Building a circular economy for textiles supported by common rules on Extended Producer Responsibility (EPR) in the EU

Recommendations and open questions for the upcoming revision of the EU Waste Framework Directive (WFD)

Ellen MacArthur Foundation, 14 July 2022
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Executive summary

As announced in the EU Strategy for Sustainable and Circular Textiles on 30 March 2022, the upcoming revision of the EU Waste Framework Directive will include a proposal for **harmonised EU extended producer responsibility rules for textiles**. The development of such harmonised rules provides a unique opportunity to establish the collective systems and infrastructure needed for **collection, sorting, preparation for reuse and recycling of textile waste** across the EU.

This white paper by the Ellen MacArthur Foundation provides a number of **policy recommendations and open questions** to be considered for implementing effective EPR systems for textiles in the EU, covering critical issues such as:

- Key **objectives** for EPR systems for textiles in the EU
- **Scope** of product categories & obligated producers
- Waste **definitions** & end-of-waste **criteria**
- **Fee calculation** & eco-modulation
- **Exports** of used textiles

Mandatory EPR systems provide the **necessary funding and organisational framework for**

1. the **separate collection of all discarded textile products within a legally defined scope**, diverting these from mixed municipal waste and thereby meeting the mandatory separate collection requirement under the current EU Waste Framework Directive.
2. investments in the **infrastructure for collected textile products to be sorted and prepared for reuse and recycling,** in practice and at scale.

Harmonised EPR regulations across the EU offer significant economic and environmental benefits. They **improve the economics for the large volumes of waste from textile products and materials** that currently end up landfilled or incinerated, and for which there is no economically viable reuse or recycling market at the moment. Diverting textiles from incineration or landfill and ensuring they are used more, is a significant step to **reduce negative environmental impacts** linked to pollution and GHG emissions.

Still, EPR has **considerable limitations**: it merely offers a solution to the high volumes of waste in the linear economy, but it is unlikely to prevent such waste at source.

To address the root causes of the current wasteful system, EPR is only one step forward towards a circular economy for textiles, which requires profound transformations on the level of product design and business models:

- ➔ **Without action on design, the economics for collection, sorting and appropriate treatment of used textiles will not stack up**, even when EPR schemes are put in place. The funding raised through EPR schemes risks becoming meaningless if we do not design and develop products for prolonged use, and for recycling after maximum use.
- ➔ **Without action on transforming business models, EPR is merely a band-aid solution for the high volumes of discarded products in a linear economy.** EPR alone will not be enough to disrupt the short lifetimes of our textile products, in particular clothing. While EPR can help fund the necessary systems and infrastructure to collect and re-circulate products and materials, more action is needed to avoid products being discarded in the first place.

Going forward, it is crucial to **build alignment with policy frameworks** covering product design and performance, business models, as well as social inclusion, to avoid EPR being stranded in a wider, unchanged linear system. The EU Strategy for Sustainable and Circular Textiles offers **an unprecedented opportunity** to build such bridges and to maximise the impact of EPR on the road to a circular economy.

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Textile waste in Europe: fixing a leaky system

State of play: a significant loss of materials and economic value

According to estimates by the EU's Joint Research Centre (JRC)[1], between 3.3 and 3.7 million tonnes of clothing and household textiles are likely discarded within mixed waste streams[2] each year in the EU27. These products leak out of the system - they are not collected separately, and therefore end up incinerated or landfilled, causing pollution and increased GHG emissions. Overall, the JRC roughly estimates that **only 38% of all textiles placed on the EU single market are eventually collected separately.**

On average, European citizens discard 11 kg of textiles per person per year[3]. **Low utilisation trends, in particular for clothing, coupled with low levels of separate collection, preparation for reuse and recycling, only exacerbate the industry's already enormous pressure on resources[4].**

The existing systems for separate collection in the EU are voluntary, and they all focus on collecting clothing that is deemed rewearable and therefore suitable for reuse. Both commercial and charitable operators have been collecting used textiles with this purpose over the last few decades[5]. The JRC estimates that between 50% and 75% of these separately collected textiles are reused or are at least reported as such. In practice, a large share of collected clothing is exported to non-EU countries with no collection infrastructure in place - these products may or may not get reused, but will ultimately end up in landfill or in the environment[6].

As there is currently no requirement at EU level for reporting on the separate collection and treatment of post-consumer textiles, **we lack crucial insights** into collection rates, material flows and the global trade in used clothing. The available data is scattered and inconsistent - for example, some EU Member States include footwear in the reporting scope, while others do not.

Whichever form today's collection schemes take, they all face the same challenge: while they rely on reselling reusable items, **an increasing share of the collected volumes turns out to be non-reusable**. Across the EU, collectors of used textiles report a decline in quality of what they receive[7]. Collected

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[1] Köhler A., Watson D., Trzepacz S., Löw C., Liu R., Danneck J., Konstantas A., Donatello S. & Faraca G., *Circular Economy Perspectives in the EU Textile sector*, Publications Office of the European Union, Luxembourg, 2021.

[2] A 2020 study in the Netherlands concluded that 5.6 % of mixed household waste in 2019 was composed of textiles (Rijkswaterstaat, Samenstelling van het huishoudelijk restafval, sorteeranalyses 2020), while the region of Flanders recently reported an annual share of 5,3 kilograms of textiles per citizen in the mixed household waste bags (OVAM Sorteeranalyse 2019-2021).

[3] European Environment Agency, *Textiles in Europe's circular economy* (2019).

[4] According to the European Environment Agency, EU consumption of textiles (clothing, footwear and household textiles) is the fourth highest pressure category for use of primary raw materials and water (after food, housing and transport). It is the second-highest for land use and fifth-highest for greenhouse gas emissions. These impacts mostly occur outside of the EU, since the large majority of textiles consumed in the EU are imported. European Environment Agency, *Textiles in Europe's circular economy* (2019).

[5] More recently, a number of brands have started running in-store collections of post-consumer textiles. In some cases, this happens as part of new business undertakings (most notably, resale of pre-used garments), while in other cases the collected clothing is sorted and resold by external service providers.

[6] According to the OR Foundation, which carried out research on the Kantamanto used clothing market in Accra, Ghana, approximately 40% of the items traded in Kantamanto leave the market as waste and end up in landfill. The research found that at least one million pounds of clothing go to the landfills surrounding Accra on a weekly basis. (Dead White Man's Clothes, OR Foundation)

[7] Ljungkvist, H., Watson, D., & Elander, M., *Developments in global markets for used textiles and implications for reuse and recycling*, Mistra Future Fashion, 2018. See also EURIC, *Updated position on EPR for textiles*, 2021.

clothing can be worn out, damaged, wet, or of too low quality to find a suitable reuse market in or outside the EU. The emergence of fast fashion - premised on high volumes of lower quality garments at low price levels - has led to a rise of "disposable" clothing, with limited reuse potential for collectors and sorters.

Meanwhile, **the market for textile-to-textile recycling is yet to emerge**[8]. While the demand for recycled textile fibres is expected to increase, the industry faces technical barriers (e.g. decreased fibre length, blended fibres that are difficult to separate[9], presence of chemicals that disrupt the recycling process) and logistical challenges (it is difficult to gather and sort high volumes of used textiles in a cost-efficient manner)[10]. As a result, the fraction that cannot be resold for reuse is downcycled into lower-value applications (such as insulation material, wiping cloths, or mattress stuffing)[11], or is directed towards incineration with or without energy recovery, wasting the embedded resources, energy and labour.

There is currently no viable business case to separately collect and process all textile waste in the EU. While resale business models are in development, often based on peer-to-peer resale, these are largely isolated efforts to capture the economic value of high-quality clothing, leaving other textile products and materials, such as bed linen or towels, entirely unaddressed. Voluntary schemes and individual company initiatives will not achieve systemic change. We need a collective system and infrastructure to capture the value of used textiles.

Separate collection and EPR: shifting the economic burden

Since its revision in 2018, the EU Waste Framework Directive requires Member States to establish systems for the separate collection of textiles[12] by 1st January 2025. This requirement may well break the current model, in which the costs for collection and sorting are offset by re-selling and often exporting used clothing. If **the non-reusable and currently unprofitable fraction increases because EU Member States need to collect a broad group of different textile products**, encompassing home textiles and footwear, this will fundamentally undermine the profitability of today's business models for collectors and wholesalers of used textiles, whether for-profit or charity-based.

Against this backdrop, **Extended Producer Responsibility (EPR) has seen increased political momentum,** as it is unlikely that EU Member-States will meet separate collection requirements if they do not introduce additional measures beyond what is already in place. EPR has been welcomed as a legal mechanism to involve fashion and textile companies more closely in the post-use phase of their

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[8] European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, Duhoux, T., Maes, E., Hirschnitz-Garbers, M., et al. *Study on the technical, regulatory, economic and environmental effectiveness of textile fibres recycling : final report*, Publications Office, 2021.

[9] Material blends make it more difficult to capture material value through recycling. Blends can be processed in mechanical fibre recycling processes, but this makes it difficult to control the material composition of the resulting recycled yarns. For chemical polymer recycling, technologies exist to separate blends as part of the recycling process, although separate steps are required and the processes are only feasible for materials that are used in large enough portions in the input material. Ellen MacArthur Foundation, *A new textiles economy: redesigning fashion's future*, 2017.

[10] Köhler A., et al. *Circular Economy Perspectives in the EU Textile sector*, 2021.

[11] We refer to "downcycling" and "lower-value" here as in these applications the textile materials will be hard to collect back after use - as a result, this is likely the final use before ending up in landfill or incineration.

[12] EU Waste Framework Directive, Article 11. While the Waste Framework Directive as such does not provide a definition of "textiles", the guidance for separate collection of municipal waste provides the following scope: "*used garments and home textiles (bed linen, towels, tablecloths etc.) and similar used textiles from private companies and public organisations e.g. hospital linen, uniforms or workwear*". European Commission, Directorate-General for Environment, Dubois, M., Sims, E., Moerman, T., et al., *Guidance for separate collection of municipal waste*, Publications Office, 2020.

products, and contribute to the financing of the systems and infrastructure needed for collection, sorting and reprocessing. As announced in the EU Strategy for Sustainable and Circular Textiles, **the upcoming revision of the EU Waste Framework Directive will include a proposal for harmonised EPR rules for textiles**, with eco-modulation of fees.

This paper focuses on mandatory, fee-based Extended Producer Responsibility, the only proven mechanism with the potential to secure funding that is dedicated, ongoing and sufficient to create the necessary infrastructure for collection, sorting, and preparation for reuse or recycling[13]. In light of the obligation for separate collection by 2025, national governments as well as stakeholder groups are assessing how EPR can deliver on both economic and environmental goals. Currently, **France is the only EU Member-State with a mandatory EPR scheme for textiles in place, while Sweden and the Netherlands are in the process of adopting national EPR legislation for textile waste**. In this context it is fundamental to clearly delineate the objectives that EPR can and cannot deliver on.

Understanding EPR from a circular economy perspective

A circular economy creates economic activity by reusing, repairing, remanufacturing and recycling textiles. **While the merits of EPR in preventing waste are often emphasised, the most effective way to prevent textile waste at source lies in the scaling of such circular business models**[14]. By boosting the attractiveness of business models that maximise resource use, rather than product turnover, we can bring down volumes of discarded textile products more rapidly than EPR systems could ever achieve.

Mandatory EPR systems can provide the necessary funding and organisational framework for:

1. the **separate collection of all discarded textile products within a legally defined scope**, diverting these from mixed municipal waste and from landfill and incineration.
2. investments in the **infrastructure for collected textile products to be sorted and prepared for reuse and recycling,** in practice and at scale.

As a policy tool, EPR offers many advantages:

- ➔ Harmonised EPR regulations can strengthen the economic feasibility of collecting the large volumes of textile products and materials that currently end up incinerated and landfilled, and for which there is no viable reuse or recycling market at the moment.
- ➔ Under EPR legislation, businesses become responsible, and accountable, for managing the flows and fate of their products.
- ➔ EPR regulations offer a helpful framework for setting and enforcing legally binding targets e.g. on preparation for reuse and recycling.
- ➔ EPR schemes are instrumental to measure collection volumes and track their destination, ideally in a uniform manner across the EU. Today, we lack insights as to the flows of used textiles and where these largely end up.

[13] Ellen MacArthur Foundation, *Extended producer responsibility: a necessary part of the solution to packaging waste and solution*, 2021.

[14] Circular business models - such as resale, rental, repair and remaking - decouple revenue from production and resource use. In fashion, these models have the potential to grow from 3.5% of the global fashion market today to 23% by 2030, becoming a USD 700 billion opportunity. Ibidem. Ellen MacArthur Foundation, *Rethinking business models for a thriving fashion industry*, 2021.

- ➔ EPR schemes can mobilise investments in R&D, helping to bridge innovation gaps such as the limited availability of material detection techniques, automated sorting, as well as solutions for blends and components that are currently not recyclable.

However, **EPR cannot build a circular economy in isolation**:

- ➔ **Without action on design, the economics for collection, sorting and appropriate treatment of used textiles will not stack up.** Low durability standards, as well as the ever-increasing number of materials and blends brought to the market, make it hard for collectors and recyclers to capture the full material value of textiles they receive. The funding raised through EPR schemes risks becoming meaningless if we do not design and develop products for prolonged use, and for recycling[15] after maximum use, whilst ensuring they are safe for circulation. In addition, EPR legislation is ill-suited to encourage the necessary shift to renewable and recycled materials .
- ➔ **Without action on transforming business models, EPR is merely a band-aid solution for the high volumes of discarded products in a linear economy.** In a circular economy, economic activity is increasingly decoupled from the extraction of (finite) raw materials. To achieve this, we need to move the industry away from low utilisation trends, incentivising business models that enable products to be used more. EPR alone will not be enough to disrupt the short lifetimes of our textile products, in particular clothing. While EPR can help fund the necessary systems and infrastructure to collect and re-circulate products and materials when they are eventually discarded, more action is needed to avoid products being discarded in the first place.

EPR offers a collective solution to cover the costs associated with increasing volumes of discarded textiles in the EU. Without such funding mechanisms in place across the EU, we are at risk of missing our obligations to collect all textiles separately by 2025, and we risk not having the right infrastructure in place to keep these textiles in circulation. However, we also need to bear in mind that **building a circular economy requires a shift in business models** towards keeping products in use for longer, effectively decreasing the volumes of textile waste. As such, EPR gradually decreases the scale of its operations over time. Eventually, in a circular economy **EPR can meet the objectives it was historically designed to achieve**, i.e. to collect and treat “end-of-life” products, which can no longer be reused, repaired or remade/remanufactured through circular business models.

[15] In a circular economy, products and materials are circulated at their highest value at all times. Within recycling, this principle results in a general order of preference for recycling types, favouring techniques that retain most embedded value. Ellen MacArthur Foundation, *Vision of a circular economy for fashion*, 2020.

Towards harmonised rules on EPR for textiles in the EU - Recommendations and open questions

Key objectives for EPR systems for textiles in the EU

Separate collection

1. Increase separate collection of discarded textiles
2. Reduce the presence of textiles in mixed municipal waste

Preparation for reuse and recycling

3. Increase the share of collected textiles that is prepared for reuse as a priority
4. In the remaining fraction, increase the share that is recycled
5. Increase textile-to-textile recycling of post-consumer feedstock
6. Progressively eliminate textile waste going to incineration or energy recovery

The EU Waste Framework Directive defines EPR as *"a set of measures taken by Member States to ensure that producers of products bear financial responsibility or financial and organisational responsibility for the management of the waste stage of a product's life cycle".* Article 15 leaves it optional for companies to fulfil their responsibility individually, by setting up their own management system to meet EPR objectives, or collectively, by joining efforts to establish a shared system.

The objectives above could be defined and considered as part of forthcoming harmonised rules on EPR, while the ambition levels (targets) and the ways to achieve them would be left to Member-States and their respective Producer Responsibility Organisations (PROs) respectively. For EPR systems to cover the entire cost range of achieving these objectives, including the necessary investments in research and innovation, it is crucial to set **targets that are sufficiently ambitious**, raising the bar over time.

Setting objectives on separate collection (1 - 2)

Given the immediate challenge to expand existing collection systems beyond clothing, and to divert textiles from the mixed municipal waste stream across the EU, it would be important to focus initially on **achieving high collection and diversion rates** (in relation to the amount of products put on the market)[16]. Over time, these targets can be adjusted to reflect changes in the product and material flows (e.g. due to an increase of reuse, repair and remanufacturing activities in the EU economy).

It is important to reflect on the appropriate ways of **measuring separate collection rates**. Currently, the collection rate is defined as the total separate collection of used textiles divided by the total quantity of textiles placed on the market, in the same year[17]. However, given the very diverging timelines that characterise the consumption of textiles - a product may be used for a few days, or for decades, before being discarded - care must be taken when measuring collection rates and using the results to inform target-setting.

[16] See also Eunomia, *Driving a circular economy for textiles through EPR*, 2022.
[17] Köhler A., et al. *Circular Economy Perspectives in the EU Textile sector*, 2021.

To achieve high collection rates, EPR schemes need to set collection targets that are **sufficiently ambitious**, allowing in turn for a broad cost coverage by producers to achieve these targets. France has had an EPR scheme for textiles in place since 2007. Yet, it collects far less per capita than the region of Flanders[18]. EPR as such does not automatically lead to a high collection rate - but ambitious targets can.

Setting objectives on preparation for reuse and recycling (3 - 6)

As foreseen under Article 11 of the Waste Framework Directive (2018 revision), the Commission will consider the setting of targets for preparing for re-use and recycling of textile waste by 31 December 2024.

Including the costs for repair and remanufacturing into the calculation of EPR fees is important, so that we can fully respect the waste hierarchy and ensure that products are used to the maximum extent, before being recycled. Yet we cannot expect EPR to be the sole policy tool to make repair accessible, affordable and more widespread among EU citizens. Broader economic and fiscal measures are required, as well as changes in consumer legislation and investments to build a skilled and fairly remunerated EU workforce that knows how to mend clothing, footwear and home textiles. These policy interventions can **strengthen the business case** for repair and remanufacturing, bringing such products back into circulation, and keeping them out of (separate) collection schemes for textile waste.

Common EU rules on EPR should reflect **a clear priority for textile-to-textile recycling**, in line with the waste hierarchy and the EU Strategy for Sustainable and Circular Textiles. Only where textile-to-textile recycling is not feasible, textile materials should be cascaded into other applications and industries as secondary raw materials. To support such priority in practice, more work is needed to develop minimum requirements for material-based sorting operations and recycling processes.

When implementing preparation for reuse and recycling objectives within national schemes, consideration could be given to a **differentiation across products and product groups**. For example, reuse targets could be higher for jeans and accessories than for footwear, reflecting the diverging levels of feasibility in the current system. Differentiating targets (and, potentially, the setting of fees) across products would allow for a more granular monitoring and identification of gaps, to understand where reuse and recycling are currently most problematic. This could in turn inform decision-making on potential innovation or R&D funds, should a PRO decide to provide such funds[19].

[18] 3,7 kg per person in France versus 8,3 kg per person in Flanders. Ibidem.

[19] As an example, the French PRO Re-Fashion, operating on behalf of the French clothing, linen, and footwear sector, invested €0,8 million in research and development in 2020. Re-Fashion 2020 Activity Report.

Scope of product categories & obligated producers

- Create clarity on scope definition.
- Build alignment with existing guidance and the EU Textile Regulation.
- Scope should include clothing, footwear, and household linen.
- Ensure a harmonised definition and consistent application of "producer".

Textiles are an **extremely diverse and heterogeneous stream**, in terms of material composition, product sizes (ranging from socks to bulky waste such as mattresses and carpets) and product lifetimes. This makes the questions around creating a harmonised scope for EPR on the EU-level all the more important.

At the moment, there are **various interpretations of the word "textiles"** - the recent EU Strategy for Sustainable and Circular Textiles has not offered a definition, or a description of the products this would cover from a regulatory perspective. The EU Textile Regulation[20] applies to "all products containing at least 80% by weight of textile fibres". But this definition would exclude the majority of footwear as well as accessories. The guidance for separate collection of municipal waste[21] considers a broad scope including garments, household textiles as well as uniforms and workwear. Given these diverging directions, it is important to **create further clarity and build alignment** between the guidance for separate collection, the legislation on textiles, and the future definition of the scope for textiles EPR in the EU.

We recommend including **clothing, footwear and household linen** in the scope for EPR, as is currently the scope of the French EPR scheme on textiles. Household linen is a particularly interesting fraction as it offers large volumes of homogeneous materials (often cotton or polycotton), and therefore represent a suitable fraction for mechanical recycling. In addition, it would be valuable to consider including accessories, such as handbags, as these correspond to a large share of fashion consumption by weight. The scope could be expanded over time to include workwear and uniforms, as these may face specific restrictions (e.g. logo removal). Carpets and mattresses would be better suited to fall under separate EPR schemes, as is already the case (or in the making) in some Member-States.

Finally, it is important to **re-examine the definition of "producer"** in the Waste Framework Directive, as the current definition[22] may lead to considerable overlaps, particularly in the fashion sector which sees a growing share of online marketplaces offering products on behalf of brands and retailers. A harmonised definition and consistent application of what constitutes a "producer" in EPR legislation is crucial for its successful implementation.

[20] Textile Regulation (EU) No 1007/2011 on fibre names and related labelling and marking of the fibre composition of textile products.
[21] European Commission, Directorate-General for Environment, Dubois, M., Sims, E., Moerman, T., et al., *Guidance for separate collection of municipal waste*, Publications Office, 2020.
[22] "Any natural or legal person who professionally develops, manufactures, processes, treats, sells or imports products", EU Waste Framework Directive.

Waste definitions & end-of-waste criteria

- Current waste definition creates barriers for circular business models such as reuse.
- Products entering EPR-funded collection and sorting operations should be considered as "waste", provided that harmonised end-of-waste criteria are established across the EU.

A prerequisite to establish a mandatory EPR scheme for textiles is to be able to clearly distinguish **what constitutes waste and what constitutes a product**. Harmonising and simplifying definitions and applications thereof across the EU would be key, in order to clearly delineate where EPR obligations begin and end.

At the moment, the **definition of "waste"** under the EU Waste Framework Directive is rather broad: "*any substance or object which the holder discards or intends or is required to discard*". This may pose **barriers to reuse**, as companies taking back their products - considered to be discarded by the consumer, and therefore considered as waste - need to navigate the complex and often incomplete legislation on waste. Across EU Member-States, the legislation strongly differs: in some cases the collection of post-consumer clothing (e.g. via collection points) is considered as waste collection, while in others it is not. In general, there is legal uncertainty around the possibility of waste products to be put back in circulation, in particular given the lack of EU-wide end-of-waste criteria for textiles.

As outlined above, mandatory fee-based EPR systems currently operate in the context of national waste management legislation. Rather than reinventing existing legal frameworks, **applying the waste status in combination with clear end-of-waste criteria**, is a pragmatic starting point for EPR for textiles. Therefore the most straightforward legal scenario, in our view, is as follows: When a company or a non-profit organisation collects a product and brings this back into circulation, as a commercial undertaking, the product should remain a product. When this product gets discarded in a collection scheme (whether managed by municipalities or by private organisations), the product should be considered waste, and the costs for its subsequent processing are raised through the EPR scheme (following EU harmonised rules and nationally defined objectives).

The product does not need to remain waste however: after sorting operations (preparation for reuse - which is considered a waste management operation under the current legal framework), and in line with EU-wide end-of-waste criteria for textiles, it can regain its product status. As end-of-waste criteria for textiles are yet to be established, it would be particularly relevant for the EU Waste Framework Directive revision to include an implementing act establishing such criteria for textile products (differentiating, for example, between clothing, footwear and household linen). In this exercise, it is important to consider standardised criteria to differentiate between high-quality used textiles (that could be reused, potentially involving a repair or remanufacturing operation) and low-quality used textiles (that would be better suited for recycling).

Fee calculation & eco-modulation

- EPR needs to go beyond the coverage of waste management costs in the current system. It is a powerful tool to provide the "necessary costs" for building the large-scale infrastructure, including research and innovation, that is required to collect and process all textile waste in scope, in accordance with the waste hierarchy.
- To do this, setting ambitious goals and targets is crucial.

The concept of EPR carries a strong focus on the "**end-of-life**" stage of a product, processing waste towards their *final* treatment. It was not originally designed to cover the entire waste hierarchy, such as waste prevention and reuse (OECD)[23]. This is reflected in the Waste Framework Directive (Article 8a), which stipulates that financial contributions "do not exceed the costs that are *necessary* to provide waste management services in a cost-efficient way". Essentially, these provisions are based on **"waste management needs" in the linear economy**[24]. It leaves little room for additional investments (e.g. in repair capacities and sorting techniques, or in research and innovation), so that the current system can gradually be expanded and improved towards one that brings textiles back in circulation at the highest value possible.

Setting ambitious targets is fundamental to ensure that the calculation of "necessary" costs (i.e. necessary to achieve said targets) ultimately leads to funding that contributes to building the infrastructure for large-scale collection, sorting and reprocessing of textiles. An **assessment of innovation and investment needs** should be included in the cost coverage, so that EPR revenues can be used to stimulate research, innovation and skills development. For example, investments in fibre detection and fibre separation technologies, or in the development of repair skills. As outlined in the Eunomia report on EPR for textiles[25], the cost coverage should also include management costs for textiles that remain in the mixed waste stream (from households or from other sources).

If the contributions paid into the EPR scheme are not sufficient to cover all operations, a perverse incentive can arise to reduce collected volumes in order to save costs[26]. It is therefore important to establish feedback mechanisms so that costs can be adapted in view of external factors impacting the management of the EPR scheme (such as rising energy costs).

Eco-modulation

As part of the upcoming WFD revision, the European Commission intends to propose harmonised rules with eco-modulation of fees. Through the introduction of such fees, EPR schemes can strengthen the incentives for upstream solutions, changing how textile products are designed and manufactured. In the national discussions on EPR for textiles thus far, there have been varying preferences as to the area that eco-modulated fees are expected to focus on (e.g. durability in the French scheme, versus recycled content in the Dutch proposal).

[23] OECD, *Extended Producer Responsibility: Updated Guidance for Efficient Waste Management*, 2016.

[24] A 2014 review by the European Commission found that most EPRs cover net operational costs, but not the full range of costs pertaining to supporting services (European Commission, *Development of Guidance on Extended Producer Responsibility (EPR)*, 2014). Illustrating this dynamic for textiles, the Eunomia report on EPR for textiles found that in the French EPR scheme, "fees paid to Re_Fashion by producers only cover, at present, a small proportion of the full end-of-life costs that could potentially be covered by EPR" (Eunomia 2022).

[25] Eunomia, *Driving a circular economy for textiles through EPR*, 2022.

[26] OECD, *Extended Producer Responsibility: Updated Guidance for Efficient Waste Management*, 2016.

A harmonised EU-wide approach to eco-modulation would be most effective, and should be based on the framework of ecodesign requirements that will come into place under the proposed Ecodesign for Sustainable Products Regulation (ESPR). The ESPR is the most suitable place to build a standardised framework, upheld across the Single Market, to differentiate EPR fees against. In short, mandatory criteria under ESPR should form the guiding principles and minimum bar, whereas EPR modulated fees can provide significant incentives for businesses to go further, and deliver more ambitious results based on the same parameters (e.g. amount of washes the item is able to withstand, or recycled content from post-consumer textile feedstocks). By fully aligning eco-modulation with the umbrella legislation under the ESPR, EPR policies can deliver the strongest possible push on ecodesign, reinforcing the existing (future) framework instead of adding new ecodesign principles.

Eco-modulation can only be effective if the number of criteria for fee differentiation remains limited and the spread of fees gives sufficiently clear market signals. This explains why EPR has so far had a neglectable "upstream" effect on the design of products. Only through sufficiently high[27] fees, can an EPR scheme deliver on the intended incentive effects for ecodesign.

[27] Sufficiently high can be understood in proportion to either the costs of manufacturing or the sales price.

Exports of used textiles

- Build better data on exports through EPR reporting requirements.
- Consider targets for domestic sorting and preparation for reuse in the EU.
- Build linkages with forthcoming criteria on used textiles and waste textiles under the EU Waste Shipments proposed regulation.

According to the EU Strategy for Sustainable and Circular Textiles, 1.4 million tonnes of textile waste were exported to non-EU countries in 2020. Yet, we have **no solid data overview** on these flows, whether they were pre-sorted or not, and their ultimate destinations. Even collectors who sell on fractions of what they collect, may not know what subsequently happens to these products. While EPR as such does not counter the export of used textiles[28], it can set clear and comprehensive reporting requirements, building better data and insights on the matter. This is a first and necessary step towards assuring **high-quality exports** of textiles in the future, countering the export of low-quality items that almost immediately end up as waste in the receiving countries.

In addition, the European Commission could consider setting objectives on increasing the share of **domestic (i.e. in the EU) sorting and preparation for reuse of textiles**. Inspiration can be found in the Dutch EPR proposal, which foresees targets for preparation for reuse in the Netherlands[29].

The forthcoming rules on EPR need to build **alignment with the proposed regulation on shipments of waste**, through which the EU Commission will be tasked to set out criteria to distinguish between used textile products and waste. Under this proposal the export of textile waste to non-OECD countries will be allowed only under the condition that importing countries notify their willingness to import specific types of waste and demonstrate their ability to manage it sustainably.

Finally, it would be important to reflect on possible **transfer mechanisms for EPR funds**, as the collection and treatment of exported textiles occurs outside of the EU, in countries with very limited collection infrastructure in place. Such transfers have recently been proposed as part of discussions on so-called “Ultimate Producer Responsibility”[30].

[28] In the French EPR scheme for textiles, the reuse rates cover 95% reuse abroad and 5% reuse in France.
[29] Conceptvoorstel AMvB UPV textiel, Ministry of Infrastructure and Water Management.
[30] Thapa, K., W.J.V. Vermeulen, O. Olayide, P. Deutz (2022) *Brief: Blueprint for Ultimate Producer Responsibility*, Copernicus Institute of Sustainable Development, Utrecht University.

The need for an integrated policy approach

EPR regulations and schemes can only be truly effective if they are part of a coordinated framework of policy measures aiming to build a circular economy. They need to align with policy instruments that address product design (in particular, durability and recyclability) and business models.

The EU Strategy on Circular and Sustainable Textiles offers an **unprecedented opportunity** to align various policy portfolios impacting the textiles sector.

Specifically:

- The EU Commission proposal for a Regulation on Ecodesign for Sustainable Products offers a significant opportunity to build **linkages between the mandatory performance and information requirements that products need to meet, and the legislation covering the treatment of these same products when they are discarded** (Waste Framework Directive). To be most effective, EPR fees should build on the same principles and criteria that are put in place under the ESPR.

- There is a significant opportunity for public policies to help improve the economic rationale of keeping products and materials in use. Deep structural reforms will need to be undertaken to realign economic and fiscal incentives and to remove regulatory barriers, so that circular business models receive improved access to finance and can operate within clear legal frameworks. **However, to date the policy intervention points to achieve this remain largely unexplored.** For example, we need to better understand how policy can help achieve a fair reflection of key externalities, how company law should be adapted to reflect changing business conditions, and how trade policies can better accommodate the shift to a circular economy (for example, by addressing the need for EPR fees to travel across national jurisdictions[31]).

- Future rules on EPR need to consider the **inclusion of the non-profit sector (charities and social enterprises)**, which is heavily represented in the collection, sorting and reuse of used textiles, but whose operating model may come increasingly under pressure. With the emergence of resale business models, including peer-to-peer resale platforms, the access of the non-profit sector to high-quality secondhand clothing may no longer be assured in the near future. EPR can be an opportunity to safeguard their role, as it can provide financial support to cover their collection and sorting activities. Looking ahead, we can expect a two-fold sorting process to come into place: a phase of manual pre-sorting, to sort out the reusable fraction, followed by an automated sorting process that aims to detect fibre types. Sorting is therefore expected to remain a labour-intensive process in the years to come. EPR for textiles can be **an opportunity to build sorting operations in the EU that meet social objectives**, e.g. by setting targets on social employment. While the shift to sorting would fundamentally change the role and main income source of the non-profit sector, it would at the same time guarantee their access to the reusable fraction within EPR-funded collection streams.

- With harmonised rules, we will still have a variety of national EPR-schemes. More effort is therefore needed to **streamline reporting requirement**s, as these are crucial levers to build better data and insights, which in turn inform the setting of targets. For example, collecting data on the textile products that are put on the EU single market and their expected performance,

[31] Thapa, K., W.J.V. Vermeulen, O. Olayide, P. Deutz (2022) *Brief: Blueprint for Ultimate Producer Responsibility*, Copernicus Institute of Sustainable Development, Utrecht University.

on the volumes of discarded products and the share of reusable versus non-reusable products in the waste stream, and on the exports of used textiles in and outside the EU. To enable a coordinated reporting effort on product flows and the quantity and quality of collected products, **harmonising definitions** is key.