2nd International Sustainable Chemistry Collaborative Centre (ISC_3) Stakeholder Forum

23 and 24 November 2020

2nd ISC_3 Stakeholder Forum

The International Sustainable Chemistry Collaborative Centre (ISC_3) hosted its second Stakeholder Forum on 23 and 24 November 2020. Because of the ongoing Covid-19 pandemic and the travel restrictions it imposed, the Forum was held online.

Founded in 2017 at the initiative of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the German Environment Agency (UBA), ISC_3 is a catalyst for sustainable chemistry. The centre manages a knowledge platform and a network of experts, offers training and support for implementation, especially for developing countries, and conducts innovation scouting activities to find new technologies, processes and business models.

Connecting stakeholders from politics, industry, academia and civil society is a key element in the transformation towards sustainable chemistry and, therefore, of ISC_3's work. The first Stakeholder Forum focused on laying the foundation for a shared understanding of sustainable chemistry and international dialogue; the focus of the second Stakeholder Forum shifted towards implementing and carrying out projects and ideas.

Participants

Day 1: Just over 130 participants from more than 25 countries: see the separate attendance list.

Greetings and opening

In his welcome address, the Managing Director of ISC_3, Dr Frank Fecher, emphasised the importance of stakeholder dialogue and engagement as central element of the Centre as a collaborative organisation. He underlined the Centre's global agenda and welcomed participants from all continents to the 2nd ISC_3 Stakeholder Forum, which was being held online because of the ongoing Covid-19 crisis. Though the meeting and the wider agenda of the Centre had moved to a digital space, he said, its focus remained on the potential of chemistry to contribute to sustainable development and the SDGs. From 2021, the Centre will implement the second phase of its agenda, which runs until 2024.

Dr Matthias Honnacker, representative of the German Environment Agency, one of the founding institutions of the centre, paid tribute to the agile and innovative approach taken by ISC_3. He highlighted the success it had achieved in its initial years and emphasised its ongoing importance to the transformation towards sustainable chemistry.

Review and outlook for the ISC_3

ISC_3 Managing Director Dr Frank Fecher gave an overview of the Centre's activities – collaboration, innovation, education, research and information. The overview was followed by a joint presentation by ISC_3 Directors Dr Frank Fecher, Prof Klaus Kümmerer and Dr Alexis Bazzanella on milestones and achievements since the Centre was launched in 2021. Looking beyond 2020, Dr Fecher made it clear that current activities will be continued and that the issue of 'capacity building' in developing countries and emerging economies will be a further focus. Further partnerships and projects will be also developed.

In the subsequent discussion on challenges and perspectives, the challenge of scarce resources was raised a number of times. Participants expressed the hope that activities will begin to stabilise, for example with start-ups themselves networking locally. Dr Fecher also emphasised that the Centre was aiming to expand its capacity building activities in developing countries and emerging economies.

Participants proposed that the role politics play in driving the ISC3 agenda should also be addressed, which is considered to be a major challenge. As a result, this proposal was supported, and reference to the involvement of civil society was added as a way of exerting pressure on politicians.

Keynote addresses

Conceptual keynote: a shared understanding of sustainable chemistry

Professor Dr Klaus Kümmerer, Director of the ISC3 Research & Education Hub, presented the revised Shared Understanding of Sustainable Chemistry that was developed by the Centre in dialogue with stakeholders, including a round table discussion at the first ISC3 Stakeholder Forum. His presentation centred on the key characteristics of sustainable chemistry as the core of the revised paper. Pointing out the importance of sustainable chemistry as a contribution to the circular and green economy, he explained that the 10 key characteristics are intended as a compass. He expressed the wish that those characteristics will be applied in the next step and that the experience gained as a result will then be fed into further conceptual debate at a later stage.

Participants express their appreciation and support for the key characteristics of sustainable chemistry and the holistic approach that also addresses ethical and social responsibilities, including on gender equality and equal opportunities.

Guest keynote: introduction to the Framework Manual on Green and Sustainable Chemistry

In the guest keynote, Sandra Averous-Monnery from UNEP presented the Framework Manual on Green and Sustainable Chemistry[1], which aims to facilitate a better understanding and provide guidance to countries and stakeholders on advancing green and sustainable chemistry. The Framework Manual was commissioned by the UNEA 4 in 2019 and builds on previous activities of UNEP and the GCO-II.

In the lively discussion that followed her presentation, it was proposed to include the economic dimension in the Framework Manual's 10 global sustainability objectives as a bridge that will also help shape the economy of the future.

The second area for discussion was the extent to which conventions in areas such as biodiversity and climate or the OECD trade guidelines could play a more active role in enforcing green and sustainable chemistry. Cross-cutting standards, including those in the occupational health, ethical and social areas, connecting to sustainable chemistry would be very helpful in getting the private sector to harmonise voluntarily. It was also noted that beyond the Basel, Stockholm and Rotterdam conventions, more legally binding treaties are needed to ensure that sustainable chemistry can be guaranteed along all value chains in all signatory regions.

A third topic of discussion was the question of standards. The need to give industry, and official agencies in particular, a clearer orientation was acknowledged, but questions were raised about whether a general standard for sustainable chemistry could be developed that would be applicable to all sectors affected by chemistry. Reference was made to the accounting sector, which has solved a similar problem through a Sustainability Accounting Standards Materiality Map[2].

[1] https://www.unenvironment.org/resources/report/chemicals-and-waste-reports-unea-5

[2] https://www.sasb.org/standards-overview/materiality-map/ The materiality map provoked enough of a response to enable standards to be drawn up https://www.sasb.org/standards-overview/download-current-standards/

The final topic for discussion was innovation, including whether the approach of chemical leasing[3] is considered here. Among other contributions, participants noted that innovation per se is not either positive or negative but that individual innovations must be evaluated holistically.

Summing up the overall discussion, UNEP emphasised that the Manual is intended primarily as a compass for orientation for all actors in the field of green and sustainable chemistry rather than as a strictly regulated set of instructions.

ISC$_3$ key activities and milestones 2017-2020

Education: launch of the first Masters programme on Sustainable Chemistry (MSc)

Dr Myriam Elschami, Coordinator of the ISC$_3$ Research & Education Hub, introduced the Masters programme on sustainable chemistry launched in March 2020, explained what it covers, the target group, the curriculum, the mode of study, the characteristics of the teaching staff, and the origin of the students. She concluded by sharing current information and contact details for those interested.

In the following panel discussion, two students on the Masters course, Benjamin Triller (Beiersdorff) and Edgar Gamero (Ramboll), explained why they had enrolled on the course and how they are benefiting from it. For both of them, using what they learned in the working environment was central. One of the lecturers, Professor Vania Zuin, then explained what she appreciated about the course as a lecturer, such as the opportunity to collaborate with companies on solutions in an experimental and application-oriented manner, the holistic approach and the networking opportunities in all areas relevant to sustainable chemistry.

Collaborative foresight: ISC$_3$ Foresight Workstream on Sustainable Chemistry and Building and Living – focus on plastics

ISC$_3$ Workstream Manager Oleg Ditkovsky presented the methodology – a preliminary study, thematic workshops and a final report. It had become clear that a wide range of perspectives had to be included in the process. He presented the key messages and principles derived from the process.

Panellist Dr Roland Weber, environmental consultant and POP [persistent organic pollutants] specialist, suggested in his contribution that the report be used in the context of the Stockholm Declaration. Panellist Professor Dr Friege of N3 Sustainability Consulting, called for the appropriate recycling of waste to become a standard process in developing countries.

In the lively discussion that followed in the Chat function, participants emphasised that while replacing plastics is desirable, the reality is that the plastics currently used are not adequately treated. Reference was made to a white paper drawn up by the German Chemical Society (GDCh), 'Science to enable sustainable plastics'[4]. There was a consensus that the role of POPs in building materials in developing countries is not yet being discussed and that that POP-free materials are considered too expensive. But there is also too little public information of and awareness of the hazards and potential harms of the materials. The issue of microplastics also adds another dimension that has not yet been addressed. However, ISC$_3$ is not focusing on that issue, as microplastics are of greater concern to the packaging industry than the building sector

[3] https://www.chemicalleasing.org/

[4] Information and download: www.gdch.de/cs3

Innovation: the ISC$_3$ Global Start-up Service and Innovation Challenge

Dr Alexis Bazzanella, Director of the ISC$_3$ Innovation Hub, presented the current status and activities of support for innovation for sustainable chemistry. More than 100 start-ups worldwide have been onboarded for general support and benefit from a wide range of services such as pitches, the Investor Forum and an online toolbox, among others. In the second phase, collaboration with investors and SME (small and medium sized enterprises) will be strengthened.

In the panel discussion, four panellists shared their experience of the Global Start-up Service from different perspectives. Abdel Rahman Fahmy from youthinkgreen Egypt is part of the Spiderweb network; he highlighted the benefits this networking platform gave his organisation and others in the region. Jaqueline Cruz, CEO of LeQuara and winner of the ISC$_3$ Entrepreneurial Spirit Award, shared her experience of establishing contact with ISC$_3$. She emphasised the benefits of increased visibility for her organisation and of networking with experts, entrepreneurs and investors. These benefits were also listed by the third panellist, Jessica Owusu, founder of MESOCARPE and winner of Best Female Founder in the ISC$_3$ Innovation Challenge 2019/20. Finally, Isaac Brenya, CEO and co-founder of Ecovon, Tanzania and winner in the Best Regional Impact category of the ISC$_3$ Innovation Challenge 2019/20 expressed his thanks for the support, wider reach and enhanced contacts he gained from the ISC$_3$ Start-up Service.

Research: report and reflection on research topics

Dr Dorota Bartkowiak, Research Coordinator, and Ann-Kathrin Amsel, Research Associate, both from the ISC$_3$ Research and Education Hub, presented the four research topics that ISC$_3$ is currently investigating: electrochemical synthesis of chemicals; metals as non-renewable, critical resources; sustainability assessment and entropy change as a measure for chemical sustainability; and chemoinformatics as a versatile tool in green and sustainable chemistry.

Panellists Dr Thomas Jakl from the Austrian Federal Ministry for Sustainability and Tourism and Professor Henninge Friege of N3 Sustainability Consulting shared some deeper considerations on two of these topics. Dr Jakl explained why sustainability assessment tools are important for sustainable chemistry and that an entropy change-based approach can contribute to existing sustainability assessment tools by enabling a holistic picture.

Professor Friege explained the importance of metals for the defossilisation of the chemical industry and low-carbon technologies and emphasised that the circular economy and recycling are both key to addressing the issue of rare metals. Other approaches for tackling metals supply bottlenecks are greater efficiency, substitution by other materials where possible, and reducing consumption. Sustainable chemistry could help to overcome metals supply bottlenecks by means of innovations for chemical reactions (without metallic catalysts) and a design for recycling of materials and products that greatly improved recovery of used metals.

Open Forum

Participants' presentations

1. Anchoring sustainable chemistry in chemicals management: development of milestones and indicators for international chemicals management beyond 2020 – Professor Henning Friege (Friege@N-hoch-drei.de)
2. Using waste carbon feedstocks to produce chemicals – Elizabeth Nesbitt (Elizabeth.Nesbitt@usitc.gov)
3. Clean carbon energy – Ken Omersa (ken.omersa@omnagen.com)
4. The experience of the Senai Innovation Institute for Biosynthetic and Fibers (Brazil) of delivering industrial solutions with sustainable chemistry – Dr Victoria Santos (VESantos@cetiqt.senai.br)

5. 13th Postgraduate Summer School on Green Chemistry – Professor Pietro Tundo (tundop@unive.it)
6. The German Chemical Society's approach to the United Nations' Sustainable Development Goals – Dr Hans-Georg Weinig (H.Weinig@gdch.de)

Participants' feedback - What are hot topics in the Regions?

What are currently your most pressing challenges in sustainable chemistry in your region? And where is the most promising potential?

Africa

- West Africa: topics are waste repurposing (particularly plastics), energy storage and STEM
- Ghana, Africa region, challenge: waste management and climate change (Deforestation)
- East Africa Bioeconomy Strategy
- East Africa: Agri-waste and carbon capture chemical compounds
- Nigeria/Africa hot topics are human capacity development in sustainable chemistry; research and innovation ecosystems and develop curriculum for sustainable chemistry to be included in higher education chemistry programmes

South America

- Brazil: carbon neutrality
- Brazil: overall implementation of the principles of a circular economy in the chemical industry
- Brazil: leveraging a modern and sustainable bioeconomy
- Chile: the most pressing challenges are related to public policy, because they hamper innovation. Hence, private sector response is mostly reactive. An example is the Minamata convention: Chile has not ratified it, and we do have many wildfires. In relation to wildfires, Chile has committed to carbon-neutrality in the context of climate change. This issue therefore can be seen from a dual perspective. The most promising potential is the process of environmental risk assessment, with new draft legislation considering improvement development of new concepts.

Western Europe and others

- USA: chemical transparency
- Western Europe: challenges, improvements and integration of interdisciplinary expertise, e.g. closing the loop, recycling, regulation and competition
- Europe: opportunities; system change approach
- Western Europe: waste separation and recycling
- Western Europe: power to chemistry (hydrogen)

Overall feedback: USA and Canada appreciated the virtual format.

Day 2

Day 1 gave an overview of the milestones achieved by ISC_3, current projects and future activities; day 2 focussed on in-depth discussion of current and future topics, from the circular economy and entrepreneurship to gender issues and the role of capacity building in promoting sustainable chemistry among others.

ISC_3 was proud to have the opportunity of adding a presentation on the new UNEP Framework Manual on Green and Sustainable Chemistry to the agenda and hosting a workshop on the Specialised Manual on Education for Green and Sustainable Chemistry, which is currently under development.

ISC_3 was also very proud to host a guest workshop by MVO Nederlands titled 'Introduction of natural capital and the chemical sector', which highlighted the importance, range and scope for capital within the chemical sector.

Chemistry within a circular economy: contributions to and limitations on closing the loop

Chair: Professor Klaus Kümmerer, ISC_3 Research & Education Hub

Discussants: Dr Christian Hagelüken, Director EU Government Affairs, Umicore AG & Co KG

Chemistry is the central value-creating science in our socioeconomic system. In this workshop, the ISC_3 Research & Education Hub invited stakeholders to join the discussion about the responsibilities and possible contributions chemicals companies could make towards the transition from a linear to a circular economy. An important aspect of the workshop was to also raise awareness of the limitations on circularity and new ways of securing stakeholder engagement.

Key takeaways:

The science and practice of chemistry is central to the transition to a circular economy (CE). Chemists should be involved in reshaping the design of products for recyclability and therefore require a systemic understanding of material and resource flows in any socioeconomy. Important aspects raised and discussed by the stakeholders included challenges to recycling posed by hazardous product components and the difficulty of the post-use separation of mixed materials in complex products. Scaling up collection for recycling was discussed as a major contributing factor to enable a CE using the example of battery recycling in different regions of the world. Overall, the need for stakeholder engagement and communication across the entire value chain was identified as essential for the transition to a CE.

Wishes from the stakeholders for moving towards CE:

- More transparency of product constituents for chemical safety and recycling
- Development of case studies and examples of best practice for CE

Key resources shared by the stakeholders:

- Flame retardants and flammability standards
  https://www.sciencedirect.com/science/article/pii/S2405665020300160
  https://greensciencepolicy.org/docs/General/halogenated-flame-retardants-do-the-fire-safety-benefits-justify-the-risks.pdf
- Copper smelter and BAT/BEP for pollution reduction:
  https://doi.org/10.1016/j.emcon.2020.07.001

- Recycling compliance in the EU:
  SCIP Database - ECHA (europa.eu)

Contact: Professor Dr Klaus Kümmerer (klaus.kuemmerer@isc3.org)

Gender and sustainable chemistry – how women benefit from sustainable chemistry and vice versa

Chair: Agnes Dittmar, ISC$_3$ Head Office

Discussants: Professor Vânia Zuin, University São Paulo, and Sascha Gabizon, WECF

As a holistic approach, sustainable chemistry embraces gender issues as well as human rights and further social aspects. Through its gender activities, the ISC$_3$ aims to promote gender related issues with a special focus on women and their role in transformations towards sustainability.

The workshop invited stakeholders to reflect on gender related topics across sectors that could be relevant to sustainable chemistry. The discussion focussed on how women can benefit from sustainable chemistry and vice versa.

Key takeaways:

Gender equality, human rights and ethical aspects are key elements of sustainable chemistry. The role of women in the informal sector should be highlighted, especially health risks caused by the recycling or reuse of materials containing hazardous chemicals. As women in developing countries seek to build up new business models by reusing and recycling waste materials, such as plastics, support and capacity building is needed to inform and protect women from the potentially harmful consequences of these low-income jobs. The ISC$_3$ gender initiative could contribute to raising awareness in this field, connecting these issues with the debate on sustainable chemistry and a clean circular economy.

The role of female scientists, as well as gender and diversity in research and science, represent an important field for ISC$_3$ activities. Female scientists are still largely underrepresented in chemical sciences. This is especially true of emerging economies and developing countries, where women face major challenges and discrimination in pursuing a scientific career. High-level scientific positions are still out of reach for most female scientists. This is even truer for women from minority groups, who face even greater barriers. Scientific data and personal experiences provide substantial background in this area and should feed into the activities of the ISC$_3$. To give the right context and focus for the further activities of the Centre, the term ‘diversity’ should be included and highlighted. Further ISC$_3$ activities should therefore be framed as a ‘gender and diversity initiative’.

Contact: Agnes Dittmar (agnes.dittmar@isc3.org)

Non-academic capacity development in developing countries and emerging economies

Chair: Sebastian Kastner and Paola Bustillos, ISC$_3$ Head Office

The ISC$_3$ seeks to devise demand-oriented capacity development formats for sustainable chemistry in selected developing countries and economies in transition countries. Stakeholders were invited to discuss information and dialogue formats on sustainable chemistry for political and social decision

makers and development and implementation of non-academic training courses for specific target groups (e.g. the chemical, textile and agriculture sectors) within partner countries.

The aim of the workshop was to identify GIZ programmes in partner countries/regions run by governmental organisations, NGOs and other development partners and other relevant stakeholders that should be involved, as well as potential focus topics.

Key takeaways:

Challenges in sustainable chemistry are closely related to the basic understanding of harmful chemicals during selection of materials at production level, so it is important to consider chemical substitution and, finally, to boost awareness of the use and management of chemicals. Regional approaches through regional hubs might be better and more effective than bilateral country approaches. For this purpose, Namibia will be considered as a hub leader and Kenya as the East Africa hub. To achieve specific improvements through capacity building, it is important to assess whether top-down or bottom-up approaches are more suitable. Furthermore, analysis is needed to investigate the work of legislation on chemicals by comparison with its enforcement.

Capacity building would benefit all stakeholders in addressing the challenge and creating awareness of sustainable chemistry. Sustainable chemistry can also contribute to climate change mitigation through CCS (carbon capture storage) and reducing emissions from waste, replacing fossil fuels. To reduce greenhouse gas (GHG) emissions, an understanding of the international legal situation is important when developing climate change solutions.

Contact: Sebastian Kastner (sebastian.kastner@isc3.org) and Paola Bustillos (paola.bustillos@isc3.org)

Regional perspectives on sustainable chemistry and energy: preparing for the ISC$_3$ Future Focus Topic

Chair: Romina Laumann, ISC$_3$ Head Office

ISC$_3$ focus topics offer a forum to explore topics of particular current interest and global challenges from the perspective of the new systems thinking approach of sustainable chemistry.

Fossil fuel sources are scarce and lead to huge emissions. The new climate-driven energy market is creating new value chains for modern processes and technologies. Can renewable energy sources and power-to-X technologies help achieve sustainability? Is new competition arising for resources such as food and water?

Can sustainable chemistry contribute to sustainable energy systems? And vice versa? And if so, how?

The workshop aimed to introduce upcoming aspects and issues and to compile insights and key questions from stakeholders about the nexus between sustainable chemistry and renewable energy and the issues to be explored.

Participants' involvement:

During the interactive part of the workshop, participants were asked about the nexus between sustainable chemistry and renewable energy. There was a clear association with innovation and the circular economy.

The main obstacles to achieving sustainability were identified by the participants as the lack of alternative business models, followed by better understanding/training, new technologies and inadequate regulation.

Key takeaways:

Chemical production uses huge amounts of energy, so renewable energy sources and technologies are required.

The entropy problem: increasing energy and material flows increase entropy. 100% circularity is impossible.

Life-cycle assessment (LCA) can help to compare the impacts of different energy resources and technologies and assess their sustainability potential. Alternative business models should also be assessed for the contribution they can make to sustainability.

Paradigm shifts are necessary, such as decentralised production and a waste economy. Start-ups and SMEs can lead the innovation.

Best practice:

Uruguay's success in electricity: 98% is now generated from renewable sources!

Creating a legal framework can lead to rapid growth of new sustainable technologies, e.g. biogas and bioethanol in South Africa.

Be aware of the conflict of interests/goals in the field of renewable sources, e.g. biomass for energy versus food. The use of waste is the solution.

The workshop laid the groundwork for the new focus topic from 2021 onwards.

All participants are welcome to give further feedback on the content of the focus topic.

Contacts: Romina Laumann (romina.laumann@isc3.org) and Oleg Ditkovskiy (oleg.ditkovskiy@isc3.org)

ISC_3 special guest workshop: the chemical sector as a game-changer for natural capital

Chair: Astrid Ewaz, Project Manager, Events ISC_3 Innovation Hub
Guest speakers: Marjolein van Gendt, Programme Manager, Natural Capital Program, and Kristel Verhoef, Kristel Clear Sustainable Strategies

In the guest workshop on the chemical sector as a game changer for natural capital, the MVO Netherlands Natural Capital Program and a 2019 Dutch research study entitled 'The chemical industry is not yet the game changer it should be' were presented and subsequently discussed in an open stakeholder session.

The MVO (Netherlands Oils and Fats Industry) Natural Capital Program aims to reduce negative impact and dependency on nature in agri-food, construction, and the chemical sector. This ISC_3 Stakeholder

Forum guest workshop helped participants to distinguish between and assess the terms ‘natural capital’ and ‘financial capital’ and analyse the impact of both types of capital on the chemical sector and its interlinkages with regard to achieving the SDGs. Issues such as how Dutch investors currently steer on impact and risks related to nature and the chemical sector were tackled. The guest speakers shed light on ongoing natural capital activities within the chemical sector and gave an overview of current natural capital-related impact investment tools, such as green bonds. Eighteen international stakeholders, including corporate representatives, government officers, researchers and investors, followed this one-hour workshop featuring eminent guest speakers that was held in parallel to many other interesting ISC_3 stakeholder workshops.

Key takeaways:

Among the key lessons learned from the workshop was that the risks of not changing the chemical sector, or changing it too slowly, will ultimately be even greater and more costly not just for businesses but also for society worldwide. One fifth of the world’s countries are already at risk of their ecosystems collapsing and have severely harmed nature. The chemical sector is among the most important catalysts for transition to a more sustainable, circular economy. In such an economy, natural capital is not only actively valued but also automatically seen as the cornerstone of human society and the worldwide economy that it really is. Nature, its biodiversity, and its ecosystem’s services, such as a stable climate, are interlinked and so interdependent that they can no longer be considered as separate from economic responsibilities. In this logic, natural capital is a crucial part of long-term value creation. This means that consumers, industry and investors face a very complex, diverse and vast range of possibilities and risks. Current trends towards good practice and developments related to natural capital in impact investing in the chemicals sector were identified and weighted with regard to successful achievement of the SDGs. But there remains considerable room for improvement, as the workshop found. The underlying reason is the way in which investors currently steer on impact and risks related to nature and the chemical sector, as well as further need for education on the part of stakeholders across the economy. The project results based on the study presented found that because of its limited capacity and very fragmented and diversified investor portfolios, the chemical sector is not (yet) leading the way among those industries that have committed to change in this area. The mission of the MVO Natural Capital Program is to further identify lessons learned from the study’s insights and ‘join up the dots’ between lessons learned as part of a long-term perspective while also continuing to raise awareness and promote the need for greater consideration of natural capital worldwide. The scientific basis for the discussion was lessons learned from the MVO Nederland’s Natural Capital Program together with the research report named ‘The chemical industry is not yet the game changer it should be’ produced by Kristel Verhoef (Kristel Clear Sustainable Strategies) in 2019, and written in collaboration with Caroline van Leenders (Dutch Ministry of Agriculture, Nature and Food Quality), Elsbeth Roelofs (MVO Netherlands), and Martin Lok (Capitals Coalition).

Upcoming events further addressing this topic:

Q1 2021: MVO’s Workshop of Dutch SMEs and banks on partnering for a carbon-neutral and nature-positive economy
Q2 2021: MVO Workshop on agri-food and agrochemical companies on building natural capital
Q4 2021: ISC_3 Investor Forum 2021, ISC_3 Stakeholder Forum 2021

Further information and initiatives interlinked with this workshop topic:

Call to support the International Biodiversity Agreement as an organisation:
https://www.businessfornature.org/call-to-action

Link to MVO paper 'Nature is your business' - On building natural capital by the chemical sector combined with SDG-impact at: https://naturalcapital.futureproof.community/bibliotheek/paper-chemical-sector-nature-is-your-business

Contacts: Astrid Ewaz (astrid.ewaz@isc3.org); Kristel Verhoef (k.verhoefwork@gmail.com) and Marjolein van Gendt (M.vanGendt@mvonederland.nl)

Special guest: UNEP workshop on UNEP manuals on green and sustainable chemistry: an exchange on the Specialised Manual on Education

Chairs: Sandra Averous-Monnery, UNEP, and Achim Halpaap, UNEP Special Advisor

To complement the Framework Manual on Green and Sustainable Chemistry, UNEP is developing a Specialised Manual on education. This workshop offered the opportunity to exchange views on its content and key messages. An initial presentation was made, followed by an open discussion focusing on the diverse ways in which education on Green and Sustainable Chemistry could be supported both within and outside formal education.

The workshop provided information on the further development of the Specialised Manual on Education.

Key takeaways:

Work has focused on closing gaps in practical knowledge and teaching on green and sustainable chemistry, for example by adding toxicology courses to chemistry curricula. Work still remains to be done in this area. However, education on green and sustainable chemistry could encompass other curricula from formal education and broader perspectives. The Manual provides insights on how to promote cross-disciplinarity and mainstream green and sustainable chemistry in the curricula for non-chemists, including early on in the curricula of primary and secondary schools. It also discusses ensuring balanced participation in the chemistry curricula from a gender, social class and diversity perspective. The Manual should also, however, reflect on examples of best practice in terms of integration in non-formal and informal education. UNEP will make progress on developing the Specialised Education Manual on green and sustainable chemistry, taking into account the main points covered during the discussion.

Contact: Sandra Averous-Monnery (sandra.averous@un.org)

Towards a Global Week on Sustainable Chemistry: discussing ideas and activities

Chairs: Janina Haubenreißer, ISC_3 Head Office, and Astrid Ewaz, Project Manager – Events, ISC_3 Innovation Hub

The aim of a Global Week on Sustainable Chemistry is to raise international awareness of the concept and the actors in the field. The Week is scheduled to take place 8-12 November 2021 as an international online event showcasing the relevance and fascination of sustainable chemistry from a cross-sectoral approach. With the Global Week on Sustainable Chemistry, the ISC_3 will offer a platform for all stakeholders to present their projects, business models and research activities.

After a presentation of the lessons learned at preceding events, including the ISC_3 Investor Forum 2020, the workshop provided information on the overall concept of the Week and invited stakeholders to actively voice ideas and discuss concrete activities.

Key takeaways:

A number of questions were asked regarding the Global Week to deepen the understanding of the general idea, which was considered to be of great value to the process of furthering sustainable chemistry.

The audience welcomed the idea of a Global Week on Sustainable Chemistry as an umbrella for existing and new events to further sustainable chemistry on a global scale for a diverse audience. To support this idea, several further institutions and contacts were named, which could be contacted and added to the agenda. Furthermore, participants added topics that could be included in the Week, including digitalisation, circular technology and environmental justice in consumer products.

Stakeholders' commitment to furthering sustainable chemistry and supporting the Global Week was encouraging, and the ideas submitted have given plenty of food for thought.

ISC_3 is very much looking forward to hearing more ideas: feel free to get in touch!

Contact: Janina Haubenreißer (janina.haubenreisser@isc3.org)