all plastics. PVC production facilities not only generate hazardous chlorinated waste – which leaks into water streams – but also contain toxic additives, like phthalates, which can negatively impact wildlife and humans.<sup>94</sup> Phthalates have been linked to asthma, cancer, altered reproductive development and fertility issues.<sup>95</sup>

**Figure 3.10:** Louis Vuitton 100% PVC gilet

**Figure 3.11:** M&S claims its cotton is 'sustainably sourced and always will be', yet a number of cotton items analysed provide no evidence to substantiate these claims

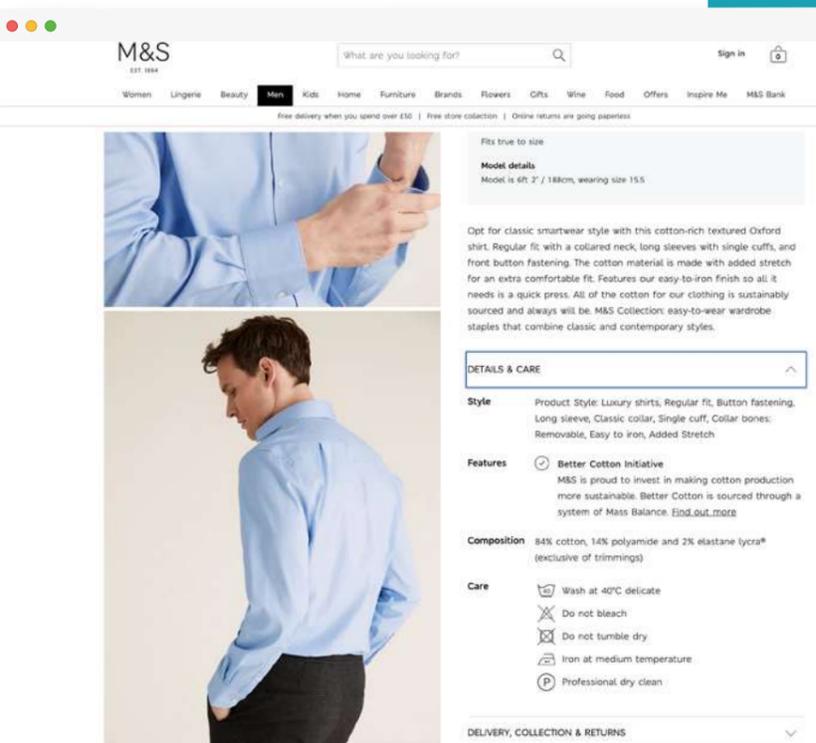
**3.10. M&S**

Of M&S's collection, 67% contained synthetics, 43% of these items contained polyester and 5% contained recycled content. The average composition of synthetic fibres was 41% per garment, and 46% for those containing polyester.

M&S is notable for the number of items with a sustainability claim that are paired with third-party certification or standards – covering 86% of products with this attribute. However, the claims on materials such as organic cotton and recycled synthetics lack substantiation or verification through third-party certifications on each individual product page. Instead, M&S relies heavily on BCI cotton, and states: 'M&S is proud to invest in making cotton production more sustainable'. Organic-cotton claims are not certified under GOTS/Organic Content Standard (OCS), unlike on Zara's product pages. Instead, M&S states the material is: 'Organic Cotton. Grown naturally. Keeping our soils, ecosystems, wildlife and farmers healthy' – a vague and ambiguous statement that is unsupported by further evidence. Our analysis found that 88% of M&S's sustainability claims would not meet CMA guidelines.

Louis Vuitton is notable for its complicated blends of both natural and synthetic materials. The brand uses a wide array of materials – including modal, wool, lamb, mohair, silk, elastane, lyocell, PVC for coating, glass fibre and even crystal – often in inextricable combinations that are entirely impossible to recycle. From the sample collected, there is a pervasive use of complex blended fabrics, paired with no provision of a garment-takeback scheme or instructions on how to responsibly recycle. Examples include a dress comprising seven different materials: 'Main material: 45% polyamide, 55% polyester. Other material: 79% polyamide, 20% cotton, 1% elastane Lining: 40% white goose down, 40% polyamide, 10% viscose, 10% cupro'. Another female jacket analysed is the epitome of complexity, using '31% cotton, 23% polyamide, 22% polyester, 20% lyocell, 2% glass fibre, 2% acrylic. Other material: lamb'.

The brand's use of synthetics in dresses is also distinct from Gucci, which uses monomaterials such as wool, silk or viscose in 19 out of 30 dresses. By contrast, only 8 out of 30 Louis Vuitton dresses are made of monomaterial textiles; 5 of the 30 consist of 100% synthetics, and 67% contain synthetics. Like other mass-market brands, Louis Vuitton displays a preference for virgin synthetics (like polyester) in the lining of garments – again, unlike Gucci, which frequently opts for a viscose lining.



**Greenwashing alert**

A product description for a men's shirt analysed states: 'all of the cotton for our clothing is sustainably sourced and always will be'. M&S seems to contradict itself here on two fronts. First, numerous cotton products from the data collected were neither marked as BCI cotton nor as organic; and second, by the scheme's own admission, BCI certification gives absolutely no guarantee that the cotton fibre in the product is actually 'sustainable'. CMA guidelines are clear on this front: claims of sustainability must be unambiguous, must not omit relevant information and must be truthful and accurate – all of which M&S breaches in numerous incidents. Elsewhere, the retailer uses recycled polyester, which it claims is 'kinder to the planet'. However, no feedstock is listed, and there is no disclosure of the exact volume of recycled synthetics used in each garment; nor are we told what it's in comparison to. Again, referring to CMA guidelines, any claims implying a product is 'greener' or more environmentally friendly must compare like-for-like and support their claim – otherwise, they are misleading.

Similar to other retailers, sustainability claims are made on items in which the majority of materials used are virgin synthetics; for example, a female jacket containing 63% polyester, 33% viscose and 4% elastane (exclusive of trimmings). The item includes claims that 33% of

its viscose content is: 'Sustainably Sourced Lyocell, Natural wood pulp from sustainably managed forests and fibre production processes that are kinder to the environment'. However, it ignores the additional use of 67% overall virgin synthetics, potentially misleading consumers into believing the entire product is sustainable, when only part of it is claimed to be.

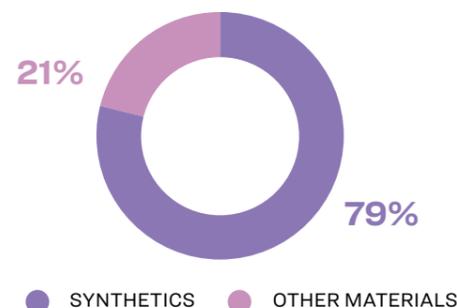
M&S's female-jacket category ranks second-highest of any category in the study for percentage of synthetics. All M&S's female jackets contained synthetics (with an average of 75% composition), and 26 out of 30 contained polyester (with a significant average polyester count of 82%). It is worth noting a lack of full transparency regarding many products, whereby fibre composition is listed as 'exclusive of trimmings' or containing percentages of 'other fibres', which are not disclosed. Since these trimmings and materials can affect the sustainability performance of the product - such as its ability to be recycled - M&S should consider full disclosure of product information.

polyester. Uniqlo uses feather and down in the filling of their jackets, as opposed to the virgin polyester or recycled synthetics used by cheaper fast-fashion brands. The brand has implemented a takeback scheme, which incentivises customers to return their old down items for reuse or 'recycling', yet the high incidence of synthetics across its collection raises questions as to what form of recycling this would be.

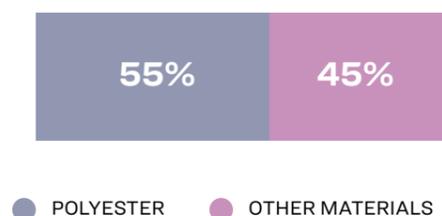
A surprising finding is that Uniqlo ranks second-highest for synthetics used in kidswear - after Walmart. Of the items in this category, 83% contained synthetics, with an average synthetic content of 51%. Of this category, 80% contained polyester, with the majority being blends of cotton with virgin synthetics. Only 4 items out of 30 used 100% cotton.



% OF TOTAL GARMENTS THAT USED SYNTHETICS



AVERAGE COMPOSITION OF GARMENTS CONTAINING POLYESTER



### 3.11. Uniqlo

Uniqlo was the third-highest user of synthetics; 79% of the products analysed contained synthetics, and 70% contained polyester. Among the garments that contained synthetics, the average composition was 64%; the average polyester composition was 55%. Uniqlo used 0% recycled synthetics.

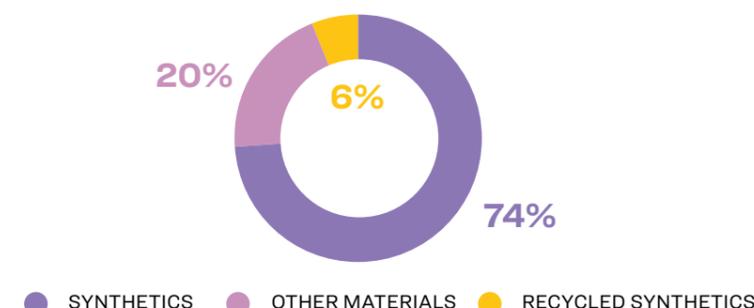
Uniqlo does not have a dedicated sustainable range; nor did it use any recycled synthetics in the sample collected. While the brand has a company sustainability policy, no claims are made on its product pages; thus, it has no certifications to support any statements. Despite the organisation's commitment to reducing single-use plastic,<sup>96</sup> there is a distinct disconnect here with the brand's high reliance on plastic-derived synthetics. Uniqlo's female and male hoodies also feature among the top in their categories, across the study, for highest percentage of synthetics.

A major contributor to the brand's high reliance on synthetics is its functional outerwear garments. For example, the HEATTECH blend typically consists of 38% Polyester, 31% Acrylic, 21% Rayon and 10% Spandex. In a similar approach to M&S and H&M, which have also sought to rebrand their synthetic items, Uniqlo has relabelled their water-repellent garments under BLOKTECH.

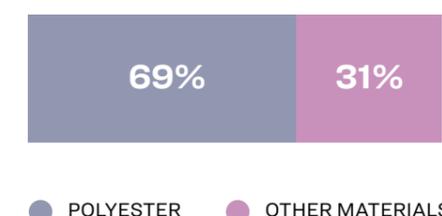
Of the Uniqlo jackets/coats analysed, 93% contained synthetics. For the female category, 26 out of 30 contained polyester, and 12 out of 30 consisting of 100% polyester. Similarly, 10 out of 30 male jackets consisted of 100%



% OF TOTAL GARMENTS THAT USED SYNTHETICS



AVERAGE COMPOSITION OF GARMENTS CONTAINING POLYESTER



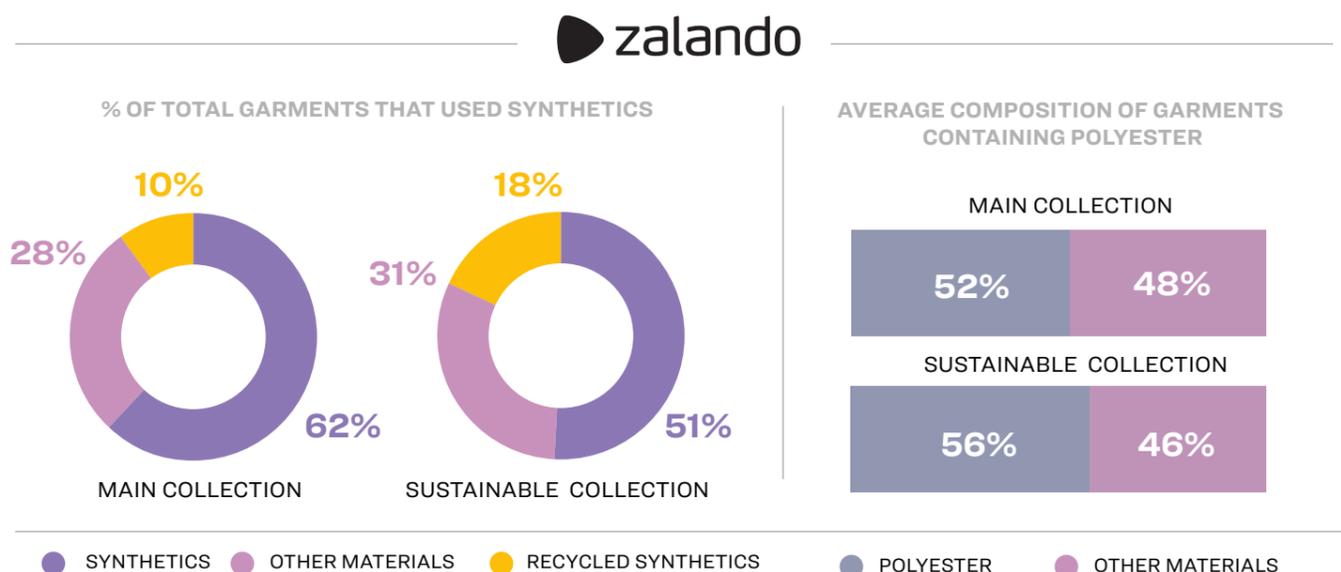
### 3.12. Walmart

Walmart was the second-worst offender for synthetic use; the American retailer used synthetics in 80% of all products analysed. Of these, 64% contained polyester and 6% contained recycled synthetics. The average synthetic fibre content was 60%, and the average polyester content was 69%.

In contrast to the worst synthetics offender (Boohoo), Walmart is notable for its use of BCI and organic cotton, as well as recycled synthetics. Walmart does not disclose the feedstock of recycled synthetics used; nor does it certify them. However, the brand has made concerted efforts to share the precise volume of recycled polyester used in each garment. This differs from brands like Zara and Zalando, which are more ambiguous about the percentage of recycled synthetics used, with statements like: 'At least 75% recycled polyamide', or: 'At least 20% recycled polyester'.

While Walmart does not have a separate 'sustainable' collection, it has set up 'Free Assembly' as the 'sustainable' offering featured in the main collection. This comprises a limited number of garments from the sample analysed. A number of items in this collection are tagged as 'more sustainable' - without stating in comparison to what, or providing a baseline. Additionally, no definition of what comprises organic or BCI cotton is provided on Walmart's product pages. The retailer should work to communicate the properties of these materials more clearly to customers.

Of greater concern is Walmart's approach to synthetics in kidswear. In this category, Walmart uses the highest volume of synthetics of all brands: 87% of the category contains synthetic fibres, and 77% contains polyester in some capacity. This differs to Gucci (only 23% of their kidswear contained synthetics) and Zara (43% synthetics). Children are more vulnerable to microfibres on a daily basis through inhalation, which poses risks to developing lungs;<sup>97</sup> as such, the high use of microfibre-shedding synthetics in Walmart's kidswear is a reckless choice. Additionally, 7 of the 30 items analysed contained recycled synthetics and disclosed the precise volume of this, which ranged from 32% to 40% and 100% (note, again, that this is technically impossible).



### 3.13. Zalando

Across Zalando's range,<sup>B</sup> 72% of garments analysed contained synthetics. For the main collection, 55% contained polyester and 10% contained recycled synthetics. The average amount of synthetic fibre per garment was 51%; for those that contained polyester, the average amount was 52%. Of Zalando's sustainability range, 69% of items contained synthetics - which is only just lower than its main collection, and still higher than the next-biggest user of synthetics (M&S). Of the sustainability collection, 48% contained polyester, and 18% of items containing recycled synthetic content. Interestingly, the average amount of synthetic fibre per garment was 48%, but the average amount of polyester in garments containing synthetics was 56% - higher than the main collection.

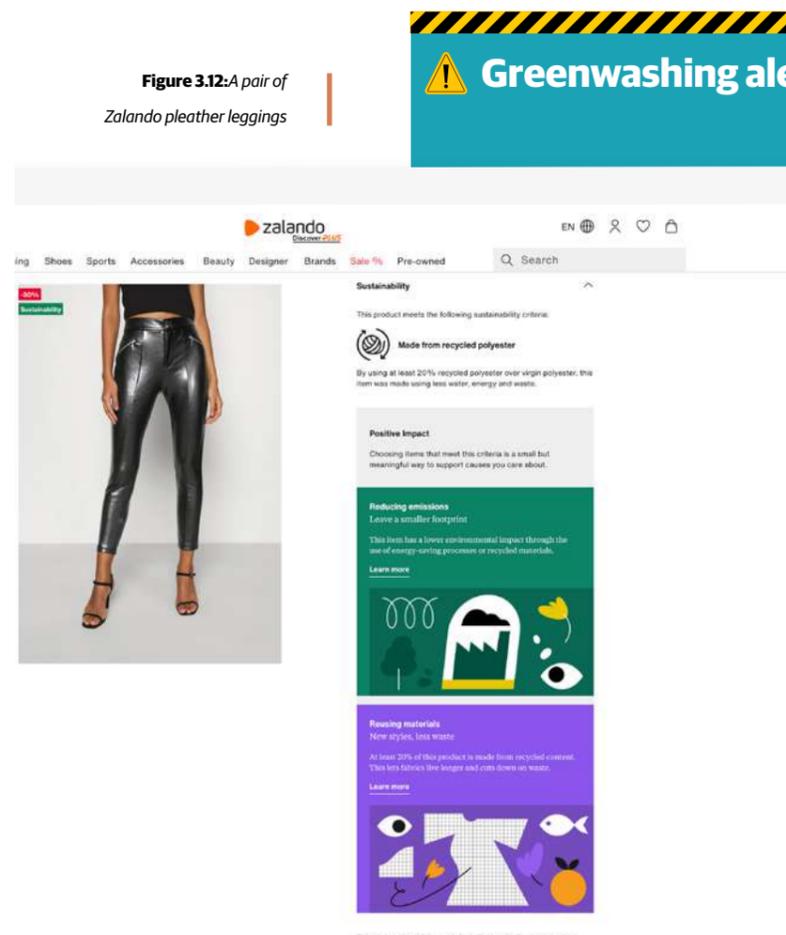
Sustainability claims were made for 86% of all products analysed - the second-highest, after Gucci - but a full 79% flouted CMA guidelines. The marginal difference in material composition between Zalando's main and sustainable collection points to the labelling of the latter being largely for marketing purposes.

There is a heavy reliance on BCI cotton in both Zalando's main and 'sustainability' offerings, and the brand uses this to justify the sustainability tag on many garments. Zalando offers a very candid explanation of BCI cotton's mass-balance approach - distinguishing it from other retailers, such as M&S - emphasising that this label 'does not mean the product is made of physically traceable Better Cotton'. Despite the candid description, given the weakness of the scheme, it is questionable whether BCI cotton items warrant the 'sustainable' tag at all.

<sup>B</sup> This analysis has been conducted on Zalando own brands only. These include: Anna Field, Even & Odd, Friboo, YOURTURN, Zalando Essentials and Zign.

The brand also suggests that linen is always an 'eco-material' that 'is a natural and durable fibre which requires less water and pesticides to grow than cotton'. However, no evidence is given to support this claim, and no certification (such as GOTS or CELC, which Zara uses).

Figure 3.12: A pair of Zalando pleather leggings



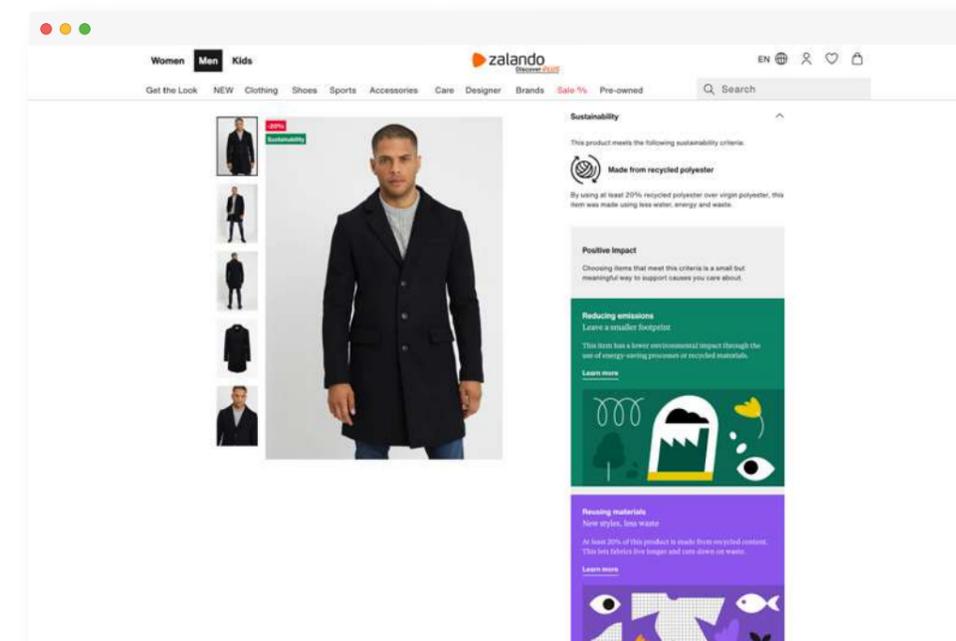
Across the items analysed, we discovered three pairs of 100% synthetic faux-leather leggings. These items were marked 'sustainable' merely for containing at least 20% recycled polyester. The creation of faux leather - or 'pleather' - involves chemically intensive processes and often-harmful plastics, such as PVC, for coatings.<sup>98</sup> Furthermore, the presence of recycled polyester does not make this product any more sustainable at end of life, making 'sustainable' an incongruous and misleading label for this garment.

A similar confusion of what should be deemed 'sustainable' is found in the jackets/coats category. For example, a male jacket made from a complex blend of 64% polyester, 24% wool, 5% acrylic, 3% viscose, 2% polyamide and 2% cotton - thus entirely unrecyclable - is labelled as 'sustainable' because it contains 'at least 20% recycled polyester'.

Akin to other brands, Zalando makes heavy use of synthetics in outerwear and polycotton blends for loungewear; 95% of male sweatshirts/hoodies contain synthetics, and only 1 item (out of 30) is a natural monofibre garment.

Jarringly, of all brands' dress categories, Zalando's sustainable-dress category uses the highest incidence of synthetics - 90% - with a steep average polyester composition of 84%.

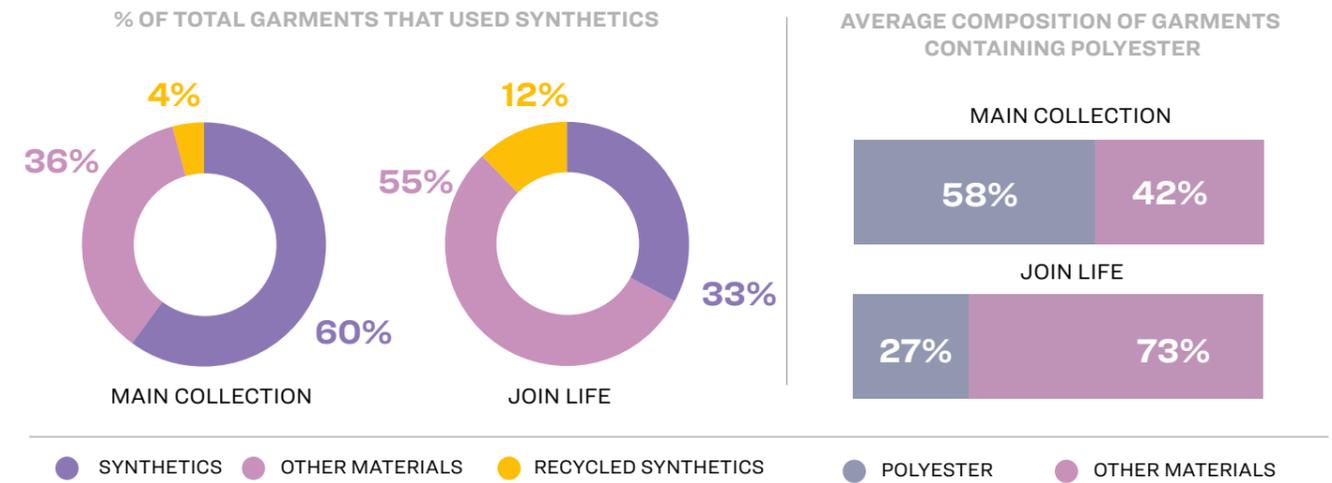
Figure 3.13: A jacket by Zalando containing a complex blend of synthetics





By contrast, for kidswear, Zalando had the lowest incidence of synthetic fibres across all brands. No polyester was disclosed in the material composition of kidswear, and the synthetics that were present were predominantly elastane for waistbands and trimming details.

## ZARA



### 3.14. Zara

About two-thirds (64%) of the products in Zara's main collection contained synthetics, and 45% in its 'Join Life' sustainable collection. From the main collection, 44% contained polyester, with an average composition of 49% for synthetics and 58% for polyester. Of Zara's main-collection items, 4% contained recycled polyester. In Join Life, 25% of items contained polyester, with an average composition of 27%, while the average synthetic composition was 28%. Of Join Life items, 12% contained recycled synthetics.

Zara has clearly made a concerted effort to transition towards using sustainable fibres, and clearly communicates material characteristics across its main and Join Life collections. The brand is keen to emphasise its sustainability offering, and positions Join Life items at the top of the main-collection category pages for both men and women.

Of all brands analysed with a dedicated sustainability collection, Zara's has the biggest difference in synthetics used compared to its main collection - it uses 19% less. While not the lowest user of synthetics across the products analysed, Zara was the most comprehensive at substantiating and verifying its sustainability claims. All organic-cotton claims are certified under the OCS, GOTS, which requires at least 70% certified-organic fibres to gain the mark. Zara also includes certification for both linen and MMCF.

Recycled polyester and recycled polyamide are always supported by the RCS and GRS on product pages. Zara states the feedstock of recycled synthetics: for recycled PET, this is water bottles; for recycled polyamide, it is more ambiguously described as a 'waste product reclaimed from polyamide'. The brand discloses rough volumes

## Synthetics Anonymous

of recycled synthetics with the wording: 'At least 25%/50%/75%'. While this is not the exact percentage (like Walmart), it is less ambiguous than M&S, which does not disclose the volume in any instance.

Zara is the only brand in this study to promote the value of responsible laundry practices, stating: 'caring for your clothing is caring for the environment'. Zara also offers a guide to clothing care, sharing advice - including instructions - on responsible laundry habits, as well as explanations of the environmental benefits of cooler washing, gentle spinning and turning garments inside out.<sup>99</sup>

Despite this more robust approach to sustainability, Zara continues to use a relatively high volume of synthetics in its main collection. For example, 27 of the 30 items in the male jackets/coats category included synthetics, and 73% of the category contained polyester, with a substantial average polyester content of 74%. Similarly, Zara's loungewear - such as hoodies/sweatshirts - demonstrates a tendency to default to synthetics and cotton blends; 87% of female hoodies/sweatshirts contained synthetics, and 77% included polyester.

As with the majority of other brands, synthetics are a common secondary material for embroidery, lace, coating and embellishments. This includes the prevalence of elastane, polyester in lining and polyurethane for coating. Zara's product pages sometimes state: 'Excludes ornamental yarns', without specifying what these are. Less-common synthetics that Zara uses include metallised fibres and elastomultiester, which Gucci and Uniqlo also sometimes use.

**Hybrid horror**

Complex blends of virgin synthetics appear throughout Zara's main collection, and are arguably extremely difficult to deconstruct for repurposing. An example is a simple-looking female hoodie, which is anything but simple in its construction, containing '31% polyester, 31% acrylic, 30% nylon, 4% wool, 4% elastane'.

Figure 3.14: A jumper by Zara made from a complex blend of synthetics

VIEW ALL HIGH WAIST MID WAIST WIDE-LEG SKINNY MOM FIT STRAIGHT-LEG >

## ZARA

### SOURCE, MATERIALS & CARE

**ORIGIN**

We work alongside our suppliers, workers, unions and international trade organisations to ensure a supply chain that respects and promotes human rights, contributing to the United Nations Sustainable Development Goals.

Additionally, thanks to an ongoing collaboration with our suppliers, we have developed a tracking programme that allows us to determine where our products are being made.

MADE IN CHINA

▶ **SUSTAINABLE MANAGEMENT OF THE SUPPLY CHAIN**

**MATERIALS**

**OUTER SHELL**

31% polyester  
31% acrylic  
30% nylon  
4% wool  
4% elastane

**CARE**

Machine wash at max. 30°C/86°F with short spin cycle





## 4. Conclusions

Our investigation into brands' transparency, policies and practices on synthetic fibres shows that most of them lack a systemic approach to this issue. Very few brands have a concrete commitment to phase out synthetic fibres or invest in real circular-economy solutions, such as scaling back overproduction, increasing clothes' durability and repairability, or introducing takeback schemes that guarantee reuse or recycling at end of life.

Our research found that many brands claim their clothes are recyclable despite a glaring absence of fibre-to-fibre recycling technologies. We are also concerned about brands' lack of meaningful investment in these technologies. It seems that most brands prefer to stick to the cheap and easy greenwashing option of using polyester from downcycled PET bottles rather than systematically rethinking their approach to fashion sustainability and truly committing to circularity.

### 4.1. Questionnaire responses

We were positively surprised about the rate of response to our questionnaire - over 83% (38 out of 46) of brands responded. However, the quality of responses was disappointing; only about half of the brands disclosed even the most basic information, such as their share of synthetics in volume and as the percentage of their sales. Our research has not established a single frontrunner, as no company made a clear commitment to end its reliance on synthetic fibres. Only six companies indicated they want to ensure the use of synthetics in their collections remains low; some of these cited the fact that they are produced from fossil fuels, or raised concerns associated with microfibres. The 15 worst-performing brands assigned to the red zone were a mix of sport, high-street, luxury and department-store companies, the majority (11 out of 15) of which are North American-based (US or Canada). Their complete lack of engagement, commitments or even transparency clearly shows that the issue of fossil fashion is not on their agenda. Given that we chose the most transparent brands for this research, this is even more concerning.

Regarding supply chains, very little meaningful information was disclosed, with brands not even disclosing their suppliers of recycled polyester. Most brands (85%) indicated that their recycled-fibre policy consists of downcycling plastic bottles into polyester; some were keen to highlight '*storied materials*', such as clothes produced from ocean plastic or captured fishing nets. However, none of the brands reported high levels of fibre-to-fibre

recycling targets, nor indicated a clear goal to move towards this type of recycling. The industry's lack of appetite for scaling up investments in closed-loop recycling solutions – as opposed to increasing its share of PET from downcycled plastic bottles – shows that fashion brands are more interested in consumer-facing reputational Band-Aids than solving the growing textiles-waste crisis and moving to a circular economy, in which products are designed to be more durable, reusable, repairable and recyclable.

Despite their minute size, microfibres are a giant elephant in the room; our research found that few brands are taking any concrete steps to stop the shedding of harmful microfibres from their clothes. Most companies are sticking to business as usual, citing the need for yet more research, and many have joined industry initiatives to develop unified measuring methods. Very few brands indicated that they are keeping their synthetic share low as a precautionary measure regarding this issue. Most are looking only at end-of-pipe solutions, such as wastewater-treatment plants and filters on washing machines, which do little but push the problem elsewhere. Our analysis of a selection of brands' online shops also showed a concerning trend – especially among US brands – of using high percentages of synthetic fibre in clothing lines for children, despite recent scientific research indicating that inhaling synthetic microfibres could be especially harmful to children.

## 4.2. Online-shop sweep

We wanted to ascertain how brands' online shops reflect and present their synthetic-fibres policies. Our investigation shows an interesting trend: Synthetic fibres are present in most of the items sold by even those brands that disclosed a low overall share of synthetics. For example, Zalando responded that synthetic fibres represent 26% of their fibre portfolio, yet our online-shop research revealed that, out of 436 products investigated, 72% contained a certain share of synthetic fibres. The average amount of synthetics per garment was also over 50%, which makes us question why the brand uses so many blends with synthetic fibres – and whether their share of synthetics is actually higher than they told us. We saw a similar trend with Asda (which reported that synthetics represent 30% of their total fibre portfolio, but we found them to be present in 61% of garments analysed) and ASOS (which reported 29%, but we found synthetics in 66% of the garments analysed). Although these numbers are not comparable, they give a good representation of how pervasive synthetic fibres are in blends that make it into the final clothes sold to the consumer.

While most brands have a lower share of synthetics in their sustainable collection, H&M is a significant exception; there is a higher percentage of synthetic fibres in their so-called Conscious Collection than in their main collection (72% vs 61%, respectively). Most brands had higher levels of recycled polyester in their sustainable collections, but those brands also tended to sell fewer items that included synthetics. For example, the biggest difference between a brand's collections was Join Life – Zara's sustainable collection – which contained 19% fewer synthetics than Zara's main range. Join Life also included three times more products with recycled polyester than Zara's conventional range (12% vs 4%, respectively). For H&M, 2% of its main collection contained recycled polyester, compared to 32% of the Conscious Collection claiming to include recycled content. This indicates that many brands think downcycled polyester from plastic PET bottles is a solution to their addiction to fossil fibres. Without rethinking some of the problems, this quick fix does not solve the issue of microfibre release, nor the fact that these clothes cannot be recycled at the end of life.

## 4.3. Greenwashing

Many of the targets and commitments that brands shared with us are wrapped in vague and misleading environmental claims. These include targets to reach 'sustainable', 'preferred', 'sustainably sourced' or 'sustainably made' materials – criteria for which are often ill defined and lead to greenwashing. Our research also found that many

companies are claiming their products are recyclable, despite the technology to recycle them back into clothes not existing. Neither do companies have takeback schemes in place to ensure these items are actually collected, and they are not making the necessary investments in closed-loop recycling technologies.

Greenwashing was also rampant across products in the online stores we analysed, over 39% of which included some kind of claim or were part of a more 'sustainable' collection. From all the green claims, only 38% were verified by a third-party scheme or organisation. However, as we do not believe that some of these certifications are robust or provide sufficient evidence to substantiate the claim, we analysed them further, using recent CMA guidance on green claims, to check whether those claims were warranted. Our research shows that 59% of claims made across the study fell short of complying with these guidelines. These claims either referred to the brand being part of BCI and/or made sustainability claims on items containing recycled synthetics, without disclosing the proportion included. Since we analysed UK online shops for this investigation, these brands are potentially liable for misleading the consumer; given that legislators are getting ready to clamp down on greenwashing, they should seriously reconsider some of their claims.

## 4.4. Why we need legislation

The findings of this research lay bare fashion brands' addiction to synthetics – not only ultra-fast-fashion brands but also that put sustainability front and centre of their shop window, and even luxury houses. It should be noted that – with the exception of Gucci – all the fashion brands whose online shops we analysed used synthetics, in some percentage, in the vast majority of products assessed, while the questionnaire revealed that some brands – such as Adidas and Asics – use synthetics in 90%, or the '*vast majority*', of their products.

This investigation clearly shows that regulators need to take immediate action and ensure the fossil-fashion industry is reformed. They must take measures to break the vicious cycle of fashion's reliance on cheap synthetic materials, and ensure the industry shifts to responsible production based on the true principles of a circular economy. The upcoming EU textile strategy presents a significant opportunity. The European Commission should commit to addressing the excesses of the fast-fashion model, which is inherently unsustainable. The Commission should introduce Extended Producer Responsibility (EPR) schemes with mandatory and ambitious ecodesign measures. Brands should become responsible for the end of life of their products, which should be separately collected, reused, repaired and ultimately recycled in a viable and environmentally benign fibre-to-fibre process. The upcoming strategy should also ensure any recycled-content obligation on the textile sector does not contradict existing EU legislation (e.g. the Single-Use Plastics Directive), according to which the industry needs to increase collection and use of recycled PET in plastic bottles, as well as decrease the overall consumption of single-use plastic and shift to reusable solutions instead.

According to the updated waste legislation, the Commission has to consider setting targets for the reuse and recycling of textiles, while member states already have to set up systems to separately collect textiles by 2025.<sup>100</sup> However, given that many current textiles are low-quality blends that cannot easily be reused or recycled, the European Commission needs to take much more ambitious action is needed to guarantee a circular economy for textiles.

Policymakers should also pay special attention to increasing supply-chain transparency and obliging companies to adopt due diligence with regards to human rights and environmental issues. We also need EU regulation on green claims, as our investigation confirms that brands can currently get away with a sea of misleading claims that go entirely unchallenged. The EU, UK and governments worldwide should ensure robust legislation and effective enforcement to prevent greenwashing and make sustainability claims more reliable.



## 5. Recommendations

### 5.1. Recommendations for fashion brands and retailers

1. **Move away from the fossil-fashion business model:** Establish a concrete, accountable and time-bound plan to move away from the unsustainable fast-fashion model, and reduce reliance on synthetic materials, through a viable trajectory and targets for the uptake of more sustainable alternatives. Prioritise phasing out synthetic fibres from children's clothing and collections for new mothers, as there is emerging scientific evidence that young children's health is the most vulnerable to microfibre pollution.
2. **Commit to ambitious and comprehensive climate targets:** Set ambitious commitments to rapidly move supply chain away from coal and other fossil fuels by 2030, to achieve the minimum 50% reduction in greenhouse gas emissions, scientists warn is needed to stay within a 1.5 degree pathway. These should cover all supply-chain emissions, including factories and mills, transportation, raw-material cultivation and end-of-life disposal. Climate strategy must also include transitioning away from fossil fuel-based fabrics (see point 1).
3. **Invest in true circularity:** This should include higher durability of garments, longer warranties, offering repairs to customers and promoting reuse. Instead of promoting recycled materials produced from PET bottles or ocean plastic, invest in viable and environmentally benign fibre-to-fibre recycling technologies. Ensure, too, that any toxic chemicals are eliminated in the design process, as these might get recycled back into new clothes, harming the health of your customers.
4. **Ensure any green claims made are not false or deceptive:** Claims must be clear and unambiguous. Do not omit important and relevant information (for example, on the product's end of life); ensure comparisons made are fair and meaningful, and that claims are substantiated and easily accessible to consumers. Stop making unsubstantiated claims on the recyclability of garments sold, in the absence of any viable fibre-to-fibre recycling technology.
5. **Provide full, publicly accessible and transparent information on your suppliers:** Including all the factories and supply-chain stages from which textiles are sourced –not just 'tier 1' and 'tier 2' factories.

6. **Openly support progressive legislation to improve circularity and transparency in the industry** (for example, mandatory EPR schemes), encourage peers to do the same and leave any industry initiatives that oppose, delay or undermine progressive legislation - including its implementation.

## 5.2. Recommendations for consumers

1. Refrain from compulsive shopping and buy only what you really need, shop second-hand and buy for maximum durability, and seek to repair, reuse and swap items where possible.
2. Buy only from brands that have made clear commitments to transparency in their supply chains, to sustainable sourcing and production of all their materials and garments, and which have strong climate commitments, including a clear plan to phase out their dependence on fossil fuel-based fibres.
3. Raise awareness of the problems with fast fashion, and use your voice - for example, through social media or signing petitions - to highlight issues such as greenwashing, exploitative practices, environmental harm and unsustainable consumption.

## 5.3. Recommendations for the European Commission

### 5.3.1. Recommendations for the EU textile strategy

1. Introduce a tax on virgin plastic, which should also cover the use of virgin synthetic fibres in the textile industry. Do not incentivise the use of plastic waste from other sectors (such as PET bottles) as a feedstock for recycled polyester fibres in the textile industry, as such items should be collected, reused and recycled in a closed loop (and companies should also reduce single-use PET bottles on the market).
2. Encourage the use of non-toxic circular materials, and introduce ecodesign measures to prevent material mixing and blends, and to eliminate substances of concern - all of which hinder circularity. Ensure any legacy toxic chemicals are eliminated to prevent recycling them into new products. Chemicals should be regulated in groups (rather than as individual chemicals) to avoid the regrettable substitution of one toxic chemical for another.
3. Set out strategies and measures to reduce pollution from the shedding of microfibres from synthetic fibres, as suggested by Science Advise for Policy by European Academics.<sup>101</sup> One such strategy should be reducing the use of synthetic fibres, in line with the precautionary principle. Secondly, set measures and maximum thresholds for the number of microfibres released during production, use phase, and end of life. In addition, explore setting rules on industrial pre-washing and wastewater filtering in European processes, so that these large quantities of microplastics are washed out and collected before the products are sold on the market - putting the responsibility for this on producers, not consumers.

4. Set up an EPR scheme for different types of textiles (for example clothing, carpets<sup>c</sup> and mattresses), in which producers are responsible for the management and cost of end-of-life treatments of the products they place on the market. Investigate the best way to set up such schemes to ensure a market shift towards higher quality, more durable fashion that takes into account ecodesign, the elimination of substances of concern (including microfibres) and durability (via longer warranty and specific targets for recycling and reuse). Encourage recyclability and reuse through eco-modulated fees.
5. Encourage and incentivise new business models that support product-as-service models (such as clothes-rental schemes), and promote reuse and repair systems. Explore other ways to slow down the fast-fashion industry.
6. Set production standards for manufacturing that encourage better production models across fashion supply chains; for example, along the lines of EU's Best Available Technologies standards.
7. Ensure the EU's support for the sector to recover from the Covid-19 crisis is conditional on companies' achievement of carbon-reduction targets, as well as a clear plan to reduce dependence on both fossil fuels and materials unfit for recycling.

### 5.3.2. Recommendations for the EU due-diligence legislation

1. Adopt mandatory due-diligence legislation, according to which companies are legally required to identify, prevent, mitigate, track and account for environmental, human rights and governance risks and impacts.
2. Due diligence should also mandate high levels of transparency, as companies are often able to hide human-rights violations and pollution scandals behind opaque supply chains and via third-party outsourcing in their supply chains.
3. Due diligence should also include transparent grievance mechanisms and access to remedy for victims of business-related adverse impacts.<sup>102</sup>

### 5.3.3. Recommendations for the EU agenda to address green claims and empower the consumer

1. Prevent companies from making unsubstantiated green claims, particularly around the 'recyclability' of their products, their use of recycled polyester from plastic bottles and the share of recycled polyester in their products. Preferably, an independent body should have to pre-approve any claim before it can be made.
2. The proliferation of weak certification and labelling schemes in the sector should be regulated, so that fashion brands can only use the most ambitious, robust and full-life-cycle schemes.

<sup>C</sup> For a model EPR scheme for the carpet industry, Changing Markets Foundation commissioned Eunomia Consulting to conduct research and create a toolkit that national governments and the EU can use to create the best carpet-circularity policies, which is available here: <https://www.eunomia.co.uk/reports-tools/policy-toolkit-for-carpet-circularity-in-eu-member-states/>.

## 6. Annexes



# Where do brands stand on their use of synthetic fibres and commitments to move away from them?



\* Changing Markets does not consider an email response without answers as engagement.

\*\* Parent groups VF Corporation, PVH Corporation and Kering are included for references purposes only, because they replied on behalf of their brands or policies are set at the group level. Only their individual brands, such as Gucci, Calvin Klein or Timberland, are counted among the 46 brands contacted for analysis purposes.

## USE OF SYNTHETIC FIBRES

BRAND/RETAILER	GROUP	ENGAGED 2021	TONNES OF SYNTHETICS/YEAR	% OF SYNTHETICS	INCREASE/DECREASE IN SYNTHETICS
<b>No frontrunners</b>					
<b>BALENCIAGA</b>	Kering	✓	Figures disclosed only for parent group Kering. See Kering.	Figures disclosed only for parent group Kering. See Kering.	See parent group Kering.
<b>BOTTEGA VENETA</b>	Kering	✓	Figures disclosed only for parent group Kering. See Kering.	Figures disclosed only for parent group Kering. See Kering.	See parent group Kering.
<b>Dressmann</b>	Varner	✓	<b>720MT in 2020</b> , Dressmann communicated, including polyester, polyamide, acrylic, elastane, polypropylene and polyurethane. This information does not appear on its website.	16% of fibre consumption in 2020, Dressmann communicated, of which 81% was polyester, 10% elastane, 9% polyamide and <1% acrylic, polyurethane and polypropylene. This information is not available on Dressmann's website. Parent group Varner's Sustainability Report 2020 reports that 24% of fibres were synthetics in 2020 for group as a whole.	Dressmann communicated that it has had a constant percentage of synthetic fibre in the last few years and foresees this to be relatively stable in the next few years, depending on the products it makes. It will continue keeping the share of synthetics fibre fairly low until there is more scientific evidence on microfibres, it added.
<b>ESPRIT</b>	Esprit Holdings	✓	<b>5,300 t in FY19/20</b> , Esprit communicated. This information does not appear on Esprit's website.	24% of fibres in FY19/20, Esprit communicated, of which 55% was conventional polyester, 23% polyamide/nylon, 9% acrylic, 7% elastane, 3% polyurethane and 3% others. The 24% figure is publicly reported in Esprit's 2019-20 Annual Report. Esprit's website says that 30% of fibre share came from synthetics in July-December 2020, noting the shift to less cotton and more synthetic fibres is due to more technical outerwear being sold in winter. It does not give an individual fibre breakdown.	Esprit communicated that it used 24% in FY19/20, down from 29% in FY18/19. It added that it is working to reduce its use of synthetic fibres and to only focus on them where certain features are needed, such as in outerwear or sports.
<b>G-STAR RAW</b>	N/A	✓	<b>802MT in 2020</b> , based on breakdown of synthetics use provided by G-Star RAW. This information does not appear on its website.	~15% of raw materials, based on breakdown provided by G-Star (10% polyester, 3% elastane, 1% nylon, <1% acrylic). G-Star's Raw Sustainability Report 2019 notes that of the 20% of raw materials which is not cotton, 10% is polyester.	G-Star communicated that its synthetic fibre use has been "stable" over the last years.
<b>GUCCI</b>	Kering	✓	Figures disclosed only for parent group Kering. See Kering.	Figures disclosed only for parent group Kering. See Kering.	See parent group Kering.
<b>HUGO BOSS</b>	Hugo Boss Group	✓	<b>2,531 t</b> of synthetic fibres, as well as 521 t of rubber and 264 t of polyurethane in 2019, according to Hugo Boss's Sustainability Report 2019.	20% of all materials were "based on" synthetic fibres in 2020, Hugo Boss communicated. Its website says 16% of materials came from synthetic fibres in 2019.	Hugo Boss communicated that its proportion of synthetic fibres increased slightly in 2020 compared to 2019, due to a decreased demand for formalwear due to the COVID-19 pandemic. It noted that it did not increase its overall use of synthetics and has "implemented various measures to keep [synthetic fibre use] as low as possible".
<b>KERING</b> (group level only)**	Kering	✓	3,500 tons used by Kering as a whole, largely in shoes. This information does not appear on Kering's website, although its public 2019 Group EP&L report indicates the relative environmental impact of synthetic fibres compared to other materials in monetary terms is lower than leather, animals products, metal and plant fibres.	4% of raw material use is synthetic fibres, Kering communicated. Of this, 67% is polyester, 22% nylon, 5% elastic, 1% acrylic, 1% elastane and 4% other. Kering also provided a breakdown of synthetic fibre use by product: 41% shoes, 25% packaging and visual goods, 19% leather goods, 12% ready to wear, 3% other. This information does not appear on Kering's website.	Kering communicated that its use of synthetic fibre has increased in recent years, but remains very low. Its public 2019 Group EP&L report indicates that impacts from synthetic fibres have increased since 2018.
<b>Levi's</b>	N/A	✓	Did not disclose, not available on website.	9% of fibre mix, including polyester and elastane, LS&Co communicated. This information does not appear on its website.	LS&Co communicated that the 9% ratio remains "fairly stable".

USE OF SYNTHETIC FIBRES

BRAND/RETAILER	GROUP	ENGAGED 2021	TONNES OF SYNTHETICS/YEAR		% OF SYNTHETICS	INCREASE/DECREASE IN SYNTHETICS
<b>Reformation</b>	N/A	✓	<b>5 t in 2020</b> , Reformation communicated. This information does not appear on its website.		4-5% of textiles are made with synthetic fibres, including single fibre fabrics and blends, Reformation communicated. This information does not appear on its website.	Reformation communicated that its use of synthetics has increased since it launched its athleisure and swim product categories. However, it outlined measures it takes to keep its share of synthetic fibres low in other clothing categories.
YVES SAINT LAURENT	Kering	✓	Figures disclosed only for parent group Kering. See Kering.		<1% of raw material use, Saint Laurent communicated. See also parent group Kering.	See parent group Kering.
UNITED COLORS OF BENETTON	Benetton	✓	<b>3,019 tonnes</b> , Benetton communicated. Benetton's website says it used <b>2,597 tonnes</b> of synthetic raw materials in <b>2019</b> .		18% of total fibres (2.6% synthetic monofibre and 15.7% synthetic mixed), Benetton communicated. Of 18% total, 65% is polyester, 15% polyamide, 10% acrylic and 9% other synthetics. Benetton publishes a breakdown of fibre use by tonnage on its website which allows calculation of its synthetics use.	Benetton communicated that its synthetic use has not increased in the past few years and it does not foresee an increase or decrease.
ASDA	Walmart	✓	<b>13,900 tonnes</b> , Asda communicated. This information does not appear on its website.		30% of fibre mix was synthetic in 2020, Asda communicated, made up of 22% polyester, 2% polyamide, 2% nylon, 2% acrylic, 1% elastane and 1% other. Asda's website does not give this full breakdown, but says 26% of George clothing is made from polyester (Asda communicated that this is a 2018 figure).	Asda communicated that its synthetic fibre use has reduced from 36% in 2018 to 30% in 2020. It does not currently have any plans to reduce synthetic fibre use, it said.
asics	N/A	✓	<b>Over 20,000 tons</b> of polyester were used in footwear products in 2020, ASICS communicated. The main synthetic fibre it uses is polyester, it added. This information does not appear on its website.	⚠	Did not disclose, but said that the "vast majority" of fibres used in its sports products are synthetic. This information does not appear on ASICS website.	ASICS communicated that its ratio of synthetic fibres is stable, that it has not seen an increase or decrease in the use of synthetic fibres recently, and it does not foresee big changes from current volumes in its mid-term plan to 2023.
ASOS	ASOS	✓	<b>6,275 tonnes in 2020</b> , ASOS communicated. This information does not appear on its website.		29% of textile products, ASOS communicated, made up of 21% virgin polyester, 3% acrylic, 1% recycled polyester, 1% conventional nylon, 1% elastane & spandex and <1% each of latex & rubber (natural & synthetic), lurex & metallised fibres, PVC, recycled nylon, silicone, virgin plastic, virgin polyacrylate, virgin polyacrylic, virgin polycarbonate, virgin polyethylene, virgin polypropylene, virgin polystyrene, virgin polyurethane and water-based polyurethane. This information does not appear on its website.	ASOS communicated that it has increased its use of synthetic fibres 16% since 2019.
bonprix	Otto Group	✓	⚠ Did not disclose, not available on website.	⚠	33%, based on breakdown provided by Bonprix (23% polyester, 6% polyamide and 4% polyacrylic). This information is available on its website.	Bonprix communicated that it has not increased its use of synthetic fibres in recent years and does not foresee an increase or a decrease in the future.
Calvin Klein	PVH Corp	✓	Figures disclosed only for parent group PVH Corp. See PVH Corp.		Figures available only for parent group PVH Corp. See PVH Corp.	See parent group PVH Corp
C&A	Cofra Group	✓	<b>42,000 tonnes in 2020</b> , C&A communicated. This information does not appear on C&A's website.		~26% of total its fibre portfolio in 2020, C&A communicated, made up of 16.1% polyester, 3.5% polyamide, 2.6% nylon, 2.6% acrylic and 1.6% elastane. Its Global Sustainability Report 2019 said polyester accounts for 19% of materials use.	C&A communicated that it has not seen an increase in its use of synthetics in recent years.
H&M	H&M Group	✓	⚠ Did not disclose, not available on website.	⚠	27% of fibre use by weight in 2020, H&M communicated, made up of 21% polyester, 3.5% polyamide and 2.5% acrylic. This information does not appear on its website. H&M communicated plans to share details about synthetic fibre and other material use publicly "as soon as we can", but gave no firm dates.	⚠ Did not disclose, not available on website.

USE OF SYNTHETIC FIBRES

BRAND/RETAILER	GROUP	ENGAGED 2021	TONNES OF SYNTHETICS/YEAR	% OF SYNTHETICS	INCREASE/DECREASE IN SYNTHETICS
<b>INDITEX</b>	N/A	✓	<b>151,239 Tn in FY2020, 185,040 Tn in FY2019 and 181,032 Tn in FY2018</b> , Inditex communicated. It also provided a tonnage breakdown of different fibres. This information does not appear on its website.	38% of total fibres in FY2020, Inditex communicated, made up of 28% polyester, 3.2% polyamide 2.5% acrylic, 1.4% elastane, 2.8% nylon and 0.2% others. H&M discloses the overall percentage of synthetic fibres in its Annual Report 2019, but not the individual fibre breakdown.	Inditex communicated that its use of synthetic fibres has kept steady in recent years, accounting for ~38.4% of its fibres (FY2018: 38.7%; FY2019: 38.1%; FY2020: 38.3%). Tonnage figures it provided show its overall use dropped in 2020.
<b>LINDEX</b>	Finnish Stockmann Group	✓	<b>6 tons of polyester and 15 tons of polyamide, based on dominant fibre in garments in 2019</b> , Lindex communicated. This information does not appear on its website.	37%, based on breakdown provided by Lindex (26% polyamide, 10% polyester and 1% acrylic), with figures based on dominant fibres in a garment. These values are given in Lindex's Sustainability Report 2020, which also notes that polyamide and polyester are its most common materials after cotton.	Lindex communicated that its polyamide use has stayed the same and its polyester use has decreased since 2017.
<b>M&amp;S</b> EST. 1884	Marks and Spencer Group	✓	<b>20,100 metric tonnes in 2020</b> , based on figures provided by M&S. This information does not appear on its website.	54% by product volume in 2020, based on breakdown provided by M&S (28% polyester, 24% polyamide and 2% acrylic). This information does not appear on its website.	M&S communicated that there is a slight variation year on year, such as increase when it launched its activewear range Goodmove, but did not say whether volumes have increased or decreased.
<b>MONSOON</b>	Monsoon Limited	✓	<b>167 tonnes in 2020/21</b> , based on breakdown figures Monsoon communicated (132 tonnes of original/normal fossil fuel based fabrics and 35 tonnes of sustainable/recycled based fabric. This information does not appear on its website.	38% by weight is synthetics, based on tonnage figures provided by Monsoon. This information does not appear on its website.	Monsoon communicated that it has increased its synthetic fibre use and sees an increase in synthetics in the future.
<b>M MORRISONS</b>	Wm Morrison Supermarkets plc	✓	<b>2,024 tonnes</b> , Morrisons communicated. This information does not appear on its website.	47%, based on breakdown provided by Morrisons (42% polyester, 2% acrylic, 3% nylon). This information does not appear on its website.	Morrisons communicated that levels have remained "fairly consistent".
	New Look Retail Holdings	✓	<b>13,292 tonnes</b> , New Look communicated. This information does not appear on its website.	66% of fibre mix, New Look communicated, made up of 42% polyester, 9% polyurethane, 4% acrylic, 2% polyethylene, 2% rubber, 2% nylon, 1% polyamide, 1% elastane, ~ 0% polypropylene and 3% other). This information does not appear on its website.	New Look communicated that its use is "likely to stay the same".
<b>next</b>	N/A	✓	<b>25,000 tonnes in 2020</b> . This information does not appear on Next's website.	38%, based on breakdown provided by Next (33% polyester, 2% acrylic, 2% nylon/polyamide and 0.5% polypropylene). This information is not available on its website, although Next's Corporate Responsibility Report to January 2020 notes that polyester is among its six main raw materials.	Next communicated that its use of synthetic fibres has increased "slightly" in recent years due to seasonal fluctuations and availability. It added that its use may increase due to the current challenges around cotton linked to forced labour allegations in Western China.
<b>PUMA</b>	N/A	✓	<b>30,010 tons in 2020</b> , based on breakdown of synthetics use provided by Puma. This information does not appear on its website.	~49%, based on figures provided by Puma (48% polyester, 1% nylon, <1% lycra, <1% acrylic). This information does not appear on its website.	Puma communicated that it is "endeavoring" to gradually reduce the proportion of its polyester over the next five years.
<b>PVH</b> (group level only)**	PVH Corp	✓	<i>37,168 MT of synthetics in FY19/20, based on breakdown provided to Changing Markets by PVH Corp (25,993 MT polyester, 8,277 MT nylon and 2,898 MT elastane, spandex and lycra). PVH Corp communicated that these values will be disclosed in its upcoming 2020 Corporate Responsibility Report. Its published 2019 Corporate Sustainability Report gives the equivalent data for FY18/19.</i>	<i>At least 20% in FY2018, based on synthetic and total materials tonnage reported in PVH's 2019 Corporate Responsibility Report.</i>	 <i>Did not disclose. However, based on the figures disclosed to Changing Markets for FY2019 and the figures published in PVH Corp's 2019 Corporate Responsibility Report FY2018, polyester use increased while nylon use stayed at a similar level.</i>
<b>Sainsbury's</b>	N/A	✓	<b>7,124 tonnes in 2020</b> , Sainsbury's communicated. This information does not appear on its website.	48% of textile products in 2020 "contained" synthetic fibres, Sainsbury's communicated. It gave the following breakdown, noting that products can feature more than one fibre type: 43% of products contain polyester, 20% polyamide, 6% acrylic, 5% recycled polyester, <1% recycled polyamide and <1% modacrylic. This information does not appear on its website.	Sainsbury's communicated that its use of synthetic fibres has been "consistent", but that changing market conditions make it difficult to set any trajectory of future trends.

USE OF SYNTHETIC FIBRES

BRAND/RETAILER	GROUP	ENGAGED 2021	TONNES OF SYNTHETICS/YEAR	% OF SYNTHETICS	INCREASE/DECREASE IN SYNTHETICS
	Tesco plc		Tesco disclosed its synthetics usage to Changing Markets but not for public disclosure. The information does not appear on its website.	30% by weight of textile products were made from polyester and nylon in 2020/21, Tesco communicated. This information does not appear on its website.	Tesco communicated that 30% of textile products were made from polyester and nylon in 2020/21, down from 32% in 2019/20. Tesco added that it does not have plans to increase the use of synthetic fibres in its products.
T O M M Y HILF I G E R	PVH Corp		Figures disclosed only for parent group PVH Corp. See PVH Corp.	Figures available only for parent group PVH Corp. See PVH Corp.	See parent group PVH Corp
VAN HEUSEN	PVH Corp		Figures disclosed only for parent group PVH Corp. See PVH Corp.	Figures available only for parent group PVH Corp. See PVH Corp.	See parent group PVH Corp
	Zlabels		<b>~1,500 metric tonnes of synthetic fibre for private label material mix in 2020</b> , Zalando communicated. This figure includes 997 tonnes of polyester, with the remainder coming from acrylic, nylon and other synthetic fibres, it said. The polyester figure is disclosed in Zalando's Sustainability Progress Report 2020.	~26% is synthetic fibres (16.3% from polyester, 9.3% from acrylic, nylon and other synthetic fibres). The polyester figure is disclosed in Zalando's Sustainability Progress Report 2020.	Zalando communicated that it has decreased its use of polyester from 28% in 2018 and 31% in 2019 to 16.3% in 2020. All these figures are publicly reported.
	Adidas AG		Did not disclose, not available on website	~90% of apparel articles are made with synthetics or blended with synthetics, Adidas communicated. Its website says polyester is "the most single-used material in Adidas products" but does not provide this percentage figure.	Did not disclose, not available on website.
BURBERRY	Burberry Group Plc		Did not disclose, but said that synthetics (nylon and polyester) account for a "small amount" of main materials. This information does not appear on its website.	Did not disclose, not available on website.	Burberry communicated that its use of synthetic fibres has increased in the last year as it expanded its outerwear selection.
	Gap Inc		Did not disclose, not available on website.	Did not disclose, not available on website. Gap communicated that its portfolio is focussed on cotton and other natural fibres.	Did not disclose, not available on website.
GILDAN	Gildan Activewear Inc.		Did not engage, not available on website.	Did not engage. Gildan's 2019 Genuine Responsibility ESG report notes that cotton is its largest raw material input, while its website says that "a significant percentage of the cost of our products comes from raw materials like cotton and polyester."	Did not engage, not available on website.
	N/A		Did not disclose, saying only that a "material portion" of its products are synthetic. This information does not appear on Lululemon's website.	Did not disclose, but communicated that it will report its material mix in its Impact Reports, the first of which is to be published later this year, and from 2022 onwards through the Textile Exchange CFMB. Lululemon's 2020 Impact Agenda report noted that high performing nylon fibre makes up the biggest portion of its fabric mix.	Did not disclose, not available on website.
	Nike, Inc.		<b>152,723 tonnes polyester and 111,496 tonnes rubber in FY20</b> , according to Nike's FY20 Impact Report.	Did not engage, not available on website. Nike's FY20 Impact Report lists polyester among the top five materials in its products, and shows it uses less cotton (93,743 tonnes in FY20) than polyester or rubber.	Based on volumes given in Nike's FY20 Impact Report, Nike has seen a 9% rise in polyester use and 36% rise in rubber use since 2015.
	Patagonia, Inc.		Did not engage, not available on website.	Did not engage, not available on website. Patagonia's website says it uses polyester "in most of our products" and "a great deal of nylon".	Did not engage, not available on website.

USE OF SYNTHETIC FIBRES

BRAND/RETAILER	GROUP	ENGAGED 2021	TONNES OF SYNTHETICS/YEAR	% OF SYNTHETICS	INCREASE/DECREASE IN SYNTHETICS
<b>PRIMARK</b>	Associated British Foods		Did not disclose, not available on website.	Did not disclose, not available on website. Primark communicated that cotton is its most used fibre, making up over half of its products.	Did not disclose, not available on website.
<b>Reebok</b>	Adidas AG		See parent group Adidas.	See parent group Adidas.	See parent group Adidas.
<b>TARGET</b>	Target Corporation		Did not engage, not available on website. Target's 2020 corporate responsibility report says it used 20,300 metric tonnes of recycled polyester in 2019 in its apparel and accessories but gives no figure for overall use of synthetics.	Did not engage, not available on website.	Did not engage, not available on website.
<b>THE NORTH FACE</b>	VF Corporation		Did not engage, not available on North Face or parent group VF Corporation website.	Did not engage, not available on North Face or parent group VF Corporation website.	Did not engage, not available on North Face or parent group VF Corporation website.
<b>Timberland</b>	VF Corporation		Did not engage, not available on Timberland or parent group VF Corporation's website.	Did not engage, not available on Timberland or parent group VF Corporation's website.	Did not engage, not available on Timberland or parent group VF Corporation's website.
<b>UNIQLO</b>	Fast Retailing Co		Did not disclose, not available on website.	Did not disclose, not available on website.	Uniqlo's parent group Fast Retailing communicated that its use of synthetics has remained at "similar levels" over the last three years and it does not "foresee any need" to increase this volume in the future.
<b>VF</b> (group level only)**	VF Corporation		Did not engage, not available on website.	Did not engage, not available on website.	Did not disclose, not available on website.
<b>Walmart</b>	Walmart		Did not engage, not available on website.	Did not engage, not available on website.	Did not engage, not available on website.
<b>Wrangler</b>	Kontoor Brands		Did not disclose, not available on website. However, parent group Kontoor Brands communicated that it is currently working to build out its data infrastructure to report absolute numbers of material content. Its Sustainability Report: 2019 similarly says it plans to report on its materials goal as it develops its tracking systems.	Did not disclose, not available on website.	Did not disclose, not available on website.

# Where do brands stand on their commitments to recycled synthetics?



\* Changing Markets does not consider an email response without answers as engagement.

\*\* Parent groups VF Corporation, PVH Corporation and Kering are included for references purposes only, because they replied on behalf of their brands or policies are set at the group level. Only their individual brands, such as Gucci, Calvin Klein or Timberland, are counted among the 46 brands contacted for analysis purposes.

## RECYCLED SYNTHETICS

BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
		Adidas has a goal on its website to replace all virgin polyester with recycled polyester "where a solution exists" in all Adidas and Reebok products by 2024. It communicated that it sets clear internal milestones for product creation teams and has already seen progress in recent seasons.	71% polyester in apparel and footwear ranges was recycled polyester in 2020, Adidas communicated (not public). Its website says this was 50% for apparel and footwear in 2019 and almost 2/3 for apparel in spring/summer season 2020.	Did not disclose.	Adidas communicated that PET bottles are the predominant feedstock for recycled polyester and it tracks third party certificates confirming the source of recycled material. It also uses Parley Ocean Plastic (from marine plastic campaign group Parley for the Oceans) as an "eco-innovative replacement" for virgin plastic across "key categories" and in an own label launched in 2020, it said. Adidas produced 11 million pairs of shoes with Parley Ocean Plastic in 2019 and was planning for around 15 million in 2020, the Parley website says. Adidas did not disclose its production method.	Adidas communicated that it has fibre-to-fibre recycling technology pilot projects. Its website says it is working on making products easy to recycle with the goal of completely eliminating waste. In 2019 it trailed its Futurecraft Loop/Made to be Remade, running shoes made from a single material fused together without glue, recycled to components for new shoes. In 2020, it gave out 1,500 pairs of its UltraBOOST DNA LOOP as a second pilot. The market launch for successor in larger volumes is planned for spring 2021, and Adidas considers this the "first steps toward creating a closed-loop product".
		Asda has a commitment on its website that all polyester will have a minimum of 30% (post consumer) recycled content by 2025. Its (non public) polyester sourcing policy says that its suppliers should be working towards 100% recycled fibres in their products "where appropriate".	17% of overall textiles are made from recycled synthetics over year to April 2021, it said.	Asda said it does not currently recycle any of its own clothing into new clothing, but is exploring this with its recycling partners. It hopes the launch of the new George Take back scheme will help facilitate this further.	Asda communicated that 12% (of total 16.5% recycled synthetics) is made from PET bottles, 3% from pre consumer fabric waste and 1.5% from fishing nets. Overall, this is a mix of post and pre-consumer waste, it said, and it outlined the mechanical method it uses to develop these fibres. Asda's website does not give these figures but mentions that recycled content is generally made of PET bottles.	Communicated that it is currently working with a number of partners to explore fibre-to-fibre technologies and is in the process of becoming a signatory of WRAP's Textile 2030 initiative to support this.
		ASICS has a public goal, set out in its Sustainability Report 2019, to replace all polyester materials in shoe uppers and sportswear products with 100% recycled polyester by 2030. The report says it developed a recycled polyester roadmap for each product category in 2019, meaning more items will be manufactured using recycled polyester from 2020. It communicated that it is "actively increasing" the use of recycled polyester for all its products.	Over 95% of ASICS new running shoe items use recycled polyester, it said. It did not say whether these items also contain virgin polyester, and did not disclose an overall percentage of recycled synthetics.	Did not disclose.	ASICS communicated that most of its recycled polyesters are made from PET bottles using mechanical recycling, but that it also uses some made from textile waste and pre-owned clothing which uses chemical recycling, and it is trying to do use more of this.	ASICS communicated that it has invested in fibre-to-fibre recycling technologies and is a "pioneer member" of Worn Again Technologies, which is developing a way to convert polyester and polycotton blended textiles and PET plastic into circular raw materials.
		ASOS aims to increase uptake of recycled materials and reduce use of materials that cannot be recycled, as set out in its Exploring Circular Business Models Wrap-Up Report. It said it will track progress on this aim annually, but did not mention a numerical goal. It has an ambition to source as many "more sustainable" fibres as it can and is working to increase its recycled synthetics "significantly" in the future, it said.	2% of textiles are made from recycled synthetics, composed of 1% recycled polyester and <1% recycled nylon, ASOS communicated. In 2020, 3% of polyester was recycled, down from 5% in 2019, with the decrease due to changing availability in the market and new departments included in 2020 reporting, it said. In 2020, 19% of nylon was recycled, up from 7% in 2019 (information not public).	Did not disclose.	ASOS said it uses pre and post-consumer waste as feedstock, including pre consumer waste at mill level, fabric offcuts from facility level, PET bottles and fishing nets through branded fibres such as Econyl. It did not disclose its production method.	ASOS communicated that it does not currently invest in fibre-to-fibre recycling technologies, but that this forms part of its long term roadmap and it will be reviewing where investment will be best placed.
<b>BALENCIAGA</b>	 (from Balenciaga but largely same as Kering)	See parent group Kering.	See parent group Kering.	See parent group Kering.	See parent group Kering.	See parent group Kering.
		Bonprix has a goal on its website to source 70% "sustainable fibres" in all textile collections by 2025. Its definition of sustainable fibres includes recycled fibres such as recycled polyester. Its website says it uses REPREVE and ECONYL, and it communicated that it also uses Reborn and recycled fibres certified through the supply chain.	0.8% of polyester and 0.8% of polyamide were recycled in 2020, Bonprix communicated.	Did not disclose.	Bonprix communicated that it uses recycled PET bottles for recycled polyester, and pre-consumer production waste or fishing nets/old carpets for recycled polyamide. It said it could not say the exact percentages of each feedstock. The production methods are mechanical, such as for recycled polyester from REPREVE, and chemical, such as for recycled polyamide from Econyl, it said.	Bonprix communicated that it invests in fibre-to-fibre recycling technologies within its partnership with Fashion for Good.

RECYCLED SYNTHETICS

BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
BOTTEGA VENETA	 (from Bottega Veneta but largely same as Kering)	 See parent group Kering.	 See parent group Kering.	 See parent group Kering.	 See parent group Kering.	 See parent group Kering.
BURBERRY		Burberry has a commitment to source 100% certified recycled nylon and recycled polyester, where it is the main material, by 2025, it said. Its website does not include this goal but will be made public later this year, it said. No policy on synthetics on website. In 2020, it launched the ReBurberry edit collection of products made from "sustainable materials" such as recycled nylon and polyester materials.	 Did not disclose but said it uses recycled synthetics in "a number of products".	 Did not disclose.	Burberry communicated that PET bottles and fishing nets are its main feedstocks for recycled synthetics. It uses both chemically and mechanically recycled nylon and polyester, it said.	Burberry communicated that it is assessing different materials and working closely with recyclers to advance fibre-to-fibre recycling.
		C&A communicated that its upcoming sustainability strategy will have a "renewed focus" on converting virgin polyester and nylon to their recycled equivalents. Its Sustainability Report 2019 sets out a goal for 67% of all raw materials, such as cotton, viscose and polyester, to come from "more sustainable sources" by 2020. The report defines "more sustainable raw materials" as the proportion of raw materials sourced under a third-party certification.	 Did not disclose, but communicated that it currently uses recycled acrylic, polyester and nylon.	 Did not disclose.	C&A's recycled polyester is made mostly from PET bottles and its recycled nylon is made with ocean waste, fishing nets and post industrial waste, it communicated. It did not disclose its production method.	C&A said it is working with Fashion For Good (FFG) to identify new sustainable innovators of fibre-to-fibre recycling of polyester garments via its participation in a FFG rPET recycling project, and participating in FFG's chemical recycling working group, which is identifying innovators for chemical recycling of post-consumer waste.
Calvin Klein	 (PVH only)	 See parent group PVH Corp	 See parent group PVH Corp	 See parent group PVH Corp	 See parent group PVH Corp	 See parent group PVH Corp
Dressmann		Dressmann communicated that it has a policy of using "100% preferred synthetic" in 2025. This aligns with parent group Varner's Sustainability Report 2020 which outlines a goal to use "100% preferred fibres" by the end of 2025 and says that 65% was achieved in 2020. This report says that Varner's definition of preferred fibres is guided by the lead of Textile Exchange, third-party verified lifecycle assessment (LCA) data and the Sustainable Apparel Coalition's Material Sustainability Index.	7% of synthetic fibres were recycled in 2020, Dressmann communicated, all of which was recycled polyester. This figure is not on its website.	0% of clothing is recycled into new clothing, Dressmann communicated.	Dressmann said it uses mainly PET bottles as feedstock, made up of 10% branded Repreve fibres and 90% non-branded fibres. Its website notes these two sources alongside old fishing nets, rugs and other consumer or industrial waste products for recycled polyamide and its use of ECONYL. Its website mentions both mechanical and chemical recycling.	Dressmann communicated that it is not investing in fibre-to-fibre recycling technology.
ESPRIT		Esprit has a target for 100% sustainable apparel by 2023, set out in its Sustainability Report 2020. It communicated this goal means that all synthetic fibres must come from recycled or biobased feedstock. The report also has goals for 30% of its synthetic fibres to be "more sustainable" and 100% of its synthetic down to be made from recycled or bio degradable materials by July 2021.	33% of synthetic fibres were recycled in July-December 2020, made up of 30% recycled polyester and 3% recycled polyamide, according Esprit's 2020 Annual Report. The figures provided for polyester and recycled polyester indicate that 46% of polyester comes from recycled sources.	 Did not disclose, saying it does not have this data as it can't track the garments once they are sold.	Esprit said it uses old PET bottles for polyester and old carpets/old textile fibre sand fishnet for polyamide. It uses mechanical recycling, it added.	Esprit communicated that fibre-to-fibre recycling is "definitely something we want to look into", but added that "from a financial aspect this is not something applicable for the near future".
G-STAR RAW		G-Star RAW has a goal for 75% of its collection to be made with recycled and/or organic, bio-based or compostable materials by 2025, moving to 100% by 2030. These goals will soon be published on its new sustainability website, it communicated. It also aims to use Cradle to Cradle Certified fabrics in 20% of its collection by 2025.	91% of polyester is recycled; 0.3% of nylon is recycled nylon and 53% of elastane are "sustainable types" of elastane, based on figures it provided. G-Star's website says 93% of all its materials are currently "sustainably sourced". It includes recycled polyester, recycled nylon, sustainable types of elastanes (ROICA™ V550, ROICA™ EF, Lycra® 166L, Lycra®T400® EcoMade) in this term, as well as other non-synthetic materials.	 Did not disclose.	G-Star communicated that its feedstock is primarily PET bottles and it uses mechanical recycling.	G-Star communicated that it is looking to up-cycling post-consumer waste into new G-Star garments and is currently in the research phase of this.

RECYCLED SYNTHETICS

BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
		Gap does not have a public goal to increase the amount of recycled synthetics. It communicated that it is “working diligently” to improve the global marketplace for synthetic performance fibres, including investigations into bio-based and biodegradable alternatives. Its website says it has been increasing its use of recycled polyester and nylon where possible. Gap brand Athleta, which uses large amounts of synthetics, had a goal to make 80% of materials made with sustainable fibres by 2020, according to GAP’s 2019 Global Sustainability Report.	0.5% of nylon and 0.7% of polyester came from recycled material in 2019, according to GAP’s 2019 Global Sustainability Report.	 Did not disclose.	 Did not disclose feedstock or production method.	Gap’s website says it is collaborating with the Hong Kong Research Institute of Textiles and Apparel (HKRITA) and its supplier Artistic Mil-liners to make a process to separate spandex from other fibres in used garments, in order to increase its recycling opportunities.
	 	Did not engage. Gildan does not have a public goal to increase the use of recycled fibres. Its website says it uses the recycled fibre Repreve in a number of its brands and indicates it uses recycled polyester from plastic bottles.	 Did not engage, does not disclose on website.	 Did not engage. Gildan’s website says that 100% of its textile clippings from its cutting and sewing operations are recycled, and that it recycles process waste from some products into partial inputs for other products.	 Did not engage. Gildan’s website says it uses Repreve (which comes from PET bottles) and that it recycles all textile clippings. It does not disclose a production method.	 Did not engage, no mention on website.
	 (from Gucci but largely same as Kering)	Gucci communicated that it is replacing virgin fossil fuel plastics and synthetic textiles with more sustainable alternatives in its products, packaging and visual merchandising. Its Gucci Off The Grid collection, launched in June 2020, uses recycled, organic, bio-based and sustainably sourced materials, including ECONYL and recycled polyester thread and linings. See also parent group Kering.	 See parent group Kering.	 See parent group Kering.	Gucci specified that it uses ECONYL, a regenerated nylon made using fishing nets and carpets. See also parent group Kering.	 See parent group Kering.
		H&M has a public commitment to use 30% recycled materials by 2025 and only 100% recycled or other “sustainably-sourced” materials by 2030. It has so far reached, 64.5%, its Sustainability Performance Report 2020 says. H&M communicated that synthetics fabrics will play a big role in helping it reach this recycled goal, adding that it has reduced its dependency on conventional synthetic fibres over the past years and has “aggressive plans” to further reduce this.	>16% in 2020, up from 1% in 2018, H&M communicated. Around 21% of polyester is recycled polyester, it added, while around 3% of polyamide is recycled polyamide. H&M’s Sustainability Performance Report 2020, notes that recycled materials overall doubled to 5.8% in 2020, but does not give breakdown for recycled synthetics.	~10% of recycled polyester is made from pre- and post-consumer recycled textile waste, H&M said. 35-45% of the 18,800 tonnes garments it collected in 2020 were recycled to products for other industries or into new fibres, but it does not specify the individual percentage made to new fibres. Its Sustainability Performance Report 2020 outlines its use of Renu polyester, a recycled polyester fibre made from textile waste. It plans to increase the use of fibre-to-fibre recycled polyester in H&M Group brands, it said.	H&M communicated that its recycled polyester is made from around 90% certified post-consumer PET bottles and 10% pre- and post-consumer recycled textile waste. Around 99% of recycled polyamide came from pre-consumer sources, largely in-house wasted yarn, H&M said, with a smaller share came from fishing nets, fabric scraps and carpet floorings. It uses both mechanical and chemical recycling, it said.	H&M communicated that it has been investing in the development and commercialisation of technologies for fibre-to-fibre recycling for several years, including investments in Worn Again technologies and Ambercycle. In 2020, H&M brand Monki launched a collection using the Green Machine system, using a hydrothermal method to separate cotton and polyester blends, it said. H&M’s new RENU recycled polyester fibre is made from chemically recycled textile waste. It has an in-store ‘Loop’ garment-to-garment recycling system in one shop in Sweden. In a partnership with Textile Genesis it is working on scaled pilots, focusing on recycled polyester as a start, it said.
		Hugo Boss has a public goal to use at least 50% recycled materials in synthetic fibres by 2025. Its website says it avoids synthetic fibres wherever possible and is always looking for sustainable materials to replace synthetics. Hugo Boss communicated that it has implemented various measures to keep synthetic fibres as low as possible.	10% of synthetic fibres come from recycled sources, Hugo Boss communicated.	 Did not disclose.	Hugo Boss gave PET bottles for polyester fibre as an example of one of its feedstocks. It also made a collection from recycled polyester in cooperation with Plastic Bank (which uses “ocean bound plastic waste”), it said. It did not disclose further recycled inputs or production methods.	Hugo Boss communicated that it is “increasingly focusing” on the improved recyclability of its products and less on the use of secondary raw materials but gave no concrete details of how it is doing this.

RECYCLED SYNTHETICS

BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
<b>INDITEX</b>		Inditex has a public commitment to ensuring 100% of the cotton, polyester and linen used in its products is recycled or comes from "more sustainable sources" by 2025. Specifically on polyester, its aims to "ensure a supply of rPET that is aligned" with this 100% target, its website says. Inditex communicated that this means it will not use virgin polyester in 2025, instead using recycled polyester and/or polyester that has a life cycle analysis showing a significant low environmental impact, such as polyester coming from mono-ethylene glycol manufactured from waste.	Inditex communicated that it used 9,594 tonnes of recycled polyester in 2020. Based on the figure it disclosed for total polyester use, this means it uses 8.6% recycled polyester. Inditex added that 21.3% of its total raw material consumption came from "more sustainable" raw materials in 2020.	Did not disclose.	Inditex communicated that it uses mainly PET bottles for recycled polyester but is doing some testing with textiles. For recycled polyamide, it uses mainly pre-consumer waste from the textile industry it said, but also some post-consumer fishing nets. It said it mainly uses mechanical recycling for recycled polyester and polyamide, adding that chemical recycling technologies need to be assessed to make sure that their life cycle analysis is positive against conventional polyester.	Inditex has invested €3m to fund textile-recycling-related activities, it communicated, adding that these technology developments will be key to achieving its polyester goal. Its investments include the MIT-Spain Inditex Circularity Seed Fund, which aims to develop new textile recycling techniques among other things, it said. A current pilot aims to chemically recycle PET textile waste to manufacture recycled PET yarn. Another technology which Inditex said it coming into its Sustainable Innovation Hub aims to manufacture ethanol from captured CO2 and use it to make polyester yarn. Other programs include t2tCR_textile, a textile chemical recycling pilot project to eliminate the limitations on recycling of textile waste from blends, and t2tCR_chemical recycling by ionic solution, research by MIT and the University of Vigo and backed by Inditex on ionic solutions to separate natural and synthetic components in textile blends, such as cotton and polyester.
<b>KERING</b> (group level only)		Kering has a public commitment to align 100% of raw materials with its Kering Standards by 2025, with current alignment reported as 74%. Suppliers must already meet minimum requirements on these standards, and are required to meet more demanding requirements by 2025, it said. These standards do not set out clear goals for an increase recycled content. The Standard for Synthetics requires suppliers to "prioritise the use" of recycled content and bio-based materials, "preferably source" certified synthetics and "address" the end-of-life for synthetic fibre. The Standard for Textile Processing focuses on minimising hazardous chemicals in production and wastewater. Kering said that it is "aware that synthetic feedstocks and chemicals used to turn those feedstocks into fabrics must be addressed to improve the total sustainability of its synthetic fabrics".	Did not disclose, but communicated that the percentage has doubled in the last three years at the group level.	Did not disclose.	Kering did not indicate how much of different feedstocks it uses for its recycled synthetics and said this is "confidential information" related to its suppliers. It said it encourages its houses to preferentially choose recycled polyester from internal recycling processes of suppliers fabric scraps, and to use PET packaging only as a second choice. For polyamide/nylon, recycled content comes from textiles such as post-consumer carpets, overstock fabrics and fabrics scraps related to specific take back programmes; fishing nets from aquaculture, the fishing industry and ghost nets; and pre-consumer waste from industrial processes such as plastic components. It uses mainly mechanical recycling for polyester and mainly chemical for polyamide/nylon, it said. It noted that the upcycling of polyamide waste happens through a process based on pressure and heat which does not use any chemicals.	It said it supports a variety of initiatives developing textile-to-textile recycling technology, including start-up Worn Again, which is developing technology to chemically separate blended fibre garments and separate dyes and other contaminants from polyester and cellulose. Kering said it is also investigating a new textile-to-textile technology which is close to industrial scale, and will chemically recycle polyester via glycolysis, offering several advantages over mechanical recycling including the ability to process "unrecyclable" materials such as polyurethane-coated textile not handled by mechanical recycling. Its Standard for Synthetics says that "in the future, when there are viable options and technology to recycle synthetics back into synthetics, suppliers should prefer synthetics that are able to be recycled".
<b>Levi's</b>		LS&Co does not have a specific goal for synthetic fibres. It noted that its percentage of synthetics is lower than the industry average, but that it is still focused on addressing the environmental impacts of synthetic fibres. It said it has a commitment to creating products that "minimise their environmental footprint and the use of virgin synthetic raw materials" without sacrificing quality.	Did not disclose. LS&Co communicated that it is "making progress" on incorporating alternatives to virgin synthetics, flagging its Levi's L-pack backpacks with 100% recycled polyester and the use of recycled polyester in its outerwear for years.	Did not disclose.	Did not disclose feedstock or production method.	Did not disclose.
<b>LINDEX</b>		Lindex has a public goal to use "100% preferred fibres" by 2025 at the latest. This means all synthetics need to be recycled by this time, it communicated.	32% of polyester and 23% of polyamide come from recycled materials, Lindex communicated. Its Sustainability Report 2020 puts these figures at 32% for polyester, 22% for polyamide and 0% for acrylic in 2020.	Did not disclose.	Mainly pre industrial, Lindex communicated. The most common raw material source for recycled polyester is old PET bottles, while recycled polyamide is mainly made from manufacturing industry waste, its Sustainability Report 2020 says. Lindex did not disclose a production method	Lindex communicated that it is looking at recycling programs for its lingerie and hosiery.

RECYCLED SYNTHETICS

BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
 lululemon	Yes	Lululemon has a goal for at least 75% of its sourced polyester to be recycled content by 2025, with a "stretch goal" of reaching 100%. It also aims for all its sourced nylon to be renewable or recycled content by 2030, and to have "more sustainable" nylon solutions by 2025. A further goal is to make all products with "sustainable materials" and end of use solutions by 2030. All these goals are set out in its 2020 Impact Agenda.	>30% of polyester comes from recycled content, Lululemon communicated. This is not currently on its website, but Lululemon it said it will be publishing progress on its recycling target in the future.	 Did not disclose.	Lululemon's website mentions discarded water bottles as an example feedstock for recycled polyester. It did not disclose other feedstocks or production methods.	Lululemon's 2020 Impact Agenda says it will invest in industry development of fibre-to-fibre recycling, but gives no further details.
 M&S		M&S has committed to sourcing its priority textile materials, including polyester, from more sustainable sources by 2025, it said. For polyester, it currently recognises the only more sustainable source as Recycled Polyester, either through the Recycled Content Standard, Global Recycled Standard or Unifi by Reprise, and only recognises recycled input material that were originally destined for disposal; either to landfill or incineration without energy recovery. The textile goal is not on M&S's website, but it has a public "Plan A" goal to source its fifty key raw materials, which cover 80% of its raw material usage, from sources "verified as respecting the integrity of ecosystems, the welfare of animals and the wellbeing of people and communities." The public goal does not specifically mention synthetics.	22% of polyester was from recycled sources in 2020, M&S communicated, but it did not give values for other synthetics. It has begun to introduce recycled nylon and will be measuring uptake for 2021, it added. This information is not on its website.	 Did not disclose.	M&S communicated that a "large majority" of its recycled polyester comes from plastic bottles. It did not disclose a production method.	M&S is not currently investing in any fibre-to-fibre recycling technologies, it said, adding that it is "committed" to improving these technologies.
MONSOON		Monsoon has a pledge on its website for 90% of its overall materials to be "sustainably made" by 2023. This includes recycled synthetics and new synthetics fibres made in a more sustainable way, Monsoon communicated. It added that it aims to get to 100% recycled based fossil feedstock synthetic fibres, but did not give a target date and this goal is not currently on its website. It is looking into using measurable KPI's for its buying teams to accelerate uptake of recycled polyester, it said. Monsoon does not mention polyester or synthetics in its Sustainability & Responsible Sourcing requirements, unlike other materials such as cotton and cellulosic fibres.	21% of synthetic fibres were sustainable or recycled fossil based fabric, based on tonnage values provided by Monsoon. Monsoon added that it increased its recycled polyester use from 26% in AW20 to 35% in AW21.	 Did not disclose.	Monsoon communicated that most of its recycled polyester is based on PET bottles and the rest is post-consumer polyester. It said it is currently looking into how it can measure and report on this. Its website says that recycled polyester is made from PET plastic bottles. It did not disclose a production method.	Monsoon reviews new technologies with its suppliers and trials new fabrics on a constant basis, it communicated, but tends to be a follower rather than investing in new concepts due to its size. It said it seen a large amount of new innovation around synthetic fibres, with closed loop process being used, and that it is continuously investigating and trialing new fibre technologies.
 MORRISONS		Morrisons has a commitment in its Sustainability Report 2020/21 that all polyester fabrics will "contain recycled sources" by 2025. This means all these fabrics will contain a portion of recycled polyester, rather than will be fully recycled, it communicated, adding that it is working to increase the quantity of recycled polyester in its ranges.	3% of polyester by weight is currently from recycled sources, Morrisons communicated. Its Sustainability Report 2020/21 also gives this 3% figure for 2020.	 Did not disclose, saying it would not be possible to track what customers do with its products.	Morrisons communicated that it uses post consumer waste as feedstock, namely PET bottles. It uses mechanical recycling, it said.	Morrisons communicated that it supported a Salvation Army grant application to invest in fibre sorting technology. "They are closely involved in developments in the textile recycling industry and we will continue to work with them on this," it said.
 look		New Look has a goal for 25% of polyester to be recycled by the end of 2020, set out in its Annual Report 2019/2020. Its website acknowledges the impact that polyester and its production have on the environment, particularly on climate change and microplastics release. New Look communicated that it has is in the process of setting new targets on increasing its use of recycled materials.	5% of "total units" had recycled content in FY 2020/21, New Look communicated. Its Annual Report 2019/2020 says it reached 9.22% recycled polyester in 2020, up from 1.05% AW19.	 Did not disclose, saying it does not have visibility of this but would assume very little to none.	New Look communicated that it does not have visibility of the feedstocks of its recycled materials or the recycling method.	New Look communicated that it is not currently directly investing in fibre-to-fibre recycling technologies, but is joining Textile 2030 at partner level. As part of this nine year programme, members will contribute financially and part take in piloting circularity initiatives including working with the UK recycling industry on developing technologies, it said.
next		Next set a goal in 2018 to source 100% of its main raw materials through "known, responsible or certified routes" by 2025. This goal is in its Corporate Responsibility Report to January 2021. It said that part of its approach is to source post consumer recycled synthetic fibres to reduce the reliance on fossil fuel extraction and for the recycled fibres to come from fibre-to-fibre recycling in the longer term.	9% of polyester used in 2020 was certified post-consumer recycled, Next said. This information is also published in Next's Corporate Responsibility Report to January 2021.	"None to date", Next communicated.	Next communicated that its feedstock is currently predominantly PET bottles, and it uses mechanical recycling.	Next communicated that it is not yet investing in fibre-to-fibre recycling technology but is "exploring the possibilities" around recycling clothing to new clothing as a signatory to WRAP's SCAP and Textile 2030 initiatives. It plans for its recycled fibres to come from fibre-to-fibre recycling in the longer term, it said.

RECYCLED SYNTHETICS

BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
	 	Did not engage. Nike has a public target to divert 100% of the waste in its supply chain from landfill, with at least 80% recycled back into NIKE products and other goods, by 2025. It also plans to use “environmentally preferred materials” in 50% of all key materials, which include polyester and rubber, by 2025. Its FY20 Impact Report says Nike’s strategy so far has been to focus on a smaller number of high volume products for recycled content, but meeting the 2025 goal will require converting the remaining key, high-volume fabric families to recycled polyester. New methods of recycling and new material types will be increasingly important, it says.	 Did not engage. 26% of polyester came from recycled content in FY20 and 94% of rubber was “environmentally preferred” rubber (which excludes certain chemical formulations), according to Nike’s FY20 Impact Report. The report adds that NIKE’s use of “more sustainable material” in apparel rose from 41% to 59% in FY20, driven by scaling recycled polyester and replacing conventional cotton with more sustainable alternatives.	 Did not engage, no percentages given on website. Nike’s Grind programme recycles manufacturing scrap, unsellable products and worn-out sneakers back into Nike’s own products as well as for other purposes such as running tracks.	 Did not engage. Nike’s FY20 Impact Report lists recycled polyester made from plastics bottles and recycled nylon made from a variety of materials, like carpet and used fish nets among the low-carbon materials it plans to focus on to meet its greenhouse gas reduction goals. It indicates it uses mechanical recycling for recycled polyester and chemical or mechanical recycling for nylon.	 Did not engage. Nike’s FY20 Impact Report says it is working to identify new recycling technologies to turn what would be waste into feedstocks for manufacturing new materials and products, but gives no further details.
	 	Did not engage. Patagonia’s website says it will only use renewable or recycled materials in its products by 2025. Its polyester page says it has “dramatically increased” its use of recycled polyester and aims to completely move away from using virgin polyester by 2025. Its recycled nylon page says it is using more postconsumer recycled nylon and exploring other options to replace nylon entirely such as materials made from plant-based alternatives. Its recycled spandex page says it started using recycled spandex in 2020 and is “moving away from using virgin petroleum sources for spandex”, noting that recycled spandex helps it achieve this goal. It is also testing new polymers that cause less environmental harm and looking at spandex alternatives that are easy to recycle, it says. Its rubber page says it replaced neoprene rubber with natural rubber in 2016 to reduce its use of petroleum-based materials. Its polyurethane page says it uses polyurethane to reduce PVC use and its goal is to use more recycled stretch yarns and bio-based polyurethanes.	 Did not engage. Patagonia’s website says that 84% of polyester fabrics were made with recycled polyester in the Spring 2021 season. 2% of whole material usage by weight includes virgin nylon, it says, and 90% of nylon fabric used to make clothing and gear contains recycled nylon for the Spring 2021 season. Overall, 64% of fabrics come from recycled materials overall, it says, noting that it used more recycled polyester than any other fibre.	 Did not engage, no mention on website. Patagonia’s website says its upcoming “Tee-Cycle T-Shirt” will be made out of old T-shirts from Patagonia and other brands.	 Did not engage. Patagonia’s website shows it uses plastic bottles for recycled polyester. Elsewhere, Patagonia says it is looking “beyond plastic bottles” from commodity recyclers to the “next generation of potential recycled materials”, adding that one option could be recycled ocean plastics. Its website says it will use NetPlus Recycled Fishing Nets in its Spring 2021 season. Its recycled nylon is made from postindustrial waste fibre and discards from weaving mills and postconsumer fishing nets, its website says, adding that its nylon yarn is made from a 50/50 blend of postconsumer and pre-consumer nylon. Its recycled spandex uses pre-consumer waste. Its website implies mechanical recycling is used for nylon, and chemical recycling of fishing nets for NetPlus.	 Did not engage. Patagonia’s website says it is looking into chemical-recycling technologies that could allow reuse of recycled garments for a “circular” manufacturing process in the long-term.
PRIMARK®		Primark does not have a numerical goal to increase its use of recycled synthetics. It said that it made “good progress” in recent years in increasing its use of recycled materials, particularly for synthetic fibre, and made a commitment in 2020 to more than double the number of Primark products made using recycled materials. This goal does not appear to be on its recycled materials page, although it notes that “this Autumn our products made using recycled materials will more than double to 40 million items”. It also says Primark will “significantly increase” the use of recycled materials across its products.	 Did not disclose.	Primark communicated that it aims to use post-consumer textile waste as a resource and is “taking positive steps” to implement a circular approach. It recognises that recycling non-textile materials is “only one way” to reduce its use of virgin resources, it said.	Primark communicated that its recycled polyester is currently mostly made from post-consumer PET bottles. It described a mechanical production method.	Primark communicated that it will support innovations in textile-to-textile recycling as part of its Textiles 2030 commitment.
		Puma has a target in its Annual Report 2020 to use 75% recycled polyester in apparel & accessories by 2025. Its previous target was to procure 100% of polyester from certified sources. Puma communicated that in 2019 it achieved use of over 90% bluesign or OEKO-TEX certified polyester.	19% of apparel polyester fabrics were made from recycled polyester in 2020, Puma communicated. This is reported in its Annual Report 2020. Puma said that it also uses recycled nylon, but on a small scale.	 Did not disclose.	Recycled polyester, mainly from recycled PET bottles, regenerated nylon from mixed feedstocks, including carpet shavings, fishing nets and other fibre, Puma communicated. Puma said it uses mechanical recycling production.	Puma communicated that it is investigating the use of chemically recycled polyester from its own fabric waste and has already started using fibre-to-fibre recycling technologies with cotton cutting fabric waste.
 (group level only)		PVH Corp has a public commitment to “sustainably source” 100% of its polyester by 2030 as part of its Forward Fashion strategy, although it does not clearly define what it includes in this term. It does not have a target for other synthetics.	8% of polyester and 2% of nylon came from recycled materials in FY2019, based on tonnage values provided by PVH Corp. These values will be published in its upcoming 2020 Corporate Responsibility Report, PVH Corp communicated. Its 2019 Corporate Responsibility Report says approximately 10% of polyester was “sustainably sourced” in fiscal year 2018.	 Did not disclose.	PVH Corp communicated that it uses recycled plastic bottles through the use of REPREVE performance fibres. It did not specify other feedstocks and did not disclose a production method.	PVH Corp communicated that it is investing in fibre-to-fibre chemical recycling technology through its partnerships with Fashion for Good such as its Full Circle Textiles project, and a pilot project with Infinited Fiber Company.

RECYCLED SYNTHETICS

BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
		Reebok has a goal on its website for 100% of its products to be “sustainable” by 2030, which among other categories includes recycled materials. The website implies that these products are made of only percentages of more sustainable materials, such as “minimum of 30% of the upper is recycled materials” for [REE]CYCLED. Reebok’s REEGROW and REECYCLE strategy includes the launch of Floatride Energy GROW, a plant-based running shoe, although this appears to be only certified as 50% plant based material. See also parent group Adidas.	 See parent group Adidas	 See parent group Adidas	 See parent group Adidas	 See parent group Adidas
Reformation		Reformation does not have a numerical recycled synthetics goal but communicated that synthetics do not as a general rule meet its fibre standards as they are fossil-fuel based and can lead to issues such as microplastic shedding. For main apparel items, it therefore uses them only “when it is needed for fabric performance and stretch” and only in a <10% blend with other fibres. Majority content synthetics are only allowed in its swim and activewear products, in which natural fibre don’t have the same performance, it says. Where these are over 10% of the material, the synthetic must come from recycled sources, it added. Reformation is also participating in Textile Exchange’s 2025 Recycled Polyester Challenge, which asks industry to bring the overall percentage of recycled polyester up from 14% to 45% in 2025.	Reformation communicated that ~60% of its synthetic use comes from recycled polyester/ nylon. It noted that all fabrics that are majority-content synthetic are recycled, but the synthetic fibres used in small amounts (<10%) in blended fabrics are typically virgin.	 Did not disclose.	Reformation’s focus is on post-consumer recycled products, it said. For majority content synthetic fabrics, it said it sources exclusively from Repreve Polyester and Econyl Nylon. Econyl’s website shows is it made from a variety of waste such as fishing nets, old carpets, while Repreve is made from recycled plastic bottles.	Reformation communicated that it is currently investing in direct take-back and upcycling programs from its athleisure and swim but did not outline whether this would use fibre-to-fibre technologies.
Sainsbury’s		Sainsbury’s does not have a public recycled synthetics goal but communicated that it is “continually looking at different ways” to increase the use of recycled materials. It said it is “working proactively” with WRAP/SCAP tools to develop its synthetic fibre products and monitor the full impact of synthetic fibres. Its website says it is committed to driving the ongoing use of recycled polyester throughout its clothing ranges.	5% of textile products in 2020 were made from recycled polyester, Sainsbury’s communicated.	 Did not disclose, saying it is working towards greater understanding of this area with suppliers.	Sainsbury’s communicated that it uses PET bottles for recycled polyester, using a mechanical production method.	Sainsbury’s communicated that it is “continually looking at new technologies” and working closely with suppliers to explore these, but gave no further details.
	 (from Saint Laurent but largely same as Kering)	 See parent group Kering.	See parent group Kering.	See parent group Kering.	See parent group Kering.	See parent group Kering.
	 	Did not engage. Target’s 2020 Corporate Responsibility Report says it has an ongoing commitment to “replace conventional polyester with polyester made from recycled plastic” in owned- and exclusive-brand apparel, accessories and home products, but does not give a date for achieving this. Its new brand, All in Motion, was developed with “the intent of using recycled polyester” it says, although this brand’s website shows it allocates the recycled polyester label to products with just 20% of recycled polyester.	 Did not engage. Target used 20,300 metric tonnes of recycled polyester in 2019 in its apparel and accessories, according to its 2020 Corporate Responsibility Report, up from 7,000 tonnes in 2018 and 6,400 in 2017. It does not disclose the percentage this represents.	 Did not engage, no mention on website.	 Did not engage, no mention on website further than “recycled plastic”.	Target’s 2020 Corporate Responsibility Report says it has invested \$1m into textile-recycling technologies. The report says much is “funding early-stage innovators or pilot projects”. It does not specifically say this is textile-to-textile recycling, but gives Evrnu as an example, whose materials include regenerated polyester from discarded clothing via chemical recycling. It adds that Target funds and supports the Fashion for Good Advanced Recycling project to test and scale chemical recycling options.

RECYCLED SYNTHETICS

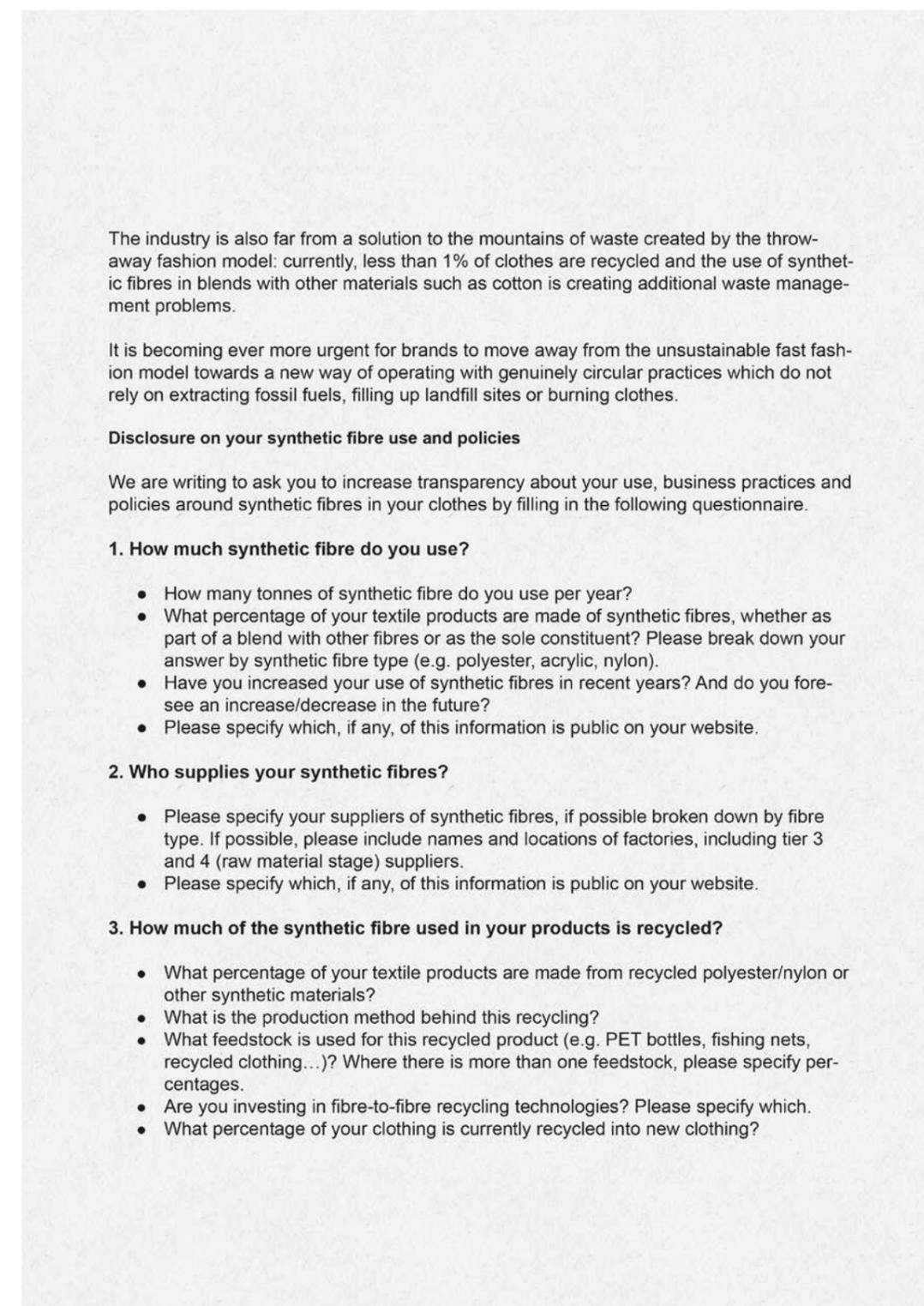
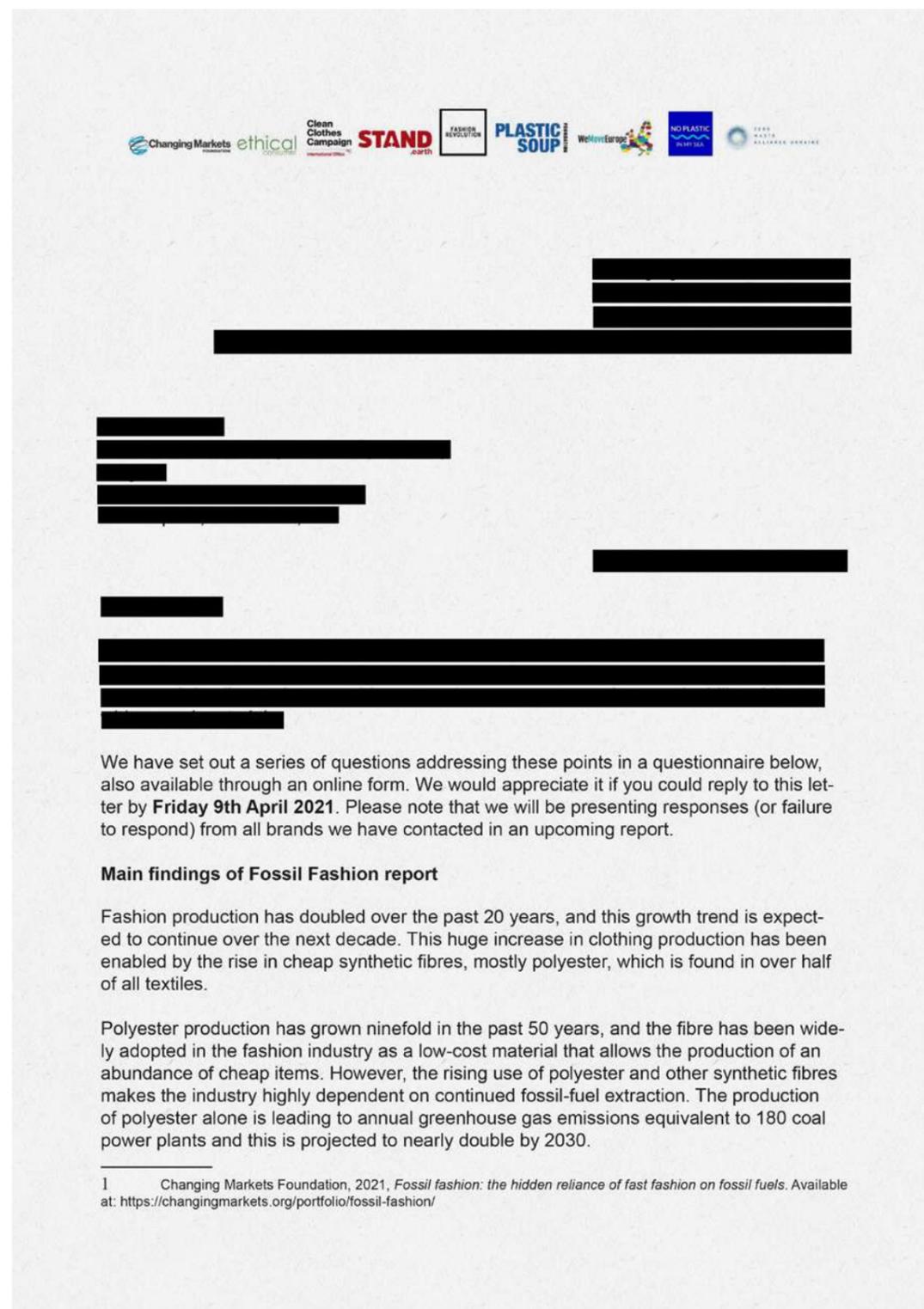
BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
		Tesco has a commitment on its website to use 45% recycled polyester by 2025, as part of its recent commitment to the 2025 Recycled Polyester Challenge. It has an internal target to achieve 100% by 2030, it communicated.	20% of polyester and 10% of nylon is currently recycled, Tesco communicated.	 Did not disclose.	Tesco communicated that all its recycled polyester comes from PET bottles and its recycled nylon comes from pre-consumer waste. It uses mechanical production for both polyester and nylon, it said.	 Did not disclose, no mention on website.
		The North Face has a goal on its website to achieve 100% "responsibly-sourced" fabrics for apparel by 2025 and for footwear and equipment by 2030. It defines responsibly-sourced as "recycled, regenerative, or responsibly-sourced renewable". See also parent group VF Corporation.	 Did not engage, not available on website. See also parent group VF Corporation.	 Did not engage, no mention on website.	 Did not engage. See also parent group VF Corporation	 Did not engage. The North Face's website does not mention fibre-to-fibre technologies but says that "ultimately, our goal is to develop circular systems to recycle previously-owned gear and reuse the raw materials", and that its first products intentionally designed for circularity will launch in 2022.
	 	Did not engage. Timberland's Fourth Quarter 2020 CSR report sets out its goal for all footwear to have "at least one major component" made with 10% or more recycled, organic, and renewable content by 2020. It reported that it reached 75% in 2020. See also parent group VF Corporation.	 Did not engage. Timberland produced 68% "recycled, organic, or renewable products" during 2019, according to VF Corporation's Annual report, but this does not give specific figures for recycled synthetics. Timberland's Q4 2020 CSR report says its largest use of recycled, organic or renewable material in footwear is recycled polyester and recycled rubber. See also parent group VF Corporation.	 Did not engage, no mention on website.	 Did not engage. Timberland's website says it uses recycled plastic bottles in its footwear and backpacks and recycled rubber in its footwear. It does not outline a production method.	 Did not engage, no mention on website.
TOMMY HILFINGER	 (PVH only) 	See parent group PVH Corp	 See parent group PVH Corp	 See parent group PVH Corp	 See parent group PVH Corp	 See parent group PVH Corp
		Uniqlo's parent group Fast Retailing communicated that it is "actively increasing" its use of recycled polyester and other recycled materials but did not outline a clear cut goal. Uniqlo has a page about clothing made from recycled PET bottles on its website, and its Sustainability Report 2021 says it uses recycled polyester made from post-consumer PET bottles in several products.	 Did not disclose.	 Did not disclose.	Parent group Fast Retailing communicated that its recycled products currently incorporate PET bottles, collected used polyester clothing and scraps, and that it uses chemical recycling as a production method.	Uniqlo's parent group Fast Retailing said it is currently investing in technologies to enable an increase in the use of recycled materials such as cotton, cellulosic fibers, polyester, nylon and wool. Uniqlo's website says it has recently been recycling clothes into clothes, starting with down products, but does not outline recycling of synthetic clothes to new clothes.
		Benetton has a goal on its website for 50% of its synthetic materials to come from recycled fibres by 2030. The page also says that 80% of the fibres in Benetton's garments are "of natural origin and therefore have a lower impact on the environment".	 Did not disclose, saying only that "quantities produced are not so high in terms of percentage". Benetton began some projects based on recycled materials in 2020, it said.	 Did not disclose, saying this was non-applicable.	Benetton uses PET, fishing nets and carpets as feedstocks, it communicated, and a mechanical production method.	Benetton communicated that it is not investing in fibre-to-fibre technologies.
	 (PVH only)	Van Heusen has a goal on its website to use only 100% sustainable cotton, polyester and nylon by 2025. See also parent group PVH Corp.	 See parent group PVH Corp	 See parent group PVH Corp	 See parent group PVH Corp	 See parent group PVH Corp

RECYCLED SYNTHETICS

BRAND/RETAILER	ENGAGED 2021	POLICY/GOAL	% OF RECYCLED SYNTHETICS	% OF CLOTHING RECYCLED TO NEW CLOTHING	FEEDSTOCK AND PRODUCTION METHOD	INVESTMENT IN FIBRE-TO-FIBRE RECYCLING TECHNOLOGIES
 (group level only)	 	<p>Did not engage. VF Corporation has a goal on its website to source 50% of nylon and polyester from recycled materials by 2025. Further goals target a transition of its top nine materials (by spend and impact) to regenerative, renewable, or recycled materials by 2030, and a reduction in the average impact of its key materials by 35% by 2025. Its website says it seeks to source “the most sustainable materials available”, which means using responsibly sourced natural materials, identifying innovative ways to recycle and reuse synthetics and exploring innovative crossover solutions, “such as natural alternatives to traditional synthetics or recycled natural materials”.</p>	 <p>Did not engage. 11% of nylon and polyester were recycled in 2018, according to VF Corporation's Sustainability &amp; Responsibility Report 2018. A figure for a later year is not reported on VF Corporation's website.</p>	 <p>Did not engage, no mention on website.</p>	<p>Did not engage. VF Corporation's Sustainability &amp; Responsibility Report 2018 mentions using recycled plastic bottles for clothing, but does not say whether this is a major feedstock or the production method used.</p>	 <p>Did not engage, no mention on website.</p>
	 	<p>Did not engage. Walmart has a target on its website to source 50% recycled polyester for Walmart US stores Private Brand apparel and soft home textile products by 2025. It says it “aspires” to reach 100% but does not set a date for this.</p>	 <p>Did not engage, no mention on website.</p>	 <p>Did not engage, no mention on website.</p>	 <p>Did not engage, feedstock and production methods are not clearly set out on Walmart's website. The website does say Walmart it will work with private brand suppliers to source “verifiable sources of recycled polyester (rPET)” and that “it is becoming more feasible to create recycled polyester fibre from pre- or post-consumer plastic waste such as PET bottles”, implying this may be a major feedstock.</p>	 <p>Did not engage, no mention on website.</p>
		<p>Wrangler's parent company, Kontoor Brands, has a public goal to source 100% sustainable synthetic fibre by 2030. It defines sustainable synthetics as “the use of recycled content, bio-based feedstocks, or additives to enhance biodegradability in polyester, nylon or spandex”, it communicated. It will report on its materials goal as it develops its tracking system, it added.</p>	 <p>Did not disclose.</p>	 <p>Did not disclose.</p>	 <p>Did not disclose a feedstock or production method.</p>	<p>Wrangler's website says its “The Jeans Re-design” partnership with the Ellen MacArthur Foundation and its use of recycled fibre is “the start of its commitment to circularity” and finding new ways to textile-to-textile recycling. Its website adds that it is investing in new ways to use recycled cotton, polyester and other fibres in its clothes but does not give further details.</p>
		<p>Zalando has a public goal to increase its share of recycled polyester to 50% by 2023. It has committed to generating 25% of gross merchandise volume with “more sustainable products” and applying the “principles of circularity” to extend the life of at least 50 million fashion products by 2023. Its Annual Report 2019 says it more than doubled its assortment carrying the sustainability flag in 2019, but adds that products require only 20% recycled material to be labelled recycled under this flag. It communicated that it will continue to raise its standards over time, and as of May 2021 has raised the minimum content percentage for the “recycled content” claim in combination with its Sustainability Flag from 20% to 30%.</p>	<p>16.3% of total polyester use in apparel and soft accessories is pre- and post-consumer recycled polyester, Zalando communicated, as disclosed in its Sustainability Progress Report 2020.</p>	 <p>Did not disclose.</p>	 <p>Did not disclose a feedstock or production method. Zalando communicated that it aims to increase traceability of the feedstocks for its recycled material but faces challenges in this due to limitations of the certification system for recycled content, which it said does not include specific feedstock information beyond pre- or post-consumer waste.</p>	<p>Zalando communicated that it is exploring partnerships with recycling innovators to accelerate the technology needed to turn old products into new ones in its circularity strategy and in collaboration with Fashion for Good.</p>

## Annex III: Brand questionnaire

An example of a letter and questionnaire that was sent to 46 brands in April 2021



**4. Do you have commitments to phase out synthetic materials based on fossil feedstocks?**

- Do you have any policies or commitments to decrease or phase out reliance on synthetic fibre use in the future? If so, please specify the plan and the timeline.
- Are you exploring or adopting an alternative business model to move away from fast fashion?
- Please specify which, if any, of this information is public on your website.

**5. Do you have policies addressing end-of-life management of synthetic fibres?**

- This may include, for example, policies or commitments to:
  - Address microfibre release, such as by pre-washing textile products before sale, or reducing/phasing out synthetics in your products
  - Promote durability of textile products and encourage reuse, such as by offering repairs or longer warranties to customers
  - Design your textile products to be more recyclable, for example by eliminating the use of fibre blends which currently cannot be separated on a large scale
  - Make investments into the separate collection of used textiles for reuse, repair and recycling, or other creative ways to reduce fibre consumption
- Do you have ambitious climate or circularity targets that apply across all production ranges and cover your entire supply chain?

We would appreciate it if you could reply to this letter by **Friday 9th April 2021** by either email or this [online form](#), which allows you to input your answers directly.

If you have any additional questions, or would like to organise a meeting or a call with our team, please do not hesitate to get in touch. Please note we will also send this letter by email.

We look forward to hearing from you,

**Urška Trunk**  
Campaign Manager  
Changing Markets

**Virginia López Calvo**  
Senior Campaigner  
WeMove Europe

**Anastasiia Martynenko**  
Head  
Zero Waste Alliance Ukraine

**Sarah Ditty**  
Policy Director  
Fashion Revolution

**Muriel Papin**  
Founder  
No Plastic In My Sea

**Paul Roeland**  
Transparency Lead  
Clean Clothes Campaign

**Rob Harrison**  
Director  
Ethical Consumer

**Laura Díaz Sánchez**  
Campaigner Microplastics  
Plastic Soup Foundation

**Gary Cook**  
Climate Campaigns Director  
Stand.earth

## Annex IV: Methodology for the brand analysis of Spring/Summer 2021 clothing collections

The analysis was conducted between 29 March and 20 April 2021, and included a total of 12 different fashion brands. The research objective was to analyse a broad spectrum of the international fashion market - from luxury houses to supermarket retailers, ultra-fast-fashion brands and high-street names.

The analysis covered 4,028 apparel products, and was based on publicly available information each brand displayed on individual online product pages. The methodology used a combination of quantitative data collection (for example, numerical volumes outlined in garment material composition) and qualitative data collection (for example, to analyse written statements and claims).

The data collected was based on a robust set of indicators on material composition, sustainability claims and certifications to support such claims. These indicators included the presence of synthetics such as polyester, nylon, acrylic, elastane and polyamide. Information was also collected on the inclusion of recycled synthetics, disclosure of feedstock and the quantity of recycled materials that each individual garment contained. While some indicators were binary (yes/no options), others - such as the volume of polyester - required specific data entry.

It was recorded whether the product page had a sustainability claim and whether there was a certification or standard to support it. For this research, it is important to note that, where a brand has tagged the garment as 'conscious' (H&M), 'Sustainability' (Zalando) or 'Join Life' (Zara), or placed the garment in its 'Responsible Edit' (ASOS), it is assumed that the retailer is making a sustainability claim about that product.

Alongside URL links, the date and location of the website accessed was logged, due to the fact that product pages are constantly being updated. This was to ensure any ambiguous or unsubstantiated claims that brands may later remove were captured. For consistency, all websites were accessed from the UK.

For the analysis of the main collections, up to 30 items were analysed for each brand across the following male and female categories: shirts/tops, non-jeans-based trousers, jackets/coats, dresses, kidswear and hoodies/sweatshirts. A maximum of 20 items were analysed per category for the sustainable collections reviewed on ASOS, H&M, Zara and Zalando. This slightly smaller sample size was chosen due to the limited number of stock-keeping units (SKUs) available to review; across both main and sustainable ranges, some categories only contained a handful of SKUs to analyse, which explains the variance in total garments collected per retailer.

Lining and secondary fabrics were incorporated into the analysis. This includes fillings, coating, ribbing,

embellishments and decorations stated on the product page. This was important to gain a clear insight into the level of synthetics used in the garments. Denim items were excluded from categories and, where possible, the research avoided collecting data on the same item in multiple colours, so as to assess a wider variety of clothing.

The main research limitation of this study pertains to the fact that data collection was limited to what is publicly available on each individual brand website; additional, valuable information may not have been disclosed. Additionally, the analysis covers only Spring/Summer 2021 collections, meaning that lighter, breathable clothes with higher percentages of natural fibres may be more present on brands' websites; Autumn/Winter may present more outerwear, which tends to contain a higher percentage of synthetics.

Lastly, we assessed each sustainability claim made in our study against the draft guidelines released by the UK's Competition and Markets Authority (CMA), which were released for comment on 21 May 2021.<sup>103</sup> We extracted some of the key criteria we used in our analysis below.

### Notes on CMA draft guidance

#### Principles:

1. Claims must be truthful and accurate
2. Claims must be clear and unambiguous
3. Claims must not omit or hide important relevant information
4. Comparisons must be fair and meaningful
5. Claims must consider the full life cycle of the product
6. Claims must be substantiated

Although this guidance is not final, it indicates the direction in which decision-makers across Europe are primed to move as they become more serious in addressing green claims. As such, it formed the basis of our analysis of brands' green claims.

# References

- 1 Tecnon Orbichem (2021) 'World synthetic fibres'. S/Db-CHEM Market Overview.
- 2 Remy, D., Speelman, E. and Swartz, S. (2016) 'Style that's sustainable: A new fast-fashion formula'. McKinsey & Company, 20 October. [ONLINE] Available at: <https://www.mckinsey.com/business-functions/sustainability/our-insights/style-thats-sustainable-a-new-fast-fashion-formula>.
- 3 Changing Markets Foundation (2018) 'Majority of UK public feel clothing brands should be responsible for supply chain impacts'. [Press Release] 10 January. [ONLINE] Available at: [http://changingmarkets.org/wp-content/uploads/2019/01/UK\\_SUSFASHION\\_PR\\_FINAL.pdf](http://changingmarkets.org/wp-content/uploads/2019/01/UK_SUSFASHION_PR_FINAL.pdf).
- 4 European Environmental Bureau (2020) EEB draft feedback: Empowering the consumer for the green transition, 1 September. [ONLINE] Available at: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12467-Empowering-the-consumer-for-the-green-transition/F547532>.
- 5 Remy, D., Speelman, E. and Swartz, S. (2016) 'Style that's sustainable: A new fast-fashion formula'. McKinsey & Company, 20 October. [ONLINE] Available at: <https://www.mckinsey.com/business-functions/sustainability/our-insights/style-thats-sustainable-a-new-fast-fashion-formula>.
- 6 Remy, D., Speelman, E. and Swartz, S. (2016) 'Style that's sustainable: A new fast-fashion formula'. McKinsey & Company, 20 October. [ONLINE] Available at: <https://www.mckinsey.com/business-functions/sustainability/our-insights/style-thats-sustainable-a-new-fast-fashion-formula>.
- 7 Global Fashion Agenda and the Boston Consulting Group (2019) Pulse of the fashion industry: 2019 update. [ONLINE] Available at: <http://media-publications.bcg.com/france/Pulse-of-the-Fashion-Industry2019.pdf>.
- 8 Changing Markets Foundation (2021) Fossil fashion: The hidden reliance of fast fashion on fossil fuels. [ONLINE] Available at: [http://changingmarkets.org/wp-content/uploads/2021/01/FOSSIL-FASHION\\_Web-compressed.pdf](http://changingmarkets.org/wp-content/uploads/2021/01/FOSSIL-FASHION_Web-compressed.pdf)
- 9 European Environment Agency (2020) Plastic in textiles: towards a circular economy for synthetic textiles in Europe. Briefing No. 25/2020, 29 January. [ONLINE] Available at: <https://www.eea.europa.eu/publications/plastic-in-textiles-towards-a>.
- 10 Buffet, L. (2020) 'The beginning of the end of the oil era?' Transport and Environment, 21 September. [ONLINE] Available at: <https://www.transportenvironment.org/newsroom/blog/beginning-end-oil-era>.
- 11 Tecnon OrbiChem (2021) World Synthetic Fibres Database: Strategic market overview.
- 12 Tecnon OrbiChem (2021) World Synthetic Fibres Database: Strategic market overview.
- 13 Ellen MacArthur Foundation (2017) A new textiles economy: Redesigning fashion's future. [ONLINE] Available at: <https://www.ellenmacarthurfoundation.org/publications/a-new-textiles-economy-redesigning-fashions-future>
- 14 Changing Markets Foundation (2021) Fossil fashion: The hidden reliance of fast fashion on fossil fuels. [ONLINE] Available at: [http://changingmarkets.org/wp-content/uploads/2021/01/FOSSIL-FASHION\\_Web-compressed.pdf](http://changingmarkets.org/wp-content/uploads/2021/01/FOSSIL-FASHION_Web-compressed.pdf).
- 15 European Commission (2021) Screening of websites for 'greenwashing': Half of green claims lack evidence. [Press Release] 28 January. [ONLINE] Available at: [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_21\\_269](https://ec.europa.eu/commission/presscorner/detail/en/IP_21_269).
- 16 European Environmental Bureau (2020) EEB draft feedback: Empowering the consumer for the green transition, 1 September. [ONLINE] Available at: <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12467-Empowering-the-consumer-for-the-green-transition/F547532>.
- 17 European Commission (2020) 'About this initiative'. Environmental performance of products & businesses: Substantiating claims. [ONLINE] Available at: [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12511-Environmental-performance-of-products-&-businesses-substantiating-claims\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12511-Environmental-performance-of-products-&-businesses-substantiating-claims_en)
- 18 European Commission, Initiative on substantiating green claims. [ONLINE] Available at: [https://ec.europa.eu/environment/eusds/smgp/initiative\\_on\\_green\\_claims.htm](https://ec.europa.eu/environment/eusds/smgp/initiative_on_green_claims.htm)
- 19 Competition and Markets Authority (2021) Misleading environmental claims. 21 May. [ONLINE] Available at: <https://www.gov.uk/cma-cases/misleading-environmental-claims>.
- 20 Competition and Markets Authority (2021) Draft guidance on environmental claims on goods and services: Helping businesses comply with their consumer protection law obligations. 21 May. [ONLINE] Available at: [https://assets.publishing.service.gov.uk/media/60a66a9cd3bf7f73893a8e1f/Draft\\_guidance\\_on\\_environmental\\_claims\\_on\\_goods\\_and\\_services-.pdf](https://assets.publishing.service.gov.uk/media/60a66a9cd3bf7f73893a8e1f/Draft_guidance_on_environmental_claims_on_goods_and_services-.pdf).
- 21 Competition and Markets Authority (2021) Draft guidance on environmental claims on goods and services: Helping businesses comply with their consumer protection law obligations. 21 May. [ONLINE] Available at: [https://assets.publishing.service.gov.uk/media/60a66a9cd3bf7f73893a8e1f/Draft\\_guidance\\_on\\_environmental\\_claims\\_on\\_goods\\_and\\_services-.pdf](https://assets.publishing.service.gov.uk/media/60a66a9cd3bf7f73893a8e1f/Draft_guidance_on_environmental_claims_on_goods_and_services-.pdf).
- 22 Fashion Revolution (2020) Fashion transparency index 2020. [ONLINE] Available at: <https://www.fashionrevolution.org/about/transparency/>.
- 23 Nike (2021) FY20 Nike, Inc. impact report. [ONLINE] Available at: <https://purpose.nike.com/fy20-nike-impact-report>.
- 24 Ellen MacArthur Foundation (2017) A new textiles economy: Redesigning fashion's future. [ONLINE] Available at: <https://www.ellenmacarthurfoundation.org/our-work/activities/make-fashion-circular/report>.
- 25 Ellen MacArthur Foundation (2017) A new textiles economy: Redesigning fashion's future. [ONLINE] Available at: <https://www.ellenmacarthurfoundation.org/our-work/activities/make-fashion-circular/report>.
- 26 O Ecotextiles (2009) Why is recycled polyester considered a sustainable textile? 14 July [ONLINE] Available at: <https://oecotextiles.blog/2009/07/14/why-is-recycled-polyester-considered-a-sustainable-textile/>.
- 27 Rengel, A (2017) Recycled textile fibres and textile recycling: An overview of the market and its possibilities for public procurers in Switzerland. Commissioned by the Federal Office for the Environment.
- 28 Rengel, A (2017) Recycled textile fibres and textile recycling: An overview of the market and its possibilities for public procurers in Switzerland. Commissioned by the Federal Office for the Environment.
- 29 Ellen MacArthur Foundation (2017) A new textiles economy: Redesigning fashion's future. [ONLINE] Available at: <https://www.ellenmacarthurfoundation.org/our-work/activities/make-fashion-circular/report>.
- 30 Ellen MacArthur Foundation (2017) A New Textiles Economy: Redesigning Fashion's Future [ONLINE] Available at: <https://www.ellenmacarthurfoundation.org/our-work/activities/make-fashion-circular/report>
- 31 Hemkhaus, M., Hannak, J., Malodobry, P., Janßen, T., Griefahn, N.S. and Linke, C. (2019) 'Circular economy in the textile sector: Study for the German Federal Ministry for Economic Cooperation and Development'. Adelphi. [ONLINE] Available at: <https://www.adelphi.de/en/publication/circular-economy-textile-sector>.

- 32 Spathas, T. (2017) The environmental performance of high value recycling for the fashion industry: LCA for four case studies. [MA thesis] Gothenburg: Chalmers University of Technology. [ONLINE] Available at: <http://publications.lib.chalmers.se/records/fulltext/250175/250175.pdf>.
- 33 ECOS (2021) Durable, repairable and mainstream: How ecodesign can make our textiles circular. [ONLINE] Available at: <https://ecostandard.org/wp-content/uploads/2021/04/ECOS-REPORT-HOW-ECODESIGN-CAN-MAKE-OUR-TEXTILES-CIRCULAR.pdf>.
- 34 Wardrobe Change (2021) Recommendations for the EU Strategy for Sustainable Textiles. [ONLINE] Available at: <https://mk0eeborgicuyctuf7e.kinstacdn.com/wp-content/uploads/2021/06/Environmental-CSOs-Recommendations-for-the-EU-Strategy-for-Sustainable-Textiles-June-2021.pdf>
- 35 Textile Exchange (2020) 2025 Recycled Polyester Challenge [ONLINE] Available at: <https://textileexchange.org/2025-recycled-polyester-challenge/>; UN Climate Change News (2021) New report sets out how fashion industry can transition to low carbon cotton and polyester. [Press Release] 26 April. [ONLINE] Available at: <https://unfccc.int/news/new-report-sets-out-how-fashion-industry-can-transition-to-low-carbon-cotton-and-polyester>.
- 36 UN Climate Change News (2021) New report sets out how fashion industry can transition to low carbon cotton and polyester. [Press Release] 26 April. [ONLINE] Available at: <https://unfccc.int/news/new-report-sets-out-how-fashion-industry-can-transition-to-low-carbon-cotton-and-polyester>.
- 37 European Commission, Initiative on substantiating green claims. [ONLINE] Available at: [https://ec.europa.eu/environment/eussd/smgp/initiative\\_on\\_green\\_claims.htm](https://ec.europa.eu/environment/eussd/smgp/initiative_on_green_claims.htm)
- 38 Competition and Markets Authority (2021) Draft guidance on environmental claims on goods and services: Helping businesses comply with their consumer protection law obligations. 21 May. [ONLINE] Available at: [https://assets.publishing.service.gov.uk/media/60a66a9cd3bf7f73893a8e1f/Draft\\_guidance\\_on\\_environmental\\_claims\\_on\\_goods\\_and\\_services-.pdf](https://assets.publishing.service.gov.uk/media/60a66a9cd3bf7f73893a8e1f/Draft_guidance_on_environmental_claims_on_goods_and_services-.pdf).
- 39 Patagonia (2021) NetPlus® recycled fishing nets. [ONLINE] Available at: <https://www.patagonia.com/our-footprint/net-plus-recycled-fishing-nets.html>.
- 40 Parley (n.d.) Parley x Adidas. [ONLINE] Available from: <https://www.parley.tv/updates/adidasparley>.
- 41 Econyl (n.d.) Some see trash. Others see treasure. Discover the process behind the breakthrough material. [ONLINE] Available from: <https://www.econyl.com/the-process/>.
- 42 Changing Markets Foundation (2020) Talking trash: the corporate playbook of false solutions to the plastic crisis. [ONLINE] Available at: [http://changingmarkets.org/wp-content/uploads/2021/01/TalkingTrash\\_FullVersion.pdf](http://changingmarkets.org/wp-content/uploads/2021/01/TalkingTrash_FullVersion.pdf).
- 43 Adidas (2020) UltraBOOST DNA LOOP launches to public as 'made to be remade' running shoes come to Creators Club week. [ONLINE] Available at: <https://news.adidas.com/running/ultraboost-dna-loop-launches-to-public-as--made-to-be-remade--running-shoes-come-to-creators-club-we/s/38b4b53e-2343-4d9a-9c59-20feda458e2b>.
- 44 Nike (2021) What is Nike's Reuse-a-Shoe program? [ONLINE] Available at: [https://www.nike.com/help/a/recycle-shoes?cp=76060516106\\_aff\\_%7CTnL5HPStwNw%7C&ranMID=41134&ranEAID=TnL5HPStwNw&ranSiteID=TnL5HPStwNw-.a0cbJb\\_8\\_5D1WBcOdzatg](https://www.nike.com/help/a/recycle-shoes?cp=76060516106_aff_%7CTnL5HPStwNw%7C&ranMID=41134&ranEAID=TnL5HPStwNw&ranSiteID=TnL5HPStwNw-.a0cbJb_8_5D1WBcOdzatg).
- 45 Nike Grind (2021) Home page. [ONLINE] Available at: <https://www.nikegrind.com/>.
- 46 Target (2021) 2020 Target corporate responsibility report. [ONLINE] Available at: <https://corporate.target.com/corporate-responsibility/reporting-progress>.
- 47 Worn Again (2021) Home page. [ONLINE] Available at: <https://wornagain.co.uk>.
- 48 Simon, J.M. and Martin, S. (2019) El Dorado of chemical recycling: State of play and policy challenges. [ONLINE] Available at: <https://zerowasteurope.eu/downloads/el-dorado-of-chemical-recycling-state-of-play-and-policy-challenges/>; Crippa, M., De Wilde, B., Koopmans, R., Leysens, J., Muncke, J., Ritschkoff A-C., Van Doorselaer, K., Velis, C. and Wagner, M. (2019) A circular economy for plastics: Insights from research and innovation to inform policy and funding decisions. European Commission, Brussels, Belgium.
- 49 H&M Foundation (2021) Green Machine: Recycling blend textiles at scale. [ONLINE] Available at: <https://hmfoundation.com/project/recycling-the-green-machine/>.
- 50 H&M (2020) H&M RE:MAKE. [ONLINE] Available at: <https://letsremake.hm.com/>.
- 51 Textile Exchange (2021) Material change insights report 2020. [ONLINE] Available at: <https://textileexchange.org/wp-content/uploads/2021/05/Material-Change-Insights-2020.pdf>.
- 52 Monsoon (2020) Clothes for life. [ONLINE] Available at: <https://www.monsoon.co.uk/clothes-for-life.html>.
- 53 The Nature Conservancy (2021) Toward eliminating pre-consumer emissions of microplastics from the textile industry [ONLINE] Available at: [https://www.nature.org/content/dam/tnc/nature/en/documents/210322TNCBain\\_Pre-ConsumerMicrofiberEmissionsv6.pdf](https://www.nature.org/content/dam/tnc/nature/en/documents/210322TNCBain_Pre-ConsumerMicrofiberEmissionsv6.pdf)
- 54 Suran, M. (2018). 'A planet too rich in fibre: Microfibre pollution may have major consequences on the environment and human health'. EMBO Reports, 19(9): e46701. [ONLINE] Available at: <https://doi.org/10.15252/embr.201846701>.
- 55 Brahney, J., Hallerud, M., Heim, E., Hahnenberger, M. and Sukumaran, S. (2020) 'Plastic rain in protected areas of the United States'. Science, 368(6496): 1257-60. [ONLINE] Available at: <https://science.sciencemag.org/content/368/6496/1257>.
- 56 Kay, J. (2017) 'Did your yoga pants cause sea pollution?' US News, 15 March. [ONLINE] Available at: <https://www.usnews.com/news/best-states/alabama/articles/2017-03-15/yoga-pants-cozy-clothes-may-be-key-source-of-sea-pollution>.
- 57 Thompson, A. (2018) 'From fish to humans, a microplastic invasion may be taking a toll'. Scientific American, 4 September. [ONLINE] Available at: <https://www.scientificamerican.com/article/from-fish-to-humans-a-microplastic-invasion-may-be-taking-a-toll/>.
- 58 Gasperi, J., Wright, S.L., Dris, R., Collard, F., Mandin, C., Guerrouache, M., Langlois, V., Kelly, F.J and Tassin, B. (2018) 'Microplastics in air: Are we breathing it in?' Current Opinion in Environmental Science & Health, 1: 1-5. [ONLINE] Available at: <https://www.sciencedirect.com/science/article/abs/pii/S2468584417300119>.
- 59 Dris, R., Gasperi, J., Mirande, C., Mandin, C., Guerrouache, M., Langlois, V. and Tassin, B. (2017) 'A first overview of textile fibers, including microplastics, in indoor and outdoor environments'. Environmental Pollution, 221: 453-8. [ONLINE] Available at: <https://www.sciencedirect.com/science/article/pii/S0269749116312325>.
- 60 Catarino, A.I., Maccia, V., Sanderson, W.G., Thompson, R.C. and Henry, T.B. (2018) 'Low levels of microplastics (MP) in wild mussels indicate that MP ingestion by humans is minimal compared to exposure via household fibres fallout during a meal'. Environmental Pollution, 237: 675-84. [ONLINE] Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0269749117344445?via%3Dihub>.
- 61 Suran, M. (2018) 'A planet too rich in fibre: Microfibre pollution may have major consequences on the environment and human health'. EMBO Reports, 19(9): e46701. [ONLINE] Available at: <https://doi.org/10.15252/embr.201846701>.
- 62 Ragusa, A., Svelato, A., Santacroce, C., Catalano, P., Notarstefano, V., Carnevali, O., Papa, F., Rongioletti, M. C. A., Baiocco, F., Draghi, S., D'Amore, E., Rinaldo, D., Matta, M. and Giorgini, E. (2021) 'Plasticenta: First evidence of microplastics in human placenta'. Environment International, 146: 106274. [ONLINE] Available at: <https://doi.org/10.1016/j.envint.2020.106274>
- 63 Plastic Soup Foundation (2021) 'Microplastics in textiles may damage lung cells', Plastic Health Coalition, 24 February. [ONLINE] Available at: <https://www.plastichealthcoalition.org/press/microplastics-in-textiles-may-damage-lung-cells/>.

- 64 Soltani, N.D., Taylor, M.P., Wilson, S.P. (2021) Quantification and exposure assessment of microplastics in Australian indoor house dust. *Environmental Pollution*, 283: 117064. [ONLINE] Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0269749121006461?via%3Dihub>
- 65 Liu, Q. and Schauer, J. (2021) 'Airborne microplastics from waste as a transmission vector for COVID-19', *Aerosol and Air Quality Research: Special Issue on COVID-19 Aerosol Drivers, Impacts and Mitigation*, 21(1): 200439. [ONLINE] Available at: <https://aaqr.org/articles/aaqr-20-07-le-0439>.
- 66 California Ocean Science Trust (2021) Assessing the risk of microplastic pollution in California. [ONLINE] Available at: <https://www.oceansciencetrust.org/projects/microplastics-risk-assessment/>.
- 67 Adidas (n.d.) Sustainability: Materials. [ONLINE] Available at: <https://www.adidas-group.com/en/sustainability/products/materials/#/pfc/our-approach-to-addressing-microfiber-pollution/>.
- 68 Patagonia (21) An update on microfiber pollution. [ONLINE] Available at: <https://www.patagonia.com/stories/an-update-on-microfiber-pollution/story-31370.html>.
- 69 Nike (2021) Microfibers. [ONLINE] Available at: <https://purpose.nike.com/microfibers>.
- 70 Tecnon Orbichem (2021) 'World synthetic fibres'. S/Db-CHEM Market Overview.
- 71 Plastic Soup Foundation (2019) 'Adidas, Nike, H&M and Zara products tested on microfiber loss during washing'. *Ocean Clean Wash*, 21 February. [ONLINE] Available at: <https://www.oceancleanwash.org/2019/02/adidas-nike-hm-and-zara-products-tested-on-microfiber-loss-during-washing/>.
- 72 Boucher, J. and Friot, D. (2017) Primary microplastics in the oceans: A global evaluation of sources. *International Union for Conservation of Nature*. [ONLINE] Available at: <https://portals.iucn.org/library/sites/library/files/documents/2017-002-En.pdf>.
- 73 Hodgson, R. (n.d.) 'Synthetic fibres and tyres the "main source" of microplastics in the sea'. *ENDS Europe*. [ONLINE] Available at: [https://www.endseurope.com/article/1717463/synthetic-fibres-tyres-main-source-microplastics-sea?bulletin=bulletin%2Fendseurope&utm\\_medium=EMAIL&utm\\_campaign=eNews%20Bulletin&utm\\_source=20210527&utm\\_content=ENDS%20Europe%20Daily%20\(61\)::www\\_endseurope\\_com\\_article\\_171&email\\_hash=](https://www.endseurope.com/article/1717463/synthetic-fibres-tyres-main-source-microplastics-sea?bulletin=bulletin%2Fendseurope&utm_medium=EMAIL&utm_campaign=eNews%20Bulletin&utm_source=20210527&utm_content=ENDS%20Europe%20Daily%20(61)::www_endseurope_com_article_171&email_hash=).
- 74 Boucher, J. and Friot, D. (2017) Primary microplastics in the oceans: A global evaluation of sources. *International Union for Conservation of Nature*. [ONLINE] Available at: <https://portals.iucn.org/library/sites/library/files/documents/2017-002-En.pdf>.
- 75 EurekAlert! (2020) Synthetic clothing fibers contribute vast amounts of plastic pollution on land. [Press Release] 16 September. [ONLINE] Available at: [https://www.eurekalert.org/pub\\_releases/2020-09/p-scf090920.php](https://www.eurekalert.org/pub_releases/2020-09/p-scf090920.php).
- 76 Ross, P.S., Chastain, S., Vassilenko, E., Etemadifar, A., Zimmerman, S., Quesnel, S.-A., Eert, J., Solomon, E., Patankar, S., Posacka, A.M. and Williams, B. (2021) 'Pervasive distribution of polyester fibres in the Arctic Ocean is driven by Atlantic inputs'. *Nature Communications*, 12(106). [ONLINE] Available at: <https://www.nature.com/articles/s41467-020-20347-1>.
- 77 Royer, S.J., Wiggin, K., Kogler, M. and Deheyn, D.D. (2021) 'Degradation of synthetic and wood-based cellulose fabrics in the marine environment: Comparative assessment of field, aquarium, and bioreactor experiments' *Science of the Total Environment*, 791: 148060. [ONLINE] Available at: <https://www.sciencedirect.com/science/article/pii/S0048969721031314>
- 78 The Microfibre Consortium (2021) Our plan for co-producing a cross-industry roadmap. [ONLINE] Available at: <https://www.microfibreconsortium.com/roadmap>.
- 79 The Microfibre Consortium (2021) Work. [ONLINE] Available at: <https://www.microfibreconsortium.com/work>
- 80 Esprit (2021) Design smart: More sustainable materials. [ONLINE] Available at: <https://www.esprit.com/en/company/sustainability/design-smart/more-sustainable-materials>.
- 81 The Nature Conservancy (2021) Toward eliminating pre-consumer emissions of microplastics from the textile industry [ONLINE] Available at: <https://www.nature.org/content/dam/tnc/nature/en/documents/21>
- 82 E&T (2020) Microplastics problem exacerbated by wearing polyester clothes, study reveals. 10 March. [ONLINE] Available at: <https://eandt.theiet.org/content/articles/2020/03/microplastics-problem-exacerbated-by-wearing-polyester-clothes-study-claims/>.
- 83 Changing Markets Foundation (2018) The false promise of certification. [ONLINE] Available at: [https://changingmarkets.org/wp-content/uploads/2018/05/False-promise\\_full-report-ENG.pdf](https://changingmarkets.org/wp-content/uploads/2018/05/False-promise_full-report-ENG.pdf).
- 84 Glover, S. (2020) 'Better Cotton Initiative pulls out of Xinjiang'. *Apparel Insider*, 22 October. [ONLINE] Available at: <https://www.ecotextile.com/2020102226892/materials-production-news/better-cotton-initiative-pulls-out-of-xinjiang.html>.
- 85 Partzsch, L., Zander, M. and Robinson, H. (2019) 'Cotton certification in Sub-Saharan Africa: Promotion of environmental sustainability or greenwashing?' *Global Environmental Change*, 57: 101924. [ONLINE] Available at: <https://www.sciencedirect.com/science/article/pii/S0959378018307854#tbl0010>.
- 86 Silver, J. (2020) 'Loungewear sales up by 1303 per cent as lockdown changes consumer habits'. *City AM*, 20 December. [ONLINE] Available at: <https://www.cityam.com/loungewear-sales-up-1303-per-cent-as-lockdown-changes-consumer-habits/>.
- 87 Innovation in Textiles (2021) Microfibres may stop lungs mending in Covid patients, 24 February. [ONLINE] Available at: <https://www.innovationintextiles.com/microfibres-may-stop-lungs-mending-in-covid-patients/>.
- 88 Bailey, I. (2021) 'Why Boohoo Australia is focusing on this 95%'. *Rag Trader*, 18 May. [ONLINE] Available at: <https://www.ragtrader.com.au/news/why-boohoo-australia-is-focusing-on-this-95>.
- 89 Boohoo (2021) Our sustainability plan. [ONLINE] Available at: <https://www.boohoo.com/page/sustainability-guide.html>.
- 90 Boohoo (2021) Boohoo Group sustainability plan 2021. [ONLINE] Available at: [https://www.boohooplc.com/sites/boohoo-corp/files/all-documents/boohoo\\_group\\_sustainability\\_plan\\_24321.pdf](https://www.boohooplc.com/sites/boohoo-corp/files/all-documents/boohoo_group_sustainability_plan_24321.pdf).
- 91 H&M (n.d.) H&M Conscious products explained. [ONLINE] Available at: [https://www2.hm.com/en\\_ca/customer-service/product-and-quality/conscious-concept.html](https://www2.hm.com/en_ca/customer-service/product-and-quality/conscious-concept.html).
- 92 Textile Exchange (2020) Material change insights report 2019. [ONLINE] Available at: [https://textileexchange.org/wp-content/uploads/2020/05/Material-Change-Insights-Report-2019\\_Final.pdf](https://textileexchange.org/wp-content/uploads/2020/05/Material-Change-Insights-Report-2019_Final.pdf).
- 93 Kell, L. (2021) Simone Rocha on inclusivity, sustainability and her new collection with H&M. *Harpers Bazaar*, 3 February. [ONLINE] Available at: <https://www.harpersbazaararabia.com/gallery/simone-rocha-interview>.
- 94 Almassi, H., (2018) 'Why is no one questioning the plastic fashion trend?' *Who What Wear*, 9 October. [ONLINE] Available at: <https://www.whowhatwear.co.uk/plastic-fashion-trend/slide3>.
- 95 Westervelt, A. (2015) 'Phthalates are everywhere, and the health risks are worrying. How bad are they really?' *The Guardian*, 10 February. [ONLINE] Available at: <https://www.theguardian.com/lifeandstyle/2015/feb/10/phthalates-plastics-chemicals-research-analysis>.
- 96 Uniqlo (n.d.) Feature: Our commitment to reducing single-use plastic. [ONLINE] Available at: <https://www.uniqlo.com/uk/en/content/plastic-reduction.html>.
- 97 Innovation in Textiles (2021) Microfibres may stop lungs mending in Covid patients. 24 February. [ONLINE] Available at: <https://www.innovationintextiles.com/microfibres-may-stop-lungs-mending-in-covid-patients/>.
- 98 Pithers, E. (2019) 'The leather debate: Is vegan leather a sustainable alternative to the real thing?' *Vogue*, 24 April. [ONLINE]

Available at: <https://www.vogue.co.uk/article/vegan-leather-sustainability-debate-2019>.

- 99 Zara (n.d.) Clothing care. [ONLINE] Available at: <https://www.zara.com/uk/en/sustainability-clothing-care-mkt3129.html?v1=1596703>.
- 100 RREUSE (2018) RREUSE position on the updated EU Waste Framework Directive. 17 September [ONLINE] Available at: [http://www.rreuse.org/wp-content/uploads/RREUSE-public-position-on-the-WFD\\_2018\\_09\\_17-FINAL.pdf#page=9](http://www.rreuse.org/wp-content/uploads/RREUSE-public-position-on-the-WFD_2018_09_17-FINAL.pdf#page=9).
- 101 Science Advise for Policy by European Academics (2019) A scientific perspective on microplastics in nature and society. [ONLINE] Available at: <https://www.sapea.info/wp-content/uploads/microplastics-conclusions.pdf>.
- 102 European Parliament (2020) Motion for a European Parliament resolution with recommendations to the Commission on corporate due diligence and corporate accountability. (2020/2129(INL)). [ONLINE] Available at: [https://www.europarl.europa.eu/doceo/document/JURI-PR-657191\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/JURI-PR-657191_EN.pdf).
- 103 Competition and Markets Authority (2021) "Green" claims: CMA sets out the dos and don'ts for businesses'. UK.Gov. [Press Release] 21 May. [ONLINE] Available at: <https://www.gov.uk/government/news/green-claims-cma-sets-out-the-dos-and-don-ts-for-businesses>.

**STAND**  
earth

**Clean  
Clothes  
Campaign**

 **Changing Markets**  
FOUNDATION

  
**RETORNA**

**PLASTIC**  
**SOUP** FOUNDATION

**NO PLASTIC**  
  
**IN MY SEA**

**FASHION  
REVOLUTION**