

## 86<sup>th</sup> LCA Discussion Forum

### Safe- and Sustainable-by-Design

25 April 2024, ETH Zentrum Campus, GEP Pavillion

We cordially invite you to the **86<sup>th</sup> Discussion Forum on Life Cycle Assessment**  
Presentations will be held in English

Safe- and Sustainable-by-Design (SSbD) is a new framework developed by the Joint Research Centre of the European Commission (EC-JRC) that aims to transform the way how the European chemical industry is developing new chemicals and materials by taking into account both safety and sustainability aspects.

SSbD facilitates a comprehensive assessment as it offers the opportunity to simultaneously address and assess safety aspects along with the planetary boundary framework (LCA and sustainability). To make this reality, the communities of risk assessors (hazard and exposure assessment) and LCA have to intensely collaborate, in particular when dealing with early-stage assessments.

During the day, we will combine practical and conceptual presentations, and give you enough time for discussion with the various presenters.

The day starts with an overview of the SSbD concept where the fundamentals and the strategy are introduced along with its operationalisation. The next section focuses on the integration of safety issues covering hazard and risk assessments together with the models/descriptors that facilitate such an assessment. Sustainability considerations are addressed in the third part, followed by practical examples, showcasing SSbD applications together with a panel discussion on these first experiences in the application of the concept.

The forum overall provides participants an in-depth understanding of SSbD and what the role of LCA is, enabling meaningful discussions and fostering further development.

We look forward to meeting you in Zürich

Akshat Sudheshwar, Bernd Nowack, Claudia Som, Joanke van Dijk, Merve Tunali, Roland Hischier  
Empa, St. Gallen

## Programme (as of March 28, 2024)

	Time		Speaker [Chair]
	08:30	Registration, coffee & croissants	
	08:50	Welcome and introduction into day	Roland Hischier (Empa)
	<b>Setting the Scene</b>		[Akshat Sudheshwar]
01	09:00	Safe and sustainable by Design – the JRC framework: updates on ongoing activities and next steps	Giulio Bracalente (EC-JRC)
02	09:20	Safety & sustainability of chemicals and materials: where do we stand?	Michel Wildi (Bafu)
03	09:40	SSbD: a paradigm shift for chemicals and materials development	Cyrille Durand (TEMAS Solutions)
04	10:00	Operationalisation of SSbD – the PARC Toolbox	Bernd Nowack (Empa)
	10:20	Discussion	
	10:45	Coffee break	
	<b>Integrating Safety Issues into SSbD</b>		[Joanke van Dijk]
05	11:15	Early-stage hazard assessment - What do we have and what should we aim for?	Katrin Fenner (EAWAG)
06	11:35	USEtox as linking element between Safety & Sustainability	Peter Fantke (DTU)
07	11:55	Safety assessment using sector specific 'Use maps'	Shufan Keetlaer-Qi (CEPE)
	12:15	Discussion	
	12:40	Lunch	
	<b>Short presentations</b>		[Merve Tunali]
S1	13:30	Short presentations of 10' per presentation : - Optionality and systems thinking in SSbD with prospective LCA - Deepening the Paradigm Shift: Revisiting the Integration of LCA and Chemical Process Design for Sustainability - Decision Supports Systems for Safe and Sustainable Innovation	T. Arblaster (CML)
S2			B. Häussling Löwgren (CML)
S3			C.F. Blanco Rocha (TNO)
	<b>Integrating Sustainability Issues into SSbD</b>		[Merve Tunali]
08	14:00	LCA's alchemy challenge: assessing chemicals that do not exist	Andre Bardow (ETH)
09	14:20	Social LCA evolution – Its uptake in Sustainability Assessment Approaches	Sonia Valdivia (WRF)
10	14:40	Multi-Criteria Decision Analysis in SSbD assessments: requirements and recommendations	Martin Scheringer (ETH)
	15:00	Discussion	
	15:15	Coffee break	
	<b>Case Studies</b>		[Bernd Nowack]
11	15:45	First application examples and first learnings (15 min each) - Assessing the suitability of tools for SSbD to guide early innovation: a case-study for BPA and alternatives - Prospective LCA modelling for chemically produced fragrances - Safe and Sustainable Chemistry by Design: selected case insights from the Mistra SafeChem research programme Panel discussion with presenters of case studies (30 min)	Joanke van Dijk (Empa);
12			Ulla Letinois (dsm-firmenich);
13			Jutta Hildenbrand (RISE)
	<b>Synthesis and Conclusion</b>		[Roland Hischier]
14	17:00	<b>Co-creation Session for SSbD Roadmaps</b> Roadmaps developed by the European Project "IRISS" to facilitate SSbD will be briefly presented. A co-creation session will follow during which the participants reflect on the day and contribute ideas to bridge research, skills and education, and knowledge sharing needs within the SSbD roadmaps.	Akshat Sudheshwar (Empa)
	17:20	Synthesis and conclusions of the day	Roland Hischier (Empa)
	17:30	<b>Farewell</b>	

## Practical information

Registration open until **April 22, 2024**.

Please use the following link:

<https://ethzurich.eventsair.com/lca2024/registration/Site/Register>

To register you need to create a profile, which is done in very few steps and is self-explanatory. In case you are not able to pay by credit card, please send an e-mail to:

[lcaforum@ethz.ch](mailto:lcaforum@ethz.ch) with a short notice that you want to receive an invoice instead. Please provide the full invoice address as well as the chosen fee type.

Also for any further questions about the registration process, please do not hesitate to contact: [lcaforum@ethz.ch](mailto:lcaforum@ethz.ch)

## Covid-19

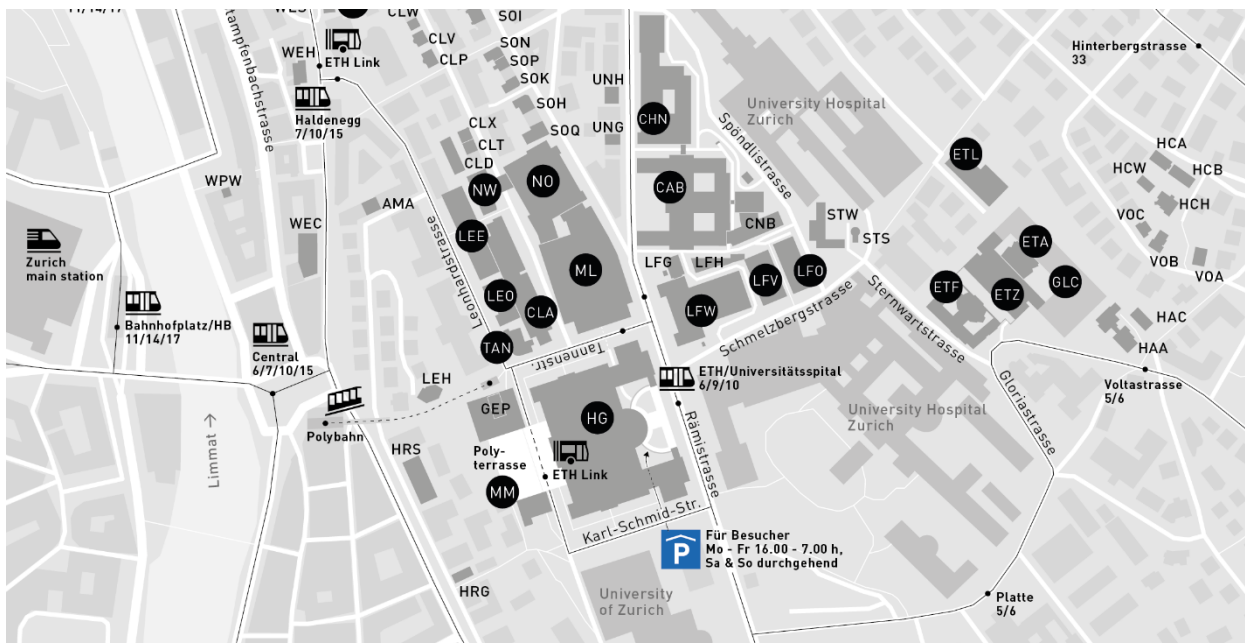
There are currently no restrictions or measures.

## Lunch

Lunch will be served close to the location. A vegetarian meal option is always on offer.

## Location

The DF will take place in the **GEP Pavillion**, at Campus ETH Zentrum, ETH Zurich, Rämistrasse 101, 8092 Zurich (see map below). From the main train station, cross the river Limmat and use the "Polybahn" cable car.



For further information, please contact Barbara Dold: [lcaforum@ethz.ch](mailto:lcaforum@ethz.ch)