



ONLINE TRAININGS  
“GREEN CHEMISTRY OPPORTUNITIES FOR A CIRCULAR ECONOMY”

AGENDA

**REGISTRATION**

**Date:** 5 and 7 September 2023

**Start:** 14:00 (EEST)

**End:** 16:00 (EEST)

**Format:** web-based video conference via MS Teams

**Language:** Ukrainian

## TRAININGS “GREEN CHEMISTRY OPPORTUNITIES FOR A CIRCULAR ECONOMY”

5 and 7 September 2023, 14:00-16:00 (EEST), online via MS Teams

### Agenda

**Moderator:** Ms. Kateryna Romanova, Communication and Advocacy Expert of RECP, Resource Efficient and Cleaner Production Centre

Time (EEST)	Item
14:00 – 14:10	<i>WELCOMING REMARKS</i>  <b>Mr. Yurii Bondarenko,</b> Deputy Head of the Environmental Safety Department, Ministry of Environmental Protection and Natural Resources of Ukraine  <b>Mr. Andrii Vorfolomeiev,</b> Director, Resource Efficient and Cleaner Production Centre
14:10 – 14:20	<i>GREEN CHEMISTRY AND CIRCULAR ECONOMY: OPPORTUNITIES AND BENEFITS</i>  <b>Ms. Olena Tabachuk,</b> Chemical Management Expert, Resource Efficient and Cleaner Production Centre
14:20 – 15:00	<i>IMPLEMENTING GREEN CHEMISTRY PRINCIPLES FOR CIRCULAR ECONOMY</i>  <b>Mr. Oleksandr Khokhotva,</b> Chemical Management Expert, Resource Efficient and Cleaner Production Centre
15:00 – 15:10	<i>EXERCISE</i>
15:10 – 15:20	<i>Q&amp;A SESSION</i>
15:20 – 15:35	<i>GREEN CHEMISTRY ALTERNATIVES FOR POPS AND MERCURY</i>  <b>Ms. Olena Tabachuk,</b> Chemical Management Expert, Resource Efficient and Cleaner Production Centre
15:35 – 15:50	<i>Q&amp;A SESSION. DISCUSSION</i>
15:50 – 16:00	<i>CLOSING REMARKS. WRAP-UP OF THE EVENT</i>

## **Event objectives**

- raise awareness among participants on green chemistry and its principles;
- present green chemistry opportunities to support a circular economy;
- discuss new opportunities related to green chemistry in Ukraine;
- show that green chemistry works, showcasing real examples.

## **Participants**

The event will gather experts and researchers working on issues related to green chemistry and engineering, green economy, circular economy, resource efficiency, and environmental protection from central and local authorities, enterprises, expert organizations, business associations, NGOs, and educational and research institutions.

On **5 September**, the training is aimed at participants with a basic knowledge of chemistry.

On **7 September** for those with advanced knowledge of chemistry and chemical technologies.

Practical exercises will be adapted to the audience.

## **Organizers**

The trainings is organized by the RECP Centre in Ukraine in collaboration with the Center for Green Chemistry & Green Engineering at Yale University under GEF-funded UNIDO project “The Global GreenChem Innovation and Network Programme”.

## **Practical information**

The trainings will be organized online on 5 and 7 September 2023 (14:00 - 16:00 EEST) using the MS Teams. The events will include presentations, exercise and discussion with participants. The events will be held in Ukrainian.

Interested participants should register in advance by filling out the [form](#).

Participation in the training is free of charge. The number of participants is limited. All attendees will receive certificates for participation in the training.

## **Background**

The training will take place on 5 and 7 September 2023 (14:00 - 16:00 EEST) (tbc) within The Global GreenChem Innovation and Network Programme (GreenChem). It will be delivered online, using the Zoom or MS Teams.

Chemicals are the building blocks for all materials and products. The selection of safer, more environmentally friendly chemistries can have a significant impact on the product life cycle, making these materials more sustainable in their manufacture, use, reuse and recycling, and ultimately its end of life. Consequently, careful chemistry decisions are fundamental to optimize materials and products for a sustainable circular economy.

Green Chemistry focuses on the development and application of chemicals with inherently benign and beneficial properties at all stages of their life cycles. Its purpose is not simply to reduce pollution through the elimination of hazards associated with chemicals, reagents, solvents, and products, but also to ensure that sustainability is considered already in the design process for innovations in the area. Green Chemistry touches virtually every business sector—food, energy, plastics, cosmetics, cleaning products, pharmaceuticals, etc. Due to the nature of green chemistry, it is an essential building block and guiding principle for the development of a circular economy.

Currently, financial, regulatory, organizational, and cultural barriers prevent the fast adoption of Green Chemistry. In industry, suppliers are under pressure to deliver chemicals faster on a regular basis. Hence, there is an inherent regulatory risk of switching to a new process, an upfront investment, the cost of redesigning existing infrastructures, and a barrier to change to new solvents and instrumentation respectively. Moreover, additional barriers include:

- lack of information about the availability of Green Chemistry alternatives and solutions,
- lack of demonstration of commercialized successful Green Chemistry solutions,
- limited connections between Green Chemistry innovators and industry,
- lack of awareness of the Green Chemistry principles, and
- the perceived high costs for small to medium-sized enterprises.

Entrepreneurs from the area of Green Chemistry are facing many challenges, including profitability and financial safety in the early years of business, difficulties securing instrumentation and laboratory space, as well as hurdles in the regulation of chemicals and chemical processes. Women undergo special constraints and inherent systemic barriers, including limited inclusion efforts, difficult access to special technical expertise and managerial training, and overall restricted opportunities.

In Ukraine, the Resource Efficient and Cleaner Production (RECP) Centre is the national partner in implementing “Global GreenChem Innovation and Network Programme”. Here, the Programme components:

- Green Chemistry Innovation and Inclusion Network for Capacity Building aims at the development of a robust Global Green Chemistry Innovation and Inclusion Network, connecting collectives and individuals, including scientists, entrepreneurs, and representatives from government, industry, academia, and non-governmental organizations.
- Green Chemistry Accelerator Programme focuses on the establishment and execution of six (6) multi-year accelerator programs, providing support and training for sustainable businesses and business ideas in the area of green chemistry, nurturing regional innovation ecosystems in the focus nations.
- Green Chemistry alternatives for POPs, mercury and micro-plastics for upscaling and replication demonstrates green chemistry alternatives and capacities in selected chemical & waste related focus sectors.

## **About GreenChem**

The Global GreenChem Innovation and Network Programme (GreenChem) aims to strengthen the sound management of industrial chemicals and their waste through better control, reduction, and/or elimination protocols, and specifically to scale up green chemistry solutions for persistent organic pollutants (POPs) and mercury replacement through capacity building, innovation, and the creation of a global green chemistry network fostering visibility, support, and implementation.

The project is funded by Global Environment Facility (GEF), implemented by the United Nations Industrial Development Organization (UNIDO) and executed by Yale University in close collaboration with governmental counterparts of six beneficiary focus countries (Indonesia, Jordan, Peru, Serbia, Uganda, and Ukraine).

For more information, please visit [www.globalgreenchem.com](http://www.globalgreenchem.com)