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Authors

Watson, Robert T
Sebunya, Kaddu
Levin, Lisa A
et al.

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Voices

Post-2020 aspirations for biodiversity

A core aim of the 15th meeting of the Conference of the Parties (COP-15) to the UN Convention on Biological Diversity in October 2021 is to set out the post-2020 global biodiversity framework to halt biodiversity loss and its impacts on ecosystems, species, and human systems. With an estimated one million species threatened with extinction, the stakes are high, and the scale of the challenge is vast. This Voices asks: what would you most like to see COP-15 achieve and why?



Robert T. Watson
University of East Anglia

The time for action is now

This year, governments have a unique opportunity that must not be wasted: to set goals and targets for conserving and restoring ecosystems and their biodiversity. But setting goals and targets without explicitly identifying actions to meet these goals and targets will once again become meaningless rhetoric. In 2010, governments agreed on 20 Aichi Targets—none were fully met. We need each government to identify specific actions that will address the direct drivers of biodiversity loss; incorporate measures of natural capital in decision making; agree to reduce perverse subsidies that lead to the loss of biodiversity; reform their agricultural, forestry, and fishery sectors; and agree on a network of terrestrial, freshwater, and marine protected areas that are well managed, contain key biodiversity, and are designed to be climate resilient. But even this is not enough; the issues of biodiversity, climate change, and land degradation are strongly interconnected and must be addressed together along with the 2030 Sustainable Development Goals. The goals, targets, and actions agreed at the 15th meeting of the Conference of the Parties (COP-15) for biodiversity must be harmonized with those agreed at COP-26 for climate change and COP-15 for land degradation and desertification. The funding promised to developing countries must be delivered. Becoming sustainable will require all actors—i.e., governments, international organizations, private sectors, financial institutions, nongovernmental organizations, scientific and educational organizations, and civil society—to trust each other and work together.



Kaddu Sebunya
African Wildlife Foundation

Means of implementation are key to success

The African Wildlife Foundation (AWF) recognizes that the Convention on Biological Diversity (CBD) COP-15 presents a unique opportunity for the world to reset its relationship with nature within this next decade. Africa has a significant role to play, and her engagement will be guided by the continental aspiration within the African Union (AU) Agenda 2063 vision, “an integrated, prosperous and peaceful Africa, driven by its own citizens, representing a dynamic force in the international arena.”

Our strategic vision is consistent with both the AU Agenda 2063 and the CBD vision that seeks to enable people to live in harmony with nature. Hence, the AWF would like to see a COP-15 that articulates balanced targets that meet people’s needs. This will ensure that as communities reap the benefits of nature, they will be champions of nature. Therefore, the goal of sustainable use remains a strong tenet toward delivering benefits to people.

Recognizing the continued loss of biodiversity, the new framework needs to hold world leaders accountable to existing commitments in global, national, and regional recovery plans.

The post-2020 global biodiversity framework needs to clearly articulate and address how consumption and production patterns contribute as drivers of biodiversity loss, especially within food and energy systems.

Indigenous people and local communities should be deliberately engaged in the management of biodiversity with proper inclusive and equitable mechanisms in place to factor in current implementation limitations of the Nagoya Protocol.

If the means of implementation are not addressed, the success of the framework can be seriously compromised.



Lisa A. Levin
Scripps Institution of Oceanography, University of California, San Diego

Diversity in the deep

The post-2020 global biodiversity framework to halt biodiversity loss and its impacts on ecosystems, species, and people faces an enormous challenge on land and in water. My hope is that the half of the planet that is deep ocean (below 200 m or 600 ft water depth) can be embraced in addressing this challenge. The biodiversity of the deep ocean contributes in major ways to moderating Earth's climate (through carbon sequestration), enabling ocean productivity (through remineralization), feeding our fisheries, providing biomedical solutions, and much more. Up to this point, deep-sea ecosystems have remained among the most pristine on the planet. Yet life in the deep sea now faces the growing manifestation of climate change (warmer, more acidic, less oxygenated waters), physical and chemical disturbances from bottom fishing and potentially deep-seabed mining, oil spills, and contamination from the disposal of waste, debris, and plastic. The shallow and deep ocean are strongly interconnected, and biodiversity conservation efforts over the coming decade will need to extend over vast areas throughout the deep water column and onto the seafloor. Biodiversity in the deep ocean can be preserved only if coastal states and UN agencies work together across sectors and jurisdictions. A new paradigm for deep-ocean stewardship that recognizes the intertwined nature of biodiversity and climate can help guide scientific research and observations, shape the design and implementation of marine protected areas, upgrade industry best practices, inform societal decisions, and evolve an integrated ocean governance system fit for the future.



Nico Eisenhauer
German Centre for Integrative Biodiversity Research

Protect Earth's thin skin

Just like the human body, Earth's surface is covered by an often disrespected but functionally indispensable thin skin. These centimeters to a couple of meters of complex coalescence among the lithosphere, atmosphere, and biosphere harbor roughly one-quarter of all species on Earth, store more carbon than the atmosphere and biosphere combined, and ultimately govern human nutrition and health. However, less than 5% of this soil biodiversity has been described, and it has been largely neglected from nature conservation and restoration actions. This is concerning because a loss of soil biodiversity is exceptionally critical to human life, and degraded soils take generations to recover. In fact, many sustainability goals can be addressed through the fostering of soil biodiversity and thereby multiple ecosystem services. Although several planned actions in the context of the UN Decade on Restoration are crucial for a healthy planet, particularly for soil biodiversity, *protecting* the remaining intact share of Earth's thin skin is a critical strategy that deserves high priority in major activities such as the ongoing preparation for the post-2020 global biodiversity framework and the 2030 Agenda for Sustainable Development. Thus, the UN CBD needs to take a whole-ecosystem perspective that includes soil biodiversity to halt global biodiversity loss. Ultimately, considering this essential component of our ecosystems will be key to living in harmony with nature and to developing sustainable and natural solutions to address the current challenges of the coupled systems of climate, biodiversity, and human society.



Sandra Lavorel
Laboratoire d'Ecologie Alpine, CNRS, Université Grenoble Alpes, Université Savoie Mont-blanc and Manaaki Whenua Landcare Research

Integrated policies—Not silver bullets

A successful future biodiversity policy requires recognizing biodiversity as intimately intertwined with the Earth system (especially climate) and with society. Threats to biodiversity are shared with all other current major environmental and societal problems: they relate to the global model of production and consumption and its associated values. Addressing any of the biodiversity, climate, or societal issues in isolation from the others carries short- and long-term risks to nature and people. Conversely, there are pathways to integrating the contributions of nature to people for jointly meeting the 17 Sustainable Development Goals. These nature-based solutions are provided by conserving and restoring ecosystems in good ecological condition while making sure these interventions are equitable for all, empower people, and recognize their diversity. New policy emerging from COP-15 needs to recognize that there is no silver bullet or one-size-fits-all solution for reversing biodiversity decline. Rather, a strong and fair yet adaptable framework is needed for place-relevant implementation of biodiversity conservation and restoration and the resulting nature-based solutions.

This framework needs to incorporate both qualitative goals and quantitative targets that might not be sufficient to achieve benefits for nature or people. COP-15, in conjunction with the climate COP-26, is a unique opportunity to address these vital global challenges.



Thomas Hickler
Senckenberg Biodiversity and Climate Research Centre

Measurable targets for the world we want to live in

COP-15 must mark a turning point in how we treat nature. We need ambitious, measurable, transparent, and binding targets for the state of biodiversity and drivers of biodiversity change. We also need a clear path to action, an efficient process for implementing monitoring and reporting systems, and tools for analyzing alternative options to stop biodiversity loss at national and regional scales.

The indicators of status and trends in nature summarized in the global Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) report from 2019 and the indicators for the global UN Sustainable Development Goals, which include more information on drivers, are a good base for a harmonized reporting and analysis system, but we also need some flexibility to account for the large diversity of human-nature relationships around the globe. Targets and actions must reach far beyond protected areas and embrace the fact that most of the planet is under more or less intense human use. We therefore need indicators for how we use nature, such as the amount of pesticides applied in agriculture, and for the benefits that humans receive from nature. These include much more than classical provisional ecosystems services, such as yields of crops or timber, which are rewarded by current economic incentives that are often harmful to biodiversity and human well-being.

Even though the situation is dire, COP-15 must also outline a positive vision for our future by emphasizing the many win-wins between biodiversity protection and other sustainability goals. For example, diverse forests are more resilient to climate change, and halting the burning of rainforests is also a must for climate mitigation. I strongly believe that we can achieve much more than is often assumed, but only if we realize that we are part of nature and must treat it well.



Carolyn Lundquist
University of Auckland and National Institute of Water and Atmospheric Research

Diversifying our targets

Ambitious transformations are required for addressing declines in biodiversity and achieving the CBD's 2050 vision of "living in harmony with nature." The post-2020 biodiversity negotiations provide the opportunity to develop targets that better reflect the linkages between nature and human well-being and allow us to assess synergies and trade-offs between biodiversity targets and the Sustainable Development Goals, health, food security, climate mitigation, and material wealth. New targets should reflect the diversity of contributions that nature provides to human and societal well-being and the intrinsic, instrumental, and relational values that people have for nature. Our biodiversity toolbox is broader than simply protected area targets for land and ocean that can result in ineffective "paper parks" with little value added for biodiversity protection. Further, we cannot solely rely on national parks and marine reserves for the protection of biodiversity, and targets that promote the integration of nature and nature-based solutions for our cities, coasts, and rural areas should be developed. Indigenous rights, local and traditional knowledge, and cultural practices that depend on sustaining biodiversity and ecosystems should inform approaches to biodiversity protection. Concepts such as kaitiakitanga (an Indigenous Māori concept reflecting the role of humans in safeguarding nature) can assist in informing targets that encourage a novel and proactive way of thinking about nature where we ask "how do we fit into nature?" rather than "how does nature fit with us?"



Maria Gasalla
University of São Paulo

Decolonizing marine protected areas

The intrinsic relational value of biodiversity for traditional human cultures and health should be considered in conservation measures for aquatic ecosystems. Humans are part of nature, and Indigenous and local knowledge is a key component of the global commons and world heritage. Although protecting traditional users as nature's guardians is important, "socio-biodiversity" sometimes seems invisible to states' market-driven conservation notions. Sacred places often reveal a particular community's conservation impulse across centuries, and there is much to be understood about traditional fishery knowledge and its potential to protect ecosystems. Top-down marine protected areas, seen as exclusion zones to protect biological diversity, are not the only effective or available solutions. Sometimes there is no scientific basis for their delineation, and furthermore, climate change can shift species distributions. Global conservation commitments for marine protected areas could undermine or defund what ultimately needs to be done to protect fishery resources and marine socio-biodiversity. They could also pose a risk of dispossession and coastal grabbing if not rooted in local communities' interests and livelihoods. Therefore, I believe that we need a new paradigm for marine conservation that puts the Sustainable Development Goals as a priority focus. Area-based tools might become popular to protect aquatic biodiversity worldwide, but socioeconomic and cultural dimensions could reveal new ways to decolonize conservation.



Belinda Reyers
Future Africa, University of Pretoria

A broader embrace of biodiversity

The late Georgina Mace used to helpfully distinguish between biodiversity loss in its narrow sense (often portrayed as species extinctions) and biodiversity loss in the broader sense of the word. It is the latter (which includes declines in the myriad of populations, communities, functions, and interactions and the sheer biomass, integrity, and diversity of the living world) that she argued really represents the fundamental and persistent roles of biodiversity disappearing from the world—roles that are important not only to the long-term maintenance of biodiversity but also to us through biodiversity's multiple and diverse material and intangible benefits, relationships, and values. But despite this wisdom, we seem to keep falling back on policy targets, indicators, and negotiations of biodiversity loss that miss this breadth. And so we miss the potential to reveal and account for the sheer breadth of biodiversity loss. But more importantly, I think we miss finding the fertile middle ground that connects people and biodiversity where actions, regenerative practices, and policies can be found to build inclusive and sustainable futures, as well as the necessary resilience capacities needed for navigating the turbulence that lies ahead. It is in revealing and reconfiguring the relationships between people and the full breadth of biodiversity that such futures lie. Better futures will exist not in a world of narrow and siloed depictions of biodiversity loss and human development but through a broader embrace of biodiversity and the messy but fertile middle ground of our interconnectedness with it. This broader embrace and accountability is my hope for COP-15.