How the Sustainable Products Initiative should address hazardous chemicals in products

Brussels, February 2022

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Summary

The Sustainable Products Initiative (SPI) is a flagship initiative of the European Commission's new Circular Economy Action Plan. It is meant to make sustainable products the norm and foster more durable, reusable, repairable, recyclable, and energy-efficient products. This ambition, however, cannot be realised without detoxifying materials and products.

This paper calls for mandatory requirements for traceability and safe use of chemicals at all stages of the product lifecycle.

EU decision makers need to ensure that the SPI rises to the occasion and implements the Chemicals Strategy for Sustainability by:

- Implementing a **generic approach to risk considerations** for chemicals in all products and materials
- Closing the gap between current EU chemicals legislation and product legislation by introducing a **horizontal and sector-specific requirements to remove substances of concern** from all products

This means that the SPI proposal needs to:

- Instill **toxic-free design** as an overarching principle for sustainable products and materials
- Ensure that **comprehensive information** about chemicals in products and materials is provided to targeted stakeholders to ensure transparency and traceability

Develop **new requirements** focusing on the use and presence of chemicals, taking into account **wider societal concerns**, for example when production takes place outside of the EU

Context

Chemicals have a great impact on global value chains and the environment and should therefore be taken into serious consideration when it comes to sustainability[1]. Hazardous chemicals are widely used in the manufacturing of materials and products commonly found on the EU market.

Hazardous chemicals may have unwanted negative impacts along the whole value chain. They can affect workers in the production plant directly or the local environment via production effluents, and later on, during the use phase, hazardous chemicals in products can also affect the environment and human health through chemical leaching. Finally, they can constitute a barrier to circularity as the safe use of repaired, refurbished or reused materials and products cannot be guaranteed when their chemical content is unknown.

Why should the SPI address hazardous substances in products?

The objectives of the Sustainable Products Initiative cannot be achieved without full and transparent knowledge about chemical substances in materials and products. The circular economy needs to be

1 Guardian (2022) Chemical pollution has passed safe limit for humanity, say scientists. Article available at https://www.theguardian.com/environment/2022/jan/18/chemical-pollution-has-passed-safe-limit-for-humanity-say-scientists

toxic-free and thus the use of harmful chemicals should be prevented. Clear and mandatory requirements for access to information and safe use of chemicals along the whole life cycle of materials and products must be key focus areas in the SPI.

The Chemicals Strategy for Sustainability's mandate to the SPI

The need for developing coherence between EU chemicals policy and product policy was acknowledged in the Commission's Chemicals Strategy for Sustainability2. The Commission committed to help develop non-toxic material cycles by:

- minimising "the presence of substances of concern in products by introducing requirements, also as part of the Sustainable Product Policy Initiative, giving priority to those product categories that affect vulnerable populations as well as those with the highest potential for circularity";
- ensuring "availability of information on chemical content and safe use, by introducing information requirements in the context of the Sustainable Product Policy Initiative and tracking the presence of substances of concern through the life cycle of materials and products".

The Chemicals Strategy further established an ambitious commitment to introduce a generic approach to risk assessment for the chemicals most harmful to human health and the environment by allowing their use in consumer products only when essential. The chemicals in focus are those that cause cancers, gene mutations, affect the reproductive or the endocrine system, or are persistent and bioaccumulative. In the longer run, the Commission would further also target chemicals affecting the immune, neurological, or respiratory systems and chemicals toxic to a specific organ.

A generic approach represents a significantly more precautionary approach than what was traditionally done in chemicals legislation. Thanks to such an approach hazardous chemicals can be restricted in products or processes based on their hazardous properties alone, without the need for extensive calculations to prove a concrete risk for each specific situation or use. A number of important steps towards introducing such generic bans have already been taken in recent years: CMR's[3,] substances that are Carcinogenic, Mutagenic and toxic to Reproduction, are restricted by default in toys, cosmetics, and pesticides and the REACH regulation provides a fast-track procedure for restriction of CMRs as substances or in mixtures intended for consumer use. These are good first steps, but the approach needs to be strengthened and expanded both with regards to its efficiency and the number of products and materials covered.

The gap between chemical legislation and product legislation in the EU

The EU has a longstanding history of tackling harmful chemicals through legislation. Today, the most important 'horizontal' rules related to chemicals safety and covering a wide range of products nd processes are in place in the REACH4 and CLP5 regulations. These are complemented with further 'vertical' requirements in specific legislations for products such as toys6, cosmetics7, and electronics8.

2 https://ec.europa.eu/environment/strategy/chemicals-strategy_en
3 CMRs are substances that are Carcinogenic, Mutagenic and toxic to Reproduction i.e. those that are also mentioned in the CSS as target substances for the wider generic approach for consumer products
4 Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02006R1907-20140410
5 Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008R1272-20201114
6 Directive 2009/48/EC of the European Parliament and of the Council of 18 June 2009 on the safety of toys
7 Regulation (EC) No 1223/2009 of the European Parliament and of the Council of 30 November 2009 on cosmetic products
8 Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

However, the current legislative framework does not prevent the use of harmful chemicals in production processes or their presence in many ordinary materials and products such as packaging, electronics, construction products or textiles.

The REACH and CLP regulations are mainly designed to provide information on substances and mixtures rather than materials and products, and specific vertical legislations only exist for a very limited number of products. In addition, the most relevant legal acts only allow for restriction of specific substances based on toxicity for humans and the environment, and do not open the door for targeted restrictions based on wider societal concerns such as potential impact on local communities, workers, and unwanted environmental impacts related to accidental leakage and spilling at the production site.

How should the SPI address hazardous substances in products?

The SPI proposal is the ideal opportunity to tackle current shortcomings of the interface between chemicals and product legislation9. Consequently the SPI framework needs to enable the development of requirements on substances of concern in products and materials in order to detoxify them. This should include information requirements as part of (digital) product passports as well as dedicated horizontal, cross-product requirements and sector specific ones.

Building the right framework for toxic-free products and materials

In line with the initial commitment put forward in the Chemicals Strategy, the SPI framework should include a generic approach to restrict the presence and use of substances which are most harmful to human health and the environment. This needs to apply, by default, to all materials and products within the EU market.

Given their potentially hazardous properties throughout their entire lifecycle, the substances relevant to the SPI framework are:

- All substances meeting the properties referred to in Article 57 of REACH Regulation (EC) No 1907/200610;
- Chemicals affecting the immune, neurological, or respiratory systems and chemicals toxic to a specific organ11;
- Chemicals that are persistent, mobile, and toxic and very persistent and very mobile substances12;
- Substances listed in Annex VI of the CLP Regulation for classification of a chronic effect, but also substances of concern for the environment13;
- Substances regulated under the Stockholm Convention (POPs);
- Substances restricted in Annex XVII to REACH14;
- Specific substances regulated under dedicated sectoral or product legislation such as the Mercury Regulation, the Toys Regulation, the restriction of hazardous substances as part of Electrical and Electronic Equipment Regulation, etc.

9 For a detailed explanation and framework of implementation please see EEB&Okopol paper Discussion starters to integrate chemicals into product policy. Available at https://eeb.org/library/integrating-the-toxic-free-environment-goal-into-product-policy-policy-briefing/

10 i.e. all substances with properties that make them "substances of very high concern" according to the REACH definition.
11 the second bullet of the commissions CSS – substances to be dealt with at a later stage
12 mobility may be as important and bioaccumulation – PFAS is the most important example
13 These substances cause effects in the environment – primarily aquatic
14 Substances that have already been restricted under one law should clearly be in focus in other laws

- Biocides, disinfectants, and preservatives15
- Substances of concern in specific processes16
- Other substances of concern for specific sectors

The SPI framework needs to enable the introduction of dedicated requirements for all of the substances listed.

Mandatory information requirements for full transparency and traceability

The lack of information on which chemicals are used in different processes, materials and products is still a major barrier to the efficient regulation of harmful substances. The need for transparency becomes even more salient when aiming to develop a circular economy. That is because the possibility to achieve safe reuse, repair, remanufacturing and recycling depends to a large extent on information about hazardous chemicals in materials and components.
The SPI should provide solutions by introducing mandatory Digital Product Passports (DPP), which would ensure that all necessary information, also on chemicals, is passed on to relevant stakeholders.

The information contained in DPPs could, consequently, contribute to a safe use of chemicals not only thanks to a transparent declaration of all substances used throughout the value chain, but the data generated could also serve as a basis for restricting substances of concern across products, as well as for each specific sector. In addition, producers and suppliers willing to go the extra mile to remove a certain non regulated substance from their production processes could provide this additional sustainability information in the DPP. However, the distinction between legal requirements and additional improvements should be clear to the user, so as not to use the mere respect of legal obligations as a marketing tool.

New requirements on substances of concern to benefit society

Traditionally, requirements related to chemicals in EU legislation are based on concerns for human health and the environment of a specific substance. While a class approach has been advocated for by NGOs for the better part of a decade17, and still remains valid, it is important that product policy looks at chemicals use from a holistic perspective. This means that the way (classes of) substances are regulated under the SPI should make space for overarching sustainability principles which tackle wider societal concerns. This is all the more relevant as the stated ambition of the SPI is to have a positive spillover effect on global value chains.

In order to achieve this objective, it is crucial for the SPI to provide the necessary framework to introduce both cross-products, horizontal requirements as well as sector-specific, vertical chemicals requirements based on concerns such as:

- The need to mainstream chemical substitution, including the possibility to choose a different material, product or solution to achieve the same function;
- The need to reduce the use of chemicals that can cause harm during the production phase (accidental leakage and spillages, need for special protective gear to safeguard workers health, etc.);
- The need to reduce the use of chemicals that have the potential to leach out of products and affect end-users, including vulnerable populations;

15 These substances are designed to kill organisms, and should thus be used with care
16 It is important to not only consider the final product but also the production process
17 https://www.sixclasses.org/

- The need to reduce substances that hamper reuse and demand for such recyclates (flame retardants, PFAS, etc.).

The exact criteria for such requirements may need to be developed on a sector-by-sector basis. This could be done based on an assessment of the safety profile of a product with regard to the chemicals used and emitted throughout the product's life cycle18. Additional criteria developed should aim to ensure safe use of chemicals in the entire value chain, including outside the EU.

18 European Environment Agency, 2002: Designing safe and sustainable products requires a new approach for chemicals, Briefing no. 29/2020