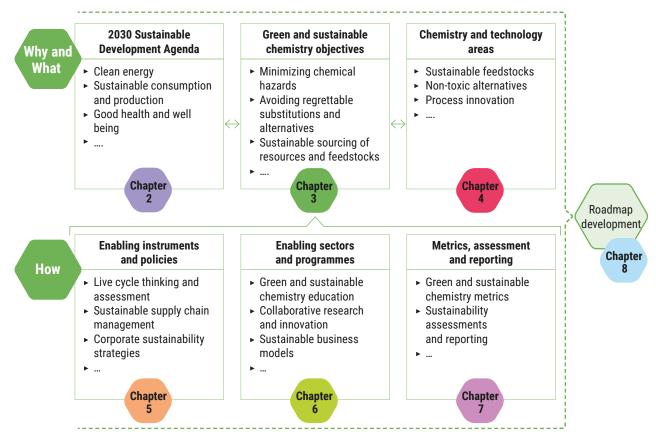
UNEP Manuals on Green and Sustainable Chemistry

United Nations Environment Assembly (UNEA) Resolution 4/8 and 5/7

In 2019 at the fourth session of UNEA, held in Nairobi, <u>Resolution 4/8</u> was adopted on the Sound Management of Chemicals and Waste. Building upon recommendations from the GCO-II, the resolution *"recognizes the value of developing a better understanding of sustainable chemistry opportunities globally"*.

It further requested that UNEP "Synthetize the analysis of best practice in sustainable chemistry produced by the Environment Programme into manuals on green chemistry and sustainable chemistry, in consultation with relevant stakeholders, by the fifth session of the Environment Assembly, and continue to work on a long-term holistic approach for the sound management of chemicals and waste, taking into account both the importance of the sound management of chemicals and the potential benefits of chemicals for sustainable development"

In 2022, at the resumed session of UNEA-5, a new omnibus resolution was adopted covering various topics related to the sound management of chemicals and waste. With respect to green and sustainable chemistry, the resolution "Welcomes the United Nations Environment Programme's Green and Sustainable Chemistry: Framework Manual and its Executive Summary, which highlight the crucial importance of environmentally sound innovation, and encourage their use as appropriate"



UNEP's Green and Sustainable Chemistry: Framework Manual

The <u>Green and Sustainable Chemistry: Framework Manual</u> (also available in <u>Spanish</u>), and its accompanying <u>executive summary</u> (also available in <u>French</u>, <u>Spanish</u>, <u>Russian</u>, <u>Arabic and Chinese</u>) are now available on the <u>Chemicals and Waste Reports for UNEA-5</u> webpage. Developed in consultation with experts from industry, academia, government, international organizations and NGO's, the manual provides a high-level overview of various scientific, technical and policy aspects of green and sustainable chemistry. A range of stakeholders concerned with the sound management of chemicals and waste and chemical innovation are targeted in the manual. This includes those in government, academic and research institutions, private sector entities at all stages of the value chain and citizens. The structure of the manual is outlined in the figure above

Ten Objectives and Guiding Considerations for Green and Sustainable Chemistry

At the heart of the Framework Manual are the ten objectives and guiding considerations for green and sustainable chemistry. They are meant to inspire and guide stakeholders to shift chemistry innovations towards sustainability. They may also be relevant for assessing existing practices throughout the value chains of chemicals and products. Ultimately, **the objectives seek to promote innovation to unveil the full potential of chemistry such that it is compatible with and supports the implementation of the 2030 sustainable develop- ment agenda**. An infographic is available that provides further context through illustrative examples, relevant resources, and guiding questions.

Design of chemicals with minimized (or no) hazard properties for use in materials, products and production processes ("benign by design") Minimizing chemical hazards	1 Avoiding regrettable 2 substitutions Develop safe and sustainable alternatives for chemicals of concern through material and
Use of sustainably sourced resources, materials and feedstocks without creating negative trade-offs feedstocks	and product innovations that do not create negative trade-offs
Use green and sustainable chemistry innovation to create Advancing	Advancing sustainability of production processes 5
sustainable products and consumption with minimized (or no) chemical hazard potential	Minimizing chemical releases and
Use of chemistry innovations to enable non-toxic circular material flows and sustainable supply and value chains throughout the life cycle	7 Maximizing
Safeguard the health of workers, workers, consumers and vulnerable groups	 8 social benefits 9 9 Maximizing standards of ethics, education and justice in chemistry innovation
in formal and informal sectors vulnerable populations	Developing solutions for sustainability challenges