

UK textiles EPR



How could a textiles Extended Producer Responsibility (EPR) system help prevent textile waste and divert used textiles from landfill in the UK?

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Executive summary

While several countries are considering Extended Producer Responsibility (EPR) for textiles, France is currently the only country with an active textiles EPR system.

From 2007, all those who place textiles products on the French market are liable to contribute to or provide for the recycling and treatment of the resulting textile waste. Eco TLC was set up at the end of 2008 as the only accredited body with devolved producer responsibility on behalf of the sector.

Since then, France has doubled the proportion of used textiles diverted from landfill and collected for reuse and recycling: from 18% in 2009 to 36% in 2017.

Eco TLC has set up a scheme whereby producers contribute fees based on the quantities they place on the market, with the fee varying depending on one of four item sizes. Eco TLC has also gradually introduced modulated fees. Producers can get a discount off the full fee for meeting thresholds of post-consumer recycled content, pre-consumer recycled content and, more recently, durability. Take up has been low however.

The money contributed by textiles producers is used mainly to help finance sorting operations, but also to support local authorities to drive citizen behaviour change and to fund research in design, manufacturing and recycling.

The UK context is quite different. The decision to set up a textiles EPR scheme in France was driven not only by waste management costs considerations as with other EPR schemes, but also by social considerations as the sector is a key employer of people facing employment difficulties. It is not clear whether this might be a priority for the UK government. Furthermore, the UK, without an EPR scheme, probably collects proportionately more used textiles for reuse and recycling (R&R) than France with an EPR scheme – so far.

Nevertheless, the UK used textiles sector remains at the mercy of global market conditions, having experienced the vagaries of price falls, declining demand and the prospect of trade bans in the last few years. Existing UK levels of R&R and landfill diversion are therefore not a given.

If fees were set at the same level as France, producers might contribute around £35m in the UK. However, the fees are set to match the needs of the sector, not the other way around, so the fees might look different in the UK.

The fee income collected as part of an EPR scheme could be used in a range of ways to help the UK secure and develop textile waste prevention and landfill diversion. This might include working with the textiles sector to help ensure there is a range of sustainable end-markets for reuse and recycling.

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Glossary

EPR - Extended Producer Responsibility

PRO - Producer Responsibility Organisation

TLC - Textiles d'habillement, Linge de maison et Chaussures (French for: clothing, linen and footwear)

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1.0 Introduction and purpose of this report

In the context of growing evidence as to the environmental impacts of the fashion industry, and incoming EU requirements for the separate collection of textile waste, Defra are reviewing policy options to tackle the issues surrounding textiles. The question arises: how could a textiles EPR system help the UK secure and develop waste prevention and landfill diversion for used textiles? Is this the most appropriate solution and would it need to be supplemented with other measures? This report examines what can be learned from France, which currently has the only textiles EPR system in operation, and the implications for the UK.

2.0 **Textiles EPR in France**

2.1 A brief look at the history of textiles EPR in France

France has a range of EPR systems in operation, typically for products that mixed waste management makes difficult to recycle or valorise and which generate large waste management costs. Some of these EPR systems are linked to the EU, some are specific to France.

In the case of textiles, the initiative is a national one and, notably, besides any waste management angle, the drivers included social and employment considerations. The used textiles sector in France has typically been a key sector of employment for people experiencing employment difficulties. However, in the 2000s, sorting operators were facing increasingly challenging economic conditions, which threatened their viability and started to impact on the ability of the sector to continue to provide these employment opportunities. It was in this context that the authorities introduced the textiles EPR system. From 2007, all those who place textiles products on the French market, destined for households¹, are liable to contribute to or provide for the recycling and treatment of the resulting textile waste.

As with many other EPR systems, textile producers chose to discharge their EPR obligations to a Producer Responsibility Organisation (PRO) and Eco TLC was set up at the end of 2008 as the single PRO accredited for the sector.

The scheme covers clothing, but also household linen and shoes. In French, this translates to Textiles d'habillement, Linge de maison et Chaussures or 'TLC' for short, as used in the rest of this report. Most of it is clothing, which accounts for 82% of the number of TLC items placed on the market in 2017, compared with 11% of shoes and 7% of household textiles (by weight: 66% of the total tonnage, 19% and 15% respectively).

The overarching purpose of the TLC EPR is to sustain and further develop the management of used TLC including collection, sorting and valorisation and to optimise it from an economic, social and environmental perspective.

¹ The scope refers specifically to textiles products destined for households and does not refer to professional workwear (e.g. company uniforms).

2.2 Eco TLC governance, mandate and targets

Eco TLC is a not-for-profit private company, representing 95% of the industry. It has a legal status of simplified limited company with share capital distributed among 29 shareholders representing the retailers, manufacturers and importers from the sector. The industry representatives used to be organised into five groups representing five distribution channels. Since December 2017 they have been organised into four groups, by product type: clothing (including for instance Carrefour and C&A), household textiles (including for instance La Redoute), shoes (including for instance Eram) and a fourth group: independent and other liable parties.

Eco TLC operates in fixed-term mandates and is currently in its second mandate, running from April 2014 to December 2019. The mandate sets out the broad responsibilities of Eco TLC, its spheres of activity and conditions of operation. The broad responsibilities include facilitating TLC waste prevention, contributing through awareness campaigns to increase used TLC collection, contributing financially to the sorting of used TLC, carrying out information and awareness campaigns about the sector, and supporting research and development that may help the sector.

The mandate also sets out specific targets: 50% of textiles placed on the market to be diverted from landfill by 2019, with 95% of sorted tonnages going to valorisation (mostly reuse and recycling) and no more than 2% being disposed of without any form of valorisation.

Eco TLC's first mandate included a target to collect 50% of the TLC placed on the market by 2013, which has since been deemed arguably unrealistic as it implied a near tripling of quantities collected inside five years. Instead, by 2013, around 27% of the TLC placed on the market were collected, compared with around 18% in 2009.

Until 2014 the French legal framework did not include provisions for sanctions for PROs failing to meet their obligations and since, the authorities have not tended to enforce them. The penalty is small, up to a maximum of EUR 30,000 (as of 2016), compared with PRO budgets which often reach tens or hundreds of millions of euros (tens in the case of textiles). A PRO's own contract may also be discontinued but in sectors such as textiles where there is a single PRO, this might be a challenging option.

Similarly, the French Cour des Comptes (the equivalent of the National Audit Office in the UK) reports - not of the textiles EPR system specifically but of French EPR systems in general - that producers who fail to register and pay into the system or break their contractual agreement with the PRO are rarely penalised, even though there are processes in place. This is changing gradually now.

2.3 Collecting the eco-contributions from producers and audits

In any given year, say year n, companies declare how much they placed on the market in year n-1 and Eco TLC calculates the amount due by each company that year, the 'ecocontribution', accordingly, based on the quantity placed on the market and the size of the items.

Producers are required to provide a certificate of veracity of their declaration of quantities of TLC placed on the market (POM). This certificate must be signed by an authorised legal representative of the company and certified by a chartered accountant or signed by an accounts commissioner.

Consistency checks are performed based on the consistency of the declaration with declarations from previous years and with declarations from similar companies. If the consistency checks identify any anomalies, the producer is asked for clarifications, and adjustments are made were necessary. In addition, an independent third-party carries out an annual audit of the declared placed on the market quantity data, representing each year at least 15% of the total quantities placed on the market during the year. The latest Eco TLC annual report published in August 2018 shows that the audit checked the declarations of 11 companies accounting for 300 million items of TLC. Out of these 11, there were 2 with no anomalies, 3 under-estimations and 6 over-estimations, which broadly cancelled one another out overall.

Sorting operators are also required to follow due process for proving their eligibility for financial support and Eco TLC also commissions an annual audit of these declarations. The latest Eco TLC report highlights many anomalies for around three quarters of the sorting centres, and a series of recommendations have been made to improve the declarations from sorting operators.

2.4 Fees and modulations

Eco TLC announces the level of the fees annually. It estimates how much revenue is necessary to meet its mandated obligations, such as support to sorters, local authorities and R&D projects (and to finance itself) and sets the fees each year accordingly to collect sufficient income from producers. Eco TLC has in the past changed the level of the standard fee². When changes are made to the fees, a notice period applies, and the relevant ministries are notified of the reason for the changes and the expected impact.

Producers with a turnover below EUR750,000 or placing fewer than 5,000 items on the market are subject to a fee of EUR36. For the rest of the registered producers, ecocontributions depend on the quantity and the size of the items they place on the market. There are four separate item sizes considered, each with its own fee: very small, small, medium and large (small and medium only for shoes). Eco TLC provides a comprehensive list of what items are covered and excluded by the scheme. For instance, gloves, bow ties and scarves are included but not neoprene diving suits, dolls' clothes nor leather belts. Eco TLC also provides a tariff classification by size. For instance, men and women's socks and tights count as 'very small', men and women's underwear count as 'small', men and women's pyjamas count as 'medium' and men and women's coats count as 'large'.

² For instance, in 2015 (for items placed on the market in 2014), the standard fee for a very small item was EUR0.00121. It stayed the same in 2016 but rose to EUR0.00132 in 2017.

In addition, Eco TLC has introduced a set of modulated fees, offering a discount off the standard fee for post-consumer recycled content, post-production content and, more recently, durability.

Eco TLC announced the first modulated fee in November 2012 (applying from 2013) onwards), granting a 50% discount for at least 15% post-consumer recycled content, i.e. where new TLC placed on the market contain at least 15% of fibres or material recycled from textiles previously used by consumers.

Eco TLC introduced the next modulation in 2016 (applying from 2017) to give a 25% discount for at least 30% pre-consumer recycled content, i.e. where new TLC contain at least 30% fibres from textile production waste. In both cases, the recycled content needs to be evidenced through a receipt or a certificate.

These modulations have not gained much take up. In 2017, producers declared 2.6bn items placed on the market in 2016, only 93,000 of which were declared under the modulated fees – and mostly under the pre-consumer recycled content discount. In revenue terms, this means EUR17.6m worth of eco-contributions with only 0.004% coming from modulated fees. Eco TLC postulates that the incentive per piece may be too low to cover the administrate costs of declaring and certifying the recycled content per unit.

From 2018, Eco TLC has introduced a new discount of 75% for meeting durability criteria for a selection of textile items: T-shirts, jeans, jumpers and bedsheets (as well as for shoes, outside the scope of this paper). The intention is to incentivise a move towards greater intrinsic quality of the TLC placed on the market and thereby to potentially increase their lifespan.

To be eligible for the durability discount, items need to meet two minimum quality criteria, which vary depending on the item type and include: abrasion resistance, dimensional stability (how much the dimensions of a garment change when washed and dried), colour fastness, and piling. The eligibility criteria are based on standard industry garment tests and ISO norms and producers are required to provide a certificate, from a French or foreign laboratory. If from an in-house laboratory, test results must be certified by a legal representative of the company. See Appendix 1 for details of the durability criteria and the corresponding ISO standards.

The take up of this latest modulation is low in what is its debut year, but it has already gained more traction than its predecessors. In 2018, producers reported 2.6bn items of TLC placed on the market in 2017, with 7m items declared under the modulated fees. In revenue terms, this means EUR17.9m of eco-contributions with 0.279% coming from modulated fees, mostly (96.6% of the 0.279%) from the durability modulation.

On average, this means an eco-contribution of EUR0.0069 per item of TLC, or EUR28.7 per tonne of TLC placed on the market, i.e. a little more than half a penny per item or around £26 per tonne placed on the market (at early August 2018 exchange rates). Figure 1 shows the latest eco-contribution levels.

Figure 1 Eco-contributions in 2018, for quantities placed on the market in 2017

(Euros per item)	Standard	Modulated	Modulated	Modulated
	scale	scale 1	scale 2	scale 3
Very small items (e.g. socks, napkins)	0.00132	0.00033	0.00066	0.00099
Small items (e.g. men/women underwear, tea towel)	0.00528	0.00132	0.00264	0.00396
Medium items (e.g. men/women pyjama, tablecloth)	0.00791	0.00198	0.00395	0.00593
Large items (e.g. men/women raincoat, blanket)	0.0528	0.0132	0.0264	0.0396
Discount off standard scale	-	75% (Durability)	50% (Post- consumer recycled content)	25% (Post- production recycled content)

Source: Eco TLC.

2.5 Eco-contributions and their use

To meet its mandated obligations, Eco TLC channels financial support towards three main areas.

Most of eco-contributions revenue is used to provide direct financial support to sorting operations. For instance, data for 2016 shows eco-contributions totalling EUR17.6m, with EUR12.8m going to sorting operations (73%), around EUR2m (11%) going to support local authorities' communication and awareness activities and around EUR0.5m (3%) to support R&D projects.

To benefit from financial support, sorting operators are required to meet traceability conditions, including reporting on the origin of the used TLC they sort (i.e. showing that they come from registered collection sources), to conform to various norms and conditions and to meet certain thresholds of valorisation. They can then receive financial support per tonne valorised on a scale: zero support for tonnages disposed of with no valorisation, some support for tonnages with energy valorisation, and a greater level of support for tonnages valorised through reuse and recycling. This latter level of support also includes valorisation through solid recovered fuels but there are minimum thresholds for reuse and recycling to meet first. Operators can also receive financial support for capacity expansion and for additional material sorting. The level of support is set in Eco TLC's mandate and can be revised, as has recently been the case, based on changes in the costs of waste treatment and recycling.

It is also worth noting that the social/employment considerations that contributed to the creation of the textiles EPR system have carried through into the operation of the scheme: the financial support for capacity extension is subject to meeting a certain threshold percentage of hours to be worked by persons who face employment difficulties. NB: this is translated from "personnes rencontrant des difficultés au regard de l'emploi", which the legal framework provides a concrete definition for in France.

The second main use for the eco-contributions is financial support to local authorities. After registering with Eco TLC, local authorities are expected to meet a threshold of provision of collection points per inhabitant. Local authorities can then receive financial support to carry out awareness campaigns designed to encourage citizens to take their used TLC to a collection point instead of putting them in the residual waste. The financial support is of the order of EUR0.1 per inhabitant. If a local authority does not quite reach the collection point density threshold, it can still receive a partial level of support. Eco TLC has developed a suite of tools to help local authorities: practical guides, training kits, collection points maps, flyers, banners, etc. It has also developed a series of tools for citizens: a website, an app, social media channels, etc.

It is worth pointing out that the owners of the collection points and the collectors organise the collection of used TLC through a range of channels including the provision of collection points (such as textile banks), the provision of facilities to deposit used TLC at a retailer or with a charity, through door-to-door, etc. This can be done by a charity, private companies or local authorities, who register with Eco TLC and report the tonnages collected and their destination. This forms an important part of the traceability of the flow of used TLC. Eco TLC provides harmonised (but customisable) labels to be used on the collection points and maintains a database of collection points to make access to legitimate collection points easier for citizens and local authorities.

The final use of the eco-contributions is to finance R&D projects. Between 2010 and 2017, Eco TLC has provided support to 36 projects, for a cumulative value of £3.2m. Each year, Eco TLC sets aside EUR0.5m to support innovation projects. The tender process is open to bids in French or English and currently aims to encourage research into new end markets, or into efficiency improvements that could result in lower treatment costs for used TLC. In 2017, the selection committee approved 8 projects, taking the total since the launch to 36: 3 on eco-design, 9 on closed loop projects, 15 on open loop projects and 9 projects on material separation or preparation for recycling. The projects are at various stages of advancement: 17 have been completed, 10 are in progress and 9 are at kick off/initial stages. Eco TLC publishes information on these projects (including in English) on their website.

2.6 Progress made

Eco TLC reports annually on its activities and provides data on the tonnages placed on the market, the tonnages collected for reuse and recycling, the amount of money raised through eco-contributions, how much financial support was provided to sorting operators, local authorities and R&D projects, the level of job creation for persons facing employment difficulties as well as a range of other metrics.

The latest report, published on 07 August 2018, shows that 624,000 tonnes of TLC were placed on the market in 2017 and 223,000 tonnes were collected, which represents 36% of the amount placed on the market (note that the data for the latest year is subject to revisions the following year).

This is considerable progress since the early days of the scheme when around 18% of POM were collected (in 2009) and since the end of the previous mandate when 27% of POM were collected (in 2013). In the four years of the current mandate, the increase in tonnage collected has averaged 15,750 tonnes per year. This highlights the degree of ambition of the 50% target, which would require the current level of collection to go up by some 77,000 tonnes to reach the estimated 300,000 or so tonnes necessary to hit the 50% target.

The scheme has also performed well with regards to valorisation: in 2017, 99.7% of the used TLC were valorised, mostly through reuse and recycling, and only 0.3% were disposed of with no valorisation (neither material nor energy).

2.7 Recent developments

Eco TLC is currently facing what it describes as a very important crisis. The situation is still evolving, and it is not within the remit of this report to investigate this in any way, but it is worth mentioning a few key points.

In 2014, as part of its mandated activities, Eco TLC set up a Comité Observatoire to monitor the development over time of used TLC sorting activities and their cost. According to media reports, the Comité subsequently found that net costs had increased, which in turn may lend weight to the call from sorting operators for an increase in the level of financial support. This led to an official decree in September 2017, which modified Eco TLC's mandate by increasing the scale of financial support by 27%, to apply as of 2018 i.e. to tonnages sorted in 2017. This seems to be visible in the annual report from Eco TLC published on 07 August 2018, which shows the support provided to sorting operators rising from EUR12.8m to EUR16.4m for tonnages sorted respectively in 2016 and 2017.

Eco TLC states that the decree is not in line with the work of the Comité and that it has led producers and Eco TLC to challenge the change with the relevant government departments and to highlight the counter-productive nature of the decision. The Eco TLC annual report sets out some of the key findings on costs including the impact of lower revenues from the export market between 2012 and 2015. It also highlights the disparity of the level of net costs across operators, which raises questions on the use of an average level of support per tonne as is currently the case. Eco TLC has announced that the work of the Comité is on hold pending findings from work looking into the sector, commissioned by the French authorities. The full implications are unclear at present.

3.0 What this means for the UK

3.1 The UK context

The UK context today is quite different from both the context in France today and the context in France when the textiles EPR system was set up. It is not clear for a start whether the UK government would take a similar stance on the social and employment considerations that contributed to the creation of the scheme in France back in 2007. Moreover, the UK collects - probably - proportionately more of its used textiles than France. There is no mandatory reporting requirement in the UK around the quantities

placed on the market nor the quantities collected for reuse and recycling. As such, UK estimates are indicative of the orders of magnitude at best and rely heavily on assumptions, hence the use of 'probably' above.

The supply chains in the UK and France are also potentially different. Eco TLC provides information on the proportions sorted by not-for-profit and other operators, the proportions sorted in France and outside of France (85% and 15% respectively), the proportion of job creation for persons facing employment difficulties, etc. This would require further investigation but factors that may impact the comparison between the French and UK supply chains might include the mix of commercial versus not-for-profit operators, level of reliance on unpaid volunteers or on workers on subsidised contracts and any associated impacts on labour costs, the level of running costs, productivity rates, the prices reached on the export market (UK used textiles fetch a higher price). So, the costs and opportunities may be different across the two countries.

Also, if the UK wanted to use the EPR scheme to drive waste prevention for instance through increased durability or to incentivise design that incorporates recycled content, the evidence from France shows that it can be a challenge for the fee modulation to provide sufficient incentives – at least for recycled content, it is arguably too early to draw conclusions on the durability modulation.

Nevertheless, the introduction of the EPR system in France has seen a rise in collections and diversion from landfill from around 18% to 36% of POM between 2009 and 2017, giving a sense of what is possible.

It is also worth pointing out that, while the UK has a thriving used textiles sector, the UK still sends around 300,000 tonnes of used clothing to landfill (450,000 tonnes when counting non-clothing textiles). This costs money for disposal instead of generating money from re-use and recycling and costs the environment water and carbon. What's more, ensuring that existing levels of landfill diversion are maintained requires viable end markets. The global market for used textiles has been subject to falling demand in 2015 and 2016, large fluctuations in prices in the last few years and concerns over import bans, all presenting risks for the sector. So, the context might be different from France but there are market risks too, which in turn could create landfill diversion risks.

3.2 How much could EPR fees generate in the UK

If UK textile producers paid the same as French producers on a per tonne basis, an EPR scheme in the UK could generate around £35m, assuming the scheme applied to clothing and household textiles (no shoes). This has clear caveats, including that the exchange rate is variable, the estimates of textiles placed on the market are indicative, and the per tonne fee includes shoes in France. Nevertheless, it gives a broad sense of the order of magnitude.

However, the way the fees are derived is that Eco TLC works out how much money is needed to meet its obligations (including to support the sorters, the local authorities and to finance R&D) and to finance itself and then it sets the fees accordingly, to generate sufficient income, not the other way around.

The level of support needed and mandated in the UK might be guite different and therefore the level of fee per tonne and overall might end up looking guite different too.

3.3 What could the UK do with EPR income

The EPR income in France is used directly, and mostly, to provide financial support to the sorting organisations. Whether and how that might be appropriate in the UK would require further investigation. The UK used textiles sector currently functions without additional support. On the other hand, the sector and by extension the UK's ability to divert used textiles from landfill, remains at risk from global market conditions, and there is still a considerable quantity of used textiles in residual waste.

Drawing on the experience in France, aside from the direct support to sorting organisations, the funds have been used to drive citizen behaviour change through awareness raising activities as well as a range of targeted actions to make it easier for citizens to opt for donating their used TLC instead of putting them in the residual bins. This has included increasing the number of collection points per inhabitant, making it easier for citizens to find their nearest collection points, etc.

Some of the R&D projects have led to the creation products that are now being sold commercially. Recent examples include a table tennis outdoor racket which includes 60% of recycled cotton/polyester fibres. This highlights the potential of financial support for R&D to contribute to the creation of new end-markets.

Eco TLC also commissions research projects to identify potential future interventions and assess end-markets. For instance, the Eco TLC annual report published in August 2018 highlighted research carried out by RDC Environment which identified two end markets with high potential: building insulation and Solid Recovered Fuel³. Similarly, within the context of potential fee modulation, Eco TLC has commissioned work to investigate the recyclability of TLC products, i.e. factors disrupting or helping recycling. The work identified external and internal disruptors that require additional removal as part of the garment preparation for recycling as well as factors that contribute to the homogenisation or the standardisation of products and as such make the preparation stages of the recycling process easier. The work concluded that several avenues might be encouraged such as limiting the number of external disruptors, homogenising product composition, designing with ease of recyclability in mind, etc.

Another aspect could be to consider addressing the barriers to the expansion of R&R. One of the obstacles is arguably that the markets for recycling grades – i.e. for the grades of used textiles that are not good enough for the reuse markets – tend to be low value. Supporting the exploration of new end-markets, not instead of but as well as other existing markets for recycling grades may fit within the activities that an EPR scheme could support.

³ Eco TLC counts Solid Recovered Fuels, or combustibles solides de récupération in French, as material valorisation, alongside reuse and recycling.

As an example, fibre-to-fibre recycling has gained attention. Some fibres lend themselves better than others to this process, such as cotton, polyester and polycotton blends. Only some types of feedstock would be suitable, and a degree of sorting and preparation of used textiles is necessary to meet process requirements, with specifications and preparation requirements varying depending on whether the recycling is chemical or mechanical in nature.

There has been headway, some recently⁴, but additional support might help accelerate progress. As well as potentially providing capital investment support, EPR may provide a mechanism to support markets through a modulated fee for recycled content provided the appropriate level of incentive can be determined. The purpose here is not to recommend that this be done but to highlight it as a possible avenue for consideration, which would require consultation with industry to avoid cannibalisation of existing end-markets, unintended consequence (such as driving up instances of illegal collections), to establish what level of financial support might be appropriate, if any, and for what part of the supply chain.

4.0 **Textiles EPR in other countries**

France is currently the only country with an operation textiles EPR system. However, other countries have investigated the potential for a textiles EPR system. There has been extensive research in Nordic countries. For instance, the Nordic Council of Ministers commissioned work to identify a range of policy options, including a mandatory EPR plus a tax on hazardous chemicals in textiles, a voluntary EPR plus recycling certificates and raw material fees or a set of measures to support new business models. Conclusions included:

"Mandatory and voluntary collective EPR systems would have a significant impact on collection of used textiles, but a more limited effect on the preconsumer (upstream) stages of the textile life cycle. On the other hand, widespread use of alternative business models, such as leasing and resell of own brand, have a clear upstream effect, but perhaps more minor impacts on overall collection, reuse and recycling."

"EPR systems, in particular a mandatory system, would create large flows of used textiles. This is a pre-requisite for investment in sorting and recycling technology. With proper supplementary measures, this can create an opportunity for increased investment in this area within and outside of the Nordic countries."

"Supplementary policies - chemical taxes, recycling certificates and raw material fees need to be further investigated in their application to textiles before implementation."

There is a wider context in the Nordic countries, which includes an action plan for sustainable fashion and textiles (launched in 2015) and a series of reports were published in 2017 around textile-to-textile recycling.

⁴ Worn Again announced in July 2018 that it hit its £5m investment target to 'accelerate its trail-blazing polymer recycling technology'. http://wornagain.co.uk/wp-content/uploads/2018/07/Worn-Again-Technologies-Press-Release-July-2018.pdf

Mistra Future Fashion, a research program funded by Mistra, the Swedish Foundation for Strategic Environmental Research, published in 2017 an impact assessment of policies promoting fibre-to-fibre recycling of textiles, looking at mandatory EPR and refunded virgin payments (RVP – i.e. a charge on virgin fibres), against eight policy goals. The report concludes that "Both a mandatory EPR and a RVP system have potentials to have large positive impacts on fiber-to-fiber recycling as well as overall recycling of textiles. A mandatory EPR system has the same or larger policy impacts on all eight policy goals...compared to a RVP system. A mandatory EPR system embodies the potential to integrate a range (combination) of complementing policy measures whereas an RVP system should be complemented by additional policy measures."

5.0 **Conclusions**

The textiles EPR system in France has been associated with a rise in used textiles diverted from landfilled, with the collection rate for reuse and recycling doubling from 18% to 36% between 2009 and 2017. It has also contributed to increase social and economic opportunities through job creation. In that sense, it provides a useful model for consideration. The context in the UK is different, with potentially different social objectives and an already (probably) higher collection rate. Nevertheless, the markets for reuse remain subject to sometimes unfavourable global market conditions and the markets for recycling can be low value, both of which pose risk to the longer-term prospects for landfill diversion in the UK. Furthermore, EPR systems provide opportunities for incentivising specific design aspects such as durability – although it is too early to draw positive conclusions from the French experience on this.

This is an initial, brief, look at a UK textiles EPR, intended to support Defra's thinking. It is not designed to make recommendations. Nevertheless, if this policy area is of interest to Defra, more work would be warranted. This might include working closely with the sector to better understand the benefits of textiles EPR for the UK, the policy design implications around fee modulation, the PRO's mandates, policy objectives, etc. This might also include some technical work to strengthen current estimates of textiles consumption and collection in the UK to better inform Defra's understanding of the current situation.

Appendix 1 Durability criteria

The eligibility criteria for the durability modulated fee apply to T-shirts, jeans and jumpers from menswear, womenswear and childrenswear, as well as to bedsheets and are based on standard industry tests.

There are modulated fees for shoes as well - outside the scope of this report and therefore not reported here.

The durability discount cannot be applied cumulatively to any other discount for recycled content.

T-shirts:

- dimensional stability (length and width): dimensional change of less than 5 % (ISO 5077)
- colour fastness to laundering (change and staining): 4-5 for light colours, 4 for dark colours (ISO 105 C06)

Jeans:

- dimensional stability (length and width): dimensional change of less than 3 % (ISO 5077)
- abrasion resistance (Martindale method): greater than 15,000 abrasion cycles (ISO 12947-3)

Bedsheets:

- dimensional stability (length and width): dimensional change of less than 5% for knitted fabric and less than 3% for woven fabric
- abrasion resistance (Martindale method): greater than 20,000 abrasion cycles (ISO 12947-3)

Jumpers:

- dimensional stability (length and width): dimensional change of less than 5% (ISO 5077)
- piling: greater than 4 (Martindale method, ISO 12945-2 / 5,000 cycles)

