

UNEP Manuals on Green and Sustainable Chemistry – Highlighting Education

1st Annual ISC3 Global Sustainable Chemistry Week – Stakeholder Forum

November 12th, 2021 - 15h10-16h20, CET

Background Information:

In the landmark [Global Chemicals Outlook II](#) (GCO-II), it was concluded that “Further action at all levels is needed to disseminate best practices in green and sustainable chemistry education and overcome barriers in academia and the private sector”. UNEP is also working to respond to [Resolution 4/8](#), adopted at the 4th session of the United Nations Environment Assembly in 2019. The resolution recognizes the value of developing a better understanding of sustainable chemistry opportunities. It further requested UNEP to synthesize UNEP’s analysis of best practices in sustainable chemistry into manuals on green and sustainable chemistry. The first of the requested manuals and its accompanying executive summary are now available online. [The Green and Sustainable Chemistry: Framework Manual](#), developed in consultation with experts from industry, academia, government, international organizations and NGO’s, provides a high-level overview of various scientific, technical and policy aspects of green and sustainable chemistry.

Building upon the recommendations of the GCO-II and the Framework Manual expert group, UNEP is finalizing the development of a specialized manual on green and sustainable chemistry education. It aims to stimulate and facilitate action in the realm of green and sustainable chemistry education, empowering stakeholders to advance the 10 objectives and guiding considerations. By including formal, non-formal and informal aspects of green and sustainable chemistry learning, the manual caters to education system actors as well as strategic change agents which influence the way chemistry is practiced. A succinct synthesis of all dimensions of green and sustainable chemistry learning will be offered in the manual along with practical guidance, illustrative examples and organized educational resources. Ultimately, the goal of the manual is to raise awareness, enhance knowledge and develop skills of all stakeholders who have a role to play in accelerating the transformation to green and sustainable chemistry.

Goal of the Event:

The event, organized by the Chemicals and Health Branch of the United Nations Environment Programme (UNEP), will seek to provide attendees with an overview of the specialized manual on Green and Sustainable Chemistry Education, and recall the 10 objectives and guiding considerations for green and sustainable chemistry from the Framework Manual.

The event will also feature a panel to highlight the role of education in advancing and scaling-up green and sustainable chemistry.

Specifically, the event will:

- Present the 10 objectives of UNEP framework manual, and an overview of the contents and key messages from the specialized manual on Green and Sustainable Chemistry Education
- Provide perspective from panelists on key inspiring actions to transform and scale-up education for green and sustainable chemistry
- Provide a platform for exchange and discussion on green and sustainable chemistry learning and education.

Proposed Agenda:

Moderator: Monika MacDevette – Head, Chemicals and Health Branch, UNEP

Session 1 – Presenting the Manuals (25 Minutes)

1. *Welcoming remarks* – **Moderator** – (5 Minutes)
2. *Overview of the 10 Objectives and Guiding Considerations for Green and Sustainable Chemistry and of the Specialized Manual on Education* – **Achim Halpaap, Lead Author**– (15 Minutes)
3. *A deep dive on green and sustainable chemistry learning at each stage of formal education* – **Colin Hannahan, Consultant, UNEP** – 5 minutes

Session 2: Panel Discussion and Audience Exchange – Action on Green and Sustainable Chemistry Education - (45 Minutes)

1. All panelists will be introduced by the moderator. Each panelist will be given the floor to share their insights on the following – (25-30 Minutes)
 - Key inspiring actions to transform and scale up education for GSC; and
 - What remains to be done, and how the UNEP 10 objectives and education manual on Green and Sustainable Chemistry, can support filling these gaps.

Panelists:

- **Amy Cannon, Executive Director/Co-founder, Beyond Benign** - *Promoting Green and Sustainable Chemistry Education through Curriculum reforms and fostering learning communities*
 - **Nydia Suppen, Director, Centro de Análisis de Ciclo de Vida y Diseño Sustentable (CADIS)** - *Illustration of non-formal and informal learning to advance green and sustainable chemistry.*
 - **Rovani Sigamoney, Engineering Programme Specialist, UNESCO** - *UNESCO's contribution to green and sustainable chemistry education through Basic Sciences.*
 - **Claudio Cinquemani, Director of Science and Innovation, ISC3** - *Using the Green and Sustainable Chemistry: Framework Manual as a tool to guide capacity-building activities.*
2. Following the panel, the floor will be opened for the audience to pose questions and establish a dialogue with the panelists and presenters – (10 – 15 minutes)
 3. The moderator will provide concluding remarks and close the session – (5 minutes)