

DG'S COLUMN

Biodiversity can't wait another decade



But science points the way to solutions for both people and nature



ROBERT NASI
🐦@forestsmatter



RAVI PRABHU

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The Kingfisher in Bogor, Indonesia. By Yadi Setiadi

As the 15th Conference of the Parties of the Convention on Biological Diversity (CBD) unfolds in Montreal, anticipation is building over what it will take for countries to agree on new targets for protecting nature.

Meanwhile, species are vanishing each day in the world's sixth mass extinction event, driven by humans. Earth, having been through this five times before, will likely survive. Humanity, on the other hand, may perish due to one particular flaw: our inability to respond to future threats the

way we can to, for example, a global pandemic or financial crisis.

This must be the decade we stop biodiversity loss. It didn't happen by 2010 as originally planned, and 2020 passed by with none of the Aichi Targets being fully met.

And 2030? The first draft of the Post-2020 Global Biodiversity Framework was promising in that it drew on robust scientific evidence. It included goals to enhance the integrity of all ecosystems, reduce the rate of extinctions tenfold, and safeguard genetic diversity. It also stressed the need to value nature's contributions to people, to ensure fair and equitable access to the benefits of genetic resources, and to close a US\$700 billion annual funding gap and repurpose environmentally harmful subsidies.

Yet while the draft framework has undergone two years of development and further refinement during online negotiations in 2021, it still needs to be agreed by the 196 Parties convening in Montreal this week. And now, over half-way through, negotiations seem to be back to square one – with most of the hard work left to the last minute.

Red flags are being waved. The '30 by 30' target to protect 30% of land and sea in the next seven years has gained the lion's share of media attention, and we fully support efforts to meet this target, if done in a locally relevant and inclusive way. Yet the main focus of this target is on protected areas or 'Other Effective Area-based Conservation Measures (OECMs)'. Unless precautions are taken, this could risk repeating the coercive history of conservation initiatives being imposed on Indigenous Peoples and local communities.

The over-emphasis on protected areas may lead to exclusion of agriculture and the critical need to develop biodiverse, inclusive and resilient food systems. An updated draft of the framework agreement released last month refers to agriculture for food production, overlooking the ways in which mosaic landscapes of crops and trees can connect natural habitats and maintain ecosystem services.

Sovereignty over digital genetic code is another sticking point, particularly for African countries wary of losing access to their own natural treasures through biopiracy. Or the agreement could simply be weakened through dilution, despite having been informed by the strongest evidence base to date.

The Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) has contributed the evidence base on biodiversity in both natural and managed landscapes in over 92 countries, with a combined 70 years of expertise on the ground. Working with Ministries of Agriculture and Forestry and a wide range of international, national and local partners, we are co-creating demand-driven locally relevant solutions through partnerships that run decades deep, in some cases.

Forests, trees and agroforestry hold the power to transform landscapes, livelihoods, communities and economies. Our work addresses all three Rio Conventions – on biodiversity, climate and desertification – and builds synergies that can address the interconnected global challenges of our time, including biodiversity loss and deforestation, the climate crisis, unsustainable food systems and value chains, and inequality.

As far back as 2008, we have worked with the CBD Secretariat on myriad issues including the landscape approach, the need for biodiverse, safe and resilient food systems, and forests and agriculture, and we jointly produced a technical report to support the implementation of guidelines for a more sustainable wild meat sector that were endorsed by CBD member countries in December 2017.

Cutting across all dimensions of the new Framework, our work aims to reduce threats to biodiversity by highlighting the potential of trees on farms for biodiversity and human well-being to improve the countries' ability to meet Aichi Target 7 (sustainably managed agricultural areas), promoting agroecological approaches, the need to reverse the decline in tree species diversity, and the role that agroforestry – done right – can play in restoring both farm and forest ecosystems. Our work has contributed to improving the physical and genetic quality of tree seed for restoration in Ethiopia and finding pathways to resilient bioeconomies through the sustainable use of wood and non-wood forest products.

Underground biodiversity is a major research focus, and we co-lead the Coalition of Action 4 Soil Health (CA4SH). We also work in critical montane ecosystems such as East Africa's water towers and through the Mountain Futures initiative, and are exploring ways to make the global trade more sustainable in, for example, palm oil, coffee and songbirds in Indonesia.

Much of our research focuses on meeting people's needs through sustainable use and benefit-sharing, for instance detailing how to preserve forest biodiversity without losing livelihoods, and through our work on sustainable and equitable land and forest use as part of our global comparative work on REDD+.

Our innovative research is also demonstrating the ways trees and forests contribute to the global food system, and we have long highlighted the importance of sustainable wildlife management, showing why taking wild meat off the menu is not an option for many people.

Recognition of the inequality affecting women, Indigenous Peoples and other marginalized groups has informed our research from the beginning. To support the finalization of the CBD Gender Plan of Action, experts from the CGIAR Research Program on Forests, Trees and Agroforestry (FTA) collaborated with the Secretariat of the CBD on developing materials to support a gender-responsive post-2020 Global Biodiversity Framework. We work closely with Indigenous

responsive post-2020 Global Biodiversity Framework. We work closely with Indigenous communities – whose effective land stewardship is evident in the fact that the lands they occupy contain 80% of the world's remaining biodiversity on only 20% of the Earth's territory. One recent example is an interactive map on communal forest management by Indigenous Peoples in the Peruvian Amazon.

To be useful, and used, research needs to be packaged into tools for practitioners and policymakers. CIFOR-ICRAF is a global centre of excellence, soil health and land restoration, with state-of-the-art laboratories on living soils, tree genetic resources, and a variety of tools such as the Global Tree Knowledge Platform, the Bushmeat Data Map, and the Landscape Portal. Finally, developed by Africans for Africans, the African Orphan Crop Consortium is sequencing the genomes of 101 traditional African food crops to facilitate their genetic improvement and reduce stunting among children from malnutrition – an issue that is also central to our wild meat research.



📷 Aguaje palms. Photo by Junior Raborg/CIFOR-ICRAF

So, whether in forests, farmlands, wetlands or drylands, we are working to protect the diversity and integrity of ecosystems for both biodiversity and human well-being. Biodiversity is not an optional ‘nice-to-have’ – it is critical to our very survival, as shown in an estimate by the insurance group Swiss Re that 55% of global GDP depends on healthy, high-functioning ecosystems.

Yet, as the recently release State of Finance for Nature 2022 report by United Nations Environment Programme (UNEP) states, the world is spending three times more on “nature-negative financial flows” than on environmental protection. But biodiversity loss can be halted, it states, if finance flows to Nature-based Solutions are rapidly doubled; this could also significantly lower greenhouse gas emissions and restore nearly 1 billion hectares of degraded land.

Prioritizing nature in the private sector through nature-positive policies could attract more than USD10 trillion in new annual business value and create 395 million jobs by 2030, according to the World Economic Forum. And findings from a 2020 study suggest that 60% of species extinctions could be avoided by restoring only 15% of degraded lands while halting further conversion of natural ecosystems. With 1 million species threatened and a potential loss of 30–50% of all species by 2050, this is encouraging news.

But biodiversity doesn't fit into a balance sheet. While it's true that some threatened species can recover, there is no such thing as a 'biodiversity offset'. Saving a turtle species in one part of the world cannot make up for the loss of livelihoods, food, health, or cultural benefits to communities who depend on an ecosystem, such as the Amazon forest, that has collapsed because of the rapid loss of key species. Extinction is permanent, ecosystems are complex, and we are close to several planetary tipping points that will turn our habitable planet into one that is inhospitable.

Pulling momentum back from this dead-end course will require a shift towards a *cultural* tipping point, one in which we change our view of nature from something that is a source of products to be consumed for economic growth to something that provides immeasurable – but not inexhaustible – services, whether in the form of food, clean water and air, medicine, recreation or spiritual sustenance. Developing a culture of stewardship is the first step towards transforming our economy and society to support biodiversity, rather than extinguish it.

How do we get there? By overcoming our very human inability to perceive future threats as real, and working to develop a new 'foresight intelligence' that will protect not only the species that are threatened with extinction and the ecosystems on the brink of collapse, but also ensure a liveable future for our children and grandchildren.

Short-sightedness is not the only Achilles heel that could lead to humanity's downfall; groupthink may be another. Paraphrasing Ehrlich and Ehrlich from their 2013 article on the potential collapse of global civilization, nations must be willing to do everything they can to solve global crises, *without waiting for others to act*.

The science has never been clearer, or more clearly communicated. What nature needs most right now is true leadership.

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