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EU-wide end-of-waste criteria for preparing for re-use and remanufacturing of textile, textile-related and footwear waste

JRC technical proposals

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Abstract

Textile waste was selected as a priority stream for EU-wide EoW criteria development following an earlier scoping study by the Joint Research Centre (JRC). The absence of an EU-wide harmonised legal framework for granting end-of-waste (EoW) status to textile, textile-related and footwear waste that is destined for preparing for re-use or remanufacturing creates considerable regulatory uncertainty for waste-management operators, re-use platforms, remanufacturers and downstream users of recovered products. Introducing EU-wide EoW criteria for these streams would eliminate the current fragmentation among Member States and across the value chain, thereby unlocking market potential for high-quality second-hand or remanufactured goods.

The objective of this study was to develop a set of technical proposals for EU-wide EoW criteria for textile, textile-related and footwear waste, in accordance with Article 6 of Directive 2008/98/EC. This report focuses on the sorting, preparing for re-use and remanufacturing phases, while a separate report addresses recycling operations.

This study provides a comprehensive overview of the textile sector, its waste generation patterns, and the existing re-use and remanufacturing pathways. It examines market-relevant aspects such as demand for second-hand textiles, trade flows, technical requirements and applicable standards. The study also reviews relevant EU and national legislation and assesses environmental and human-health impacts, including the presence of chemicals of concern throughout the value chain. A comparative review of national EoW provisions for textile re-use and remanufacturing across Member States is also presented.

Drawing on inputs from a broad spectrum of stakeholders and on-site visits, the JRC has drafted technical proposals for EU-wide EoW criteria for preparing for re-use and remanufacturing of textile, textile-related and footwear waste. The proposed criteria address requirements for input materials, handling and treatment processes, product-quality specifications, quality-assurance procedures and obligations for transparent information provision.

The possible adoption of these EU-wide EoW criteria is expected to remove legal barriers, boost market confidence and stimulate the circular use of textile, textile-related and footwear products. Consequently, the measures will support the EU Green Deal objectives and contribute to the transition towards a sustainable textile economy.

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Executive summary

Policy context

The EU is increasingly positioning re-use and remanufacturing at the core of the textile sector's circular transition. In March 2022, the Commission launched the EU Strategy for Sustainable and Circular Textiles, a cornerstone of the European Green Deal and the Circular Economy Action Plan. The strategy sets out an ambitious vision: to turn textiles into a greener, more competitive and resource-efficient industry by fostering durability, reparability, recyclability and circular design.

More recently, the Ecodesign for Sustainable Products Regulation (ESPR) ((EU) 2024/1781) introduced a ban on the destruction of unsold consumer goods, including apparel, accessories and footwear. The ban expressly excludes preparation for re-use and remanufacturing, which are actively promoted as circular practices.

The Waste Framework Directive (WFD) (2008/98/EC) mandates Member States to set up a separate collection system for textiles as of 1 January 2025 and to establish extended producer responsibility (EPR) obligations for textile, textile-related and footwear products. Under the Polluter Pays Principle, producers must finance and organise the collection, sorting and preparation for re-use of post-consumer textiles, thereby creating a financial incentive to invest in re-use hubs and remanufacturing facilities. The WFD also prioritises remanufacturing over recycling for items deemed unsuitable for re-use.

Article 6(1) of the WFD lays down four main conditions for end-of-waste (EoW), namely that:

> *"(a) the substance or object is to be used for specific purposes;*
> *(b) a market or demand exists for such a substance or object;*
> *(c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and*
> *(d) the use of the substance or object will not lead to overall adverse environmental or human health impacts".*

Article 6(2) lists the detailed criteria to be considered when establishing EoW criteria, namely:

> *"(a) permissible waste input material for the recovery operation;*
> *(b) allowed treatment processes and techniques;*
> *(c) quality criteria for end-of-waste materials resulting from the recovery operation in line with the applicable product standards, including limit values for pollutants where necessary;*
> *(d) requirements for management systems to demonstrate compliance with the end-of-waste criteria, including for quality control and self-monitoring, and accreditation, where appropriate; and*
> *(e) a requirement for a statement of conformity."*

Building on its commitment to examine the feasibility of developing EU-wide end-of-waste or by-product criteria for selected waste streams[1], the Commission undertook a scoping study

[1] COM/2020/98 final: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN

(Orveillon et al., 2022) to identify possible candidate streams. Textile waste was ranked as the second priority stream, after plastic waste, for the development of EU-wide EoW criteria.

The present study develops technical proposals for EU-wide EoW criteria for textile waste, targeting the preparing for re-use and remanufacturing operations. The recommendations set out herein are intended to form the technical proposals based on which the Commission may in the future develop a legal act laying down the Union-wide EoW criteria for textile waste to be adopted according to Art. 6(2) of the WFD.

Related and future JRC work

EU-wide EoW criteria have already been successfully laid down for: iron, steel and aluminium scrap (Council Regulation (EU) 333/2011), based on the JRC proposals for aluminium and aluminium alloy scrap (Muchova & Eder, 2010a) and for iron and steel scrap (Muchova & Eder, 2010b); copper scrap (Commission Regulation (EU) 715/2013), based on the JRC proposals for copper and copper alloy scrap (Muchova et al., 2011); and glass cullet (Commission Regulation (EU) No 1179/2012), based on the related JRC proposals (Rodriguez Vieitez et al., 2011).

Besides, based on the JRC proposals for biodegradable waste subjected to biological treatment (Saveyn & Eder, 2014), the Commission adopted requirements for Component Material Categories (CMCs) that can cease to be waste pursuant to Article 19 of the Fertilising Products Regulation (EU) No 2019/1009, including requirements for: CMC 3 (compost) and CMC 5 (digestate other than fresh crop digestate) under Regulation (EU) No 2019/1009; CMC 12 (precipitated phosphate salts and derivates) under Commission Delegated Regulation (EU) No 2021/2086); CMC 13 (thermal oxidation materials and derivates) under Commission Delegated Regulation (EU) No 2021/2087; CMC 14 (pyrolysis and gasification materials) under Commission Delegated Regulation (EU) No 2021/2088 and CMC 15 (recovered high purity materials) under Commission Delegated Regulation (EU) No 2022/1171.

In parallel, the JRC is working on the development of technical proposals for EoW criteria for textile recycling (presented in Egle et al. (2026)) as well as for recycling of construction and demolition waste.

Notably, this is the first time EU-wide EoW criteria are being developed for preparation for re-use and remanufacturing; earlier initiatives predominantly focused on recycling.

Quick guide

This document presents a structured methodology for drafting EU-wide EoW criteria that target the preparation for re-use and the remanufacturing of textile, textile-related and footwear waste. It first outlines the textile value chain, from raw-material production to waste generation, and reviews how waste destined for re-use or remanufacturing is classified, the available management options and market-related considerations. The report then details the relevant information for formulating EoW criteria, including standards, waste and product legislation, and the environmental and human-health impacts. A comparative map of existing EoW criteria across Member States is also provided. Based on this background, the report proposes EoW criteria for preparing for re-use and remanufacturing, organised by requirement category, and incorporates stakeholder feedback and the accompanying assessment, while also acknowledging existing national EoW provisions and guidelines.

JRC proposal for EU-wide end-of-waste criteria for preparing for re-use and remanufacturing of textile, textile-related and footwear waste

As indicated above, this study was carried out by the JRC and aimed at supporting the Commission in the implementation of Article 6 of Directive 2008/98/EC, by developing technical proposals for **EU-wide EoW criteria for preparing for re-use and remanufacturing**[2] (see **Table 1**).

The scope encompasses:

— **post-consumer household textile waste**[3];

— **post-consumer commercial textile waste**[4]; and

— **pre-consumer textile waste**[5].

It is proposed to include all **textile, textile-related and footwear categories** within the scope, including apparel, clothing accessories, home/interior textiles, non-clothing accessories, workwear, technical textiles and footwear. Mattresses, upholstery and other bulky items[6] are outside the scope.

The JRC proposes that **EoW status for preparing for re-use** shall be granted to a textile, textile-related or footwear item that:

— has undergone sorting for re-use operations and preparing for re-use, wherever needed;

— complies with the full set of EoW criteria for preparing for re-use; and

— is ready to be placed on the second-hand market without any further processing.

The JRC proposes to include an additional possibility to grant **EoW status to items not suitable for re-use that are redirected to remanufacturing**. EoW status for remanufacturing shall be granted to a remanufactured textile, textile-related or footwear item that:

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2 Remanufacturing is defined in Article 2(16) of Regulation (EU) 2024/1781 (ESPR) as "actions through which a new product is produced from objects that are waste, products or components and through which at least one change is made that substantially affects the safety, performance, purpose or type of the product".

3 Post-consumer household textile waste is generated at household level and can contain the following textile categories and items: clothing, clothing accessories, footwear, home/interior textiles, other items partially or fully made of textile materials.

4 Post-consumer commercial textile waste arises from any commercial or industrial activities such as hospitality, healthcare, agriculture, environment, construction. Technical textiles also belong to this category (e.g. textiles for filtration, professional cleaning items, workwear with highly technical features, personal protective clothing and footwear).

5 Pre-consumer textile waste is generated at retail level, including excess stock, returns and discarded unsold goods.

6 Bulky items can be understood in this context as textile-based articles that, due to their size, weight, thickness, filling structure or multi-material construction, are not consistently compatible with standard collection, sorting, and preparing for re-use systems established for clothing and household textiles. This category includes, irrespective of whether individual items may physically fit into post-consumer textile collection containers, articles that typically require separate handling, specialised processing or alternative treatment routes. These include but are not limited to: mattresses and mattress toppers; duvets, pillows and other filled bedding articles; foam-filled garden cushions and similar outdoor furnishing textiles; large carpets and rugs that do not fit into standard post-consumer textile collection containers; and upholstery.

— has been deemed unsuitable for re-use;

— has undergone a remanufacturing operation;

— complies with the full set of EoW criteria for remanufacturing; and

— is ready to be placed on the market again without any further processing.

Table 1. JRC proposal for EU-wide end-of-waste criteria for preparing for re-use and self-monitoring requirements

No	Proposed end-of-waste criteria	Proposed self-monitoring requirements
Requirements on input materials		
1.1	All incoming textile, textile-related and footwear waste shall undergo a preliminary sorting step to remove any unnecessary non-textile items followed by a sorting for re-use operation to identify which textile, textile-related or footwear items meet the following conditions for direct re-use: (a) items do not exhibit excessive wear[7], do not emit unpleasant odours and do not show signs of dirt[8]; and (b) items do not have missing parts critical to their use, except for minor faults[9]. Textile, textile-related and footwear items that do not meet these conditions but are identified as potentially fit for re-use after checking, cleaning or repairing recovery operations shall be re-directed to appropriate preparing for re-use steps. Textile, textile-related and footwear items identified as unsuitable for re-use and for preparing for re-use already at this stage shall be redirected to sorting for remanufacturing, as a preferential option wherever possible, or (sorting for) recycling.	Acceptance control by visual, tactile and olfactory inspection of all waste received and of the accompanying documentation shall be carried out by qualified staff. Automated inspection systems that provide equivalent verification of item quality and suitability for re-use shall also be accepted. The producer or another operator of the sorting facility shall document that the textiles, textile-related and footwear items suitable for re-use meet minimum quality standards to ensure their suitability for re-use, as verified by qualified staff or validated automated systems during the pre-sorting process. Records of the sorting operations, including the quantities and types of items identified as suitable for re-use, shall be kept within the quality management system.
1.2	The textile, textile-related and footwear waste streams to be redirected to sorting for re-use and sorting for remanufacturing may originate from	Acceptance control by tactile and visual inspection and analysis of accompanying documentation of all textile, textile-related and footwear waste received shall be carried out by

7 Excessive wear understood as signs of use that compromise the overall re-usability of the item, including significant thinning of fabric, fraying, or stretched seams.

8 Dirt may be shown in the form of stains, mould or residues.

9 Minor faults are understood as defects that do not compromise the overall re-usability and hence do not impede the possible resale of an item.

	any source, with the exception of mixed municipal solid waste. The following items shall be eliminated from the re-use and the remanufacturing streams: (a) healthcare textiles; (b) carpets and rugs; (c) reusable absorbent hygiene products; (d) technical textiles including protective footwear; The suitability of the items listed under points (a)-(d) for recycling shall be assessed as a preferential option in compliance with the end-of-waste criteria for recycling. If qualified staff, in the course of verification, have reasonable grounds to suspect that certain items may contain substances restricted under Regulation (EU) No 1907/2006 (REACH) and/or Regulation (EU) 2019/1021 (POPs), such items shall be specifically identified and redirected to recycling or other recovery operations.	qualified staff who are trained on how to recognise input restricted under this criterion. The producer or another operator of the treatment facility shall define appropriate risk management measures to ensure compliance restrictions under these criteria. Particular attention shall be paid to items that are likely to contain substances restricted under Regulation (EU) No 1907/2006 (REACH) and/or Regulation (EU) 2019/1021 (POPs). The operator shall define appropriate methods to ease the identification of articles likely to contain those substances. The producer or another operator of the treatment facility shall document and record all control measures, including records of input waste (date, origin, type, weight and/or quantity) and rejected/removed items (type, quantity and reason for rejection/removal), within the quality management system.
Requirements on treatment processes and techniques		
2.1	Textile, textile-related and footwear waste shall be handled according to the provisions laid down in Article 22d(1) of Directive 2008/98/EC. In addition, output items resulting from a preparing for re-use operation that comply with the EoW criteria shall be kept separately from any waste material not complying with the EoW criteria. Output items resulting from a remanufacturing operation that comply with the EoW criteria shall be kept separately from any waste material not complying with the EoW criteria. Rejects shall be labelled as waste.	The self-monitoring requirements related to the handling of textile, textile-related and footwear waste shall be documented and recorded under the quality management system.
2.2	The sorting and preparing for re-use processes shall include all treatment steps needed to prepare textile and textile-related items to reach the targeted quality for re-use, as defined by the product quality requirements (cf. criteria 3.1, 3.2, 3.3). Items assessed as not suitable for re-use shall be sorted for remanufacturing, as a preferential option wherever possible, or for recycling. The sorting for remanufacturing and remanufacturing operations shall include all	All treatment steps must be documented under the quality management system. The producer or another operator shall keep track of items redirected to sorting for remanufacturing and/or recycling and record them under the quality management system. Output items resulting from preparing for re-use operations and remanufactured items packed in a bale shall be labelled with relevant information to facilitate efficient processing by the next holder and avoid the need for

	treatment steps needed to prepare the textile and textile-related items to be placed on the market again, in compliance with the product quality requirements (cf. criteria 3.1, 3.2, 3.3). Items assessed as not suitable for remanufacturing shall be redirected to sorting for recycling.	additional sorting upon receipt, in line with the provisions laid down in Article 22d(8) and 22d(9) of Directive 2008/98/EC.
2.3	Footwear items deemed potentially suitable for re-use shall undergo cleaning and/or sanitation where appropriate, based on professional assessment and market requirements. Footwear items assessed as not suitable for re-use shall be sorted for remanufacturing, as a preferential option wherever possible, or for recycling.	The cleaning and/or sanitation steps shall be documented and recorded under the quality management system, including the amount and type of treated items and the cleaning and/or sanitation technique used.
Requirements on product quality		
3.1	Output textile, textile-related and footwear items resulting from sorting for re-use, preparing for re-use and remanufacturing operations: (a) shall not emit persistent unpleasant odours and shall not show signs of dirt[10]; and (b) shall be functional, with essential parts present to enable normal use. Output items may present minor faults[11] provided these do not compromise intended functionality or safety. Items that do not meet these conditions shall be redirected to recycling.	Qualified staff shall conduct visual, tactile and olfactory inspections to verify that textiles intended for re-use meet cleanliness and functionality standards. Automated inspection systems that provide equivalent verification of item quality shall also be accepted. Qualified staff shall grade the output materials in line with established market practices. Records of inspections, including quantities and any rejected items, shall be kept within the quality management system.
3.2	Output items resulting from sorting and preparing for re-use operations shall demonstrably fulfil all legal requirements and shall comply with customer specifications, industry specifications or standards for direct re-use. Remanufactured items shall demonstrably fulfil all legal requirements and shall comply with customer specifications, industry specifications or standards applicable to products of the same nature.	Qualified staff shall verify that each batch in the consignment complies with the legal requirements and appropriate specifications or standards through proportional, risk-based checks. Compliance shall be verified at batch level rather than for individual items. The compliance procedure shall be documented under the quality management system.
3.3	Output textile, textile-related and footwear items resulting from sorting and subsequent preparing	Qualified staff shall carry out visual inspection of each batch in the consignment, to detect

[10] Dirt may be shown in the form of stains, mould or residues.

[11] Minor faults are understood as defects or imperfections that do not compromise the overall (re-)usability of an item.

	for re-use operations shall, to the extent possible, be free from materials that are not necessary for the functional use of the article and that were not part of its original sales unit. Examples of such materials are paper, wood, plastic, rubber, metal, stone, ceramics, porcelain or other non-textile materials. However, this does not relate to labels, hang tags, packaging or traceability elements associated with the original article. Output items resulting from remanufacturing operations shall not present any materials that are not necessary for the functional use of the article.	anomalies in product qualities. Automated inspection systems that provide equivalent verification are also accepted. Those procedures shall be documented and recorded under the quality management system.
Requirements on quality assurance procedures		
4.1	1. The producer shall implement a quality management system that allows it to demonstrate compliance with the end-of-waste criteria. 2. The quality management system shall include a set of documented procedures concerning each of the following aspects: (a) monitoring of waste entering sorting, preparing for re-use or remanufacturing operations (including quality control and risk management measures); (b) monitoring of the treatment processes and techniques; (c) monitoring of the quality of output items resulting from preparing for re-use or remanufacturing operations; (d) record keeping of the results of monitoring conducted under points (a). (b) and (c); (e) record keeping of feedback from customers concerning the quality of the output items; (f) record keeping of the actions taken to improve the performance of the preparing for re-use or remanufacturing operations, in order to addressed observed non-compliance with the end-of-waste criteria; (g) review and improvement of the quality management system; and (h) training of staff. 3. The quality management system shall cover all the specific self-monitoring requirements set out for each end-of-waste criterion and the statement of conformity. 4. The quality management system shall be assessed by one of the following bodies: (a) a conformity assessment body; or (b) an environmental verifier. 5. The bodies referred to in paragraph 4 shall verify that the quality management system fulfils the requirements on procedures referred to in paragraph 2. The verification shall be carried out every three years. 6. Environmental verifiers, referred to in paragraph 4, point (b), shall be permitted to perform the verification referred to in paragraph 5 only if such bodies have obtained an accreditation or licence	

	with a scope covering at least one of the following NACE codes specified in Regulation (EC) No 1893/2006 of the European Parliament and of the Council[12]: - NACE Code 13 (Manufacture of textiles); or - NACE Code 14 (Manufacture of wearing apparel); or - NACE Code 15 (Manufacture of leather and related products); or - NACE Code 22 (Manufacture of rubber and plastic products); or - NACE Code 38 (Waste collection, treatment and disposal activities; material recovery). 7. The producer shall give enforcement authorities, as defined in Article 2, point (26), of Regulation (EC) No 1221/2009, access to the quality management system upon request and make the records referred to paragraph 2, points (d), (e) and (f) electronically available to the relevant national authorities upon request, for at least five years after the date of recording. 8. To be allowed to place output items on the Union market, the importer of such items from preparing for re-use and remanufacturing facilities located in a third country shall require third-country suppliers to implement a quality management system which complies with the requirements set out in paragraphs 1, 2 and 3. This quality management system shall be verified by one of the bodies referred to in paragraph 4, which is accredited or licensed in a Member State to perform verification and validation activities for an organisation located in a third country, in accordance with the specifications laid down in Regulation (EC) No 765/2008 or in Regulation (EC) No 1221/2009 in conjunction with Commission Decision 2011/832/EU[13]. 9. If the importer of output items from preparing for re-use and remanufacturing facilities located in a third country fails to meet the requirements laid down in paragraph 8, the output items to be imported shall be considered waste and, therefore, shall comply with Regulation (EU) 2024/1157.
Requirements on provision of information	
5.1	The producer or the importer shall issue, for each consignment[14] of output items complying with end-of-waste criteria, a statement of conformity in agreement with the model set out in the template. The producer or the importer shall transmit the statement of conformity to the next holder of the consignment. They shall retain a copy of the statement of conformity for at least three years after its date of issue and shall make it available to competent authorities upon request. The statement of conformity may be in electronic form.

Source: own elaboration

12 Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC regulations on specific statistical domains (OJ L 393, 30.12.2006, p. 1, ELI: http://data.europa.eu/eli/reg/2006/1893/oj).

13 Commission Decision 2011/832/EU of 7 December 2011 concerning a guide on EU corporate registration, third country and global registration under Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) (OJ L 330, 14.12.2011, p. 25, ELI: http://data.europa.eu/eli/dec/2011/832/oj).

14 Consignment: a batch of EoW textiles which is intended for delivery from a producer to another holder and may be contained in either one or several transport units, such as containers.

Table 2 contains the proposal for the statement of conformity to be used by the producer/importer of the output material fulfilling the EoW criteria for preparing for re-use and remanufacturing.

Table 2. JRC technical proposal for the statement of conformity (preparing for re-use and remanufacturing)

1.	Unique identification code of the consignment: Details of the installation in which the sorting, preparing for re-use or remanufacturing of the items in this consignment was carried out: Name: European Unique Identifier (EUID) (optional, alternative to the name): Address: Contact person: Tel.: E-mail:
2.	Quantity of the consignment - weight (tonnes), volume (m^3) or number of objects:
3.	Characteristics and intended use of the output items: a) Name or code that identifies the output item, in accordance with legal requirements, standard and product specifications, including customer requirements: b) Main technical characteristics of the output item, in accordance with legal requirements, standard and product specifications, including customer requirements:
4.	The items in this consignment comply with customer requirements, industry specifications or a standard referred to in point 3.
5.	The items within this consignment meet the criteria on input materials, on treatment processes and techniques, and on product quality.
6.	The producer applies a quality management system assessed by an accredited conformity assessment body, which is accredited by a national accreditation body, or by an environmental verifier as defined in Article 2, point (20)(b), of Regulation (EC) No 1221/2009. Where output items which have ceased to be waste are imported into the customs territory of the Union, the quality management system shall be verified by an accredited conformity assessment body, which is accredited by a national accreditation body, or by an environmental verifier, who shall obtain a specific accreditation or licence to operate in a third country, in accordance with the specifications laid down in Regulation (EC) No 765/2008 or in Regulation (EC) No 1221/2009 in conjunction with Commission Decision 2011/832/EU.
7.	The material in this consignment is intended to be placed directly on the market. It cannot be recycled or used for any other purpose. Where these conditions are not met, the user of this material shall handle it as waste and shall inform the producer.
8.	Declaration of the producer/importer: I certify that the above information is complete and correct to the best of my knowledge: Name: Date: Signature:

Source: own elaboration

1. Introduction

1.1. EU regulatory framework on textiles

The EU regulatory framework increasingly positions re-use and remanufacturing as central to the circular transition of the textile sector.

In March 2022 the Commission launched the **EU Strategy for Sustainable and Circular Textiles**[15], a cornerstone of the European Green Deal and the Circular Economy Action Plan (CEAP). The strategy aims to transform the textile sector into a greener, more competitive, and resource-efficient industry by prioritising durability, reparability, recyclability and circularity. Key objectives include increasing recycling capacity for fibres, reducing environmental and social impacts across the value chain, and ensuring textiles are designed for re-use and remanufacturing.

The minimisation of environmental impacts of textile manufacturing processes at large EU textile production plants is addressed in the Best Available Techniques (BAT) **Reference Document (BREF) for the Textiles Industry**[16] under the Industrial Emissions Directive (2010/75/EU).

To address the environmental impacts linked to production and waste management of textiles, the **Ecodesign for Sustainable Products Regulation** (ESPR) ((EU) 2024/1781), adopted in June 2024, introduces a ban on the destruction of unsold consumer products for economic operators, including apparel and clothing accessories as well as footwear. The provisions are laid down in Chapter VI of the ESPR (Destruction of unsold consumer products). Article 25(1) sets a ban on the destruction of unsold consumer products listed in Annex VII (reported in **Annex 1** to this document). This prohibition, effective from July 2026 for large enterprises and from July 2030 for medium-sized businesses, excludes preparing for re-use and remanufacturing, which are explicitly encouraged as circular practices.

Future **eco-design requirements** under Article 4 will further promote sustainability, with textiles and footwear prioritised for rules such as modular designs, material transparency, and durability standards to enable multiple re-use cycles.

Voluntary initiatives, such as the **EU Ecolabel criteria** for textile products[17] and the **EU Green Public Procurement (GPP) criteria** for textile products and services[18], already incorporate reusability and durability requirements, setting a foundation for future regulatory mandates. The EU Ecolabel, for instance, prioritises textiles that can withstand repeated washing and repair, while GPP may favour products designed for circularity.

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15 EU Strategy for Sustainable and Circular Textiles: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0141

16 BREF for the Textiles Industry: https://publications.jrc.ec.europa.eu/repository/handle/JRC131874

17 Commission Decision 2014/350/EU of 5 June 2014 establishing the ecological criteria for the award of the EU Ecolabel for textile products (OJ L 174, 13.6.2014, p. 45–83): https://eur-lex.europa.eu/eli/dec/2014/350/oj/eng

18 EU green public procurement criteria for textile products and services, SWD (2017) 231 final: https://publications.jrc.ec.europa.eu/repository/handle/JRC107241

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (**REACH**) sets regulatory requirements for chemicals, which also concern textile products. These are, amongst others, restrictions on manufacturing, placing on the market and use of certain chemical substances on their own, in mixtures and articles (as regulated in its Annex XVII).

The **Waste Framework Directive** (WFD) (2008/98/EC) lays down a separate collection obligation for textiles (Article 11(1)), which has applied since 1 January 2025. The latest amendment to the WFD[19] focuses on textile waste (in line with the EU strategy for sustainable and circular textiles) and on food waste (to support the Farm to Fork Strategy[20]). Conforming to the Polluter Pays Principle[21], Article 22a of the WFD mandates Member States to establish extended producer responsibility (EPR) obligations for textile, textile-related and footwear products, listed in Annex IVc (see **Annex 2** to this document). EPR obligations align with the EU strategy's circular goals, requiring producers to finance and organise the collection, sorting and re-use of post-consumer textiles. EPR will incentivise investment in re-use hubs and remanufacturing infrastructure, to divert textiles from landfills.

Article 22d(c) of the amended WFD mandates that "*items that are assessed as not suitable for re-use are sorted for remanufacturing and recycling including, where technological progress allows, fibre-to-fibre recycling, with a view to* ***prioritising remanufacturing over recycling***".

1.2. EU regulatory framework on end-of-waste

The WFD defines in Article 6(1) the general conditions that a waste material has to fulfil to cease to be waste: *"Member States shall take appropriate measures to ensure that waste which has undergone a recycling or other recovery operation is considered to have ceased to be waste if it complies with the following conditions:*

(a) the substance or object is to be used for specific purposes;
(b) a market or demand exists for such a substance or object;
(c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and
(d) the use of the substance or object will not lead to overall adverse environmental or human health impacts."

In 2009, the Joint Research Centre (JRC) published a general methodology analysing the principles according to which the criteria should be set and providing the related methodological framework required to determine EoW criteria (Delgado et al., 2009). This methodology was incorporated into the WFD, Article 6(2), in the following terms:

"The Commission shall monitor the development of national EoW criteria in Member States, and assess the need to develop Union-wide criteria on this basis. To that end, and where appropriate, the

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19 Targeted amendment of the WFD: https://eur-lex.europa.eu/legal-content/AUTO/?uri=CELEX:32025L1892&qid=1768311971278&rid=1

20 Farm to Fork Strategy: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0381

21 As referred to in Article 191(2) of the Treaty on the Functioning of the European Union (TFEU).

Commission shall adopt implementing acts in order to establish detailed criteria on the uniform application of the conditions laid down in paragraph 1 to certain types of waste.

Those detailed criteria shall ensure a high level of protection of the environment and human health and facilitate the prudent and rational utilisation of natural resources. They shall include:

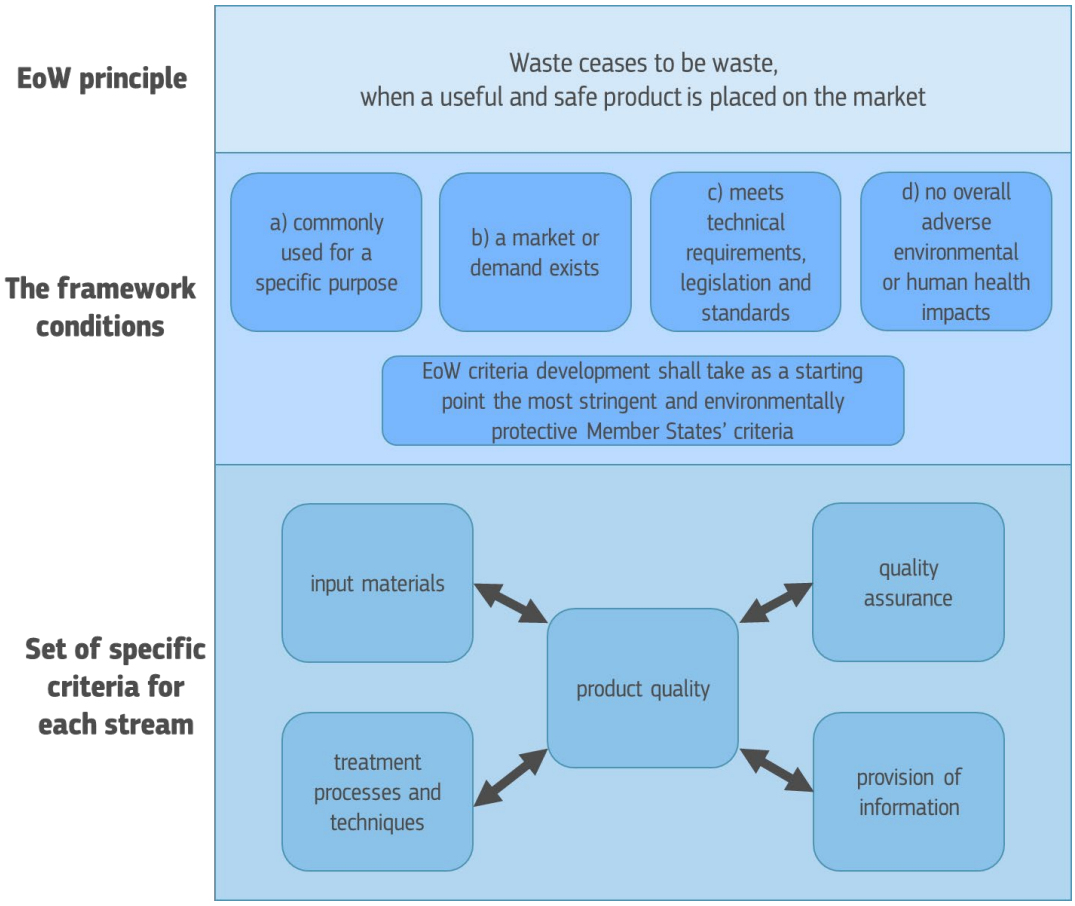
> *(a) permissible waste input material for the recovery operation;*
> *(b) allowed treatment processes and techniques;*
> *(c) quality criteria for end-of-waste materials resulting from the recovery operation in line with the applicable product standards, including limit values for pollutants where necessary;*
> *(d) requirements for management systems to demonstrate compliance with the end-of-waste criteria, including for quality control and self-monitoring, and accreditation, where appropriate; and*
> *(e) a requirement for a statement of conformity."*

Additionally, the Commission shall take as a starting point the most stringent and environmentally protective EoW criteria established in Member States:

"When adopting those implementing acts, the Commission shall take account of the relevant criteria established by Member States in accordance with paragraph 3 and shall take as a starting point the most stringent and environmentally protective of those criteria".

Figure 1 shows the conceptual approach and framework conditions for the development of EoW criteria, taking into account the JRC methodology.

Figure 1. Conceptual approach of the EoW mechanism, framework conditions and elements of EoW criteria



Source: own elaboration

EoW criteria have already been successfully laid down for:

— iron, steel and aluminium scrap (Regulation (EU) No 333/2011);

— glass cullet (Regulation (EU) No 1179/2012);

— copper scrap (Regulation (EU) No 715/2013).

In addition to the EoW criteria listed above, the Commission adopted requirements for Component Material Categories (CMCs) that can cease to be waste pursuant to Article 19 of the Fertilising Products Regulation ((EU) 2019/1009)[22]. They include requirements for:

— CMC 3 (Compost) and CMC 5 (Digestate other than fresh crop digestate) under Regulation (EU) 2019/1009;

— CMC 10 (Processed manure) under Commission Delegated Regulation (EU) 2024/1682;

[22] Regulation (EU) 2019/1009: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02019R1009-20230316#M2-2

— CMC 12 (Precipitated phosphate salts and derivates) under Commission Delegated Regulation (EU) 2021/2086);

— CMC 13 (Thermal oxidation materials and derivates) under Commission Delegated Regulation (EU) 2021/2087;

— CMC 14 (Pyrolysis and gasification materials) under Commission Delegated Regulation (EU) 2021/2088;

— CMC 15 (Recovered high purity materials) under Commission Delegated Regulation (EU) 2022/1171.

The implementation of EoW criteria for plastic waste is currently under way.

Notably, this is the first time the development of EU-wide EoW criteria is focused on the preparation for re-use and remanufacturing operations. Earlier initiatives have predominantly focused on recycling.

1.3. Scoping exercise to identify candidate streams

Further to the commitment to assess the scope to develop EU-wide EoW or by-product criteria for certain waste streams[23], the Commission carried out a scoping exercise in 2021 to identify candidate streams (Orveillon et al., 2022).

The potential of 11 categories of waste and by-products for the development of EU-wide EoW or by-product criteria was appraised using the following ranking criteria:

— level of support from stakeholders to develop further EU-wide EoW or by-product criteria;

— current collection and material re-use/recycling rates;

— identified uses, types of uses (recycling versus other recovery operations) and impacted economic sectors;

— estimated EU market value;

— intra- and extra-EU shipments;

— purity/composition of recovered materials and possibility to recover critical raw materials;

— evidence of demand;

— existence of relevant international or national product standards;

— existence of national or regional EoW or by-product criteria;

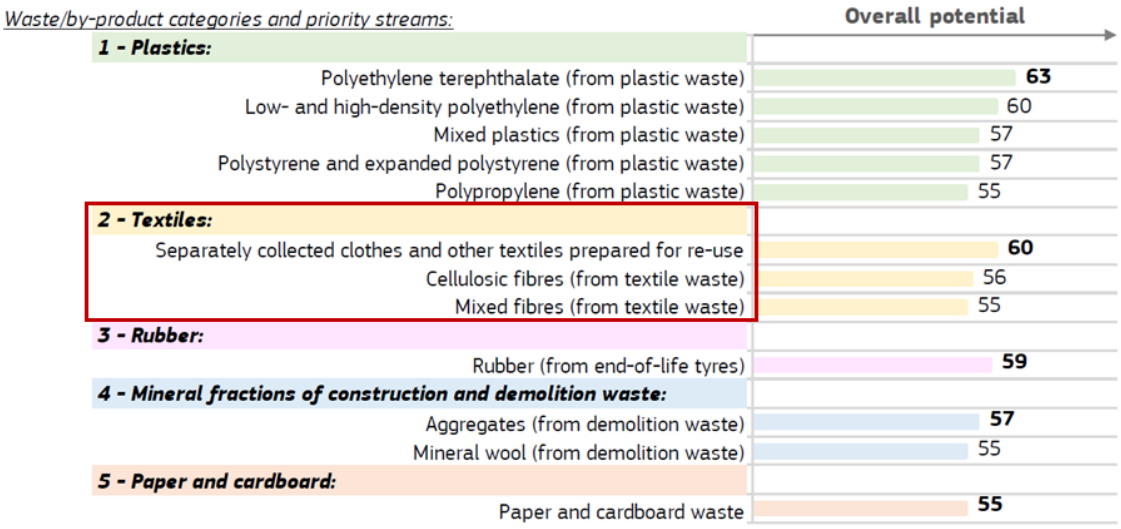
— expected environmental and human health impacts.

Figure 2 presents the results of the scoping study, grouped by category of waste/by-product. **Textile waste** was ranked as the **second priority stream** for the development of **EoW criteria**,

[23] COM/2020/98 final: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN

after plastic waste. The JRC recently released a report on technical proposals for EU-wide EoW criteria for plastic waste (see Pierri et al., 2024).

Figure 2. List of priority streams grouped per category, and ranked based on their overall potential, according to the scoring system



Source: Orveillon et al. (2022)

Figure 3 presents the final ranking of the waste streams that were scored as top candidates for the development of EoW or by-product criteria.

Three main textile waste streams (highlighted in green in **Figure 3**) were included in the priority list:

— separately collected clothes and other textiles prepared for re-use;

— cellulosic fibres (from textile waste);

— mixed fibres (from textile waste).

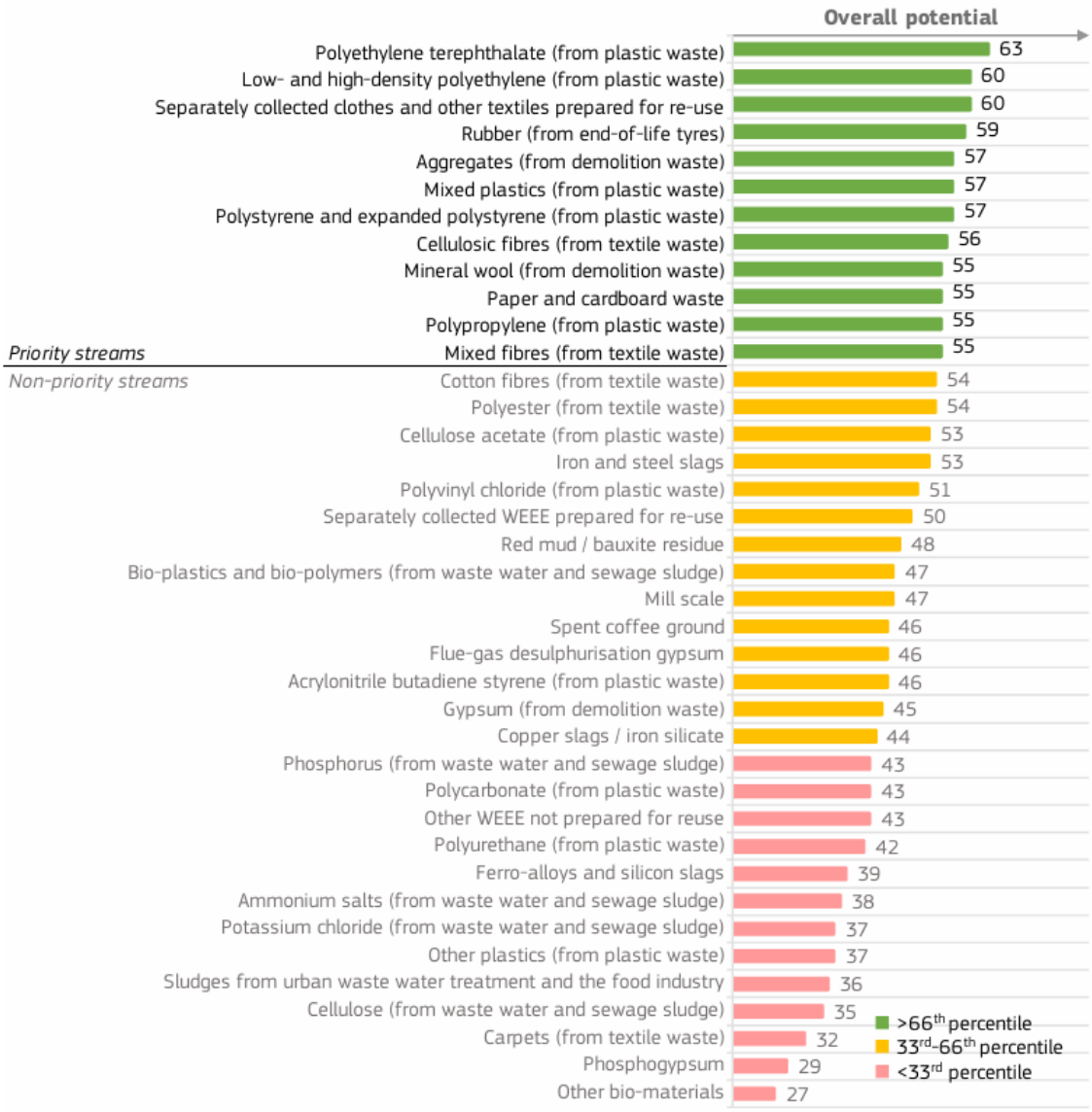
Two textile waste streams (highlighted in yellow in **Figure 3**) are just below the cut-off line of priority streams:

— cotton fibres (from textile waste);

— polyester fibres (from textile waste).

The waste stream *carpets (from textile waste)* is at the bottom of the ranking (highlighted in red in **Figure 3**).

Figure 3. Final ranking of the candidate streams for which to develop further EU-wide EoW or by-product criteria based on their overall potential



Source: Orveillon et al. (2022)

Since textiles destined for re-use were near the top of the ranking, the JRC considered devising EoW criteria for those streams. Acknowledging that the preparing for re-use and recycling operations are fundamentally different, the JRC opted to develop two separate sets of EoW criteria: one focused on the preparing for re-use operation and another covering recycling.

It is worth highlighting that in the latest phase of the project the criteria for preparing for re-use were complemented by specific requirements applicable to the remanufacturing operation, in line with the targeted amendment of the WFD, which fosters the prioritisation of remanufacturing over recycling, as mentioned above. Incorporating remanufacturing as an explicit, regulated pathway alongside preparation for re-use strengthens the overall circularity of the textile sector.

1.4. Objectives and possible impacts

This study aims to deliver **technical proposals for EU-wide EoW criteria for textile waste**. In particular, the proposals focus on **preparing for re-use** and on **remanufacturing**.

Possible impacts of the implementation of EU-wide EoW criteria for preparing for re-use and remanufacturing of textile, textile-related and footwear waste are:

— **Environmental and human health impacts**:

- By promoting re-use and remanufacturing, EoW criteria contribute to diverting textiles from landfills and incineration, therefore reducing greenhouse gas emissions.
- By establishing clear criteria, robust quality-assurance mechanisms and supportive policy instruments, the EU can unlock the full potential of textile re-use and remanufacturing, ensuring that discarded textiles re-enter the market at the highest possible value level, thereby maximising resource efficiency.
- By extending the life cycle of textile items, EoW criteria can contribute to reducing the demand for virgin materials, possibly resulting in energy and materials savings.
- EoW criteria enforce sorting, cleaning and quality assurance procedures, thereby reducing the risk of contaminated materials entering the (second-hand) market.

— **Economic/market impacts**:

- By setting clear requirements for sorting, preparing for re-use and remanufacturing, EoW criteria contribute to building trust among buyers and sellers, fostering a more reliable market for second-hand and remanufactured goods.
- EoW criteria can contribute to increase the quality of exported textiles for re-use, thereby reducing the risk that second-hand textiles end up being landfilled in the importing country.
- By harmonising EU standards, EoW criteria make it easier for EU producers and importers to export re-usable textiles to third countries, enhancing market access.
- By harmonising sorting and preparing for re-use operations, EoW criteria could incentivise the upgrade of the collection and sorting system.
- EU-wide EoW criteria would simplify compliance across Member States, reducing administrative burdens and fostering a level playing field.

— **Legal impacts**:

- The criteria support the Circular Economy Action Plan and the EU Strategy for Textiles by promoting waste prevention, re-use and sustainable consumption.
- The criteria support the implementation of Article 22a, 22c and 22d of the amended WFD concerning EPR for textiles and management of used textiles and textile waste.
- By reducing illegal dumping of used textiles in non-EU countries, the criteria also support the enforcement of the Basel Convention.

1.5. Structure of this document

This document is structured as follows:

— Chapter 2 provides a brief overview of the textiles value chain and includes relevant definitions;

— Chapter 3 presents an overview of textile production and the EU textile market;

— Chapter 4 contains relevant background information on textile waste, including definitions and a detailed overview of the textile waste management chain;

— Chapter 5 contains additional information that is key for the development of EoW criteria, namely market-related aspects, standards and relevant legislative aspects, environmental and human health impacts, complemented by a mapping of existing EoW criteria in Member States;

— Chapter 6 presents the draft proposals for EU-wide EoW criteria for preparing for re-use and remanufacturing;

— Chapter 7 presents the conclusions of this work.

2. Methodology for the development of technical proposals

The study to develop a technical proposal for EoW criteria for preparing for re-use and remanufacturing of textile, textile-related and footwear waste was launched on 19 April 2023 with a kick-off meeting hosted by the Joint Research Centre (JRC). The scope of the meeting was to present the initial scope for the development of EoW criteria for textile waste and to present preliminary data gathered through a short stakeholder survey.

The work was initially focused on preparing for re-use and recycling.

A second workshop was held on 25 October 2023, to present the consolidated scope and preliminary findings and to launch the first consultation phase.

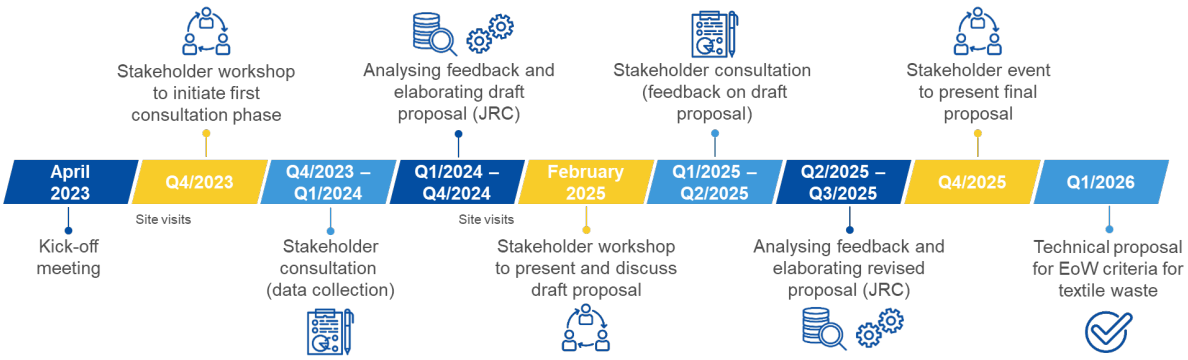
The first consultation round (October 2023-January 2024) aimed at gathering data on collection, sorting and recycling practices as well as opinions about possible requirements on the five main pillars of EoW criteria, i.e. input materials, process and techniques, output materials, quality management system and provision of information. The preliminary proposals were presented to stakeholders on 17 and 18 February 2025, when the second consultation round (February-April 2025) was launched. Stakeholders were asked to fill in an extensive questionnaire with targeted questions and to provide arguments in favour of or against the draft proposals for EoW criteria for preparing for re-use and for recycling. They were also asked to provide additional evidence to support the finalisation of the work.

It is noteworthy that, in the project's latest phase, the criteria for preparing for re-use were extended with dedicated requirements for remanufacturing, an addition that aligns with the proposed amendment to the WFD, which gives remanufacturing priority over recycling.

After a thorough analysis of the feedback received, complemented by site visits, bilateral meetings and in-house research, the JRC presented the proposals at the final stakeholder events on 3 and 4 December 2025. This report presents the EU-wide EoW criteria for preparing for re-use and remanufacturing of textile, textile-related and footwear waste, while EU-wide EoW criteria for recycling of textiles are outlined in Egle et al. (2026).

Figure 4 provides an overview of the project timeline and methodology.

Figure 4. Project timeline and methodology



Source: own elaboration

3. Background information on textile products

This chapter provides a brief description of textile production, from the harvesting and production of fibres up to the finished textile product and the relevant definitions. An overview of the market, trade flows and use of textile products in the EU is also given.

3.1. Textiles production

3.1.1. Textile fibres

The textile value chain starts with the **harvesting and production of raw fibres**.

Natural fibres are categorised into (Roth et al., 2023; Sajn, 2019; Textile_Exchange, 2022):

- animal origin (protein such as wool, hair, silk fibres);
- vegetable origin (cellulose such as bast, leaf and seed fibres);
- mineral origin fibres (e.g. asbestos).

Man-made fibres include (Roth et al., 2023; Sajn, 2019):

- natural polymer origin (plant and animal fibre such as cellulose, alginate, elastodiene and regenerated protein fibres);
- inorganic origin (e.g. glass, carbon, metal, ceramic, as well as fibreglass and gold fibre);
- synthetic origin (petrochemical) (e.g. polyurethane, polyolefin, polyester, polyamide).

3.1.2. Finished textile products

Fibres are prepared for the **manufacturing of yarns** which are produced through spinning. **Production of fabric** consists of different methods, e.g. weaving, knitting and non-weaving. Finishing steps include dyeing, printing and coating, among others. Fabric is then converted into the **finished textile product** (e.g. clothing) (Roth et al., 2023).

In the **Textile Labelling Regulation** (Regulation (EU) No 1007/2011) textile products are defined as "*any raw, semi-worked, worked, semi-manufactured, manufactured, semi-made-up or made-up product which is exclusively composed of textile fibres, regardless of the mixing or assembly process employed*". The Regulation also specifies that "*the following products shall be treated in the same way as textile products:*

(a) products containing at least 80% by weight of textile fibres;
(b) furniture, umbrella and sunshade coverings containing at least 80% by weight of textile components;
(c) the textile components of:
  (i) the upper layer of multi-layer floor coverings;
  (ii) mattress coverings;
  (iii) coverings of camping goods;

provided such textile components constitute at least 80 % by weight of such upper layers or coverings;

(d) textiles incorporated in other products and forming an integral part thereof, where their composition is specified".

Textile products can also contain *non-textile parts of animal origin*, such as down, feathers, leather and bones.

Textile products can be classified into **five main categories** (see **Figure 5**):

- **Clothing** (also known as garments): designed to be worn on the body for different purposes (e.g. covering, protecting or decorating the body).
- **Footwear**: all articles with applied soles designed to protect or cover the foot, including parts marketed separately, as defined in the EU Directive on Footwear Labelling (94/11/EC)[24]. Protective footwear belongs to the technical textiles/footwear category as per Regulation 2016/425/EU[25].
- **Clothing accessories**: items made of textiles or non-textile materials used to fulfil different practical or decorative functions.
- **Home/interior textiles**: textiles used in households for home furnishings as well as in accommodation services.
- **Technical textiles**: engineered fabrics that prioritise function over aesthetics, meeting strict technical and quality standards for specialised uses. They span many sectors and are grouped into sub-categories such as:
    - AgroTech or Agro Textiles – used in agriculture, aquaculture, horticulture and forestry (e.g. crop protection nets);
    - BuildTech – used in building and construction (e.g. architectural membranes);
    - Geotech or Geotextiles – used for soil and civil engineering applications (e.g. separation layers, filters);
    - InduTech or Industrial Textiles – used in manufacturing sectors for specific purposes (e.g. filtration, cleaning);
    - MobilTech – used in automobiles, railways, aerospace, etc. (e.g. seat upholstery, seat belt, carpets, air bags);
    - EcoTech – used for environmental protection (e.g. landfill waste management).

[24] Directive 94/11/EC of European Parliament and Council of 23 March 1994 on the approximation of the laws, regulations and administrative provisions of the Member States relating to labelling of the materials used in the main components of footwear for sale to the consumer (OJ L 100 19.4.1994, p. 37): http://data.europa.eu/eli/dir/1994/11/2013-07-01

[25] Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC (OJ L 81, 31.3.2016, pp. 51–98): http://data.europa.eu/eli/reg/2016/425/oj

Personal Protective Equipment (PPE) is included in the technical textiles category and encompasses products specifically designed and certified to protect the wearer against identifiable occupational health and safety risks and is regulated under Regulation 2016/425/EC. **Protective footwear** is considered PPE according to Regulation 2016/425/EC.

Workwear with advanced technical features, while not always certified as PPE, is also classified as a technical textile because it is designed for demanding professional conditions and incorporates functional features such as weather-resistant or water-repellent coatings, thermal insulation, anti-static or flame-retardant treatments, abrasion-resistant reinforcements, chemical-resistant finishes. These features may be identified by visible cues (reinforced elbows/knees, special textures, ventilation panels) or by product documentation (specifications, care labels, certifications). In contrast, standard uniforms or basic workwear lack measurable performance specifications and provide only basic coverage or durability.

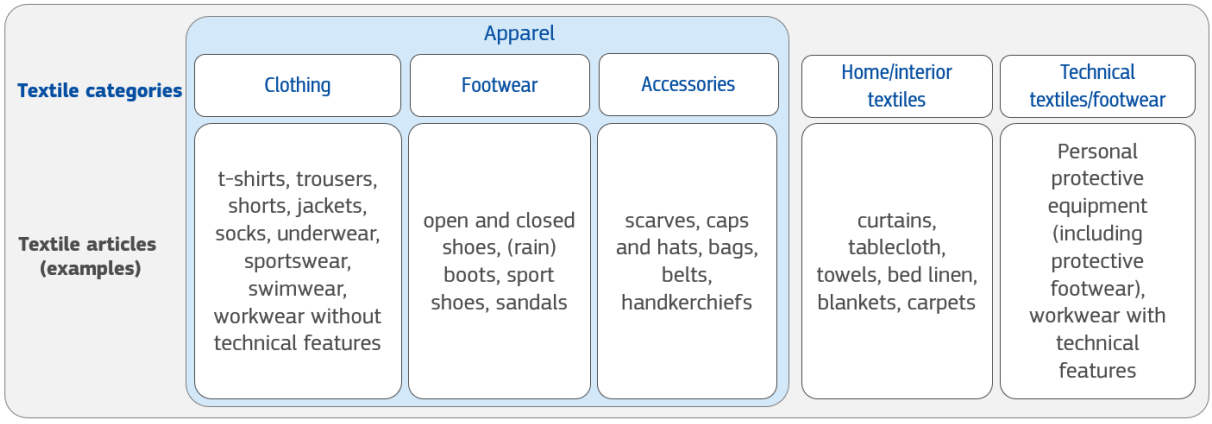
Certain textile products cannot be classified solely by end-use; their classification depends on design intent and functional performance:

— **Workwear without advanced technical features** (standard uniforms, basic service clothing) is considered regular apparel because it provides only basic protection and comfort, without task-specific performance metrics.

— **Raincoats** and **sportswear** are not technical textiles despite functional finishes; they are intended for consumer comfort and recreation, not for defined professional or industrial roles.

Thus, technical textiles are distinguished by purpose-driven design and verified performance for specific operational contexts, whereas conventional apparel and recreational garments prioritise comfort and aesthetics.

Figure 5. Textile categories and exemplary articles



Source: own elaboration

An extensive list of textile items is given in the Eurostat Prodcom database (statistics on the production of manufactured goods)[26] NACE Rev. 2 sector 13 (Manufacture of textiles), sector 14 (Manufacture of wearing apparel) and sector 15 (Manufacture of leather and related products).

3.2. EU textiles market, use and trade flows

The EU plays an important role in the global textiles industry, in terms of importation as well as production and exportation of textile fractions and final products (Köhler et al., 2021).

Huygens et al. (2023 estimated that **12 Mt/year** of textiles are **placed on the EU market**. Around 3 Mt/year are produced in the EU. The production of clothing and accessories made of textiles is predominant in the EU textiles manufacturing industry. Footwear is the second largest subsector in terms of production (EC, 2021b). The share of technical textiles is rapidly increasing, due to growing demand for industrial applications, such as healthcare and automotive (EURATEX, 2022). The production of household textiles is also growing (EC, 2021b).

According to Huygens et al. (2023), **13.5 Mt/year** of fibres, yarns, fabrics and finished products are **imported into the EU**. One third of the imported textile products originate from China. Other relevant suppliers are Bangladesh, Turkey and India (EURATEX, 2022). The EU is the second biggest exporter of textiles[27] after China, with a market share of 27.5% in 2021 (Statista, 2022). Textile products manufactured in the EU are exported mostly to Switzerland, the United Kingdom and the United States, followed by China, Russia and Turkey (EURATEX, 2022).

EEA (2023b) reports **14.9 kg/capita** of **textile consumption**, including clothing, household textiles and footwear.

Private households are the main consumers of clothing and household textiles. A smaller share of the apparent consumption[28] of textiles is attributed to government and businesses (e.g. workwear, uniforms for employees, bed linen for hospitals and hotels etc.) (Köhler et al., 2021).

Köhler et al. (2021) estimated that in 2020 the apparent consumption of clothing and household textiles in the EU-27 was equal to 9.92 kg/capita and 2.36 kg/capita, respectively.

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[26] EUROSTAT - Statistics on the production of manufactured goods: https://ec.europa.eu/eurostat/cache/metadata/en/prom_esms.htm

[27] Including precursors (e.g. fibres, yarns, fabric), textile items and used clothing.

[28] Apparent consumption means domestic retail and textiles placed on the market for business-to-business applications. It is calculated as the sum of EU production plus imports minus exports of finished textiles.

4. Background information on textile waste and used textiles

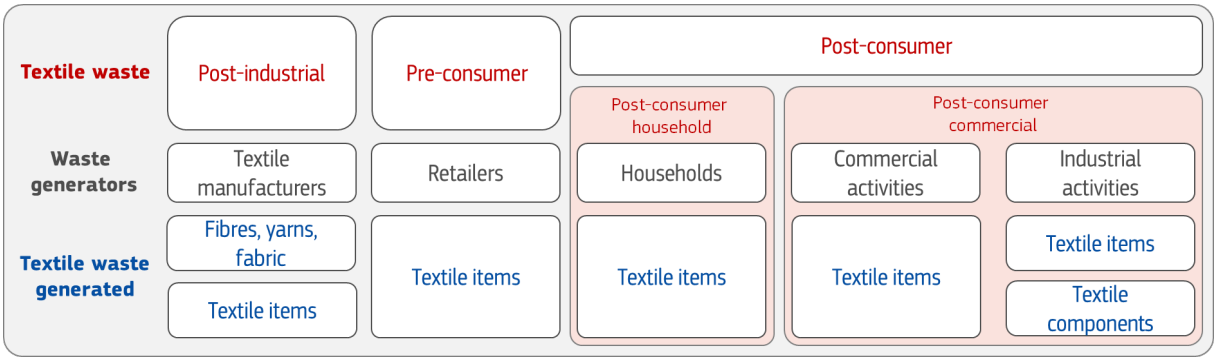
This chapter provides in-depth background information on textile waste, including classification, composition and suitability for re-use or remanufacturing. The different phases of the textile waste value chain, with the relevant definitions, are presented.

The findings presented in this section come from a literature review carried out in-house by the JRC, complemented by information provided by stakeholders.

4.1. Classification of textile waste and suitability for preparing for re-use or remanufacturing

Textile waste[29] can be classified into post-industrial, pre-consumer and post-consumer textile waste (see **Figure 6**).

Figure 6. Classification and sources of textile waste – including textile, textile-related and footwear items



Source: own elaboration

A more detailed description of the origin, composition and suitability of these waste types for preparing for re-use or remanufacturing is given in the following sections.

4.1.1. Post-industrial textile waste

Post-industrial textile waste is generated in the manufacturing of fabrics and textile products. It is generated as a result of technical features of the manufacturing process (e.g. cutting, roll ends), inaccurate resource planning (e.g. excess fabric) or production errors (e.g. defective or damaged fabric) (Aus et al., 2021).

Due to the fact that this fraction does not usually consist of textile items, but rather cut-offs, it is not suitable for preparing for re-use nor for remanufacturing. It is however the preferred feedstock for recycling.

[29] Textile waste includes **textile, textile-related and footwear products**, as defined in the WFD.

4.1.2. Pre-consumer textile waste

Pre-consumer textile waste is generated at retail level, including excess stock, returns and unsold goods (Huygens et al., 2023).

According to recital 37 of Regulation (EU) 2024/1781 on Ecodesign for Sustainable Products (ESPR), unsold consumer product means any consumer product that **has not been sold including surplus stock, excess inventory and deadstock and products returned by a consumer** on the basis of their right to withdrawal in accordance with Article 9 of Directive 2011/83/EU or, where applicable, during any longer withdrawal period provided by the trader.

Returned and unsold products that are still functional may be redirected to discounts/outlet shops, jobbers[30] or may be donated. Damaged and defective products are typically discarded (Tom Duhoux et al., 2024).

As reported by Tom Duhoux et al. (2024), return rates for fashion and lifestyle products are higher than those of other product categories, due to the fact that relevant parameters cannot be evaluated when purchasing products online (e.g. general appearance, fit and size). Once the item is returned, it is checked in return centres and it can be restocked at full price (if it is fully functional and not faulty) or at a reduced price (if minor repairs or cleaning were necessary or if it is obsolete). If the product is faulty but still sellable it may be redirected to the secondary market (charity or jobbers), while if it is not sellable it may be discarded of (Tom Duhoux et al., 2024).

As mentioned in Section 1.1, Article 25(1) of the ESPR prohibits the **destruction of unsold consumer goods**, including apparel, clothing accessories, and footwear (see **Annex 1**). The ban is meant to reduce the environmental impact of textiles by reducing the generation of waste and disincentivising overproduction.

Destruction is defined in Article 2(34) of the ESPR as "*the intentional damaging or discarding of a product as waste with the exception of discarding for the sole purpose of delivering the discarded product for preparing for re-use, including refurbishment or remanufacturing operations*". Destruction covers recycling, other recovery, or disposal, while **preparing for re-use**, including refurbishment and **remanufacturing**, is not considered destruction. Additional details on the derogations may be found in Article 2 of the Delegated Act setting out derogations from the prohibition of destruction of unsold consumer products[31].

4.1.3. Post-consumer textile waste

Post-consumer waste is generated by end-consumers of a material stream. It consists of textile, textile-related and footwear waste disposed of by **households** and **commercial** and **industrial** activities. It is therefore classified into post-consumer household textile waste and post-consumer commercial textile waste, which incorporates waste originating both from commercial and industrial activities.

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30 Jobbers are companies that deal in clothes and textiles but not necessarily for sale to consumers.

31 EUR-Lex - Ares(2025)5207942 - EN - EUR-Lex

Post-consumer household textile waste is generated at household level and can contain the following textile categories and items:

- clothing (e.g. t-shirts, trousers, underwear, sportswear);
- clothing accessories (e.g. scarves, caps, bags);
- footwear (e.g. boots, sport shoes, sandals);
- home/interior textiles (e.g. household cleaning items, household carpets, bedding, toilet and kitchen linen and towels, curtains, soft toys);
- other: items partially or fully made of textile materials, not classified under any of the categories above (e.g. packaging - nonwoven fabrics, bags, sacks).

These fractions are collected through collection schemes set up by municipalities, charity organisations, waste management organisations, second-hand shops and retailers (Huygens et al., 2023).

Post-consumer commercial textile waste is textile, textile-related and footwear waste that arises from any **commercial or industrial activities** such as hospitality (accommodation and food service activity), healthcare (human health services and residential care activities), agriculture (e.g. crop protection, greenhouse covers, shade nets, and anti-hail nets, crop storage, and silage wraps), environment (production of filters, membranes, barriers for water treatment, air purification, waste management), construction (e.g. isolation, geotextiles for erosion control, drainage, soil reinforcement, tensioned fabric structures such as tensile roofs, membrane structures, and canopies). Technical textiles also belong to this category (e.g. textiles for filtration, professional cleaning items, workwear with high technical features, personal protective clothing and footwear).

Textile waste from accommodation and food service (interior textiles, e.g. bed linen, curtains, tablecloths) is similar to textile waste generated by households but is often provided in larger and more homogenous volumes, which can make it suitable for recycling when re-use is no longer possible. Textiles originating from the healthcare sector, such as uniforms, are typically managed through rental or leasing schemes operated by professional laundry services. In this model, items are collected, hygienically cleaned and returned to circulation multiple times, thereby extending their service life well beyond single ownership. This is not re-use in the conventional sense of preparing discarded textiles for a new user, but rather a service-based system that maximises product longevity within a controlled loop. Comparable practices are also widely applied in the hospitality sector, where textiles such as bed linen, towels and tablecloths are managed through professional laundry services to ensure repeated, safe use.

Post-consumer textile waste **may qualify both for preparing for re-use and for remanufacturing**, depending on its quality as well as on the interest of traders in second-hand garments (e.g. if they are still considered fashionable or in demand) or in remanufactured items.

4.2. Classification of used textiles in the EU

In order to define the scope of this work, it is important to take into account the legal classification of textiles from the different sources. In the WFD, waste is defined as "*any substance or object which the holder discards or intends or is required to discard*".

Used textiles are understood as separately collected textiles that are discarded by the end user, whether or not they are discarded with the intention and possibility for them to be re-used. **At that stage, used textiles could be either fit for direct re-use or be waste**.

Article 22d(2) of the amended WFD establishes that separately collected textile, textile-related and footwear items are considered to be waste upon collection. In paragraph 3 it is clarified that '*used textile, textile-related and footwear products that are directly handed over by end users and directly professionally assessed as fit for re-use at the collection point by the re-use operator or social economy entities shall not be considered to be waste upon collection*'.

As already highlighted in Section 4.1.2, unsold textiles from retailers can be redirected to discount/outlet shops, jobbers or exporters or may be donated. These textiles are not classified as waste.

Household textiles that are informally passed on or are sold online or at flea markets (consumer-to-consumer (C2C)) are not classified as waste, as there is no intention to discard them.

Textiles that are collected and accepted by the re-use operator or social economy entities and are assessed as **fit for direct re-use** as a result of a professional sorting step (described in more depth in Section 4.3.2) are **not classified as waste**. Those do not fall within the scope of this work as they do not enter the waste regime.

However, if textile items are assessed as not fit for direct re-use by re-use operators and social economy entities, they are redirected to sorting and hence fall within the scope of this work.

The United Nations Environment Programme (UNEP) launched the Circularity and Used Textile Trade Project[32] in 2023 with the aim of mapping of textiles trade flows and setting guidelines to differentiate between used textiles and textile waste. The project is funded by the EU and may provide more clarity on the classification of used textiles.

4.3. Generation and management of textile waste and used textiles in the EU

Estimates on the amount of textile waste generated vary significantly depending on the scope and the selected system boundary of the study.
Huygens et al. (2023) reports the amount of **textile waste in the EU market** was estimated to be around **12 Mt/year** in 2019. The study covers post-consumer waste (10.9 Mt/year), post-industrial waste (1.34 Mt/year) and pre-consumer waste (0.33 Mt/year).

Separate collection of **post-consumer textile waste** accounts for approximately **2.4 Mt/year**, as estimated by Huygens et al. (2023). Clothing, accessories, footwear and home/interior textiles, in total covering 57% of post-consumer textile waste, are the dominant fractions of the separately

[32] Circularity and Used Textile Trade Project: https://www.unep.org/circularity-and-used-textile-trade-project#:~:text=Recognising%20the%20urgency%20to%20transition%20toward%20a%20sustainable,role%20of%20trade%20to%20enable%20a%20transformative%20change.

collected post-consumer waste. **Annex 3** provides an overview of the textiles categories and items collected separately in Member States.

About **0.33 Mt/year** of separately collected textile waste is **imported** into the EU. Based on the data from Huygens et al. (2023), a **separate collection rate**, relative to the total textile waste generation including commercial and bulky textile waste, of around **20%** is calculated.

Moreover, of the amount of separately collected textiles, **1.77 Mt/year** are **sorted**. Existing sorting capacities in Europe are likely below the required capacities to sort such an amount (Huygens et al., 2023). According to Dahlbom et al. (2023), the textile sorting capacity in the EU is 560 000 tonnes/year. A large amount of collected textiles is exported and sorted in third countries (van Duijn et al., 2022).

Separately collected textile waste is sorted and then redirected to re-use (after preparing for re-use) or recycling, either within or outside the EU. Innovative approaches can sort textiles present in mixed municipal solid waste, to be recycled after a cleaning step. Textile fractions that are not suitable for re-use or for recycling may be diverted to landfills or incineration. No figures on remanufacturing were indicated in the study.

Around 10% of sorted textiles (**0.188 Mt/year**) are destined for **domestic re-use in the EU** (Huygens et al., 2023). A bigger share is exported to developing and emerging countries.

A brief overview of the management chain for used textiles and textile waste is provided in the following sections, with a focus on collection, sorting, preparing for re-use, remanufacturing and re-use. While some practices described may be common in certain countries, they should not be taken as representative of procedures across the entire EU.

4.3.1. Collection and preliminary sorting

As per the definition in Article 3(10) of the WFD, "'**collection**' *means the gathering of waste, including the* ***preliminary sorting*** *and* ***preliminary storage of waste*** *for the purposes of transport to a waste treatment facility"*.

Furthermore, according to Article 22d of the amended WFD: '*Separately collected used and waste textile shall be subject to a* ***professional screening*** *at the* ***separate collection point or the sorting facility*** *to identify and remove non-target items or materials or substances that are potential sources of contamination*'.

This **preliminary sorting** during collection serves as a filter, ensuring that only suitable textile items are accepted as feedstock for the subsequent sorting process. The preliminary sorting takes place at collection points, where drivers manually empty containers into trucks. At this stage, drivers pack clothes in plastic bags to preserve their potential reusability and carry out a basic visual check, rejecting clearly non-reusable materials. This process also allows heavily soiled items, which may be directed to recycling or energy recovery, to be identified, while non-textile items such as toys, packaging or electronic devices are separated.

Article 3(11) of the WFD defines '**separate collection**' as *the collection where a waste stream is kept separately by type and nature so as to facilitate a specific treatment.*

Separate collection of textile waste is already in place in most Member States (see **Annex 3**). However, some countries have a more established history of separate collection than others, as shown in EEA (2024b) where around 10 countries already had mandatory separate collection before the EU-wide obligation set by the WFD. Waste collection competencies are regionalised in some countries, meaning that the textile items that are collected could be for re-use purposes, for remanufacturing or for recycling, depending on the region or municipality in which the collection takes place. Additionally, within the same country, waste collection may differ in smaller urban settlements compared to more populated areas.

With the obligation for Member States to set up separate collection systems for textile waste as of 1 January 2025 established in the WFD, the markets for textiles prepared for re-use, remanufactured or recycled will be stimulated. An increased amount of textile waste available for preparation for re-use, remanufacturing or recycling, particularly textile waste from households, is expected.

Collection points

Separate collection of post-consumer textile waste is mainly organised in two streams:

— post-consumer household textile waste collected by municipalities (either in separate bins or in bags that are collected together with bulky waste for example); and

— post-consumer household textile waste, with potential to be re-used, collected by social economy entities.

Examples of collection points are the following:

— large containers that are provided for this purpose, located in public places such as civic amenity sites or in private areas (e.g. supermarket parking lots); these containers are emptied at regular intervals;

— directly on the premises of associations (e.g. over-the-counter in re-use shops) or recycling centres;

— during collection events organised by collectors;

— door-to-door collection schemes such as for household or bulky waste collection.

Collection can also be made directly in stores (applying take-back schemes), where customers take advantage of their visit to drop off their used clothing, home textiles and footwear.

EPR obligations

Some Member States such as France, the Netherlands and Hungary already have in place mandatory EPR obligations for textiles. In the case of France, accessories and technical textiles for instance, are allowed to be accepted as feedstock in the sorting facility. However, sorters do not receive any support from the EPR scheme to sort these types of textiles. Nevertheless, it shall be noted that the EPR scheme does not set restrictions on sorting of products in sorting facilities.

As mentioned above, Article 22a of the amended WFD lays down the mandatory EPR obligations for certain textile, textile-related and footwear products (specified in Annex IVc) to be established in Member States. The provisions apply to economic operators making products available on the

market of a Member State, including manufacturers, distributors, importers and online sellers. EPR for textiles makes it mandatory for extended producer organisations to implement extended producer responsibility obligations on behalf of producers. The WFD clarifies that all relevant stakeholders, e.g. private or public waste operators, local authorities, re-use and preparing for re-use operators, social economy entities, including local social enterprises, should be involved in the implementation of EPR. EPR shall cover the costs of i) collection and subsequent waste management operations; ii) compositional survey of collected mixed municipal waste; iii) provision of information on sustainable consumption, waste prevention, re-use, preparing for re-use, recycling, other recovery and disposal; iv) data gathering and reporting to competent authorities; v) support to research and development to improve sorting and recycling.

The costs of collection and subsequent waste management operations shall include:

a) collection for re-use and separate collection for preparing for re-use and recycling;

b) transport of collected items for subsequent sorting for re-use, preparing for re-use and for recycling;

c) sorting, preparing for re-use, recycling, other recovery operations and disposal;

d) collection, transport and treatment of waste generated by social enterprises and other operators.

4.3.2. Sorting

There is no legal definition for sorting in the amended WFD. However, in point 5 of Article 22(d) there is a minimum criterion for sorting textile, textile-related and footwear waste.

Textiles sorting is a complex, multi-stage process that is not widely automated, as per the current state of the art. There are no established industry-wide sorting criteria or standards for homogeneous sorting fractions across Member States. Sorting is highly influenced by market demand and varies almost constantly.

Sorting can be classified into sorting for re-use, sorting for remanufacturing and sorting for recycling. Sorting for re-use and sorting for remanufacturing are described below.

4.3.2.1. Sorting for re-use

Depending on the sorting facility, sorting for re-use may start with a **visual**, **olfactory** and **tactile inspection** of the textiles collected using the sense of sight, touch or any non-specialised equipment with the objective of taking a preliminary decision on potential suitability for re-use.

Given the heterogeneity of incoming textile waste (in terms of different materials, degrees of wear of the garments and fashion factor), the item-to-item sorting, to separate fractions fit for direct re-use from fractions subject to further preparing for re-use operations, involves a high degree of subjectivity and therefore requires specialised capacity, skills and knowledge of the destination markets to recognise and valorise the feedstock and sort up to hundreds of output product categories. This valorisation capacity is not replicable by automated systems at the state of the art.

In general, re-use operators follow sorting manuals with specifications that allow them to professionally assess functionality, missing parts (e.g. zippers, buttons), damage, stains, puncture or signs of discolouration, loss of quality, and other defects (e.g. pilling) on the textile items.

Sorting for re-use usually involves a thorough quality check, resulting in the categorisation of textiles by quality. The different qualities for the sorted textile fractions are generally selected based on the degree of wear. However, in addition to the condition of the individual items, the current fashion trends and customer specifications are also important criteria for the classification of items. Alongside wear and tear, the potential for resale is crucial when sorting for re-use. This aspect can fluctuate based on market demands, sometimes altering the selection criteria.

Five main quality grades can be identified:

— Category *crème*:

  - new or in very good condition: no stains, pills or snagging, no missing buttons, working zips, clean collars and cuffs, no deformation, etc.
  - presenting small holes in inconspicuous places, very small stains or small make-up stains.

— Category A:

  - functionally reusable;
  - flawless where signs of use are insignificant;
  - no loss of shape or colour;
  - fashionable, new or new-looking clothes without defects.

— Category B:

  - functionally reusable;
  - minor signs of use;
  - minimal loss of shape or colour;
  - same as Category A but can be slightly less fashionable and from cheaper brands.

Textiles in Categories A and B should not be torn or stained, although they may present small stains or small holes in inconspicuous places, and some loose stitching.

— Category C:

  - any garment with noticeable stains, especially around the chest, underarm area;
  - any garment that is torn, with visible holes, broken zipper or excessive pilling;
  - any garment with faded colours and worn-out patterns;
  - collars of shirts or tops that are torn, frayed or heavily worn;

- minor (repairable) defects are accepted, such as mending, a missing button, slightly worn collars / sleeve edges / trouser legs' edges, knitwear bobbles, small unremovable stains in not discreet places, slightly faded colours, a broken seam, slightly out of shape.

Categories *crème*, A and B have the highest potential for re-use, whereas fractions within category C may be subject to further preparing for re-use, remanufacturing or recycling.

Sorting processes for re-use nowadays are still extensively **manual** and, to a lesser extent, **partly automated**. Fully automated sorting processes are still under development in the EU. Manual and automated processes may co-exist, as some facilities apply specialised automated equipment for transportation of the textile waste while some others have a partly automated line for sorting the material. Nonetheless, the largest share by far of the sorting remains a manual process.

4.3.2.2. Sorting for remanufacturing

There is insufficient clarity on how remanufacturing is classified within EU waste law. The WFD does not provide a definition on remanufacturing. In contrast, Article 2 of the ESPR defines remanufacturing as '*actions through which a new product is produced from objects that are waste, products or components and through which at least one change is made that substantially affects the safety, performance, purpose or type of the product*'.

Remanufacturing could be considered an activity that falls within, or is closely related to, the definition of preparing for re-use under Article 3(16) of the WFD. However, the definition of preparing for re-use appears to refer mainly to lighter repair operations that restore a discarded item so it can be used again for its original purpose. In contrast, according to KEMI (2021)[33], remanufacturing entails more substantial interventions that bring about greater changes to a product.

Although the WFD does not explicitly mention remanufacturing in the waste hierarchy (Article 4), Article 22d of the amended WFD specifies that '*items that are assessed as not suitable for re-use are sorted for remanufacturing and recycling including, where technological progress allows, fibre-to-fibre recycling, with a view to prioritising remanufacturing over recycling*'.

In light of the above, and for the purpose of developing EoW criteria for textiles, remanufacturing will be considered as a **subsequent step that follows the sorting for re-use operations**.

Sorting for remanufacturing aims to separate textiles identified as not suitable for re-use into categories suitable for **reprocessing into new products** without fully breaking down the material into fibres. Unlike sorting for direct re-use, sorting for remanufacturing focuses on identifying items that can be **upcycled, redesigned, partially disassembled, or reassembled** into new textile products.

The sorting for remanufacturing process typically begins with a **manual inspection** to identify items with sufficient integrity, usable components (e.g. buttons, zippers, trims) and acceptable structural quality.

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[33] KEMI 2021. Available here: PM 6/21: Regulatory mapping for remanufacturing of products under EU law

Sorting for remanufacturing is largely manual due to the heterogeneity of textiles and the need for operator judgement to assess the potential of each item or component. Once sorted, textiles are typically graded according to their remanufacturing potential. After preparation steps, including cleaning and sometimes washing, a decision is taken as to whether the garment will undergo full, partial or no disassembly.

4.3.3. Preparing for re-use

As per the definition in Article 3(16) of the WFD, *"'Preparing for re-use' means checking, cleaning or repairing recovery operations, by which products or components of products that **have become waste** are prepared so that they can be re-used without any other pre-processing*".

Preparing for re-use can include cleaning, repairing, ironing and disinfection. These operations can be carried out directly in the sorting plants. In some specific cases the cleaning or repairing of the textiles is due to, for example, possible requirements of local health legislation or the sorting operator's choices regarding the treatment of certain fractions of textile waste.

Other additional steps that can be considered part of the preparing for re-use steps are packaging and labelling.

4.3.4. Remanufacturing

Remanufacturing in the textile sector refers to the systematic process of transforming used items into new products with comparable functional and aesthetic value, while retaining as much of the original material as possible. It typically follows two broad steps: **full or partial disassembly** and **reassembly** into new textile products.

After cleaning and inspection, items are first sorted and evaluated to decide whether they should undergo full, partial or no disassembly. This decision is usually taken based on material quality, design features and the potential for re-design, and it determines the feasible production route. Items are then disassembled to the required extent and prepared by cutting, ironing, overlocking, and quality control, often forming standardised intermediate components such as fabric panels or patches that can be temporarily stored. Finally, these prepared components are reassembled into new products. Depending on the degree of transformation, this can range from minor modifications such as adding patches, to combining several garments, or fully reconstructing new items "sewn from scratch". Through this staged process, discarded items are converted into marketable products, extending material lifetimes and reducing the need for virgin resources (Pal et al., 2021).

It is worth noting that remanufacturing of textiles is currently still limited and not developed at scale.

4.3.5. Re-use

As per the definition in Article 3(13) of the WFD, *"'Re-use' means any operation by which products or components that are **not waste** are used again for the same purpose for which they were conceived".* On average, 55% of sorted textiles are deemed fit for the second-hand market.

5. Background information for the development of end-of-waste criteria

As mentioned in Section 1.2, the main conditions for a waste to cease to be waste are:

> *"(a) the substance or object is to be used for **specific purposes**;*
> *(b) a **market or demand** exists for such a substance or object;*
> *(c) the substance or object fulfils the **technical requirements** for the specific purposes and meets the **existing legislation** and **standards** applicable to products; and*
> *(d) the use of the substance or object will not lead to overall **adverse environmental or human health impacts**."*

Besides, the Commission shall take as a **starting point** the most stringent and environmentally protective **criteria established in Member States**.

The following sections provide an overview of the market and demand as well as common applications for recovered textiles. Technical requirements, standards and legislative aspects are introduced. Environmental and human health impacts related to the use of recovered textiles are discussed. Finally, EoW criteria in Member States are benchmarked.

5.1. Market, demand and common applications

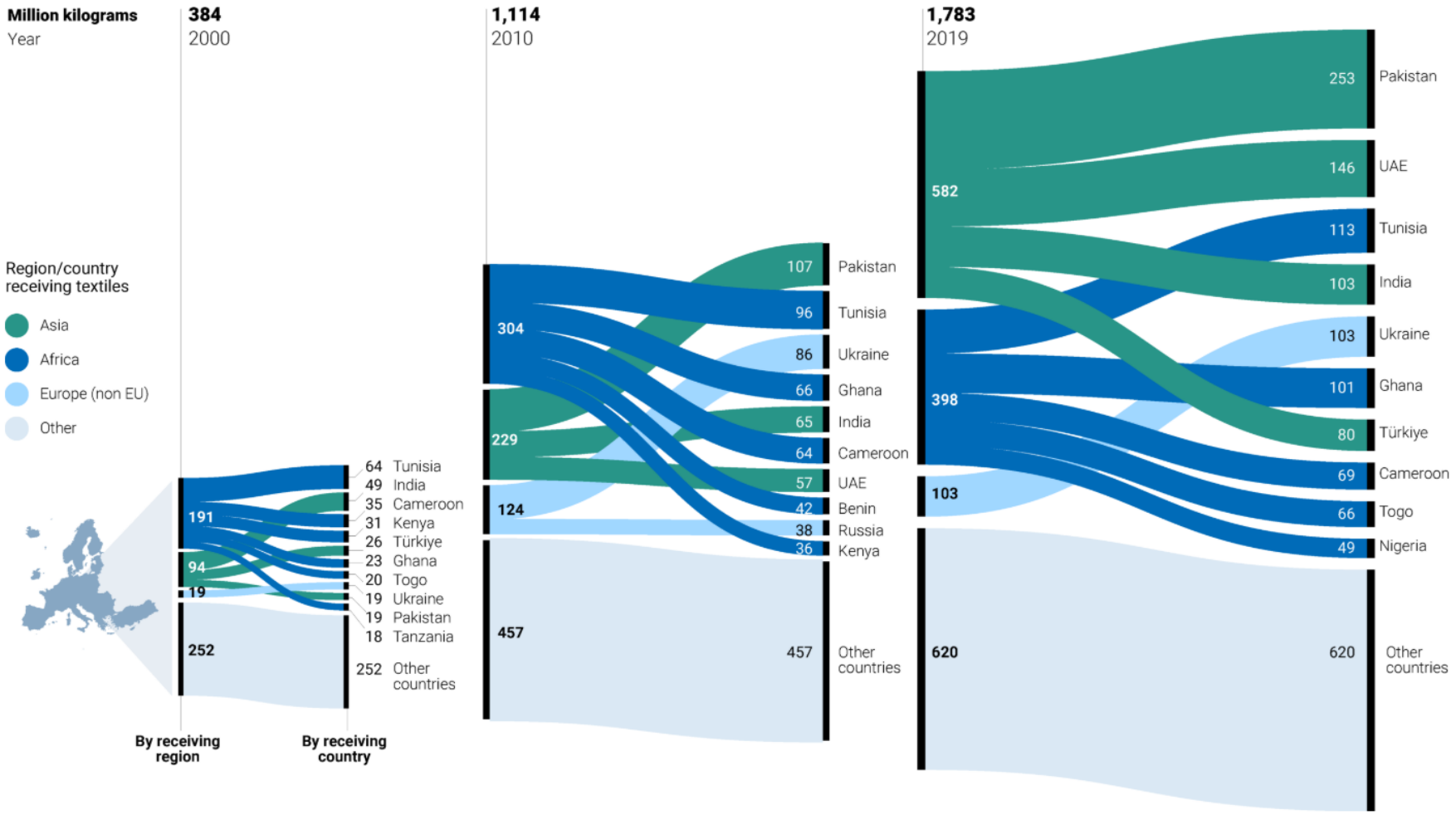
In the global market for used textiles there is an increased trend in the supply of used textiles and a stabilisation of the demand. Due to a stabilisation of demand for used textiles, prices are falling (EUR 0.70/kg in 2020). The price fall is also due to an overall reduction in the quality of textile items produced. Furthermore, there is an increased use of consumer-to-consumer (C2C) second-hand platforms, where high-quality textiles are sold independently by consumers (Trzepacz et al., 2023).

Due to limited re-use and recycling capacities in Europe, a big share of used textiles is exported outside the EU (see **Figure 7**); 6.5% of all exports are to OECD countries and 93.5% to non-OECD countries. **Exports outside the EU** have tripled over the last two decades, reaching **1.7-1.8 Mt** in 2019 (EEA, 2023a; Eurostat, 2021; Halleux, 2023; Huygens et al., 2023).

The main importers are Africa and Asia. Russia, Ukraine and Cameroon acquire the most expensive textiles (EUR 2.26/kg, EUR 1.28/kg and EUR 0.99/kg, respectively) (Trzepacz et al., 2023).

There is a high level of uncertainty in relation to the final fate of used textiles, once they are exported. Used textiles exported to **Africa (46% of EU exports)** seem to be mostly directed to local re-use and are of a **medium quality**. The fraction that is not deemed suitable for local re-use is likely diverted to landfills. Used textiles exported to **Asia (41% of EU exports)** are of **medium or low quality** and are processed in dedicated economic zones. Low-quality textiles are downcycled into industrial rags or filling, exported to other Asian countries for recycling or to African countries for re-use. The remaining fraction is likely landfilled (EEA, 2023a).

Figure 7. EU exports of used textiles



Source: EEA (2023a)

5.1.1. Market, demand and common applications for textiles suitable for re-use

The potential fate of textiles sorted and prepared for re-use is determined by the quality and suitability for the second-hand market (Trzepacz et al., 2023).

As mentioned above, Huygens et al.(2023) estimated that around 0.188 Mt/year is re-used in the EU, and 0.92 Mt/year is re-used outside of the EU. Articles that are fit for the domestic EU market are typically sorted textile items with *crème* quality. Those represent a small share of the total volume collected (5-15% in different Member States according to Trzepacz et al. (2023)).

The textile category clothing (e.g. suits, jackets, coats, trousers, shirts and blouses) presents the highest potential for re-use and is typically sold in second-hand shops (Köhler et al., 2021).

Köhler et al. (2021) stress that there is a lack of consistent data on the quantities and fate of used textiles in Europe. However, it is recognised that in some Member States the consumption of second-hand textiles accounts for a significant share of total consumption of clothing and home/interior textiles.

5.2. Technical requirements and standards

5.2.1. Standards

The technical body CEN/TC 248[34] (textiles and textile products standard) covers the standardisation of the following aspects of textiles, textile products and textile components of products: 1) test methods; 2) terms and definitions; 3) specifications, and, if necessary, classifications, in terms of their expected behaviour, in particular where required by other CEN Technical Committees or the CEC or EFTA. Recommendations for the design and manufacture of children's clothing are part of this set of standards. The technical body CEN/TC 309[35] covers test methods and environmental aspects for footwear. A non-exhaustive list of standards, guidelines and specifications is presented in **Table 3**.

Table 3. Overview of standards, guidelines or specifications with regard to characterisation of textiles in general, and more specifically regarding sorting and preparing for re-use (non-exhaustive list)

Standard / Guideline / Specification	**Content**
CEN/TC 248/WG 39 (EN, 2023)	Circular textiles chain - requirements and categories (under development).
CEN/TC 309	Footwear.
UNE 40700:2023	Spanish Norm - Handling and sorting specifications **for re-use and recycling** of used textiles.

[34] CEN/TC 248 – Textiles and textile products: https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:6229&cs=10D5E9507DBA0195D1D470609DD93A3DC

[35] CEN/TC 309 – Footwear: https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:6290&cs=17352FCE0EDE7F4AB7FBD23531A86A66C

EuRIC Textiles Handling & Sorting Specifications (EuRIC, 2021)	Guidelines for **re-use and recycling** of used textiles.
LAGA Communication 40 (LAGA, 2023)	Implementation aid for the prevention as well as the collection, **sorting and recycling** of used textiles (2020).
Sorters Handbook - Sorting for circularity Europe (van Duijn et al., 2022)	Handbook for the conduction of **sorting analyses** using hand-held near infrared scanning technology.

Source: own elaboration

5.3. Legislative aspects

5.3.1. Relevant waste legislation

Waste legislation applies when the textile material is still in the waste regime, namely at the point of collection, when accepting the waste at the waste management facility (e.g. sorting) and during processing.

Particularly relevant for the development of EoW criteria are the classification of waste as hazardous or non-hazardous, and provisions on waste shipment and on the sound management of textile waste.

5.3.1.1. Legislation on hazardousness classification of waste

The primary legislation governing waste management in the EU is the **Waste Framework Directive** (WFD) (Directive 2008/98/EC).

The classification of waste as hazardous or non-hazardous is outlined in Annex III to the Waste Framework Directive, and the classification laid down in the Annex to Commission Decision (EC) No 2000/532 on the **List of Waste**[36].

Commission Notice 2018/C 124/01[37] on the classification of waste offers further guidance on the correct interpretation of the waste classification rules. While certain criteria in Annex III to the WFD reference the CLP hazard classes and statements, the CLP Regulation and hazardousness classification rules apply only to substances and mixtures, not to waste.

5.3.1.2. Basel Convention

The Basel Convention is an international treaty designed with the objective of reducing the transboundary movements of hazardous waste, and preventing shipment of hazardous waste from developed to less developed countries. Additionally, the Convention aims to reduce both the quantity and toxicity of hazardous waste produced and to ensure its environmentally responsible management (UNEP, 2019).

[36] Commission Decision (EC) No 2000/532: https://eur-lex.europa.eu/eli/dec/2000/532/oj/eng

[37] Commission Notice 2018/C 124/01: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:JOC_2018_124_R_0001

5.3.1.3. Waste Shipment Regulation

Regulation (EU) 2024/1157[38] (Waste Shipment Regulation, henceforth: **WSR**) governs waste shipments between EU Member States, from third countries to the EU, from the EU to third countries and in transit through the EU. It lays down shipment rules, depending on the origin, destination and path of the waste as well as the type of waste and treatment.

The primary goal of the new Regulation is to prevent the EU from transferring its waste management challenges to other countries and to promote environmentally sound management of waste. Additionally, the focus is on enhancing enforcement to reduce illegal shipment of waste, as well as improving traceability of waste and promoting preparing for re-use and recycling.

Waste shipment rules **between EU Member States** vary based on waste type and intended treatment. As per Article 4, waste destined for disposal as well as hazardous waste or mixed waste destined for recovery requires a **prior notification and consent procedure**. Green-listed (non-hazardous) waste for recovery within the EU or OECD requires the shipment to be accompanied by general information[39], if the quantity of waste shipped exceeds 20 kg.

Textile waste (as described in entry B3030 in Annex III to the Regulation) is **green-listed**. The notification procedure applies to shipments between Member States or with OECD countries if textile waste is mixed with other types of waste, is contaminated to an extent which prevents the recovery in an environmentally sound manner[40] or if it is contaminated with persistent organic pollutants (POPs) in quantities exceeding the limit values established in Annex IV to Regulation (EU) 2019/1021. In all other cases, the information requirements laid down in Article 18 apply.

Exports **from the EU to OECD countries** will be closely **monitored**, to assess possible environmental damage in the country of destination, especially if certain exports are increasing (cf. Article 45).

Article 39 of the Regulation prohibits the export **from the EU to non-OECD countries** of hazardous waste and certain other types of waste (e.g. e-waste, plastic waste).

Article 40 of the Regulation prohibits the export **from the EU to non-OECD countries** of other types of non-hazardous waste, unless the a third country demonstrates its ability to manage this waste in an environmentally sound manner. This regime also applies to textile waste.

Article 29 of the Regulation lays down the rules that apply in the event that competent authorities disagree on the classification of a material as waste (basically providing for the stricter approach to be respected for the purposes of the shipment of that material). In that context, and complementary to Articles 5 and 6 of Directive 2008/98/EC, Article 29(1) stipulates that an object or substance is to be considered a **used good** and not as waste, if the following conditions are fulfilled:

> "*(a) further use or reuse of the object or substance is certain;*

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38 Regulation (EC) No 1013/2006, as amended by Regulation (EU) 2024/1157: http://data.europa.eu/eli/reg/2024/1157/oj

39 Following the requirements laid down in Article 18 of Regulation (EU) 2024/1157.

40 The Commission services are currently working on a correspondent guideline for textile waste, to specify contamination values.

(b) the object or substance can fulfil its intended function without significant pre-processing;
(c) where relevant, the object or substance is tested to ensure its full functionality;
(d) further use is lawful, that is to say that the object or substance fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts;
(e) the object or substance is properly preserved and protected against damage during transport, loading and unloading."

In order to avoid certain types of waste being falsely declared as used goods, Article 29(3) includes an empowerment for the Commission to adopt implementing acts establishing criteria to distinguish between used goods and waste, for products of particular concern. The impact assessment envisages a preparatory study to identify waste streams for which the Commission has to set criteria and a preparatory study to set criteria to differentiate between used goods and waste for each waste stream.

5.3.1.4. Other rules on waste shipment in third countries

In Africa, several nations, including Nigeria, Zimbabwe and South Africa, have debated or implemented bans on used textile imports to protect domestic textile industries. While these imports provide affordable clothing and employment, they also pose social and environmental challenges. In 2016, the East African Community (EAC) aimed to ban used clothing by 2019, arguing that low prices hinder regional development, though not all EAC members followed through. Rwanda enforced a 2018 ban, prompting the U.S. to suspend its duty-free clothing export privileges under the African Growth and Opportunity Act (AGOA) that same year. However, the effectiveness of these bans remains contested, with external pressures (e.g. from the U.S.) influencing their implementation.

5.3.2. Relevant product legislation

One of the main questions related to the implementation of EoW criteria is how product legislation regulates environmental and health risks, once waste has achieved EoW status. As soon as the material ceases to be waste it leaves the waste regime and enters the product regime and hence has to fulfil legislation applicable to products.

5.3.2.1. CLP Regulation

Regulation (EC) 1272/2008 on Classification, Labelling and Packaging of substances and mixtures (henceforth: **CLP Regulation**) aims at ensuring a high level of protection of human health and the environment, while promoting the free movement of substances, mixtures and articles.

The Regulation requires those placing substances and mixtures on the market to classify and label according to the rules established therein.

Article 3 and Annex I (Parts 2 to 5) set out the criteria for classification in hazard classes and set out additional provisions on how the criteria may be met. The output of sorting, preparing for re-use and remanufacturing is an article, not a substance or a mixture, thus the hazard classification is not relevant for EoW criteria for preparing for re-use and remanufacturing.

5.3.2.2. REACH Regulation

One of the key objectives of Regulation (EC) 1907/2006 (henceforth: **REACH Regulation**) is ensuring a high level of protection of human health and the environment from chemicals. It stipulates provisions for the manufacturing, placing on the market and use of substances on their own, in mixtures and in articles.

As in the CLP Regulation, in Article 2(2) of REACH, waste is not considered a substance, mixture or article. Therefore, this Regulation does not apply to waste. However, as soon as textile waste ceases to be waste, the product legislation applies, including various obligations defined in REACH for substances on their own, in mixtures and in articles.

Manufacturers or importers of substances and substances in mixtures above 1 tonne/year have to register those substances to gain access to the EU market (subject to exemptions). Article 33 requires that any supplier of an article meeting the criteria in Article 57 in a concentration above 0.1% weight by weight shall provide the recipient of the article with information on the substance.

Other relevant obligations include substances listed in Annex XIV, for which an authorisation is needed to place them on the market for use in the EU, pursuant to Article 56. In addition, restrictions pursuant to Article 67 and listed in Annex XVII to REACH may apply to the manufacturing, placing on the market and use of certain hazardous substances.

Article 3 of the REACH Regulation defines placing on the market as "*supplying or making available, whether in return for payment or free of charge, to a third party. Import shall be deemed to be placing on the market*". No reference is made to the 'first placing on the market', hence under REACH every placing on the market, unless stated otherwise, is to be considered a "placing on the market". This is particularly relevant for second-hand goods.

There are a number of restrictions in REACH that are relevant for textiles. In certain cases and where it was warranted, these restrictions can have derogations or specific provisions for substances in articles already in use or for second-hand goods. For example, to reduce some hazardous substances in textiles, one of the EU-wide restrictions came into force in 2020, restricting the presence of 33 substances classified as carcinogenic, mutagenic or toxic for reproduction (CMR)[41] in textiles and footwear. The restriction applies to products manufactured in the EU as well as imported (e.g. clothing, bed linen and upholstery, footwear). Examples of the restricted substances are (ECHA, 2023b):

- heavy metals (cadmium, chromium VI, arsenic and lead compounds);
- benzene and polyaromatic hydrocarbons (PAHs);
- certain polyfluorinated substances (PFAS);
- volatile organic chemicals (VOCs) such as formaldehyde;

[41] Regulation (EC) 1907/2006 of the European Parliament and of the Council of 18 December 2006 and Commission Regulation (EU) 2018/1513 of 10 October 2018 adding CMR substances to Annex XVII to the REACH Regulation: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R1513

— flame retardants;

— phthalates;

— azo-dyes and acrylamines;

— quinolone;

— polar aprotic solvents.

There is a derogation from this restriction for second-hand clothing, related accessories, textiles other than clothing or for footwear.

Another example is the restriction of dimethylfumarate, which also applies to articles made of textiles (e.g. sofas). This restriction does not allow for any derogation for second-hand products or products.

5.3.2.3. Forthcoming restriction on skin-sensitising chemicals

The Classification and Labelling Inventory[42] of the European Chemicals Agency (**ECHA**) contains notifications covering over 120 000 hazardous substances present on the EU market. A fraction of these substances (e.g. chromium VI, nickel and cobalt compounds) have been identified as skin sensitisers (i.e. substances that can cause an allergic response following skin contact) (ECHA, 2020). The Commission is working on a proposal for a restriction of skin sensitisers (category 1, 1A and 1B) in textile and leather products, based on a dossier prepared by France and Sweden, and considering an opinion[43] issued by the relevant ECHA committees (RAC and SEAC).

5.3.2.4. POPs Regulation

Persistent Organic Pollutants (POPs) are chemicals that persist in the environment, bio-accumulate and can potentially cause significant adverse effects to human health or the environment.

Regulation (EU) 2019/1021 (henceforth: **POPs Regulation**) aims at protecting human health and the environment from these chemicals with specific control measures.

As regards second-hand and remanufactured goods, Article 4(2) states that "*Article 3 shall not apply in the case of a substance present in articles already in use before or on the date that this Regulation or Regulation (EC) No 850/2004 became applicable to that substance, whichever date came first*". This is only valid for articles that remain in use and therefore not for waste or once an article has ceased to be waste and are placed on the market again as products.

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42 ECHA Classification and Labelling Inventory: https://echa.europa.eu/information-on-chemicals/cl-inventory-database

43 https://echa.europa.eu/registry-of-restriction-intentions/-/dislist/details/0b0236e182446136

5.3.2.5. Ecodesign for Sustainable Products Regulation (ESPR)

Regulation (EU) 2024/1781 (Ecodesign for Sustainable Products Regulation, henceforth: **ESPR**) aims at promoting the sustainability of products over the whole life cycle by establishing eco-design requirements.

Article 2(27) lays down a definition for substances of concern, including substances meeting the criteria of Article 57 of the REACH Regulation, substances classified as hazardous pursuant to Annex VI to the CLP Regulation, substances regulated under the POPs Regulation and other substances negatively affecting the re-use and recycling of materials in the product in which they are present.

The ESPR does not impose limitations on those substances. Article 7 of the Regulation establishes information requirements for SoCs, which must be included either on the product or must be accessible via a digital passport accompanying the product. Information requirements for specific product groups will be specified in secondary legislation.

As mentioned in Section 1.1, Chapter VI of the ESPR (Destruction of unsold consumer products) prohibits economic operators from destroying unsold goods – including apparel, clothing accessories and footwear – that are listed in Annex VII (reported in **Annex 1** to this document). Under Article 25(1) this ban came into force in July 2026 for large enterprises and will come into force in 2030 for medium-sized companies. The prohibition does not apply to activities that prepare the products for re-use or for remanufacturing, which are expressly promoted as circular economy measures. Specific derogations on the prohibition of destruction of unsold consumer products are laid out in Commission Delegated Regulation (EU) 2026/296.

5.3.2.6. General Product Safety Regulation

Regulation (EU) 2023/988 (General Product Safety Regulation, henceforth: **GPSR**) aims at providing a high level of consumer protection, by laying down rules on the safety of consumer products placed on the EU market. It is a horizontal framework for all consumer products, designed to fill the gaps of sector-specific legislation on safety aspects for specific products or product categories.

The Regulation entered into force on 10 May 2023 and applies from 13 December 2024.

Article 5 of the Regulation requires that economic operators shall place or make available on the market only safe products. The assessment of safety and conformity are regulated in Articles 6, 7 and 8.

Article 9 requires manufacturers to conduct internal risk analyses and maintain technical documentation proving that the products are safe. When assessing a product's safety, all relevant factors, such as its characteristics (physical, mechanical and chemical properties) and presentation, should be considered. Additionally, risks associated with specific consumer categories, like children, elderly individuals and persons with disabilities, should be accounted for, to guarantee that suitable safety precautions are implemented for these vulnerable groups.

Article 3 of the Regulation reads: "*This Regulation applies to products placed or made available on the market whether new, used, repaired or reconditioned. It does not apply to products to be repaired or reconditioned prior to being used where those products are placed or made available on the market and are clearly marked as such*".

Hence, the GPSR is applicable to textile, textile-related and footwear articles prepared for re-use or remanufactured and should be taken into account in the development of EoW criteria for preparing for re-use and remanufacturing.

5.4. Environmental and human health impacts

One of the conditions to be fulfilled for EoW status is that the use of the material that has achieved EoW status shall not lead to adverse environmental or human health impacts. Once waste ceases to be waste, it shall comply with product legislation and the relevant requirements to prevent adverse impacts on human health and the environment.

Environmental and human health impacts can occur at any step of the textile value chain, including production of new textiles, as well as collection and management of textile waste.

Re-use and remanufacturing prevent textile products and textile waste streams from being incinerated or landfilled, thereby fulfilling the waste hierarchy principles.

Huygens et al. (2023) estimated the environmental benefits of moving textile waste up in the waste hierarchy and carried out a life cycle assessment. The findings of the study demonstrate that re-use is the best alternative in terms of environmental benefits, because of avoided emissions during the production of new textile products.

As a big share of textile products (apparel, home textiles) come into direct contact with the skin, it is vital to evaluate the impacts on human health that could be caused by chemicals contained in those products. This aspect is described in detail in the following subsection.

5.4.1. Chemicals of concern

Systems for providing information on chemicals in textile products are considered as one of the examples in the 'Chemicals in Products Programme'[44]. The programme is part of the Strategic Approach to International Chemicals Management (SAICM)[45] of the United Nations Environment Programme (UNEP). The approach aims at increasing the availability of and access to the information that actors need to properly manage chemicals in those products.

Different substances can become incorporated into textile products during production, use and recovery. The chemical substances used in textiles can be classified into (KEMI, 2014, 2022):

— **functional chemicals** – to confer specific functional properties (e.g. oil/soil and water repellents, flame retardants, biocides) or aesthetic properties (e.g. dyestuffs and pigments) – these typically remain in the final product;

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44 UN Chemicals in Products Programme: https://www.unep.org/explore-topics/chemicals-waste/what-we-do/emerging-issues/chemicals-products#:~:text=The%20Chemicals%20in%20Products%20%28CiP%29%20Programme%20is%20an,information%20on%20the%20chemicals%20contained%20in%20everyday%20products.

45 Strategic Approach to International Chemicals Management: http://saicm.org/

— **auxiliary chemicals** – necessary for the textile production process (e.g. organic solvents, softeners, salts) – these are typically washed out during the production process;

— **unintended chemicals** – contaminants and degradation products with no specific function in the production process or in the finished article (e.g. formaldehyde, polyaromatic hydrocarbons impurities, heavy metals) – these may remain in the final product in relatively low concentrations, but may nonetheless be of concern for human health and the environment.

Chemicals present in textile items may be released during the use phase and end of life, leading to potential exposure of humans and the environment. The way they are released depends on the inherent chemical/physical properties of the substance, on the incorporation into the textile material and the type of fibre as well as on the use patterns of the textile item (KEMI, 2014).

Human exposure to chemicals in textiles can occur through dermal contact, inhalation and ingestion. Clothing and bed linens, being in close contact with the skin, pose a risk of dermal exposure (potentially leading to allergic reactions). Oral exposure can be of concern for small children, especially in the case of water-soluble compounds that can migrate to the saliva. Textile fibres can be released into indoor dust, potentially affecting children who may ingest or inhale them. Inhalation exposure primarily affects retail workers and those in environments with high textile concentrations (e.g. warehouses, clothing and furniture stores). Chemical exposure through inhalation may also occur due to volatile compounds emitted from textiles or intentional additives like fragrances (KEMI, 2014).

As mentioned in Section 5.3.2.3, under the CLP Regulation a substance is classified as a **skin sensitiser** if it shows allergenic properties in toxicity tests or if there is evidence that the substance can cause a skin allergy in humans. The most common substances reported to cause dermatitis are dyes (particularly disperse dyes) and finishing resins (which can release formaldehyde) (KEMI, 2014).

Environmental exposure to chemicals in textiles primarily occurs through leaching during laundering, textile fibre release due to wear and tear, and waste disposal. Substances can enter wastewater during textile washing, which may then affect aquatic ecosystems and potentially lead to human exposure through food. Chemical substances can also bind to textile fibres, which may end up in wastewater or household dust, further impacting the environment. Consumer use of textiles, such as laundering and recycling, can contribute to these environmental exposures, although the specific impact of various chemicals is not well understood. One known example is nonylphenol ethoxylates and their degradation product, nonylphenol, which have been identified as significant sources of exposure to aquatic environments from textile washing (KEMI, 2014).
Biocides can be used to prevent bacterial growth and odours during use. The most common antibacterial or antimicrobial substances are **zinc pyrithione** and **silver**. These agents can be released to the environment during washing (KEMI, 2022).

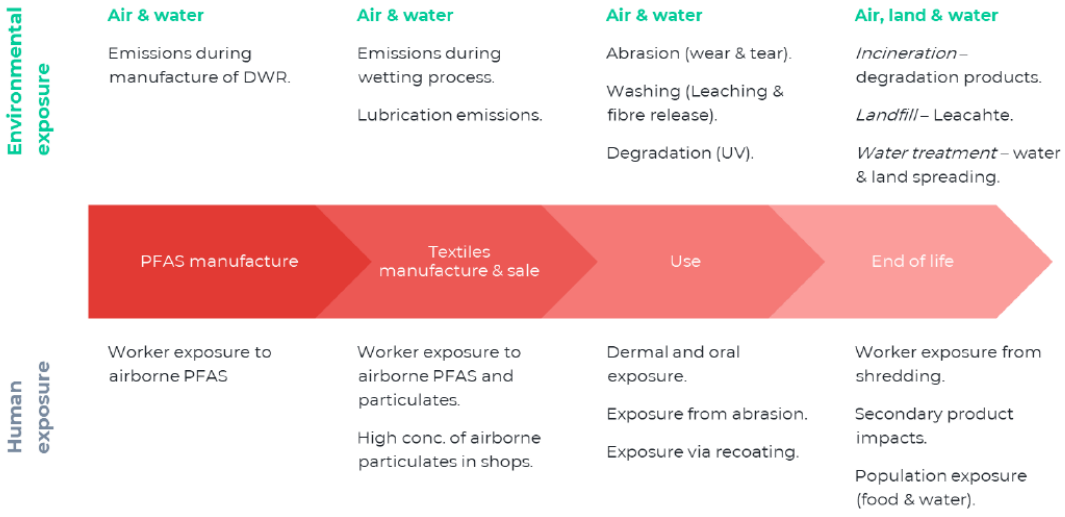
Per- and polyfluoroalkyl substances (PFAS) have been identified as a class of toxic chemicals and have gained attention both under the SAICM (NRDC, 2021) and the Stockholm Convention on Persistent Organic Pollutants (ECHA, 2023a) but also within the EU in the context of the Chemicals

Strategy for Sustainability[46], under the REACH Regulation and beyond. Under REACH there are restrictions in place for some of the substances belonging to the PFAS group in textile products. A dossier to extend the restrictions to the whole group of PFAS is currently under evaluation by ECHA.

PFAS can cause serious health effects, even at low levels of exposure, including cancer, hormone disruption, liver and kidney damage, developmental and reproductive harm, changes in serum lipid levels, and immune system toxicity (UNEP, 2021). PFAS are persistent and very hard to degrade, due to their strong chemical bonds. Once they are released they can spread quickly, also representing a threat for the environment (contamination of groundwater, surface water and soil) (NRDC, 2021).

Textiles represent a significant contributor to PFAS pollution in the EU and globally (35% of the total global fluoropolymer demand). Environmental and human exposure to PFAS can occur through the whole textile life cycle, from production to sale, use and disposal (see **Figure 8**) (Doyle et al., 2024; EEA, 2024a).

Figure 8. PFAS in the textiles life cycle

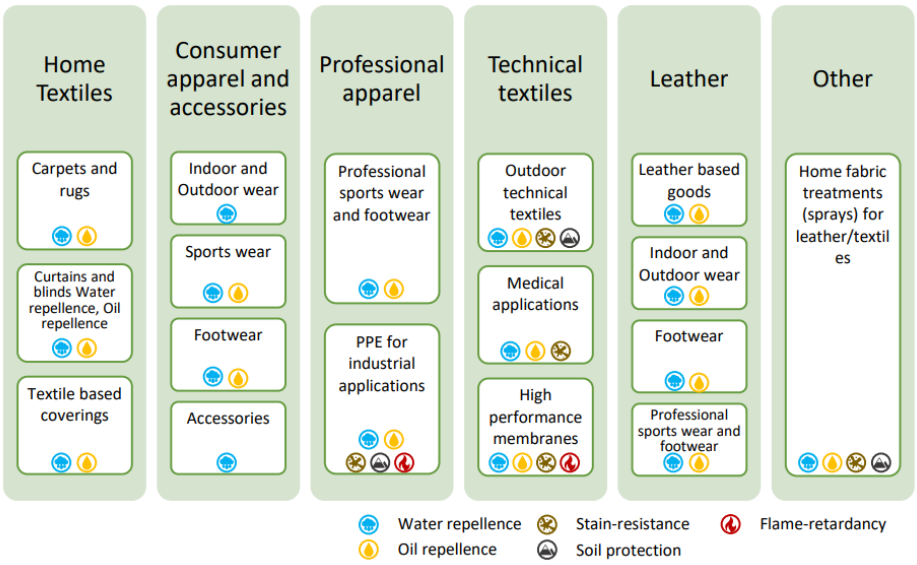


Source: Doyle et al., 2024

Some types of PFAS are used in different textile products (see **Figure 9**), specifically as water and oil repellents (e.g. in carpets, curtains, sportswear and footwear), stain resistants and flame retardants (e.g. in technical textiles) (Doyle et al., 2024; UNEP, 2021).

46 EU Chemicals Strategy for Sustainability: https://environment.ec.europa.eu/strategy/chemicals-strategy_en

Figure 9. PFAS in the textile sector



Source: UNEP, 2021

PFAS exists in polymeric and non-polymeric form. Polymeric PFAS are intentionally added to the article to provide the desired properties during manufacturing or during their lifetime. For instance, in the case of carpets, certain PFAS are added during manufacturing as stain repellents but also during use for cleaning purposes. Non-polymeric PFAS are used during manufacturing as processing aids and can be released during washing (Bečanová et al., 2016; Doyle et al., 2024; Herzke et al., 2012).

A set of strategies to reduce the negative impact of PFAS in the textiles sector has been proposed by EEA (2024a), including:

— finding safe alternatives;

— tracing PFAS in textiles before and during use;

— identifying, separating and sorting PFAS after use or at the end of life;

— improving incineration techniques and avoiding landfill;

— minimising impacts beyond the EU.

The use of PFAS is not always a technical necessity (except in the case of speciality articles such as firefighters' clothing) and it is possible to replace them with other substances. Some manufacturers of textile products have started to replace certain PFAS with fluorine-free substances.

Denmark notified the European Commission[47] of an Order banning PFAS in consumer clothing and footwear by July 2026. The use of PFAS in professional and safety clothing will still be allowed, until

[47] Notification by Denmark on the Order prohibiting the import and sale to consumers of clothing, footwear and waterproofing agents containing PFAS: https://technical-regulation-information-system.ec.europa.eu/en/notification/26455

valid alternatives can be found. The ban will apply to imports from Member States, but not to re-used textiles.

Re-use and remanufacturing of textiles containing PFAS raises concerns, for both human health and the environment. The challenge lies in their ability to remain embedded in textiles long after their initial application, making them difficult to remove or neutralise during re-use or remanufacturing processes. Another key barrier is the lack of transparency in textile supply chains. Chemicals are often not disclosed on product labels, and their presence in polymeric or non-polymeric forms complicates identification and tracking. This hinders efforts to assess risks and develop safe handling practices, particularly for used textiles entering the re-use stream or re-entering the market.

It is crucial to take these risks into account in the development of EoW criteria for preparing for re-use and remanufacturing of textile, textile-related and footwear waste.

5.5. Mapping existing end-of-waste criteria for textiles prepared for re-use or remanufactured in Member States

The mapping of existing EoW criteria at national level is based on in-house research and on input received from stakeholders and Member States within the scoping study and the stakeholder consultation.

To date, two Member States (Austria and France) have implemented EoW criteria for preparation for re-use of textiles (see **Table 4**). No criteria specifically targeted to remanufacturing have been identified.

In Austria, a testing checklist was developed to determine the EoW status for several reusable items (Meissner et al., 2019). Clothing and accessories as well as home/interior textiles are considered. The testing checklist includes test steps such as preselection, visual inspection and manual safety checks, technical safety checks, functionality testing and cleaning.

In France, criteria were developed for the re-use of different types of waste, including for textile waste (Legifrance, 2018). The criteria define which waste is allowed to enter preparing for re-use (19 12 08 Textiles; 20 01 10 Clothes; 20 01 11 Textiles), treatment techniques and processes and the quality of objects and chemicals from preparing for re-use. Moreover, in France the application of a quality management system is required, in compliance with Ministerial Decree No 2021-380 on end-of-waste status for all waste types[48]. The quality manual referred to includes the following in particular:

— The training of competent personnel in the process of upgrading from waste status, and in particular in the detection of inputs or batches that do not comply with EoW criteria.

[48] French Ministerial Decree 2021-380 on end-of-waste: https://www.legifrance.gouv.fr/loda/id/LEGIARTI000043329487/2021-04-04/

— Procedures for verifying compliance with self-monitoring obligations: administrative verification, and visual inspection of incoming waste and outgoing objects in preparing for re-use. If there is any doubt as to the nature or composition of the incoming waste or outgoing object, which cannot be ruled out by further analysis, the competent personnel send it to a waste management facility authorised to receive it.

An in-depth analysis of those national EoW criteria has been carried out, as reported in **Annex 4**.

Table 4. EoW criteria and guidance documents for re-use of textiles and other types of waste in Member States (non-exhaustive list)

Member State	Targeted waste	Status
Austria (AT)	Different types of waste, including textiles	Published: Guide to determining the EoW status in preparing for re-use (Meissner et al., 2019) https://www.umweltberatung.at/download/?id=Prep-for-Re-Use_end-of-waste-guide_Austria_2019.pdf
France (FR)	Objects and chemicals sorted for re-use (including textiles)	Implemented: Ministerial order of 11 December 2018 establishing criteria for the EoW status for objects and chemicals sorted for re-use. JORF n°0294 du 20 décembre 2018. Textiles are specifically mentioned in Annex I, 1.1, §7 https://www.legifrance.gouv.fr/loda/id/JORFTEXT000037832774?init=true&page=1&query=crit%C3%A8res+sortie+du+statut+de+d%C3%A9chet&searchField=ALL&tab_selection=all

Source: own elaboration

6. End-of-waste criteria development for preparing for re-use and remanufacturing of textile, textile-related and footwear waste

In the following sections the scope, system boundaries and the EoW criteria for preparing for re-use and remanufacturing are presented and discussed in detail.

The feedback and additional evidence gathered through two rounds of stakeholder consultation, as well as during bilateral meetings, site visits and the final stakeholder event, were thoroughly analysed and critically assessed and have informed the development of this final technical proposal.

It is to be noted that the EoW criteria for preparing for re-use were complemented at a later stage with specific criteria for remanufacturing, given the recent legal developments, as explained above. Hence the reported feedback refers mostly to the preparation for re-use operation. A complementary analysis on remanufacturing is presented in the JRC assessment.

The requirements laid down in national EoW criteria presented in **Section 5.5** and further explained in **Annex 4** have been taken into account in the assessment.

6.1. Scope and system boundaries

6.1.1. Textile sources within the scope

Stakeholders were asked whether they agreed with the initial JRC proposal to include post-consumer household textile waste, post-consumer commercial textile waste and pre-consumer textile waste within the scope for preparing for re-use.

6.1.1.1. Stakeholders' feedback

— **Arguments in favour of including all proposed sources of textile waste within the scope**

The main arguments put forward by stakeholders in favour of including post-consumer household textile waste, post-consumer commercial textile waste and pre-consumer textile waste within the scope for preparing for re-use were as follows:

- All sources of textile waste proposed to be within the scope represent significant sources of reusable materials provided their inclusion is aligned with existing legislative initiatives such as the ESPR.
- Particularly, the re-use of post-consumer household textile waste supports established downstream markets in the Global South, where high-quality second-hand textiles play a vital socioeconomic role by providing affordable clothing and sustaining local livelihoods. Export markets are already equipped to handle a wide range of used textiles and stakeholders have emphasised the importance of sorting criteria that preserve access to wearable items without introducing burdensome procedural or certification requirements that could disrupt existing re-use channels.

- Stakeholders stressed the need to distinguish between the origin of the textile waste at the collection stage. Due to differences in quality and contamination levels, separate collection of post-consumer household textile waste, post-consumer commercial textile waste and pre-consumer textile waste is deemed essential to ensure efficient and appropriate treatment.

— **Arguments against including pre-consumer textile waste within the scope**

Several stakeholders expressed concerns regarding the inclusion of pre-consumer textiles within the scope for preparing for re-use, pointing to material-specific limitations as well as broader regulatory and market implications.

- The inclusion of pre-consumer textiles (e.g. unsold goods, returned products and post-industrial items such as defective or sample clothing) within re-use criteria was seen as conceptually problematic. Stakeholders noted that these items have not undergone a first use and are therefore not "second-hand" in the conventional sense. Their classification as waste, and subsequent eligibility for re-use, raises definitional and legal ambiguities. In fact, one stakeholder expressed concern that including pre-consumer textiles within the scope of re-use could be misleading and could risk distorting fair competition, as post-consumer textiles (typically in poorer condition) require more extensive sorting and quality assurance efforts.

- From a legal standpoint, it was emphasised that pre-consumer textiles should only be considered waste once explicitly discarded. Stakeholders questioned whether the current JRC proposal adequately reflects this principle, particularly in light of the ESPR ban on the destruction of unsold goods. Further clarification is requested on how and when pre-consumer textiles would transition to waste status under EoW conditions. Moreover, it was also indicated that EoW status should already be granted once pre-consumer textiles are collected and made available for re-use.

— **Concerns regarding collection and sorting infrastructure**

Lastly, concerns were raised about collection and sorting infrastructure, which in many cases is not equipped to process combined streams of post-consumer household, post-consumer commercial and pre-consumer textiles. Without separate collection and tailored processing systems, stakeholders warned that the quality and traceability of reusable textiles could be compromised, hindering effective implementation of EoW criteria.

6.1.1.2. JRC assessment of feedback

The analysis of stakeholder feedback indicates a broad consensus in favour of including both post-consumer household and post-consumer commercial textile waste within the scope of EoW criteria for preparing for re-use. In the previous stakeholder consultation, there was consensus on **excluding textiles retrieved from mixed municipal solid waste** (MSW).

— **Post-consumer household textile waste**

Post-consumer household textile waste covers, for example, clothing, accessories, footwear, home/interior textiles, including workwear without technical features. This textile source has demonstrated strong marketability in both EU and international markets., with established second-hand markets for a variety of items. Moreover, the inclusion of this textile waste stream under the EoW criteria would be consistent with the obligations introduced under the amended WFD[19] on EPR for textiles.

— **Post-consumer commercial textile waste**

Similarly, post-consumer commercial textile waste enjoys strong stakeholder support for inclusion in the scope. This textile source encompasses high-quality textiles from industrial and professional use, which have substantial potential for re-use. Nonetheless, concerns regarding contaminated post-consumer commercial textile waste could indicate a challenge in finding suitable re-use markets. Additionally, it is important to note that most sorting facilities may lack the capacity to effectively separate contaminated textiles, particularly when processing high volumes. Therefore, any restrictions applied should be carefully balanced to avoid being overly stringent.

— **Pre-consumer household textile waste**

The JRC acknowledges the concerns raised regarding the inclusion of pre-consumer textiles (e.g. unsold goods, returns, defective items) under the scope of EoW criteria for preparing for re-use. From a legal perspective, it is important to clarify that pre-consumer textiles fall under the definition of waste once the economic operator decides to discard them. This interpretation follows the WFD, under which "waste" is any substance or object which the holder discards, intends to discard, or is required to discard[49]. Even if a textile product has never undergone a first use, once it is deliberately set aside by the operator, it enters the scope of waste legislation.

In this respect, the inclusion of pre-consumer textiles in the EoW criteria is consistent with current policy developments. In particular, the ESPR includes a ban on the destruction of unsold goods. Without a re-use pathway under waste legislation, many of these items would otherwise face destruction, which would run counter to circular economy objectives. Providing a legal framework for their re-use through EoW criteria therefore addresses both waste prevention and resource efficiency. Moreover, some stakeholders argued that pre-consumer textiles should automatically obtain EoW status once collected and made available for re-use. The JRC notes that this interpretation is not consistent with the legal framework. Article 6 of the WFD specifies '*that waste which has undergone a recycling or other recovery operation is considered to have ceased to be waste'* provided that the additional conditions set out in the Directive are also met. Simply collecting and making available pre-consumer textiles does not fulfil these requirements and therefore cannot confer EoW status.

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49 As defined in Article 3, point (19), of Directive 2008/98/EC.

On the conceptual distinction between “second-hand” and “unused” products, the JRC agrees that that pre-consumer textiles should not be confused with "second-hand" or "re-wear" items. Nonetheless, the EoW criteria aim to ensure that once a material is discarded, it can be recovered under controlled conditions and re-enter the economy as a product. The fact that some pre-consumer textiles may require less extensive quality checks than post-consumer textiles does not alter their waste status.

Regarding the variability of pre-consumer waste, it is acknowledged that different sub-categories (e.g. finished garments, unsold batches) have distinct characteristics. However, this heterogeneity is not unique to pre-consumer textiles and can be addressed through sorting and verification requirements, as is the case with post-consumer textiles. What matters from a regulatory standpoint is that all discarded pre-consumer textiles must meet EoW conditions before being placed back on the market as a product.

— **Textiles retrieved from mixed municipal solid waste**

In contrast to post- and pre-consumer household waste, textiles recovered from mixed MSW present significant quality and traceability issues. Stakeholders broadly agreed that this stream is unsuitable for preparation for re-use and should be excluded from the scope. Therefore, the JRC concurs that textiles filtered out mixed MSW shall not be considered within the scope as they cannot provide the level of assurance required for EoW criteria.

Post-consumer household and commercial textiles can be suitable for remanufacturing, if deemed unsuitable for re-use. As clarified in Section 4.1.2, the ban on destruction of unsold goods established in the ESPR does not apply to remanufacturing. Pre-consumer textiles can hence be redirected to remanufacturing, as an alternative pathway to preparing for re-use, if the latter is not feasible. Hence the same sources of waste selected for preparation for re-use can be channelled to remanufacturing, on the condition they are not suitable for re-use.

6.1.1.3. JRC proposal

The JRC proposes that the following sources of textile waste shall be considered for the development of EoW criteria for preparing for re-use and remanufacturing:

— **Post-consumer household textile waste** covering, for example, clothing, accessories, footwear, home/interior textiles, including workwear without technical features.

— **Post-consumer commercial textile waste** covering, for example, tablecloths, carpets, curtains, towels, beddings from accommodation and food service activities.

— **Pre-consumer textile waste** including unsold goods (e.g. surplus stock, excess inventory and deadstock) and products returned by consumers.

6.1.2. Textile categories and items under scope

During the written consultation, stakeholders were asked whether certain textile categories and/or items should be excluded from the scope. The stakeholders’ opinions are summarised below.

6.1.2.1. Stakeholders' feedback

Slightly less than half of respondents expressed support for the inclusion of textiles, textile-related articles and footwear within the the scope for preparing for re-use, while agreeing with the exclusion of bulky items such as **mattresses** and **upholstery**. However, several stakeholders agreeing with the proposed scope also raised implementation-related concerns and requested clarification on specific aspects of the proposed scope as detailed below.

— **Footwear**

Only a minority of stakeholders contested the inclusion of footwear in the scope, raising concerns about hygiene, wear-related structural deformation, degradation and safety. Certain stakeholders also emphasised the absence of effective sanitation protocols to fully address microbial contamination risks due to prolonged body contact. All in all, some stakeholders stressed that footwear should only be considered for re-use if it is practically new.

Additionally, the definition of footwear was considered too broad. Clarification was requested on whether the scope would differentiate between various footwear types based on material composition (e.g. leather, plastic, rubber) or intended use.

— **Bulky items**

Concerns were raised about the term "bulky", which was seen as vague and could lead to inconsistent interpretations across Member States, thus impairing regulatory coherence. A clearer definition was requested.

Several stakeholders opposed the exclusion of all bulky items, such as blankets, duvets, pillows, carpets, mattresses and upholstery, noting that many of these are commonly collected in textile waste streams and have viable re-use or recycling markets, particularly items with down or feather filling. While acknowledging the technical and operational challenges associated with including such items under preparing for re-use, stakeholders cautioned that their complete exclusion could unnecessarily limit circular economy opportunities and hinder the development of future re-use solutions. As an alternative, some suggested adopting a more flexible approach, such as defining specific criteria for bulky items while accounting for evolving market conditions.

— **Technical textiles**

Stakeholders highlighted the need for a clear definition of technical textiles. They noted that if this category includes items such as those used in medical facilities, there is a heightened risk of threats to human health. Contaminated technical textiles, in particular, were deemed unsuitable for re-use.

Concerns were also expressed about potential health and environmental risks related to legacy substances, particularly in textiles treated with stain-repellent or flame-retardant chemicals (e.g. Personal Protective Equipment (PPE)). Some stakeholders proposed to exclude such articles from the scope or, alternatively, to require risk assessments to ensure compliance with limits on POPs. These concerns are particularly important for clothing items that are treated with durable chemical finishes to ensure specific performance functions, which may contain or release hazardous substances over time.

— **General**

Stakeholders indicated that items such as soft and hard toys, toys with batteries, eyewear, umbrellas and big travel bags frequently appear in textile collection containers. Some respondents recommended that the scope should account for the full diversity of items encountered at sorting facilities. Thus, it remains adaptable to collection practice, although it was also acknowledged that expanding the scope may entail more complex risk assessments.

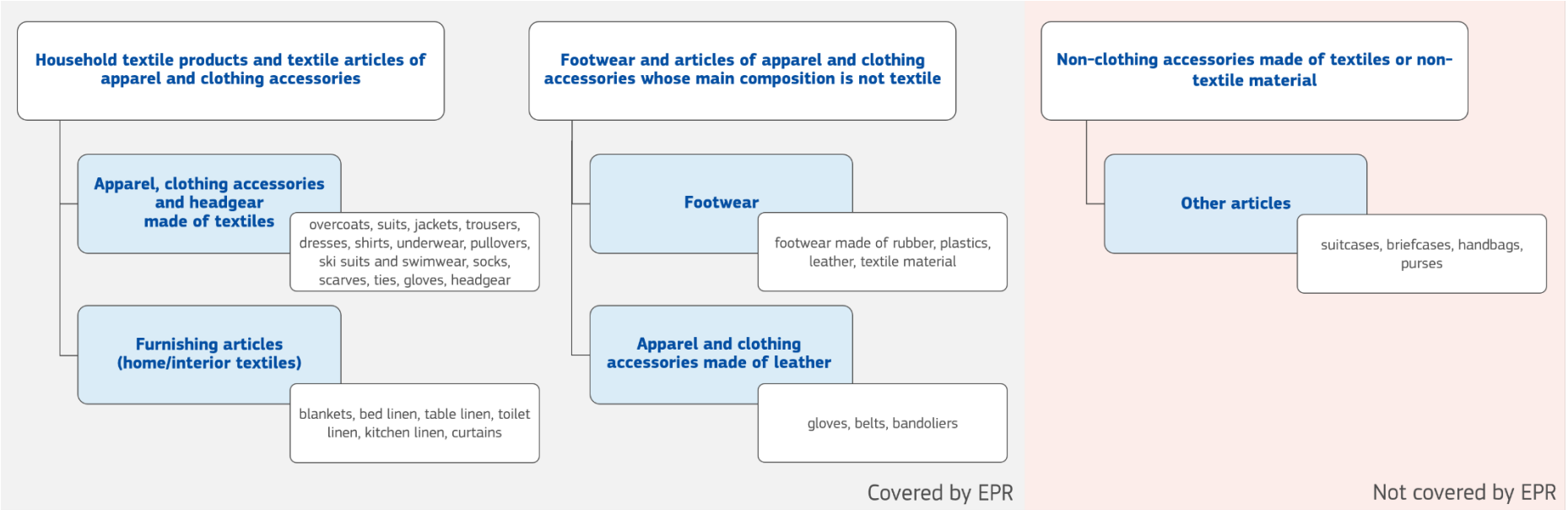
Additionally, a distinction was recommended between re-use pathways depending on the item type: basic checking and sorting for household textiles versus cleaning, disinfection and possible repair for other product categories.

6.1.2.2. JRC assessment of feedback

Limitation of textile categories and items within the scope

The EPR provisions in the **WFD** (see Section 1.1 - articles within the scope of EPR are listed in **Annex 2** to this document) only cover a defined set of textile, textile-related and footwear waste (see **Figure 10**). Yet, some items outside that scope were highlighted by stakeholders as particularly suitable for re-use. For example, suitcases, handbags and similar items are often manufactured from durable materials and can easily be brought back into circulation after cleaning and/or minor repair. The JRC therefore considers that the EoW criteria for preparing for re-use should not be limited to the categories covered under EPR but should be extended to those with demonstrated re-use potential.

Figure 10. Textile categories and items (examples) with high potential for re-use



Source: own elaboration

— **Footwear**

The JRC considers that footwear should remain included within the scope. Evidence indicates that footwear is already widely collected and re-used in practice, demonstrating that structural deformation or hygiene concerns do not constitute a systemic barrier to re-use. Comparable considerations regarding body contact are also applicable to clothing, which is routinely re-used without restriction, indicating that similar health concerns for footwear can be effectively managed. Established cleaning and sanitation protocols in sorting and refurbishment facilities, together with standard post-purchase cleaning practices by end users, provide sufficient mitigation of microbial contamination risks. Maintaining footwear in the re-use stream ensures that sorting operators can continue to collect and channel this waste category to appropriate recovery pathways. The JRC proposes targeted restrictions at the input material level to ensure that only footwear meeting defined quality and safety requirements enters the EoW process, thereby safeguarding both operational feasibility and product safety while supporting circularity objectives.

— **Bulky items**

Bulky items have practical handling and processing constraints. Many of these products exceed the capacity of conventional textile collection containers, and their multi-material or filled constructions (including textile layers combined with non-textile components such as foams, bonding layers, adhesives, or materials of animal origin like feathers or down) limit their compatibility with clothing-oriented sorting and preparation for re-use. Their design also creates logistical, hygiene and safety challenges that require specialised collection, storage or processing, which differ significantly from the systems used for apparel and household textiles.

By contrast, duvets, pillows and foam garden cushions are classified as bulky textile-based items for two complementary reasons. First, they are generally voluminous, so even when they can fit into collection containers, their size affects handling, storage and sorting efficiency. Second, their multi-material or filled construction (combining textile covers with non-textile components) further restricts compatibility with clothing-oriented sorting and preparing for re-use systems.

Stakeholder comments highlighted that certain items (particularly pillows and smaller carpets) are commonly deposited in post-consumer textile containers and, in some cases, collected separately for re-use or remanufacturing. For carpets and rugs, only large items that cannot be physically accommodated in standard containers are considered outside the scope, as they necessitate dedicated collection and logistics. While some actors operate dedicated collection and remanufacturing schemes for bulky items through, for instance, refilling, re-covering, or foam reconditioning, these practices generally rely on specialised infrastructure and quality control procedures distinct from standard textile re-use streams.

— **Technical textiles**

Despite the claims on the possibility to re-use technical textiles, there is not enough proof of the marketability potential for technical textiles prepared for re-use. It should be noted that several sorting facilities are known to either require high-quality technical textile items or do not accept such input at all. However, the JRC would prefer to keep an open scope and to impose specific restrictions on the use of these textiles as input for the sorting process, if needed.

In response to the request for a clearer definition of technical textiles, the JRC clarifies that, for the purpose of this work, technical textiles cover the following sub-categories:

- AgroTech or Agro Textiles – used in agriculture, aquaculture, horticulture and forestry (e.g. crop protection nets);
- BuildTech – used in building and construction (e.g. architectural membranes);
- Geotech or Geotextiles – used for soil and civil engineering applications (e.g. separation layers, filters);
- InduTech or Industrial Textiles – used in manufacturing sectors for specific purposes (e.g. filtration, cleaning);
- MobilTech – used in automobiles, railways, aerospace, etc. (e.g. seat upholstery, seat belt, carpets, air bags);
- EcoTech – used for environmental protection (e.g. landfill waste management).

Personal Protective Equipment (PPE) is included in the technical textiles category and encompasses products specifically designed and certified to protect the wearer against identifiable occupational health and safety risks and is regulated under Regulation 2016/425/EC. PPE must comply with essential health and safety requirements and undergo conformity assessment procedures (e.g. CE marking). **Protective footwear** is considered PPE according to Regulation 2016/425/EC.

For the purpose of this report, **workwear with advanced technical features** is included in the technical textiles category because, although not certified as PPE, such garments are engineered to meet demanding professional use conditions and therefore align with the core definition of technical textiles as products providing specialised, non-decorative functions.

To support stakeholder understanding, differentiating elements may include the presence of specialised materials, protective coatings, or functional treatments that deliver measurable performance. Examples of advanced technical features include: weather-resistant or water-repellent coatings, thermal insulation, anti-static or flame-retardant properties, abrasion-resistant reinforcements or chemical-resistant finishes.

While some performance features may not be immediately visible, differentiating elements can include observable cues such as reinforced areas (e.g. elbows, knees), specialised fabric textures indicating high durability, integrated insulation or ventilation panels, or labels indicating compliance with technical performance standards. Product information such as manufacturer specifications, care labels, or certifications can further support the identification of garments with advanced technical performance. Standard uniforms or workwear lacking these features provide only basic coverage, durability or visual identification and do not meet defined operational or technical performance requirements.

Additionally, there are a number of textile product categories whose classification cannot be determined solely based on end-use sector and therefore require clarification based on design intent, technical performance, and functional requirements:

- **Workwear without advanced technical features** (e.g. standard uniforms, basic service or administrative clothing) is treated as conventional apparel because its primary purpose is limited to providing basic coverage, modest protection or general durability. These garments are not engineered to deliver measurable, task-specific performance or specialised technical functions, such as chemical resistance, thermal insulation, anti-static behaviour, abrasion resistance or enhanced weather protection. They lack performance specifications or verifiable quality thresholds linked to professional, industrial, protective or environmental applications, and their design is primarily oriented toward general comfort, appearance or compliance with simple workplace dress codes rather than function-driven utility.
- **Raincoats** and other **sportswear** are not classified as technical textiles because, despite sometimes incorporating functional finishes (e.g. water repellence, breathability, stretch), their primary design purpose is consumer comfort and recreational or everyday use. Their performance features are not intended to fulfil a defined technical role in professional, industrial, protective, infrastructural or environmental applications, nor are they typically specified against sector-specific technical standards. By contrast, technical textiles are characterised by function-driven design for specialised operational contexts, where performance is intrinsic to the product's utility rather than an added consumer feature.

Given that the choice of the categories and items within the scope mostly affects the collection and sorting system, it is advisable to maintain the same scope for remanufacturing.

6.1.2.3. JRC proposal

The JRC proposes to include all **textile, textile-related and footwear categories** within the scope for preparing for re-use and remanufacturing, including:

- **apparel** (made of textiles or non-textile material);
- **clothing accessories** (made of textiles or non-textile material);
- **home/interior textiles** (including small carpets and rugs);
- **non-clothing accessories** (made of textiles or non-textile material);
- **workwear without advanced technical features** (e.g. standard uniforms), which aligns with conventional clothing;

— **technical textiles** (including protective footwear) and **workwear with advanced technical features** (e.g. PPE, geotextiles);

— **footwear** (made of textiles or non-textile material);

The JRC proposes to **exclude** the following categories from the scope of the EoW criteria for preparing for re-use: **mattresses**, **upholstery** and other **bulky items**[50].

6.1.3. Granting of EoW status and system boundaries

In its earlier draft, the JRC proposed that EoW status could be granted to any textile fraction that can be deemed suitable for re-use without any further processing. The feedback from stakeholders on this proposal is presented below.

6.1.3.1. Stakeholders' feedback

Stakeholders broadly supported granting EoW status once textiles meet a minimum quality for re-use, rather than when they are fully ready for final retail sale. They advocated for a flexible, market-aligned definition of re-use readiness that reflects wholesale, international resale and local repair practices. Downstream steps such as cleaning, ironing or minor repairs are common and should not delay EoW status, as they do not constitute substantial processing. In fact, one stakeholder further noted that no actor in the value chain can guarantee that an item will be purchased again on the second-hand market without undergoing some routine preparation steps, or even that it will be sold at all, due to market dynamics. For example, the stakeholder added that textiles exported for re-use are typically shipped in compressed, unwashed bales; upon arrival in destination markets, clothing generally requires washing, ironing or other basic preparation before resale. Stakeholders emphasised that such practices are standard elements of preparing for re-use and should not be interpreted as "further processing."

On a different note, several stakeholders highlighted that empirical case studies show how sorted materials not immediately suitable for retail sale can gain significant added value through **remanufacturing** or other innovative re-use strategies. In this context, many argued that a market-oriented approach able to distinguish between goods ready for immediate re-use and those requiring remanufacturing would better respond to actual market needs while supporting sustainability objectives.

Professional manual sorting was seen as the key step for determining reusability and market potential, with EoW status ideally granted after sorting and preparing for re-use where necessary. Stakeholders emphasised that overly strict quality standards could discourage re-use and push

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50 Bulky items can be understood in this context as textile-based articles that, due to their size, weight, thickness, filling structure or multi-material construction, are not consistently compatible with standard collection, sorting and preparing for re-use systems established for clothing and household textiles. This category includes, irrespective of whether individual items may physically fit into post-consumer textile collection containers, articles that typically require separate handling, specialised processing or alternative treatment routes. These include but are not limited to: mattresses and mattress toppers; duvets, pillows and other filled bedding articles; foam-filled garden cushions and similar outdoor furnishing textiles; large carpets and rugs that do not fit into standard post-consumer textile collection containers; and upholstery.

textiles prematurely into recycling or disposal, contradicting the waste hierarchy. Minor faults (e.g. missing buttons) should not disqualify items from re-use, and items with specific characteristics such as workwear with logos could be channelled into remanufacturing operations. Examples mentioned included remanufacturing the parts without logos or applying other techniques in line with proposals under development by CEN/TC 248/WG 39 on *Circular Economy for textile products – General Principles and Guidance*, which introduces different R-strategies such as refurbishing, remanufacturing and repurposing.

Several stakeholders also noted that textile products and textile waste suitable for remanufacturing may arise during sorting and preparing for re-use operations. They therefore stressed that EoW criteria should explicitly encompass **textiles suitable for remanufacturing** to ensure that sorting systems also supply materials to this market segment and do not inadvertently limit access to suitable feedstock.

Stakeholders also called for clarity on how EoW applies to exports, including mixed loads that may undergo further sorting abroad, and recommended a graduated traceability system to demonstrate re-use intent while minimising burdens. Rigid definitions of sorting steps are viewed as incompatible with innovation, and methodological flexibility is preferred to allow operators to adapt to different market and climatic contexts.

Finally, stakeholders highlighted the social and economic implications of overly prescriptive EoW definitions, warning against undermining the affordability of second-hand clothing, local repair economies, and diverse consumer preferences. They called for internationally adaptable criteria that support legitimate trade flows and would not destabilise re-use markets in importing countries.

6.1.3.2. JRC assessment of feedback

The JRC proposal that allows the granting of EoW status when textiles are deemed suitable for re-use without the need for further processing is seen as a practical and flexible approach by the majority of stakeholders.

However, the term “further processing” could create confusion. For clarification, “further processing” implies a substantial transformation rather than routine preparation steps. The distinction between these terms is explained as follows:

- “further processing” is understood as operations (e.g. extensive repairs requiring replacement of major components such as zippers or linings, resizing or altering garments, re-dyeing or re-finishing textiles) that alter the nature or intended function of the textile after going through preparing for re-use steps; whereas
- “routine preparation steps” (e.g. cleaning, minor repairs, ironing, labelling, packaging) are considered part of preparing the product for the final user but do not affect its EoW status.

The JRC acknowledges the importance of remanufacturing and notes that the amended WFD establishes sorting for remanufacturing as a preferential option over recycling for items deemed not suitable for re-use. This provides a clear legal basis for recognising remanufacturing as a distinct pathway following the re-use determination step, *wherever possible*. In this context, “wherever possible” reflects that remanufacturing is not yet an operation available at scale and that many sorting facilities may not currently have the equipment, partnerships or access to specialised operators needed to channel textiles into remanufacturing.

In line with stakeholder views and existing legislative provisions, the JRC considers it appropriate to introduce a separate EoW pathway for remanufacturing to support the development of high-value circular business models, without imposing remanufacturing where the necessary infrastructure or market capacity is not yet in place.

Items not suitable for re-use may be identified at the preliminary sorting stage, during the sorting for re-use stage or after the preparing for re-use step and should be redirected to remanufacturing as a preferred option wherever possible. Where this is not feasible, for example due to severe material degradation, contamination, the absence of remanufacturing operators for specific product categories, or lack of logistical links between sorters and remanufacturers, among others, these items should then be sent to sorting for recycling or directly to recycling, depending on the operator's system. Leftovers from remanufacturing processes ("residues") should also be redirected to sorting for recycling or recycling operations.

The inclusion of remanufacturing within the set of EoW criteria related to preparing for re-use, rather than under recycling, reflects both regulatory considerations and the waste hierarchy logic. Under the ESPR, the destruction of unsold goods is prohibited, and recycling is considered a form of destruction, unless a specific derogation applies. In contrast, preparing for re-use and remanufacturing are not regarded as destruction and therefore constitute compliant management routes for such products. Moreover, in the waste hierarchy, remanufacturing precedes recycling, as it entails a lower level of material transformation and generally preserves more of the product's functional and economic value, especially when compared to mechanical or chemical recycling processes. Positioning remanufacturing alongside re-use therefore provides greater regulatory clarity.

6.1.3.3. JRC proposal

The JRC proposes that **EoW status for preparing for re-use** shall be granted to a textile, textile-related or footwear item that:

— **has undergone sorting for re-use operations** and **preparing for re-use**, wherever needed;

— **complies with the full set of EoW criteria for preparing for re-use**; and

— **is ready to be placed on the second-hand market without any further processing**.

The JRC proposes to include an additional possibility to grant EoW status to items not suitable for re-use that are redirected to remanufacturing. **EoW status for remanufacturing** shall be granted to a remanufactured textile, textile-related or footwear item that:

— **has been deemed unsuitable for re-use**;

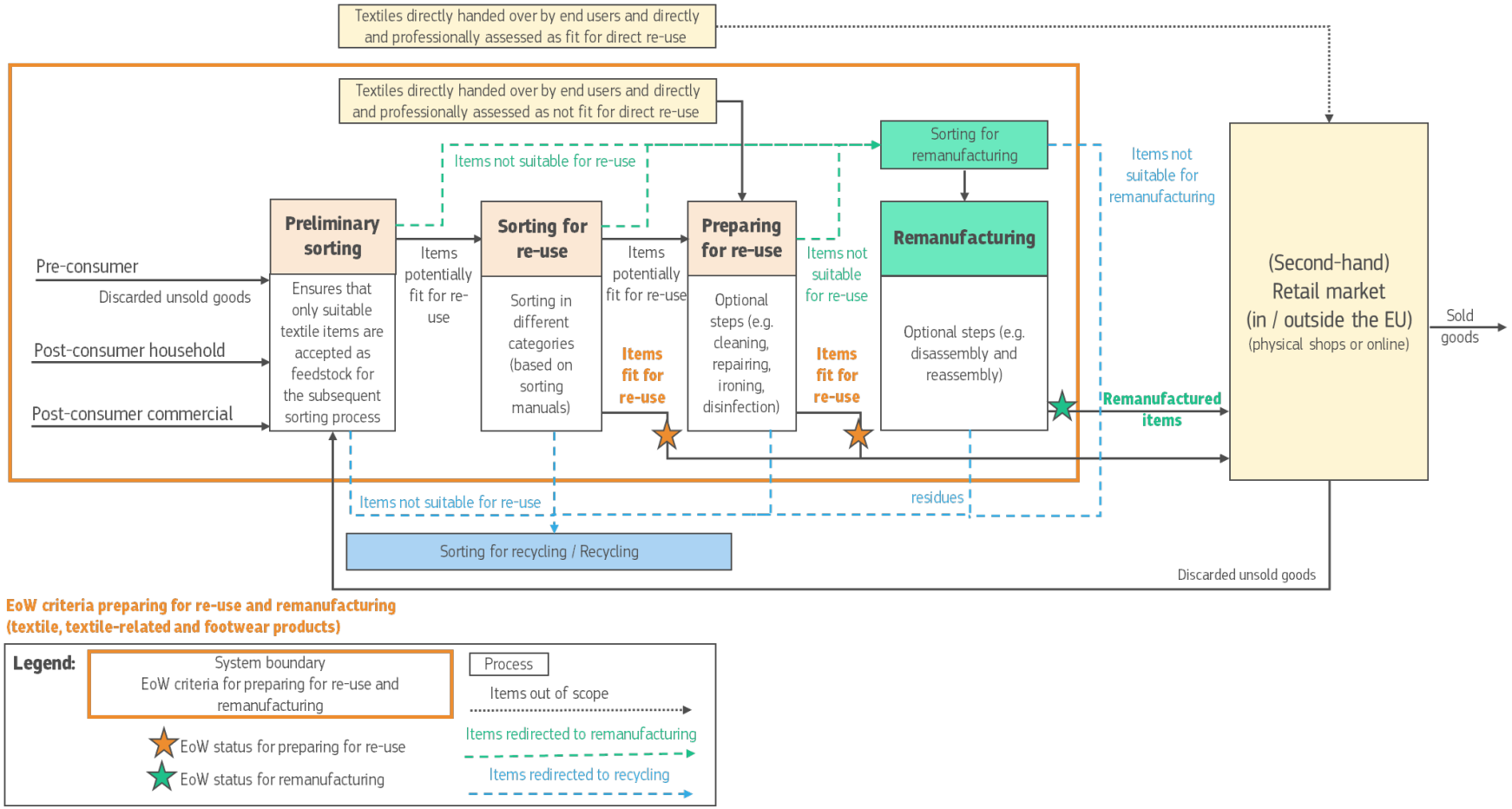
— **has undergone a remanufacturing operation**;

— **complies with the full set of EoW criteria for remanufacturing**; and

— **is ready to be placed on the market again without any further processing**.

The proposal is presented graphically in **Figure 11**.

Figure 11. Proposal for EoW status for preparing for re-use and remanufacturing



Note: Arrows with continuous lines represent the preferential path of items (potentially) fit for re-use. Arrows with dashed lines represent alternative paths of items identified as not suitable for re-use

Source: own elaboration.

6.2. Requirements on input materials (feedstock for sorting for re-use, preparing for re-use and remanufacturing)

The type of waste used as feedstock for the sorting process in the sorting facility depends on the collector and the instructions provided to consumers. In general terms, sorting facilities specialising in re-use normally accept all kinds of textiles and textile-related articles previously deposited by consumers in the dedicated containers, as long as they are in good enough condition to be re-used. Contaminated items (e.g. those with chemical or biological contaminants) as well as wet, dirty or damaged items are not intentionally collected, but may still inadvertently enter the textile waste collection stream. Feedstock for the overall sorting process, where the potential for re-use and recycling is assessed, can therefore not be reasonably regulated through EoW criteria. The restrictions imposed under the EoW criteria should focus instead on the **sorting for re-use** operation.

6.2.1. Criterion 1.1: Sorting for re-use operations to identify items suitable for direct re-use

6.2.1.1. Stakeholders' feedback

The JRC initially proposed that all incoming waste should undergo a pre-sorting step to identify articles not meeting specific conditions. However, some stakeholders criticised the fact that the JRC treats sorting and preparation for re-use as separate steps, whereas in industry practice sorting is an integral part of preparation for re-use. Sorting itself is a value-generating and preparatory activity and pre-sorting should be considered part of sorting rather than a distinct phase, serving as a rough separation of non-textile items from textiles that can be performed by collectors or at the start of sorting.

Additionally, there is broad support for granting EoW status after sorting, provided that items are functionally reusable, even with minor defects, without requiring additional repair.

There is a broad consensus that minor defects, such as missing buttons, small stains, or tears, should not disqualify textiles from EoW status. Requiring mandatory repairs would significantly increase costs, reduce the affordability of second-hand clothing and create unnecessary barriers to re-use, while market demand exists for such items both within the EU and in global re-use markets.

Several stakeholders noted that costly activities like laundry or repair are typically not performed by sorters and that repair activities are preferably carried out in destination countries, where they support local employment and circular practices. Prescriptive definitions of "retail-ready" risk imposing an EU-centric model of re-use that does not reflect functioning re-use economies, particularly in countries of the Global South, where garments with superficial imperfections are routinely repaired or altered and remain highly valued by consumers. Stakeholders also warned that raising the bar for EoW on the basis of cosmetic conditions could restrict access to affordable clothing and undermine local livelihoods that depend on repair, resale and re-use.

6.2.1.2. JRC assessment of feedback

The previous JRC draft proposal distinguished between pre-sorting and sorting as two separate steps. In the revised proposal pre-sorting should be understood as a professional screening in line

with WFD Article 22d, involving the separation of textiles from non-textiles at the collection stage. This preliminary sorting operation is considered part of the overall collection process, as defined in Article 3(10) of the WFD.

In accordance with Article 22d(5)(b) of the WFD, sorting for re-use must take place at an appropriate level of granularity to enable the separation of items that are fit for direct re-use from those that require further preparing for re-use operations. This clear functional distinction implies that preparing for re-use constitutes a subsequent step following sorting, rather than being part of the sorting process itself.

The JRC acknowledges that certain steps such as repairing, cleaning or ironing are not always required for textiles to be considered fit for re-use. At the same time, minimum quality requirements are necessary to ensure that textiles achieving EoW status are suitable for re-use and not exported as waste. These criteria are intended to be proportionate, allowing items with minor defects to qualify for EoW status, while leaving additional preparation steps to also be undertaken in importing countries, if needed.

6.2.1.3. JRC proposal

The proposal on a preliminary sorting step to identify items suitable for re-use is presented in **Table 5**.

Table 5. EoW criteria for preparing for re-use and remanufacturing - requirements on input materials – Criterion 1.1

No	Proposed EoW criteria on input materials	Self-monitoring requirements
1.1	All incoming textile, textile-related and footwear waste shall undergo a preliminary sorting step to remove any unnecessary non-textile items, followed by a sorting for re-use operation to identify which textile, textile-related or footwear items meet the following conditions for direct re-use: (a) items do not exhibit excessive wear[51] , do not emit unpleasant odours and do not show signs of dirt[52]; and (b) items do not have missing parts critical to their use, except for minor faults[53]. Items that do not meet these conditions but are identified as potentially fit for re-use after checking, cleaning or repairing recovery operations shall be re-	Acceptance control by visual, tactile and olfactory inspection of all waste received and of the accompanying documentation shall be carried out by qualified staff. Automated inspection systems that provide equivalent verification of item quality and suitability for re-use shall also be accepted. The producer or another operator of the sorting facility shall document that the textile, textile-related and footwear items suitable for re-use meet minimum quality standards to ensure their suitability for re-use, as verified by qualified staff or validated automated systems during the pre-sorting process.

[51] Excessive wear understood as signs of use that compromise the overall re-usability of the item, including significant thinning of fabric, fraying, or stretched seams.

[52] Dirt may be shown in the form of stains, mould or residues.

[53] Minor faults are understood as defects that do not compromise the overall re-usability and hence do not impede the possible re-sale of an item.

	directed to appropriate preparing for re-use steps. Textile, textile-related and footwear items identified as unsuitable for re-use already at this stage shall be redirected to sorting for remanufacturing, as a preferential option wherever possible, or (sorting for) recycling.	Records of the sorting operations, including the quantities and types of items identified as suitable for re-use, shall be kept within the quality management system.

Source: own elaboration

6.2.2. Criterion 1.2: Restriction of textile, textile-related and footwear categories and items

6.2.2.1. Stakeholders' feedback

Stakeholders expressed broad support for re-use across most textile categories, provided that items undergo appropriate treatment and are assessed case by case rather than through blanket exclusions.

In the case of footwear, some stakeholders expressed concerns regarding hygiene, structural deformation from wear, material degradation and user safety (particularly for protective footwear, where re-use could reduce protective performance). They also noted that current sanitation protocols may be insufficient to fully prevent microbial contamination from prolonged body contact.

A differentiated approach is urged for workwear with logotypes, as logos can often be removed or obscured, and overlaps exist with casual wear. Some re-use operators already have authorisations to handle such textiles, although exclusions may remain justified for protective clothing, uniforms and healthcare workwear due to security concerns and hygiene.

A recurring worry relates to chemicals of concern, where stakeholders stressed that sorting facilities cannot reliably identify restricted substances. New testing and screening methods are requested to improve sorting capacity.

Stakeholders also argued against a categorical ban on technical textiles, carpets and rugs, noting that certain items are already re-used in practice and could be made suitable with proper cleaning. Similar caution is raised against fully excluding underwear and reusable absorbent hygiene products (AHPs); clean, good-quality items may still be reusable or at least recyclable, and exclusion risks hindering innovation in circular hygiene textiles.

In particular, stakeholders highlighted the need to distinguish between underwear in good condition and used underwear. While imports of used underwear are prohibited in some countries (e.g. Ghana, under East African Standard EAS 356:2024) due to sanitary concerns, stakeholders argued that underwear should not be categorically excluded from re-use streams. They noted that underwear is frequently collected alongside other textiles and that there is a viable market for items in good or like-new condition, including unsold stock or products disposed of with tags or packaging intact. Regulations in countries prohibiting imports should not prevent trade with markets where high-quality second-hand underwear is in demand, such as Mozambique and parts of Europe.

6.2.2.2. JRC assessment of feedback

— **Healthcare textiles**

The JRC is of the opinion that healthcare textiles should be excluded from preparing for re-use and remanufacturing operations due to potential exposure to biological contaminants. An exception could be considered for items used by staff not directly engaged in patient care or not exposed to comparable health risks (e.g. administrative or ancillary personnel), provided that adequate hygiene and safety requirements can be demonstrably ensured.

Healthcare textiles (e.g. gowns, scrubs, protective clothing) used in clinical or patient-care contexts may present risks of microbial contamination and cross-infection, which could make their safe re-use or repurposing highly problematic. Stakeholder feedback indicated that these types of items are generally incinerated by law in Member States. However, the JRC lacks sufficient evidence on a case-by-case basis and considers that clothing used in healthcare facilities could be mixed unintentionally. As a result, the JRC supports the exclusion of textiles used in healthcare facilities altogether.

— **Carpets and rugs**

Some stakeholders supported avoiding a categorical ban on carpets and rugs as input materials for preparing textiles for re-use. The JRC recognises that practical and quality-related challenges exist, particularly for large carpets, which are typically bulky, heterogeneous and prone to contamination and wear. As large carpets are already classified as bulky waste, they fall outside the EoW criteria scope.
Small carpets and rugs may also have been treated with PFAS[54], and it is not possible to visually identify such treatments without professional testing. In view of these considerations, the JRC supports excluding carpets and rugs not only from the re-use stream but also from the stream destined for remanufacturing.

— **Absorbent hygiene products (AHPs)**

Only one stakeholder suggested that AHPs should not be excluded, arguing there is a market for reusable products but providing no further details. However, there is insufficient evidence to demonstrate their marketability or safe re-use. AHPs contain materials that have been in contact with bodily fluids, making hygienic restoration impractical and posing potential health and liability risks. Existing collection and sorting systems may not be equipped to handle AHPs safely, making their inclusion in re-use or remanufacturing streams inappropriate. The JRC supports hence excluding AHPs.

54 https://taenk.dk/kemi/english/avoid-pfas-carpets

— **Footwear**

Stakeholders highlighted important concerns regarding hygiene and functionality. These issues are legitimate and must be addressed to ensure confidence in re-useable waste categories and remanufactured items. At the same time, footwear is explicitly covered under EPR provisions, reflecting its importance as a consumption category and its relevance for circularity objectives. The JRC notes that hygiene and functionality concerns, while significant, do not prevent footwear from being included under EoW criteria. Stakeholders themselves reported that established cleaning, sanitation and quality-checking protocols already exist in sorting facilities, demonstrating that such risks can be effectively mitigated in practice.

— **Technical textiles (including protective footwear)**

Despite stakeholders' claims regarding the potential for re-using technical textiles, there is currently insufficient evidence to demonstrate their marketability.

Stakeholder feedback also highlights practical limitations in existing sorting systems, where technical textiles are typically rejected or accepted only when they meet strict quality criteria. These concerns reflect both demand-side barriers and infrastructural constraints to preparing technical textiles for re-use. The same is applicable to remanufacturing.

Technical textiles are highly heterogeneous, covering applications such as AgroTech. Some categories (e.g. HomeTech or certain InduTech items like cleaning cloths) are comparable to household textiles in properties and potential end uses, while others serve specialised professional functions with significant safety and/or security implications (e.g. protective equipment, military fabrics, geotextiles).

Moreover, while qualified staff at sorting facilities may be able to assess potential for re-use or remanufacturing, technical textiles are designed to meet strict technical and safety specifications that degrade with use. Additionally, unlike household textiles, technical textiles may have been exposed to hazardous substances or rely on performance characteristics that cannot be checked or restored outside controlled testing environments. If their performance no longer meets the original standards and an incident occurs upon re-use or upon placing the remanufactured item on the market, determining liability becomes complex.

Recital 28 of Directive 2025/1892 amending WFD clarifies that the scope of extended producer responsibility (EPR) for textiles should primarily target household textile and apparel products, which represent the largest share of EU consumption and contribute most to unsustainable overproduction and overconsumption. Products for professional use that do not pose safety, health and hygiene risks or raise security concerns may fall within the scope only when their nature and composition are similar to household textiles and if they are not covered by other relevant Union and national laws. By contrast, specialised professional applications (e.g. military items or Personal Protective Equipment with safety, health or hygiene risks) should be excluded by EPR obligations set out in Article 22a, 22b and 22c of the WFD.

Allowing such materials into re-use or remanufacturing streams could therefore pose significant user safety and regulatory compliance risks. For this reason, the JRC proposes that technical textiles and workwear with advanced technical features should be limited as input materials for preparing for re-use and remanufacturing and instead redirected to recycling or other recovery operations.

Finally, in the case of protective footwear[55], structural wear could undermine user safety. Protective footwear protects workers from occupational hazards such as impacts, slips, compression and extreme temperatures. Compliance with standards like EN ISO 20345:2022[56] ensures protective performance and durability. Sorting and recycling facilities cannot reliably verify safety features as they require standardised testing. Moreover, even when protective footwear may seem new, materials may degrade overtime. As a result, the protective properties cannot be guaranteed. Given this, the JRC proposes to restrict protective footwear as input material.

— **Underwear**

The JRC supports retaining underwear within the preparation for re-use criteria, as stakeholders highlighted that clean, good-quality items can be safely re-used. It was noted that underwear is often found in its original packaging and in brand new condition. There is also a viable market for such items in Europe and in other regions where their re-use is permitted. Therefore, their inclusion reflects actual market demand while maintaining hygiene and safety standards.

— **Workwear with logos**

Stakeholders noted that logos on uniforms can often be removed or obscured, and certain items may overlap with casual wear. Consequently, excluding non-technical workwear would be unnecessarily restrictive. For the purpose of this report, including these items for re-use aligns with existing operator practices, maximises material recovery and supports continued access to affordable clothing. Handling of uniforms bearing logos may be subject to specific permits or contractual requirements at sorting facilities, as in some cases these items may need to be directed to remanufacturing or, where appropriate, sent directly to recycling.

6.2.2.3. JRC proposal

The proposal on restriction of textile categories and items is presented in **Table 6**.

[55] Protective footwear understood as footwear in which the toe caps are made of metal Classifying footwear | Access2Markets

[56] EN ISO 20345:2022/A1:2024 - Personal protective equipment - Safety footwear - Amendment 1 (ISO 20345:2021/Amd 1:2024)

Table 6. EoW criteria for preparing for re-use and remanufacturing - requirements on input materials – Criterion 1.2

No	Proposed EoW criteria on input materials	Self-monitoring requirements
1.2	The textile, textile-related and footwear waste streams to be redirected to sorting for re-use and sorting for remanufacturing may originate from any source, with the exception of mixed municipal solid waste. The following items shall be eliminated from the re-use and the remanufacturing streams: (a) healthcare textiles; (b) carpets and rugs; (c) reusable absorbent hygiene products; (d) technical textiles including protective footwear; The suitability of the items listed under points (a) to (d) for recycling shall be assessed as a preferential option in compliance with the end-of-waste criteria for recycling. If qualified staff, in the course of verification, have reasonable grounds to suspect that certain items may contain substances restricted under Regulation (EU) No 1907/2006 (REACH) and/or Regulation (EU) 2019/1021 (POPs), such items shall be specifically identified and redirected to recycling or other recovery operations.	Acceptance control by tactile and visual inspection and analysis of accompanying documentation of all textile, textile-related and footwear waste received shall be carried out by qualified staff who are trained on how to recognise input restricted under this criterion. The producer or another operator of the treatment facility shall define appropriate risk management measures to ensure compliance restrictions under these criteria. Particular attention shall be paid to items that are likely to contain substances restricted under Regulation (EU) No 1907/2006 (REACH) and/or Regulation (EU) 2019/1021 (POPs). The operator shall define appropriate methods to ease the identification of articles likely to contain those substances. The producer or another operator of the treatment facility shall document and record all control measures, including records of input waste (date, origin, type, weight and/or quantity) and rejected/removed items (type, quantity and reason for rejection/removal), within the quality management system.

Source: own elaboration

6.3. Requirements on processes and techniques (sorting for re-use, preparing for re-use and remanufacturing)

The amended WFD's Article 22d establishes operational requirements for the management of textile waste, including protection from contamination and adverse weather. These provisions are closely linked to EPR obligations and focus on how Member States must organise collection, handling and sorting.

However, the scope of EoW criteria is broader than EPR as described in Chapter 4 and therefore requires specific self-monitoring obligations for each textile management activity. While there is no intention to duplicate regulation, EoW criteria serve a different function, verifying when a material ceases to be waste, and need their own set of process and monitoring requirements to ensure

consistent quality and safety across all pathways, including those covered but also not necessarily covered by EPR.

6.3.1. Criterion 2.1: Handling incoming waste

6.3.1.1. Stakeholders' feedback

Stakeholders expressed general support for keeping textile waste dry during collection and transportation but disagreed with the self-monitoring requirements proposed by the JRC in the earlier proposals, which are seen as rigid, costly and of limited added value. Stakeholders argued that ensuring dryness should fall under national EPR schemes as mandated by the WFD, rather than being enforced through separate EoW self-monitoring obligations. They pointed out that Article 22d of the revised WFD already addresses the protection of textiles from adverse weather and contamination during handling. Therefore, monitoring compliance is recommended to be integrated into EPR certification systems to avoid regulatory overlap between EoW criteria and existing provisions under the WFD.

Additionally, ensuring cleanliness (not just dryness) during collection was highlighted as crucial. Problems have been reported where used containers (e.g. those formerly used for construction waste) introduce contamination, compromising reusability. Therefore, stakeholders indicate that containers must be clean, dry and capable of preventing moisture ingress throughout collection and transportation stages. Additionally, one stakeholder indicated that vehicles must also be cleaned after each load.

Finally, practical challenges are raised regarding how dryness can be reliably ensured, especially given weather-related issues like condensation in warm conditions, and concerns that rigorous monitoring would be too costly.

6.3.1.2. JRC assessment of feedback

The JRC agrees with the stakeholder approach of not overregulating the handling of incoming textile, textile-related and footwear waste. Handling requirements should align with the provisions of Article 22d of Directive 2008/98/EC, reinforcing regulatory coherence and ensuring consistency with future EPR obligations for textiles.

While Article 22d covers general requirements for collection, transport, storage and treatment, it is proposed to introduce additional, targeted obligations to ensure that output items resulting from preparing for re-use or remanufacturing operations are clearly distinguished from non-compliant EoW criteria.

These requirements prevent cross-contamination between compliant and non-compliant EoW items, facilitate traceability, and support the enforcement of EoW criteria without creating unnecessary duplication with EPR compliance mechanisms.

6.3.1.3. JRC proposal

The proposal on handling incoming waste is presented in **Table 7**.

Table 7. EoW criteria for preparing for re-use and remanufacturing - requirements on processes and techniques – Criterion 2.1

No	Proposed EoW criteria on processes and techniques	Self-monitoring requirements
2.1	Textile, textile-related and footwear waste shall be handled according to the provisions laid down in Article 22d(1) of Directive 2008/98/EC. In addition, output items resulting from a preparing for re-use operation that comply with the EoW criteria shall be kept separately from any waste material not complying with the EoW criteria. Output items resulting from a remanufacturing operation that comply with the EoW criteria shall be kept separately from any waste material not complying with the EoW criteria. Rejects shall be labelled as waste.	The self-monitoring requirements related to the handling of textile, textile-related and footwear waste shall be documented and recorded under the quality management system.

Source: own elaboration

6.3.2. Criterion 2.2: Treatment steps

6.3.2.1. Stakeholders' feedback

Stakeholders broadly agreed on the importance of including treatment steps to ensure the quality of textiles prepared for re-use, but there was significant divergence on how this should be implemented.

Some stakeholders supported the inclusion of all necessary treatment steps but proposed that sorting and preparing for re-use should be performed in the same facility. This was suggested as a way to facilitate control and traceability, and to prevent sorted textiles intended for re-use from being redirected to recycling. However, others viewed this requirement as too inflexible, arguing that re-use systems typically involve different actors handling different stages of preparation, including downstream services like washing or repair.

There was further concern that requiring all items to undergo full preparation steps before being granted EoW status is impractical, particularly given the wide variation in market-specific re-use conditions. Stakeholders emphasised that what qualifies as reusable is highly context-dependent, shaped by factors such as climate, culture, consumer preference and affordability in destination countries. Imposing rigid or highly cosmetic thresholds (e.g. requiring flawless appearance or sanitation) risks excluding valuable, repairable items and reducing access to affordable clothing in low-income or rural areas.

There were repeated calls for clearer definitions and more flexibility. The term "all treatment steps needed for direct re-use" was described as ambiguous, and stakeholders asked who defines the targeted quality.

Finally, some stakeholders suggested developing a glossary of preparation for re-use activities to bring clarity, increase transparency along the value chain and enable fairer cost distribution between actors in sending and receiving countries.

6.3.2.2. JRC assessment of feedback

The JRC appreciates that stakeholders broadly support the inclusion of treatment steps to ensure the quality of textiles prepared for re-use but emphasises the need for flexibility and clarity. Performing sorting and preparation in the same facility could simplify traceability. However, mandating this would not reflect the practical organisation of re-use systems, which often involve multiple operators handling distinct stages, including washing or repair at different locations. Enforcing a single-facility requirement could create unnecessary logistical constraints and limit the efficiency of existing re-use chains.

The JRC recognises stakeholders' concerns regarding the diversity of market conditions for re-use and the importance of maintaining access to affordable clothing. However, it notes that the proposed requirement is not intended to impose uniform or high aesthetic quality requirements. The wording is deliberately generic, requiring operators to carry out only the treatment steps necessary to achieve the targeted quality for direct re-use, which can vary depending on the destination market and consumer expectations. This approach ensures flexibility while maintaining a baseline of quality assurance, avoiding the risk that unsuitable items are channelled into re-use streams. Items that are assessed as not suitable for re-use are to be sorted for remanufacturing and recycling.

Regarding the term "all treatment steps needed for direct re-use," the JRC notes that it is intentionally generic to allow adaptation to market-specific conditions, such as climate, culture, consumer expectations and affordability. To address stakeholder requests for clarity, the JRC proposes the "targeted quality" shall be defined by the operator in line with the intended destination market and documented in the quality management system.

The same logic is also valid for remanufactured items, which shall undergo all necessary treatment steps needed to transform them from a waste-derived input into finished goods with a clearly defined, market-acceptable value. The operator must determine, on the basis of the intended end use and the expectations of the target consumer segment, what combination of treatments is needed to guarantee that the remanufactured item meets the performance, safety, aesthetic and regulatory standards that apply to a brand-new product.

Moreover, items prepared for re-use or remanufactured and packed in bales shall be labelled with relevant information, as established in Article 22d(8) and 22d(9) of Directive 2008/98/EC.

6.3.2.3. JRC proposal

The proposal on treatment steps is presented in **Table 8**.

Table 8. EoW criteria for preparing for re-use and remanufacturing - requirements on processes and techniques – Criterion 2.2

No	Proposed EoW criteria on processes and techniques	Self-monitoring requirements

2.2	The sorting and preparing for re-use processes shall include all treatment steps needed to prepare textile and textile-related items to reach the targeted quality for re-use, as defined by the product quality requirements (cf. criteria 3.1, 3.2, 3.3). Items assessed as not suitable for re-use shall be sorted for remanufacturing, as a preferential option wherever possible, or for recycling. The sorting for remanufacturing and remanufacturing operations shall include all treatment steps needed to prepare the textile, textile-related items to be placed on the market again, in compliance with the product quality requirements (cf. criteria 3.1, 3.2, 3.3). Items assessed as not suitable for remanufacturing shall be redirected to sorting for recycling.	All treatment steps must be documented under the quality management system. The producer or another operator shall keep track of items redirected to sorting for remanufacturing and/or recycling and record them under the quality management system. Output items resulting from preparing for re-use operations and remanufactured items packed in a bale shall be labelled with relevant information to facilitate efficient processing by the next holder and avoid the need for additional sorting upon receipt, in line with the provisions laid down in Article 22d(8) and 22d(9) of Directive 2008/98/EC.

Source: own elaboration

6.3.3. Criterion 2.3: Additional treatment for specific items

6.3.3.1. Stakeholders' feedback

Some stakeholders supported the principle that footwear should undergo a functionality check to ensure basic integrity and usability for re-use. However, many emphasised that this check should be limited to a visual inspection, consistent with current industry practices. A systematic or technical functionality test was seen as unrealistic and impractical, especially given the high volume and diversity of footwear processed. Operators argued that trained sorters are already capable of identifying reusable items without formal testing procedures, and that mandatory functionality checks would increase labour costs and slow down operations.

There was strong concern regarding the proposal for a mandatory cleaning and/or sanitation step. Although stakeholders acknowledged the importance of ensuring hygiene, they highlighted that not all footwear requires these treatments. In many cases, shoes are cleaned or disinfected downstream—by wholesalers, importers, retailers or final users, especially in low-income markets. Making such treatment mandatory at the sorting stage is seen as costly, unnecessary and potentially counterproductive. Stakeholders requested that the criteria allow for operator discretion, suggesting formulations like "where appropriate" or "if needed" to avoid unnecessary processing and expense. Some also noted that mandatory treatment could reduce the affordability of second-hand footwear, undermining access for vulnerable populations and damaging local re-use markets.

Several stakeholders called for clearer definitions of the proposed treatment steps. The current proposal lacks precision on whether "cleaning" refers to external cleanliness (removal of dirt) or deeper hygiene measures, which may be difficult or impossible to guarantee, especially for footwear that comes into contact with bare skin, such as sandals. There is also concern over inconsistencies, for instance why sanitation is mandatory for footwear but not for clothing. Stakeholders

recommended that the criteria should be clarified through a glossary of terms or risk-based approach and that hygiene requirements should be proportional and practical.

Many stakeholders raised the issue of overregulation. They cautioned that imposing strict rules across the EU may destabilise effective existing systems, particularly for SMEs. Respondents from countries with mature regulatory frameworks (e.g. Austria, Germany) stressed that established sorting and re-use processes already operate under strict national permits and quality controls, and that layering new EU rules on top could result in duplicative procedures, administrative burden and reduced operational efficiency.

A number of stakeholders warned about the negative socioeconomic impacts of overly rigid rules. In destination markets like Kenya and Ghana, second-hand footwear is often cleaned, refurbished, or altered locally, which supports informal employment and local economies. Imposing burdensome requirements in the EU could reduce supply, increase prices and disrupt these economies. There is also concern that a narrow definition of reusability would push more items into recycling or disposal, even when they are easily repairable, undermining the goals of the circular economy.

To address these concerns, stakeholders suggested introducing flexibility in the criteria, such as letting operators determine when cleaning or sanitation is necessary. They proposed that the final assessment of usability should reflect market realities, not just technical procedures, and cautioned that overly strict standards could lead to the waste of usable products. Several contributions recommended that the JRC should conduct an impact assessment to ensure the criteria facilitate, rather than hinder, preparation for re-use, and that responsibilities for hygienic quality and final preparation should be more fairly shared across the value chain, including through EPR and eco-design policies.

6.3.3.2. JRC assessment of feedback

The JRC recognises that maintaining functionality and usability is essential for footwear intended for re-use. Some stakeholders stated that it is industry practice that trained operators can effectively identify items that are unsuitable for re-use (such as deformed or damaged shoes) through visual inspection alone. Therefore, the JRC is of the opinion that mandating formal functionality testing is considered disproportionate and would significantly increase operational costs without meaningful gains in quality or safety. The increasing use of automated systems should be considered where applicable.

Regarding cleaning and sanitation, the JRC acknowledges that a blanket requirement at the sorting stage is disproportionate, as not all footwear necessitates cleaning and sanitation. Footwear items may undergo sanitation steps further along the supply chain, by wholesalers, retailers or in destination markets. Requiring sanitation at the initial stage could increase costs, reduce accessibility of second-hand products and disrupt well-functioning re-use markets, particularly in lower-income regions.

The JRC therefore supports a flexible, risk-based approach, allowing operators to perform cleaning where needed or based on professional judgement. This ensures items meet basic usability standards while preserving efficiency and affordability. Footwear remains an important product group with high re-use potential, and the criteria should enable its continued circulation, even as products, without imposing rigid or overly technical obligations.

6.3.3.3. JRC proposal

The proposal on requirements on additional treatment for specific items is presented in **Table 9**.

Table 9. EoW criteria for preparing for re-use and remanufacturing - requirements on processes and techniques – Criterion 2.3

No	Proposed EoW criteria on processes and techniques	Self-monitoring requirements
2.3	Footwear items deemed potentially suitable for re-use shall undergo cleaning and/or sanitation where appropriate, based on professional assessment and market requirements. Footwear items assessed as not suitable for re-use shall be sorted for remanufacturing, as a preferential option wherever possible, or for recycling.	The cleaning and/or sanitation steps shall be documented and recorded under the quality management system, including the amount and type of treated items and the cleaning and/or sanitation technique used.

Source: own elaboration

6.4. Requirements on product quality (items suitable for direct re-use and remanufacturing)

6.4.1. Criterion 3.1: Quality requirements

6.4.1.1. Stakeholders' feedback

Stakeholders generally supported the principle that output materials intended for re-use should meet basic functionality and hygiene standards. However, they strongly cautioned against overly rigid or prescriptive criteria especially regarding appearance and minor defects, as this risks excluding valuable items.

Many stressed that minor imperfections, such as small stains, tears or missing buttons, are common in second-hand items and do not compromise functionality. These faults are accepted by markets, sometimes even valued in fashion trends like distressed jeans. Stakeholders argued that appearance is inherently subjective, and that setting objective conditions for this is neither practical nor aligned with market dynamics. Therefore, appearance criteria should remain flexible, serve only as minimal requirements, and respect national or regional variations.

Several noted that current grading systems (e.g. A, B, C grades used in second-hand markets globally) already accommodate different levels of quality, and that criteria should align with such existing practices. A small stain may downgrade an item to a B grade but not disqualify it entirely for re-use.

There was broad agreement that mandatory preparation for re-use (e.g. repairs) should not be required for all items. This could increase costs, risk pushing items prematurely into recycling, and strain already fragile re-use operators, especially when the cost of repair exceeds product value.

Stakeholders suggested that repair should preferably be performed downstream by buyers or specialist services and that support for such repair ecosystems (e.g. laundries, tailors, logistics) would be more effective than strict obligations.

Moreover, qualified staff are best placed to judge reusability rather than using prescriptive thresholds that cannot account for complex, variable market conditions. Stakeholders also highlighted that manual sorting introduces inevitable human error, so the presence of one non-conforming item/article in a bale should not disqualify the entire batch. Stakeholders added that a reasonable margin of error should be accepted.

6.4.1.2. JRC assessment of feedback

The JRC agrees with stakeholders that quality requirements for textiles intended for re-use should focus on functionality and cleanliness, while avoiding overly prescriptive thresholds on appearance. Minor defects such as stains, tears or missing buttons do not compromise reusability and are widely accepted by second-hand markets, which operate with established grading systems that accommodate different quality levels. Overly rigid appearance-based criteria would risk excluding items that remain valuable, undermining circularity and affordability.

In line with recital 50 of Directive 2025/1892 amending the WFD, the purpose of EoW criteria is to ensure that textiles sorted for re-use meet the needs of recipient markets, both in the EU and globally, while distinguishing goods fit for reuse from waste. The JRC believes that this requires criteria that are proportionate, market-oriented and compatible with existing grading practices. It is proposed that preparing for re-use steps, such as repair or cleaning, are not to be mandatory at the point of sorting unless professional assessment by qualified staff prescribes them. Isolated non-conforming items shall not automatically disqualify entire batches or shipments and preparation for re-use, such as repair or cleaning, is not to be mandatory at the point of sorting, unless professional assessment by qualified staff prescribes it. Such an approach strikes a balance between guaranteeing high-quality outputs and maintaining flexibility for diverse re-use markets and business models.

Remanufactured items shall also meet basic aesthetic and functionality requirements, to ensure they can acquire a new market value.

6.4.1.3. JRC proposal

The proposal on quality requirements is presented in **Table 10**.

Table 10. EoW criteria for preparing for re-use and remanufacturing - requirements on product quality – Criterion 3.1

No	Proposed EoW criteria on product quality	Self-monitoring requirements
3.1	Output textile, textile-related and footwear items resulting from sorting for re-use, preparing for re-use and remanufacturing operations:	Qualified staff shall conduct visual, tactile and olfactory inspections to verify that textiles intended for re-use meet cleanliness and functionality standards. Automated inspection systems that provide equivalent verification of item quality shall also be accepted.

	(a) shall not emit persistent unpleasant odours and shall not show signs of dirt[57]; and (b) shall be functional, with essential parts present to enable normal use. Output items may present minor faults[58] provided these do not compromise intended functionality or safety. Items that do not meet these conditions shall be redirected to recycling.	Qualified staff shall grade the output materials in line with established market practices. Records of inspections, including quantities and any rejected items, shall be kept within the quality management system.

Source: own elaboration

6.4.2. Criterion 3.2: Compliance with legislation and standards

6.4.2.1. Stakeholders' feedback

Stakeholder feedback revealed strong consensus that requirements for second-hand textiles to comply *demonstrably* with Regulation (EU) 2023/988 on General Product Safety Regulation (GPSR) and all other legal or industry requirements present significant practical, legal and economic challenges. While the objective of consumer safety is broadly supported, stakeholders cautioned against overly strict or unrealistic compliance obligations that risk undermining the viability of the second-hand sector.

A recurring concern is the impossibility of tracing the origin, date of placement on the EU market, or chemical composition of individual used textiles. Garments often lack intact labels and the required product information for GPSR compliance is rarely available to re-use operators. Many items were placed on the market long before the entry into force of current regulations. Without tools like a Digital Product Passport, verifying compliance is largely unfeasible.

Stakeholders consistently argued that used textiles should not be treated like new products. The GPSR primarily regulates products when they are placed on the market for the first time, meaning that garments already lawfully sold in the EU should be presumed compliant. Stakeholders expressed concern that requiring re-use operators to verify compliance when making used textiles available on the market introduces redundant burdens and threatens the economic sustainability of SMEs.

Instead, many propose a risk-based approach with spot checks (i.e. random inspections of selected items to verify quality and compliance) integrated into quality management systems. This approach, combined with existing legal obligations (e.g. waste operator licences, hygiene and safety protocols), is seen as sufficient to safeguard health. Several stakeholders requested clear, practical guidance from the European Commission on how to implement this.

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57 Dirt may be shown in the form of stains, mould or residues.

58 Minor faults are understood as defects or imperfections that do not compromise the overall (re-)usability of an item.

6.4.2.2. JRC assessment of feedback

Stakeholder feedback indicated that requiring full demonstrable compliance with Regulation (EU) 2023/988 (GPSR) and all legal or industry standards for second-hand textiles is often impractical. Many garments lack labels or documentation, and operators cannot reliably trace their original market placement, placement on the market or chemical composition. Applying the GPSR as if second-hand items were newly placed on the market would impose disproportionate costs and administrative burdens, without significant added safety benefits.

The JRC considers that the objective of consumer safety can be met through proportional, risk-based verification by qualified staff. Qualified staff shall focus on verification of each batch rather than individual items. Verification should target functionality, hygiene and compliance with applicable customer or market specifications or standards relevant for re-use. Existing grading and sorting systems can serve as effective safeguards, reflecting market realities while avoiding unnecessary testing or duplication. However, these grading and sorting systems are suggested as optional by the JRC.

Similarly to second-hand items, remanufactured items shall meet legal requirements applicable to products of the same nature and shall fulfil market specifications established by the industry or by customers.

6.4.2.3. JRC proposal

The proposal on requirements on compliance with legislation and standards is presented in **Table 11**.

Table 11. EoW criteria for preparing for re-use and remanufacturing - requirements on product quality – Criterion 3.2

No	Proposed EoW criteria on product quality	Self-monitoring requirements
3.2	Output items resulting from sorting and preparing for re-use operations shall demonstrably fulfil all legal requirements and shall comply with customer specifications, industry specifications or standards for direct re-use. Remanufactured items shall demonstrably fulfil all legal requirements and shall comply with customer specifications, industry specifications or standards applicable to products of the same nature.	Qualified staff shall verify that each batch in the consignment complies with the legal requirements and appropriate specifications or standards through proportional, risk-based checks. Compliance shall be verified at batch level rather than for individual items. The compliance procedure shall be documented under the quality management system.

Source: own elaboration

6.4.3. Criterion 3.3: Presence of non-textile materials

6.4.3.1. Stakeholders' feedback

Stakeholders broadly supported the intention to avoid output materials presenting unnecessary non-textile materials but seek clarification on the application of the requirement. Multiple comments

stressed that an absolute absence of non-textile materials is unrealistic due to the manual nature of sorting processes and added that a small, acceptable margin of error should be included to reflect operational realities and avoid disproportionate penalties.

Many stakeholders called for exceptions for certain materials that serve a legitimate function such as labels, hang tags, packaging or traceability elements, especially if they are necessary for re-use preparation, sale or legal compliance. These should not be classified as unnecessary non-textile materials. For example, certain clothing items often arrive at collection points still in their original plastic packaging. Stakeholders proposed that such items should be considered as having achieved EoW status and allowed to be sold in their original packaging.

There was also concern about items that have been repaired or upcycled, such as those with a replaced zipper or sewn button. These items, despite not being part of the original article, should not disqualify the garment from re-use; rather, they represent positive circular practices.

Some stakeholders mentioned that fashion features may include non-functional elements (e.g. decorative plastic or metal parts) and cautioned that banning all non-original components could conflict with aesthetic or stylistic market norms.

Overall, stakeholders recommended that the criterion distinguishes between essential and non-essential non-textile materials, and focuses restrictions on the latter, while also recognising market dynamics which naturally discourage the inclusion of irrelevant non-targeted waste in second-hand shipments.

6.4.3.2. JRC assessment of feedback

The JRC acknowledges that the presence of minor non-textile materials is inevitable given the nature of manual sorting and preparing textiles for re-use. Even in the future with impending automated sorting, their presence may be unavoidable.

Absolute zero tolerance is therefore impractical and could impose disproportionate burdens on operators. The JRC believes that the criterion should allow for a limited, reasonable margin of error, while focusing on removing non-textile materials that are truly non-functional or potentially harmful for consumers.

The JRC also agrees that certain materials, such as labels, hang tags, packaging or traceability elements, as well as repair or upcycled components (e.g. replaced zippers or sewn buttons), should not be considered as unnecessary non-textile materials and should not prevent an item from achieving EoW status. Likewise, non-functional decorative elements that are part of the original design or style should be accommodated, reflecting market realities.

Overall, the JRC proposes a flexible and risk-based approach, targeting genuinely unwanted non-textile materials while avoiding unnecessary exclusion of otherwise reusable textiles.

Similarly, for remanufacturing the JRC proposes that output items shall not present materials not necessary to fulfil the new function of the article.

6.4.3.3. JRC proposal

The proposal on requirements on presence of non-textile materials is presented in **Table 12**.

Table 12. EoW criteria for preparing for re-use and remanufacturing - requirements on product quality – Criterion 3.3

No	Proposed EoW criteria on product quality	Self-monitoring requirements
3.3	Output textile, textile-related and footwear items resulting from sorting and subsequent preparing for re-use operations shall, to the extent possible, be free from materials that are not necessary for the functional use of the article and that were not part of its original sales unit. Examples of such materials are paper, wood, plastic, rubber, metal, stone, ceramics, porcelain or other non-textile materials. However, this does not relate to labels, hang tags, packaging or traceability elements associated with the original article. Output items resulting from remanufacturing operations shall not present any materials that are not necessary for the functional use of the article.	Qualified staff shall carry out visual inspection of each batch in the consignment, to detect anomalies in product qualities. Automated inspection systems that provide equivalent verification are also accepted. Those procedures shall be documented and recorded under the quality management system.

Source: own elaboration

6.5. Requirements on quality assurance procedures (sorting, preparing for re-use and remanufacturing)

6.5.1. Criterion 4.1: Quality management system

6.5.1.1. Stakeholders' feedback

Stakeholders broadly supported the introduction of a Quality Management System (QMS), especially as a way to improve performance and prevent malpractice but repeatedly stressed that its implementation must account for the operational realities of small and social economy enterprises. There was widespread concern about the administrative and financial burden posed by mandatory external audits, especially for SMEs and microenterprises. Many stakeholders called for self-declaration or self-assessment mechanisms to be accepted in lieu of certification by third-party verifiers. Stakeholders also argued that the QMS should build on existing national waste treatment frameworks to avoid redundancy and overregulation that may undermine efficiency and compliance.

Several responses noted that imposing such a system on third-country suppliers is likely unrealistic and instead called for alignment with international standards like ISO 9001. To ensure fair competition, stakeholders suggested that importers and EU producers should face equivalent QMS requirements. A number of stakeholders called for a realistic implementation timeline, such as a two- to three-year transition period, to allow operators to adapt and to ensure there are enough qualified environmental verifiers.

Some stakeholders recommended that aggregated QMS performance data and material flow information should be made publicly accessible for transparency. Others proposed that controls and inspections by authorities should be regularly conducted on site rather than relying solely on

paperwork. Concerns were raised about the lack of capacity to enforce QMS compliance, particularly regarding textile imports via online retailers or private individuals, which currently escape oversight.

Many stakeholders also argued that QMS costs should be borne by EPR schemes, warning that, without compensation, such costs may force small actors out of the market. Calls were made for flexible quality monitoring alternatives tailored to the needs of microenterprises. Overall, stakeholders urged caution to avoid creating disproportionate regulatory burdens that may disincentivise re-use and consolidate the sector into the hands of larger players, undermining market diversity and inclusivity.

Stakeholders supported quality assurance but stressed that implementation must remain practical and proportionate. There is broad support for a QMS as a framework to ensure traceability, continuous improvement, and trust in sorting operations, but mandatory third-party certification for every operator was viewed as unnecessarily burdensome, especially when existing systems like ISO 9001 or local permits already fulfil similar roles. Many argued that the QMS should allow for self-declaration, particularly for SMEs, and that audits should not be overly prescriptive.

To ensure credibility, some proposed that verifiers should be selected from a list of accredited parties, with Member State involvement to avoid monopolies. Others suggested at least two independent assessment bodies should be available and called for audits coordinated by Producer Responsibility Organisations (PROs), coupled with targeted customs checks to ensure exports truly meet re-use criteria.

6.5.1.2. JRC assessment of feedback

— **Implementation, adaptation and enforcement of QMS**

The JRC acknowledges stakeholder support for the introduction of a QMS as a means to ensure traceability, operational performance and compliance in textile re-use. However, the JRC believes that QMS requirements must be uniform for all operators, including SMEs, social economy actors, and importers, to ensure legal certainty, fairness and alignment with the WFD.

While stakeholders expressed concerns about administrative and financial burdens, particularly for smaller operators, the JRC considers that a standardised QMS is a relevant pillar of the EoW framework. The QMS is essential to maintain consumer safety, material quality and trust in the re-use chain, and to avoid regulatory loopholes. Qualified personnel must conduct verification and audits across all operators without differentiation, ensuring equivalent treatment between EU producers and importers.

— **Alignment with international standards**

Based on the evaluation of the feedback received, the JRC proposes not to require the use of any international standards like ISO 9001. Implementing a standardised Quality Management System can generate additional costs and administrative burdens, particularly for small and medium-sized enterprises, as highlighted by stakeholders. Self-declarations or reliance on ISO standards shall not replace the mandatory QMS, as all operators are required to implement a consistent system with auditable procedures and third-party certification and verification.

Moreover, standards are periodically revised, meaning that referencing them would necessitate ongoing updates to maintain alignment.

The same considerations are also valid for the remanufacturing operation. Hence, the JRC proposes the same quality framework for remanufacturing.

6.5.1.3. JRC proposal

The JRC proposal on the quality management system is presented in **Table 13**.

Table 13. EoW criteria for preparing for re-use and remanufacturing - requirements on quality assurance procedures – Criterion 4.1

No	Proposed EoW criteria on quality assurance procedures
4.1	1. The producer shall implement a quality management system that allows it to demonstrate compliance with the end-of-waste criteria. 2. The quality management system shall include a set of documented procedures concerning each of the following aspects: (a) monitoring of waste entering sorting, preparing for re-use or remanufacturing operations (including quality control and risk management measures); (b) monitoring of the treatment processes and techniques; (c) monitoring of the quality of output items resulting from preparing for re-use or remanufacturing operations; (d) record keeping of the results of monitoring conducted under points (a). (b) and (c); (e) record keeping of feedback from customers concerning the quality of the output items; (f) record keeping of the actions taken to improve the performance of the preparing for re-use or remanufacturing operations, in order to addressed observed non-compliance with the end-of-waste criteria; (g) review and improvement of the quality management system; and (h) training of staff. 3. The quality management system shall cover all the specific self-monitoring requirements set out for each end-of-waste criterion and the statement of conformity. 4. The quality management system shall be assessed certified by one of the following bodies: (a) a conformity assessment body; or (b) an environmental verifier. 5. The bodies referred to in paragraph 4 shall verify that the quality management system fulfils the requirements on procedures referred to in paragraph 2. The verification shall be carried out every three years. 6. Environmental verifiers, referred to in paragraph 4, point (b), shall be permitted to perform the verification referred to in paragraph 5 only if such bodies have obtained an accreditation or licensing

	with a scope covering at least one of the following NACE codes specified in Regulation (EC) No 1893/2006 of the European Parliament and of the Council[59]: – NACE Code 13 (Manufacture of textiles); or - NACE Code 14 (Manufacture of wearing apparel); or - NACE Code 15 (Manufacture of leather and related products); or – NACE Code 22 (Manufacture of rubber and plastic products); or – NACE Code 38 (Waste collection, treatment and disposal activities; material recovery). 7. The producer shall give enforcement authorities, as defined in Article 2, point (26), of Regulation (EC) No 1221/2009, access to the quality management system upon request and make the records referred to paragraph 2, points (d), (e), and (f), of this article electronically available to the relevant national authorities upon request, for at least five years after the date of recording. 8. To be allowed to place output items on the Union market, the importer of such items from preparing for re-use and remanufacturing facilities located in a third country shall require third-country suppliers to implement a quality management system which complies with the requirements set out in paragraphs 1, 2 and 3 of this Article. This quality management system shall be verified by one of the bodies referred to in paragraph 4, which is accredited or licensed in a Member State to perform verification and validation activities for an organisation located in a third country, in accordance with the specifications laid down in Regulation (EC) No 765/2008 or in Regulation (EC) No 1221/2009 in conjunction with Commission Decision 2011/832/EU[60]. 9. If the importer of output items from preparing for re-use and remanufacturing facilities located in a third country fails to meet the requirements laid down in paragraph 8, the output items to be imported shall be considered waste and, therefore, shall comply with Regulation (EU) 2024/1157.

Source: own elaboration

6.6. Requirements on provision of information (sorting, preparing for re-use and remanufacturing)

6.6.1. Criterion 5.1: Statement of conformity

6.6.1.1. Stakeholders' feedback

Stakeholders generally acknowledged the value of a statement of conformity (SoC) in improving traceability and compliance, but they expressed strong concerns about the administrative burden,

[59] Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC regulations on specific statistical domains (OJ L 393, 30.12.2006, p. 1, ELI: http://data.europa.eu/eli/reg/2006/1893/oj).

[60] Commission Decision 2011/832/EU of 7 December 2011 concerning a guide on EU corporate registration, third country and global registration under Regulation (EC) No 1221/2009 of the European Parliament and of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) (OJ L 330, 14.12.2011, p. 25, ELI: http://data.europa.eu/eli/dec/2011/832/oj).

especially for SMEs and operators in the Global South. There was broad agreement that the SoC should apply at the shipment or bale level, not at item level, and that it should be issued in electronic form, preferably integrated into existing documentation like invoices or packing lists.

Several stakeholders emphasised the need for a simple, user-friendly and feasible system, cautioning that overly complex or costly requirements may disrupt trade, especially for small-scale importers in countries like Kenya or Ghana. Concerns were raised about the three-year record-keeping requirement, with some questioning its necessity and practicality.

There was a call for alignment with other legislation, such as the Digital Product Passport under the ESPR, and for any associated costs to be covered by EPR schemes. Some national authorities and social economy actors stressed that consumers should not be obligated to retain the SoC and that the scope of the SoC should be limited to confirming marketability and re-use classification, not product-level compliance, which is impractical given product diversity.

6.6.1.2. JRC assessment of feedback

The JRC considers a SoC a useful instrument to enhance traceability and demonstrate that textile batches meet EoW requirements. To remain effective, the SoC should be streamlined and applied at the shipment or bale level, rather than per individual item, reducing unnecessary administrative complexity. Integration with existing documentation, such as invoices or packing lists, is recommended to avoid duplicating procedures and facilitate operational efficiency.

The JRC emphasises that the SoC should maintain a proportionate approach, reflecting the realities of small-scale operators and international trade, while supporting regulatory oversight. Electronic records are encouraged to simplify management and improve accessibility for authorities and operators.

Finally, the SoC should focus on confirming the reusability and marketability of textile batches, rather than attempting to verify full product-level compliance, preserving both economic feasibility and the integrity of the re-use market.

The points presented above apply equally to the remanufacturing process. End users, retailers and downstream processors need assurance that remanufactured textiles are safe, fit for purpose and legally compliant. The SoC provides a single, auditable document that links the batch to its compliance status, facilitating traceability across the supply chain. A SoC improves buyer confidence and willingness to purchase remanufactured goods and reduces the risk of product recalls or market-access barriers caused by missing compliance evidence.

6.6.1.3. JRC proposal

The JRC proposal on the statement of conformity is presented in **Table 14**.

Table 14. EoW criteria for preparing for re-use and remanufacturing - requirements on provision of information – Criterion 5.1

No	Proposed EoW criteria on provision of information

5.1	The producer or the importer shall issue, for each consignment[61] of output items complying with end-of-waste criteria, a statement of conformity in agreement with the model set out in the template. The producer or the importer shall transmit the statement of conformity to the next holder of the consignment. They shall retain a copy of the statement of conformity for at least three years after its date of issue and shall make it available to competent authorities upon request. The statement of conformity may be in electronic form.

Source: own elaboration

Table 15 contains the template for the statement of conformity.

Table 15. JRC technical proposal for the statement of conformity (preparing for re-use and remanufacturing)

1.	Unique identification code of the consignment: Details of the installation in which the sorting, preparing for re-use or remanufacturing of the items in this consignment was carried out: Name: European Unique Identifier (EUID) (optional, alternative to the name): Address: Contact person: Tel.: E-mail:
2.	Quantity of the consignment - weight (tonnes), volume (m^3) or number of objects:
3.	Characteristics and intended use of the output items: a) Name or code that identifies the output item, in accordance with legal requirements, standard and product specifications, including customer requirements: b) Main technical characteristics of the output item, in accordance with legal requirements, standard and product specifications, including customer requirements:
4.	The items in this consignment comply with a customer requirement, industry specification or a standard referred to in point 3.
5.	The items within this consignment meet the criteria on input materials, on treatment processes and techniques, and on product quality.
6.	The producer applies a quality management system assessed by an accredited conformity assessment body, which is accredited by a national accreditation body, or by an environmental verifier as defined in Article 2, point (20)(b), of Regulation (EC) No 1221/2009. Where output items which have ceased to be waste are imported into the customs territory of the Union, the quality management system shall be verified by an accredited conformity assessment body, which is

[61] Consignment: a batch of EoW textiles which is intended for delivery from a producer to another holder and may be contained in either one or several transport units, such as containers.

	accredited by a national accreditation body, or by an environmental verifier, who shall obtain a specific accreditation or licence to operate in a third country, in accordance with the specifications laid down in Regulation (EC) No 765/2008 or in Regulation (EC) No 1221/2009 in conjunction with Commission Decision 2011/832/EU.
7.	The material in this consignment is intended to be placed directly on the market. It cannot be recycled or used for any other purpose. Where these conditions are not met, the user of this material shall handle it as waste and shall inform the producer.
8.	Declaration of the producer/importer: I certify that the above information is complete and correct to the best of my knowledge: Name: Date: Signature:

Source: own elaboration

6.7. Comparison of JRC proposal for EU-wide EoW criteria for preparing for re-use with national EoW criteria

As mentioned in Section 5.5, only France has implemented national EoW criteria for textiles prepared for re-use. Austria has published a national guideline to determine EoW status (see also **Annex 4**). No criteria targeting the remanufacturing operation have been identified to date.

The French EoW criteria have been used as a starting point for the development of the harmonised EU-wide EoW criteria. The criteria developed by Austria have been analysed in depth, but they are not considered as a starting point, as they do not constitute a legal text.

It can be seen that the JRC proposals are mostly in line with the French EoW criteria, when it comes to quality assurance and provision of information.

As for requirements on input materials, the main difference is that in the French EoW decree it is specified by the waste code from the European Waste Catalogue (EWC) which non-hazardous textile waste can be used as input (codes 19 12 08 "Textiles", 20 01 10 "Clothes" or 20 01 11 "Textiles"). The JRC opted for a different approach, by specifying which types of textile waste cannot be redirected to re-use. The JRC believes that using a negative list of non-allowed materials is more effective than using a positive list of allowed materials and is also future-proof. Furthermore, the JRC approach is more specific, as it includes a series of conditions the item has to meet to be eligible for re-use, either directly or after preparing for re-use.

In the treatment processes and techniques, specific requirements for footwear, namely on functionality and cleanliness, have been included in the JRC approach.

As for the requirements on product quality, the JRC approach is more stringent than the French approach, as it has to be demonstrated that the article meets specific conditions for direct re-use and fulfils all the relevant legal requirements.

7. Conclusions and recommendations

Current EU waste legislation lacks harmonised criteria for granting EoW status to textile, textile-related and footwear items prepared for re-use, remanufactured or recycled. Preparing for re-use and remanufacturing are fundamentally different from recycling and it is not feasible to come up with a single set of EoW criteria covering all these operations. This study presents proposals for EoW criteria for textile, textile-related and footwear waste that is prepared for re-use or remanufactured, while a parallel study proposes EoW criteria for recycled textile waste.

This study started with a scope focused exclusively on preparing for re-use. Nonetheless, EU policy developments occurring during the execution of this study, in particular the revision of the Waste Framework Directive (2008/98/EC) and the entry into force of the Ecodesign for Sustainable Products Regulation ((EU) 2024/1781), demanded a revision of the scope. The EoW framework had to be expanded with specific requirements for the remanufacturing step, which were incorporated within the EoW criteria proposed in this study.

Including remanufacturing under the preparing for re-use criteria - rather than under recycling - was driven by the JRC's understanding of the waste hierarchy principles. Our assessment sees remanufacturing positioned above recycling because it involves less material transformation and retains more of the original product's functional and economic value.

However, the JRC notes that the legal positioning of remanufacturing within the EU legislation is at present ambiguous.

Under Article 22d(5) of the revised Waste Framework Directive, it is clarified that waste shall be sorted into three successive streams: (i) direct re-use; (ii) preparing for re-use; and (iii) items deemed unsuitable for re-use, which must be sorted for remanufacturing and recycling, with a view to prioritising remanufacturing over recycling. The Directive does not provide a definition of "remanufacturing", but it seems to suggest that remanufacturing is regarded as a separate recovery operation that ranks below preparing for re-use in preference.

Conversely, recital 55 of the Ecodesign for Sustainable Products Regulation ((EU) 2024/1781) explicitly includes remanufacturing under the umbrella of "preparation for reuse" activities for the purposes of the provision on the ban on destruction of unsold goods. Article 2(16) of this Regulation also provides a definition of remanufacturing, namely "*actions through which a new product is produced from objects that are waste, products or components and through which at least one change is made that substantially affects the safety, performance, purpose or type of the product*".

In order to solve this discrepancy, the JRC recommends adopting a harmonised EU-wide definition of "remanufacturing", which should clarify its position in the waste hierarchy, in particular vis-à-vis preparing for re-use and recycling operations.

The technical proposals presented in this document are the result of an extensive consultation process involving waste treatment operators, including sorters, manufacturers, NGOs, standardisation bodies and national authorities, among others. This participatory approach has produced criteria that strike a balance between technical feasibility and legal compliance. In developing the criteria, prescriptive grading systems or rigid sorting rules were deliberately avoided. By leaving the detailed classification of items to market operators, the framework preserves commercial flexibility and respects the diversity of second-hand and remanufacturing business

models across the EU. This approach also acknowledges the international dimension of textile flows, as a large share of sorting and preparation takes place in third countries. Implementing systematic early-stage screening procedures to identify materials that are unsuitable for re-use already during sorting should enable the textile sector to streamline downstream processing.

Finally, the JRC notes that the timing of developing and possibly implementing EoW criteria for re-use and remanufacturing is especially pertinent given the rapid growth of fast fashion, where textile items are discarded after little to no use. As volumes of post-consumer textile waste continue to increase, a clear, legally recognised pathway for re-use and remanufacturing will help divert material from landfill, supporting the EU's circular economy ambitions.

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List of abbreviations

BAT	Best Available Technique(s)
BREF	BAT Reference Document
C2C	Consumer-to-consumer
CEAP	Circular Economy Action Plan
CEC	European Footwear Confederation
CEN	European Committee for Standardization
C&L	Classification & Labelling
CLP	Classification, Labelling and Packaging
CMC	Component Material Criteria
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DG ENV	Directorate-General for Environment
JRC	Joint Research Centre
DIN	German Institute for Standardisation
EC	European Commission
EC / List no	European Community Number / List number assigned by ECHA
ECHA	European Chemicals Agency
EoW	End-of-Waste
EPR	Extended Producer Responsibility
ESPR	Ecodesign for Sustainable Products Regulation
EU	European Union
GRS	Global Recycling Standard
HS	Harmonized Commodity Description and Coding System
Mt	Million tonnes
N/A	Not available
NACE	Nomenclature of Economic Activities
OECD	Organisation for Economic Co-operation and Development
PFAS	Per- and polyfluoroalkyl substances
POPs	Persistent Organic Pollutants

PPE	Personal Protective Equipment
RAC	Committee for Risk Assessment
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RCS	Recycled Claim Standard
SAICM	Strategic Approach to International Chemicals Management
SEAC	Committee for Socio-economic Analysis
SME	Small and medium-sized enterprise
SVHC	Substances of Very High Concern
TC	Technical Committee
TFEU	Treaty on the Functioning of the European Union
UNEP	United Nations Environment Programme
WG	Working Group
WFD	Waste Framework Directive
WSR	Waste Shipment Regulation

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Annex 1: Destruction of unsold goods (ESPR)

Table 16. Consumer products of which the destruction by economic operators is prohibited – listed in Annex VII to the ESPR

Commodity code	Description
1. Apparel and clothing accessories	
4203	Articles of apparel and clothing accessories, of leather or composition leather
61	Articles of apparel and clothing accessories, knitted or crocheted
62	Articles of apparel and clothing accessories, not knitted or crocheted
6504	Hats and other headgear, plaited or made by assembling strips of any material, whether or not lined or trimmed
6505	Hats and other headgear, knitted or crocheted, or made up from lace, felt or other textile fabric, in the piece (but not in strips), whether or not lined or trimmed; hairnets of any material, whether or not lined or trimmed
2. Footwear	
6401	Waterproof footwear with outer soles and uppers of rubber or of plastics, the uppers of which are neither fixed to the sole nor assembled by stitching, riveting, nailing, screwing, plugging or similar processes
6402	Other footwear with outer soles and uppers of rubber or plastics
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather
6404	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of textile materials
6405	Other footwear

Source: Regulation (EU) 2024/1781

Annex 2: Products that fall within the scope of the EPR

Table 17. Textile products, and textile articles of apparel and clothing accessories for household use or other uses, where such products are similar in nature and composition to those for household use, that fall within the scope of Article 22a of the amended WFD, listed in Annex IVc – Part 1

CN code	Description
61 – all listed codes within the chapter	Articles of apparel and clothing accessories, knitted or crocheted
62 – all listed codes within the chapter	Articles of apparel and clothing accessories, not knitted or crocheted

6301	Blankets and travelling rugs (except 6301 10 00)
6302	Bed linen, table linen, toilet linen and kitchen linen
6303	Curtains (including drapes) and interior blinds; curtain or bed valances
6304	Other furnishing articles, excluding those of heading 9404
6309	Worn clothing and other worn articles
6504	Hats and other headgear, plaited or made by assembling strips of any material, whether or not lined or trimmed
6505	Hats and other headgear, knitted or crocheted, or made up from lace, felt or other textile fabric, in the piece (but not in strips), whether or not lined or trimmed; hairnets of any material, whether or not lined or trimmed

Source: Directive (EU) 2025/1892

Table 18. Footwear, and articles of apparel and clothing accessories for household use or other uses, where such products are similar in nature and composition to those for household use, whose main composition is not textile, that fall within the scope of Article 22a of the amended WFD, listed in Annex IVc – Part 2

CN code	**Description**
4203	Articles of apparel and clothing accessories, of leather or composition leather (excl. footwear and headgear and parts thereof, and goods of chapter 95, e.g. shin guards, fencing masks)
6401	Waterproof footwear with outer soles and uppers of rubber or of plastics, the uppers of which are neither fixed to the sole nor assembled by stitching, riveting, nailing, screwing, plugging or similar processes
6402	Other footwear with outer soles and uppers of rubber or plastics
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather
6404	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of textile materials
6405	Other footwear.

Source: Directive (EU) 2025/1892

Annex 3: Separate collection of textile waste in EU Member States

Table 19. Overview of textile categories and articles that are collected separately in EU Member States

Articles	**AT**	**BE - Fl**	**BE - Br**	**BG**	**CZ**	**DE**	**DK**	**EL**	**ES**	**FI**	**FR**	**HR**	**HU**	**NL**	**PT**	**SK**	**SE**
Clothing (excl. footwear)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Accessories (general)						x			x		x						
Accessories (specific)		x														x	x
- bags		x														x	x
- belts		x														x	x
- caps/hats																	x
- mittens/scarfs																	x
- jewellery																	x
Footwear	x	x	x	x	x	x			x		x		x	x	x	x	x
Home/interior textiles (general)					x	x	x	x		x	x	x		x	x		
Home/interior textiles (specific)	x	x	x													x	x
- Bedding	x	x	x													x	x
- Blankets	x	x														x	x
- Curtains	x	x															
- Kitchen & bathroom textiles		x															
- Towels			x														
- Clean rags		x															
- Down duvets and pillows																	
Toys		x													x		
Professional clothing and textiles								x									

Source: AT: (Carla, 2023; ÖPULA, 2023); DE: (HUMANA Germany, 2021); ES: (HUMANA Spain, 2023); FR: (LeRelais, 2023; Refashion, 2023); PT: (HUMANA Portugal, 2023) SE: (Sverige, 2023), BE Flanders, BE Brussels, BG, CZ, DK, EL, FI, HR, HU, NL: (EC, 2021a)

Table 20. EU country guidelines for consumers related to textile collection items in containers

Accepted features	**AT**	**BE**	**DE**	**EE**	**ES**	**FI**	**FR**	**IT**	**NL**
Functional (wearable, re-usable) / in good condition (i.e. without holes)	x	x		x			x	x	
Clean (i.e. without stains)	x	x	x	x				x	x
Dry	x	x	x				x	x	x
Placed in (closed) bags	x	x	x		x	x		x	x
Folded									
Shoes must be in pairs	x		x		x		x	x	x
Socks must be in pairs									x

Source: own elaboration based on stakeholder input

Table 21. EU country guidelines for consumers: items not accepted in textile collection bins

Not accepted items		**AT**	**BE**	**DE**	**EE**	**ES**	**FI**	**FR**	**IT**	**NL**	**PT**	**SI**
Accessories	Belts						x					
	Bags						x					
	Jewellery						x					
Home/interior textiles	Pillows	x					x			x		
	Duvets with synthetic filling	x								x		
	Blankets						x					
	Rags	x										
	Floor coverings (i.e. mats and carpets)	x		x			x			x		
Footwear	Shoes						x					
	Single shoes	x										
	Rubber boots, slippers, shoe inserts	x										
	Ski, snowboard, ice skating shoes	x		x								
Clothing	Underwear						x					
	Socks						x					
	Tights						x					
	Swimming suits						x					
	Toys (including hard and plush toys)						x			x		
	Leather jackets or fur clothing			x			x					
Other	Mattresses			x			x			x		
	Tailoring waste, industrial waste	x		x						x		
	Knitting yarns									x		
	Umbrellas			x								
	Electronic devices			x								x
	Books and other household goods									x		

Source: own elaboration based on stakeholder input

Annex 4: Overview of national EoW criteria

A4.1 EoW criteria for preparing for re-use

A.4.1.1 Austria - Guide to determining the EoW status in the preparing for re-use of textiles

Meissner et al. (2019) developed a guide to classify product groups as eligible to be prepared for re-use, including a testing checklist. Clothing and accessories as well as home textiles are addressed in the guide.

The steps to be followed to determine EoW status include the following:

a) Preselection – Test criteria include selection criteria specified by the operator to identify items with potential for re-use (items that are locally non-marketable or non-recoverable shall be filtered out) as well as criteria on compliance with legislation.

b) Visual inspection – Test criteria are meant to assess if all essential functional components are available and that there are no visible damages that significantly impair the function, safety and marketability of the product.

c) Visual and manual safety check – Test criteria are meant to assess if the product is safe (e.g. there are no unsecured pointed or sharp-edged areas; mechanical strength is provided; all moving parts are mobile; there is no soiling, or corrosion-damaged or aged plastic parts).

d) Functionality testing – Test criteria are meant to assess if the product-specific main functions are maintained.

e) Cleaning – To remove dirt and other soiling affecting the main functions.

For certain high-risk product groups, it may be necessary to perform additional tests. This does not apply to textiles.

A.4.1.2 France – EoW status for objects and chemicals sorted for re-use

Products prepared for re-use shall cease to be waste when all of the following criteria are met:

a) Waste used in preparing for re-use meets the criteria set out in Section 1 of Annex I to the EoW decree.

b) Waste used in preparing for re-use shall be treated in accordance with the criteria set out in Section 2 of Annex I to the decree.

c) The articles resulting from the preparing for re-use shall meet the criteria set out in Section 3 of Annex I to the decree.

The operator of the preparation for re-use facility applies a **quality management system** which includes, in particular, the definition of the training of competent personnel and the procedures for verifying compliance with the self-monitoring obligations.

The operator of the preparing for re-use facility shall implement the following **self-monitoring obligations**: the relevant personnel carry out an administrative check and visual inspection of incoming waste and objects leaving the preparing for re-use facility. If there is any doubt as to the nature or composition of the incoming waste or of the outgoing product which cannot be ruled out by further analysis, the competent personnel shall send it to a waste management facility authorised to receive it.

Annex I to the decree presents criteria for the end-of-waste status of waste that has been prepared for re-use.

Section 1: Waste used in preparing for re-use

The only textile wastes accepted in preparing for re-use processes are: 15 01 09 Textile packaging, and textiles with waste status covered by one of the codes 19 12 08 "Textiles", 20 01 10 "Clothes" or 20 01 11 "Textiles".

Waste received at the facility site that are not immediately prepared for re-use are received and stored separately from other types of waste.

Each object which has been the subject of preparing for re-use is identified by a unique identification number and the reference of the installation where the preparing for re-use was carried out, in order to ensure its traceability and to be able to justify the status of this object during checks by the competent authorities. Identification can be done in batches.

Section 2: Treatment techniques and processes

2.1. Preparing for re-use necessarily includes a technical check (visual and/or tactile check for example) and an administrative check (check for consistency between the documents accompanying the waste and the waste itself for example). This is in order to identify the operations to be carried out which will guarantee that the waste can be directly re-used. This control ensures that waste from an object has the technical characteristics which enable it to perform the same functions as the object from which it came, as it is or after repair.

2.2. Preparing for re-use includes, where appropriate, cleaning or repair steps to ensure that the waste can be directly re-used for the same use as initially intended.

2.3. Objects that have been prepared for re-use are stored separately from other types of objects that may be managed at the facility.

Section 3: Quality of objects resulting from preparing for re-use

3.1. The objects that have been prepared for re-use are in a state allowing direct use without any other waste treatment operation.

3.2. Objects that have been prepared for re-use are packaged or repackaged and stored using practices that preserve their integrity and quality.

3.3. Objects that have been prepared for re-use have an identical use/function to that of the article or assembly of articles from which they initially came. With regard to packaging having contained dangerous substances or contaminated by such residues, identical use corresponds to use as packaging for a substance or mixture whose properties are compatible with the properties of the dangerous substance or residue which was present in the packaging. There must be no risk of contamination which would be detrimental to the use of the new content.

Annex II to the decree encompasses the elements to be included in the certificate of conformity. The certificate of conformity for an object prepared for re-use should include key details such as the address of the installation where the re-use preparation was carried out, the operator's company name, and the identification number of the part or lot. It should also specify the weight, volume, or number of objects, along with the delivery date. The certificate must confirm that the object complies with relevant standards, industrial specifications, and/or regulations, and, if applicable, the customer’s technical requirements. Additionally, it must outline the authorised uses of the object post-preparing for re-use.

The operator must certify the accuracy of the information, affirming that the object has been prepared for re-use in accordance with the ministerial decree of 11 December 2018. The document should be dated and signed by the site operator.

Annex 5: Common third-party certifications for QMS in sorting facilities

Table 22. Third-party certification schemes for quality management systems in sorting facilities (non-exhaustive list)

Third-party certification	Country of application
Eco-Management and Audit Scheme (EMAS)	International
GRS (Global Recycled Standard)	International
TÜV Nord[62]	International
MEPEX[63]	Norway
SGS[64]	International
Qualityaustria[65]	Austria
Ecodynamics[66]	Belgium
Rec'Up[67]	Belgium
KIWA[68]	Netherlands

Source: own elaboration based on stakeholder input

62 TÜV Nord: Technical inspection association active in the areas of control, auditing, certification, testing, training and technology in almost all industrial and service sectors. More information is available here: https://www.tuv-nord.com/be/de/homepage/

63 MEPEX: Norwegian independent consultancy firm specialising in waste management, recycling and circular value chains. More information available here: https://mepex.no/en/about-mepex/

64 SGS: world's leading testing, inspection and certification company. More information is available here: https://www.sgs.com/en

65 Qualityaustria: is the leading Austrian contact for the Integrated Management System, based on quality, environmental and OH&S. More information is available here: https://www.qualityaustria.com/produktgruppen/sustainability-und-esg-management/guetesiegel-fuer-soziale-unternehmen-als-partner-von-arbeit-plus-soziale-unternehmen-oesterreich/

66 Ecodynamics: an official and free recognition. It rewards and encourages companies, non-profit organisations and institutions in the public or private sector in Brussels that take action to reduce the impact of their activity on the environment. More information is available here: https://www.ecodyn.brussels/?lang=en

67 RecUp: defines organisational criteria which guarantee the quality of the products and services offered by social economy companies active in the collection, sorting, re-use, recovery and recycling of goods. More information available here: https://www.res-sources.be/fr/recup/

68 KIWA: Testing, inspection and certification organisation. Since January 1, 2022, entrusted with the assessment of the Vereniging Herwinning Textiel (VHT) scheme (Textile Recovery Association in English). More information is available here: https://www.kiwa.com/nl/en/

Annex 6: Glossary

Accessories: items made of textiles or non-textile materials used to fulfil different practical or decorative functions.

Apparel: a textile category that encompasses different types of articles made from fibres, yarns or fabrics. It includes clothing, footwear and accessories.

Apparent consumption: domestic retail and textiles placed on the market for business-to-business applications. It is calculated as the sum of EU production plus imports minus exports of finished textiles.

Bale: can be produced from textile waste collected separately but also from sorted textile waste. Balers are used to condense waste into dense, easier-to-transport bales.

Bulky items: textile-based articles that, due to their size, weight, thickness, filling structure or multi-material construction, are not consistently compatible with standard collection, sorting and preparing for re-use systems established for clothing and household textiles. This category includes, irrespective of whether individual items may physically fit into post-consumer textile collection containers, articles that typically require separate handling, specialised processing or alternative treatment routes. These include, but are not limited to: mattresses and mattress toppers; duvets, pillows and other filled bedding articles; foam-filled garden cushions and similar outdoor furnishing textiles; large carpets and rugs that do not fit into standard post-consumer textile collection containers; and upholstery.

Clothing (also known as **garments**)**:** items made of textile or other non-textile material (e.g. leather) designed to be worn on the body for different purposes (e.g. covering, protecting, decorating).

Collection (follows the Directive 2008/98/EC definition): the gathering of waste, including the preliminary sorting and preliminary storage of waste, for the purposes of transport to a waste treatment facility.

Collection rate: percentage of textile waste collection compared to the total textile waste generation. Textile waste collected in a country but exported to another country for recycling is included. Textile waste imported from other countries and recycled in the country in question is not included.

Consignment: a quantity of EoW textiles which is intended for delivery from a producer to another holder and may be contained in either one or several transport units, such as containers.

Destruction (follows the Regulation (EU) 2024/1781 definition): the intentional damaging or discarding of a product as waste with the exception of discarding for the sole purpose of delivering the discarded product for preparing for re-use, including refurbishment or remanufacturing operations.

Disposal (follows the Directive 2008/98/EC definition): any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy. Annex I to the Directive sets out a non-exhaustive list of disposal operations.

Energy recovery: the use of waste principally as a fuel (e.g. refused-derived fuel (RDF)) or other means to generate energy.

Footwear (follows the Directive 94/11/EC definition): all articles with applied soles designed to protect or cover the foot, including parts marketed separately.

Hazardous waste (follows the Directive 2008/98/EC definition): waste which displays one or more of the hazardous properties listed in Annex III to the WFD (e.g. explosive, acute toxic).

Healthcare textiles: textiles used in clinical or patient-care contexts (e.g. gowns, scrubs, protective clothing).

Home/interior textiles: textiles used in households for home furnishings as well as in accommodation services.

Input material: textile and textile waste used as input for a sorting facility.

Knitting: a mechanical process which consists of knotting yarn together with a series of needles. Knitting, whether by hand or on a machine, is usually done by using warp and weft knitting techniques.

Material recovery (follows the Directive 2008/98/EC definition): any recovery operation, other than energy recovery and the reprocessing into materials that are to be used as fuels or other means to generate energy. It includes, *inter alia*, preparing for re-use, recycling and backfilling.

Municipal solid waste (MSW): non-sorted, mixed waste from households and commercial activities. This waste flow excludes the flows of recyclables collected and kept separately, be it single-material flows or multi-material (commingled) flows.

Natural textile fibre: fibre which occurs in nature. It can be categorised according to its origin into animal and plant fibres.

Non-textile components: materials and substances not bound to or incorporated in the textile matrix, which are part of the products where the textile is present.

Non-targeted textiles: textiles present in textile waste, but the presence of which is detrimental to the direct use of the textile waste in the production of new textiles.

Nonwoven textiles: textiles manufactured without an intermediate yarn-processing step. Nonwovens are textiles that are neither woven nor knitted. Nonwoven fabric is typically manufactured by layering medium-sized fibres (4–7 cm) in the form of a sheet or a web and then binding them either mechanically, thermally or with an adhesive.

Output materials: output obtained from sorting, preparing for re-use or remanufacturing operations.

Output items: these include textile, textile-related and footwear items.

Polyester: the term typically used to refer to fibres or textiles made from polyethylene terephthalate (PET), polybutylene terephthalate (PBT) or polytrimethylene terephthalate (PTT). Even though all materials are considered polyester, blending of these different types of polyester can adversely affect the processing and the quality of the output material.

Preliminary sorting: it is considered part of the collection step as per Article 3(10) of the WFD and aims to remove any unnecessary non-textile materials. This step is followed by a sorting for re-use operation to identify which textile, textile-related or footwear items meet the conditions for direct re-use.

Preparing for re-use: (follows the definition in Article 3(16) of the WFD): checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing.

Personal Protective Equipment (follows the Regulation 2016/425/EU definition): equipment designed and manufactured to be worn or held by a person for protection against one or more risks to that person's health or safety.

Producer: an operator that treats plastic waste so that it ceases to be waste in compliance with the end-of-waste criteria.

Professional assessment: the final decision to classify used textile, textile-related and footwear products as fit for re-use is not left to the end user but to the persons receiving the used products at the collection point who are provided with training or guidelines to ensure an adequate assessment (follows the definition in recital 48 of the amended WFD).

Qualified staff: individuals who have been provided with training or guidelines to ensure an adequate professional assessment and are able to distinguish between items potentially suitable for re-usable, remanufacturing and recycling (follows text linked to professional assessment in recital 48 of the amended WFD).

Recovery (follows the Directive 2008/98/EC definition): any operation generating waste serving a useful purpose by replacing other materials which would have been otherwise used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II to the Directive sets out a non-exhaustive list of recovery operations.

Remanufacturing (follows the definition in Article 2(16) of Regulation (EU) 2024/1781): actions through which a new product is produced from objects that are waste, products or components and through which at least one change is made that substantially affects the safety, performance, purpose or type of the product.

Restricted substances: any substance in textile waste which represents a risk for health, safety and the environment.

Re-use (follows the definition in Article 3(13) of the WFD): any operation by which products or components that are not waste are used again for the same purpose for which they were conceived. Re-use is a means of waste prevention; it is not a waste management operation.

Protective footwear: footwear explicitly designed to safeguard the wearer from occupational hazards. These shoes have toecaps made of metal to give protection against impact and may possess other distinctive characteristics. They are classified under different subheadings of CN code 6403.

Second-hand textile items: used textiles that have been prepared for re-use and are re-entering a market for sale, lease or use by a second user or an end user.

Sorted textile fraction: contains specific textile items or textile fibres that are destined for re-use.

Sorting for re-use: the process by which collected post-consumer textile items are systematically inspected, separated and classified to identify those that are suitable for direct re-use or preparation for re-use, based on criteria such as physical condition, cleanliness, functionality, safety, and compliance with applicable requirements, and to distinguish them from items destined for remanufacturing, recycling or other recovery operations.

Sorting for remanufacturing: the process by which collected post-consumer textile items are identified, separated and directed based, for example, on their structural integrity, material composition, and suitability for industrial reprocessing, with the purpose of enabling remanufacturing operations such as disassembly, component recovery or reconditioning, rather than direct re-use or conventional recycling.

Technical textiles: textile products designed primarily to perform specific technical functions rather than decorative or aesthetic ones, using specialised materials, structures or treatments to meet defined performance requirements in professional, industrial, protective or environmental applications

Textile: general term that encompasses various fibre-based materials, including fibres, yarns, filaments, threads and different fabric types.

Textile category: category of textiles that includes a specific type of textile items. Exemplarily, the textile category clothing includes the textile items t-shirt, trousers, shorts, jackets, socks, underwear, sports- and swimwear.

Textile item: one physical textile object, for example a t-shirt, a blanket or a pair of shoes, but also output material of a mechanical recycling process such as a cleaning rag.

Textile fibre (follows the Regulation 1007/2011/EU definition): a unit of matter characterised by its flexibility, fineness and high ratio of length to maximum transverse dimension, which render it suitable for textile applications; a flexible strip or tube, of which the apparent width does not exceed 5 mm, including strips cut from wider strips or films, produced from the substances used for the manufacture of the fibres and suitable for textile applications.

Textile product (follows the Regulation 1007/2011/EU definition): any raw, semi-worked, worked, semi-manufactured, manufactured, semi-made-up or made-up product which is composed of at least 80% textile fibres, regardless of the mixing or assembly process employed.

Textile waste: textile waste which the holder discards, intends to discard or is required to discard. It can be classified into the following:

- **Post-industrial textile waste** is generated in the manufacturing of fabrics and textile products. It is generated as a result of technical features of the manufacturing process, inaccurate resource planning or production errors. Production scrap re-used within the production process or by-products are not within the scope.
- **Pre-consumer textile waste** is generated at retail level, including excess stock, returns and unsold goods.

— **Post-consumer commercial textile waste** arises from any commercial or industrial activities such as hospitality, healthcare, agriculture, environment, construction. Technical textiles also belong to this category (e.g. textiles for filtration, professional cleaning items, workwear with highly technical features, personal protective clothing and footwear).

— **Post-consumer household textile waste** is generated at household level and can contain the following textile categories and items: clothing, clothing accessories, footwear, home/interior textiles, other items partially or fully made of textile materials.

Treatment (follows the Directive 2008/98/EC definition): recovery or disposal operations, including preparation prior to recovery or disposal.

Upholstery (follows the Commission Decision (EU) 2016/1332 definition): the materials used in the craft of covering, padding and stuffing of seating, bedding or other furniture products; it may include covering materials such as leather, coated fabrics and textiles as well as padding materials such as flexible cellular polymeric materials based on rubber latex and polyurethane.

Used textiles (follows recital 23 of the WFD): separately collected textiles that are discarded by the end user, whether or not they are discarded with the intention and possibility for them to be re-used. At this stage, used textiles could be either fit for re-use or waste, as they have not been assessed. For that reason, used textiles that are collected separately should be considered to be waste upon collection unless they are directly handed over by end users and directly and professionally assessed as fit for re-use at the collection point by the re-use operator or social economy entities.

Visual inspection: inspection of consignments using either one or all human senses such as vision, touch and smell and any non-specialised equipment. Visual inspection shall be carried out in such a way that all representative parts of a consignment are covered. This may often be best achieved in the delivery area during loading or unloading and before packing. It may involve manual manipulations such as the opening of containers, other sensorial controls (feel, smell) or the use of appropriate portable sensors.

Weaving: the process by which yarns are assembled together on a loom to obtain a woven fabric.

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