

Concept Note
Webinar Series and Webinar #2

**“Implementing the Global Framework on Chemicals (GFC)
through Safe and Sustainable Innovation: Global
Perspectives and Practice”**

Organized by ISC3, IOMC, & UNITAR

April to September, 2026 | Online

Second Webinar: 23rd July, 2026 / 2PM-3.30PM CEST

Background and Objective

Background information

In support of the [Global Framework on Chemicals \(GFC\)](#) and aiming to drive a global sustainable transformation of the sectors using and manufacturing chemicals, the International Sustainable Chemistry Collaborative Centre (ISC3), the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), and the United Nations Institute for Training and Research (UNITAR) are organizing a Webinar Series focused on how to produce sustainable products by design, in full alignment with the following GFC targets (among others)¹:

- Target A3 – By 2030, companies implement measures identified to prevent or, where prevention is not feasible, minimize adverse effects from chemicals throughout their life cycle.
- Target D1 – By 2030, companies consistently invest in and achieve innovations towards advancing sustainable chemistry and resource efficiency throughout the life cycle of chemicals.
- Target D2 – By 2035, Governments implement policies that encourage production using safer alternatives and sustainable approaches throughout the life cycle, including best available techniques, green procurement and circular economy approaches.
- Target D4 – By 2030, relevant stakeholders give priority to sustainable solutions and safer alternatives to harmful substances in products and mixtures, including in consumer products, in their research and innovation programmes.
- Target D6 - By 2030, sustainable chemical and waste management strategies have been developed and implemented for major economic and industry sectors that identify priority chemicals of concern and standards and measures, such as the chemical footprint approach, to reduce their impact and, where feasible, their input along the value chain.

¹ Including other related targets, such as: Target A2, Target B4, Target B5, Target D3, and Target E2

Introduction

The GFC (2023) is a unique multi-stakeholder framework that aims to prevent or minimize harm from chemicals and waste to protect the environment and human health. It supports innovation to provide better products that are safe and sustainable by design and advance sustainable consumption and production patterns, including through resource efficiency and circular economy approaches.

Safe and sustainable innovation in chemicals and materials has evolved through multiple international initiatives over the past decades. Since the late 1990s, the OECD has advanced sustainable chemistry² concepts and practical tools, including the [Safe\(r\) and Sustainable Innovation Approach for advanced materials](#), [guidance on designing sustainable plastics from a chemicals perspective](#), and the SAAToolbox to support substitution and alternatives assessment. The [UNEP Green and Sustainable Chemistry Framework Manual \(2021\)](#) further consolidated international understanding of how chemistry can contribute to sustainable development. In parallel, the ISC3 articulated [10 Key Characteristics of Sustainable Chemistry](#), framing it as holistic, precautionary and systems-oriented; ethically grounded and transparent; supportive of sound chemicals management; aligned with circularity and green chemistry; and applied across the full life cycle of products and services. Built on the body of work developed globally, the European Commission's Safe and Sustainable by Design (SSbD) approach (2022, revised in 2025) offers a structured, voluntary method to integrate safety and sustainability criteria into the innovation process.

Taken together, these and other initiatives demonstrate that safe and sustainable innovation in chemicals and materials is a wide, globally evolving movement to embed life-cycle thinking, hazard reduction, circularity and responsible innovation into chemicals management and industrial transformation, consistent with the ambitions of the GFC.

The Objective: Turning Frameworks into Practice

Despite global political commitments under the GFC and other instruments, implementation gaps persist - particularly at the interface between policy ambition and innovation practice. Many actors struggle to operationalize life-cycle thinking, substitute substances of concern early in design phases, and align innovation incentives with safety and sustainability outcomes across global value chains.

Acknowledging the challenges faced by governments, companies, practitioners and other stakeholders in understanding and implementing the GFC and the above-mentioned frameworks and concepts, **this Webinar Series will focus on outlining concrete measures, identifying what works well in practice, and creating a shared space for peers to exchange experiences and views, as well as to provide feedback.**

² Sustainable chemistry is the design, manufacture and use of efficient, effective, safe and more environmentally benign chemical products and processes. Within the broad framework of sustainable development, government, academia and industry should strive to maximise resource efficiency through activities such as energy and non-renewable resource conservation, risk minimisation, pollution prevention, minimisation of waste at all stages of a product life-cycle, and the development of products that are durable and can be re-used and recycled. [ENV/JM/MONO\(2002\)12](#)

As the first International Conference of the GFC is taking place in November 2026³, this is a valuable period for increasing outreach and supporting innovations.

Specific Objectives of the Webinar Series

This Webinar Series is expected to:

- Inform policy makers, industry representatives, and other stakeholders about ongoing partnerships, sustainability initiatives, and trends worldwide;
- Emphasize the links between various chemical sustainability frameworks and tools and the GFC to be used as examples of an innovation process for chemicals and materials in different sectors and regions;
- Contribute to the implementation and advancement of the GFC by presenting sustainability, SSbD and GFC principles as concrete design, investment, and policy decisions across selected sectors;
- Present case-studies and share the lessons learned;
- Exemplify how chemical innovation can be economically viable and sustainability can create clear value for both innovators and society;
- Publicly share existing easy-to-use tools (e.g., guidance documents) to help implementation of the GFC, such as the materials developed under the SSbD framework, UNEP's Green and Sustainable Chemistry Framework Manual and respective e-course, the [Specialized Manual on Green and Sustainable Chemistry Education and Learning](#), the OECD's Safe(r) and Sustainable Innovation Approach (SSIA), and others.
- Present clear linkages with GFC implementation, with particular focus on relevant GFC sector Implementation Programmes (IPs), including for the Electronics Sector and Healthcare sector IP, to ensure alignment with sector-specific priorities, promote uptake of the target D6 building blocks, and strengthen measurable impact pathways.

Target Audience

Stakeholders include but are not limited to **sustainability leaders** (including those with limited prior awareness of the GFC, chemical safety and sustainability and/or SSbD approaches), **policy stakeholders** responsible for chemicals, product, and innovation policy; **companies and start-ups** engaged in product and material design; **Green and Sustainable Chemistry and SSbD actors**; **practitioners** supporting implementation in emerging and transitioning economies; and **researchers and designers** influencing early-stage innovation decisions.

Features and approach

The Series will include **three webinars from April to September 2026**. They will be delivered on Zoom (UNITAR's Business Account) and will have a duration of approximately 1.30hrs, with simultaneous Spanish and French interpretation. The proposed time will be 2PM CEST to accommodate as many time zones as possible.

³ [The Global Framework on Chemicals – First International Conference](#)

Following a first introductory section during Webinar 1, each session will focus on a specific sector using and/or manufacturing chemicals⁴. Relevant stakeholders representing each sector will be invited accordingly. A detailed proposed agenda for Webinar 2 is attached as Annex 1.

Deliverables

By the end of the Webinar Series, the following deliverables are expected:

- Satisfaction and learning assessment results;
- Webinar reports with analytics on attendance (including participants background), engagement, feedback, key takeaways, and recommendations;
- Knowledge-Sharing materials: Shared folder with the recordings and relevant documents including agendas, presentations, session reports, relevant literature;
- Other deliverables pending request from ISC3.

Impact: The webinar series will contribute to strengthening the science–policy–innovation interface by translating global policy commitments into practical innovation pathways applicable across regions. The increased level of awareness on the topics will be measured with pre-and post-self-assessment surveys.

Dissemination

A Concept Note for each webinar will be developed to be shared with potential speakers. Flyers and other dissemination materials, such as visual elements for social media posts and online publications will follow ISC3/IOMC/UNITAR templates (including ISC3, IOMC, and UNITAR logos), and will be disseminated through ISC3, IOMC, and UNITAR Social Media Channels (such as LinkedIn, email lists, and the IOMC Website). The GFC Secretariat will also be invited to promote the webinars.

Outcomes of Webinar 1

Webinar #1 “Introducing Safe and Sustainable by Design (SSbD) and the Global Framework on Chemicals (GFC) in the consumer electronics sector”

The objective of Webinar 1 was to strengthen participants’ understanding of the key elements of, and linkages between, the Global Framework on Chemicals (GFC) and the Safe and Sustainable by Design (SSbD) framework, and to illustrate their practical application within the consumer electronics sector.

In addition, speakers from the industrial sector shared existing tools, platforms, and practical experiences related to SSbD in the consumer electronics value chain, highlighting both achievements and ongoing challenges.

For more information about the webinar, including the presentations made, please refer to the event [website](#).

⁴ Webinar 1: Consumer electronics, Webinar 2: Pharmaceuticals, Webinar 3: Thematic scope open, to be decided following participants feedback.

Annex 1 – Description of Webinar 2

Webinar #2 “Prescription for Change: Safe and Sustainable Chemistry in Global Pharmaceutical Systems”

23rd July 2026 (2PM-3.30PM CEST)

Introduction

Pharmaceutical production depends on a wide range of chemical substances, including active pharmaceutical ingredients (APIs), excipients, and solvents. These substances are essential for producing medicines that are vital to human and animal health and well-being. At the same time, if these substances enter the environment, they may pose risks to ecosystems and human health. Therefore, this sector is an important and complex area for developing safe and sustainable innovation. The pharmaceutical sector is a global leader in R&D and has already shown strong ability to adopt green and sustainable chemistry approaches. Further strengthening the application of these principles and GFC targets across the pharmaceutical value chain offers significant potential to reduce chemical footprints while maintaining product safety and efficacy.

Objective of this webinar

The objective of Webinar 2 is to bridge policy and innovation by translating the GFC priorities for pharmaceuticals in the environment. In particular, this session will:

- Explore opportunities to further address environmentally persistent pharmaceutical pollutants (EPPPs) in the context of the GFC;
- Demonstrate how “benign by design” can operationalize GFC targets by embedding safety, sustainability, and life-cycle thinking directly into the pharmaceutical sector;
- Identify gaps and enabling conditions (policy, incentives, tools, collaboration) needed to scale safe and sustainable pharmaceutical innovation globally;
- Expose real-world factors (performance, cost, regulatory compliance, environmental fate) to ground discussions in practical decision-making across the value chain;
- Showcase how companies translate design principles into measurable environmental and business outcomes.

Expected Learning Outcomes

- Improved understanding of how the GFC can support actions on pharmaceuticals in the environment throughout the entire life cycle;
- Strengthened ability to identify gaps and enabling conditions needed to scale safe and sustainable innovation in line with GFC objectives;
- Increased awareness of “benign by design” principles and how they can be applied in pharmaceutical development;
- Better understanding of key trade-offs in pharmaceutical innovation and their implications for decision-making;
- Enhanced knowledge of practical industry approaches to integrate safety and sustainability into R&D.

Provisional Agenda

Time (CEST)	Session	Speakers
2.00 PM 5 min	Welcoming and opening remarks	Delena Indar (UNITAR)
2.05 PM 15 min	Global Policy Perspective: “Pharmaceuticals in the Environment and the GFC” EPPPs through a l life-cycle perspective, from prevention, to end-of-pipe. EPPPs as an issue of concern under the GFC, with linkages to GFC targets and implementation pathways.	Stéphanie Laurelle (UNEP)
2.20 PM 25 min	Key Note: “Benign by Design: Rethinking Pharmaceuticals from the Molecule Up” Redesigning pharmaceuticals and materials: why, how? Opportunities and constraints. Performance vs. environmental fate vs. cost. From concept to application.	Prof. Klaus Kümmerer (Leuphana University)
2.45 PM 10 min	Interactive activity	All
2.55 PM 15 min	Moderated discussion and Open Q&A: From policy ambition to molecular design – what is still missing?	Moderation: Delena Indar (UNITAR)
3.10 PM 15 min	Industry Case Study: “Establishing Sustainable Pharmaceuticals in India: Opportunities and Challenges” Scaling up industrial R&D and product development processes: tools, criteria, workflows, barriers, incentives, and lessons learned. Measurable outcomes (e.g., environmental performance, regulatory alignment, business implications).	Mr. Nitesh Mehta (ChemisTree Foundation)
3.25 PM 5 min	Q&A	All
3.30 PM	Final remarks	UNITAR & ISC3

About the organisers

The International Sustainable Chemistry Collaborative Centre (ISC3) promotes a holistic approach to sustainability by supporting the integration of sustainable technologies, processes and products across supply chains, taking environmental, economic and social factors into account. As a global platform, ISC3 connects stakeholders from policy, the public and private sectors, industry, academia and civil society worldwide. The Centre was established in 2017 on the initiative of the German Federal Ministry for the Environment and the German Environment Agency, is hosted by GIZ, and supported by DECHEMA. For further information: <https://www.isc3.org/>.

The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was established in 1995 and currently brings together ten inter-governmental organizations actively involved in chemical safety. The objective of the IOMC is to strengthen international cooperation in the field of chemicals and to increase the effectiveness of the organizations' international chemicals programmes. The IOMC promotes coordination of policies and activities, pursued jointly or separately, to achieve the sound management of chemicals in relation to human health and the environment and is playing a central role in the GFC, in particular for development of the "implementation programmes". For further information: <https://iomc.info/>.

UNITAR's Chemicals and Waste Management Programme (CWM) supports countries in strengthening their legal, institutional, and technical capacities for the sound management of chemicals and waste. It offers guidance, training, and technical assistance on key topics such as plastics management, EPR, waste governance, persistent organic pollutants, mercury, PRTs, and the Globally Harmonized System (GHS) system of classification and labelling of chemicals, aligning efforts with global conventions and in collaboration with international partners through the IOMC. For further information: <https://unitar.org/sustainable-development-goals/planet/our-portfolio>.

For any questions about the event, please contact us at cwm@unitar.org.