

2020 Biodiversity Day

Nature cannot save us if we do not stop harming it

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May 22 is the International Day for Biological Diversity. Its motto for this year is "Our solutions are in nature". This motto seeks to highlight the importance of biodiversity in the run-up to the negotiations of the UN Convention on Biological Diversity's Post-2020 Global Biodiversity Framework – a plan for global and national biodiversity action until 2050. Through its phrasing, the motto suggests that nature and, so-called *nature-based solutions* (NbS), play a key role in tackling biodiversity loss to ultimately provide solutions to social and environmental issues such as food security, climate change, water security, human health, or disaster risk. However, it is worth emphasising that NbS can only be part of the solution to these challenges. NbS alone won't do the trick as long as current unsustainable production and consumption patterns, especially by developed nations, remain largely unaddressed.

We are currently on the brink of the sixth mass extinction, characterised by a global species extinction rate that exceeds the average rate over the past 10 million years by more than a hundred times. The Intergovernmental Platform on Biodiversity and Ecosystem Services' recent global assessment spells out many of the worrying consequences: Notably, over 40 percent of the world's land is now agricultural or urban, resulting in drastic losses of biologically diverse habitats. Biodiversity loss has major negative repercussions for the satisfaction of human needs. For instance, in some regions, the loss of pollinating insects already reduces the natural availability of plant-based food. Forest degradation shrinks important reservoirs of food, fuel and natural medicines for many people in the Global South. The current corona virus pandemic is also a result of habitat destruction and wildlife trade that in turn make virus outbreaks much more likely.

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In response to such challenges, NbS are gaining traction among environmental organisations and development agencies. NbS is an umbrella term for concrete manageable interventions that draw on natural processes as opposed to engineered solutions to provide environmental benefits and human wellbeing. For instance, the NbS concept would in many contexts favour the plantation of mangrove forests as flood protection over the construction of artificial dykes. Other NbS include protecting forests as carbon sinks; promoting urban green spaces to reduce heat stress; the creation or expansion of marine and land pro-

tected areas; or integrating trees in agriculture (agroforestry) or cattle ranching (silvopastoral) for biodiversity-friendly food production.

The problem with a heavy reliance on NbS, however, is that they do not address the core direct and indirect drivers of biodiversity loss. Direct drivers put immediate pressure on the natural environment. They include, for example, habitat destruction (e.g. deforestation), climate change, pollution, over-exploitation (e.g. overfishing) and the introduction of invasive species. These direct pressures are fuelled by indirect drivers such as demographic trends, production and consumption patterns, international trade, cultural factors and technological change, which determine natural resource demand. In light of the magnitude of these challenges, NbS – with their focus on project-like interventions – can only partially fulfil their promise of addressing social and environmental challenges. For instance, protected areas may slow habitat loss, but important biodiversity continues to be lost outside of protected areas, notably in agricultural monocultures, forest plantations and mining landscapes. Moreover, planting trees cannot fully safeguard biodiversity, if we keep extracting and burning fossil fuels that continue to heat the planet, thereby disrupting sensitive species' reproduction patterns. The NbS concept can even lend a hand to corporate greenwashing when big oil companies can call themselves carbon neutral by investing in NbS while continuing to extract fossil fuels and increasing the climate change problem. We also cannot prevent invasive species introduction if we continue to rely on far-connected commodity chains.

So while the motto 'our solutions are in nature' is charming in times in which people are increasingly aware of their reliance on nature, we cannot hold nature alone accountable for solving the burning issues at hand. Rather, we need to help nature to help us, by embracing a new economic paradigm that acknowledges the unsustainability of capitalism - infinite economic growth is not possible on an earth with finite (biological) resources. Urgent first steps include leaving fossil fuels in the ground to accelerate decarbonisation of the economy as well as striving for more diversified and sustainable agriculture, fisheries and forestry.