Société Chimique de France

ISGC 2025

A session on Sustainable Chemistry

A discussion about « Transition Pathway for the Chemical Industry »

(May 13, 2025)

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ISGC 2025, La Rochelle, May 12-16, 2025

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Introduction :

Michel Philippe

Sustainable Chemistry and Industrial Chemistry Divisions-Société Chimique de France

Transition Pathway for chemical Industry and actions in progress

Roberto Rinaldi

(European Commission, DG Grow)

Industrial and Academic feedbacks

- **Fabien Deswarte (L'Oréal)**
- **Ismahane Remonnay (Veolia)**
- **Olivier Teillac (BASF)**
- **François Jérome (CNRS-Chimie)**

Audience Discussion

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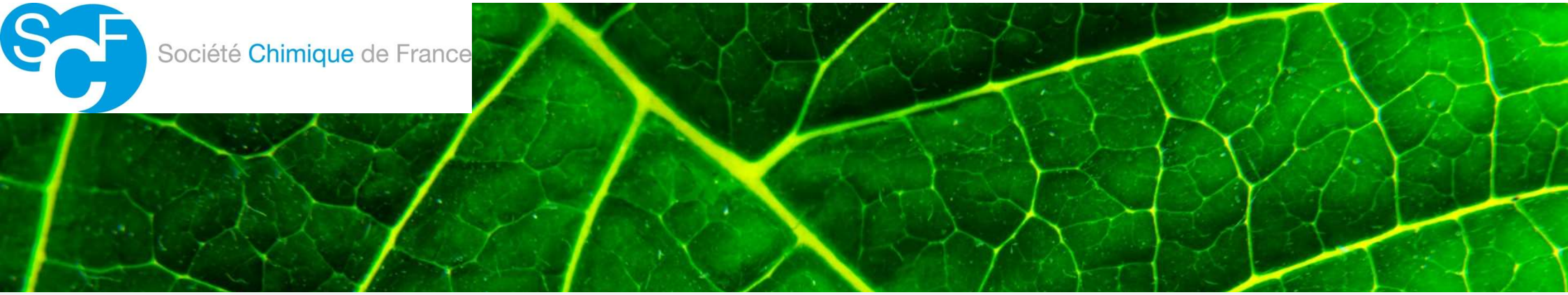
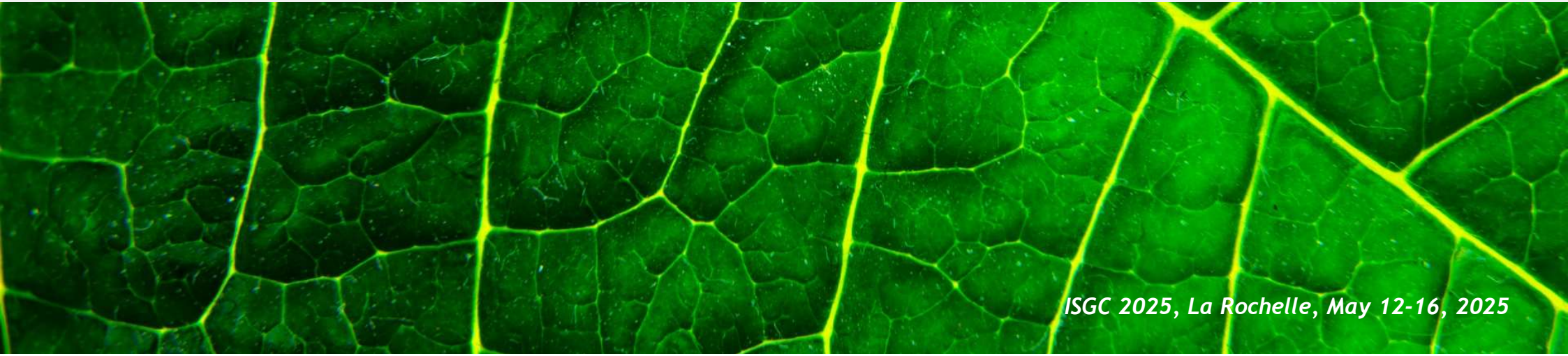


WHY TRANSITION PATHWAY FOR CHEMISTRY AN URGENT MATTER?



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Principles of the UN Global Compact

(derived from the Rio Declaration on Environment and Development to guide countries in future sustainable development)

On the Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility;
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

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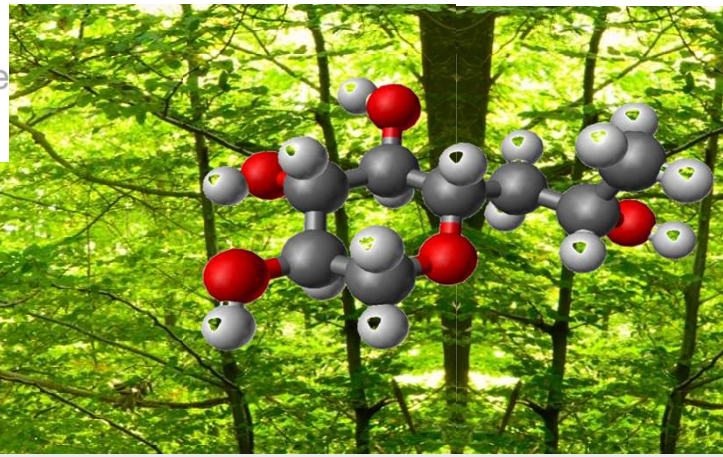

Importance of *Eco-design* through *Green Chemistry* (12 Principles, 1998) for *sustainable* chemical products with the strategic help and innovation of academic teams

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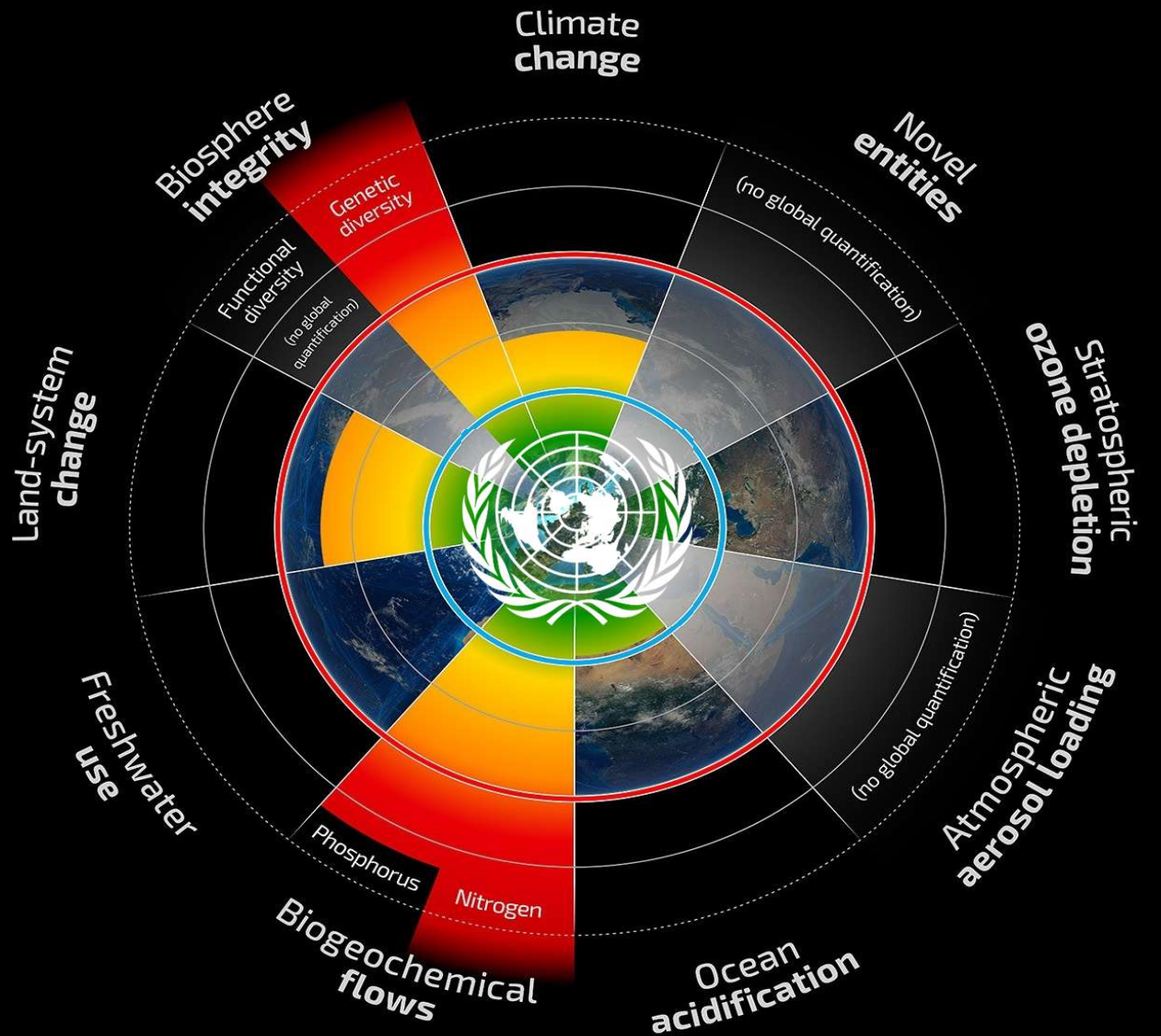
PLANETARY BOUNDARIES

Rockström and al. Planetary boundaries : exploring the safe operating space for humanity.
Ecology and Society 2009 14(2): 32.
http://www.ecologyandsociety.org/vol14/iss2/art32/

(Credit: Azote for Stockholm Resilience Centre, based on Rockström et al., 2009)



Sustainable Development Goals: an urgent call for action by all countries

(adopted by all United Nations Member States in 2015)[2]

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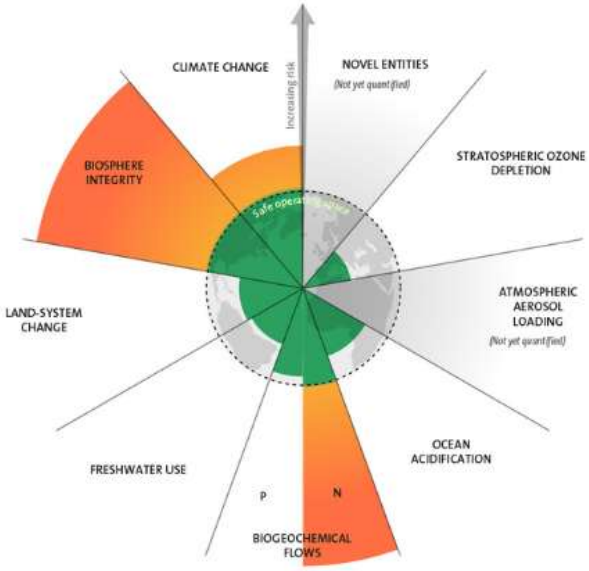
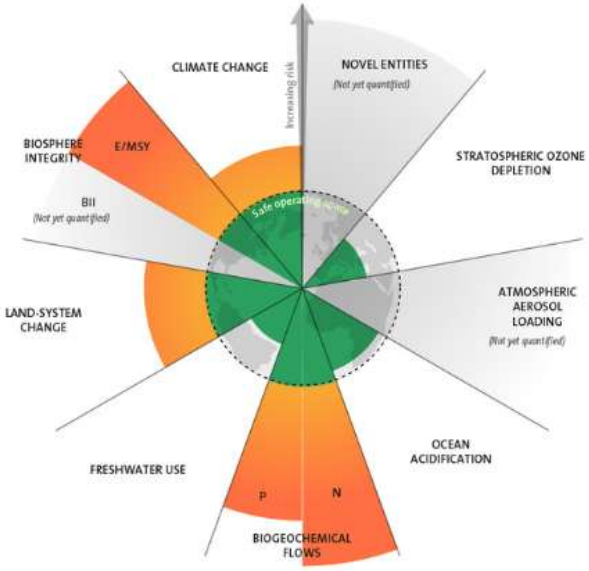
2009



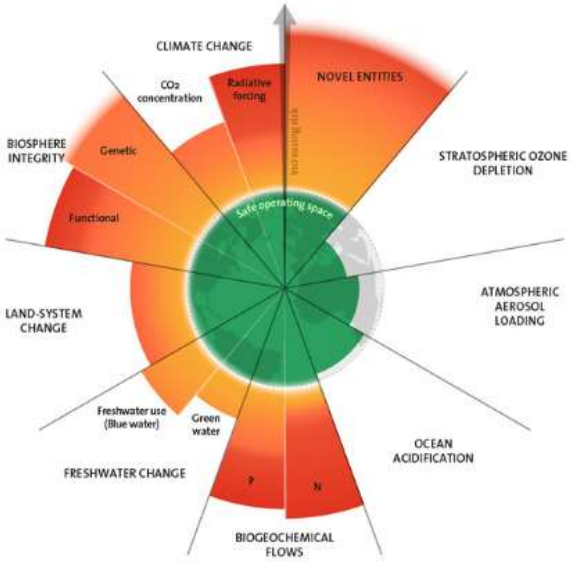
7 boundaries assessed,
3 crossed

2015



7 boundaries assessed,
4 crossed

2023



9 boundaries assessed,
6 crossed

The evolution of the planetary boundaries framework.

Main objective: Reducing Impacts

- REDUCTION OF AIR-SOIL-WATER TOXICITY OF PRODUCTS AND WASTES
- REDUCTION OF GREENHOUSE GAS EMISSIONS
- WATER PRESERVATION
- REDUCING THE IMPACT OF AGRICULTURAL PRACTICES

WITH RECYCLABILITY/RECYCLING TO ANTICIPATE

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Luxembourg: Publications Office of the European Union, 2022 © European Union, 2022

STRATEGIC RESEARCH AND INNOVATION PLAN for SAFE and SUSTAINABLE CHEMICALS and MATERIALS (SRIP)

Figure 1: The life-cycle approach of the Strategic Research and Innovation Plan (SRIP)

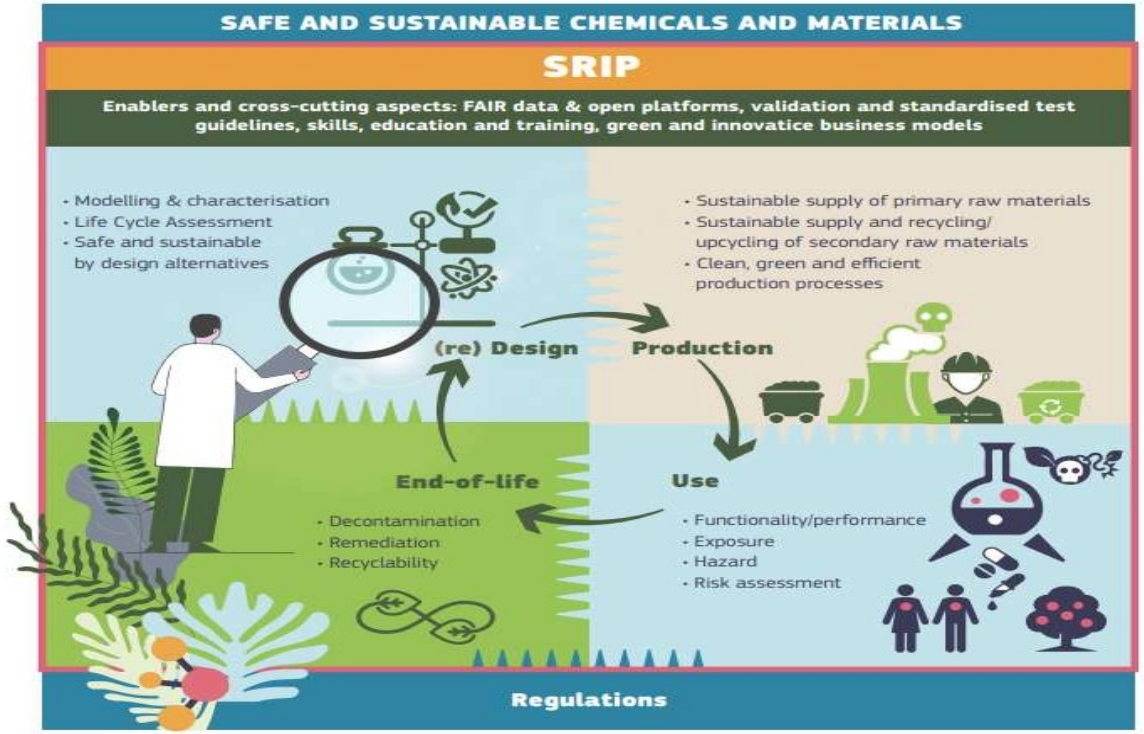
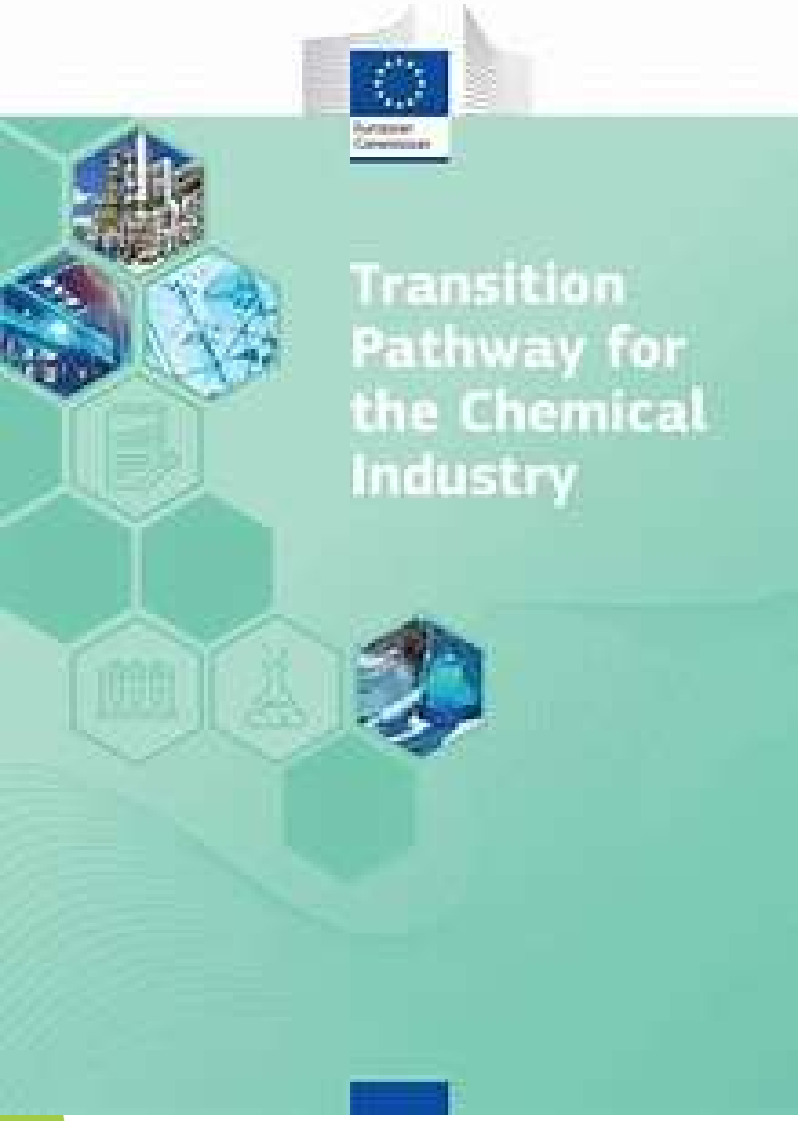


***Figure 1**: The life-cycle approach of the Strategic Research and Innovation Plan (SRIP). The Plan focuses on enabling and crosscutting aspects and R&I needs in line with life cycle stages of chemicals and materials. As chemicals and materials are used in many different sectors and consumer goods the identified R&I areas can also contribute to increasing the overall sustainability of these value chains and products.*



In the spring of 2022, the Commission launched the ‘co-development’ process for the transition pathway for the European chemical industry, along with EU Member States, the chemical industry itself, social partners, NGOs and academia.

The outcome of this process is a group of topics and actions to be implemented by each of the involved actors. These most relevant ones are presented as a roadmap

Reminder of the SCF achieved Actions following the publication of the TPCI Document in 2023

- MEETING TPCI 14/06/2024 (Maison de la Chimie, Paris)
  - With presentation of the Document TPCI by K. Schreiber, Director at DG Grow
  - Examples of transition pathways given by
    - ✓ Academic Research: CNRS, MESR,IFPEN
    - ✓ NGO: OECD
    - ✓ industrial Research: BASF, GBE, L'Oréal, SEPPIC, Stéarineries Dubois, Pennakem, Veolia
  - And discussion with all the stakeholders

- ARTICLE REPORT MEETING TPCI OF 14/06/2024

  - published in « L'ACTUALITE CHIMIQUE N°500 -JAN. 2025 (coord. J.Barrault/M.Philippe)

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Reminder of the SCF achieved Actions following the publication of the TPCI Document in 2023

- INTERVIEW J. BARRAULT/M. PHILIPPE (SCF)
  - published in INFOCHIMIE Magazine N°587-Nov. 2024

  "…The French Chemical Society places particular emphasis on the Eco-design that it wishes to encourage, in academic and industrial research, from the conception of a product…"

- THE ROADMAP FOR TPCI : R. RINALDI/A. DUME (E.C., DG Grow)
  - L'ACTUALITE CHIMIQUE N°501- Feb. 2025

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THE MAIN OBJECTIVES OF THE SESSION

- Reminder of the TPCI roadmap of the European Commission and actions in progress
- Academic and industrial investigations
- Stakeholders discussion with audience

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