

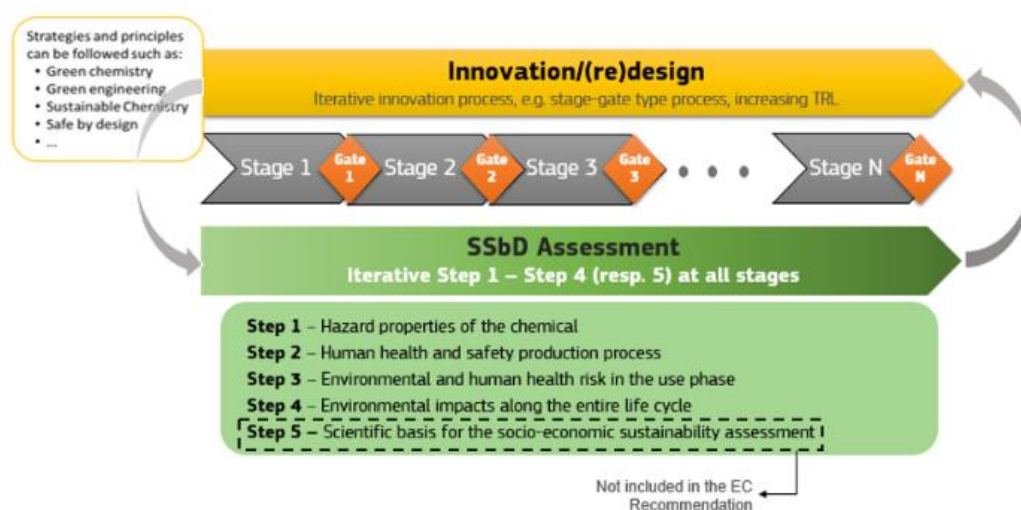
The EC Safe & Sustainable by Design (SSbD) framework: Towards the improvement of its relevance, reliability and operability

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1. Introduction

Key for the green industrial transition is the SSbD framework developed by the JRC [1] to ensure the development of chemicals, materials, processes and products that are safe and sustainable by design (SSbD).

The framework puts together safety, environmental sustainability and socio-economic dimensions for the first time. In addition, it requires that the safety and sustainability aspects are addressed together from the beginning, through the entire R&I (research and innovation) process, and with a life cycle perspective, shifting this way the current practice.



In order to improve the relevance, reliability and operability of the framework in R&I activities, the European Commission (EC) published in December 2022 a Recommendation establishing a European assessment framework for safe and sustainable by design (SSbD) chemicals and materials [2]. The Recommendation establishes a two-year testing period in which stakeholders are invited to test the framework and provide feedback.

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2. Conclusions

The 1st period for stakeholders to provide feedback was from 5 May to 30 June 2023. Responses were received from 24 different organisations comprising all relevant stakeholders (including European/national funded project consortia, and NGOs (non-governmental organisations)) to which the recommendation was addressed.

The feedback received from stakeholders reflected challenges based on experience as well as further guidance needs for the implementation of the framework. This includes specific guidance for the definition of the SSbD system in which the framework is applied and for the integration of the safety and sustainability assessment and the functionality in the innovation process.

Based on the experience gained since the publication of the framework and thanks to the feedback received in the 1st reporting phase established in the EC Recommendation, the JRC has published on the 14th of May 2024 the 1st SSbD methodological guidance [3] with the aim of providing support to SSbD practitioners.

3. Acknowledgements

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4. References

[1] Caldeira, C. et al (2022). Safe and Sustainable chemicals by design chemicals and materials - Framework for the definition of criteria and evaluation procedure for chemicals and materials. Publications Office of the European Union, Luxembourg, <https://doi.org/http://dx.doi.org/10.2760/487955>

[2] EC. (2022). Commission recommendation of 8.12.2022 establishing a European assessment framework for 'safe and sustainable by design' chemicals and materials. Brussels, 8.12.2022 C(2022) 8854 final

[3] European Commission, Joint Research Centre, Abbate, E., Garmendia Aguirre, I., Bracalente, G. et al., *Safe and sustainable by design chemicals and materials – Methodological guidance*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2760/28450>