



S³C
**2nd Summer School on Sustainable Chemistry
for Sustainable Development**

Value chains and the example of textiles

*12th September – 16th September 2016
at Leuphana University, Lüneburg*

BACKGROUND

Sustainable chemistry is a new approach on chemistry as a science as well as an important industrial sector. To our understanding, it encompasses all life stages of chemical products and materials taking into consideration their contribution to a more sustainable future (see Clark & Kümmeler 2015). Sustainable chemistry addresses the design, manufacture and use of efficient, effective, safe and more environmentally benign chemical products and processes. It embraces and connects several chemical and non-chemical disciplines.

The worldwide implementation of sustainable chemistry is a key to reduce unwanted environmental and health impacts of chemicals along their life cycle and to achieve sustainable production and consumption. Especially in emerging and developing countries, the need for environmentally sound management and substitution of hazardous chemicals is essential because the costs of exposure to harmful chemicals are often unrecognized or ignored for economic reasons. The Summer School on Sustainable Chemistry focuses on the newest developments of the concept of sustainable chemistry and chemicals management e.g. within the textile value chain.

OBJECTIVE

The 2nd Summer School on Sustainable Chemistry for Sustainable Development will provide the participants with an understanding of the newest theoretical and practical developments of Sustainable Chemistry. Beside that the international Summer School will treat the specific problems like wet processes in the textile production.

One main target of the summer school is to discuss the scope and benefit of sustainable chemistry in value chains and chemicals in products. The issue of sustainable production and consumption in international cooperation will be addressed to identify possible approaches and solutions to substitute hazardous chemicals. The exchange of experiences between the participants will be at the core of the discussion.

ORGANIZERS

The Summer School on Sustainable Chemistry for Sustainable Development is organized jointly by the Sector Program Rioplus of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the Federal Ministry for Economic Cooperation and Development (BMZ), the Partnership on Sustainable Textiles and the Institute of Sustainable and Environmental Chemistry of Leuphana University Lüneburg.

CONTENT

The program of the summer school includes a theoretical part (lectures), practical exercises to deepen important application aspects, group discussions and an excursion. The trainers' team consists of scientists and individuals who actively operate in the fields of sustainable chemistry and international cooperation. For the sessions of block 2 experts e.g. in the field of textile chemical management are invited. The lectures cover the following topics:

❖ **Block 1: Concept and approaches**

- Concept of green and sustainable chemistry and recent developments
- Reference instruments of intervention: national – European – international; BAT/BEP
- Practical implementation of sustainable chemicals management in the fields of international cooperation and development cooperation
- The role of the industry for sustainable chemistry

❖ **Block 2: Sustainable chemistry in value chains (parallel sessions)**

A) *Sustainable chemistry in the textile value chain – integrated environmental management*

- Standards and audit-instruments, checklists and training tools, green lists
- The role of the chemicals industry for substitution of hazardous chemicals
- Instruments of chemicals management and waste water treatment
- Optional: training for retailers on sustainable sourcing

B) *Sustainable chemistry in selected value chains of the chemicals industry*

- Existing approaches and best practices
- Public private partnerships
- Global initiatives (Responsible Care, Together for Sustainability)
- Challenges for the chemicals industry

Within the final practical exercise the participants will work individually on the development of an approach to solve current challenges with special regard to the cross-cutting nature of sustainable chemistry. An excursion to a textile producing company allows for insights into wet processes and best practices. At the market place (poster exhibition including information desks), textile standards and associations as well as representatives of the chemicals industry will present their activities in the field of sustainable chemistry.

TARGET GROUP and APPLICATION

The summer school is aimed at postgraduates and young professionals who deal with or are professionally interested in the topic of sustainable chemistry as a cross-cutting issue. Written application for the participation is required. Participants from developing countries may be eligible for reimbursement of traveling costs. They are highly welcome to send their *Curriculum Vitae* and a *letter of intent* for application to chem-wep@giz.de. For them experience in the field of international cooperation would be an asset. **Deadline for application is 8th August 2016**. Selected participants will be informed until 15th August 2016.

COSTS

The summer school is free of admission costs. Participants from developing countries can apply for assumption of travel and accommodation costs. GIZ will assure catering during the summer school. No per diems or daily allowances will be paid to the participants. Travel costs of participating GIZ employees should be covered by their projects.

For further information, please visit our [Global Chemicals and Waste Information Platform](#).

Provisional Agenda

**Sunday,
11 September 2016**

afternoon	Arrival of the participants
07:00pm	Informal get together (location to be announced – drinks and dinner on own expense)

**Monday,
12 September 2016**

8:30am – 09:00am	Registration (location: Hörsaal 5 of Leuphana University) <i>Welcome and Introduction</i>
9:00 am – 9:30am	Welcome by the hosting institutions Prof. Dr. Jörg Terhechte, Vice-President of the Leuphana University, and representative of BMZ (German Federal Ministry for Economic Cooperation and Development) (tbc) Prof. Dr. Klaus Kümmerer, Leuphana University Lüneburg Friedrich Barth & Helmut Krist, GIZ Ylann Schemm, Elsevier Foundation (tbc)
9:30am – 13:00am	Block 1A: Framing Sustainable Chemistry
9:30am – 10:30am	The concept of sustainable chemistry in a nutshell Prof. Dr. Klaus Kümmerer, Leuphana University Lüneburg
10:30am – 11:00am	<i>Coffee break</i>
11:00am – 11:30pm	The Strategic Approach to International Chemicals Management (SAICM) German Federal Ministry for Environment, Nuclear Safety and Construction, N.N. (tbc)
11:30pm – 12:00pm	The international conventions relevant for sustainable chemistry Frank Moser, BRS-Secretariat (tbc)
12:00pm -12:30pm	Activities of UNEP in the field of sustainable chemistry Kevin Munn, United Nations Environment Programme Chemicals and Waste Branch, DTIE (tbc)
12:30pm – 1:00pm	Outcomes from UNEA2 - The perspective of a developing country Dr. Sam Adu-Kumi, President of the COP-8 of the Stockholm Convention
1:00pm – 2:00pm	<i>Lunch Break</i>
2:00pm-2:30pm	Sustainable Chemistry: Strategies and Initiatives of the German Environment Agency

	Dr. Christopher Blum, UBA
2:30pm-3:00pm	Legal framework: REACH N.N.
3:00pm – 3:30pm	The International Sustainable Chemistry Collaborative Center (ISC³) N.N.
3:30pm-4:00pm	<i>Coffee break</i>
4:00pm – 5:30pm	Block 1B.1: Implementation and Tools
4:00pm – 4:30pm	Practical Exercise: Handling of Chemicals, Laboratory and Workshop Safety Institute of Sustainable and Environmental Chemistry. Leuphana University
4:30pm – 5:30pm	Practical Exercise: Round tour labs Leuphana University: Research, management and safety Institute of Sustainable and Environmental Chemistry. Leuphana University
5:30am – 6:00pm	Feedback round and organizational matters
6:30pm – 8:00pm	<i>Voluntary sightseeing walk in the Old City of Lüneburg (tbc)</i>
8:00pm	Welcome Dinner (<i>Brau- und Tafelhaus Mälzer, tbc</i>)

**Tuesday,
13 September 2016**

9:00am – 12:30pm	Block 1B.2: Implementation and Tools
9:00am – 9:30am	Chemical leasing as a new business model Petra Schwager, UNIDO (tbc)
9:30am – 10:30am	Contribution of the chemical industry to a sustainable chemistry N.N.
10:30am-11:00am	<i>Coffee break</i>
11:00-12:30	Achieving a circular economy in the chemical industry Sonja Jost, DeLexChem (tbc)
12:30am – 1:30pm	<i>Lunch</i>
1:30pm – 4:30pm	Block 1C: Practical implementation and business models
1:30pm – 2:00pm	Material cycles and substitution Kooperationsstelle Hamburg IFE GmbH, N.N. (tbc)
2:00pm – 2:30pm	Recycling of mercury

	Prof. Florian Schindler, Beuth Hochschule Berlin (tbc)
2:30pm – 3:30pm	Sources for Data and Software tools Useful for Sustainable Chemistry Prof. Dr. Klaus Kümmerer, Leuphana University
3:30 pm – 4:00pm	<i>Coffee break</i>
4:00pm – 4:30pm	The challenge of PFAs and their application in the textile value chain Dr. Roland Weber, POPs Environmental Consulting
4:30pm – 5:00pm	The use of sustainable chemistry for the toy industry Susanne Betz, German Association of the toy industry (tbc)
5:00pm – 5:45pm	General discussion: How it all is interlinked and Lessons Learned
5:45pm – 6:00pm	Feedback round and organizational matters

**Wednesday,
14 September 2016**

	EXCURSION on industrial application of sustainable chemistry (destination to be determined)
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**Thursday,
15 September 2016**

	Block 2A: SC in textile production	Block 2B: SC in chemical industry
8:30am – 8:45am	The Textile Partnership BMZ (tbc)	The Chemie³ - sustainability guidelines, check and indicators
8:45am – 9:15am	Sustainable chemistry in the textile value chain Helmut Krist, GIZ	Elena Schad, VCI-Chemie ³ (tbc)
9:15am – 11:00am	The PFC issue and it's solutions (panel discussion) <i>speakers N.N.</i>	The work of ICCA in the field of sustainable chemistry & EPR in the chemical industry: the Responsible Care initiative N.N.
11:00am – 11:30am	<i>Coffee break</i>	

11:30am – 12:00pm	Environmentally friendly produced dyestuffs and optical brightener Dr. Harald Schönberger	Experience report: practical industrial implementation of sustainable chemistry Evonik (tbc)
12:00pm – 1:30pm	How to introduce substitution of hazardous chemicals in the supply chain (panel discussion) <i>panelists N.N.</i>	Opportunities for sustainable chemistry in the value chains of the chemical industry - and how to get SME on board (panel discussion) <i>panelists N.N.</i>
1:30pm – 2:30pm	<i>Lunch</i>	
2:30pm – 5:30pm	Marketplace - Presentation of projects and initiatives <i>Presentations and exhibition/information booths of the textile industry, standard systems, sustainability initiatives and the chemical industry</i>	
4:00pm – 4:30pm	<i>Coffee break</i>	
5:30pm – 6:00pm	Feedback round and organizational matters	
8:00 pm	Goodbye dinner (tbc)	

**Friday,
16 September 2016**

	SC in textile production	SC in chemical industry
8:30am – 08:45am	Arrival of the participants	
08:45am – 09:30am	Capacity Development Jürgen Hannak, ZDHC (tbc)	Tools of development cooperation on improving producer responsibility GIZ (tbc)
09:30 – 10:15am	Practical Examples of sustainable chemistry in the textile industry and downstream Ulhas Nimkar, India	Experience report from a conducted public-private partnership in the field of sustainable chemicals management N.N.
10:15 – 11:00am		Together for Sustainability – a chemical industry initiative to establish supplier standards N.N.
11:00am – 11:30am	International reference framework N.N.	Where needs the chemical industry to improve – a NGO-perspective Alexandra Caterbow, WECF (tbc)

11:30am – 12:30pm	Concluding discussion on sustainable chemistry in the textile value chain	Concluding discussion on sustainable chemistry in the chemical industry
12:30pm – 1:30pm	<i>Lunch break</i>	
1:30pm – 3:00pm	Joint wrap-up	
3:00pm	Departure of Participants	

Provisional schedule

Time*/Date	Sun, 11/09/2016	Mon, 12/09/2016	Tue, 13/09/2016	Wed, 14/09/2016	Thu, 15/09/2016	Fri, 16/09/2016
approx. 08:30am - 12:30pm (incl. 30 minutes coffee break)		I. Registration II. Welcome and Introduction <i>Hörsaal 5</i>	Block 1B.2 <i>Hörsaal 5</i>	excursion (incl. small lunch)	Block 2A.1	Block 2A.2&B.2 <i>parallel sessions</i>
		Block 1A <i>Hörsaal 5</i>			Block 2B.1 <i>parallel sessions</i>	Concluding discussions
approx. 12:30pm - 01:30pm		lunch break <i>university canteen</i>			lunch break <i>university canteen</i>	
approx. 01:30pm – 06:00pm (incl. 30 minutes coffee break)	arrival & check-in	Block 1A/B.1 <i>Hörsaal 5/lab</i>	Block 1C <i>Hörsaal 5</i>	excursion	market place <i>Presentation of projects and initiatives</i>	joint wrap-up
						Departure
after 06:00pm	informal get together	Welcome Dinner	free time		Goodbye Dinner (tbc)	

*For details of timing, location and content, please consult the agenda and the section “further information”