

# A focus on Global Biodiversity Framework Target 7: Approaches to pollution

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## Dr Christoph Neumann analyses the Global Biodiversity Framework Target 7, and explains the need for a qualified risk-based approach to pollution from the COP15 convention

The key outcome of the COP15 Convention on Biological Diversity (CBD) meeting in December 2023 in Montreal was adopting the Global Biodiversity Framework.

Target 7 of the Global Biodiversity Framework, as adopted, reads as follows: “Reduce pollution risks and the negative impact of pollution from all sources, by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including:” (a) “reducing excess nutrients lost to the environment by at least half including through more efficient nutrient cycling and use;” (b) “reducing the overall risk from pesticides and highly hazardous chemicals by at least half including through integrated pest management, based on science, taking into account food security and livelihoods; and also” (c) “preventing, reducing, and working towards eliminating plastic pollution.”<sup>(1)</sup>

This article focuses on the relevance of Target 7 to pesticides specifically targeted under (b), explaining the need for a qualitative risk-based approach.

### A comprehensive definition of pollution

There is no generally agreed definition of what constitutes “pollution”. The specific context and goals of different legal instruments shape the definitions, which often relate to specific parts of the environment to be protected from defined undesirable effects from specific sources.

A workable definition of “pollution” must include a clear appreciation of “risk” instead of hazard. Since pesticides are specifically spelt out in Target 7, the dedicated regulatory regimes in a specific jurisdiction that explicitly assess risks from using a pesticide should apply.

These risks include undesirable effects on human and animal health, fate and behaviour in the environment and impacts on a range of non-target species. Based upon a detailed risk assessment, environmental risk mitigation measures are prescribed.

Treating pesticides as unregulated by imposing overall non-qualified quantitative restrictions on the total number or volume of pesticides used – without regard to the individual risks which have been assessed and determined acceptable – would ignore the well-established regulatory frameworks for pesticides.

It is hence vital to acknowledge that the off-target residues and their effects which have been assessed and approved in a risk management process mandated by law, should not be legally qualified as pollution.

## **A qualified risk-based approach to pollution**

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Albeit earlier versions of Target 7 focused on a quantitative reduction of pesticide use, the adopted Global Biodiversity Framework refers to “reducing the overall risk from pesticides”, with a further reference that this should be “based on science” and “taking into account food security and livelihoods”. Therefore, it is essential that national action plans define and implement such a qualitative risk-based approach. <sup>(2)</sup>

Ongoing innovations will enhance the farmers’ toolbox, enabling more sustainable use and protection of biodiversity, ecosystems, and their services in agricultural production systems. Besides Integrated Pest (IPM) and Integrated Weed (IWM) Management, developing biological pesticides and using digital tools will increasingly make inputs more precise and data-driven and support risk reduction of agriculture on biodiversity.

Those innovations could also deliver reduced pesticide use rates depending on local conditions of pest and disease pressures, and yield expectations linked with respective food security needs and farmers’ livelihoods.

The discussion on agricultural practices and impact reduction and addressing the nexus of increasing demand for food and food security as well as the challenges of climate change, should also be linked to Target 10, which aims to define the balance between people’s need for nutritious food and food security while sustainably managing biodiversity and natural resources plus safeguarding ecosystem services.

## **The need for a meaningful indicator in the Global Biodiversity Framework**

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At COP15, the headline indicators of the monitoring framework of the Global Biodiversity Framework were also agreed, which for T7 and the pesticide component is “Pesticide environment concentration”. <sup>(3)</sup> However, given the lack of any context and guidance enabling effective implementation, it will be further discussed by an expert group established under the CBD.

To better reflect what evidence-based pollution reduction constitutes in terms of pesticides, a comprehensive and applicable definition of “pollution”, including a clear appreciation of “risk” instead of hazard, as assessed under dedicated regulatory regimes, needs to be considered.

This is confirmed by the science brief on Target 7 of the Global Biodiversity Framework commissioned by the CBD, stating that “The headline indicator of total pesticide use per hectare, should be replaced with environmental risk-based indicators. Risk-based indicators can be calculated using currently available data – more precise risk-based indicators will require efforts to collect better data on pesticide use, exposure per active ingredient and toxicity.” <sup>(4)</sup>

In practice, this indicator should also enable effective management, practical implementation and monitoring and could be further refined by referring to percentage of parties that have established programs to reduce pollution, i.e., off-target contamination, excessive use and agricultural practices non-compliant with Good Agricultural Practices.”

In support of implementation and monitoring by countries, the following effective risk mitigation measures are suggested:

- Percentage of parties that have scientifically assessed risk management options to mitigate run-off and spray drift to edge-of-field waterbodies and to terrestrial habitats.
- Percentage of parties that implement risk management/mitigation measures that mitigate run-off and spray drift to edge-of-field waterbodies and terrestrial habitat.
- Adoption rate of precision agriculture to reduce the footprint of pesticide applications.
- Reduction in the frequency of exceedance of regulatory acceptable concentrations for aquatic ecosystems when baseline is available.

## **Reducing the risk of pesticides on biodiversity**

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To effectively reduce the risk of pesticides on biodiversity, we call upon all policymakers to cooperate with the key stakeholders to clearly define a qualitative risk-based approach and provide a meaningful indicator to ensure an effective, workable and coherent implementation of Target 7.

## **References**

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1. <https://www.un.org/sustainabledevelopment/blog/2022/12/press-release-nations-adopt-four-goals-23-targets-for-2030-in-landmark-un-biodiversity-agreement/>
2. An asterisk marks this indicator. An agreed up-to-date methodology does not exist for this indicator. The Ad Hoc Technical Expert Group will work with partners to guide the development of these indicators. See page 3 at [https://prod.drupal.www.infra.cbd.int/sites/default/files/2022-12/221222-CBD-PressRelease-COP15-Final.pdf?\\_gl=1\\*wczc50\\*\\_ga\\*MTA1Njc2ODM0Ny4xNjgzMDUyMzQ1\\*\\_ga\\_7S1TPRE7F5\\*MTY4NjU0ODA0OS4xLjAuMTY4NjU0ODA1Ny41Mi4wLjA](https://prod.drupal.www.infra.cbd.int/sites/default/files/2022-12/221222-CBD-PressRelease-COP15-Final.pdf?_gl=1*wczc50*_ga*MTA1Njc2ODM0Ny4xNjgzMDUyMzQ1*_ga_7S1TPRE7F5*MTY4NjU0ODA0OS4xLjAuMTY4NjU0ODA1Ny41Mi4wLjA)
3. “Pesticide environment concentration” is found on pages 5 & 15 of the final COP document <https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-05-en.pdf>
4. Secretariat of the Convention on Biological Diversity. Science briefs on targets, goals and monitoring in support of the post-2020 global biodiversity framework negotiations. 2022. CBD/WG2020/4/INF/2/Rev.2. Available from: <https://www.cbd.int/doc/c/c874/6eb7/813f0201cd67299c9eb10a4a/wg2020-04-inf-02-rev-02-en.pdf>

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