

Objective D: Benefits to human health and the environment are maximized and risks are prevented or, where not feasible, minimized through safer alternatives, innovative and sustainable solutions and forward thinking.

Considerations: Intended to cover the ongoing need for innovative thinking and solutions to address current and future aspects of managing chemicals and waste, such as life-cycle management, the circular economy, green and sustainable chemistry, safer alternatives, better recycling technologies and resource efficiency.

Target Target D1. Companies adopt and implement policies and practices consistently, regardless of where they operate, to produce and use sustainable and safer alternatives and deploy cleaner production technologies.

| Definition | Responsible agency | Activity | Output | Outcome/impact |
|--------------------|--|--|--|----------------|
| | Industry associations Chemicals industries or multinational companies that do not belong to any association | Policies and practices are adopted and implemented International safety, human and environmental health quality standards adopted and implemented | Highly toxic, unsustainable and non-safe alternatives are neither produced, nor are they used. Sustainable and natural products or non-chemicals alternatives are produced and used in the production process Non-cleaner production technologies are not developed Cleaner production technologies are developed and installed | |
| Responsible | National governments | <input type="checkbox"/> | | |
| | Industry | <input checked="" type="checkbox"/> | Data on adoption and implementation of policies and practices to produce and use sustainable and safer alternatives Data on deployment cleaner production technologies | |
| | Trade associations | <input type="checkbox"/> | | |
| | Academia | <input checked="" type="checkbox"/> | Data on the use of highly toxic, unsustainable and non-safe alternatives, sustainable and natural products or non-chemicals alternatives and (cleaner) production technologies | |
| | IOMC organisations | <input checked="" type="checkbox"/> | Data on health and environmental effects, hazard- and risk assessment results | |

| | Civil Society | <input type="checkbox"/> | |
|--|--|--------------------------|--|
| High level/ high impact Indicators | High impact/ high level indicators | | Considerations |
| | % of companies that have adopted resource efficiency and sustainability in their policies | | For all indicators: % inclusive of the number and it is indicative of the overall situation whereas a number alone tells nothing as the broader or overall number is not known |
| | % Reduced production and use of toxic, unsustainable, and unsafe chemicals, and installation of non-cleaner technologies. | | |
| | % of companies implement sustainable chemistry principles, use natural products or non-chemicals as a source for their products. | | Non-chemical alternatives should also be considered as alternative for the use of chemicals (e.g. beneficial insects or traps instead of insecticides) |
| | % of companies implement sustainable chemistry principles, use natural products or non-chemicals as a source for their products. | | |
| | % of companies implement sustainable chemistry principles, use natural products or non-chemicals as a source for their products. | | |
| | % of companies that have developed and implemented an overall environmental or sustainability plan. | | |
| | % of start-up companies investing on innovative and sustainable chemical solutions, and cleaner production technology. | | |
| | % company turnover investment on research and development on safe alternatives, innovative and sustainable chemical solutions, and cleaner production technology. | | |
| | % associations, companies acknowledge; encourage; and reward through economic incentives the production and use of natural products or non-chemicals as input in production processes. | | |
| | % companies report reduced exposure of workers and nearby communities to highly toxic, unsustainable, and unsafe chemicals. | | |
| | % companies report reduced associated disease burden, improved human health of workers, nearby communities and associated work environment. | | |
| Existing baselines | | | |
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Additional considerations resulting from the discussions:

Non-chemical alternatives do not have to be reflected in the target language provided that there will be an indicator measuring its use.

With the above, there is no need for the additional target proposed during IP3

Safer alternatives need to be defined. Does it include non-chemical alternatives?

Unclear if data are available for proposed indicators, including on no-chemical alternatives

A glossary may be helpful

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|--------------------|---|--|--|-----------------------|
| Target | Target D.2 Governments (globally, regionally, sub-regionally, nationally) implement policies that encourage production using natural products or non-chemicals, facilitate the recycling and re-use of products (circular economy), and the adoption of sustainable and safe alternatives, including cleaner production technologies. | | | |
| Definition | Responsible agency | Activity | Output | Outcome/impact |
| | Governments (globally, regionally, sub-regionally, nationally) | Policies and practices are adopted, implemented and enforced | <p>Active ingredient development processes informed by sustainable chemistry principles.</p> <p>Production of toxic, unsustainable and non-safe alternatives are not produced, and used.</p> <p>Sustainable and natural products or non-chemicals alternatives are produced and used as input in the production processes.</p> <p>Non-cleaner production technologies are not developed.</p> <p>Cleaner production technologies are developed and installed.</p> | Prevent minimize harm |
| Responsible | National governments | <input checked="" type="checkbox"/> | Implement policies that encourage production using natural products or non-chemicals, facilitate the recycling and re-use of products (circular economy), and the adoption of sustainable and safe alternatives, including cleaner production technologies. NOTE: also government globally, regionally, sub-regionally and nationally | |
| | Industry | <input checked="" type="checkbox"/> | production using natural products or non-chemicals, recycling and re-use of products (circular economy), and adoption of sustainable and safe alternatives, including cleaner production technologies | |
| | Trade associations | <input type="checkbox"/> | | |
| | Academia | <input checked="" type="checkbox"/> | Data on production methods, use of safe alternatives, circular approaches and cleaner production technologies | |
| | IOMC organisations | <input checked="" type="checkbox"/> | Promote sustainable consumption and production (SDG12) | |

| | Civil Society | <input type="checkbox"/> | |
|--|---|--------------------------|----------------|
| High level/ high impact Indicators | Indicator | | Considerations |
| | % of countries promoting and adopting circular economy and green procurement. | | |
| | % of countries using sustainable chemistry principles. | | |
| | % of countries using natural products or non-chemicals in their production processes. | | |
| | % of governments direct their companies to use natural products or non-chemicals as input in production processes. | | |
| Existing baselines | % of governments ended the production, use, import and export of banned, highly toxic, unsustainable, and unsafe chemicals. | | |
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Additional considerations resulting from the discussions:

This target could possibly also be considered under Objective A

Does safe alternatives include ‘natural products or non-chemicals ‘? If so – the target could be simplified as follows: Governments (globally, regionally, sub-regionally, nationally) implement policies that encourage production using sustainable and safe alternatives, including cleaner production technologies and facilitate the recycling and re-use of products (circular economy).

Safe alternatives need to be defined e.g. as not causing harm to human health and the environment

Need to be precise on what circular economy implies to ensure that the cycling of e.g. POPs in waste products do not end up in toys made from recycled material

There are gaps in the set of targets under objective D: those that speak to maximizing benefits and reducing risks