

# Strategic Action to Advance Green and Sustainable Chemistry - Using UNEP's Objectives

The Objectives are structured to highlight the outcomes of actions that advance green and sustainable chemistry. They can be used to show interested stakeholders the potential benefits and outcomes of the strategic action itself.



*Strategic action to advance green and sustainable chemistry can lead to manufacturing processes with improved resource efficiency, strengthened pollution prevention and waste minimization. This can lower the life-cycle impact of products..*

Stakeholders have emphasized the importance of establishing shared values among those involved in the strategic action. They highlighted UNEP's Objectives as a helpful framework to find shared values among actors in a range of stakeholder groups.



*The potential of green and sustainable chemistry innovation to protect workers, consumers and vulnerable groups represents an opportunity to find shared values between company managers, government regulators, labour organizations and community organizations.*

The Framework Manual suggests that the Objectives be used as a high-level reference for assessing value chain practices. Stakeholders can use Objectives as a basis to more precisely measure how their value chain activities align with, or leverage green and sustainable chemistry.



*Are chemical releases being minimized throughout the target value chain from raw material extraction to end-of-life? How can releases be quantified at each stage of the value chain to measure progress on Objective 6?*

Stakeholders noted that the Objectives are a useful reference to quickly illustrate the green and sustainable chemistry concept. They can become a common point of reference for all those involved in the strategic action.



*The Objectives can be displayed in classrooms, research laboratories, board meeting rooms, factory floors and government offices to remind stakeholders of their shared journey towards green and sustainable chemistry.*

Stakeholders in chemical intensive downstream sectors, such as electronics, agriculture, construction and textiles, have noted that through consultation the Objectives can be applied to their specific value chains. They can then become a custom tool to guide the development of chemical innovations which drive sustainability in those sectors.



*What does Objective 3 mean for stakeholders along the buildings and construction value chain? What innovations in the sector can advance it and how will they drive sustainability in the value chain? Which are the key strategies and actions to enable stakeholders to implement these innovations?*

A key aspect of strategic action is setting goals, and planning actions to build the capacity of stakeholders to initiate, develop and implement green and sustainable chemistry innovation. Stakeholders pointed to the Objectives as a tool to identify specific gaps in knowledge, awareness and funding which the strategic action can fulfill.

## 2 Avoiding regrettable substitutions and alternatives

Develop safe and sustainable alternatives for chemicals of concern through material and product innovations that do not create negative trade-offs

*What barriers do stakeholders face to avoid negative trade-offs when finding alternatives to chemicals of concern? What training, knowledge and awareness is needed to improve the evaluation of trade-offs?*

The Framework Manual recommends using the Objectives to guide innovation program with stakeholders suggesting that their integration into such programs can help maximize impact. They can be a useful high-level framework to set boundaries for the development of chemical, product and process innovations to ensure they support, and are compatible with the SDGs.



*Innovation mechanisms and institutions such as incubators, financing instruments and start-up accelerators, can integrate the Objectives into their selection process and evaluation schemes. Private sector R&D programs may use the Objectives to set boundary conditions with which new products must comply.*

The Objectives can be used to guide measurement of the strategic action's impact. Stakeholders have suggested to map metrics to Objectives that are suitable to measure progress and/or impact on a range of goals and outcomes defined in the strategic action.

## 8 Maximizing social benefits

Consider social factors, high standards of ethics, education and justice in chemistry innovation

*Use Objective 8 to decide on action key social sustainability metrics and measure progress of the strategic action For example, if the strategic action includes the development of green and sustainable chemistry products, market survey data can determine how accessible the products are to those living in developing countries.*

Stakeholders emphasized the need to direct investment towards the development of green and sustainable chemistry innovations. Metrics or benchmarks based on the Objectives can be used to assess whether projects qualify for green funding initiatives, either in the private sector or investment from the state.

Use of chemistry innovations to enable non-toxic circular material flows and sustainable supply and value chains throughout the life cycle

## 7 Enabling non-toxic circularity

*Many governments have set up funding mechanisms for SMEs to develop cleaner production technologies. Indicators relevant to Objective 7, such as increased use of post-consumer feedstock, or quantity of chemicals of concern removed from material flows, can be used as requirements to qualify for this funding.*