Summer School on Sustainable Chemistry for Sustainable Development – And Agriculture

From **12 to 16 July 2021 the 7th S3C Summer School on Sustainable Chemistry for Sustainable Development** took place in a virtual format again due to the ongoing COVID-19 pandemic.

In **16 lectures and 3 workshops** boundaries, challenges and opportunities of implementing sustainable approaches, methods and regulations for a sustainable use of chemicals in general and in the field of agriculture were elaborated as well as insights given into the current European sustainability strategy and the UNEP's Green and Sustainable Chemistry Manuals. Furthermore, education in sustainable chemistry as an integral part of a future sustainable development was also part of the Summer School. The unique study programmes **M.Sc. Sustainable Chemistry** and **MBA Sustainable Chemistry Management** were presented.

18 experts from renowned Universities, public authorities and institutes contributed again to this Summer School by sharing their knowledge in this field. In three workshops the participants learned more about a systems-thinking approach in sustainable chemistry and agriculture. In one workshop they worked in groups to design and develop a Systems-Oriented Concept Map Extension (SOCME) for a specific example of agriculture, in another they dealt with the question whether smart, integrated approaches can actually provide solutions to add more value to agricultural value chains and make them more resource and energy efficient and carbon neutral. In the third workshop central concepts related to sustainable agribusiness and the application of waste-to-food approaches were elaborated with emphasis on the optimisation of production and consumption, development of novel preservation technologies enabling the storage of nutrients in food biomass in a multiyear scale, the role of artificial intelligence as well as related ethical aspects.

The participants highly rated the insights into Sustainable Chemistry and new systems thinking for a change of economics in the chemical industry and the food system. Especially practical tips as sources of data and software tools and new business models such as chemical leasing were very much approved.

The next Summer School on Sustainable Chemistry for Sustainable Development will take place in **July 2022** with the focus topic **"Sustainable Chemistry Within a Hydrogen Economy-Opportunities, Prerequisites and Pitfalls".** Depending on the situation by then, it will either take place virtually or on-site again. Stay tuned here!

Some feedback from our participants:

"I became even more conscious about the world's systemic workings and about how everything is interconnected, we cannot afford more structural schisms if we would like to solve some of the global problems at hand (preferably fast)"

"System Thinking though a complex web of understanding is something that is my takeaway from this summer school. I would like to implement it to understand and aware people of the concepts of sustainability in their day to day life."

"I gained new insights regarding sustainability not only in natural science but also social science
and the sustainability must be discussed comprehensively"

02/09/2021, Karen Kratschmer

About the ISC_3

The ISC_3 is an international centre promoting and developing sustainable chemistry solutions worldwide. It is a globally acting centre, a multi-stakeholder platform that engages with civil society, politics, and the private sector to contribute to international chemicals policies and the formation of a global network for collaboration, innovation, research, and education on Sustainable Chemistry. The centre was founded in 2017 on the initiative of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the German Environment Agency (UBA). The ISC_3 is anchored in the German GIZ (Gesellschaft für Internationale Zusammenarbeit) and has established a Research & Education Hub at Leuphana University, Lüneburg, and an Innovation Hub at DECHEMA e.V., Frankfurt.