

Annual Report 2017 - 2018

A successful start into a new era of sustainable chemistry

First Year of the International Sustainable Chemistry Collaborative Centre (ISC₃)

First Year of the International Sustainable Chemistry Collaborative Centre (ISC₃)

The International Sustainable Chemistry Collaborative Centre (ISC₃) is a new independent, international institution promoting and developing sustainable chemistry solutions worldwide. Sustainable chemistry is the single largest opportunity to transform the chemicals sector. It has the potential to move entire supply chains towards circular economy models, avoiding waste, hazardous chemicals, and making better use of natural resources. The ISC₃ aims at establishing sustainable chemistry as a holistic approach to chemistry that promotes the use of environmentally and socially sustainable alternatives. Delivered at scale, this approach will create a wealth of new business opportunities and new jobs, and significantly contribute towards achieving the UN Sustainable Development Goals (SDGs).

As a globally acting independent institution and think tank, the ISC₃ is committed to help transforming chemistry in cooperation with all stakeholders. It operates a multi-stakeholder platform for collaboration and information to share knowledge and discuss new policies. It also runs its own innovation, education and research programmes to accelerate technological and business model innovation, economic growth as well as capacity building especially in developing countries.

Starting-up the ISC₃

The ISC₃ was established in May 2017 by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) as an international organization to institutionalise sustainable chemistry as a discipline. It is presently hosted by the German Development Cooperation (GIZ). The ISC₃ Headquarter is located in the UN-City of Bonn, Germany. The centre has established a Research and Education Hub at Leuphana University, Lüneburg and an Innovation Hub at DECHEMA, Frankfurt a.M.

The mission of the **ISC₃-Innovation Hub** is to scout, initiate and support innovation in sustainable chemistry based on their transformational potential. Across the entire spectrum of early stage R&D projects through to later stage capital rounds of start-ups, the ISC_3 -Innovation Hub will facilitate tech transfer from science to industry and to the developing countries. Furthermore, the Innovation Hub will distinguish entrepreneurs by evaluating their approaches in terms of market potential, business model, technological innovation and impact. An international innovation award will highlight outstanding projects from all over the world to promote the most promising innovations in the field of sustainable chemistry.

Sustainable Chemistry: a Key Contribution to Sustainable Development

Chemistry is an enabling industry for all other industry sectors. Innovation in chemistry can have a massive impact on the entire supply chain. It could be the driving force for reaching sustainable consumption and production patterns towards a circular economy, for combating climate change, and much more. Achieving the Sustainable Development Goals (SDGs) will only be possible by developing and implementing innovative solutions in chemistry. Unfortunately, the benefits of chemical innovation are often coupled today with the consumption of vast quantities of non-renewable resources, energy and hazardous substances.



Sustainable chemistry is an emerging concept that aims at achieving the benefits of chemical innovation without its trade-offs, thus protecting health and the environment. Sustainable chemistry anchors eco-

logical principles not only in the production of chemical products themselves but also in the product design of industrial and consumer products. Reducing the use of hazardous substances from the onset will improve health and safety for workers and users alike. Sustainability based chemical research and production offer broad opportunities for economic progress especially in developing countries and emerging economies. The **ISC₃-Research & Education Hub** will identify and assess emerging trends in academic chemistry. In particular, it will verify whether these fields can be researched or whether there are any restrictions due to intellectual property rights, and will evaluate their sustainability potential as well as their limitations. The Hub develops and delivers scientific courses and trainings in sustainable chemistry to an international audience and helps interested third parties, especially from developing countries, to establish similar programs in their institutions. A key activity of the Research & Education Hub is the "Summer School on Sustainable Chemistry" co-organized with Leuphana University and the "Green and Sustainable Chemistry Conference" in Berlin.

Furthermore, the first **Regional Hub** will be established at the University of Massachusetts Lowell (USA) in 2018 with the mission to reach out to the Americas. The "Americas Hub" will build upon the Green Chemistry and Commerce Council, a network of more than 70 companies, including major retailers and brands, dedicated to promoting safer products. It is planned to establish further regional Hubs across all continents over the next years to achieve a global impact.

The ISC₃ establishes its headquarters in Bonn

In accordance with its status as an independent international organization, the ISC₃ chose to establish its headquarters in distinct premises within the historical Südstadt of the UN City of Bonn. The location combines the advantages of close proximity to governmental institutions, to the German Development Cooperation, and in particular to the UN Campus, as an ideal starting point for working with stakeholders worldwide. Lastly, the location required only little refurbishment, given a sound, old building substance, allowing to save precious resources and enabling the ISC₃ to start its work programme. Setting up the headquarters also involved a careful selection of the furniture and of the necessary IT infrastructure.

In alignment with its mission, the ISC₃ set a particular focus on the procurement of sustainable furniture and equipment. The ISC₃ developed a building biology concept and commissioned specific furniture, where it proved impossible to obtain certifiably sustainable alternatives. As of now, the ISC₃ equipment includes wood and steel furniture, eco-friendly paint and carpeting, and minimal use of plastics.

ISC₃ Headquarters are located in the historical Südstadt of the UN-City of Bonn.



The ISC₃ also decided on an independent IT infrastructure to enable a truly global future reach. In partnership with Telekom, the ISC₃ was able to set up all necessary IT infrastructure between December 2017 and March 2018 with a minimal ecological footprint. In order to integrate the different Hubs with remote collaborators that are part of different legal entities, the ISC₃ opted for its own cloud solution. In combination with cloud telephony, this solution provides the flexibility to add future international Hubs without much administrative effort. All participants are able to work under the ISC₃ identity (email and phone) by simply authorizing access to the ISC₃ cloud services. Finally, this setup also enables current GIZ staff to have continuous access to the GIZ services.

The final, but most important aspect of establishing the ISC₃ Headquarters was the employment of highly qualified and internationally experienced staff. It is the clear intent to form a multidisciplinary and diverse team, able to cover the wide range of technical and non-technical skills required to make this institution a global success. Therefore recruitment and HR was at the core of the management effort. The search for suitable staff has proven to be a challenging part of the setup, due to the relative recency of sustainable chemistry as a discipline.

Strategy and activities of the ISC₃



The ISC₃ acts a catalyst for sustainable chemistry through collaboration, innovation, education, information and research. It connects stakeholders from the private sector, science and research as well as from civil society and from politics to develop a transformative agenda for the chemical sector. With the promotion of sustainable chemistry, the ISC₃ contributes to the international processes on the sound management of chemicals and waste for a pollution-free planet as well as to the implementation of a circular economy and the SDGs.

The ISC₃ strives to become a globally recognized think tank that sets up relevant dialogues among the right stakeholders. One of the ambitions for example is to continue the international discussion on the sound management of chemicals and waste. By promoting

cross-sectoral dialogue and collaboration, the ISC_3 helps decision-makers to make more informed choices with respect to the impact of their choices on sustainability. The dialogues also help raise awareness for the responsible use of chemicals and for the potential of sustainable innovation in business, politics and science.

More importantly, the ISC₃ wants to ensure that the outcome of these dialogues really result in actions taken. To achieve this ambitious goal, the ISC₃ relies on its other instruments, first by helping concerned parties to find each other and collaborate on innovative solutions. Second, it proactively scouts for new business ideas and start-ups in developing countries as well as in industrialized countries in order to accelerate their success and ultimately their contribution towards the transformation of the sector. Third, the ISC₃ invests in the development of a sustainable chemistry research agenda. The centre monitors trends in research and contributes to the scientific discussion within the global research community through the lens of sustainable chemistry. And fourth and finally, it disseminates knowledge through the design and delivery of a sustainable chemistry curriculum that can be replicated on a global scale, with a particular emphasis on capacity building in developing countries.



Regional expert workshop in Nairobi in cooperation with UN Environment on trends, risks and opportunities relevant for Sustainable Chemistry innovation and the development of the next Global Chemicals Outlook II.



Collaboration: global scenario process and workstreams

To set a frame to its activities, the ISC_3 wishes to attract stakeholders from all sectors to participate in the ISC_3 global scenario process that will formally

be kicked off later in 2018. Within the global scenario process, experts are invited to debate how sustainable chemistry impacts our future, by addressing questions such as: "What kind of chemical products and chemical production processes do we need to shape a sustainable future? What are the societal, economic and political implications of sustainable chemistry? In which areas are chemical innovations key to achieving the SDGs?" These dialogues will be conducted in dedicated scenario workshops, with the aim of delivering expert endorsed outcomes.

The ISC₃ has already commissioned a pre-study that will outline the scope and approach to the scenario process itself. This approach will provide early validation of the choice of ISC₃ focus topics and workstreams such as: Sustainable Chemistry & SDGs; Sustainable Chemistry & Climate Change; Sustainable Chemistry & Buildings and Living; Sustainable Chemistry & Mobility; Sustainable Chemistry & Circular Economy and Digitalization (Chemistry 4.0), and more.

The scenarios should provide an opportunity for civil society to voice expectations and concerns, help industry players in the refinement of their strategy and investments, provide input to policy makers in the shaping of regulatory frameworks and instruments, and they should spur further research.



Innovation: global start-up service and funding

Innovative solutions to combat and prevent pollution in the areas of mobility, energy, urbanisation, and agriculture very often originate in the chemical sector, in its research community and in start-up companies. Examples can be found in many initiatives to replace fossil fuels, in new energy storage systems and in the development of new construction and insulation materials. However, innovative solutions that are able to contribute to a pollution free planet do not easily find their way to the markets. The ISC₃ has therefore initiated a new global start-up service and network to identify and support start-up companies in the developed as well as in the developing countries. In the first phase, the startup service will provide communication support, network events, trainings and access to investors.

The **ISC₃-Innovation Hub** has the mission to both initiate and support innovation in sustainable chemistry. The ISC₃-Innovation Hub will scout for promising R&D projects world-wide. It will facilitate investment, lab capacity and tech transfer from science to industry and to the developing countries. Furthermore, the



Presenting five international start-ups with sustainable innovations for the new plastics economy at ACHEMA Trade Fair in June 2018

Innovation Hub will support potential entrepreneurs by reviewing and evaluating innovative approaches. An international innovation award will turn the spotlight on outstanding projects from all countries, providing both an incentive and a showcase for the best innovations in the field of sustainable chemistry.



Education: international school and capacity development

Sustainable chemistry begins in the minds of decision makers, researchers and practitioners at large. The transformation of chemistry and of all other activity sectors through sustainable chemistry can only be achieved through better and targeted education. The mission of the **ISC₃-Research & Education Hub** is to develop and implement an international curriculum on sustainable chemistry. The curriculum integrates green chemistry, synthesis and product related topics with complementary expertise on economics, product life cycle management, recycling, feedstocks, new business and service models, regulations, international chemicals management, environmental chemistry and toxicology.

The curriculum will be piloted and delivered at the "International School for Sustainable Chemistry". With this school, the ISC₃ aims at making sustainable chemistry an integral part of scientific and executive education. Once this pilot established, the model can be replicated globally. The ISC₃-Research & Education Hub has already started to deliver scientific courses and trainings to interested third parties such as universities or authorities especially from developing countries to encourage them to establish similar programs in their



Interactive discussion during the Summer School for Sustainable Chemistry 2017 at the ISC₃ –Research and Education Hub at Leuphana University, Luneburg.

institutions and to nurture a network of potential future partners. The ISC₃-Research & Education Hub holds the "Summer School on Sustainable Chemistry" each year, which addresses not only academia but also aims to connect young academics with professionals from governmental institutions, industry, and non-governmental organizations. The summer school is designed as an educational complement to the annual scientific "Green and Sustainable Chemistry Conference".



The **ISC₃-Research & Education Hub** is a key department that brings leading-edge scientific competence to the Innovation Hub and to the activities of the Headquarters, allowing the ISC₃ to fully embrace its role as an international think tank.

The hub has started with seminal research that will serve as a basis for the international and dialogue-



Prof. Dr. Klaus Kümmerer, Director of the ISC₃-Research & Education Hub, in the laboratory at Leuphana University, Luneburg. based development of a common understanding of sustainable chemistry. This common understanding will in turn, over time, result in hands-on sustainability assessment tools that will provide help and guidance for decision makers.

Research topics that are currently being screened are intended to be cross-sectoral by nature and include topics such as "the potentials and limits of circular economy for chemical products", "the possible contributions of chemical science to the sound management of chemicals and the Sustainable Development Goals" as well as "the contributions of sustainable chemistry to sustainable construction and urbanization". The research will be addressed in discussion and collaboration with international academic institutions as well as with institutions from developing countries.

The hub will continuously publish and promote its own as well as third-party reports and findings. It will primarily serve the ISC_3 platforms but also contribute to other relevant websites and scientific publications, to spur the discussion among subject matter experts. On the basis of this work, the Hub will organize and attend scientific conferences, which will add to the international visibility and reputation of the ISC_3 .



Knowledge management and information dissemination on sustainable chemistry are at the core of the ISC₃ activities. Events, conferences and exhibitions are key activities to spread the word and invite all stakeholder groups to the discussion and to consolidate insights from all over the world.

In addition to the in-person meetings, the ISC₃ will set up a virtual platform that will help stakeholders to collaborate on sustainable chemistry. The platform will include an "Atlas of Sustainable Chemistry" that maps knowledge and activities across the world. It will also connect science, entrepreneurs and industry with the public sector and civil society. The platform will highlight innovation and best practices in sustainable chemistry, demonstrate contributions to sustainable development and raise awareness for the discipline and its potential to create new economic perspectives for all countries.

As a third pillar to its information dissemination strategy, the ISC₃ will run a series of media activities and will build a stock of video clips and awareness raising materials that can easily be spread and localised into other languages. Finally, it will implement a social media strategy to better reach experts and the public at large.

Being a central contact point for ideas and questions relating to sustainable chemistry world-wide, the ISC_3 can successfully fulfil its mission and continuously develop new knowledge in collaboration with all parties.



Interview with Friedrich Barth, Managing Director of the ISC₃, on the mission of the ISC₃.

Panel discussion with international speakers on sustainable chemistry and climate solutions at COP 23 in Bonn.



Activities and highlights in 2017

With the launch of the ISC₃ in May, the year 2017 was focused on identifying its key national and international partners, on anchoring the concept of sustainable chemistry on their roadmap, on gaining acceptance of the role of the ISC₃ as an institution, and on establishing the required infrastructure for the organisation. The activities in 2017 therefore included all the setup work of its Headquarters in the UN-city of Bonn, as well as the formal creation of its Hubs at DECHEMA, Frankfurt and at Leuphana University, Luneburg, and of their work programmes.

Simultaneously it started promoting sustainable chemistry with the aim to inform and invite relevant stakeholders to join. The ISC₃ either co-organised or participated in several international conferences relating to the concept of sustainable chemistry, such as the International Conference "Mainstreaming Sustainable Chemistry" and the "World Efficiency Solutions" Conference in Paris. Moreover, the ISC₃ organised side events at the United Nations Climate Change Conference (COP 23) in Bonn and at the United Nations Environment Assembly (UNEA 3) conference in Nairobi. The ISC₃ also started its first activities in innovation. In September 2017, the ISC₃ invited start-ups and investors to discuss opportunities for disruptive innovation in the chemical sector in an era of digital transformation. In analysing opportunities, challenges and barriers to market entry for start-ups in sustainable chemistry, it became clear that a neutral point of reference would be welcomed by all parties. Both start-ups and investors are looking for a validation of the innovative and sustainable nature of the business idea and of the business model itself. During the workshop, further input was gathered that will serve as an input to refine the scope and the next steps required for the ISC₃ to fulfil such a role.

Finally, the Research & Education Hub at Leuphana University, Luneburg conducted the "Summer School on Sustainable Chemistry" in 2017 as part of the implementation of the ISC₃ education programme.

At a glance: activities and events in 2017

Launch of the ISC₃ during the international conference "Mainstreaming Sustainable Chemistry" in Berlin

May, 17–18, 2017

The ISC₃ was launched by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the German Environment Agency (UBA) during the international conference "Mainstreaming Sustainable Chemistry" in Berlin in May 2017. 200 experts came together to discuss policies for sustainable and innovative chemicals as well as the future role of the ISC₃: a driving force that enables developing countries to achieve the UN Sustainable Development Goals; an active and substantial contributor to national and international chemicals policies; an independent international network for Collaboration, Innovation and Education on sustainable chemistry.

"Advancing Entrepreneurship and Start-up Initiatives for Sustainable Chemistry: Learning from Case Studies" workshop in Berlin

September 14, 2017

In September 2017 the ISC3 and UN Environment, in partnership with the United Nations Industrial Development Organization (UNIDO), the United Nations Institute for Training and Research (UNITAR), and the Free University of Berlin organized a workshop for sustainable chemistry start-ups. The invitation was met with an overwhelming interest of young companies from all over the world. 14 start-ups were selected to present their innovation based on their match with the 2030 Sustainable Development Agenda and the upcoming UNEA 2017 theme "Towards a Pollution-free Planet". The workshop explored barriers and challenges that sustainable chemistry start-ups face in moving ideas from concept to market, including access to laboratory infrastructure, obtaining patents and licenses, securing capital, and gaining market access.

Participants very much welcomed the establishment of the ISC₃ as a champion for sustainable chemistry. They saw the potential for the ISC₃ to actively promote innovation in the sector and serve as a neutral point of reference, able to validate the fit of innovation with key sustainability principles. Attending start-ups stated that they want to participate in future relevant international discussions. They also expressed the wish that the ISC₃ worked on strengthening the ecosystem surrounding the start-ups, in order to enable and accelerate the breakthrough of their innovations. The workshop outcomes will serve as input for the next steps.



3rd Summer School on Sustainable Chemistry for Sustainable Development at Leuphana University *September 25–29, 2017*

The Summer School is one of the first steps to develop the educational work stream of ISC₃. This annual activity is set to have a different focus every year. In 2017 the target of the summer school was to discuss the "scope and benefit of sustainable chemistry in value chains", as well as the "choice of chemicals in products". Using electronic consumer goods as an illustrative example, the summer school covered specific problems such as recycling, dissipation, rebound effect and materials design. Participants from many countries were hosted by the ISC₃ Research Hub and were able to experience the Research Hub as an actor for dialogue and cooperation in sustainable chemistry.



Side Event at COP 23: "Sustainable Chemistry – a key to climate solutions" November 6–17, 2017

The 23th Conference of the Parties on the UNFCCC offered a great opportunity to introduce the ISC₃ to the international climate-community and highlight the contributions of sustainable chemistry to climate change mitigation. Together with the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMUB) and UN Environment (UNEP) the ISC₃ hosted a side event on sustainable chemistry as a key to climate solutions. The side event featured two case studies on innovative solutions – one on climate-friendly synthetic fuels by the start-up Sunfire, the other on Carbon Capture Use by Covestro – and a high-level panel with distinguished international experts. This side event sent a strong message that was very well received by the climate-community.



Side Event at United Nations Environment Assembly (UNEA 3) in Nairobi December 4, 2017

The ISC₃ was invited to present itself as a new international organization during the UNEA-3 side event "Towards a Pollution-Free Planet: Accelerating the Sound Management of Chemicals and Wastes" in Nairobi. The ISC₃ released a political commitment in which it explained its future role in knowledge management and information dissemination. "The ISC₃ is developing concepts aiming at environmentally sound, economically viable and socially responsible solutions. It is also developing guidance on sustainable chemistry and is promoting the exchange of best practices on the global level." The Side Event was an excellent possibility to get connected with African experts in sustainable chemistry.



World Efficiency Solutions Conference in Paris 2017 *December 12–14, 2017*

The ISC₃ used the premier international meeting for the low-carbon and resource-efficient economy in Paris for dialogue and cooperation. It took an active part in the panel session "Circular production and consumption: business solutions and collaborative mechanisms". The participation in Paris was a first step to make ISC₃ known in Europe and to invite stakeholders from European countries to cooperate with the ISC₃.

Activities and highlights in 2018

Key activities and highlights in 2018 for collaboration are: an international workshop series and the international workshop on the Global Chemicals Outlook II in partnership with UN Environment; the participation in the Interessional Process for considering SAICM and the sound management of chemicals and waste beyond 2020; the first meetings of the ISC₃ Advisory and the Scientific Board; and finally the first ISC₃ Stakeholder Forum. These key activities are designed as multi-stakeholder platforms to enable ongoing dialogue and cooperation on sustainable chemistry.

The "3rd Green and Sustainable Chemistry Conference" in May is a highlight for researchers. It will facilitate the exchange of latest information on green and sustainable chemistry and it will be a source of excellent ideas to be integrated into the ISC₃ research agenda. The "Summer School on Sustainable Chemistry" in September will foster exchange of knowledge and experiences between the participants from different regions. The 2018 edition will focus on construction materials in residential buildings, one of the workstreams of the ISC₃. To establish the ISC₃ as multiplier of innovative ideas in sustainable chemistry, a new global start-up service and network will be launched towards the end of 2018. The ISC₃ will also take an active part in the Global Chemical Leasing Award Ceremony.



Regional expert workshop in Bangkok in cooperation with UN Environment on trends, risks and opportunities relevant for sustainable chemistry innovation and the development of the next Global Chemicals Outlook II.

Regional Perspectives on Sustainable Chemistry Innovation and the Global Chemicals Outlook II: Understanding Trends, Risks and Opportunities

 ISC_3 and UN Environment organized a series of regional expert workshops to understand trends, risks and opportunities relevant for sustainable chemistry innovation and the development of the next Global Chemicals Outlook II. The workshops brought together diverse stakeholders from different regions, including innovators and entrepreneurs, policy makers, representatives from civil society and academia. The participants identified and examined regional megatrends and industry sector trends that may create risks and opportunities for chemicals management and sustainable chemistry innovation. The workshops provided a unique opportunity for experts from the scientific, the private and public sector to voice expectations, contribute ideas, and be part of the worldwide dialogue on sustainable chemistry innovation from the very beginning.



The results of the workshops will feed in

workshops will feed into the Global Chemicals Outlook II publication and into the ISC₃ Global Scenario Process, which will be initiated later in 2018 to identify opportunities for a transition to a more sustainable chemistry. The results will also contribute to the ongoing reflections on the future of sustainable chemistry and the role chemicals and chemistry will play in addressing the emerging and future challenges to implement the 2030 Agenda for Sustainable Development.

At a glance: planned activities and events in 2018



International Workshop series in cooperation with UNEP March – April 2018

To enable dialogue and cooperation and to understand trends, risks and opportunities relevant for sustainable chemistry innovation and the development of the next Global Chemicals Outlook II ISC₃ and UN Environment organized a series of regional expert workshops (Nairobi, 07-08.03; Frankfurt, 26-27.03; Panama City, 12-13.04; Bangkok, 25-26.04).



3rd Green and Sustainable Chemistry Conference in Berlin *May 13–16, 2018*

The conference is set up to provide the latest information on advances in green and sustainable chemistry and to be a source

of ideas for research. It will be chaired by the Prof. Klaus Kümmerer, Director of the ISC₃ Research & Education Hub. During the conference, the ISC₃ Innovation Hub will be hosting the workshop "Start-ups and Sustainable Chemistry". Start-ups get the opportunity to present their ideas, articulate their requirements, meet international representatives of the chemicals industry and learn more about support opportunities provided by ISC₃. A special feature of this conference will be the launch of the Elsevier Foundation "Green and Sustainable Chemistry Challenge".



ACHEMA exhibition and fair trade in Frankfurt

June 11 – 15, 2018 The ISC₃ will be present at this year's ACHEMA exhibition and fair trade in Frankfurt, Germany. The triennial event is the

world's largest forum for chemical engineering and the process industry, offering a panorama of up-to date technology trends, and a technology platform of choice. The ISC₃ will be hosting a booth at the Innovation und Research Hall jointly with the US-based initiative Think Beyond Plastic, an accelerator and think tank advancing commercialization of research and innovation with focus on circular materials, circular design and innovative packaging. The partners will provide international start-ups and entrepreneurs with the opportunity to showcase their businesses at the ISC₃ booth and within a speed-pitching session at the hall's discussion corner."



Global Chemicals Outlook-II (GCO-II) workshop/consultation in Bonn June 18–20, 2018

The ISC₃ will be hosting a consultation in Bonn with the authors of the next GCO-II publication to discuss the results of the International Workshop Series of the ISC₃ scenario process pre-study. As the GCO-II is currently being developed by UNEP, it is useful to share findings and determine what could be included in the GCO-II publication, and which topics from the GCO-II could feed into the ISC_3 scenario process later in 2018 for a transition to a more sustainable chemistry.



4th Summer School on Sustainable Chemistry at Leuphana University *September 24 – 28, 2018*

Facilitating the exchange of knowledge and experience among participants from different regions, the 4th summer school will focus this year on the use of chemicals in the construction industry. It will look at the combined effects of the mix of chemicals in products and in construction materials used for residential buildings. It will also discuss the opportunities, benefits and limitations of sustainable chemistry in this field.



1st Advisory and Scientific Board Meeting of ISC₃ September 2018

The first meetings of the Advisory Board and the Scientific Board will provide the ISC₃ with an important opportunity to engage with international experts and stakeholders. The boards are important bodies that provide guidance, focus on the planned activities of ISC₃ and that help the ISC₃ to establish an international network on sustainable chemistry.



Global Chemical Leasing Award Ceremony at the Green Chemistry Conference in Vienna

November 6, 2018 To act as a global supporter of innovation,

the managing director of ISC₃ Friedrich Barth serves as a member of the jury of the fourth Global Chemical Leasing Award, that takes place in November in Vienna, Austria. The Award Ceremony will be part of the Green Chemistry Conference 2018 within the Trio Presidency of the Council of the European Union (EU) programme, "Smart and Sustainable Europe", held during Austria's EU Presidency.



Launch of the new global startup Service November 2018

To establish the ISC₃ as multiplier and supporter of innovative ideas in sustainable chemistry, a new global startup service and network will be launched at the end of 2018. The global start-up service will identify and support start-up companies in developed as well as in developing countries through support in communication, organization of network events, trainings and access to investors.



1st ISC₃ Stakeholder Forum in Frankfurt a.M. *November 2018*

The first ISC_3 Stakeholder Forum will provide a platform for dialogue and cooperation. Stakeholders from all sectors will get the opportunity to discuss sustainable chemistry issues and engage with the ISC_3 experts on the activities of the centre.

Milestones until 2020

The results of the pre-study to the Global Scenario Process will feed into the Global Chemicals Outlook II and inform a global ISC₃ Scenario Process to be initiated later in 2018. The scenario process itself will identify opportunities for a transition to a more sustainable chemistry. The pre-study results will also serve as a point of reference in the ongoing reflections on the future of sustainable chemistry. One of the ISC₃ missions is to help establish a clearer perspective on the role chemicals and chemistry in implementing the 2030 Agenda for Sustainable Development.

In 2019 the first **"Global Sustainable Chemistry**

Week" will be the framework for various events hosted and organized by the ISC₃, with the intent to cover the needs of different stakeholder groups. The "Global Sustainable Chemistry Week" will again help connect relevant stakeholders, facilitate the exchange of ideas, identify innovative approaches and strengthen the international cooperation. However, innovative solutions, that are able to contribute to a pollution free planet, do not find their way easily to the markets. ISC_3 will therefore initiate a new **Global Start-up Service** and network to identify and support start-up companies in developed as well as in developing countries. In the first phase, the start-up service will provide communication support, network events, trainings and access to investors.

With the establishment of the International School for Sustainable Chemistry the ISC₃ is going to make sustainable chemistry an integral part of scientific and executive education. The ISC₃-Research Hub will offer scientific courses and trainings on a global level and will help interested third parties to establish similar programs in their institutions.

マ |

Launch Mai 2017

Pre-Study Global Scenario Process in cooperation with UNEP, contributing to the Global Chemicals Outlook II

International dialogue & study:

Scenario Process

on Sustainable

Chemistry

Global

First Global Sustainable Chemistry Week Establishment of the Start-up Service and the International School

Imprint & Contact

Published by

International Sustainable Chemistry Collaborative Centre (ISC₃) Simrockstraße 5 53113 Bonn, Germany

hosted by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Friedrich-Ebert-Allee 40 53113 Bonn, Germany

Managing Director Friedrich Barth friedrich.barth@giz.de

Text

International Sustainable Chemistry Collaborative Centre (ISC $_3$)

Editors Agnes Dittmar, Dr. Brigitta Meier (ISC₃)

Design

magenta Kommunikation, Design und Neue Medien GmbH & Co. KG

Photography

International Sustainable Chemistry Collaborative Centre (ISC $_3$)

May 2018



$$\begin{split} ISC_3 &- International Sustainable Chemistry Collaborative Centre Simrockstrasse 5 \cdot 53113 Bonn \cdot Germany \\ T +49 228 90241-121 \cdot E contact@isc3.org \cdot www.isc3.org \end{split}$$



We transform chemistry