

Workshop: Economic and Industry Sector Engagement and Action to Implement the Global Framework on Chemicals

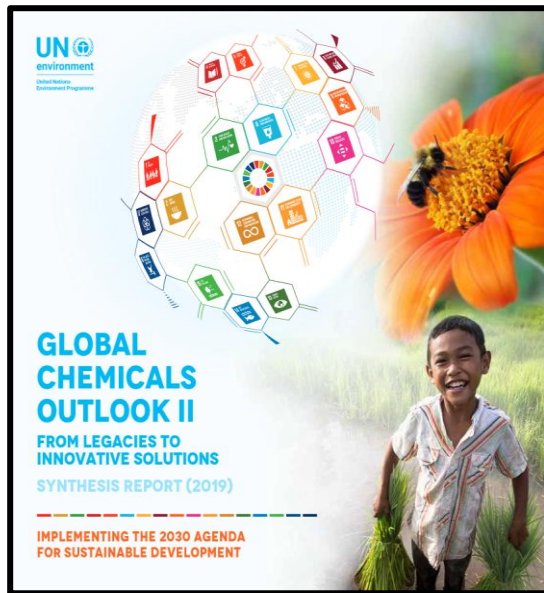
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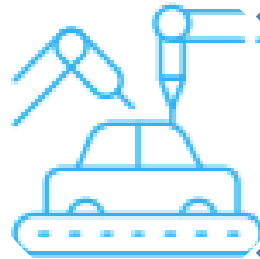
Green and Sustainable Chemistry Objectives and Guiding Considerations

Why do we need Green and Sustainable Chemistry (GSC)?

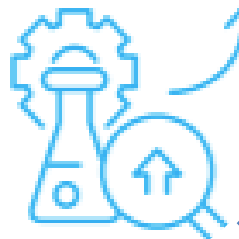
“Business as usual is not an option”



Hazardous chemicals and other pollutants continue to be released and are ubiquitous in humans and the environment



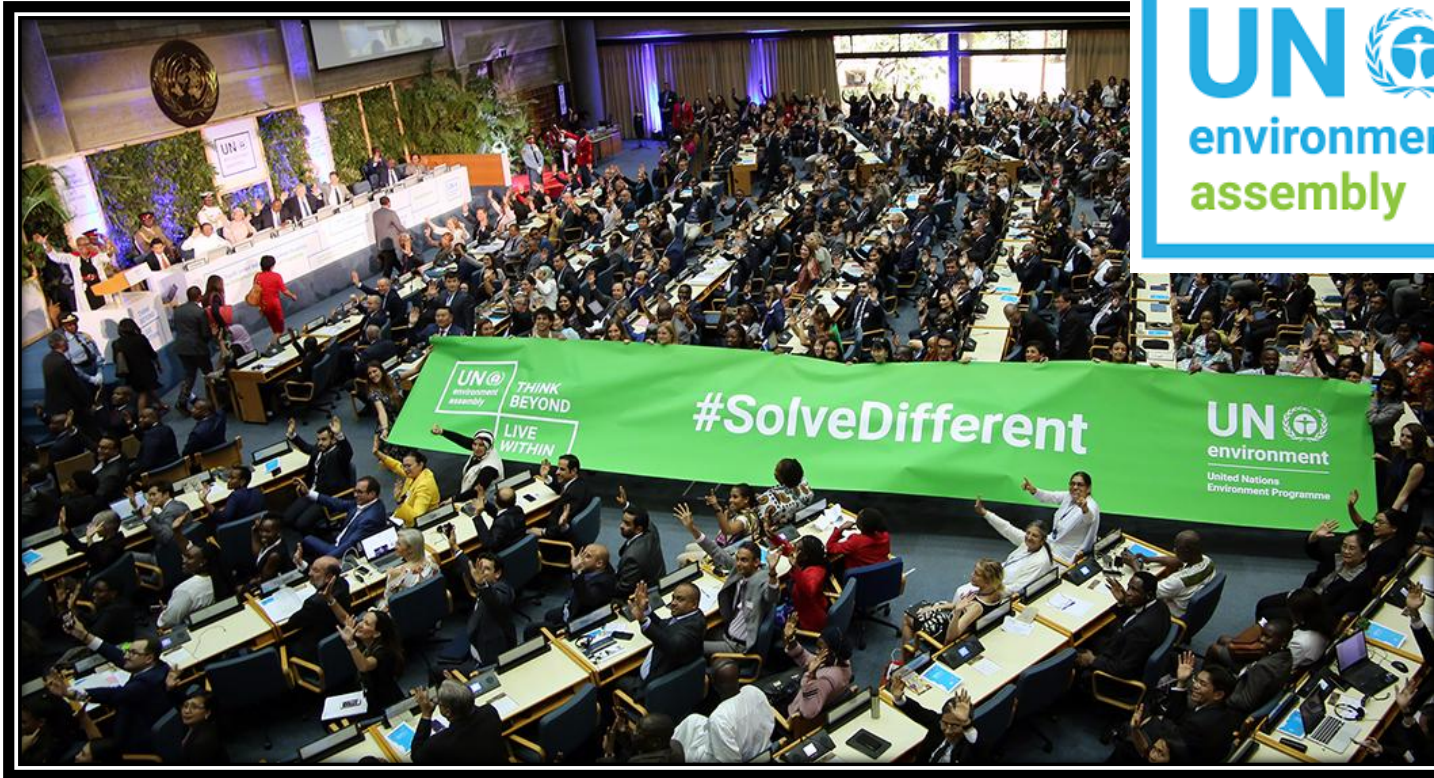
Growth in chemical-intensive industry sectors (e.g. construction, agriculture, electronics) creates risks, but also opportunities to advance sustainable consumption, production and product innovation



Consumer demand, as well as green and sustainable chemistry education and innovation, are among the important drivers of change. They can be scaled up through enabling policies, reaping the potential benefits of chemistry innovations for sustainable development

United Nations Environmental Assembly - Resolution 4/8

Welcomes the analysis of best practices in sustainable chemistry and recognizes the value of developing a better understanding of sustainable chemistry opportunities...



[By UNEA-5] Synthesize the analysis of best practice in sustainable chemistry produced by the Environment Programme into manuals on green chemistry and sustainable chemistry

“the world’s parliament on the environment”

The Potential of Green and Sustainable Chemistry

“Chemistry innovation” includes innovation in chemistry (i.e. new molecules/ chemical compounds), innovations in chemical engineering sciences (i.e. chemical processes and sustainable production), as well as in related areas (e.g. product development).”



Chemical Innovation



Product Design

Process Design



Circularity



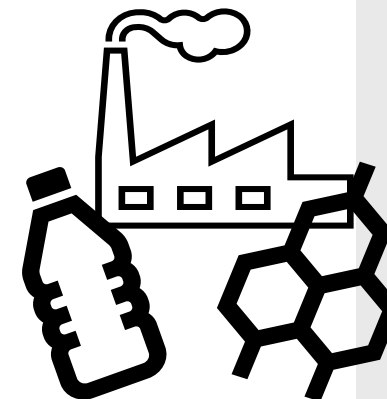
- Product design for circularity
 - Reduced resource use
 - Recycled feedstocks
- Waste conversion technologies

Climate Change



- Energy storage technology
- Improved renewable energy generation
- Less energetically intensive processes
 - Carbon Dioxide as a feedstock

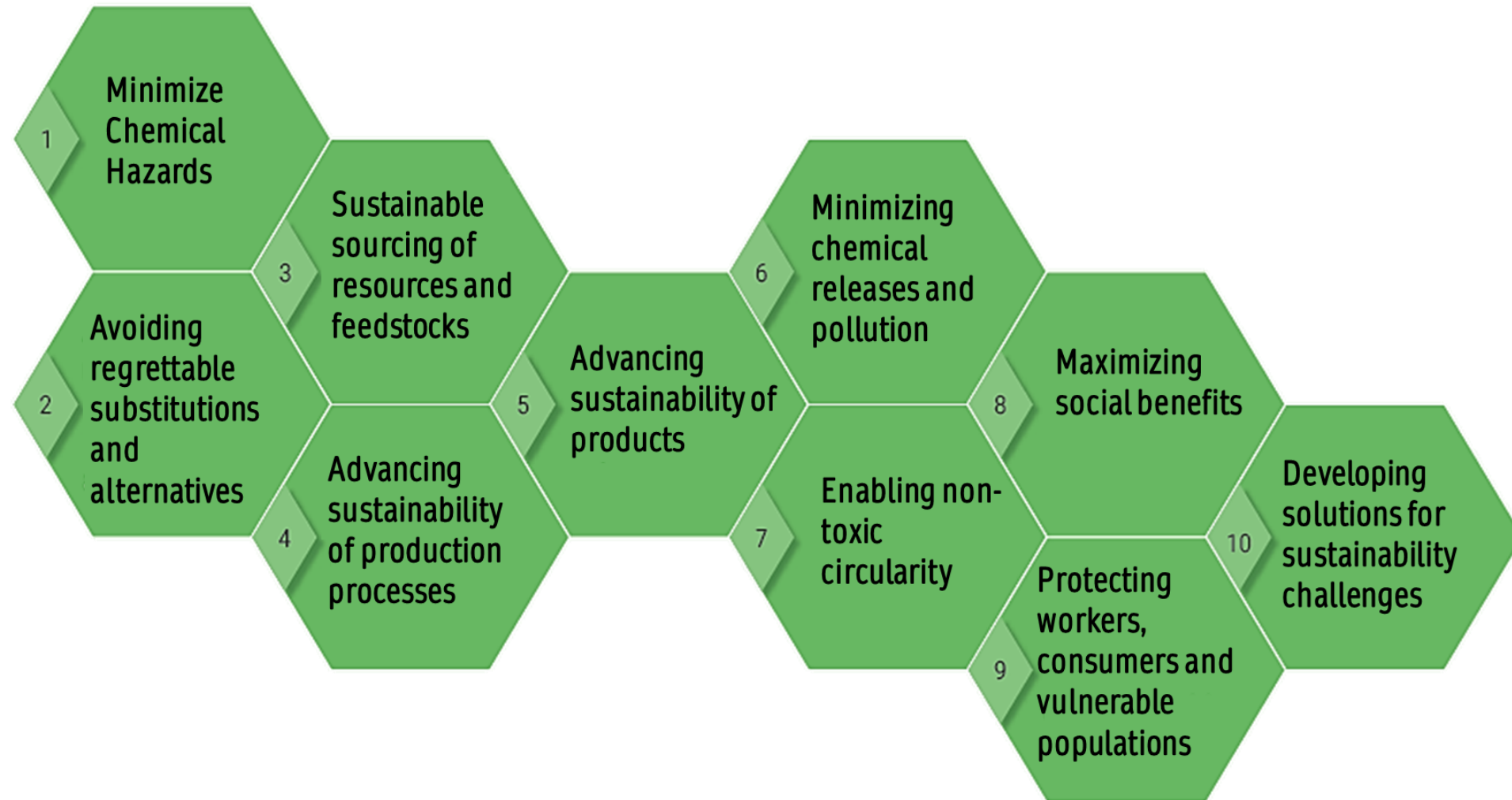
Pollution



- Biodegradable materials
- Non-toxic alternatives to CoCs
- Alternative, non-toxic catalytic materials

UNEP Green and Sustainable Chemistry: Framework Manual and The 10 Objectives and Guiding Considerations for Green and Sustainable Chemistry

Promote innovation to unveil the full potential of chemistry such that it is compatible with and supports the implementation of the 2030 Sustainable Development Agenda.



Implementation of GSC objectives and contribution to GFC

Objective A. Legal frameworks, institutional mechanisms, and capacities

- GSC objectives can catalyze legal frameworks that promote safer chemical use and sustainable practices.

Objective B. Knowledge, data, and information

- GSC encourages the generation and sharing of data related to chemical use, emissions, and their impacts, making it easier to monitor and assess the risks associated with chemicals in products and waste streams.

Objective C. Addressing issues of concern

- GSC can facilitate Identifying and addressing concerns related to harmful chemicals and promote innovation in safer alternatives and design-for-sustainability practices.

Objective D. Safer alternatives and innovative solutions

- GSC focuses on developing safer chemicals and promoting green chemistry innovations, the introduction of non-toxic materials, energy-efficient production methods, sustainable waste treatment technologies.
- GSC encourages the private sector to incorporate strategies that minimize chemical risks across business models.

Objective E. Resource mobilization, partnerships, and cooperation

- Promotion of GSC principles can lead to new collaborations between government agencies, industries, and NGOs to accelerate the transition to safer and sustainable practices.



Thank you for your attention

