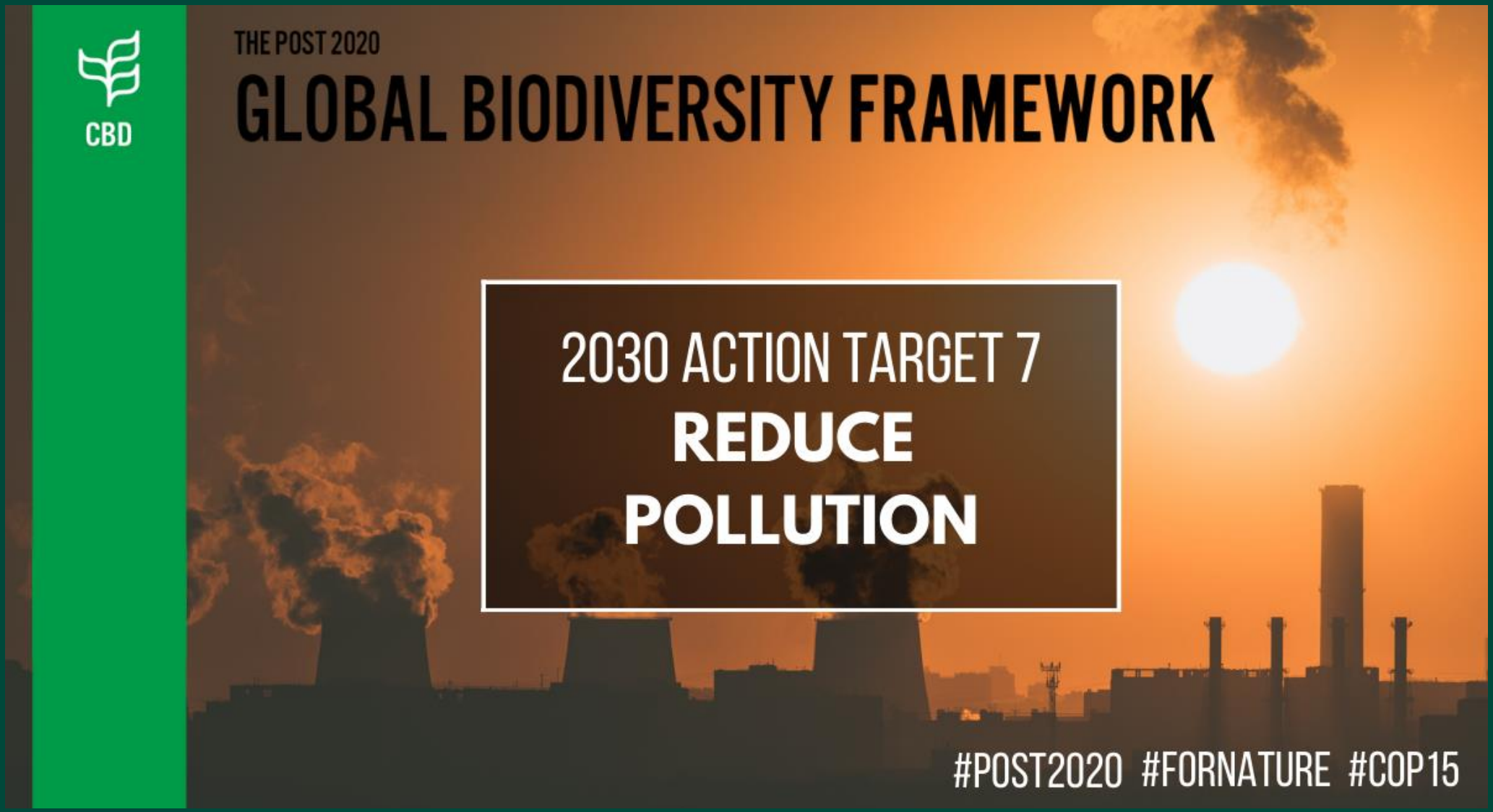

Participate in WG2020-3

Read other one-pagers

Read the full First Draft

Target 7. Reduce pollution from all sources to levels that are not harmful to biodiversity and ecosystem functions and human health, including by reducing nutrients lost to the environment by at least half, and pesticides by at least two thirds and eliminating the discharge of plastic waste.

Objective:

Pollution is one of the main drivers of biodiversity loss, and many forms of pollution impact on biodiversity and in various ways. Most pollutants also have negative impacts on human health and some groups, such indigenous peoples and local communities, women, children and people living in vulnerable situations, may be disproportionately affected. To achieve the 2050 Vision and the proposed Goals of the post-2020 global biodiversity framework it will be necessary to reduce substantially levels of pollution, focusing on nutrients, pesticides and plastics, given that they were identified by IPBES as top priorities[30] (other groups of pollutants could become the focus of efforts in subsequent Global Biodiversity Frameworks and eventually all priority pollutants should be addressed by 2050).

Component:	***Indicators (Headline in bold)***
Amount of nutrients leached or lost to the environment[31] - Excess nutrients (especially nitrogen and phosphorus), including from the historic and ongoing application of fertilizers[32], cause eutrophication and "dead zones" in freshwater and coastal areas. It also negatively impacts and affects species composition in terrestrial, freshwater, marine and coastal ecosystems, and contributes to air pollution, climate change and stratospheric ozone depletion. It is proposed to reduce the use of nutrients, such as nitrogen, by half[33].	**7.0.1 Index of coastal eutrophication potential (excess nitrogen and phosphate loading, exported from national boundaries)** 7.1.1 Fertilizer use (FAO) 7.1.2 Proportion of domestic and industrial wastewater flow safely treated (SDG 6.3.1)
Amount of pesticides leached or lost to the environment – Pesticide means any substance, or mixture of substances of chemical or biological ingredients intended for repelling, destroying or controlling unwanted live organisms that are harmful to human, crops, or animal health or to the environment, or that can cause damage to human activities.	**7.0.3 Pesticide use per area of cropland**
Amount of discharge of plastic waste[34] - Decades of overuse and a surge in short-lived, single-use plastics, has led to a global, environmental catastrophe. Up to 12 million tonnes of plastics are being swept into the oceans annually. While most plastics are expected to remain intact for decades or centuries after use, those that do erode end up as micro-plastics, consumed by fish and other marine wildlife, making their way into the global food chain.	**7.0.2 Plastic debris density**
Amount of other pollutants – Can include persistent organic pollutants (POPs), waste water, noise (including underwater noise) and light pollution. For instance, noise and light pollution disrupt the behaviour of many species and in some cases can kill or harm species.	7.4.1 Municipal solid waste collected and managed (SDG 11.6.1) 7.4.2 Underwater noise pollution 7.4.3 Hazardous waste generation (SDG 12.4.2)

Further explanation of target elements

Not harmful to biodiversity, ecosystem functions and human health – Different metrics will be needed for different types of pollution. As an example, pesticide use can be reduced by between 20-70% without reducing yields or farmer income when following appropriate agronomic practices[35]; in some cases, this will be accompanied by improved yields and/or incomes can, as well as an associated increase in the populations of natural enemies of pests[36]. An ongoing reduction in pollution levels can be expected to improve the natural resilience of ecosystems; overtime achieving the goal of becoming non harmful as this resilience is no longer compromised.

Linkages

Objectives of the CBD – conservation of biological diversity

Drivers of biodiversity loss – land/sea use change, direct exploitation
GBF targets – all targets
Sustainable Development Goals Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture Goal 6: Ensure availability and sustainable management of water and sanitation for all Goal 12: Ensure sustainable consumption and production patterns Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
GBO-5 pathways Essential for the achievement of all transitions to sustainable pathways identified in GBO-5

Click here to for more information on the First draft of the post-2020 global biodiversity framework

[30] IPBES (2019) Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany;

[31] A valuable resource and ally, the Global Partnership on Nutrient Management (a platform for governments, UN agencies, scientists and the private sector to forge a common agenda, mainstreaming best practices and integrated assessments, so that policy making and investments are effectively 'nutrient proofed') has as a primary focus the reduction of excess nutrients. See http://www.nutrientchallenge.org/

[32] For example see Van Meter et al (2018) Legacy nitrogen may prevent achievement of water quality goals in the Gulf of Mexico. Science, 360(6387), 427-430. https://doi.org/10.1126/science.aar4462; and Goyette et al (2018). Low buffering capacity and slow recovery of anthropogenic phosphorus pollution in watersheds. Nature Geoscience, 11(12), 921-925. https://doi.org/10.1038/s41561-018-0238-x

[33] Sutton et al (2020). The nitrogen decade: mobilizing global action on nitrogen to 2030 and beyond. One Earth. https://doi.org/10.1016/j.oneear.2020.12.016

[34] UN. Plastics. https://www.un.org/pga/73/plastics/; As a valuable resource, prepared by the UNEP, IUCN and the Life Cycle Initiative, on identifying plastic leakage 'hotspots', finding their impacts along the entire plastic value chain, and then prioritising actions once these hotspots are identified, see United Nations Environment Programme (2020). National guidance for plastic pollution hotspotting and shaping action - Introduction report. Boucher J.,; M. Zgola, et al. United Nations Environment Programme. Nairobi, Kenya

[35] Lechenet et al (2017). Reducing pesticide use while preserving crop productivity and profitability on arable farms. Nature Plants volume 3(17008). https://doi.org/10.1038/nplants.2017.8; Vasileiadis et al (2016). Farm-scale evaluation of herbicide band application integrated with inter-row mechanical weeding for maize production in four European regions. Weed Research 56(4), 313-322. https://doi.org/10.1111/wre.12210; National Research Council. 2003. Frontiers in Agricultural Research: Food, Health, Environment, and Communities. Washington, DC: The National Academies Press. https://doi.org/10.17226/10585.

[36] Gurr et al (2016) Multi-country evidence that crop diversification promotes ecological intensification of agriculture, Nature Plants. doi: 10.1038/nplants.206.14. Settle et al (1996) Managing tropical rice pests through conservation of generalist natural enemies and alternative prey, Ecology, 77(7), 1996, pp 1975-1988. Lechenet et al (2017). Reducing pesticide use while preserving crop productivity and profitability on arable farms. Nature Plants volume 3(17008). https://doi.org/10.1038/nplants.2017.8; Vasileiadis et al (2016). Farm-scale evaluation of herbicide band application integrated with inter-row mechanical weeding for maize production in four European regions. Weed Research 56(4), 313-322. https://doi.org/10.1111/wre.12210; National Research Council. 2003. Frontiers in Agricultural Research: Food, Health, Environment, and Communities. Washington, DC: The National Academies Press. https://doi.org/10.17226/10585. Wan et al (2020) multispecies coculture promotes ecological intensification of vegetable production. Journal of cleaner production 257 120851. https://doi.org/10.1016/ j.jclepro.2020.120851.