# UNEP Workshop on Green and Sustainable Chemistry in the Buildings and construction Sector

## 20 January 2023 – 10h00 – 17h00 (CET)

## Background

With construction consuming almost 50% of the total material footprint across the global economy, and urbanization driving rapid growth in the sector, timely action is needed to address the environmental impacts of building materials (UNEP 2019[1], UNEP 2021[2]). As the buildings and construction sector grows, so will the global market for construction chemicals, which is expected to reach over 50 billion USD by the end of 2024 (UNEP 2019). While risks to human and environmental health may emerge from a chemicals and waste perspective, new opportunities to implement green and sustainable chemical innovations will also arise. Recognizing these opportunities, UNEP aims at supporting application of green and sustainable chemistry solutions to the buildings and construction value chain.

## Purpose

The workshop will aim to bring together experts in green and sustainable chemistry, and those working towards a more sustainable buildings and construction sector. Experts at the workshop will have the opportunity to discuss and exchange on the potential of chemical innovations to support a more sustainable buildings and construction value chain.

A key outcome of the workshop will be the identification of priority areas and strategies to unlock the potential of green and sustainable chemistry innovation and scale-up implementation within the buildings and construction sector.

The following topics and elements will be discussed at the workshop:

- The application of UNEP's Ten Objectives and Guiding Consideration for Green and Sustainable Chemistry to the buildings and construction sector.
- Present an overview of the materials challenge in the buildings and construction sector.
- Illustrative examples of green and sustainable chemistry action in the buildings and construction sector.
- What information is necessary along the value chain and where it is needed for sound management over the life cycle of materials used in buildings.
- Key actions and strategies to advance the integration of green and sustainable chemistry innovation into the buildings and construction sector.

[1] *United Nations Environment Programme (2019). Global Chemicals Outlook II: From Legacies to Innovative Solutions - Implementing the 2030 Agenda for Sustainable Development. https://wedocs.unep.org/bitstream/handle/20.500.11822/28113/GCOII. pdf?sequence=1&isAllowed=y.*

[2] *United Nations Environment Programme (2021). Catalysing Science-based Policy action on Sustainable Consumption and Production – The value-chain approach & its application to food, construction and textiles. Nairobi." https://www.oneplanetnetwork.org/sites/default/files/report_unea5_catalysing_science-based_policy_action_on_scp_-_task_group_irp-one_planet_0.pdf*

*Preliminary Agenda – 20 January 2023*

| ***Session 1 - Green and Sustainable Chemistry Innovation towards a more sustainable buildings and construction value chain*** | | |
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| ***Time*** | ***Activity*** | ***Presenter/Responsible*** |
| ***9h30 – 10h00*** | Welcome coffee and registration | |
| ***10h00 – 10h05*** | Opening remarks | UNEP |
| ***10h05 – 10h15*** | *Tour-de-table* (name, title and organization) | All |
| ***10h15 – 10h30*** | Overview of the GlobalABC and the materials challenge in the buildings and construction sector | UNEP |
| ***10h30 – 10h45*** | UNEP Manuals on Green and Sustainable Chemistry and the Ten Objectives and Guiding Considerations for Green and Sustainable Chemistry | UNEP |
| ***10h45 – 11h00*** | Question and Answer Session | UNEP Moderation |
| ***11h00 – 11h15*** | Background document on the application of UNEP's Green and Sustainable Chemistry Objectives and Guiding Considerations in the buildings and construction sector. | Bioregional |
| ***11h15 – 11h45*** | Group discussion | UNEP Moderation |
| ***11h45 – 12h00*** | Update on key outcomes from IOMC workshop on Chemical intensive economic sectors and value chains under the new "beyond 2020" framework on chemicals and waste. | Achim Halpaap |
| ***12h00 – 13h00*** | Breakout groups – Session 1<br><br>*Key Outcome – Priority activities and products to target for further development of green and sustainable chemistry innovation* | UNEP Facilitation |
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| ***13h00 – 14h00*** | **Lunch break** | |
| ***14h00 – 14h30*** | Outcomes of the breakout groups | UNEP |
| ***14h30 – 14h45*** | Illustrative examples of Green and Sustainable Chemistry action to promote a more sustainable buildings and construction sector | Participants |
| ***14h45 – 15h00*** | **Coffee Break** | |
| ***Session 2 - Key Actions and strategies to integrate green and sustainable chemistry innovation into the buildings and construction value chain*** | | |
| ***15h00 – 16h15*** | Breakout groups – Session 2<br><br>*Key Outcome – Identification of detailed actions, and stakeholder responsibilities to scale-up priority areas of green and sustainable chemistry innovation for the buildings and construction sector* | UNEP |
| ***16h15 – 16h45*** | Outcomes of the breakout groups | UNEP |
| ***16h45 – 17h00*** | Closure and next steps | UNEP |

*Registered Participants*

| Name | Organization | Country |
|---|---|---|
| Marie-Ange Baucher | OECD | |
| Christopher Blum | German Environment Agency (UBA) | Germany |
| Kerstin von Borries | Technical University of Denmark | Denmark |
| Jan Boström | SundaHus | Sweden |
| Ernest Dione | DEEC/MEDDTE SENEGAL | Senegal |
| Gabriela Eigenmann | UNIDO | |
| Jutta Emig | German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) | Germany |
| Pascal Eveillard | SAINT-GOBAIN | France |
| Max Folkett | UK Department for the Environment, Food and Rural Affairs (Defra) | United Kingdom |

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| Henning Friege | N³ Thinking Ahead Dr. Friege & Partners | Germany |
| Ian Hamilton | University College London | United Kingdom |
| Colin Hannahan | UNEP – Consultant, Chemicals and Health Branch | |
| Johannes Heister | World Bank | |
| Seema Issar | DGNB | Germany |
| Asmae Khaldoun | Al Akhawayn University | Morocco |
| Johannes Kreissig | DGNB/WGBC | Germany |
| Jens Krol | International Sustainable Chemistry Collaborative Centre (ISC3) | Germany |
| Samantha Kumarasena | National Cleaner Production Centre, Sri Lanka | Sri Lanka |
| Stewart Muir | Bioregional | United Kingdom |
| Barbara Perthen-Palmisano | Federal Ministry for Climate Action | Austria |
| Eduardo Caldera Petit | UNEP, SAICM Secretariat | |
| Federica Pozzi | Environmental Coalition on Standards (ECOS) | Belgium |
| Nicolas Ramirez | Green Building Council Costa Rica | Costa Rica |
| Steffi Richter | German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) | Germany |
| Rana Veer Pratap Singh | THE ENERGY AND RESOURCES INSTITUTE (TERI) | India |
| Stacy Smedley | Building Transparency | USA |
| Hans-Christian Stolzenberg | German Environment Agency | Germany |
| Olena Tabachuk | Resource Efficient and Cleaner Production Centre - Ukraine | Ukraine |
| Thomas Wanner | ISC3 | Germany |
| Susan Wilburn | HCWH | |
| Oliver Wootton | UNITAR | |
| Vânia Zuin | Leuphana University and UFSCar | Brazil |

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| Jacqueline Alvarez | UNEP – Economy Division | |
| Sandra Averous Monnery | UNEP - Chemicals and Health Branch | |
| Jonathan Duwyn | UNEP – buildings and construction | |
| Mona Mohammed | UNEP Life Cycle Initiative | |
| Achim Halpaap | UNEP - UNITAR | |
| Peggy Lefort | UNEPFI | |
| Nora Steurer | UNEP – buildings and construction | |
| Eloise Touni | UNEP – Global Environment Facility | |