

Session 2 speaker:

SSbD Tools and Use Cases – current status and plans

Tomas Rydberg, PhD, Senior Researcher, Swedish Environmental Research Institute, Sweden.

Short abstract

Safe and Sustainable by Design, SSbD, has been launched within the Chemicals strategy for sustainability, CSS, (EC, 2020) and aims to integrate safety and sustainability considerations and criteria including circularity and socio-economic feasibility already in the functional design phase of chemicals and materials.

Two commonly applied families of methods are risk assessment (RA) and life cycle assessment (LCA), where the RA addresses the safety aspects whereas the LCA addresses the environmental sustainability with the related concepts Social LCA and Life cycle costing (LCC) are aimed at covering the social and economic pillars. One challenge of the SSbD approach is therefore to combine RA and LCA concepts, elements and operationalization into one common framework.

During 2022-23, JRC has developed a first version of such a framework including initial illustrative case studies to test selected tools, which was presented in February 2023. Experience of applying the suggested SSbD framework is so far limited. Various EU projects (e.g. PARC, IRISS) and national initiatives (e.g. Mistra SafeChem in Sweden) are in the process of advancing and/or evaluating tools for SSbD for a range of use cases. The presentation will briefly overview and look into SSbD tools and selected examples, as well as discuss prospects and challenges ahead.