



Online Event: Safe and Sustainable-by-Design: a key tool to boost innovation and growth



Thursday 24 March 2022, 12:00 – 14:00 CET
Online Event

Hosted by MEP Maria Spyra (EPP)

Speakers

- **MEP Maria Spyra (EPP)**, Co-Chair of the European Parliament Intergroup on 'Climate Change, Biodiversity and Sustainable Development'
- **Jurgen Tiedje**, Head of E3 Unit on Industrial Transformation, DG Research & Innovation, European Commission
- **Dr. Annegret Vester**, Chief Sustainability Officer, CHT Germany
- **Anne-Sofie Bäckar**, Executive Director, ChemSec
- **Dr. Simon Cook**, Chemicals Management Advisor, Eurometaux
- **Dr. Xenia Trier**, Expert on Chemicals, Environment and Human Health, European Environment Agency (EEA)
- **Dr. Wibke Lölsberg**, Chair of the Cefic Network of Experts on Safe and Sustainable-by-Design
- **Tjisse Stelstra**, Rapporteur of the CoR opinion on "New Circular Economy Action Plan", Committee of the Regions

Welcome Remarks

MEP Maria Spyraiki

“It is necessary to realise that the concept of Sustainable and Safe-by-Design can be considered as a mobilising power driving innovation and leading the way to achieve the Sustainable Development Goals”.

Ms. MEP Spyraiki started her speech by underlining that the **transition towards safe and sustainable-by-design** (SSbD) must be **facilitated** to reward companies. A strong financial support is needed along with regulatory instruments. Moreover, **recycling** in the EU must become a **benchmark** worldwide. Ms. Spyraiki emphasised that **substances of concern** must be minimised, and it is necessary to **proceed** towards **sustainable chemicals**. Therefore, it is important to invest in **good business models**. The industry must adapt as smoothly as possible to the new standard. However, she addressed the fact that **specific risk assessments** with definitions still need to be developed. She highlighted that the chemical industry must go **beyond regulatory requirements** and all assessments must aim to achieve the **Green Deal objectives**. It is necessary to realise that the concept of SSbD can be considered as a **mobilising power** driving innovation and leading the way to achieve the **Sustainable Development Goals** (SDGs). Ms. Spyraiki concluded her welcome remarks by emphasising that all **stakeholders** need to be taken into consideration for an **inclusive and successful transition**.

Opening remarks

Jürgen Tiedje, Head of E3 Unit on Industrial Transformation, DG RTD, European Commission

“Sustainable-by-Design should steer innovation towards the green industrial transition”.

Mr. Tiedje started by setting the scene by explaining the **Chemicals Strategy** for sustainability, a part of the Green Deal. The key action for this involves **boosting the investment and innovative capacity** for SSbD chemicals throughout their life cycle. SSbD is an **approach to the design**, development, and use of chemicals and materials that focuses on providing a function

(or service) while **reducing harmful impacts on human health** and the environment. How chemicals and materials are used in products is part of the SSbD assessment when evaluating the use stage, although it will be challenging. SSbD should become a steering mechanism towards the **green industrial transition**. SSbD must help with finding substitutes for substances of concern, in line with and beyond upcoming regulatory obligations. Moreover, SSbD aims to minimise the impact on climate and the environment during all life cycle phases. Mr. Tiedje underlined that change will be enabled through **research** and **innovation**. He outlined the regulatory context, explaining the EU's several **related initiatives**. He emphasised that the chemical industry must be driven towards innovation. Mr. Tiedje presented a draft **framework** on how to possibly address SSbD, which for now **includes 4 - 5 steps** with criteria that should be assessed by the industry. The framework has been prepared by the Joint Research Centre which has been presented at an online workshop to stakeholders on 22 March. He concluded by outlining the timeline for the development of SSbD which started in March 2021; in May 2022, the **High-Level Roundtable** set up under the Chemicals Strategy for Sustainability will take place to engage with stakeholders regarding future implementation.

Presentation

Dr. Annegret Vester, Chief Sustainability Officer, CHT Germany

“At the moment the EU has one of the most comprehensive and secure regulatory frameworks for chemicals”.

Dr. Annegret Vester started by explaining that CHT is a global company working on sustainable product design serving different industries. For CHT to achieve sustainable product design, they need to understand the **market needs** of businesses and end-users. CHT has the **know-how to transfer chemistry** into an **application** and define **clear internal rules** for sustainable product development. She highlighted two projects of sustainable product design and development: the sustainable dyeing of cotton fibers and paper making. For sustainable dyeing, the CHT developed a process to **reduce water** and **energy** in textile dyeing processes. For papermaking, CHT developed a special **additive** for the **grinding process that** reduces the consumption of energy. At the moment the EU has one of the most **comprehensive** and **secure regulatory frameworks** for chemicals. She highlighted that all **processes** in the **entire**

value chain must be aligned while **sustainable solutions** are still expensive. She concluded with a question, which needs to be solved by politics, namely, how to **ensure** a **global approach** to tackle **sustainable product development** and save the environment.

Panel Discussion

Speakers that took part in the panel discussion:

- **Anne-Sofie Bäckar**, Executive Director, ChemSec
- **Dr. Simon Cook**, Chemicals Management Advisor, Eurometaux
- **Dr. Xenia Trier**, Expert on Chemicals, Environment and Human Health, European Environment Agency (EEA)
- **Dr. Wibke Lölsberg**, Chair of the Cefic Network of Experts on Safe and Sustainable-by-Design
- **Tjisse Stelpstra**, Rapporteur of the CoR opinion on “New Circular Economy Action Plan”, Committee of the Regions

Ms. Anne-Sofie Bäckar kicked off by outlining **5 concrete ideas** on the criteria for **moving towards sustainability**. The first idea was that chemicals of concern cannot be called SSbD. The second idea implies creating incentives for the industry. The third idea implies **establishing different levels** in the scheme to leave room for improvement. Differentiation between chemicals and materials is the fourth idea. Lastly, she suggested implementing **sustainability criteria**. It is necessary to put SSbD into practice, sooner rather than later.

Dr. Simon Cook began by stating that this is an **opportunity** for the EU to lead the way globally. SSbD can be a **growth engine** for the EU. He emphasised SSbD is seen as a guiding philosophy for gradual improvement. The **demand** for many metals is going to **increase** due to goals set in the Green Deal. Therefore, it is necessary to have a **life cycle approach** to keep the bigger picture in mind and to understand **interdependencies** between different metals.

Dr. Xenia Trier underlined that studies have shown that **many hazardous chemicals** are being used. There are **two challenges** that need to be addressed. The first challenge is **pollution**, which in many cases are too difficult or costly to remediate after it has happened. Therefore,

the **polluter pays principle** does not apply well here. A **shift** is needed towards the **prevention of pollution**, as called for in the EC 2020 Chemical Strategy for Sustainability (CSS). The second challenge involves various **global environmental pressures** which must be addressed simultaneously.

Dr. Wibke Lölsberg emphasised Research and Development (R&D) is about **generating knowledge** and **developing solutions** to improve societal wellbeing. **R&D steering is essential** to keep up the success of companies in the market. The **essence** is to be **sustainable along the whole life cycle**. Information becomes available through development processes. So, it is necessary to **build on the processes** that are in place today. She underlined that a **common understanding** of how to assess SSbD must be **clarified**. At the same time, SSbD must enable and support creativity to ensure front-running innovation in Europe.

Mr. Tjisse Stelpstra highlighted that SSbD is **crucial** from a **multi-level governance perspective**. The Committee of the Regions (CoR) welcomed the Commission's **initiative** on SSbD. The CoR noted that the mere **control of toxic components** is not enough. Mr. Tjisse Stelpstra highlighted instead how **complete transparency** of components is needed to **recycle** and **upcycle** components in a proper way. The manufacturing process is linked to the process design and development, so **sustainable production** will play a role in **reducing** the **negative impacts** on society. The aim is for people to live in a **healthy** and **safe** environment.

Continuing the panel discussion, Ms. Bäckar highlighted that SSbD must **create incentives for companies** to move in the right direction. Such criteria should thus be linked to **certification schemes with three levels**. This approach will **drive the market towards inherently safe chemicals**. In short, the SSbD criteria can be the engine to move the economy towards a sustainable society.

For Dr. Cook, **SSbD** is at heart **an innovation approach**, for which **favourable conditions** need to be created so that the goals of the Green Deal can be reached. **Barriers to innovation** can be both **economic** and **regulatory**. A **third obstacle** is an untrusting environment for innovation. Regarding the concept of **SSbD** itself, the wider societal objectives must be taken

into account in defining what 'hazardous' means. This requires a **pragmatic approach** which **avoids regrettable substitutions**.

Dr. Trier followed up by stating that **SSbD goes beyond current practices** because it avoids the use of both chemicals known or suspected to be harmful. Furthermore, to balance **multiple environmental protection goals across chemical and product life-cycles**, an **interdisciplinary approach** should create an innovative environment. Regarding **global benchmarks**, the key is to make them implementable across industries. Strong **political and economic incentives** must be a final element in the EU's approach if it hopes to **push the global market forward**.

Dr. Lölsberg mentioned that both safety and sustainability are **multi-parameter concepts**. This means precise **criteria** need to be developed. A **joint understanding** of how safety and sustainability are being defined and assessed will increase transparency and comparability between chemical products. This allows **downstream manufacturers and consumers** to practice **informed decision-making**. The Commission must promote a **commonly agreed framework** that is as detailed as needed and as pragmatic as possible.

Mr. Stelpstra added that **horizontal and vertical cooperation** is imperative to link the objectives of the Chemical Strategy with the Green recovery. Such actions have to be backed by fully involved **local and regional communities**. The EU should **regulate chemical substances** based on their intrinsic harmful properties, even in the case of scientific uncertainty. **Exposure risks and wider societal benefits** must also be taken into account.

In the last part of the panel discussion, the speakers give their **key takeaways** from the exchange. Ms. Bäckar said that one of the goals of the Chemical Strategy is that **new chemicals and materials are inherently SSbD**, while it is fundamental that chemicals of concern are not viewed as such. This discussion has convinced her even more that **SSbD criteria must be linked with a certification scheme**, as only a R&D toolbox is insufficient to transform the industry. **Additional incentives** may be required as well.

Dr. Cook mentioned that **Eurometaux fully supports an SSbD approach**. He observed that

barriers must still be addressed to allow a wave of innovation to happen. A **paradox** was also pointed out: substances are often hazardous because they are reactive, but this reactivity is also the reason they are used by industry in the first place. A **pragmatic approach** is vital, in particular of substances without a close next best alternative.

Dr. Trier followed up by analysing that **something different has to be done**, as the current legislation on chemicals is unable to deal effectively with the hundreds of thousands of chemicals and multiple environmental crisis. Reacting to Dr. Cook, she supported the ECs Chemicals Strategy for Sustainability's call to use a **hazard-based approach** for the most harmful substances and substances of concern, as it would be very costly and complex to implement risk assessment procedures for every substance. An **opportunity** exists for Europe's talented academics and professionals, who need an **enabling environment** through the alignment of environmental and industrial policies to prosper.

Dr. Lölsberg echoed that **actors throughout many value chains** using chemical products must be engaged. Only focusing on R&D would be insufficient as new products need to be taken up by the market, making **other instruments** necessary. Since R&D is an iterative process, a **comparative assessment** to the incumbent solution must be considered. **Pilots** must be run to know if and how such schemes work in practice.

Mr. Stelpstra concluded that **multi-level cooperation** in this policy area must be ensured. This should entail **collaboration and knowledge exchanges**. Regarding Mr. Tiedje's presentation on the SSbD workflow, step 5 on an **economic and social assessment** seems to be a crucial element that needs to be retained.

Q&A Session

The Q&A session started with Mr. Tiedje, who underlined the importance of **alignment between different stakeholders**. It was emphasised that the European chemical industry could be the **first global mover** on SSbD but would need an appropriate framework to reach

this objective. Mr. Tiedje also said that **hazardous byproducts** might be tackled in step 3 'exposure risks' of the SSbD workflow.

Replying to a question on **monitoring the global value chain**, Dr. Vester said that all the actions of CHT have a global scope, as they have customers worldwide and are active as separate entities in 23 countries. She considers a **life cycle approach** as the best possible path forward, working together with all partners from the value chain.

Dr. Trier articulated that **pilot cases** can be useful to assess the relevance of **worldwide certification schemes**. Technical support centres can help produce documentation of compliance. Existing **international standardisation bodies** do exist, such as ISO. Individual countries have a key role in developing such infrastructures.

Coming back to Mr. Tiedje, it was said that **Europe first must determine what it wants** before taking this discussion formally to the international level. **Moving forward step by step** while first establishing the general framework and defining key concepts are the **priority**. Dr. Trier commented that assessment tools must be complemented with **compliance verification tools** to examine if claims are true, also for imported products.

Next, Ms. Bäckar responded to a question on the **SSbD criteria** by stating that a **lack of data on chemicals'** carbon emissions, energy use and waste is problematic and must be filled gradually. Additionally, **certification schemes** must be used to ensure they are not just a checklist. Mr. Tiedje remarked that **the data issue is massive**, as chemicals and materials have been an underdeveloped part of the **EU's Digital Decade**. It was also mentioned that the 5 step SSbD workflow is a framework for developing criteria, not a checklist. Dr. Trier observed that assessing hazards through modelling may be a long-term solution; in the short-term, a **pragmatic approach is necessary** to speed up the transition towards SSbD.

Closing Remarks

MEP Maria Spyra

“With this discussion, the scope of our exchange of views has been addressed, which is how safe and sustainable chemicals by design can be a tool for sustainable growth”.

MEP Spyra finished the event by sharing her **key takeaways**. First, **the scope of the exchange** was addressed, as SSbD has been framed as a key tool for sustainable growth. The importance for the European chemical industry to become **frontrunners** has also been underlined. Actions need to be sped up. **Sufficient funding** is paramount in this regard, which must be managed adequately in order to reach commercially viable innovative products. It has been made clear that an **ambitious and implementable legal framework for SSbD** is imperative. To accomplish this, the **data issue** must be improved using all available instruments. MEP Spyra concluded that safe and sustainable chemicals are to be put at the core of discussions with stakeholders abroad to tackle the issue of a **global level playing field**.