

Textile Waste as a Resource: Infrastructures, Waste Shipment, and Secondary Raw Materials Markets

Position Paper

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Introduction

In the 2020 Circular Economy Action Plan, textiles have been identified as one of the post-consumer waste streams with the highest untapped potential to implement circular practices. According to the revised Waste Framework Directive, EU Member States are expected to put in place by 2025 a separate collection system of textile waste. Furthermore, with the announcement of a European Strategy for Sustainable Textiles, the European Commission aims to set in place a comprehensive framework for sustainable textiles. The objective of the Strategy is to create conditions and incentives to boost the competitiveness, innovation, sustainability and resilience of the EU textile sector. Among others, the Strategy might consider setting targets to step up reuse and recycling efforts, by e.g., boosting textile sorting through innovation, and will investigate, in coordination with the Sustainable Products Initiative, how to ensure the uptake of secondary raw materials. This will require an effective secondary raw materials flow.

The Policy Hub welcomes the discussions on how to unlock the full potential of textile waste - including apparel and footwear. The core message is that **textile waste shall ultimately be considered as a new material resource**. The future for our sector is a circular textile system, where products are made to last longer, from safe, recycled or sustainably sourced inputs that can recirculate multiple times. Textiles are complex goods due to the materials used to deliver innovative and high-performance products to consumers and because of the highest regard for safer, cleaner, and sustainable materials. Understanding the complexity of textiles is vital and goes beyond just the primary materials, down to the ink type or printing technology used.

The Policy Hub – Circularity for Apparel and Footwear, therefore, takes this opportunity to share key recommendations on the new infrastructures needed for a sustainable textile waste management in Europe and on how to secure a constant flow of high-quality secondary raw materials. The Policy Hub strongly recommends:

1. to harmonise EPR and waste collection rules across the EU;
2. to bring textile recycling solution at scale through research, development and funding opportunities;
3. to set a definition of textile waste, harmonising end-of-waste criteria at EU level to secure a constant flow of high quality secondary raw materials;
4. to invest in sustainable innovations that can decontaminate waste streams and increase safe recycling; and
5. to simplify and digitalise the authorisation process under the revised Waste Shipment Regulation when post-consumer recoverable waste is shipped within the EU and globally for the purpose of sorting, preparation for reuse or recycling.

See our key recommendations on those points as follows.

Harmonisation of textile waste collection rules across the EU

In Europe, sustainable textile waste management requires a more effective and synchronised collection, sorting, reuse, and recycling infrastructure. This way, textile waste can be processed at scale, maintain the highest possible value and lead to a future where textile waste becomes an important resource. Realising a circular system of both high-quality and safe secondary raw textile materials will be of more benefit if addressed from a European - and ideally global - level. Understanding the complexity of textiles and their collection, sorting, reuse, and recycling structures; promoting innovation and investments in scaling of recycling technologies (in particular upcycling, which should be the priority); and supporting policies at the EU level are necessary to ultimately stimulate climate-neutral, circular economies across the EU. It is important to underline that high quality sorting, supported by harmonized sorting standards across EU, and high-quality recycling play a crucial role in gaining value from collected textile waste.

The Commission should map, in collaboration with the industry, best practices that are currently implemented at EU Member States level. These could then be replicated and harmonised at the EU level. Waste collection systems currently in place in some EU Member States are mainly designed for resale and overseas export of clothing and footwear. Yet, such export markets are increasingly saturated or restricted by import countries. Moreover, existing collection infrastructures and associated textile collection permit requirements often vary across Member States, regions, and even municipalities. The responsibility for these systems lies within municipalities, districts, regional authorities or relevant EPR schemes. This fragmentation makes it challenging to create a harmonised and effective collection infrastructure and leads to complexity and confusion for businesses and consumers.

The Policy Hub believes that various economic operators for designated circular services as defined by the waste hierarchy should be allowed to carry out collection activities, to optimize the collection system and make it as accessible for customers as much as possible. These economic operators may include, for instance, national and local authorities, non-profit organisation, brands' in-store collection, online platforms take-back collection etc. All collecting operators should be subject to the same transparency requirements, such as disclosing data on collected textile. Collection permits should not just be granted to the companies that are willing to pay the highest price for collected garments, because this reduces competitiveness and innovation and makes it difficult for non-profit sorting companies to participate.

The Policy Hub welcomes the European Commission's intention to support the separate collection of textiles waste through the measures announced in the Circular Economy Action Plan and the Roadmap for a European Strategy for Textiles, such as **Extended Producer Responsibility**. As part of this effort, **the Commission should propose EU-wide EPR rules for textiles to incentivise one circular system.**

The Commission should also evaluate and rethink existing and future collection schemes and propose initiatives and recommendations to make them suitable for optimising, standardising, and increasing sorting, reuse and recycling across the EU, including better

data collection on waste and resource flows. Additional strategically placed centres for sorting and recycling will also be beneficial. These would limit the number of movements of used textiles, which would increase scaling capabilities but also be better from a climate perspective. Concurrently, it is important to carefully assess the impact of such setup in terms of job creation/losses and on non-profit or charities and other communities.

The need for further investments and research in scalable textile recycling technologies

In Europe and beyond, cost-effective and economically scalable textile sorting and recycling technologies are not sufficiently established and operated, especially for garments and textiles made from mixed materials/fibres and complex materials. **Research and development in sorting and recycling technologies based on recyclers' needs are critical for a restorative and regenerative circular economy. These go hand in hand with further investments to scale up these technologies.** Examples of investments may include:

- dedicated funds for improving sorting and recycling technologies and accelerating scalability of already proven (pilot scale/pre-industrial) technologies, similar to funds for fundamental and lab scale research through EU Horizon/LIFE programs;
- circular economy programmes of the European Investment Bank;
- financial support in the form of low-interest loans, guarantees, and equity for innovative SMEs and start-ups linked to a circular economy; and
- crowdfunding.

As mentioned in the introduction, textiles are complex products and understanding their complexity is vital. **EU policymakers, the textile industry and all the actors in the textile value chain¹ must work closely to develop recycling solutions,** including through public-private partnerships, that are smart, scalable, impactful, and economically viable at the same time. In this regard, advanced sorting and recycling technologies that make it possible to recycle textile waste streams which contain mixed materials will be critical. We envision a recycling system where textiles with blended fibres can be processed and separated into specific materials (e.g., cellulose, PET, etc.), making it possible for them to recirculate multiple times and be used again in the same manner and of the same quality as virgin-grade raw material. Even if for some materials this objective is still far from being achieved or not at scale, technical innovation, and know-how to improve the quality and quantity of textile waste recycling is at present showing promising results. Such innovation must be supported and become available on a large scale, as it is, e.g., for plastic recycling. Secondary raw materials that are inferior to virgin textile materials will hold back decisive breakthroughs. Also, secondary raw materials should have at least price parity with virgin materials to substantially increase secondary raw materials' penetration into the market and their profitability. Financing sorting and recycling innovation will thus be a key enabler.

¹ Examples for actors that need to be involved: all actors within reverse logistic of the textile value chain. e.g. manufacturers, retailers, second-hand retailers, and recycling- and sorting companies, but also consumers, policymakers, governments and municipalities.

Uncertainties about when materials cease to be waste: define EU-wide end-of-waste criteria

To secure the economic and environmental viability of reuse and recycling, a constant and reliable flow of high-quality secondary raw materials is needed. **End-of-waste criteria for textiles should be defined and subject to maximum (or full) harmonisation at EU level**, in line with the waste hierarchy. Emphasis should be placed on the consistent interpretation and implementation of EU waste policy and objectives across Member States to leverage and safeguard the potential of the single market and to create a level playing field.

End-of-waste criteria need to be defined both at product and material level. Collected garments sorted and prepared for reuse must cease to be waste. This will ultimately also better support the uptake of new business models which are based on prolonged use through rental or resale. Incentives should focus on extending the products' life and on new business models. On the other hand, collected textiles that cannot be reused must cease to be waste once they are recycled and meet the requirements of article 6 of the revised Waste Framework Directive. After the recycling process, considering end-of-waste criteria per fibre material might be in certain cases more appropriate, to ensure a supply of high-quality secondary raw materials. Finally, only the remaining collected textiles that are neither reusable nor recyclable and are sent for landfilling should be classified as waste. The aim is to minimise this last category.

End-of-waste criteria must ensure high-quality materials. Incentives should focus on increasing the quality of recycled or reused textile materials, as well as their quantity. Quality criteria for secondary raw materials should consider innovations such as advanced chemical and mechanical recycling and improvements across the textiles value chain. It will also be important to address the question of how to handle potentially conflicting legislation, such as the skin sensitisers restriction proposal, which might hamper the potential uptake of secondary raw materials. Finally, secondary material requirements should not impede promising sustainability innovations that may utilise bio-based materials. These challenges underline the critical importance of strengthening the EU's efforts in promoting and stimulating innovation in processing technologies that turn waste into appropriate raw materials for further textile and apparel production.

Additionally, to boost the use of secondary raw materials, **end-of-waste criteria must ensure compliance with existing chemical legislation.** REACH and other chemical regulations should serve as the legal basis when developing the quality criteria on chemicals requirements, authorisations, and restrictions of substances. These pieces of EU legislation have been specifically adopted to improve the protection of human health and the environment from the risks that can be posed by chemical content while enhancing the competitiveness of the industry. Potentially conflicting chemical requirements set for virgin and recycled materials must be avoided. At the same time, the presence of legacy substances in recycled materials and in articles made thereof needs to be addressed in a specific way (more information on this in the next section). Chemical standards should be aligned with global standards to ensure the exchange of recoverable waste and secondary raw materials.

The Policy Hub is open to exploring targets on mandatory content of recycled materials, but underlines that **all these challenges need to be carefully understood, considered and addressed in close collaboration with the industry** to secure a constant flow of high quality secondary raw materials before any requirement on the mandatory content of recycled materials is set in the context of the EU Strategy for Sustainable Textiles and the Sustainable Products Initiative. Furthermore, including recycled textile material into other types of articles or articles used by industries with different or additional restrictions – like toys – might prove problematic: those interfaces also need to be addressed.

Presence of legacy substances in recycled materials and in articles made thereof

When chemicals are found to pose a risk, their use in products is restricted. Nonetheless, there may be products currently present on the market that contain those same substances because their use was legal in the past. When textile waste is finally recovered, these restricted substances (so-called “legacy substances”) might still be present in recovered materials.

In the case of articles that have already been placed on the market, legacy substances may be difficult or impossible to detect and remove in a viable manner. Currently, there is neither a general framework to deal with this issue, nor a common methodology to determine the overall costs and benefits of the use of recycled materials containing those substances compared to the disposal of articles containing legacy substances if their recycling is prevented. Specific solutions have been implemented on an ad-hoc basis, but there is still widespread uncertainty.

The Policy Hub calls on the Commission to develop a general framework to address the presence of legacy substances in articles already placed on the market. As part of the Sustainable Products Initiative, **EU policymakers and the industry should jointly develop sector-specific methodology and standards and establish clear circular design guidelines to decide on the recyclability of textiles containing legacy substances.** Clear roadmaps should be jointly set to phase out specific materials, based on a thorough impact assessment (including a socio-economic analysis).

Moreover, **the Policy Hub welcomes the commitment of the Commission to support investments in sustainable innovations that can decontaminate waste streams and increase safe recycling,** as stated in the EU Chemicals Strategy for Sustainability. The Policy Hub also welcomes the recognition that these innovative solutions are particularly important for textiles: new investments are crucial to successfully address the presence of legacy substances in textile waste.

The Policy Hub believes that supporting circularity should be the primary objective of the EU waste policy and calls for a stepwise approach. At some point, the proportion of “new” textiles articles within the waste stream will outweigh the “old” textiles that may contain legacy substances. Nonetheless, in the short term, **recycling articles containing certain legacy substances should be allowed in certain circumstances.** Different levels of restriction on recycled materials should be applied, considering the aforementioned unintentional source of legacy chemicals. Restrictions may hinder progress to using recycled materials if

justifiable exceptions were not considered. Furthermore, some derogations may be necessary as clothing can pick up hazardous and restricted materials from use (e.g., oils from a mechanic) or when older clothing is mixed in, but these will phase out over time. **Clear and reasonable transition times for phase-outs need to be addressed upfront.** This will enable economic operators to understand timelines for incorporation of legacy substances and the extent of regulatory obligations for re-using articles that may be deemed unusable or not recyclable in future years.

Ensure a global free movement of recoverable waste

A constant and reliable flow of high quality and price-competitive secondary raw materials is key for a functioning circular economy. With the growing volume of recoverable textile waste that is expected with the implementation of its separate collection, we urge the Commission to adapt the waste shipment rules to truly deliver global circular value chains.

In this context, it is crucial to keep in mind that the textile sector is a global industry. Currently, many of the recycling operators and related infrastructure, with expertise and know-how to repair and remanufacture complex products, are located outside the EU and most of the yarn and fabric producers are located in Asia. Ensuring that the shipment to these locations of recoverable textile waste - purposed for sorting, preparation for reuse or recycling - is possible will be a key component of a functioning circular economy.

Recoverable textile waste should be considered a valuable commodity and should not be subjected to a de facto export ban. The Policy Hub supports the aim of making Europe a frontrunner in sustainable textiles, but this should not lead to protectionism. It is unrealistic to expect that all textiles consumed in the EU would be produced there. Any limitation to cross-border shipment of post-consumer recoverable textile waste will be an obstacle for the global textile industry to become fully circular and would run against the same objectives of the 2020 Circular Economy Action Plan. Thus, the **Policy Hub strongly encourages the EU to simplify and digitalise the authorisation process under the revised Waste Shipment Regulation when post-consumer recoverable waste is shipped within the EU and globally for the purpose of sorting, preparation for reuse or recycling.**

At the same time, **the Policy Hub recognises that the EU should not export its waste problem abroad.** As previously stated, we believe that the collected recoverable textiles are eventually a resource. Hence, we see this as a case of resource shipment. To guarantee that the materials are reused and recycled properly and to an environmentally sound standard in the receiving country, **shipments must be linked with requirements for recycling in line with high environmental standards.** Operators outside of the EU must meet requirements equivalent to those of the EU. Also, information and traceability obligations may be required.

ABOUT THE POLICY HUB – CIRCULARITY FOR APPAREL & FOOTWEAR

Launched in May 2019 by the Sustainable Apparel Coalition, Federation of the European Sporting Goods Industry, Global Fashion Agenda, Textile Exchange, ZDHC, and their members, aims to unite the textiles industry and its stakeholders in developing and promoting a unified European policy framework that

accelerates the transition to a circular system for the apparel and footwear industry. Between them, the three organisations represent more than 500 brands, retailers, manufacturers, and other stakeholders.