



CEFICSUSTAINABILITY
PROGRESS UPDATE

SPEEDING UP THE TRANSITION TO A SUSTAINABLE FUTURE

The pathway to sustainability is a journey, one that requires the chemical industry to continuously upgrade to improved processes, materials, and products.

In 2016 and 2018 we were steering our initiatives – <u>Cefic's Sustainability Charter</u> and the Chemical Sector SDG roadmap – towards the United Nations Sustainable Development Goals and the Paris Agreement.

Since 2021 we have been placing a lot of emphasis on measuring the sustainability performance of the sector and understanding new concepts such as Safe and Sustainable-by-Design.

In 2022, we continued on this pathway and focused on the development of tools & instruments, supporting the green and digital transition as outlined in the Green Deal Communication by the European Commission.

How did we concretely contribute?

- We have concluded a list of Sustainable Development Indicators (SDIs) that will be used to report and discuss the European chemical industry's progress towards the SDGs and the Green Deal objectives.
- We have proposed guiding design principles for a selected set of safety and sustainability dimensions at the level of product-application and increased our engagement with partners and stakeholders active in developing assessment tools and generating datasets.
- We are developing a long-term holistic vision for sustainable carbon cycles.
- We continued the dialogue and outreach capacity with relevant stakeholders.



MEASURING THE TRANSITION



GHG EMISSIONS



"Our industry realised disruptive decreases in GHG

emissions
in the past and will do
so in the future."



HAZARDOUS AND NON-HAZARDOUS WASTE



"Waste is a resource for the chemical sector:

over 50% of waste - equal to 4.4 million tons -

was recovered



ALTERNATIVE FEEDSTOCK



"The industry diversifies its feedstock, e.g. bio-based

chemical turnover has increased by over 30% since 2009"



OPERATIONAL SAFETY



"20% decrease in non-fatal accidents

rate at work in 2018 compared to 2010"

ENERGY EFFICIENCY



"Production almost doubled with

24% less energy consumption

since 1990"





"Emissions

of the air pollutants NOx, SOx & non methane VOCs **have fallen**

by over resp. 27%, 50% and 36% since 2009"



RESEARCH AND INNOVATION

"The European chemical sector is the second largest chemical R&I investor in the world which **invested 9.4 billion euros** in 2020 for further improvement"

^{*} Footnote infographic:

¹⁾ Energy efficiency in 2019 compared to 1990

²⁾ alternative feedstock in 2018 compared to 2009

³⁾ emissions of air pollutants in 2019 compared to 2009

Just walking the path to a sustainable future is not enough, being able to show progress is an absolute necessity. In 2020 we started to explore the development of Sustainable Development Indicators (SDIs) for the chemical industry, to reflect the performance of the sector regarding the transition towards a safe, resource-efficient and circular economy within a climate-neutral Europe. Come 2022, we are ready to launch a comprehensive set of SDIs.

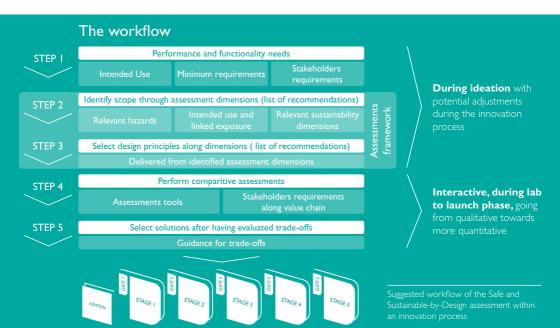
The set of SDIs is aligned with the increased policy efforts to map the performance of the industry in relation to the goals of the EU Green Deal. Goals which are reflected in the development of an indicator framework under the Chemicals Strategy for Sustainability and European Sustainability Reporting Standards as delegated acts under the Corporate Sustainability Directive.

The first batch of SDIs offers a thorough coverage of sustainability themes including greenhouse gas emissions, energy consumption and efficiency, preventing and minimising waste within the sector, use of alternative feedstock, emissions to the environment and operational safety.

Next steps include developing baselines for the remaining indicators, and a learning network where experiences with among others the forthcoming Corporate Sustainability Reporting Directive (CSRD) reporting can be shared.

An example of such a learning network activity was the organisation of a <u>workshop</u> on <u>Biodiversity</u> sharing best practices and available tools to incorporate biodiversity into daily management.

4 ENHANCING INNOVATION TOWARDS SAFER AND MORE SUSTAINABLE CHEMICALS



In 2021, the chemical industry defined Safe and Sustainable-by-Design (SSbD) as "an iterative process guiding innovation and the placement on the market of chemicals, materials, products, processes and services that are safe, and deliver environmental, societal, and/or economic value through their applications". Because designing towards safe and sustainable chemicals, materials and processes should be an integral part of the innovation process, a stepwise approach for its integration was further elaborated. In particular, design principles have been formulated for a suite of safe and sustainable dimensions. This work has been our input to the ongoing work at the European Commission on the same topic.

HOLISTIC VISION ON SUSTAINABLE CARBON CYCLES

The concepts of circular carbon and sustainable carbon cycles are quite recent. The discovery of the "plastic soup" in 1997 functioned as a wake-up call and led to the emergence of the concept of «closing the loop» for plastic waste. This concept was later extended to all carbon. Closing the carbon loop is now a central piece of the EU Green Deal.

However, another step has to be made; the step towards a planet-centric approach. Taking a planet-centric approach would ensure that the impact of the entire system is taken into account. When looking at the safe boundaries for greenhouse gas concentrations, it becomes clear that 'neutral' is not enough. The system must reach negative emissions or carbon removal. With these insights in mind, a holistic vision on sustainable carbon cycles is being elaborated, allowing the European chemical sector to dialogue more easily with interested stakeholders.



OUTREACH & DIALOGUE



In 2022, our <u>ChemistryCan newsletter</u> focused on the role of the chemical sector regarding digital health applications, showing the broad range of chemical applications. Chemistry will always have a role in medicine of the future, whether as targeted drugs or adhesives in foil technology to encase microchips or to create sensors and other devices. Digital medical innovations will give consumers choice. An interesting debate regarding the role of the chemical industry in the use of bio-based feedstock on the road to a carbon neutral and circular economy was presented in the ChemistryCan newsletter of June.

To promote the exchange of ideas and experiences regarding sustainable chemistry in Europe, all stakeholders are given the opportunity to join in the <u>Future Chemistry Network</u>. If you are not involved yet and you are interested, do not hesitate and sign up! Together we can further raise awareness and help promote stronger opportunities for sustainable chemistry in the EU.

WHAT IS NEXT?

In the coming year, the Cefic Sustainable Development Indicators as well as the indicators developed within the Chemicals Strategy for Sustainability (CSS), will be used to discuss the evolving trends and to identify challenges, opportunities and needs for further action.

There will also be an increased focus on guidelines and standards under development such as the Safe and Sustainable-by-Design

approach, Portfolio Sustainability Assessments (PSA), Circular Transition Indicators (CTI) and sector guidance for the Science Based Targets initiative. Data gaps for Life Cycle Assessment of chemicals will also be further identified. PSA and CTI are initiatives by the World Business Council for Sustainable Development (WBCSD) with whom Cefic is collaborating.

And we'll keep our doors open to exchange.

CONTACT

General enquiries Ann Dierckx Sustainability Director

Tel: +32 474 76 00 02 Email: adi@cefic.be

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