

# Part 1 of 2 of the questionnaire on the working document: Preparatory study on textiles for product policy instruments - 3rd milestone

Fields marked with \* are mandatory.

## Introduction

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### Context of the questionnaire

Welcome to the **Part 1 of 2** of the questionnaire that will allow you to contribute to the development of the [preparatory study on textile products](#).

Deadline for submission of answers and comments: **30 March 2026** at 23:59 CET.

On 16 December 2025, the Joint Research Centre (JRC) of the European Commission shared with all registered stakeholders the [working document of the 3rd milestone](#).

On 14 and 15 January 2026, registered stakeholders and the JRC exchanged ideas during an online workshop about Tasks 4, 5 and 6 of the working document.

On 30 January, stakeholders received a PDF version of the questionnaire providing detailed information on the content and structure of all questions related to the working document of the 3rd milestone, on which the JRC would welcome feedback from stakeholders.

From 5 February to 30 March 2026, all registered stakeholders will be able to provide **written feedback** to the working document of the 3rd milestone via two dedicated EU Survey forms.

The consultation process enables the JRC to improve the work under development and the exchange with registered stakeholders aims to:

- verify the work done to date,
- collect additional evidence on the investigated topics.

## Structure of the Part 1 of 2 of the questionnaire

Part 1 of 2 of the questionnaire has 8 sections:

1. Profile of the respondent
2. Analysis of technologies in the context of physical durability
3. Analysis of technologies in the context of repairability
4. Analysis of technologies in the context of recycled content
5. Design options (DOs) not included in the model
6. DO1 on robustness
7. DO2 on recyclability
8. DO3 on recycled content

The questionnaire is designed and implemented in a way that should enable stakeholders to easily identify the sections they wish to comment, allowing them to skip those sections which they do not wish to comment. Section 14 of Part 2 of 2 of the questionnaire further allows all registered stakeholders to provide up to 10 written comments to the working document on topics not otherwise specifically covered in the questionnaire. Should you wish to provide more than 10 comments, you are welcome to **submit more than one questionnaire**. If you wish to share a document to support your position further, you may do so by sending it via email to **JRC-B5-TEXTILES@ec.europa.eu**, clearly indicating if the submitted information should be treated as confidential. Please note that comments made in Section 14 of Part 2 of 2 of the questionnaire or documents sent via email should not reiterate or substitute the answers on topics asked in other sections of the questionnaire. We would be grateful if you can support the JRC in analysing the comments received by using to the maximum extent possible the structured questionnaire provided.

### Confidentiality of personal data and information provided

Data and information collected via this questionnaire will be treated confidentially and complying with the Regulation on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data ([Regulation \(EU\) 2018/1725](#)).

Therefore, data will be treated for the development of EU policies on textiles, and it will be of the exclusive use of the European Commission. The European Commission will process data and information complying with the referred regulation. For more information, please visit the privacy statement under [this link](#) (processing of personal data for user management purposes) and [this link](#) (processing personal data within the survey itself).

## 1. Profile of the respondent

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	First name	Last name	Email address
. *	Ingun Grimstad	Klepp	ingunk@oslomet.no

\* Publication of information in my contribution

- I **consent** to the publication, by the European Commission's JRC, of any information in my contribution, in whole or in part (which may include quotes or opinions I express), provided that the personal information submitted under "stakeholder information" is not disclosed. Publication of the information may include publication in aggregated or disaggregated form of your contributions in JRC intermediate deliverables or final reports that may be made publicly available via the JRC's [project website](#).
- I do **not consent** to the publication of any information in my contribution.

I guarantee that:

- My response does not infringe any intellectual property rights, including without limitation, copyright, database sui generis rights or trademark rights or any other third party rights;
- To the extent that my response contains materials from other sources (e.g., text, illustrations, graphs, tables), I have obtained written permission from the relevant copyright owners to include such materials in my response, in a way that allows the European Commission to publish my response;
- I can provide copies of any relevant written permissions/licences, at the request of the European Commission; If my response contains materials made available under an open licence (e.g. Creative Commons), I indicate the type of licence, together with the source and author's name, in my response;
- Nothing in my response is obscene, defamatory, violates any right of privacy or duty of confidentiality, infringes any other rights of any person or entity or is otherwise unlawful.

\* **1.1 Name of the submitting organization**

What is the name of the organization you represent in this questionnaire?

*Text of 1 to 300 characters will be accepted*

SIFO, Oslo Metropolitan University

\* **1.2 Type of the organization**

Select the type of organization you represent in this questionnaire:

- Government (e.g. Member States, regions, EU Ecolabel competent bodies, national and regional agencies, etc.)
- Textile industry
- Textile industrial association
- Waste management industry
- Waste management industry association
- Consumer organization
- Environmental Non-governmental organization (NGO)
- Other Non-governmental organization (NGO)
- Research institutions, including universities
- Test laboratory
- Other

\* **1.3 Country of the organization**

Select the country of the organization you represent in this questionnaire:

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| <input type="radio"/> Afghanistan              | <input type="radio"/> Dominican Republic | <input type="radio"/> Lithuania         | <input type="radio"/> San Marino               |
| <input type="radio"/> Albania                  | <input type="radio"/> Ecuador            | <input type="radio"/> Luxembourg        | <input type="radio"/> Sao Tome and Principe    |
| <input type="radio"/> Algeria                  | <input type="radio"/> Egypt              | <input type="radio"/> Madagascar        | <input type="radio"/> Saudi Arabia             |
| <input type="radio"/> Andorra                  | <input type="radio"/> El Salvador        | <input type="radio"/> Malawi            | <input type="radio"/> Senegal                  |
| <input type="radio"/> Angola                   | <input type="radio"/> Equatorial Guinea  | <input type="radio"/> Malaysia          | <input type="radio"/> Serbia                   |
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| <input type="radio"/> Bangladesh               | <input type="radio"/> Gambia             | <input type="radio"/> Monaco            | <input type="radio"/> South Korea              |
| <input type="radio"/> Barbados                 | <input type="radio"/> Georgia            | <input type="radio"/> Mongolia          | <input type="radio"/> South Sudan              |
| <input type="radio"/> Belarus                  | <input type="radio"/> Germany            | <input type="radio"/> Montenegro        | <input type="radio"/> Spain                    |
| <input type="radio"/> Belgium                  | <input type="radio"/> Ghana              | <input type="radio"/> Morocco           | <input type="radio"/> Sri Lanka                |
| <input type="radio"/> Belize                   | <input type="radio"/> Greece             | <input type="radio"/> Mozambique        | <input type="radio"/> Sudan                    |
| <input type="radio"/> Benin                    | <input type="radio"/> Grenada            | <input type="radio"/> Myanmar           | <input type="radio"/> Suriname                 |
| <input type="radio"/> Bhutan                   | <input type="radio"/> Guatemala          | <input type="radio"/> Namibia           | <input type="radio"/> Sweden                   |
| <input type="radio"/> Bolivia                  | <input type="radio"/> Guinea             | <input type="radio"/> Nauru             | <input type="radio"/> Switzerland              |
| <input type="radio"/> Bosnia and Herzegovina   | <input type="radio"/> Guinea Bissau      | <input type="radio"/> Nepal             | <input type="radio"/> Syrian Arab Republic     |
| <input type="radio"/> Botswana                 | <input type="radio"/> Guyana             | <input type="radio"/> Netherlands       | <input type="radio"/> Tajikistan               |
| <input type="radio"/> Brazil                   | <input type="radio"/> Haiti              | <input type="radio"/> New Zealand       | <input type="radio"/> Tanzania                 |
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| <input type="radio"/> Burundi                  | <input type="radio"/> India              | <input type="radio"/> North Korea       | <input type="radio"/> Tonga                    |
| <input type="radio"/> Cabo Verde               | <input type="radio"/> Indonesia          | <input type="radio"/> North Macedonia   | <input type="radio"/> Trinidad and Tobago      |
| <input type="radio"/> Cambodia                 | <input type="radio"/> Iran               | <input checked="" type="radio"/> Norway | <input type="radio"/> Tunisia                  |
| <input type="radio"/> Cameroon                 | <input type="radio"/> Iraq               | <input type="radio"/> Oman              | <input type="radio"/> Turkmenistan             |
| <input type="radio"/> Canada                   | <input type="radio"/> Ireland            | <input type="radio"/> Pakistan          | <input type="radio"/> Tuvalu                   |
| <input type="radio"/> Central African Republic | <input type="radio"/> Israel             | <input type="radio"/> Palau             | <input type="radio"/> Türkiye                  |
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| <input type="radio"/> Chile                    | <input type="radio"/> Jamaica            | <input type="radio"/> Papua New Guinea  | <input type="radio"/> Ukraine                  |
| <input type="radio"/> China                    | <input type="radio"/> Japan              | <input type="radio"/> Paraguay          | <input type="radio"/> United Arab Emirates     |
| <input type="radio"/> Colombia                 | <input type="radio"/> Jordan             | <input type="radio"/> Peru              | <input type="radio"/> United Kingdom           |
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| <input type="radio"/> Congo                    | <input type="radio"/> Kenya              | <input type="radio"/> Poland            | <input type="radio"/> Uruguay                  |

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| <input type="radio"/> Croatia                          | <input type="radio"/> Kuwait        | <input type="radio"/> Qatar                            | <input type="radio"/> Vanuatu       |
| <input type="radio"/> Cuba                             | <input type="radio"/> Kyrgyzstan    | <input type="radio"/> Republic of Moldova              | <input type="radio"/> Venezuela     |
| <input type="radio"/> Cyprus                           | <input type="radio"/> Laos          | <input type="radio"/> Romania                          | <input type="radio"/> Viet Nam      |
| <input type="radio"/> Czechia                          | <input type="radio"/> Latvia        | <input type="radio"/> Russian Federation               | <input type="radio"/> Yemen         |
| <input type="radio"/> Côte D'Ivoire                    | <input type="radio"/> Lebanon       | <input type="radio"/> Rwanda                           | <input type="radio"/> Zambia        |
| <input type="radio"/> Democratic Republic of the Congo | <input type="radio"/> Lesotho       | <input type="radio"/> Saint Kitts and Nevis            | <input type="radio"/> Zimbabwe      |
| <input type="radio"/> Denmark                          | <input type="radio"/> Liberia       | <input type="radio"/> Saint Lucia                      | <input type="radio"/> Other country |
| <input type="radio"/> Djibouti                         | <input type="radio"/> Libya         | <input type="radio"/> Saint Vincent and the Grenadines |                                     |
| <input type="radio"/> Dominica                         | <input type="radio"/> Liechtenstein | <input type="radio"/> Samoa                            |                                     |

## 2. Analysis of technologies in the context of physical durability

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### \*2.1 Contribution to physical durability

Do you want to contribute to section 9.2.1 of the working document on description of product technologies in the context of physical durability? This section of the questionnaire contains 24 main questions.

- Yes
- No, I want to skip this section of the questionnaire

## Questions about analysis of technologies in the context of physical durability

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### \*2.2 Assessment of physical durability (1 of 2)

Considering:

- The legislative and technical context of the preparatory study, as reported in section 1 of the working document of the 3rd milestone,
- The knowledge and evidence presented in the working document of the 3rd milestone,
- The definition of durability reported in the ESPR (the ability of a product to maintain over time its function and performance under specified conditions of use, maintenance and repair),

Do you agree with the theoretical methodology describing the physical durability reported at lines 2969-2991?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.2.2 Why? How can it be improved?

*Text of 1 to 5000 characters will be accepted*

We don't have evidence that more durable products lead to less production, (Maldini et al., 2025, Maldini and Klepp, 2025). we also do not know that more durable products lead to longer Duration of Service (DoS). The average Duration of Service (DoS, not to be confused with JRC's DOs) of apparel are the results of the production volumes divided on population, therefore to increase the utilization of products we need to reduce the production volumes.

Improvements: The choice of interventions in ESPR must therefore first and foremost have the potential to impact quantities or in the least not increase amounts. Durability may lead to more quantities/materials /synthetics are needed to make them more durable. In the situation with textiles per person, the need for durability is decreasing. This is also shown in waste audits, showing that people are not discarding worn-out textiles. In a recently published PhD, the main reasons for discarding apparel, in the one-third that has technical discarding issues, Anna Schytte Sigaard found the main 'failure' to be pilling (people can't be bothered to remove the pills even if they easily could), but also many issues related to physical damage to the clothing which cannot necessarily be 'designed out', , stains or odors. This article sums up the findings from the PhD: Sigaard, Anna Schytte; Laitala, Kirsi (2025). Repairability of clothing and textiles: Consumer practices and policy implications. International Journal of Sustainable Fashion & Textiles. Vol. 4. [https://doi.org/10.1386/sft\\_00064\\_1](https://doi.org/10.1386/sft_00064_1)

MALDINI, I. & KLEPP, I. G. 2025. The EU Textile Strategy: How to Avoid Overproduction and Overconsumption Measures in Environmental Policy. Journal of Sustainable Marketing, 1-17.

MALDINI, I., KLEPP, I. G. & LAITALA, K. 2025. The environmental impact of product lifetime extension: a literature review and research agenda. Sustainable Production and Consumption, 56, 561-578.

## \*2.3 Assessment of physical durability (2 of 2)

The analysis reported at lines 2992-3038 shows that the conceptual approach proposed by the JRC to describe physical durability cannot be implemented with the currently available standardized tests used by the textile industry. This results largely from the fact that there are currently no standards capable of simulating the aging process of the textile apparel.

Do you agree with the analysis on the limitations of the current implementation of the physical durability approach, as reported at lines 2992-3038?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.3.1 Why?

*Text of 1 to 5000 characters will be accepted*

As far as we now, there is no research comparing test methods with wear and tear in praxis. "Wear and tear" is also a blend of weaknesses of the product and of the user, the latter might be called accidents, and are also failures in wash and use. Research is needed to understand how much can be done by improvements in design. In stead of concentrating on durability, it would have been easier to look at Duration of Service and look at use-practices in waste audits to understand these dynamics better. To do that, dating the products would be a great advantage. The limitation of the test methods is that the physical is only part of durability, and less and less as the quantities are growing. An important part of durability are f ex fit issues, as is also clear in a recently published PhD. This is something that ESPR could look more into.

## \*2.4 Robustness as proxy of the physical durability

Assuming that the physical durability cannot be addressed as such due to limitations outlined in questions 2.2.1 and 2.2.2, robustness is proposed as proxy for physical durability at lines 3039-3157.

In this context, robustness is defined as “the capability of a product to resist, i.e. maintain its physical structure and appearance, after undergoing external stresses, which could be of chemical or physical nature”.

Do you agree with the use of robustness as a proxy for physical durability?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.4.2 Why? How can it be improved?

*Text of 1 to 5000 characters will be accepted*

We don't agree that durability is a good proxy for Duration of Service, nor that robustness is a good proxy for durability. To choose robustness as a proxy for durability one needs knowledge on how high a percentage of apparel would have been used more with different interventions on robustness, and this should then be measured against the increased environmental impact of making the products more robust. Robustness might sometimes be only positive, less pilling as an example, in other instances it will also have disadvantages, people might prefer a thinner garment to a thicker, people might prefer the warmth of a wool-sock compared to a polyester sock. This makes a tunnel vision on durability or robustness, as apparel has so many different important properties for the user that might be affected. Find a proxy for durability that has the potential to not interfere with important qualities and functions for the users, and at the same time has potential to affect quantities. Based on research, choosing a few, targeted and widespread problems that can be affected by design, examples might be big prints on t-shirts or elastane in jeans, things that are on the recyclability list as problematic very much align here. Many would dislike this change, but it would be clearer what has to be sacrificed to make the environmental burden decrease. It would be easier also to discuss the benefits and losses of the interventions. Targeting all textiles will have unforeseen consequences.

## \*2.5 Definition of robustness

Do you agree with the definition of the robustness provided at lines 3041-3042?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.5.1 Why?

*Text of 1 to 5000 characters will be accepted*

We agree on the definition, however, with the quantities of textiles, the impact of robustness on Duration of Service will be less and less. The definition is thus not necessarily relevant.

## \*2.6 General limitations of robustness framework

Considering the definitions of physical durability and robustness mentioned above, lines 3053-3064 report the general limitations of using a framework based on robustness.

Do you agree with the limitations reported at lines 3053-3064?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.6.1 Why?

*Text of 1 to 5000 characters will be accepted*

Robustness has clear limitations, but the same applies to durability. Instead of trying to measure durability, we have suggested measuring Duration of Service for products with different design parameters. This is possible to do, but easier if the products had been dated. The problem is that looking into the future is just guesswork, but looking backwards in time, we can actually capture and measure. The probably most important factor for Duration of Service both measured in years and uses, are the quantities of apparel – a parameter that is often forgotten.

## \*2.7 Key parameters in the proposed robustness framework

Lines 3080-3120 describe the robustness framework proposed in the preparatory study.

Do you agree with the selection of the key parameters?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.7.2 Why? Which other parameters would you rather select and why? Which standardised tests could underpin them?

*Text of 1 to 5000 characters will be accepted*

Spirality, is this really a common problem, and if so, is it a problem for the whole production, or only parts of it? Taking out samples could then be problematic. Shrinkage (dimensional change), pilling and colour fastness are very different for natural fibers than synthetics, and also might be regarded differently, f ex fading blue jeans compared to a black polyester trouser. It must then be different threshold for natural fibers compared to synthetics, in order to support increased use of synthetics and thereby also increase the quantities, which is the most important to avoid. One solution could be to only have parameters on synthetics. If visual inspection is chosen as a method, in the least it should be compared to real life performance.

## \*2.8 Number of cleaning cycles in the proposed robustness framework

Lines 3080-3120 describe the robustness framework proposed in the preparatory study.

Do you agree with the selection of five cleaning cycles?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.8.2 Why? Which number would you rather select and why?

*Text of 1 to 5000 characters will be accepted*

Five washing/cleaning cycles represents a much longer use of a thick wool sweater or wool skirt than an undergarment. This is a problem that again will in praxis be in favor of synthetics, that are laundered much more frequently and less impacted by cleaning. Another problem is consequences of such interventions, and the unclearness in relation to the washing instructions and the washing praxis. For example, more labelling with dry cleaning might be an outcome, which is neither good for the consumer nor the environment. People use care instructions very differently, and is it for instance normal to give natural fiber textile a slight stretch before hanging to dry, or not? Without doing this, dimensional changes will happen.

## \*2.9 Product categories in the proposed robustness framework

Lines 3080-3120 describe the robustness framework proposed in the preparatory study.

Do you agree with the product categories proposed at lines 3098-3100?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.9.2 Why? Which other product categories would you rather propose and why?

*Text of 1 to 5000 characters will be accepted*

Fibers and also function need to be taken into consideration, next to skin garments are different than outer layers in how much use five cleaning cycles represent. Fibers are most important, not only because they will be affected differently, but because this supports synthetics and by doing so, will increase the quantities in the system.

## \*2.10 Non-washable textile apparel in the robustness framework

Lines 3101-3103 report that the number of non-washable textile apparel placed on the EU market is negligible compared to the total number of products placed on the market in the scope of the preparatory study.

Do you agree with the estimation of the number of non-washable textile apparel?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree

- No, I disagree
- I do not know / I have no opinion

### \*2.10.1 Why?

*Text of 1 to 5000 characters will be accepted*

If something is washable is a question of definition. A product with down-filling and water-proof outer layer, such as a Canada Goose jacket, might have washing or dry-cleaning instructions, but it is unlikely that it will retain its esthetical and functional properties over time and several cleaning cycles. In praxis it may be non-washable /impossible to clean. Uncleanable products are an interesting category for a design directive. It might be good to restrict the use of waterproof outer layers over down-fillings, without possibility to detach the layers, instead of taking them out of the discussion. We don't know how the potential in interventions like this can impact volumes, but as commented before, it might be better to target real, but limited design problems, than trying to target everything with limited or unforeseen consequences.

### \*2.11 Standards in the proposed robustness framework

At lines 3104-3120, product technologies are described in the framework of robustness. Table 44 reports the ISO standards proposed to measure the key parameters.

Do you agree with the proposed standards to measure key parameters for each product category?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.11.2 Why? What would be the advantage of using alternative standards? (if so, please specify the alternative standards in question)

*Text of 1 to 5000 characters will be accepted*

The threshold should be different for different fibers, and the problems of the consumer praxis on the results, such as stretching and ironing, must be better specified. A fiber like Merino wool will naturally shrink when laundered. The industry has given the consumer the choice of anti-shrinkage products to avoid this. Some consumers choose products without such treatments, for different reasons, such as their belief that fewer chemical treatments are better for the environment. They will instead stretch their products after washing and are happy to do that. This example shows how to acknowledge the variety in consumer behavior and preferences, and especially when this is linked to environmental awareness. A market without this choice will neither gain the consumer nor the environment.

### 2.12 Description of product technologies for each product category

Table 44 describes the characteristics of the two product categories (knitted and woven products). The definition of product technologies is reported at lines 2596-2600:

- The Base Case of technologies (BC) represents the average product on the market.
- The Best Available Technologies (BAT) provide the highest performance available on the market. BAT are implemented at scale.

- The Best Not yet Available Technologies (BNAT) have the highest performance, but they are not yet implemented at scale, therefore they are considered not available on the market.

In this context, product technologies are products with defined characteristics related to key parameters of robustness.

### \*2.13 Values proposed for visual inspection in Table 44

Do you agree with the values reported in Table 44 proposed for visual inspection?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.13.2 Why? Which alternative values would you use?

*Text of 1 to 5000 characters will be accepted*

Same answer as above, this must differ for different fibers and will make it more complex than the set-up now allows for.

### \*2.13.4 Is your answer based on direct measurements on products in the scope of the preparatory study?

- Yes
- No

### \*2.14 Values proposed for spirality in Table 44

Do you agree with the values reported in Table 44 proposed for spirality?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.15 Values proposed for dimensional change in Table 44

Do you agree with the values reported in Table 44 proposed for dimensional change?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.15.2 Why? Which alternative values would you use?

*Text of 1 to 5000 characters will be accepted*

The thresholds must differ for different fibers. See earlier answers.

**\*2.15.4 Is your answer based on direct measurements on products in the scope of the preparatory study?**

- Yes
- No

**\*2.16 Cleaning cycles in Table 44**

Lines 3107- 3112 describe how to perform the cleaning cycles.

Do you agree with the directions provided on how to perform the cleaning cycles?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\*2.16.2 Why? Which alternative directions would you provide?**

*Text of 1 to 5000 characters will be accepted*

The handling of the textiles, smoothing and stretching, will have an impact on shrinkage and are not considered. Hang-drying is more practical and normal than drying flat.

**\*2.16.4 Is your answer based on direct experience with these test methods?**

- Yes
- No

**\*2.17 Performance level of visual inspection**

Lines 3115-3116 state that the performance level of the visual inspection is given by the worst performing sub-parameter assessed.

Do you agree with the choice of referring to the worst performing sub-parameter assessed?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\*2.18 Intentional colour change in Table 44**

Lines 3117-3119 address intentional colour change in specific products.

Do you agree with the proposal to skip the analysis of colour change on products that are designed to evolve their colour over time?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.18.1 Why?

*Text of 1 to 5000 characters will be accepted*

Fading over time is not necessarily intended but still regarded differently on natural fibers than on synthetics.

### \*2.18.3 Is your answer based on direct experience manufacturing and/or testing these products?

- Yes
- No

### \*2.19 Products made of viscose in Table 44

Lines 3121- 3125 address the peculiarities of products mainly made of viscose (fibre content higher than 80% by mass).

Do you agree with the proposal of ironing them before performing measurements reported in Table 44?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.19.1 Why?

*Text of 1 to 5000 characters will be accepted*

It is true that viscose and other natural fibers shrink, and that stretching or ironing will impact the dimensional change. But it is not only viscose. And it is not only ironing, but also stretching and how you handle things after laundering.

### \*2.19.3 Is your answer based on direct experience manufacturing and/or testing these products?

- Yes
- No

### \*2.20 Categorization of products in the context of robustness.

Lines 3130-3140 report the reasons leading to a simplified categorization and therefore the exclusion of key parameters related to abrasion, tear, and seam slip, which refer to specific products for defined applications. Do you agree with the reasoning for the simplified categorization?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 2.20.1 Why?

*Text of 1 to 5000 characters will be accepted*

Instead of trying to put everything into simpler categories. An answer to these issues would be to target specific problems in specific, but narrow product groups. For example, t-shirts with big prints, jeans with elastane, products with electronics such as flashing Christmas sweaters. Alternatively, only include products with synthetic fibers, as they are the ones that are increasing in volumes and where we need restrictions.

### \* 2.20.2 Which would be the advantages of including more key parameters referring to specific products for defined applications?

*Text of 1 to 5000 characters will be accepted*

The advantage of focusing on specific product groups with specific problems, such as flashing Christmas sweaters, would be to solve real problems and would limit the unforeseen consequences of imposing parameters on products with no real effect. It would also be cheaper and simpler, and easier to communicate. Broad, unspecified requirements can more easily contribute to improvements by activating consumer rights and making it easier to complain.

### \* 2.20.3 Which would be the limitations or drawbacks of including more key parameters referring to specific products for defined applications?

*Text of 1 to 5000 characters will be accepted*

With fewer parameters, it is harder to actually target the problems.

### \* 2.20.4 Which are the additional parameters you would include?

*Text of 1 to 5000 characters will be accepted*

We understand the wish for fewer parameters, with fewer parameters, the ones chosen carry more weight and it's not obvious that the chosen ones are the ones that mostly impact duration of service. We would think other parameters could have been more impactful, such as working with good sizing systems and fit. Also, the parameters and testing regime may hurt SMEs and micro-sized businesses as unintended consequences.

### \* 2.20.5 Is your answer based on direct experience manufacturing and/or testing these products?

- Yes
- No

### \* 2.21 The robustness framework and service lifetime

Lines 3141-3154 report the views of the JRC on the limitations of the robustness framework.

Do you agree that the proposed robustness framework is not capable of providing an estimate of the envisaged service lifetime of an item of textile apparel based on its intrinsic properties?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.21.1 Why?

*Text of 1 to 5000 characters will be accepted*

We don't think robustness nor durability will have a great impact on the service lifetime in a system of over-production, such as we are facing today in the textile sector. If we envision a system of limited access to textiles, it would have been another case. The more produced, the less durability/robustness will impact service lifetime. The policy under development would have been useful in another situation, not the current one nor what the industry seems to be planning for. And as answered before, it is possible to measure design parameters in hindsight (through waste audits and wardrobe studies), looking forward into the future/predicting service life, will be based on guesses.

### \*2.22 The robustness framework and the aging of products

The proposed robustness framework is capable to describe only the resistance to external stresses and therefore only provides a partial picture that does not correspond to what should be agreed by experts as the real combination of stresses that occur during product aging.

Do you agree with this statement?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.22.1 Why?

*Text of 1 to 5000 characters will be accepted*

Use and aging are both complex processes, and wear and tear have many dimensions, not included. Five washing cycles are also a very limited 'stressing' test in comparison with how apparel can be used and is used in real life.

### \*2.23 The robustness framework and the increase of the service lifetime

In the proposed robustness framework, claims regarding any expected increase of the service lifespan of textile apparel currently can only be based on expert judgements, which will not be verifiable. Textile experts cannot base their judgement on direct experience, because nobody performs such measurements due to lack of aging tests (Lines 3150-3154). Do you agree with this statement?

- Yes, I agree

- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.23.1 Why?

*Text of 1 to 5000 characters will be accepted*

It is possible to do research looking back at service lifespan connecting key parameters to differences in performance in the length of use. It is also possible to divide imports/production on population size to find average length of use. Increasing the population or decreasing imports/production, will be opportunities you can choose between in order to increase average life span. The latter is easier than the first. In the 3rd Milestone, the description of what happened when the import quotas disappeared, is key to what obviously needs to be done policy-wise.

### \*2.23.3 Is your answer based on experience with manufacturing and testing products in the scope of the preparatory study?

- Yes
- No

### \*2.24 Product aging and standards

In your view, should a testing standard be developed that would simulate the ageing of textile apparel, thereby capturing, to the extent feasible, a representative range of stresses to which a product is subjected during its service life?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*2.24.1 Why?

*Text of 1 to 5000 characters will be accepted*

We are lacking data on the correspondence between existing testing methods and real use of textiles. Therefore, it is not a new standard, but what the standard testing methods represent, that is lacking. We also lack knowledge on which measurable parameters could be used to improve Duration of Service. Probably this would be most effective looking at more narrow product categories with problems that could be solved by design improvements. Sweat resistance might be important for next to body apparel, while light resistance might be important for textiles exposed to sunshine. The list of properties and possible failures are endless and therefor might be captured better by consumer rights and complaints. It might also be that some parameters, f ex such as pilling, could be communicated to the consumer better, with level of pilling, as this is important to some, not for others.

See Sigaard, Anna Schytte; Laitala, Kirsi (2025). Repairability of clothing and textiles: Consumer practices and policy implications. International Journal of Sustainable Fashion & Textiles. Vol. 4.  
[https://doi.org/10.1386/sft\\_00064\\_1](https://doi.org/10.1386/sft_00064_1)

## \* 2.25 Characteristics of the two potential frameworks: physical durability and robustness

In Table 45, the two potential frameworks are described.

Do you agree with the description reported in Table 45?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 2.25.1 Why?

*Text of 1 to 5000 characters will be accepted*

We do not believe that either durability or robustness are capable to describe the foreseen service lifetime related to intrinsic product properties; and objectively quantify the increased service lifespan due to improvement of the key parameters. Claims such as these 'A known increase of performance level of key parameters corresponds to a quantifiable known increase of the service lifespan related to physical properties of the product' will be less and less likely the more we see increase in volumes. Looking at the reasons for discarding apparel, yes, around one third is linked intrinsic quality (Laitala and Klepp, 2022), however, this one-third also includes failures that are accidents, such as stains and lack of care, that hardly can be solved by design parameters.

See: Sigaard, Anna Schytte; Laitala, Kirsi (2025). Repairability of clothing and textiles: Consumer practices and policy implications. International Journal of Sustainable Fashion & Textiles. Vol. 4. [https://doi.org/10.1386/sft\\_00064\\_1](https://doi.org/10.1386/sft_00064_1)

LAITALA, K. & KLEPP, I. G. 2022. Review of clothing disposal reasons [Online]. Oslo: Clothing Research Group at OsloMet. Available: <https://clothingresearch.oslomet.no/2022/10/19/review-of-clothing-disposal-reasons/> [Accessed].

### \* 2.25.2 How can it be improved?

*Text of 1 to 5000 characters will be accepted*

It lacks two important aspects, one is the impact of quantities, the other is the Duration of Service and measurements of this.

## 3 Analysis of technologies in the context of repairability

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### \* 3.1 Contribution to repairability

Do you want to contribute to section 9.2.3 of the working document on description of product technologies in the context of repairability? This section of the questionnaire contains 1 main question.

- Yes
- No, I want to skip this section of the questionnaire

## Questions about analysis of technologies in the context of repairability

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### \*3.2 Framework for repairability

The analysis reported in section 9.2.3 leads the JRC to propose a framework that reports only information to the user regarding the location and contact of available repair services.

Do you agree with the conclusion that only information to the user regarding the location and contact of available repair services can be part of the framework describing repairability?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

#### \*3.2.1 Why?

*Text of 1 to 5000 characters will be accepted*

We agree in general that apparel in general is repairable, but there are also some exceptions. Again, instead of making broad and unnecessary requirements, it might be better to target the unrepairable parts of textiles. Examples of not repairable are clothing with flashing lights, otherwise strong products with integrated elastane and pilling that cannot be removed with a pilling comb. We also disagree with the concept of repair, looking at both waste audits and wardrobe studies, it is obvious that the problem with textiles is wider than the concept of repair is understood. This includes alterations, stain removal and so on. The industry recognizes this, and some trousers are for instance sold with the option of shortening the legs. And when consumers talk about repair, it is not necessarily making the product as it was when it was new, more about adjusting them to current use. Repairs are mainly done privately, or by professional local services, so including information on availability here is unnecessary.

#### \*3.2.2 How can this analysis be improved?

*Text of 1 to 5000 characters will be accepted*

The most efficient way of increasing repair (and other life prolonging techniques such as alteration, stain removal etc.) is not information on where to repair, but to increase the perceived value of the products. Perceived value is linked with amounts of products and price. Unrepairable apparel might therefore be the ones that are priced the lowest. It is possible to say that a product costs less than two hours of repair, it isn't repairable.  
See: Sigaard, Anna Schytte; Laitala, Kirsi (2025). Repairability of clothing and textiles: Consumer practices and policy implications. International Journal of Sustainable Fashion & Textiles. Vol. 4.  
[https://doi.org/10.1386/sft\\_00064\\_1](https://doi.org/10.1386/sft_00064_1)

## 4. Analysis of technologies in the context of recycled content

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### \*4.1 Contribution to recycled content

Do you want to contribute to section 9.2.5 of the working document on description of product technologies in the context of recycled content? This section of the questionnaire contains 1 main question.

- Yes
- No, I want to skip this section of the questionnaire

## Questions about analysis of technologies in the context of recycled content

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### \*4.2 Definition of recycled content

Lines 3958-3960 reports that the analysis of the ecosystem suggests the refinement of the definition of recycled content for the purpose of this PS as the proportion, by mass, of recycled fibres, from post-industrial, pre- and post-consumer waste, in a textile product. Lines 3961-3966 reports some additional reasoning.

Do you agree with this definition?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*4.2.1 Why?

*Text of 1 to 5000 characters will be accepted*

For some very specific products repair services provided by the producer will be a good option, for cheaper products, including socks, stockings, this will not be happening.

## 5. DOs not included in the model

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### \*5.1 Contribution to design options not included in the model

Do you want to contribute to section 11.1 of the working document on design options not included in the model? This section of the questionnaire contains 10 main questions.

- Yes
- No, I want to skip this section of the questionnaire

## Questions about DOs not included in the model

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### \*5.2 Inclusion of voluntary information about repair services

At lines 5143- 5165, arguments for the inclusion of voluntary information about repair services are reported.

Do you agree with the arguments used for the inclusion of voluntary information on repair services?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*5.2.1 Why?

*Text of 1 to 5000 characters will be accepted*

For some very specific products repair services provided by the producer will be a good option, for cheaper products, including socks, stockings, this will not be happening.

**\* 5.2.2. Do you agree with establishing an information requirement on repair services directly offered by the brand (if any), including their details and contact information, via the Digital Product Passport?**

- Yes, I agree
- No, I do not agree
- I do not know / I have no opinion

**\* 5.2.3 Why?**

*Text of 1 to 5000 characters will be accepted*

For some product groups, this is fine. But all products should be labelled clearly with a responsible producer to give the consumer a recipient to whom they can complain and to receive more information on the product qualities in a way that makes sense to the consumer, f ex with information on pilling., which could be clear by then dating the products, this would be valuable for guarantees. This though depends on that 'normal use' is sufficiently defined and can be given values that are meaningful for the consumer and easy to verify when complaining. This would give the consumers a much-needed way to reference unwanted changes in products. Waste audits would then give valuable data on expected Duration of Service that could inform what exactly 'normal use' is.

**\* 5.2.4 How can the requirement on repair service be improved?**

*Text of 1 to 5000 characters will be accepted*

We think that in general it is more important to improve repair than repair services, as the latter do so little of the actual repairs (including other care practices such as alterations, stain removal, etc.). To increase repair (in a wide definition), less quantities and higher prices are the most efficient tool. It's lack perceived value that hinders repair, both professionally and by the consumers themselves. Targeted efforts that lead to increasing the value of textiles will also affect the more pressing problems, such as the environmental impact. See: Sigaard, Anna Schytte; Laitala, Kirsi (2025). Repairability of clothing and textiles: Consumer practices and policy implications. International Journal of Sustainable Fashion & Textiles. Vol. 4. [https://doi.org/10.1386/sft\\_00064\\_1](https://doi.org/10.1386/sft_00064_1)

**\* 5.3 Can you propose any other requirements to address repairability?**

- Yes, I want to propose more requirements
- No, I cannot propose more requirements
- I do not know / I have no opinion

**\* 5.3.1 Please, carefully describe the reasoning and the characteristics of the requirement**

Information on corresponding costs would be highly appreciated. If the respondent considers such information confidential, could directly send it to the functional mailbox [JRC-B5-TEXTILES@ec.europa.eu](mailto:JRC-B5-TEXTILES@ec.europa.eu).

*Text of 1 to 5000 characters will be accepted*

As already described in the above answers, as increased price or decreasing quantities are the two main drivers – increasing perceived value through higher prices is one of the possibly most effective requirements. In the current situation, fewer and fewer products are in the need of repair, due to the volumes. See:

SIGAARD, A. S. & LAITALA, K. 2025. Repairability of Clothing and Textiles: Consumer Practices and Policy Implications. *International Journal of Sustainable Fashion & Textiles*, 4.

VANACKER, H., LEMIEUX, A.-A., LAITALA, K., DINDI, M., BONNIER, S. & LAMOURE, S. 2025. Understanding garment durability through local lenses: a participatory study with communities across the globe. *Scientific Reports*, 15, 34962.

VERMEYEN, V., ALAERTS, L., WORRELL, E., VAN ACKER, K. & GERMEYS, F. 2025. Behind Closed Doors: Examining the Stock of Clothing in Individuals' Wardrobes. *Journal of Circular Economy*.

## \*5.4 Exclusion of requirements addressing sustainable sourcing

Lines 5166 - 5183 provide arguments about why it is currently not possible to propose requirements on sustainable sourcing of materials used in textile apparel.

Do you agree with these arguments?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*5.4.1 Why?

*Text of 1 to 5000 characters will be accepted*

We agree that fibers cannot be directly compared, because they have different properties. It is also a problem that the environmental impact of the production varies a lot from farm to farm and place to place, not only between fibers. We have problems with understanding the line 5167 (60 to 63 percent of the environmental impact stems from fiber production). We see more than one problem with this estimate. First, we wonder why these numbers are so much higher than most numbers used (12-15 percent)? And why are these huge differences not explained nor discussed. Our second concern is that LCAs on textiles underestimate the environmental impacts of synthetic fibers. Referring to LCAs in general should therefore be done with awareness of this limitation. The range 60-63 percent is very small, and unlikely to be accurate. We will give an example: A Norwegian sweater locally produced with Norwegian wool from local farmers, with no dyeing or finishing, with local, renewable energy and very rarely washed, it's impact will be mainly in fiber-production. An addition example is a recent Norwegian project, led by the Trimco Group and Green Score Capital, which compared products using the PEF 3.0 database. The results show that a fleece polyester jacket scored 1476 points and Merino sweater scored 18264 points. For the fleece jacket, the raw material is estimated to constitute 17.52% of PEF score, 24.23% of GHG emissions, while transformation, manufacturing and finishing constituted ca 79% of the PEF score, 70% of GHG emissions. For the wool sweater, raw material formation constituted 91.51% of the PEF score, 84.52% of the GHG emissions, while transformation, manufacturing and finishing constituted ca 7% of the PEF score and 13% of GHG emissions. This shows the discrepancy between even trying to attempt a fair comparison. If this is allowed to be consumer-facing, the confusion will be enormous.

<https://www.makethelabelcount.org/globalassets/make-the-label-count/documents/gd4505-mtlc-pef-whitepaper-final.pdf>

<https://textileexchange.org/knowledge-center/reports/ensuring-integrity-in-the-use-of-life-cycle-assessment-data/>

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**\* 5.5 Inclusion of voluntary information about fibres in compliance with the Regulation (EU) 2018/848 on organic production and labelling of organic products**

At lines 5184- 5194, the working document proposes the voluntary information about cotton, wool, and silk fibres in compliance with Regulation (EU) 2018/848 on organic production and labelling of organic products. Do you agree with including voluntary information about fibres in compliance with the Regulation (EU) 2018 /848?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 5.6 Schemes certifying compliance with Regulation (EU) 2018/848**

Can you name certification schemes that would allow verification of the content of cotton, wool, and silk fibres in textile apparel compliant with Regulation (EU) 2018/848?

- Yes, I can
- No, I cannot

**\* 5.7 Exclusion of requirements on the fragmentation of textile apparel**

Section 10.2 reports an assessment of pollution generated by textile fragmentation. In particular, section 10.2.1 reports about the lack of standardised definition of biodegradability of pollution generated by textile fragmentation. This lack of definition does not allow to define the scope of the problem and therefore its magnitude. Lines 5195- 5211 present the rationale for not proposing requirements on the fragmentation of textile apparel.

Do you agree that the definition of particulate matter biodegradability should be standardised?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 5.7.1 Why?**

*Text of 1 to 5000 characters will be accepted*

However, not using the list proposed. As long a substantial percentage of the textiles are discarded without incineration it is only a question of time before a synthetic product is fragmented into microplastics. The problem is therefore the quantities of synthetic fibers in mismanaged waste, not what the path of biodegradation for natural fibers is.

**\* 5.8 Definition of biodegradability (1 of 2)**

Do you agree that a standardised definition of biodegradability should specify the aspects that are reported in lines 5200- 5205?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*5.8.1 Why?

*Text of 1 to 5000 characters will be accepted*

The amount of addressed material is fine, which already there will mean synthetics are the main concern, the rest is problematic. A simpler way to address this issue is additional information based on three or four questions:

Is the raw fiber material biogenic and in what percentage/weight?

Is the raw fiber material biodegradable under standard conditions?

During manufacturing, has it been treated with toxic chemicals?

Is the End of Life of products containing synthetics ensured so that they do not end up in nature?

### \*5.9 Definition of biodegradability (2 of 2)

Would you add more characteristics of the biodegradability definition?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*5.9.1 Why?

*Text of 1 to 5000 characters will be accepted*

See above answer. A simpler list, that aligns with the actual problem, that all synthetics, unless handled properly as waste, will become microfibers at End of Life.

(Kounina, A. et al. (2024). The global apparel industry: a significant yet overlooked source of plastic leakage.

Nature Communications. <https://doi.org/10.1038/s41467-024-49441-4>)

<https://iwto.org/wp-content/uploads/2026/03>

[/IWTO\\_Position\\_Paper\\_Microplastics\\_JRC\\_3rd\\_Milestone\\_03112026.pdf](#)

### \*5.10 Comparable measurements of fragmented textiles along the value chain

In section 10.2.4, the JRC expresses the view that the lack of standardised methods for sampling, characterization, and quantification in all release points of the value chain does not allow to identify the hotspots for the pollution generated by the fragmentation of textiles.

Do you agree that in order to collect reliable and comparable measurements along the whole value chain, standardised methods should first be developed for the sampling, characterization and quantification of these pollutants in all release points of the value chain?

-

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 5.10.1 Why?

*Text of 1 to 5000 characters will be accepted*

For the same reasons as above, it is as waste this constitutes an environmental problem, for use it's a health problem.

See: (Kounina, A. et al. (2024). The global apparel industry: a significant, yet overlooked source of plastic leakage. Nature Communications. <https://doi.org/10.1038/s41467-024-49441-4>)

<https://iwto.org/wp-content/uploads/2026/03>

[/IWTO\\_Position\\_Paper\\_Microplastics\\_JRC\\_3rd\\_Milestone\\_03112026.pdf](#)

5.11 Considering the currently available standards, would you propose requirements to address the problems generated by the fragmentation of textile apparel?

### \* 5.11 Potential requirements addressing pollution generated by textile fragmentation

Considering the currently available standards, would you propose requirements to address the problems generated by the fragmentation of textile apparel?

- Yes, I want to propose requirements
- No, I cannot propose requirements
- I have no opinion

### \* 5.11.1 Please, describe the reasoning and the characteristics of the requirement

Information on corresponding costs would be highly appreciated. If the respondent considers such information confidential, could directly send it to the functional mailbox [JRC-B5-TEXTILES@ec.europa.eu](mailto:JRC-B5-TEXTILES@ec.europa.eu).

*Text of 1 to 5000 characters will be accepted*

By using weight of synthetic material in any given product, it would not be costly at all. The weight of synthetic fiber in the product is what mainly will predict the possible microfiber amount at End of Life. The manufacturing with dyes and finishes that confound the problem, is harder to quantify weight-wise, however, with this information included on the product, there will be an element of warning for consumers. So, in order to include key additives/finishes relevant to persistence, toxicity, recycling and biodegradation (e.g., durable water repellents, antimicrobial treatments, flame retardants), one should use harmonized substance categories where feasible. Thus, consumer-facing information should be short and factual. For example: "Contains synthetic (plastic) fibers. If released to the environment, plastic fibers persist and can become microplastics. Follow care and end-of-life instructions."

(Kounina, A. et al. (2024). The global apparel industry: a significant, yet overlooked source of plastic leakage. Nature Communications. <https://doi.org/10.1038/s41467-024-49441-4>)

<https://iwto.org/wp-content/uploads/2026/03>

[/IWTO\\_Position\\_Paper\\_Microplastics\\_JRC\\_3rd\\_Milestone\\_03112026.pdf](#)

## 6. DO1 on robustness

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## \*6.1 Contribution to design option on robustness (DO1)

Do you want to contribute to section 11.1.1 of the working document on design option about robustness? This section of the questionnaire contains 25 main questions.

- Yes
- No, I want to skip this section of the questionnaire

## Questions about DO1 on robustness

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### \*6.2 Reasons to propose the design option 1 (DO1) on robustness

DO1 was proposed because the extension of the service lifetime would tackle between 81% and 90% of the total lifecycle environmental impacts of the products.

Lines 5213-5230 report justifications and collect relevant information from previous sections.

Based on the information and the rationale provided at lines 5213-5230, do you agree with the proposal of DO1?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

#### \*6.2.1 Why?

*Text of 1 to 5000 characters will be accepted*

Product robustness' (or durability's) impact on production volumes is only a theory. We lack both empirical evidence that this impacts how much consumers are buying and also that consumer behavior impacts production volumes (Maldini et al., 2025). A system where production is driven by demand is a system with a scarcity of products. The current global textile ecosystem has, since the changing of the trade agreements, grown out of this, as JRC so well describes in the section on the Global Market (5.1). The rapid increase in quantities has been the result of lack of market regulation, not in decreased product robustness. Why should this be met with product robustness and not with market regulation? The evidence that the system today is supply-driven is both that the over-production is clearly present in the supply chain, not just in the marketplace and among consumers, and driven by the heavy marketing of textiles. Would it be necessary for the EU to forbid the destruction of unsold goods, if production was demand-driven? The answer is 'no'.

MALDINI, I., KLEPP, I. G. & LAITALA, K. 2025. The environmental impact of product lifetime extension: a literature review and research agenda. Sustainable Production and Consumption, 56, 561-578.

### \*6.3 Objectives of DO1 and limitations of the robustness framework

The DO1 aims to establish a framework that: (1) empowers consumers to make informed purchases of more durable products, and (2) encourages manufacturers to produce more durable products. The DO1 relies on the robustness framework proposed.

Do you agree that the limitations of the robustness framework influence the objectives of DO1?

- Yes, I agree
- Yes, I mostly agree

- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 6.3.1 Please elaborate your response

*Text of 1 to 5000 characters will be accepted*

It's not because of lack of robustness that the global textile ecosystem is characterized by over-production. More robust products will support strong, synthetic fibers and use of more fibers and treatments, and through this leads to increasing the total environmental impact of the system, without the potential to decrease. This can also be framed as no or very limited potential and combined with unintended side-effects. In order to decrease the impacts, interventions need to make it harder to produce more and to use more synthetics.

### \* 6.4 Effect of DO1 on robustness

Do you consider that an information requirement based on robustness would lead to:

- A significant service lifetime extension (e.g. due to consumers and manufacturers choosing and producing more robust products, respectively)
- A negligible increase in service lifetime
- No effect on the service lifetime
- I have no opinion

#### \* 6.4.1 Why?

*Text of 1 to 5000 characters will be accepted*

Firstly, with the current pricing and low knowledge level among consumers, it is difficult to imagine information being taken seriously. We also know consumers are aware of the greenwashing, and don't believe anything coming from industry. At the same time, they are at the mercy of heavy marketing. The next problem is whether more robust products actually will be used more, which also is unlikely when intrinsic qualities of products being a minor reason for discarding. As mentioned several times, and well documented in the recent PhD *Want Not, Waste Not: A Practice-Theoretical Study of Textile Disposal in Everyday Life*, there are so many reasons for discarding apparel that using the suggested Design Options to fix a problem that in essence has little to do with design, but much more to do with the globalized mass-production and fast fashion system. It seems easy to use Laitala K, Klepp IG. 2022, Review of clothing disposal reasons to point to the 1/3 that goes out of use for technical reasons. However, as we have written several places, these 'technical' reasons beg more research to see what design can fix and what design cannot fix. See PhD: <https://nva.sikt.no/registration/019be047228d-2c87c768-5508-4309-89c1-eb7a0c2d5f50>  
This is also unfair for SMEs and micro-sized businesses, without huge marketing budgets.

### \* 6.5 Robustness scoring system

Do you agree with the scoring system described in lines 5252- 5283 and table 71?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.5.1 Why?

*Text of 1 to 5000 characters will be accepted*

Information to consumers should be specific, objective and easy to understand. It makes sense to give a grade on pilling, so people who don't like pilling can avoid the product. Scoring systems with very different properties blended together are difficult to understand and might contain scores that are not relevant. As mentioned before, we are also skeptical to scoring where properties that are part of natural fibers' natural 'way of behaving' will promote synthetics. Every scoring system needs to be carefully evaluated for unintended consequences, for consumers, for SMEs and micro-sized business and also in areas not previously imagined. We cannot repeat often enough that when the energy score was implemented, the washing machines didn't actually end up cleaning the laundry, the temperatures were too low. So, the result was harsher detergents, with more chemical output. Consumers are also not necessarily choosing the energy saving program because it takes too much time but use shorter programs. An environmental gain? That is up for discussion.

### \*6.5.2 How can it be improved?

*Text of 1 to 5000 characters will be accepted*

No opinion.

### \*6.6 Assumption on service lifetime

At lines 5294- 5310, the average service lifetime is assumed to increase by 5%.

Do you agree with the average increase by 5% of the service lifetime?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.6.1 Why?

*Text of 1 to 5000 characters will be accepted*

The average service lifetime can only be improved by decrease in production/imports of textiles, divided by the population. We will also say that experience from energy labelling is not relevant because the product groups there were much more standardized and less use of energy gained the consumers' economy directly. The distrust from the consumers towards the industry is also different when it comes to textiles compared to the products in the energy labelling scheme. If JRC is right that the service lifetime will increase with 5 % that will not have any environmental impact unless it decreases production by 5 %. The industry's plans to increase the global fiber production by more than this.

### \*6.6.2 Please specify the alternative value you propose along with its justification (and source).

*Text of 1 to 5000 characters will be accepted*

That's difficult and also because one thing is the direct effect, which we believe is little, but we also need to count the unintended effect, which can be substantial. It also may be unintended consequences with positive impact, since it will be time-consuming and expensive (testing) to produce new collections. This can just as well

affect small businesses and thus have another unintended consequence by strengthening large fast fashion business models.

### \* 6.6.3 What is the source of your proposal?

- Technical evidence that could be made available to JRC
- Expert judgement based on direct measurements
- Expert opinion that is neither based on technical evidence nor direct measurements
- Other

### \* 6.7 Assumption on energy use for the knitted product category

In Table 72, the energy use is assumed to increase by 2%.

Do you agree with the increase by 2% of the energy use?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

#### \* 6.7.1 Why?

*Text of 1 to 5000 characters will be accepted*

The more robust products will demand more input of something, more synthetics, more fibers, more chemicals or in general more material.

### \* 6.8 Assumption on energy use for the denim product category

In Table 72, the energy use is assumed to increase by 2.5%.

Do you agree with the increase by 2.5% of the energy use?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

#### \* 6.8.1 Why?

*Text of 1 to 5000 characters will be accepted*

We agree, but not sure how much.

### \* 6.9 Assumption on energy use for the other woven product category

In Table 72, the energy use is assumed to increase by 2%.

Do you agree with the increase by 2% of the energy use?

- Yes, I agree

- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.9.1 Why?

*Text of 1 to 5000 characters will be accepted*

We agree, but not sure how much.

### \*6.10 Assumption on water use for the knitted product category

In Table 72, the water use is assumed to increase by 1%.

Do you agree with the increase by 1% of the water use?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.10.1 Why?

*Text of 1 to 5000 characters will be accepted*

Use more synthetics, use less water, etc.

### \*6.11 Assumption on water use for the denim product category

In Table 72, the water use is assumed to increase by 2.5%.

Do you agree with the increase by 2.5% of the water use?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.11.1 Why?

*Text of 1 to 5000 characters will be accepted*

Same as above.

### \*6.12 Assumption on water use for the other woven product category

In Table 72, the water use is assumed to increase by 1.4%.

Do you agree with the increase by 1.4% of the water use?

- Yes, I agree
-

- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.12.1 Why?

*Text of 1 to 5000 characters will be accepted*

Same as above.

### \*6.13 Assumption on fibres use for the knitted product category

In Table 72, the fibres use is assumed to increase by 0.6%.

Do you agree with the increase by 0.6% of the fibres use?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.13.1 Why?

*Text of 1 to 5000 characters will be accepted*

Same. More fibers is one way to increase robustness but can also be done through chemical use and mixing in synthetics. So, there are a lot of uncertainties here.

### \*6.14 Assumption on fibres use for the denim product category

In Table 72, the fibres use is assumed to increase by 0.5%.

Do you agree with the increase by 0.5% of the fibres use?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.14.1 Why?

*Text of 1 to 5000 characters will be accepted*

Same.

### \*6.15 Assumption on fibres use for the other woven product category

In Table 72, the fibres use is assumed to increase by 0.44%.

Do you agree with the increase by 0.44% of the fibres use?

- Yes, I agree

- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.15.1 Why?

*Text of 1 to 5000 characters will be accepted*

Same.

### \*6.16 Assumption on chemicals use for the knitted product category

In Table 72, the chemicals use is assumed to increase by 2%.

Do you agree with the increase by 2% of the chemicals use?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.16.1 Why?

*Text of 1 to 5000 characters will be accepted*

Same.

### \*6.17 Assumption on chemicals use for the denim product category

In Table 72, the chemicals use is assumed to increase by 1.7%.

Do you agree with the increase by 1.7% of the chemicals use?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*6.17.1 Why?

*Text of 1 to 5000 characters will be accepted*

Same.

### \*6.18 Assumption on chemicals use for the other woven product category

In Table 72, the chemicals use is assumed to increase by 1.25%.

Do you agree with the increase by 1.25% of the chemicals use?

- Yes, I agree
-

Yes, I mostly agree

- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 6.18.1 Why?

*Text of 1 to 5000 characters will be accepted*

Same.

### \* 6.19 Additional parameters related to increased robustness

Would you propose additional parameters to model related to increased robustness?

- Yes, I want to propose additional parameters
- No, I cannot propose additional parameters
- I have no opinion

### \* 6.19.1 Please, carefully describe the additional parameters and the reasoning to use them.

*Text of 1 to 5000 characters will be accepted*

We have already mentioned many, pre-stressed, use of elastane in otherwise durable products like jeans, etc. And we also think that sizing and fit are important aspects to consider.

### \* 6.19.2 What is the source of your proposal?

- Technical evidence that could be made available to JRC
- Expert judgement based on direct measurements
- Expert opinion that is neither based on technical evidence nor direct measurements
- Other

### \* 6.20 Additional manufacturing costs due to increase of energy, water, fibres and chemicals use

At lines 5336-5337, it is reported that the additional manufacturing costs for achieving a higher robustness are calculated based on the additional energy, water, mass and chemicals used.

Do you agree with what is reported at lines 5336-5337?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 6.21 Costs of testing in DO1

At lines 5338-5343, is reported that an additional cost of testing is considered and estimated to be of 0.05 € /unit.

Do you agree with the additional cost of testing equal to 0.05 €/unit?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 6.22 Costs of labelling in DO1

At lines 5344- 5348, is reported that an additional cost of labelling is considered and estimated to be of 0.02 € /unit.

Do you agree with the additional cost of labelling equal to 0.02 €/unit?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 6.23 Additional costs related to increased robustness

Would you propose additional costs related to increased robustness?

- Yes, I want to propose additional costs
- No, I cannot propose additional costs
- I have no opinion

### \* 6.24 Performance requirements on robustness

Would you be in favour of proposing a performance requirement on robustness?

- Yes, I would
- Yes, I mostly would
- No, I mostly would not
- No, I would not
- I do not know / I have no opinion

#### \* 6.24.1 Why?

*Text of 1 to 5000 characters will be accepted*

The minimum requirements would have to be 'raised' from what today is the threshold/consumer rights level, in order to make sense. In Norway consumer rights state that 'normal use' means two to five years, depending on the type of product. The problem with consumer rights is that it is unclear what 'normal use' actually is, and additionally low prices do not encourage complaints. If a higher threshold than two to five years is suggested, it is important to ensure that this is not negatively affecting the natural fibers more than the synthetic ones to avoid unwanted consequences.

**\* 6.24.2 How would you justify the limit values? Based on what information would you establish such performance requirements?**

*Text of 1 to 5000 characters will be accepted*

The same limitations of knowledge regarding the performance in tests and in real life including what 'normal use' represents – are the same limitation JRC uses to exclude 'durability'. Knowledge is needed on these relationships and what 'normal use' represents. This would also clarify strengthening the consumer rights or 'robustness limits' would be the most efficient intervention.

**\* 6.24.3 Can you provide tentative limit values by product category?**

*Text of 1 to 5000 characters will be accepted*

No.

**\* 6.24.4 What is the source of your proposal?**

- Technical evidence that could be made available to JRC
- Expert judgement based on direct measurements
- Expert opinion that is neither based on technical evidence nor direct measurements
- Other

**\* 6.25 Classes of performance on robustness**

Classes of performance are a structured categorisation that translates a product's performance on a single key parameter (e.g. visual inspection, spirality, and dimensional change), or an aggregated potential robustness score, into clear bands that are easy to compare. For example, considering 5 classes from A to E, with A being the best and E the worst.

Under the ESPR, they are used to benchmark and differentiate products, incentivise better-performing designs and communicate circularity and environmental performance on labels to guide customers' choices, while ensuring that the lowest class aligns with the minimum required performance.

Would you be in favour of proposing classes of performance on robustness?

- Yes, I would
- Yes, I mostly would
- No, I mostly would not
- No, I would not
- I do not know / I have no opinion

**\* 6.25.1 Why?**

*Text of 1 to 5000 characters will be accepted*

Instead of guessing and projecting based on an arbitrary durability or robustness score, it is possible to measure Duration of Service using discarded clothes and comparing the findings from studying these to design parameters, which ensures using more reliable methods than guessing/projecting. This would be made much easier with the producer responsible clearly labeled alongside a date on all products.

## \* 6.26 Influence of the Extended Producer Responsibility on robustness

Extended Producer Responsibility (EPR) schemes required under the Waste Framework Directive could incentivise designing products with higher robustness scores.

Do you think that EPR fee modulation based on a robustness score will increase the use of products with increased service lifetime?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 6.26.1 Why?

*Text of 1 to 5000 characters will be accepted*

Instead of guessing and projecting based on an arbitrary durability or robustness score, it is possible to measure Duration of Service using discarded clothes and comparing the findings from studying these to design parameters, which ensures using more reliable methods than guessing/projecting. This would be made much easier with the producer responsible clearly labeled alongside a date on all products.

## 7. DO2 on recyclability

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### \* 7.1 Contribution to design option on recyclability (DO2)

Do you want to contribute to section 11.1.2 of the working document on design option about recyclability? This section of the questionnaire contains 12 main questions.

- Yes
- No, I want to skip this section of the questionnaire

## Questions about DO2 on recyclability

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### \* 7.2 Reasons of proposing design option 2 (DO2) on recyclability

DO2 was proposed because products which are recyclable after specific processing yield recycled fibres, the use of which can prevent the use of virgin fibres. This design option indirectly addresses 60-63% of the lifecycle environmental impacts of the product.

Lines 5375- 5391 report justifications and collect relevant information from previous sections.

Based on the information and rationale provided at lines 5375- 5391, do you agree with the proposal of this design option?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

## \*7.2.1 Why?

*Text of 1 to 5000 characters will be accepted*

We disagree with this on different levels. 1) the percentage of the impact of the fibers is unusually high. 2) We have not seen a discussion around whether production of recycled fibers would add on to the overproduction or come instead of part of the production. A discussion of this will be needed to make this statement valid. For us it seems to be that China, the biggest fiber producer, has met competition with lowering prices, not lowering the production volumes. Already today the low prices of fibers, especially synthetics, is hindering the recycled industry. It is just too expensive. This problem can be solved by subsidizing or mandating content. Both tracks imply new problems. One is linked to the very little environmental savings connected to recycling due to the other stages of production being much more important in most other analysis of the lifecycle stages. The other is linked to tractability and trustworthy documentation. The problem is different when looking at natural or synthetic fibers. Recycled synthetics might have similar properties as the virgin synthetics, for natural fibers, the properties are more different. Chemically recycled natural fibers are no longer natural, rather viscose or similar. Recycled silk is no longer a filament fiber, but a staple fiber. This gives the recycled natural fibers substantial other esthetic and performance properties. In many products recycled would not be possible. This argument results in a recommendation where recycled content is first applied to synthetics. Afterwards it will, of course, be possible to investigate if the intervention has led to decreased production of virgin synthetic fibers. The proof will be in the pudding.

SANDIN, G., LIDFELDT, M. & NELLSTRÖM, M. 2023. Does large-scale textile recycling in Europe reduce climate impact? A consequential life cycle assessment. IVL Swedish Environmental Research Institute.

## \*7.3 Effect of information on recyclability

Lines 5383-5388 report limiting factors for textile recyclability that go beyond design of products.

Despite these limiting factors, do you think that an information requirement on recyclability (under the assumption that stakeholder comments for its improvement are addressed appropriately) would:

- Significantly increase the share of textile going to recycling.
- Result in some increase of textile going to recycling.
- Have no effect on the share of textile going to recycling.
- I have no opinion.

### \*7.3.1 Why?

*Text of 1 to 5000 characters will be accepted*

The recycling industry for textile is small and despite of incentives and heavy support, it has not been able to grow. This is because it's costly to sort, transport and recycle, and that the price of new virgin fiber (polyester) is very low. It is on the demand side of the recycled fibers that the limitations exist, not on the supply side. It is likely that consumers would prefer recyclable products, if recycling in praxis doesn't exist or is unlikely, this will be a version of greenwashing or in the least fooling the consumers. A new and better textile ecosystem requires more trust and honesty. To recycle textiles has a high price and little environmental improvements can be gained. This is not an argument against recycling, but changing the current system is more complex and trust and honesty will be needed vis-à-vis the consumer on these issues.

SANDIN, G., LIDFELDT, M. & NELLSTRÖM, M. 2023. Does large-scale textile recycling in Europe reduce climate impact? A consequential life cycle assessment. IVL Swedish Environmental Research Institute.

## \*7.4 Development of recycling techniques and capacity

At lines 5386- 5388, the available techniques are highlighted as the main limiting factor for recycling.

Can you provide any projections on how the textile recycling capacity will increase globally in 2030, 2035, 2040, in absence of any ecodesign requirement?

In your answer, please, specify if you include or not the effects of other policy tools, such as the Extended Producer Responsibility under the Waste Framework Directive, and the planned revision of the Textile Labelling Regulation.

- Yes, I can
- No, I cannot
- I have no opinion

#### \*7.4.1 Why?

*Text of 1 to 5000 characters will be accepted*

The global textile ecosystem, especially related to production on fibers, is dominated by China. Substantial changes in pricing, technology, supply, etc. will necessarily be affected by their response to changes in European industrial policy.

#### \*7.5 Recyclability scoring system

Do you agree with the scoring system described in lines 5403- 5443 and Table 76?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

#### \*7.5.1 Why?

*Text of 1 to 5000 characters will be accepted*

We recognize that due to the immature state of the recycling industry, there is a lot we don't know at the current stage. Therefore, to make a good table with scores is difficult. Mono-materials are probably given too little emphasis with only 1 point. Blends of linen and cotton would not be the same as blends of cotton and elastane. There should be a division between blends with different plant-based fibers, than blending natural fibers with synthetics. All blends are not the same. It might also be good to have a category for small items that are just too small as a category to be of interest for the industry (f ex socks, panties, bras, etc.). We expect this list of criteria and points might change with the maturing of the recycling industry. It is also possible that some of the criteria, such as free from sequins and prints, are better handled by restrictions than a point-system. We also think that price is a limitation for recyclability. The existence of a recycling industry for wool has depended on a high price for wool and also for recycled wool, compared to the low price for polyester and as a result, also for recycled polyester. It might be that price of virgin fibers could be a criterion for recyclability. In praxis this is already the case.

#### \*7.5.2 How can it be improved?

*Text of 1 to 5000 characters will be accepted*

See above answer.

## \* 7.6 Assumption on share going to recycling

At lines 5447- 5461, the share going to recycling is assumed to increase by 5%.

Do you agree with the increase by 5% of the share going to recycling?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 7.6.1 Why?

*Text of 1 to 5000 characters will be accepted*

The share going to recycling is dependent on prices for new and recycled fibers, and support to the recycling industry. To use energy related evidence to support the discussion is not relevant. Energy labelling gives consumers products that are less costly in use. Recycling on the other hand, will give consumers potentially worse products and less tractability when it comes to origin and even more importantly, chemical content. We don't see a consumer-demand for recycled products, on the contrary, new fibers are still understood as a quality sign.

SIGAARD, A. S. & LAITALA, K. 2023. Natural and sustainable? Consumers' textile fiber preferences. Fibers.

### \* 7.6.2 Please specify the alternative value you propose along with its justification.

*Text of 1 to 5000 characters will be accepted*

0 %.

### \* 7.6.3 What is the source of your proposal?

- Technical evidence that could be made available to JRC
- Expert judgement based on direct experience
- Expert opinion that is neither based on technical evidence nor direct experience
- Other

## \* 7.7 Costs of labelling in DO2

At lines 5462- 5465, is reported that an additional cost of labelling is considered and estimated to be of 0.02 € /unit.

Do you agree with the additional cost of labelling equal to 0.02 €/unit?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

## \* 7.8 Additional costs related to recyclability information disclosure

Would you propose additional costs related to recyclability information disclosure (DO2)?

- Yes, I want to propose additional costs
- No, I cannot propose additional costs
- I have no opinion

### \*7.9 Influence of the Extended Producer Responsibility

Extended Producer Responsibility (EPR) schemes required under the Waste Framework Directive could incentivise designing products with higher recyclability scores.

Do you think that EPR fee modulation based on a recyclability score will increase the share of products going to recycling?

- Yes, it will
- Yes, it mostly will
- No, it mostly will not
- No, it will not
- I do not know / I have no opinion

#### \*7.9.1 Why?

*Text of 1 to 5000 characters will be accepted*

The share of products going to recycling depends on the development of the recycling industry, it's not dependent on the supply of lower quality fibers at a higher price. The competition is not only with virgin fibers, but also with so-called recycled fibers from rPET. The policy that targets Fiber to Fiber recycled fibers over rPET and support to the industry on this, would be more important than information to consumers.

### \*7.10 Influence of the planned revision of the Textile Labelling Regulation

The planned revision of the Textile Labelling Regulation (TLR) aims to improve fibre identification on the label, notably by modernising the fibre names according to international standards, streamlining the process to add new fibre names, requiring more detailed information on location of fibre and non-fibre content across textile products components/parts and by incorporating new standards on test methods. Extending the current recycling tolerance for the carding process to all mechanically recycled content is also planned.

Do you think that a revised TLR will increase the share of products going to recycling?

- Yes, it will
- Yes, it mostly will
- No, it mostly will not
- No, it will not
- I do not know / I have no opinion

#### \*7.10.1 Why?

*Text of 1 to 5000 characters will be accepted*

We of course support an updated version of TLR. However, the main problem with the fiber content is that it is restricted to fibers. The content of the product is so much more, and this 'more' might be important for both the performance of the textile and the recycling. Yes, we have problems with the use of inconsistent names for fibers, but even more the actual problems are related to how industry hides other parts of the product content, such as the dyeing and finishing processes. These are the most important production stages that affect our

health, the environment and more; but remain hidden. This is also important for biodegradability, as we have addressed in this section. We hope these problems can be solved by the revision, resulting in both better information to consumers and more usable, reusable and recyclable products.

### \* 7.11 Use of RFID to carry labelling information

Do you agree that the use of RFID to carry labelling information in a machine-readable format could facilitate automatic sorting and recycling and therefore increase the share of products going to recycling?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly do not agree
- No, I do not agree
- I do not know / I have no opinion

### \* 7.12 Performance requirements on recyclability

Would you be in favour of proposing a performance requirement on recyclability?

- Yes, I would
- Yes, I mostly would
- No, I mostly would not
- No, I would not
- I do not know / I have no opinion

#### \* 7.12.1 Why?

*Text of 1 to 5000 characters will be accepted*

If connected to specific product groups, this might make sense. For example cotton jeans, it is possible to restrict the use of elastane and thereby making them more recyclable. This would probably boost the second-hand market and lead to less buying of new jeans. Likewise, restriction of prints bigger than a certain square centimeter might be a good thing, thus limiting the unnecessary narrowing of the use potential of the products. The side effects of such interventions might be more positive for the environment than the effect on recycling might have.

#### \* 7.12.2 Please, carefully describe the reasoning and the characteristics of the requirement

Information on corresponding costs would be highly appreciated. If the respondent considers such information confidential, could directly send it to the functional mailbox JRC-B5-TEXTILES@ec.europa.eu.

*Text of 1 to 5000 characters will be accepted*

N/A

#### \* 7.12.3 What is the source of your proposal?

- Technical evidence that could be made available to JRC
- Expert judgement based on direct experience
- Expert opinion that is neither based on technical evidence nor direct experience
- Other

### \*7.13 Classes of performance on recyclability

Classes of performance are a structured categorisation that translates a product's performance on a recyclability score, into clear bands that are easy to compare. For example, considering 5 classes from A to E, with A being the best and E the worst.

Under the ESPR, they are used to benchmark and differentiate products, incentivise better-performing designs and communicate circularity and environmental performance on labels to guide customers' choices, while ensuring that the lowest class aligns with the minimum required performance.

Would you be in favour of proposing classes of performance on recyclability?

- Yes, I would
- Yes, I mostly would
- No, I mostly would not
- No, I would not
- I do not know / I have no opinion

#### \*7.13.1 Why?

*Text of 1 to 5000 characters will be accepted*

We can see two problems with this. One is the huge differences between 'might' be recycled and what is actually recycled. The other is linked to the development of the recycling industry. In general, we think that consumers will be more interested in knowing if the product is going to be reused or recycled, than if it theoretically can be recycled. In spite of high support from the circular economy, the market for recycled content has not increased - tied to the low prices of virgin polyester. If one is going to use resources, including consumers' time spent on sorting, delivering etc., this needs to be seen in relation to actual environmental savings. Looking at the volumes produced and sold, it is important to evaluate if an increase in recycling will impact volumes. Will this be in addition to? Or an excuse to continue consuming?

Our suggestion: Limit the discussion to synthetic fibers firstly, and importantly to fiber-to-fiber recycling, related to the volumes but also because recycling natural fibers is different from synthetics. The latter is less effected in the recycling process in the sense, that they 'change' more (weaker, etc.) and hence become a different quality, different perceived value and function – besides the need to add more synthetics for strength.

#### \*7.13.2 How would you justify the limit values? Based on what information would you establish performance levels?

*Text of 1 to 5000 characters will be accepted*

N/A

#### \*7.13.3 What is the source of your proposal?

- Technical evidence that could be made available to JRC
- Expert judgement based on direct experience
- Expert opinion that is neither based on technical evidence nor direct experience
- Other

## 8. DO3 on recycled content

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### \* 8.1 Contribution to design option on recycled content (DO3)

Do you want to contribute to section 11.1.3 of the working document on design option about recycled content?

This section of the questionnaire contains 30 main questions.

- Yes
- No, I want to skip this section of the questionnaire

## Questions about DO3 on recycled content

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### \* 8.2 Reasons of proposing design option 3 (DO3) on recycled content

DO3 was proposed because the use of recycled fibres prevents the manufacturing and use of virgin fibres.

This design option directly tackles the 60-63% of the lifecycle environmental impacts of the product.

Lines 5497- 5500 report justifications and collect relevant information from previous sections.

Based on the information and rationale provided at lines 5497- 5500, do you agree with the proposal of this design option?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

#### \* 8.2.1 Why?

*Text of 1 to 5000 characters will be accepted*

There is no evidence that this DO will prevent the production of new fibers. In addition, the estimate of fiber production is much higher than estimated elsewhere.

### \* 8.3 Source of recycled fibres

Regarding the types of waste from which the recycled fibers originate, they should include:

- Post-consumer textile waste only
- Post-industrial, pre- consumer and post-consumer textile waste
- Post-industrial, pre-consumer, post-consumer textile waste, and waste from other sectors (e.g. PET bottles)
- Others
- I have no opinion

#### \* 8.3.1 Why?

*Text of 1 to 5000 characters will be accepted*

Exclusion of rPET is important to ensure a development of textile-to-textile recycling, and because new packaging is a better use of rPET than textiles. The EU ban on unsold goods raises the question, is it a good idea to 'recycle' unused goods? The inclusion of post-industrial waste raises questions in a system based on over-production. Seen from a perspective of the Global South it might be better to recycle than to 'reuse' (the praxis of export to the Global South) the unwanted textiles.

**\* 8.4 Availability of recycled cotton**

Section 13.12 reports the assessment on the availability of the recycled cotton.

Do you agree with the assessment reported in Section 13.12 regarding the availability of recycled cotton?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 8.5 Availability of the recycled nylon**

Section 13.12 reports the assessment on the availability of the recycled nylon.

Do you agree with the assessment reported in Section 13.12 regarding the availability of recycled nylon?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 8.6 Availability of the recycled polyester**

Section 13.12 reports the assessment on the availability of the recycled polyester.

Do you agree with the assessment reported in Section 13.12 regarding the availability of recycled polyester?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 8.7 Availability of the recycled wool**

Section 13.12 reports the assessment on the availability of the recycled wool.

Do you agree with the assessment reported in Section 13.12 for recycled wool?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 8.8 Assumptions for knitted product category when only information requirements are assessed**

Lines 5577-5582 report the assumption made when only information requirements are considered.

Do you agree with the assumption that by only setting information requirements this would lead to an increase of secondary materials content equal to 2% of polyester, and 0.5% of nylon, wool and cotton?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 8.9 Assumptions for denim product category when only information requirements are assessed**

Lines 5577-5582 report the assumption made when only information requirements are considered.

Do you agree with the assumption that by only setting information requirements this would lead to an increase of secondary materials content equal to 5% of cotton and 2% of polyester?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 8.10 Assumptions for other woven product category when only information requirements are assessed**

Lines 5577-5582 report the assumption made when only information requirements are considered.

Do you agree that the adoption of only information requirements would result in an increase of secondary materials content equal to 2% of the polyester, and 0.5% of the nylon, wool and cotton?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 8.11 Performance requirements on recycled content for knitted product category** Section

11.1.3 considers the following performance requirements for knitted product category:

- at least 5% of the nylon used in the product should be recycled material,
- at least 10% of the wool used in the product should be recycled material, and
- at least 15% of the polyester used in the product should be recycled material.

Do you agree with the adoption of these minimum limit values?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
-

I do not know / I have no opinion

### \*8.11.1 Why?

*Text of 1 to 5000 characters will be accepted*

We disagree with a minimum requirement for wool.

### \*8.11.2 Please specify the alternative value you propose along with its justification.

*Text of 1 to 5000 characters will be accepted*

No value for wool.

### \*8.11.3 What is the source of your proposal?

- Technical evidence that could be made available to JRC
- Expert judgement based on direct experience
- Expert opinion that is neither based on technical evidence nor direct experience
- Other

### \*8.12 Performance requirements on recycled content for the denim product category

Section 11.1.3 considers the following performance requirements for the denim product category: at least 20% of the cotton used in the product should be recycled material.

Do you agree with the adoption of this minimum limit value?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*8.13 Performance requirements on recycled content for other woven product category

Section 11.1.3 considers the following performance requirements for other woven product category:

- at least 5% of the nylon used in the product should be recycled material,
- at least 10% of the wool used in the product should be recycled material, and
- at least 15% of the polyester used in the product should be recycled material.

Do you agree with the adoption of these minimum limit values?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### **\*8.14 Assumptions for knitted product category when information and performance requirements are assessed**

Section 11.1.3 considers the following performance requirements for knitted product category:

- at least 5% of the nylon used in the product should be recycled material
- at least 10% of the wool used in the product should be recycled material
- at least 15% of the polyester used in the product should be recycled material

Do you agree with the assumption that an information requirement on recycled content in combination with a performance requirement would lead to an increase of secondary materials content by 5% as compared to the mentioned thresholds (i.e. resulting in 5.25% of the nylon, 10.5% of the wool, and 15.75% of the polyester?)

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

#### **\*8.14.1 Why?**

*Text of 1 to 5000 characters will be accepted*

Same as above, wool should be left out.

#### **\*8.14.2 Please specify the alternative value you propose along with its justification.**

*Text of 1 to 5000 characters will be accepted*

Same as above, leave wool out.

#### **\*8.14.3 What is the source of your proposal?**

- Technical evidence that could be made available to JRC
- Expert judgement based on direct experience
- Expert opinion that is neither based on technical evidence nor direct experience
- Other

### **\*8.15 Assumptions for denim product category when information and performance requirements are assessed**

Section 11.1.3 considers the following performance requirements for the denim product category: at least 20% of the cotton used in the product should be recycled material

Do you agree with the assumption that an information requirement on recycled content in combination with a performance requirement would lead to an increase of secondary materials content by 5% as compared to the mentioned threshold (i.e. resulting in 21% of the cotton?)

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree

- No, I disagree
- I do not know / I have no opinion

### **\*8.16 Assumptions for other woven product category when information and performance requirements are assessed**

Section 11.1.3 considers the following performance requirements for recycled content for the other woven product category:

at least 5% of the nylon used in the product should be recycled material, at least 10% of the wool used in the product should be recycled material, and at least 15% of the polyester used in the product should be recycled material

Do you agree with the assumption that an information requirement on recycled content in combination with a performance requirement would lead to an increase of secondary materials content by 5% as compared to the mentioned thresholds (i.e. resulting in 5.25% of nylon, 10.5% of wool, and 15.75% of polyester?)

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

#### **\*8.16.1 Why?**

*Text of 1 to 5000 characters will be accepted*

Leave wool out.

#### **\*8.16.2 Please specify the alternative value you propose along with its justification.**

*Text of 1 to 5000 characters will be accepted*

Leave wool out.

#### **\*8.16.3 What is the source of your proposal?**

- Technical evidence that could be made available to JRC
- Expert judgement based on direct experience
- Expert opinion that is neither based on technical evidence nor direct experience
- Other

### **\*8.17 Additional parameters related to increased share of recycled fibres**

Would you propose additional parameters to model that relate to having an increased share of recycled fibres?

- Yes, I want to propose additional parameters
- No, I cannot propose additional parameters
- I have no opinion

**\*8.17.1 Please, carefully describe the additional parameters and the reasoning to use them.**

*Text of 1 to 5000 characters will be accepted*

Polyester has the largest potential because it's the biggest share of the production, it therefore makes more sense to mandate inclusion of recycled polyester (not rPET), which would align with a general understanding that the growth of fossil-based fibers needs to be halted.

**\*8.17.2 What is the source of your proposal?**

- Technical evidence that could be made available to JRC
- Expert judgement based on direct experience
- Expert opinion that is neither based on technical evidence nor direct experience
- Other

**\*8.18 Price of recycled PET – an average value from the global market**

Table 81 reports that the price of recycled PET at global level is equal to 1.840 EUR/kg. The information was taken from [this source](#).

Do you agree with the adopted value and the use of its source?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\*8.19 Price of recycled PET – an average value from Chinese producers**

Table 81 reports that the price of recycled PET from the Chinese market is equal to 1.068 EUR/kg. The information was elaborated from [this source](#) and [this source](#).

Do you agree with the adopted value and the use of its sources?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\*8.20 Price of recycled PET – an average value from EU producers**

Table 81 reports that the price of recycled PET from the EU market is equal to 2.430 EUR/kg. The information was taken from [this source](#).

Do you agree with the adopted value and the use of its sources?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree

I do not know / I have no opinion

### \*8.21 Price of recycled polyamide – an average value from non-EU producers

Table 81 reports that the price of recycled polyamide from non-EU producers is equal to 3.375 EUR/kg. The information was taken from [this source](#).

Do you agree with the adopted value and the use of its sources?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*8.22 Price of recycled polyamide – an average value from EU producers

Table 81 reports that the price of recycled polyamide from EU producers is equal to 3.375 EUR/kg. The information was elaborated from [this source](#) and [this source](#).

Do you agree with the adopted value and the use of its sources?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*8.23 Price of recycled cotton – an average value from non-EU producers

Table 81 reports that the price of recycled cotton from non-EU producers is equal to 2.648 EUR/kg. The information was elaborated from [this source](#) and Khan et al. (2025).

Do you agree with the adopted value and the use of its sources?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \*8.24 Price of recycled cotton – an average value from EU producers

Table 81 reports that the price of recycled cotton from EU producers is equal to 2.693 EUR/kg. The information was elaborated from [this source](#).

Do you agree with the adopted value and the use of its sources?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 8.25 Price of recycled wool – an average value from non-EU producers

Table 81 reports that the price of recycled wool from non-EU producers is equal to 3.560 EUR/kg. The information was elaborated from [this source](#).

Do you agree with the adopted value and the use of its sources?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 8.26 Price of recycled wool – an average value from EU producers

Table 81 reports that the price of recycled wool from EU producers is equal to 3.560 EUR/kg. The information was elaborated from [this source](#).

Do you agree with the adopted value and the use of its sources?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 8.27 Costs of labelling in DO3

At lines 5592- 5595, it is reported that an additional cost of labelling is considered and estimated to be of 0.02 €/unit.

Do you agree that the additional cost of labelling is equal to 0.02 €/unit?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

### \* 8.28 Costs of certification in DO3

At lines 5596- 5602, it is reported that an additional cost of certification is considered and estimated to be of 0.13 €/unit. This cost refers to a certification based on a chain of custody system that is capable to demonstrate that a specific quantity of fibre in the final product is a recycled material coming from a specific type of textile waste, i.e. post-industrial, pre-consumer, and post-consumer.

Do you agree that the calculated cost of certification is equal to 0.13 €/unit?

- Yes, I agree
- Yes, I mostly agree
- No, I mostly disagree
- No, I disagree
- I do not know / I have no opinion

**\* 8.29 Additional costs related to DO3**

Would you propose additional costs to be considered related to the design option 3 (DO3) on recycled content?

- Yes, I want to propose additional costs
- No, I cannot propose additional costs
- I have no opinion

**\* 8.30 Influence of the Extended Producer Responsibility on recycled content**

Extended Producer Responsibility (EPR) schemes required under the Waste Framework Directive could incentivise designing products with higher recycled content.

Do you think that EPR fee modulation based on the quantity of recycled material will increase the use of products with increased recycled content?

- Yes, it will
- Yes, it mostly will
- No, it mostly will not
- No, it will not
- I do not know / I have no opinion

**\* 8.30.1 Why?**

*Text of 1 to 5000 characters will be accepted*

If rPET from bottles is regarded as recycled, this might both lead to supporting fossil-based materials and at the same time hinder fiber-to-fiber recycling of textiles. This is not necessarily positive.

**\* 8.30.2 By how much?**

*Text of 1 to 5000 characters will be accepted*

It is impossible to estimate.

**\* 8.30.3 What is the source of your proposal?**

*Text of 1 to 5000 characters will be accepted*

Many years of research.

**\* 8.31 EPR scheme and the calculation of recycled content**

Should the EPR fee modulation be based on:

- The overall amount of recycled content present in the product
- The recycled content in the product sourced from European post-consumer textile waste
- Other

**\* 8.31.1 Please specify what other options would you consider to define the EPR fee modulation for the recycled content**

*Text of 1 to 5000 characters will be accepted*

Fiber-to-fiber, excluding man-made fibers. It might make sense to divide between man-made fibers and natural fibers to increase recycled content. Both synthetics and natural fibers can be recycled into man-made fibers. Natural fibers can only be mechanically recycled to natural fibers. This difference is an argument for starting with mandating content of recycled fibers in man-made fibers first and wait with the natural fibers.

## Finalization of **Part 1 of 2** of the questionnaire

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Your opinion matters to us.

Thank you very much for taking the time to contribute to

**Part 1 of 2** of this consultation.

### **Contact**

[Contact Form](#)