

Textile consumption

Used textiles arisings

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INTRODUCTION

Welcome to the textiles market situation report. WRAP market situation reports provide in-depth information on the latest economic trends and developments affecting the capture, re-use, and recycling of key recovered materials.

WRAP published its first textiles market situation report in 2016. This report provides an update and highlights recent developments in the market for UK used textiles as well as key factors shaping the outlook for the sector.

In this report, 'textiles' includes: clothing, items such as shoes, bags and belts, as well as household-type textiles such as bed and table linen, and leisure textiles such as sleeping bags.¹



INTRODUCTION

KEY THEMES AND FIGURES

3%



UK households continue to buy more clothing: spending
on clothing has increased by
3% per annum on average
in the five years to 2018, adjusted
for inflation.

620,000

tonnes of used textiles were collected for re-use and recycling in 2018.



921,000

tonnes of used textiles ended up in the household residual waste in 2017 of which...



336,000

tonnes of used clothing ended up in the household residual waste in 2017.



\$4bn

worth of used textiles a year are exported globally. In 2017, **the UK remains the second largest exporter** but has lost market share between 2008 and 2017 to the US, Korea and China, according to UNComtrade.

As well as the wider economic context and trends in the fashion sector, **Brexit**, **Extended Producer Responsibility and increased sector scrutiny** are some of the factors that may be shaping the future for the textiles sector.



The £ value of a tonne of UK used textiles exported remains high by historical standards but costs are reportedly going up.



The continued growth in spending on clothing (with its associated environmental impacts) and the quantity of textiles still going to residual waste give a sense of challenge, but also of the economic and environmental opportunity for the sector.

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TEXTILE CONSUMPTION



SPENDING ON CLOTHING

In 2018, UK households spent £60.5bn² a year on clothing, accounting for 5% of their overall spending.

Between 2017 and 2018, household spending on clothing, adjusted for inflation, grew by 2%. The five-year average growth rate of household spending on clothing, adjusted for inflation, has slowed from 14% in 2003, to 9% in 2008, to 4% in 2012, down to 3% in 2018.³

This suggests that households continue to spend more on clothing from one year to the next, but at a slower pace. This notwithstanding, in the first quarter of 2019, household spending on clothing rose by 5%, adjusted by inflation, compared with the first quarter of 2018.

In the 2000s, spending on clothing was boosted by sharply falling prices: clothing prices⁴ fell by 58% between 1988 and 2010 – in sharp contrast to overall consumer prices which went up by 64% over the same period. This made clothing, relatively, much more affordable and encouraged consumption.

Since then, clothing prices have increased – they were up by 11% between 2010 and 2018, but still not as much as overall prices – which were up by 18% over the same period, and in the first six months of 2019, clothing prices fell by 1% compared with the first six months of 2018.

The clothing landscape has changed too, with fast fashion, the emergence of digital retail opportunities and the closure of physical retail outlets among the key trends.

£60.5bn

The amount UK households spend on clothing a year

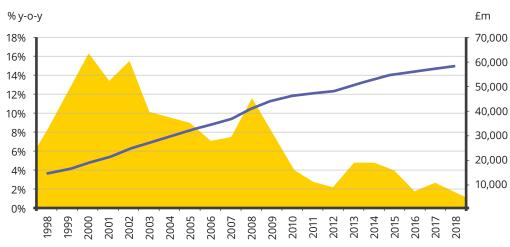
Globally, PWC's Global Consumer Insight Survey suggested that fashion is the category most likely to be bought online, with nearly a quarter of shoppers buying clothes or footwear mostly, or only online.

Although there has been a slowdown in the pace of growth and many changes to the marketplace, household spending on clothing is still growing overall.

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Figure 1. UK household spending on clothing



Source: ONS Consumer Trends, released 28 June 2019. Annual data.

% y-o-y, chained volume measure **£m** adjusted for inflation (chained volume measure)

Key

- Annual level of spending on clothing: rising
- Annual growth of spending on clothing: slowing down

CLOTHING CONSUMPTION

WRAP estimates that the UK consumed 1.04m tonnes of clothing in 2017.

This compares with 1.09m tonnes in 2014 and 1.03m tonnes in 2010.

Preliminary data suggests consumption at 1.07m tonnes in 2018 (subject to revision).

Most of the clothing consumed in the UK is imported, and the estimates here are based on 'apparent consumption' – which is measured by looking at production of clothing plus imports of clothing minus exports of clothing⁵.

The methodology and inherent assumptions associated with estimates based on apparent consumption mean that the data is arguably better suited for providing orders of magnitude, than for tracking trends; and the implied changes over time may not fully reflect market conditions. Caution is urged in the interpretation of the data over time.



NON-CLOTHING CONSUMPTION AND TOTAL CONSUMPTION

Consumption of householdtype textiles such as bed and table linen is estimated at 295,000 tonnes in 2017; shoes and bags at 298,000 tonnes; and leisure textiles such as sleeping bags at 32,000 tonnes.⁶ Due to methodological limitations and data gaps, the estimates for non-clothing consumption are indicative and caution is urged in using the data.

Overall, this means the UK consumed around 1.7m tonnes of textiles in 2017.





The environmental impact

WRAP's 2017 report 'Valuing our Clothes: the cost of UK fashion' calculated that the total footprint of clothing in use in the UK, including global and territorial emissions, was 26.2 million tonnes CO₂e in 2016.

The report found that the highest contributor to the carbon footprint of clothing was the production of fibre through polymer extrusion or agriculture. The report also highlighted that re-use and recycling offer some carbon savings because the lifetime of clothing that is re-used or recycled is extended.

Where this displaces a sale of a new garment, the effects on the environment from fibre extraction and processing are avoided.

The total water footprint of clothing in active use in the UK in 2016, including the water consumed overseas to make our clothes, was 8 billion m³ of water.

The greatest volume of water is used during the growing and production of fibres, although water is also used during colouration, fabric finishing and domestic washing. The report also highlighted process waste from clothing production.

Not all waste occurs at the end of the life of a garment: it also occurs in the processing and production phases. In 2016, this process or 'supply chain' waste was estimated at over 800,000 tonnes.

WRAP continues to work with funders and partners to reduce the environmental impact of clothing. WRAP's Valuing our Clothes report highlighted key opportunities for industry action: increasing the adoption of sustainable fibre to reduce the water footprint, using lower impact processes in the production of garments, focusing on garments that will deliver the largest reduction in carbon, water and waste footprints; and informing and enabling customers to improve care, repair and re-use.

USED TEXTILES ARISINGS



Clothing bought in a given year will last for 3.37 years on average before it is discarded or passed on, with tops averaging 2.74 years and coats averaging 4.58 years.

Clothing in active use reflects more than just that year's worth of purchases, and consumption levels can vary from discarded levels.

Used textiles are discarded through a variety of routes: directly in the household bin, direct charity shop donations, textile banks, door-to-door collections, corporate, school and community schemes, kerbside collections, at local household waste and recycling centres (HWRCs),

or through in-store collections (sometimes in exchange for a discount voucher or through cash for clothes operations). These find their way either to re-use and recycling end markets in the UK and overseas, or to the residual waste which is ultimately destined for landfill or incineration.

There are also several peer-to-peer routes, such as donations to friends and family, and peer-to-peer exchange buying and selling sites such as eBay, Depop, Gumtree, Sphock, and Re:gain.

Finally, there is a stock of textiles that is neither used nor passed on but is instead stored in the 'nation's wardrobe', largely unused.

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SCAP

The Sustainable Clothing
Action Plan (SCAP) 2020
Commitment, launched in
2012, is a voluntary agreement
by businesses, re-use and
recycling organisations and
other stakeholders, which aims
to reduce the environmental
footprint of the UK clothing
sector by the end of 2020.

The target for water has been met, with signatories achieving an 18.1% reduction in the water footprint per tonne of garments, against a target of a 15%.

Further action is needed to meet the carbon target (13.4% reduction against a target of 15%), and WRAP is confident this will be met by 2020.

The waste footprint target continues to be challenging (1.4% reduction in waste per tonne by against a target of a 3.5% reduction).

USED TEXTILES IN THE RESIDUAL WASTE



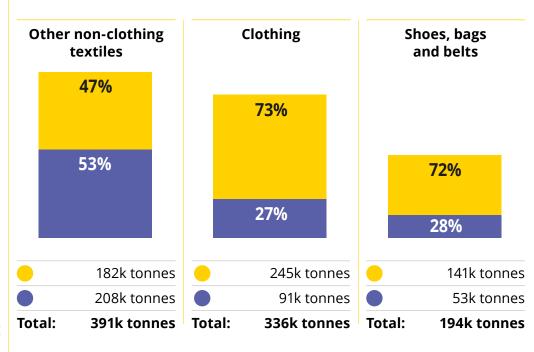
There were 336,000 tonnes of clothing in the household residual waste in 20179, destined for landfill or incineration.

This represents a 10% increase since 2014/2015¹⁰, or around 35,000 tonnes, reversing part of the 50.000 tonnes decrease observed between 2012 and 2014/15.

There are several ways of interpreting this. Given the average clothing longevity (3.3 years), the clothing discarded in any given year is arguably influenced by clothing bought around three years prior. Notwithstanding the caveats that apply around the consumption estimates over time, on this basis, the increase in used clothing found in the household residual waste in 2017 may reflect the delayed impact of higher clothing consumption levels in 2014.

A total of 921,000 tonnes of textile products, including shoes, bags, belts (194,000 tonnes) and nonclothing textiles¹⁰ (391,000 tonnes), were in the household residual waste in 2017, destined for landfill and incineration.

Figure 2. UK textiles in the household residual waste⁸



Key



Textile consumption

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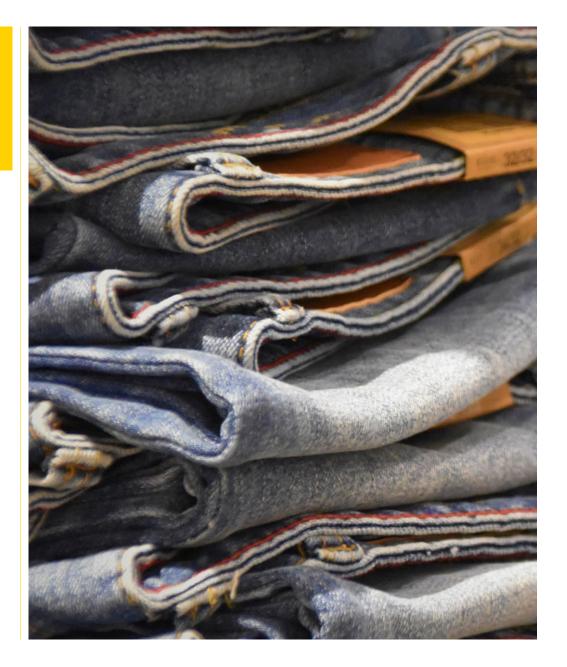
This suggests there are further opportunities for diversion from the residual waste streams, both for clothing and non-clothing at both kerbside and HWRCs.

Most of the used textiles in the household residual waste are found in the kerbside residual waste: 62% of the overall total and 73% of the clothing-only total.

There are opportunities at recycling centres too, with 91,000 tonnes of used clothing alone (not including shoes, bags and belts), found in residual waste at recycling centres.

There is a smaller amount of used textiles found in the commercial residual waste stream. It is estimated that there were around 267,000 tonnes of used textiles in the commercial municipal residual waste¹¹ in England in 2017: around 170,000 tonnes of used clothing, shoes, bags and belts, and around 97,000 tonnes of nonclothing textiles. It is important to note that, due to the shortcomings of the available data, there are a number of significant limitations to the analysis and that these estimates should be treated as indicative and interpreted with caution.

It is estimated that there were around 267,000 tonnes of used textiles in the commercial municipal residual waste in England in 2017.



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USED TEXTILES COLLECTED FOR RE-USE AND RECYCLING



IN TOTAL

An estimated 600,000 tonnes of textiles were collected for re-use and recycling in the UK in 2017, rising to 620,000 tonnes in 2018¹².

These are not on a like-for-like basis with the previous estimate for 2014, so it is not possible to conclude whether the amounts collected for re-use and recycling have increased or decreased since then. The estimates are compiled from a variety of sources using several assumptions and the estimated level of uncertainty is +/- 30,000 tonnes around the central estimate of 620,000 tonnes for 2018.

55%

The percentage of textiles in residual waste in 2017.

This means that, as a proportion of textiles consumed or 'placed on the market' in that same year, around 36% was collected for re-use and recycling in 2017 and 55% was in the residual waste

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BY SOURCE

Donations direct to charity shops (48% of the tonnage collected) and textile banks (37%) remain the main supply streams, accounting for 85% of the total collected for re-use and recycling in 2018, with a further 9% from door-to-door collections¹³.

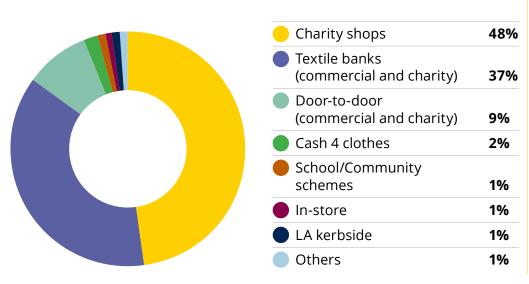
Donations direct to charity shops and textile banks remain the main supply streams, accounting for 85% of the total collected for re-use and recycling. Textile bank operators report a high degree of competition for textile bank sites. Challenges include the withdrawal of site permission, e.g. for fly-tipping reasons, and the difficulty in obtaining permission from supermarket car parks, which for some, are owned by a third party.

'Door-to-door collections' is the process whereby households receive a bag to fill with used textiles and place outside for collection.

Bag theft, by a third party before the operator has managed to collect the filled bag, has declined, and some operators have invested in new technologies such as electronic tracking to deter future theft.

Policing the supply chain is difficult though and several operators are thought to be running collections without the appropriate licences.

Figure 3. UK used textiles collected for re-use and recycling, by supply chain stream¹²





END MARKETS FOR USED TEXTILES

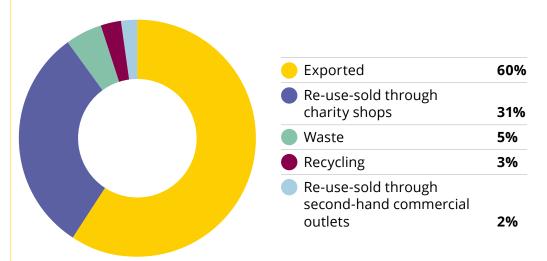


Most of the UK used textiles that are collected for re-use and recycling are destined for the re-use market: 32% is re-used in the UK, sold mostly in charity shops, and around 60% is exported.

Most of the used textiles exported is thought to be for the re-use market in the destination country, rather than being recycled. WRAP is currently carrying out research to find out what happens overseas to textiles that may not be re-used. The remainder of textiles collected in the UK is recycled (3%) and around 5% is not suitable for re-use or recycling, and is disposed of as waste.



Figure 4. The fate of UK used textiles collected for re-use and recycling¹²



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RECYCLING END MARKETS

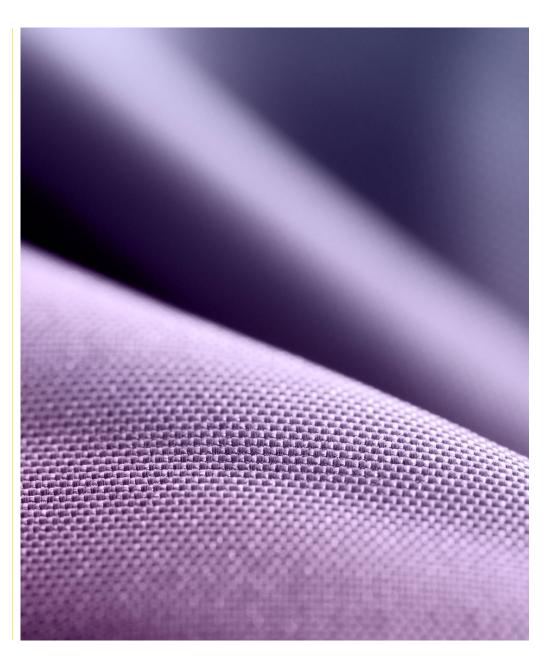
There are two main recycling applications for UK used textiles: wiping cloths (used to wipe spills and surface contaminants in manufacturing industries – commonly referred to as 'wipers'), and non-woven products.

Wipers are often made from household textiles such as bedsheets which offer the benefit of large, flat surfaces, and from cotton or cotton mix (for its absorbent properties). This is a declining market however as it is thought unlikely that there will be much volume growth in the manufacturing sector that buys these wipers.

The sector is also becoming more high-tech and cleaner, hence a reduced need for wipers. There has also been a trend away from recycled textiles wipers towards alternative wiping products.

The second main application is non-woven products. Fibres recovered from used textiles through shredding are made into non-woven products using specific processes such as needle punching.

These are then mainly used in the car manufacturing sector (as acoustic underlay) and as mattress-spring coverings. Both are already mature markets.



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FIBRE-TO-FIBRE (F2F)¹⁴

Textile production is dominated by cotton and polyester, but alternatives, including recycled fibres, hold the potential to help the industry meet future demand for clothing. This would also minimise the environmental impacts along the supply chain, drawing on used textiles currently destined for landfill or incineration as a source of feedstock to make new fibres and yarns.

For example, chemical fibre-to-fibre recycling of used polycotton textiles dissolves the fibres to recover the synthetic fraction and make pellets. These can re-enter the synthetic yarn manufacturing process and the cellulose fraction to make dissolving pulp, which is then used in the production of viscose-like materials.

Mechanical fibre-to-fibre recycling involves chopping and pulling used garments to break them down into shredded fragments, until the fibres themselves can be recovered.

There are projects underway exploring the financial sustainability of fibre-to-fibre (F2F) recycling, including from F2F recycling process developers and from the European Clothing Action Plan (ECAP).

Chemical F2F recycling is thought to be several years away from full commercialisation, although commercial initiatives using preconsumer feedstock¹⁵ have already been deployed. The time lags to market readiness reflects the timescales involved in getting demonstrable outputs from pilots and trials and in raising funds. Scaling up to meet the levels of demand of high-capacity yarn mills would be the next stage of development – potentially another two to three years.

Mechanical F2F recycling has historically been focused on recovering higher-value fibres such as wool and cashmere. The current emphasis is on improving processes for cotton and cotton blends – with a focus on finding ways to minimise the erosion of the length fibres through the recycling process (shorter fibres do not perform as well as the longer, virgin fibres in the yarn-making process).



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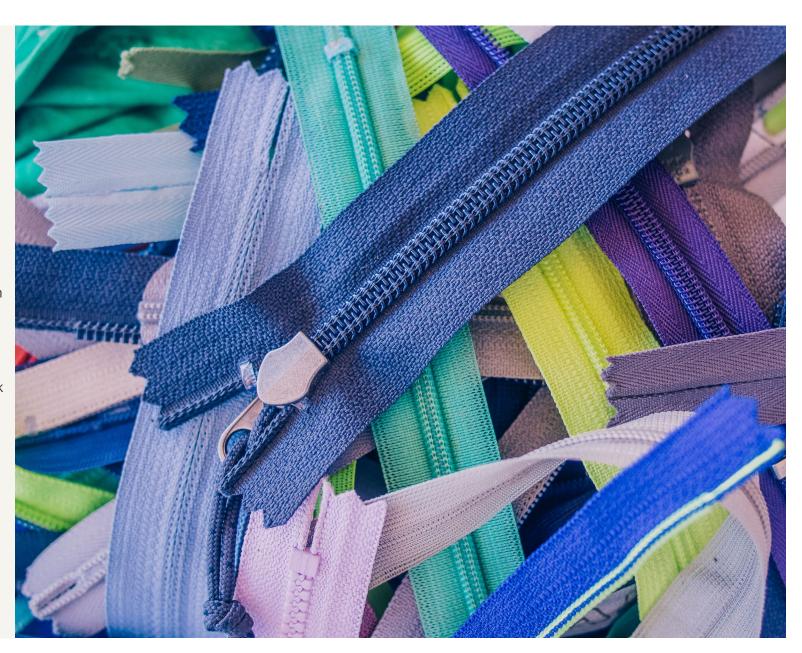
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Ways to overcome barriers to F2F recycling include:

- Improvements in post-consumer textiles collection and sorting processes;
- Introduction of automation to increase accuracy and decrease costs in the sorting process. Although still in development, automation may also lower garment preparation costs (removal of zippers, etc.);
- Development and communication of feedstock specifications through collaboration between textile merchants and F2F recycling process developers;
- Supply chain integration and work to foster demand (pull) from brands, retailers and consumers; and
- support for, and by, F2F recycling process developers and those in the textile merchant supply chain, in securing finance for process scale-up and commercialisation.



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DOMESTIC RE-USE MARKET

The Charity Retail Association (CRA) estimates that there are around 11,200¹⁶ charity shops in the UK, the majority of which sell clothes and other textiles.

Charity shops have noticeably enhanced their in-store sorting and their rotation of donated stock across shops in the last few years. In 2018, 55%¹⁷ of the tonnage of used textiles handled by charity shops was sold in-store, equivalent to 192,000 tonnes, up by 8% from 2016, with reduced amounts being sold to textile operators or ending up as waste.

55% of used textiles handled by charity shops was sold in-store, equivalent to 192,000 tonnes.

GLOBAL MARKET FOR USED TEXTILES

World trade in used textiles rose back up to \$4.05bn in 2017¹⁸.

The global used textiles market fell two years running in 2015 and 2016 and has not got back to its previous peak (in 2014) but the broad trend has been up: the volume of used textiles exported has gone up by 41% between 2007 and 2017 (from 2.9m tonnes to 4.2m tonnes), and the value has gone up by 70%.

The UK plays a key part in the global market for used textiles, ranking second with 12.5% of the market value after the US (15.5%) based on UNComtrade¹⁷. The top 5 exporters include Germany, the Republic of Korea and China and together account for more than half of the world trade in used textiles.

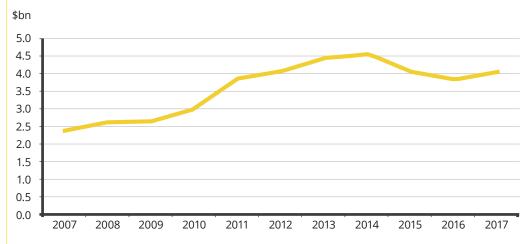
Although the UK remains a large player, over the last ten years, its market share has eroded, from 15.5% of world market value in 2008, down to 12.5% in 2017.

Of the top 5 exporters in 2017, the market share of Germany has also fallen over the same period, while the US, Korea and, most noticeably, China, have gained market share: the latter rising from 0.1% to 7.3% between 2008 and 2017 to reach \$298m in 2017. The top destinations for Chinese exports of used textiles are Angola (15%), Kenya (12%), Ghana (7%) and Tanzania (7%).

According to UNComtrade, the top 5 importers of used textiles by value in 2017 were, in order: Pakistan, Malaysia, Ukraine, Russia and Kenya.

Prospects of import bans affecting world exports of used textiles have receded. In 2016, The East African Community initially agreed a ban on used clothes imports by 2019, but most countries decided not to go ahead with the ban, and Rwanda is the only country to proceed with import restrictions.

Figure 5. World exports of used textiles



Source: UNComtrade

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2012 2013

2011

2014

UK EXPORTS OF USED TEXTILES

In the last twenty years, the broad trend for UK exports of used textiles²⁰ has been upwards: from 80,000 tonnes in 1998 to 373,000 tonnes in 2018, an increase of 365%.

After a phase of fast expansion, 16% per annum between 1998 and 2008, growth has settled at 1% per annum on average between 2008 and 2018.

After a peak at 352,000 tonnes in 2014, exports of used textiles fell two years running in 2015 and 2016 but have picked up since: up by 3% in 2017 and by 8% in 2018 to reach a new high of 373,000 tonnes. Exports (in tonnes) in the first five months of 2019 were up 8%, compared with the same period in 2018.

The export value reflects the trends in the total quantities exported, the changes in distribution of exports across destination countries – with substantial variations in value per

tonne across destinations – and the changes in the value per tonne in each destination over time. After two years of consecutive decline in 2014 and 2015, UK exports of used textiles have since risen back up to reach £381m in 2018 – just 3% below the previous high of £391m in 2013. Exports (in £) in the first five months of 2019 were up 8%, compared with the same period in 2018.

There has been a shift in the last ten years with exports in tonnes rising overall to most broad destinations, whereas exports to the EU, notably to Poland, and to other non-EU European countries have fallen substantially.

In value terms, this means that, while exports to the EU have risen, they have done so by much less than exports to other regions.

In turn this has meant a shift in market shares in value terms. Sub-Saharan Africa and the EU remain the main destination regions. However, compared with ten years ago, there has been a movement away from the EU, mostly towards Asia and the Middle East.

Figure 6. UK exports of used textiles

£m

450
400
350
250
200
150
100
50

2008 2009 2010

2007

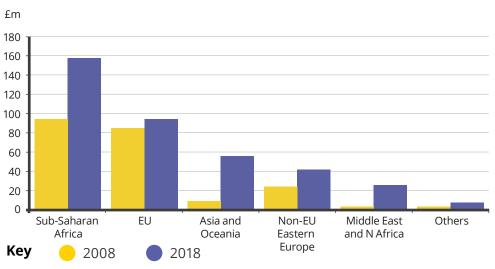
Source: HMRC

1997 1998

Figure 7. UK exports of used textiles by destination, 2008 and 2018

2003 2004 2005 2006

2002

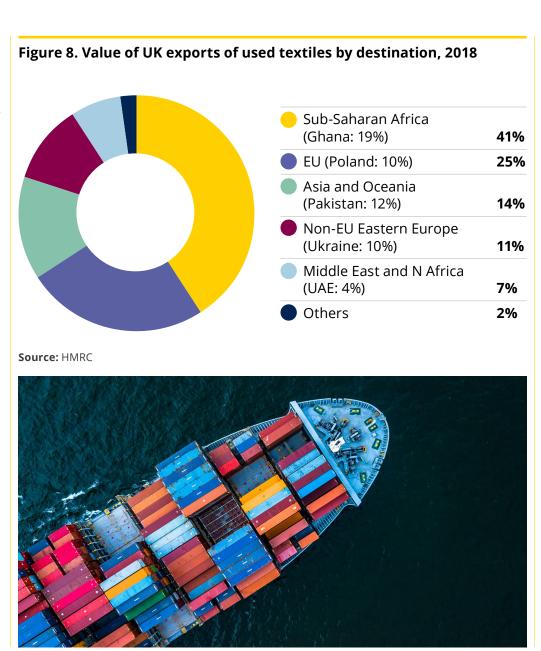


Source: HMRC

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The UK exports to (by value):

- Sub-Saharan Africa: 41% of the total value of UK exports of used textiles in 2018 – notably to Ghana, which has a key entry port for the region – down from 43% in 2008
- the EU: 25%, down from 39% in 2008 – notably to Poland (down from 22% to 10% between 2008 and 2018)
- Asia: 14%, up from 4% in 2008 notably to Pakistan
- non-EU Eastern Europe: 11%, mostly Ukraine
- The Middle East/North Africa: 7%, up from 1% in 2008 – notably to the United Arab Emirates which acts as a hub for sorting and onward distribution.



PRICES FOR USED TEXTILES

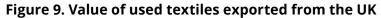


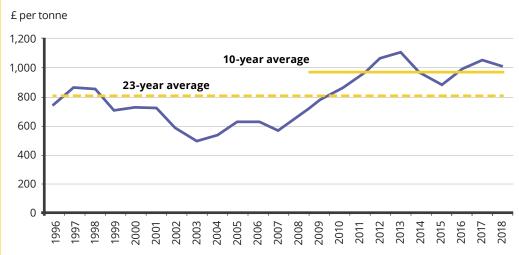
According to WRAP's Materials Pricing Report, prices for textiles from charity shops²¹ stood at £330/t (per tonne) in May 2019, broadly in line with the five-year average (£329/t). Textile bank prices fell to £210/t in May 2019, 17% below their five-year average (£250/t).

Key influencing factors include the global market demand for used textiles, the availability of used textiles, their quality, the exchange rate (e.g. a weaker £ against the Euro and the \$ can help to make UK exports more competitive), and the costs of sorting and processing. These factors all affect prices at various stages of the supply chain.

One recurrent issue raised by the used textiles supply chain is that the quality of used textiles donated has fallen over time, with operators citing 'fast fashion' as a key contributor behind the deterioration.

The value that can be achieved on the export markets is key to the used textiles sector, and both the value per tonne achieved in each export destination, and the changes in the relative amounts of exports across lower-value and higher-value destinations, impact the value per tonne exported from the UK overall. In 2018, the value per tonne²² exported fell by 4% from the previous year. Nevertheless, it remains relatively high by historical standards. At £1,021/t in 2018, it was 8% below the highest value on record (£1,115/t in 2013) but still 5% above the 10-year average (£973/t).





Source: HMRC, annual data

Depending on the degree and cost of sorting required, the suitability of the textiles for the higher value markets (such as sub-Saharan Africa or Europe) or lower value markets (such as Pakistan), and on the proportion not suitable for re-use or recycling end markets, the profitability of a given tonne of used textiles can vary noticeably and operators adapt their business model accordingly.

The difference between the value per tonne exported and the banks/ charity shops' prices therefore represents a range of factors.

There is not enough data available on the costs of sorting and processing the textiles to build a clear picture of the costs. Comments from the industry suggest that costs have increased in the last 5 years, with some operators reporting being affected by the increase in the minimum wage and rising business rates, as well as by rising costs to tailor sorting to meet customer requirements.

An industry survey¹² reports that most operators are believed to sort to some extent in the UK. Some companies had moved away from

sorting due to the cost but some restarted or extended their UK sorting in 2018. Costs, margins, and prospects are likely to vary greatly across operators with many different types of operations (e.g. cash 4 clothes, in-store collections, different degrees of sorting, etc.) and many very small, often short-lived operations.

There has been consolidation in the sector with a number of independent businesses now under a single parent company. This is thought to make it the largest operator in the UK, operating across UK regions and across supply chain streams: charity shops, textile banks and HWRCs.

Comments from the industry suggest that costs have increased in the last 5 years, with some operators reporting being affected by the increase in the minimum wage and rising business rates.

Figure 10. UK used textiles prices and value per tonne exported

f
1,200
1,000
800
400
200

Key

Export value

Charity shops

2014 2014 2014 2015 2015 2015 2015 2016 2016 2016

Banks

2018 2018 2018

2017 2017 2017 2017

Source: WRAP Materials Pricing Report, HMRC. Quarterly averages.

NB: 2019 Q2 export value based on Apr-May 2019 data.

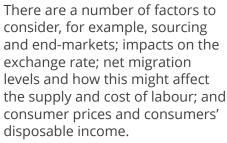
LOOKING AHEAD



As well as the broader economic context in the UK, the global economy, and the fashion sector, there are several developments on the horizon that are relevant for the used textiles sector in the UK.

BREXIT

Businesses report Brexit-related uncertainty both in the new and used textiles markets. At the time of writing (September 2019), uncertainty remains, for instance over the potential changes in trade terms and how this might affect exports and imports in future.



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THE PROSPECT OF EXTENDED PRODUCER RESPONSIBILITY

Defra's 2018 Resources and Waste Strategy identified textiles as one of five priority areas for which Defra plans to review and consult on measures such as Extended Producer Responsibility by 2025 (by 2022 for two of the priority areas, not yet specified). Defra refers to the issues it might consider as part of this review and consultation process. These include: the impact of fast fashion (for instance via lesser clothing durability and shorter clothing lifespan) and how to support re-use and closed-loop recycling to reduce the environmental impacts of textiles, including the impacts of microplastic fibres in the water system.

"'Extended Producer Responsibility' (EPR) is a powerful environmental policy approach through which a producer's responsibility for a product is extended to the post-use stage. This incentivises producers to design their products to make it easier for them to be re-used, dismantled and/or recycled at end of life. Alongside stakeholders, we consider EPR to be a crucial tool in moving waste up the hierarchy, and stimulating secondary markets. It has been adopted in many countries around the world, across a broad range of products, to deliver higher collection, recycling and recovery rates. The most successful schemes use a range of measures to encourage more sustainable design decisions at the production stage."

Defra, 2018, Resources and Waste Strategy

MICROFIBRES

The release of microfibres from textiles into the environment has gained attention as a source of concern for the textiles industry, with a body of evidence reporting microfibres in airborne dust and as waterborne microplastics.

The Environmental Audit Committee's February 2019 report²³ highlighted the role played by the choice of synthetic fibres and garment design. The report acknowledged the need for further research – whilst signalling that this is not a reason for delaying action in the meantime.

WRAP's own exploratory research²⁴ has identified several challenges in attempting to get a sense of the scale of the issue at each stage of the textile lifecycle, by assessing the formation of microfibres during the production, processing, use phase and disposal of textile products. Separating microfibres from the rest of the waste products or other impurities

is difficult. There are studies providing valuable insight, but the methodological variations make comparative analysis difficult, further impeded by the greater focus on synthetic fibres in existing studies focusing on release from laundry relative to natural fibres (driven by the greater susceptibility of some synthetic garments to contribute to marine pollution). The actual impacts of the presence of microfibres - for instance on human health - have also not been fully assessed yet, although work has been done for instance on the impact on textile workers.

WRAP continues to investigate this area and is working with funders and partners to determine whether this area might form part of future action plans for the UK textiles sector.



INCREASED SCRUTINY

In February 2019, the House of Commons Environmental Audit Committee reported findings from its inquiry into clothing consumption and sustainability. The report²³ highlighted environmental and social concerns throughout the supply chain and called on government to urgently change the system, to end throwaway society. The committee advocated a charge on producers of one penny per garment, generating revenue that can be used to invest in clothing collection and sorting in the UK.



SEPARATE COLLECTIONS

Building on existing obligations for paper, cardboard, glass, metals and plastics, EU members agreed a new requirement in 2018, to collect used textiles separately from other household waste by 2025. However, the specifics have not been formally set out yet, e.g. what counts as separate collections and what criteria define whether used textiles count as a product or as waste, which currently varies across countries, and how strictly this might be implemented.



INDUSTRY CONCERNS

The used textiles supply chain depends on the profitability of the export re-use end markets. Industry participants have highlighted a confluence of pressure points.

The quality of donated textiles has decreased over time, with fast fashion singled-out as a key factor; some end-markets are becoming more demanding, requiring for instance tailored sorting to meet customer specifications; demand in some of the more profitable endmarkets has gone down; and costs are going up – all of which has put pressure on margins. Some reported that the uncertainty around Brexit has hindered business planning.

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Some also report that some of the used textiles that would have previously been donated are now being sold online (e.g. eBay).

The rise of China as an exporter of used textiles is providing further competitive pressure. The lack of end markets for textiles not suited to the domestic and export re-use market leaves the sector open to market volatility and reliant on export markets.

Textile consumption

Used textiles arisings

Used textiles in the residual waste

Used textiles collected for re-use and recycling

End markets for used textiles

Prices for used textiles

Looking ahead

CHALLENGE AND OPPORTUNITY

Reducing the environmental impacts of textiles involves a supply-chainwide effort, with progress already underway, but much still left to be done. Managing impacts at the production stage is a key contributor. As is keeping textiles in some form of use for longer. This can happen through longer consumer use and through more re-use and recycling. In turn this requires a range of end-markets, especially for the non-reusable used textiles.

In the face of growing demand for raw materials from textile manufacturers, fibre-to-fibre recycling presents a potential opportunity for a new set of end-markets. In its 2018 Resources and Waste Strategy, Defra has signalled a fresh intent to support re-use and closed-loop recycling to reduce the environmental impacts of textiles.

The continued growth in spending on clothing in the UK (and the environmental impacts that come with it), and the 921,000 tonnes of household used textiles still going to landfill or incineration give a sense of the challenge, but also of the economic and environmental opportunity for the sector.



Introduction Textile Used textiles Used textiles in Used textiles collected End markets for Prices for Looking consumption arisings the residual waste for re-use and recycling used textiles used textiles ahead

ENDNOTES

- 1 Mattresses and carpets are not included.
- 2 This is an estimate in current prices, for 2018, from the ONS data from the Consumer Trends dataset released on 28.06.2019. Consumer-panel-based estimates of the clothing market from Kantar and ONS household-survey based Family spending data on clothing suggest lower levels.
- 3 On a per capita basis, this translates into: 13%, 8%, 4% and 2%.
- 4 ONS, Consumer Price Index.
- 5 The methodology uses a combination of Her Majesty's Revenue and Customs data and Prodcom data sourced from Eurostat and the ONS and rests on several implicit assumptions for instance on stock changes.

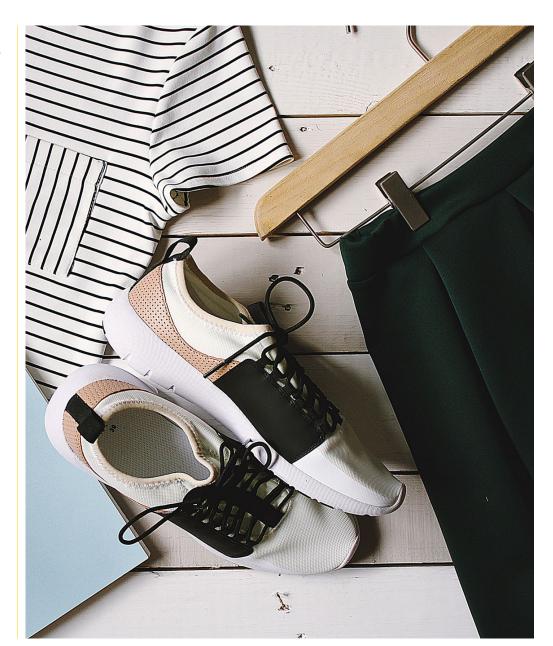
- 6 Resource Futures, 2019, 'UK textile consumption estimate' (unpublished research for WRAP). Data rounded.
- 7 WRAP, 2013, 'Measuring the active life of clothes'.
- 8 WRAP, 2019, 'National municipal commercial waste composition, England 2017' (unpublished at the time of writing). All figures rounded to the nearest thousand tonnes, so the sum of the individual elements may appear to not add up exactly.
- 9 WRAP, 2017, 'Valuing our clothes: the cost of UK fashion'.
- 10 Household-type textiles such as bed and table linen and leisure textiles such as sleeping bags.
- 11 WRAP, 2019, 'National municipal commercial waste composition, England 2017' (unpublished at the time of writing).

- 12 Oakdene Hollins, 2019, 'A quantification of used textile collections for re-use and recycling in the UK' (unpublished research for WRAP).
- 13 Other routes such as peer-topeer donations and sales through eBay are out of scope for this report and not counted in the amounts collected for re-use and recycling nor the end markets.
- 14 WRAP, 2019, 'Fibre-to-fibre recycling: an economic and financial sustainability assessment'.
- 15 In this context, 'pre-consumer' refers to feedstock arising from the textile supply chain prior to the clothing/textile reaching the consumer and 'post-consumer' refers to feedstock arising from clothing/textile discarded by the consumer.

- 16 Rounded to the nearest hundred.
- 17 Source: Charity Retail Association. The 55% proportion is based on the Sources of Stock 2017 report.
- 18 Source: UNComtrade.
- 19 The Observatory of Economic Complexity provides data based on UNComtrade data and 'cleaned' to harmonise the data on bilateral flows. The OEC data ranks the UK as the third largest exporter after the US and Germany.
- 20 Export data rounded to the nearest 1,000 tonnes. Export value on a free on-board basis (FOB), i.e. including transport to the customs frontier but not including freight to the importing country nor insurance costs.

- 21 The term 'Banks' refers to the value that textile bank operators will pay to the bank beneficiary such as the named charity. The term 'Charity shop' refers to the value that a charity receives for clothing sold to merchants that collect the garments from the shop.
- 22 The export (dispatches) value is on a free on board basis i.e. the value reflects the cost of goods to the purchaser abroad including packaging, inland and coastal transport in the UK, dock dues etc. accruing up to the point where the goods are deposited on board the exporting vessel or aircraft or at the land boundary of Northern Ireland.

- 23 House of Commons Environmental Audit Committee, 2019, Fixing fashion: clothing consumption and sustainability.
- 24 WRAP, 2019, Textile Derived Microfibre Production: Investigating the Current Evidence Base.





WRAP's vision is a world in which resources are used sustainably.

Our mission is to accelerate the move to a sustainable resource efficient economy through reinventing how we design, produce and sell products; re-thinking how we use and consume products; and re-defining what is possible through re-use and recycling.

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