



Global Sustainable  
Chemistry Week 2021

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Report

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Chemistry Week 2021

## Report



We transform chemistry

# Content

<b>Abbreviations</b>	<b>5</b>
<b>1. Global Sustainable Chemistry Week (GSCW) – Review and Outlook</b>	<b>6</b>
<b>2. Stakeholder Forum</b>	<b>7</b>
<b>3. Investor Forum</b>	<b>10</b>
<b>4. Programme partner events</b>	<b>14</b>
<b>4.1. People, Plastics and Pollution: How Can Youth Engagement Solve the Global Challenges of Today?</b>	<b>14</b>
<b>4.2. EU Regions: Key Players in the Transition to a sustainable and circular chemical sector</b>	<b>15</b>
<b>4.3. Towards a toxic free future: Success Factors of Chemical Policymaking on the Example of Lead in Paint</b>	<b>16</b>
<b>4.4. Defining the path to a Non-Toxic Circular Economy: “Theory of Change” workshop as part of the Global Sustainable Chemistry Week</b>	<b>18</b>
<b>4.5. Panel discussion on Young Chemists’ Expectations of the Chemical Sector</b>	<b>18</b>
<b>4.6. How to increase your Natural Capital as chemical business’ by MVO Nederland</b>	<b>20</b>
<b>4.7. MSP Institute</b>	<b>22</b>

# Abbreviations

CSS	Chemicals Strategy on Sustainability
ECBF	European Circular Bioeconomy Fund
ECRN	European Chemicals Regions Network
EU	European Union
CEO	Chief Executive Officer
CoP	Community of Practice
CSTI	Centre for Science and Technology Innovations
DG GROW	Directorate for the Internal Market, Industry, Entrepreneurship & SMEs
DG REGIO	Directorate-General for Regional and Urban Policy
IH	Innovation Hub
ISC3	International Sustainable Chemistry Collaborative Centre
GSCW	Global Sustainable Chemistry Week
GSS	Global Start-up Service
HaDEA	European Health and Digital Executive Agency
JCF	JungChemikerForum
MBA	Master of Business Administration
MENA	Middle East and Northern Africa
MSP	Multi-Stakeholder Process
NGO	Non-governmental organisation
R&D	Research and Development
RFI	Responsible Finance & Investment
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
SC	Sustainable Chemistry
ToC	Theory of Change
WIFU	Wittener Institut für Familienunternehmen
WFC	World Future Council

# 1. Global Sustainable Chemistry Week (GSCW) – Review and Outlook

The International Sustainable Chemistry Collaborative Centre (ISC3) hosted its 1st Global Sustainable Chemistry Week on November 8-12, 2021, with various events, discussions, panels, lectures etc. by stakeholders and partners.

With the Global Sustainable Chemistry Week, the ISC3 strives to raise international awareness for the concept of Sustainable Chemistry and the actors in this field, offering a platform for all stakeholders to present their projects, business models, and research activities.

Due to the ongoing Covid-19 pandemic and the unpredictable travel restrictions, the first Global Sustainable Chemistry Week took place as an international online event, with the goal to present the relevance of the topic and evoke fascination for Sustainable Chemistry with a cross-sectoral approach. The ISC3 invited stakeholders to engage in the discussion and also to contribute to the event program on Sustainable Chemistry. Single event formats such as workshops, lectures as well as panel discussions with a range of stakeholders from business, industry, academia, and civil society provided a wide range of perspectives on the transformation towards Sustainable Chemistry.

The ISC3 contributed to the Global Sustainable Chemistry Week with the [Stakeholder Forum](#), the [Investor Forum](#), and a panel on the European Union's (EU) Chemicals Strategy on Sustainability (CSS).

With more than 1,000 participants across 30 hours of event and almost 100 programme partners and panelists, the first Global Sustainable Chemistry Week was a huge success. The depths and variety of topics, partners, and participants highlighted the importance of Sustainable Chemistry as an important factor to reach the UN Sustainable Development Goals. With the overall feedback by both participants and programme partners being very positive, ISC3 is looking forward to the second Global Sustainable Chemistry Week which will take place in 2023.



## 2. Stakeholder Forum



The third Stakeholder Forum took place on the 8th and 12th November 2021, during the first Global Sustainable Chemistry Week. It reviewed ISC3's activities in the fields of academic education, innovation, and research and served as a dialogue platform for the discussion of current and upcoming topics in Sustainable Chemistry.

The first day (Monday 8 November 2021) gave an overview on the milestones achieved, current projects and future activities, whereas the second day (Friday 12 November 2021) gave insight into the varied topics connected to Sustainable Chemistry and the ISC3's stakeholders.

The first day started with a review and outlook on the ISC3's goals and achievements, among others the publication of the results of the workstream topic Sustainable Building and Living with Focus on Plastics and the ISC3 Research and Education Hub's Summer School. Looking ahead to the next phase, the new focus project on Green Hydrogen was announced, as well as further focus on professional education and advisory services to partners.

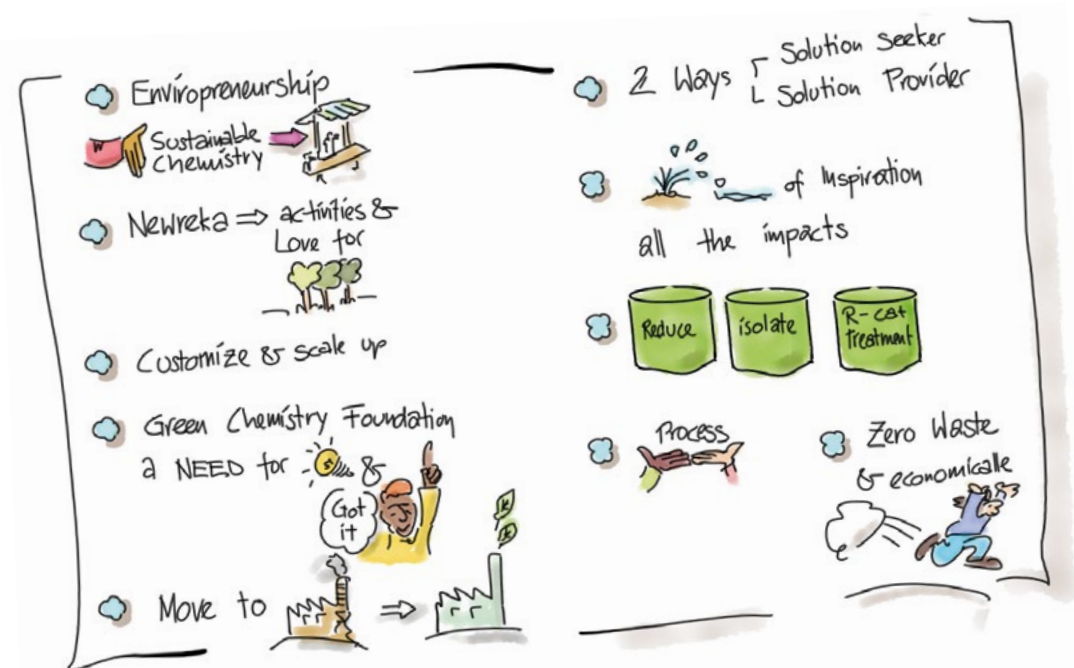
A new MBA study course on Sustainable Chemistry Management will be launched in addition to the already existing Master of Science in Sustainable Chemistry at the ISC3's Research & Education Hub at Leuphana University. In the area of research, the topic of metals continues to be significant. Activities ahead include the engagement for the European Union's Chemical Sustainable Strategy and the Safe and Sustainable-by-Design pre-marked approach.

The Innovation Hub highlighted their achievements regarding the Global Start-Up Service, the core activity of the Innovation Hub with emphasis on entrepreneurship. In the future, "Mentors and Expert Programs" are planned to support the activities of start-ups in collaboration with the ISC3 Research & Education Hub and together with small and medium sized enterprises (SME).

The guest speaker Nitesh Metha, Co-Founder and Director of Green ChemisTree Foundation and Newreka Green-Synth Technologies, India, took his own journey as an "Enviropreneur"<sup>(1)</sup> as an example to highlight the importance of positive impacts as sources of inspiration and the positive impact created by Sustainable Chemistry.

<sup>(1)</sup> The term "Enviropreneurship" is composed of environment and entrepreneur and describes an attitude or a mindset, a way of thinking. This thinking includes seeing an environmental challenge as an opportunity, having the passion for environment and the adventurous spirit of an entrepreneur, seek for long term sustainable solutions and pursue the goal of creating value for all, including the environment.





A closer look into the [Master Programme Sustainable Chemistry \(M.Sc. SC\)](#) via an interview with a student was conducted and further information on and an outlook into the [MBA Sustainable Chemistry Management](#) were also given, leading to a fruitful discussion with the participants. They pointed out the importance of the interface function between policy and science, which is addressed in the study programs by an interdisciplinary approach.

The success stories of the [Global Start-up Service](#), the [Spiderweb Partner Network](#) and the [Innovation Challenge](#) were shared by the Innovation Hub. It was pointed out again, that Innovation is open to start-ups and small and medium sized enterprises, which is why further activities will be extended.

The four [research](#) topics that ISC3 is still investigating, namely Cheminformatics as versatile tool in Green and Sustainable Chemistry, entropy change as a measure for chemical sustainability, electrochemical synthesis of chemicals and metals as non-renewable, critical resources, were presented, giving an overview of the respective status.

The introduction of the new Focus Topic [Sustainable Chemistry and Renewable Energy – Subtopic for 2021: Power to X \(PtX\) and Green Hydrogen](#) led to interested questions from the audience.



The day closed with the introduction of the new website tools, namely the [ISC3's Event Calendar](#) and [Online Atlas](#). The Event Calendar displays upcoming events in the field of Sustainable Chemistry. The Online Atlas shows and connects stakeholders of Sustainable Chemistry in one tool. Both website tools are open for stakeholders [to register](#) and then share their respective information (e.g. information on the organisation, social media, upcoming events).



The second day of the Stakeholder Forum was also the closing day of the Global Sustainable Chemistry Week.

This day showed Sustainable Chemistry in action, going from a macro to a micro perspective.

First a Panel on the **“EU Chemicals Strategy on Sustainability (CSS)”** highlighted the different perspectives and biggest hurdles and obstacles. The discutients pointed out that a common language and a bottom-up community for developing a structure to exchange should be established. The panelists agreed that it depends on the motivation of the actors involved what can be achieved in the next 3-4 years around the EU High-Level Roundtable and beyond.

Afterwards a presentation of the preliminary results and a discussion of experts in the field of Sustainable Chemistry on **“Anchoring Sustainable Chemistry in International Chemicals Management”** followed. After the presentations on the topic, a panel discussion investigated the question of whether Sustainable Chemistry could be a pacemaker for international management for chemicals and waste.

The presentation was followed by a moderated panel discussion on **“UNEP’s Specialized Manual on Green and Sustainable Chemistry Education”**. The panelists gave an overview of the 10 Objectives and Guiding Considerations for Green and Sustainable Chemistry (GSC) and of the Specialized Manual on Education. This continued with a deep dive on Green and Sustainable Chemistry learning at each stage of formal education. A panel discussion with the audience exchanging focused on key inspiring actions to transform and scale up education for GSC. Main questions, that arose were what gaps remain in the field of education and how UNEP’s 10 objectives and education manual on Green and Sustainable Chemistry are supporting to fill these gaps.

The day closed with examples of **ISC3’s capacity building, giving an example on capacity building regarding “Plastics in Sustainable Building”** with partners in Kenya, demonstrating the mutual value of the collaboration among CSTI and ISC3.

The growing momentum at the international level to advance Sustainable Chemistry provides ample opportunity to scale up ISC3’s offers and activities for capacity development

The Stakeholder Forum continues to be an opportunity to highlight the diversity of the topic and the stakeholders connected. They were invited to engage, voice their expectations, exchange views, and share their expertise.

More information on the Stakeholder Forum can be found on the [ISC3’s website](#).

### 3. Investor Forum

The Investor Forum 2021 took place in the frame of the very first „Global Sustainable Chemistry Week (GSCW)“ hosted by ISC3 and took place virtually from Tuesday, 9 to Thursday, 11 of November 2021. A total of 170 international guests from start-ups, finance, industry, science, NGOs and politics took part in the virtual third international Investor Forum.

During the Investor Forum, the ISC3 brought together innovative Sustainable Chemistry and Renewable Energy solutions in front of a distinguished international audience, with a special focus on investors. Investors had the opportunity to interact firsthand with Sustainable Chemistry start-ups and engage in in-depth conversations about their solutions. Additionally, the ISC3 presented diverse panels in the topics of new and alternative business models; regulation and reporting in connection with chemical-related restrictions and the role of Sustainable Chemistry in the energy transition and ways forward. The Investor Forum was concluded with the ISC3 award ceremony of the Innovation Challenge 2020/2021.

In the three-day event, Dr. Alexis Bazzanella, Director of the ISC3 Innovation Hub, welcomed the international audience and was complemented by Ms. Andrea Ortega, Junior Communication Manager ISC3 IH, Germany, and Ms. Juanita Halblaub, International Relations Manager ISC3 IH, Germany, who moderated through the sessions on the second and third conference day respectively.

#### Day 1-3

On the first day, the session opened with an introduction on alternative and sustainable business models held by Prof. Dr. Thomas Clauß, WIFU-Endowed Chair for Corporate Entrepreneurship & Digitalization in Family Business at Witten/Herdecke University, Germany; Adjunct Professor for Business Model Innovation at University of Southern Denmark, Denmark. This was followed by a panel discussion, moderated by Ms. Alicia Sornson, Manager, Programs and Partnerships - MENA at Village Capital, United States of America. Together with Ms. Zubeida Zwavel, Executive Director at the Centre for African Resource Efficiency and Sustainability (CARES), Republic of South Africa, Mr. Thomas Jakl, former President of the EU Council working group on international environmental policy (chemicals) and Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Co-Author of „Chemical Leasing“ and „Chemical Leasing goes Global“, Austria, Prof. Dr. Thomas Clauß, WIFU-Endowed Chair for Corporate Entrepreneurship & Digitalization in Family Business at Witten/Herdecke University, Germany and Adjunct Professor for Business Model Innovation at University of Southern Denmark, and Mr. John Kayenje, Cost Containment Manager, Crown Beverages Ltd., Uganda, she discussed the topic of sustainable and alternative business models.

On the second day, the session opened with a discussion on finance and sustainability as an introduction to the current discussions on taxonomy held by Mr. Blake Goud, CEO at Responsible Finance & Investment (RFI) Foundation, United Kingdom. It was followed by a panel discussion, moderated by Ms. Cornelia Frentz, Manager Corporate Governance at European Circular Bioeconomy Fund (ECBF). The panelists consisted of Mr. Blake Goud, CEO at Responsible Finance & Investment (RFI) Foundation, United Kingdom, Prof. Dr. Marzia Traverso, Rapporteur at the Technical Working Group European Platform on Sustainable Finance, Belgium, Prof. Dr. Martin Führ, Research focuses on environmental law and industrial plant law, and regulatory impact assessment, legal expert for the German Bundestag, and Mr. Peter van der Zandt's, Director of Risk Management at the European Chemicals Agency, Finland.

On the third day, Dr. Alexis Bazzanella, Director of the ISC3 Innovation Hub moderated a lively panel discussion on the role of Sustainable Chemistry (SC) in the energy transition and ways forward between Mr. Thomas Goergen, VP Global Alliance Management at Covestro Deutschland AG, Germany, Dr. Soren Bowadt, European Commission, Deputy Head of Unit „B3 Industry“, European Health and Digital Executive Agency (HaDEA), Belgium, Ms. Sonia Rueda, Chemical Industry Advisor at GIZ PtX-Hub, Germany, Mr. Florian Sigmund, Investment Manager at frankly.green, Germany, and Ms. Florentine Van den Eerenbeemt, Responsible Investment Specialist at NN Investment Partners, Netherlands.

All three panel discussions were complemented by pitching sessions with a total of 20 innovative start-ups on all three event days. In addition, 20 additional start-ups from the field of Sustainable Chemistry presented their innovations on a separate meeting platform for investors and start-ups, as well as in a digitally available IF21 Investor Brochure. During the individual start-up and investor meetings, a total of almost 1000 minutes of B2B meetings were streamed.

In addition, the best start-up pitch per event day was selected by the international audience and celebrated with an ISC3 Investor Forum Audience Award. The winners are the following:

The Egyptian start-up „Mycelium“, which is the winner of the first day, is a biotech start-up that produces an innovative and plastic-like material from mushroom and crop waste. The Ugandan start-up „Ourroots Africa“, winner of the second day, provides plant based sustainable alternatives to single use plastic and other plastics that are 100% biodegradable and compostable. The winner of the third day, the Kenyan start-up „LeafyLife“ is recycling waste diapers and sanitary pads into a fuel gel that emits 76% less carbon dioxide, no carbon monoxide, and no smoke or soot that lasts 10% longer than kerosene.

The ISC3 Investor Forum ended with the announcement of this year's winners of our Innovation Challenge on Renewable Energies and Sustainable Chemistry. The ISC3 Innovation Challenge aims to engage, award and promote Sustainable Chemistry innovators and their original solutions.





## 4. Programme partner events

The ISC3 was delighted by the interest shown by partners to participate in the first Global Sustainable Chemistry Week by contributing to the program. The events displayed the range of topics and areas touched by Sustainable Chemistry as well as the internationality of the stakeholders and their connections.

### 4.1. People, Plastics and Pollution: How Can Youth Engagement Solve the Global Challenges of Today?

On November 11, the United Nations (UN) Major Group hosted a session to support the voices of young people in the discussion about the UN SDGs in chemicals & waste and the chemical sector. The session took place during the „ISC3 Youth Day“ as part of the 1st Global Sustainable Chemistry Week.

The event was kicked off by two impulse speakers from different regions in India that explained the challenges they face in their daily lives and within their community due to chemical exposure and environmental pollution.

Each speaker took the opportunity to point out their perspective on how to better engage young people and especially young chemists in decision-making processes. The Vice Chair of JCF argued that young scientists in the chemical sector should be supported and educated further. He highlighted the importance of listening to experts with a STEM and trans-disciplinary background and pointed out that scientific knowledge changes constantly.

Dr. Claudia ten Have from the Minamata Secretariat elaborated on ongoing high level work projects such as setting up international agreements (e.g. chemical conventions) around various chemicals (e.g., mercury, hazardous chemical with a lot of applications). Thus, another flanking task of the secretariat is to help countries to access financial resources and to act as a knowledge resource.

Dr. Natalie O’Neil from Beyond Benign pointed out that chemistry education that includes Green and Sustainable Chemistry is the piece that is missing and what chemistry students want. Hereby, she highlighted that sustainability is a mindset, which includes the reflection on how one minimizes impact on human health and the environment. Dr. O’Neil mentioned educational institutions such as the University of Toronto, which started to educate themselves on Sustainable Chemistry because it was just not covered in the curriculum. There are still other resources, such as virtual availability of scientific experts.

All speakers agreed that young people should be further encouraged to make their voices heard as (among other things) they offer new perspectives to industries that have in the past made some mistakes. The younger generation comes with “less baggage” and with a “blank slate” while other behaviors that have been engraved in the minds of other-generation scientist, are not applicable. Additionally, the panelist coincided with each other on the urgent need for people with experience in fields such as chemistry, sustainability and related subjects.



### 4.2 EU Regions: Key Players in the Transition to a sustainable and circular chemical sector

In the framework of the European association European Chemicals Regions Network (ECRN), an online conference was organised to discuss the role of regions as key players in the transition to a sustainable and circular chemical sector. Therefore, Minister Baljeu opened the conference remarking on the strategic role of the chemical sector for the European economy. Two representatives from Spain and Italy introduced two projects developed under the Chemicals Partnership on the S3 Platform (“Bi-rex” and “Flow Chemistry Project”). The conference pointed out that projects come with challenges such as the identification of the business model, financing problems (e.g., pre-financing in the initial phases of the project), legal aspects and an intellectual property or interregional dimension (namely how to engage various regional actors). Another pressing challenge is how to involve private companies.

Representatives from the European Commission (Ms. Ulla Engelmann, DG GROW and Ms. Monika Zsigri, DG REGIO) highlighted the role of networks to better disseminate information and enable a bottom-up approach. For better interregional cooperation and cohesion in Europe, instruments were introduced such as the S3 partnerships on the 3 Thematic Platforms (industrial modernization, agri-food, energy) and the new Interregional Innovation Instrument (I3) programme (to be launched in Q4/2021).

To give some firsthand insights, Ms. Heleen van Wijk (Groningen Seaport) and Ms. Lia Voermans (Brightlands Chemelot Campus) brought the experience of two success stories from the Netherlands to the table.

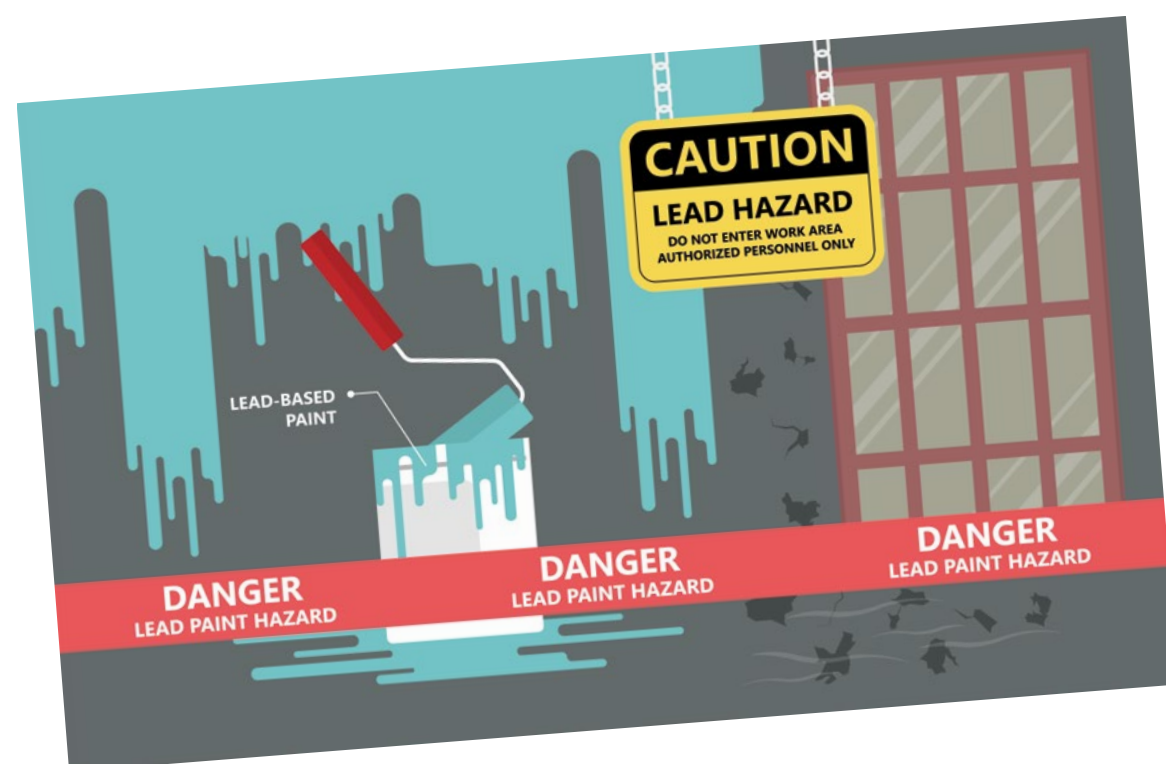
Ms. Valentina Colombo brought the closing remarks from ECRN President, Mr. Fabrizio Sala. Once again the role of interregional cooperation in advancing the chemical sector in Europe and the importance of stronger and more secure supply chains for strategic raw materials like chemicals was stressed.



### 4.3. Towards a toxic free future: Success Factors of Chemical Policymaking on the Example of Lead in Paint

Lead is among the top ten chemicals of major health concern. One of the main causes of lead exposure is through lead in paint.

The continued use of lead paint creates a significant risk especially for children (in households, toys, bedrooms). However, only a few countries globally have enacted comprehensive bans on the use of lead additives in all paints. The situation is similar when it comes to other top chemicals of concern. The case of the Philippines, where legislation prohibiting lead in paint phased out lead effectively, can be seen as a best-case example and the exchange of lessons learnt should be encouraged.



### Summary

The webinar by the World Future Council (WFC) brought together stakeholders for the purpose of discussing best-practices and a way forward. Country-specific contributions came from policymakers (Germany, USA), representatives from environmental protection authorities as well as from civil society (Philippines, Ethiopia) which implemented the first successful lead-safe paint regulation in whole Southeast Asia, which was recently honored with the Future Policy Award 2021 by WFC.

The panelists discussed what triggers governments to change their chemical policies, based on exemplary national lead paint policies (e.g., drivers and barriers of such policies; lessons learnt). Furthermore, they exchanged views on success factors that are fundamental to effectively regulate top ten chemical such as lead and how a combination of them can bring about major results that represent impactful options for worldwide replication.

The panel discussion was kicked off by a keynote from Dr. Jutta Emig from the German Environmental Ministry, where she pointed out how important the awareness on sound chemical management around the globe, especially on the elimination of lead in paint, is.

Followed by a brief introduction of UN-defined “emerging issues of environmental concern” with a focus on “lead in paint”, the panelists took a deep dive into their experience of national policy implementation.

Mr. Navaluna (Philippines) reported on the best-practice example in his country, where he showcased the key success factors of policymaking by outlining key drivers (e.g., lead campaigns), methodology (e.g., monitoring) and the necessary interplay of government, industry, and civil society.

Dr. Amera (Ethiopia) pointed out how the Philippines’ policy model served to eliminate lead in paint within his country. He highlighted how important the buy-in of the industry (in terms of policy formulation and participation) was in the policy-making process.

The panelist agreed that raising political awareness through the science-policy-interface, campaigns, commitment from all stakeholders and creating synergies between the different chemical management conventions, approaches and partnerships are key elements of success.

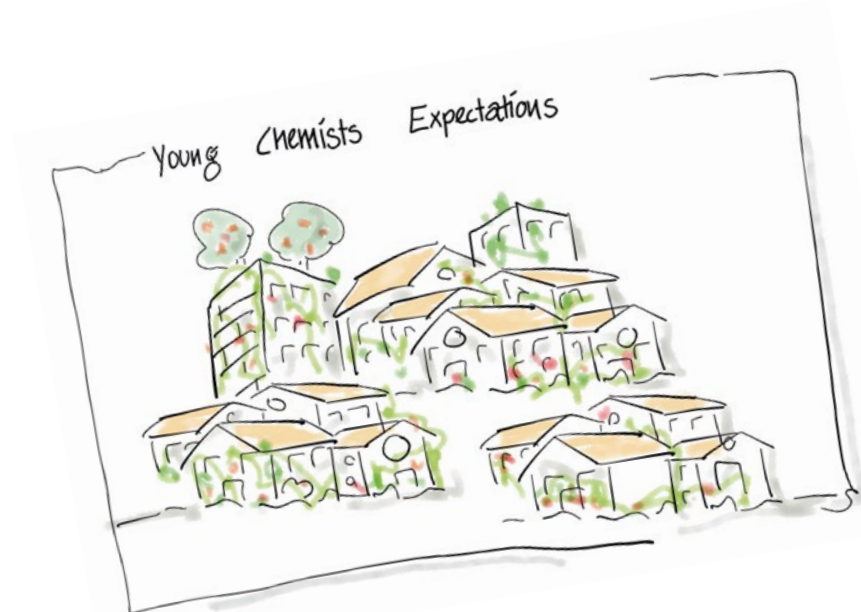
However, leaders and leadership on national and international level are, too, essential to achieving the further phase-out of chemicals of concerns and a healthy planet.

#### 4.4. Defining the path to a Non-Toxic Circular Economy: “Theory of Change” workshop as part of the Global Sustainable Chemistry Week

The Research Group sofia at the Darmstadt University of Applied Sciences published a/ the “Theory of Change” workshop co-organised by the Baltic Environmental Forum in Germany (BEF) as part of the ISC3 Global Sustainable Chemistry Week 2021.

With the European Green Deal in mind, the overall aim of the workshop was to explore essential steps towards the declared vision of a non-toxic, circular, resource-friendly, and climate-neutral economy by 2050. Participants came mainly from academia, administration, and government, with minor representation of industry and NGOs.

Drawing from the “Theory of Change” (ToC) concept, combined with methodological elements from scenario building, the workshop conducted a cross impact analysis of six policy areas relevant for the vision: climate change policies, chemicals policies, product and waste policies, value chain interaction policies, consumer empowerment policies and green finance policies. According to the results, chemicals policies and climate change policies are driving forces in the transition towards non-toxic and resource-preserving circular economy. In contrast, the roles of consumer empowerment and green finance instruments shall not be overestimated. With this in mind, the contribution outlines the setting up of a more in-depth ToC workshop to broaden and deepen the discussion. A workshop report presenting the key findings of the one carried out can be found on the website of sofia Darmstadt ([here](#)). The contribution outlines the setting up of a more in-depth ToC workshop, that will take place in Paris in April 2022.



#### 4.5. Panel discussion on Young Chemists’ Expectations of the Chemical Sector

The panel discussion “Young Chemists Expectations of the Chemical Sector – A Multi-Stakeholder Discussion by JCF/ISC3” discussed the [paper](#) published and written by Emiel Dobbelaar and Janine Richter, supported by ISC3’s input. The publication was structured along the different questions from a survey done with international young chemists. These guiding questions looked at Young Chemists Expectations, Products & Processes of the Future, The future of Chemistry Education, and Implementation Levels. The publication’s guiding questions also structured the panel discussion.

The panel’s multi-lateral exchange reflected the expectations and opinions of young chemists towards the chemical sector based upon the article and the panelists’ own insights and experience. The aim of the discussion was to include young chemists and their views in the dialogue of UN SDGs for the benefit of society.

Young people are seen as a determining force in the transformation of the chemical sector from academia to the laboratory, and products. The overall importance of solutions that maximize the benefits to society while minimizing the risk were pointed out. There are different focus points in research and importance seen by the young chemists, for example agriculture vs. technical invention as driving forces towards Sustainable Chemistry.

Therefore, more investments in innovation and laboratories are necessary to have more young people engaged in chemistry. But at the same time, young people must introduce their interests and passions about sustainability at all levels of university and the work force.

The path towards Sustainable Chemistry could and should be supported by politics. Young chemists want politics to assign a higher priority to Sustainable Chemistry in terms of funding and scientific advisors, as politics can guide an industrial development of sustainability by implementing sanctions and incentives. Additionally, close cooperation between industry, authorities, and civil society is seen as necessary.

It was seen as a promising and important step, that the EU is implementing a chemical strategy for sustainability which is expected to further improve chemicals management, aiming to close gaps in chemical safety by involving all aspects of the life cycle, thereby promoting innovation for safe and sustainable chemicals and products.

It was agreed that fighting chemical problems with chemical solutions is not fighting fire with fire, but actually the only way to solve the challenges on our way towards the SDGs, because chemical problems can only be solved by chemical solutions.

## 4.6. How to increase your Natural Capital as chemical business' by MVO Nederland

MVO Nederland is the largest European sustainable business network representing about 1.800 companies. The movement is made for "new economy" entrepreneurs whose goal is a future-proof economy (climate neutral, nature inclusive, inclusive, circular, and built around fair supply chains).

The workshop "How to increase your Natural Capital as chemical Business?" was moderated by Elsbeth Roelofs, the senior program manager on Sustainable Chemical Business. She kicked-off with the exploration of the term "natural capital" and its relation to the "chemical sector". This aimed at deepening the knowledge of the term and to discuss the perspectives on "natural capital". Most recently, the interdependence between nature and the economy has become more evident with natural disasters becoming costly for society and even destroying people's basis of existence.

This assumes that all businesses impact and depend on nature. This relationship delivers costs and benefits back to themselves and to society. This in turn leads to risks (such as reputational, social, financial or legal risks) and opportunities for business (such as new market niches or operational opportunities).

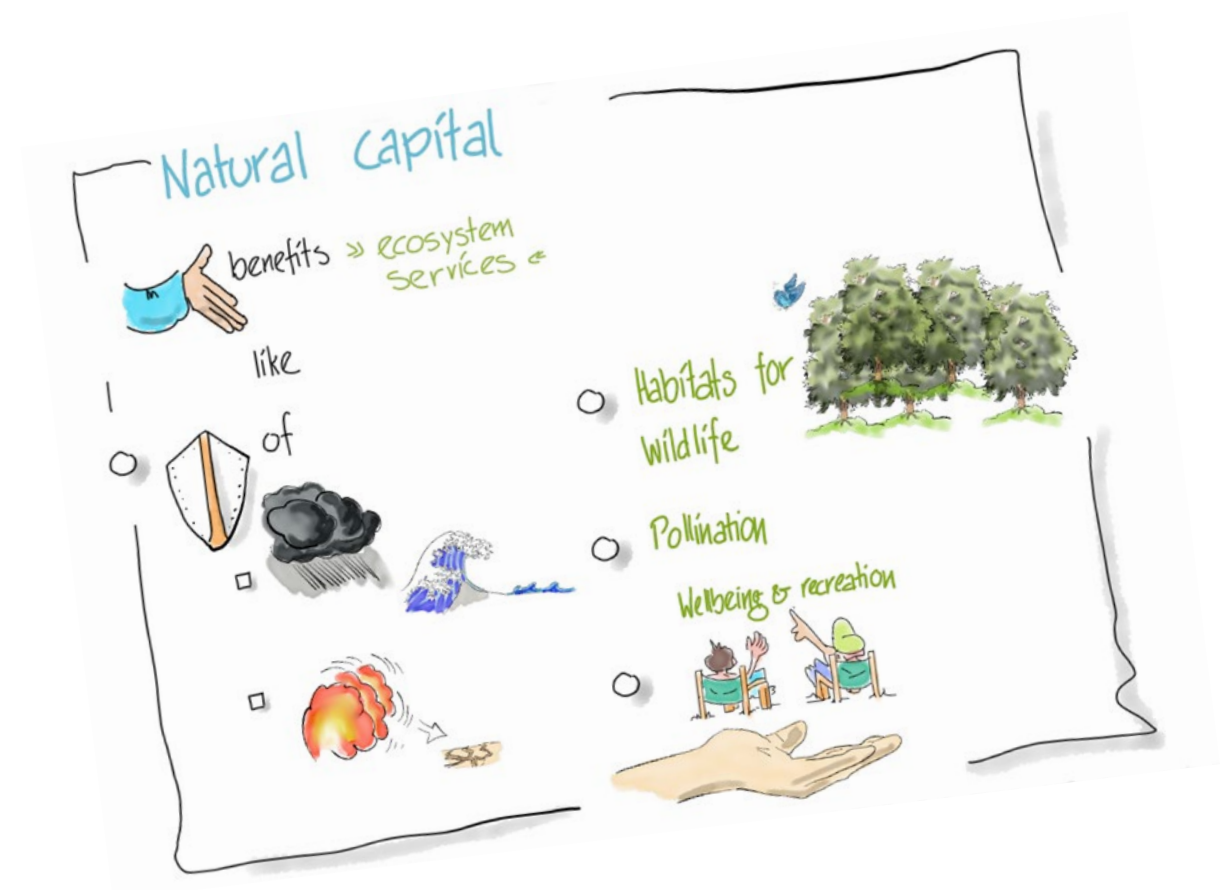
The workshop pointed out the importance of taking potential biodiversity collapse into account. This is based on the findings of the "Global Risks Report 2021 by the World Economic Forum" (published every year), where among the top five risks are in "green" which means, they are related to nature (such as extreme weather, climate action failure, natural disaster, biodiversity loss, human made environmental disasters). Currently, global risks with a special focus on nature and climate are being analyzed more frequently and companies all over the world are becoming more aware of the risks and opportunities that come with "nature".

Furthermore, the workshop outlined the drivers for biodiversity loss with the example of the Dutch food industry, beverage and tobacco sector, and chemicals and products. The first group is characterized by a high supply chain biodiversity loss (through the indirect effect of land use). The second group, chemicals and products are characterized by very high direct greenhouse gas emissions (GHG). The workshop highlighted how dependent the chemical sector is of a (functioning) ecosystem (including areas such as water or stable climate conditions).



Ms. Roelofs introduced MVO's contribution to the exchange format "Community of Practice (CoP) Nature Inclusive Chemical Business", whereby companies jointly explore the risks and opportunities for natural capital and biodiversity restoration in the company, along the value chain and within the sector. The modus operandi of this format is demand driven and dynamic learning. Companies determine which issues or questions are being explored and they learn from each other and from experts. The target groups include sustainability managers, R&D, facility managers, and investor relations managers. The CoP is set up for a duration of two and a half years.

As an outcome, the participants acknowledged that climate and biodiversity are intrinsically linked. They influence each other in a two-way interaction, and they cannot be seen as separate entities. The participants agreed that this concept should be kept in mind when crafting chemicals-related business strategies in the future.





## 4.7. MSP Institute

The [MSP Institute e.V.](#) is a German NGO and is passionate about high-quality multi-stakeholder processes (MSPs) for sustainable development. The MSP Institute brings knowledge, skills, experience and networks to processes of engagement, collaboration and learning at local, national and international levels, and advocates for investing in designing, facilitating and evaluating MSPs. Regarding “Gender and Chemicals” the institute steers a project which is aiming to improve integration of gender aspects in international chemicals and waste management and increase the participation of women’s organizations and gender experts in the SAICM Beyond 2020 process.

The virtual workshop “Gender and Chemistry – from inequalities to sustainability” which took place on 12th of November 2022 presented key gender aspects (social and biological) in the chemicals sector and how a gender analysis can be a solution to raise awareness. Via an interactive online mural board, guided by the moderator Dr. Minu Hemmati, the workshop participants brainstormed collaboratively on experiences in their respective sectors and ideas on how to promote gender-just and Sustainable Chemistry.

This is important against the background that due to the division of labor, men and women are affected by different chemicals in different sectors. Men are, for example, more directly affected, whereas women are more indirect and long-term affected by indoor pollution. Additionally, due to gender roles, women and men tend to use different products.

Currently, social aspects do not receive sufficient attention in chemical safety and sciences. In a range of sectors (such as pharmaceuticals, cosmetics, agriculture/mining, science/industry, etc.) being a man or a woman has a significant impact (such as on health, lack of gender data and gender research, roles in society, division of labor, exposure to chemicals during pregnancy, barriers for women careers etc.).

The MSP Institute pointed out that gender inequalities are omnipresent in our societies and their dimensions also permeate all chemical sectors. The MSP Institute proposes gender analysis as a tool to understand and unpack root causes of unsustainable behavior and to think outside the ‘masculine’ box with „gender lenses“.

The SDGs pose a window of opportunity to connect the topics of gender, sustainability, and chemistry, whereas Gender Mainstreaming and chemicals and waste management are cross-cutting tasks for many SDGs. According to the MSP Institute, Sustainable Chemistry is not possible without gender equality. There already is some awareness of the challenges but no awareness of the transformative potential yet. Therefore, gender equality must be part of the holistic framework of Sustainable Chemistry, according to the MSP Institute. As an outcome, the participants brainstormed on how to engage more women in the field of Sustainable Chemistry (e.g., by growing a network of women experts or other interest parties) and expressed their desire that more readings on this relevant topic should be published in the future (e.g., the [ISC3 Women in Sustainable Chemistry](#) Article Series among others).



**We transform chemistry**

**ISC3**  
**International Sustainable Chemistry**  
**Collaborative Centre**

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