

## Baseline analysis of Safe and Sustainable-by-Design criteria per value chain - specificities and common grounds

*Goals:* Providing input to WP1 for mapping Safe-and-Sustainable-by-Design (SSbD) gaps, challenges and needs; analysing whether the SSbD criteria mapped in WP1 are of relevance to the respective value chains and identifying overlaps.

*Approach:* The main SSbD challenges, opportunities and their associated criteria were described for the following value chains:

1. Packaging (represented by [IPC](#))
2. Textiles (represented by [Textile ETP](#))
3. Construction (represented by [EFCC](#))
4. Automotive (represented by [CLEPA](#))
5. Energy (represented by [EMIRI](#))
6. Electronics (represented by [INL](#))
7. Fragrances (represented by [IFRA](#))

Based on the value chains and stakeholders analysis-, as part of T4.1, and taking the input from ongoing developments in WP1 as a baseline, each value chain partner has verified the applicability of the defined SSbD criteria within their remit. The overview of aspects and indicators for SSbD that were provided in the Joint Research Centre (JRC) Framework Report (Caldeira 2022) were used as a starting point for the development of value chain specific criteria analysis.

As a first step, each of the value chain partners has identified their most relevant SSbD criteria - in close collaboration between them through a common workshop in M6 (November 2022) – focusing on commonalities and specificities. The workshop methodology has been developed by Tekniker (D4.2) and the activities have been organised by EFCC and Cefic.

The key SSbD criteria for each of the value chains have been mapped using a life cycle thinking approach, taking into account: the manufacture (or sourcing) of raw materials, the production stage, the use stage and the end-of-life stage.

*Outcomes:* Major outcomes of the value chains, SSbD criteria analysis included:

- the use or emissions of restricted substances at the raw materials stage (most value chains)
- social aspects related to critical raw materials use
- the inclusion of geographic coverage impacts: e.g., textiles (global) and construction (local)
- environmental emissions reduction at the production stage
- special attention to the end of life for most value chains, in particular for the Packaging and Textiles value chains.

*Impact:* SSbD not only tackles various challenges and criteria in a holistic way, it should also bring new opportunities for innovative processes, materials, or products, especially those associated with a reduced impact on several dimensions of Health, Environment, and Circularity.

*Future work:* At this stage only the most critical criteria for each value chain have been listed with some explanation, but no quantification has been performed yet. This will take place in the frame of the case studies and testing phase proposed by JRC .

Also the responses/solutions to the specific challenges associated with value chain specific SSbD criteria will be developed in co-creation resulting in value chain-specific roadmaps (to be completed by January 2024).

## Disclaimer

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