Challenges and possible solutions to creating an achievable and effective Post-2020 Global Biodiversity Framework

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ABSTRACT

Global biodiversity is in crisis as a result of human activity. This biodiversity crisis has been well documented by scientists, recognized by world leaders, politicians, businesses, and citizens. Both the biodiversity and climate crises need to be addressed now. 2020 was when this change was supposed to start, with the 15th Conference of Parties (COP15) of the Convention on Biodiversity (CBD) meeting in Kunming, and the 26th Conference of Parties (COP26) of the UN Framework Convention on Climate Change meeting in Glasgow, but both meetings were postponed. COP26 was held a year late (November 2021), while COP15 was split into two, with the first part held in Kunming in October 2021, and the second part scheduled for Montreal in December 2022. This meeting in Montreal – arguably the most important in the CBDs history – must agree on the Post-2020 Global Biodiversity Framework (GBF), to reverse biodiversity loss. Failure to reach agreement in Montreal would ultimately be a failure of us all, with irreversible consequences for life on earth. Yet, with three months before the final deadline only 20% of text and two targets are agreed. This paper reviews the factors hindering progress on the agreement and suggests possible solutions.

Lessons from Aichi

The Post-2020 Global Biodiversity Framework is intended to replace the Strategic Plan for Biodiversity 2011–2020, agreed at the CBD COP10 in Nagoya, Aichi Prefecture, in 2010. This included the 20 Aichi Targets, none of which were met in full by 2020, although considerable progress was made on some of them (CBD Secretariat 2020). There were multiple reasons for the failure of the 2010 Strategic Plan to achieve the targeted reduction in the rate of biodiversity loss, but three are most relevant to COP15. One is the targets themselves, which are often regarded as ambiguous, unquantified, and unnecessarily complex (Butchart, Di Marco, and Watson 2016), partly due to the inherent complexity of biodiversity. The draft Post-2020 GBF targets avoid many of these problems, but not all, and the negotiation process, unfortunately, does not encourage either simplicity or succinctness. Most Aichi Targets were also difficult or impossible to monitor, and a major difference with GBF is that the monitoring framework has been central throughout the negotiation process (CBD Secretariat 2022a, 2022b), and this framework explicitly details the necessary mechanisms to quantify progress. Another reason, which is partly a consequence of the targets’ wording, is the failure of most Parties to translate the global targets into national targets and actions (CBD Secretariat 2020; Xu et al. 2021). Clearer global targets in the GBF will help with this, especially as many new targets focus on reducing the drivers of biodiversity loss, but there also needs to be an agreed obligation on Parties to embed the relevant global targets into national policies and laws (CBD Secretariat 2022). Thirdly, the 2010 agreement did not include adequate funding and other support for implementing the targets (Peña Moreno and Romero 2018). Most biodiversity is in middle and low-income countries, so they bear most of the burden of implementing any agreement, but the benefits are global, and the high-income countries have a much greater financial capacity (Armstrong 2019). Finally, it must also be emphasized that 2022 is not 2010 and both global and national capacities for biodiversity conservation have massively increased in the last 12 years. The availability of new technologies and biodiversity data is still uneven, but most of the megadiverse countries that harbor the majority of global biodiversity have the necessary capacity to implement the GBF if sufficient funds, coupled with technology transfer are made available.
Learning from Paris

Biodiversity conservationists have watched with envy the successes of their climate change counterparts in leveraging funds, policy and mobilizing actions at all levels across the last decade. Biodiversity loss and anthropogenic climate change are the twin results of unsustainable human practices. However, while the climate community has succeeded in demonstrating the existential risk posed by climate change and, as a consequence, climate conferences are attended by presidents and prime ministers, with support from across society, the biodiversity community has generally failed to effectively communicate that the biodiversity crisis is also an existential issue (United Nations 2021).

The 2015 Paris Agreement is very much simpler than the draft Post-2020 GBF and there has been a prolonged debate about whether the GBF also needs a single top-level target – equivalent to the 1.5°C and 2.0°C targets agreed in Paris (Rounsevell et al. 2020; Leadley et al. 2022). Biodiversity loss is a more complex issue than climate change, and no single metric can include all the elements that the CBD covers, while the UNFCCC, in contrast, has a single clear aim, preventing “dangerous human interference with the climate system.” The success of climate scientists in mobilizing societal support, however, shows clearly what needs to be done to generate the necessary support for an effective Post-2020 GBF. The COVID-19 pandemic has reminded us of the linkages between human health and the status of natural world – healthy people depend on healthy nature. Just as the increase in extreme events brought about by climate change, disease spill-over and epidemics are more likely to occur if we fail to protect ecosystems and manage them sustainably. But without high-level support and genuine mainstreaming, we will not be able to make the changes necessary.

What is preventing progress?

There are multiple reasons for the slow progress of the GBF negotiations. Certainly, COVID-19 has been a factor, delaying meetings, forcing online negotiations that could not replace the genuine discussion needed to reach solutions, and restricting attendance at the few in-person meetings. Even allowing for this, however, there are major challenges that have not yet been resolved. First is the text itself. All the current text has some support, but it all needs 100% support – or, at least, consent – to be in the final text to be agreed in Montreal. The Open-Ended Working Group on the GBF Text (WG2020) met at a mixed-mode meeting in Nairobi in June this year to finalize the text but, although it succeeded in putting all the options on the table, very little text was finalized, leaving a huge amount of work for the 5th WG2020 meeting in Montreal in early December and COP15 Part 2 immediately afterward. Many of the Nairobi delegates were still focusing on their own national and regional priorities, while agreement in Montreal will require much greater willingness to compromise.

The challenge on which most progress was made in Nairobi – although still without an agreed final text – was the issue of digital sequence information (DSI) from DNA, RNA, and proteins (IISD 2022). The 2010 Nagoya Protocol on Access and Benefit Sharing, a supplementary agreement under the CBD, was intended to ensure the fair and equitable sharing of benefits arising out of the utilization of genetic resources, but it was developed when genetic resources were physical objects and DSI was not an issue. Now, however, bioprospecting can be done online in publicly accessible databases, thus overcoming the requirement for Free, Prior and Informed Consent of the providing country and circumventing the CBD’s benefit sharing obligations. It was clear from the UNEA meeting in Nairobi in 2022 both that this is a potential red line for many biodiversity-rich countries, who want DSI highlighted in the goals and targets of the Post-2020 GBF, but also that delegates from the developed, biodiversity-poor countries now understand the need for an agreement. The benefits of open access to sequence data are huge and not confined to the developed world (Scholz et al. 2022), so there is tremendous pressure for a compromise agreement that ensures fair benefit-sharing without restricting access.

The most important remaining challenge, however, is the funding needed for implementation of the GBF. Greater ambition means greater costs and these costs fall disproportionately on the countries that can least afford them (Waldron et al. 2022). Article 20 of the CBD states that “The developed country Parties shall provide new and additional financial resources to enable developing country Parties to meet the agreed full incremental costs to them of implementing measures which fulfil the obligations of this Convention . . . ,” and the developing country delegations referred to this repeatedly in Nairobi. Brazil and other countries called for the rich world to provide at least US$100 billion a year until 2030, and this figure is in bracketed text in the current working version of the GBF. While this amount is not unreasonable, given independent estimates of the cost of funding global biodiversity conservation (Deutz et al. 2020; Birdlife 2022), it will be difficult to mobilize funding on this scale in a time of global economic uncertainty from rich countries already struggling to provide the similar amount pledged to help poorer countries cope with climate change. Moreover, the USA is not a Party to the CBD, so
the pool of donors for biodiversity is smaller than for climate. The developed-world Parties have emphasized the need to mobilize funding from multiple sources – domestic, international, public, and private – and to eliminate harmful subsidies, all of which need to be done, but it is clear that a large transfer of funds from high to lower income countries will be needed to secure agreement in Montreal. Many Parties favor the creation of new “global biodiversity fund” to handle this money, although others prefer to use the existing Global Environment Facility (GEF).

**Synergies with other global agreements**

The aims of the CBD and GBF have obvious overlaps and potential synergies with both the Sustainable Development Goals in the 2030 Agenda for Sustainable Development and the Paris Agreement under the UNFCCC, as well as the third “Rio convention,” the United Nations Convention to Combat Desertification (UNCCD), and several other biodiversity-related conventions (CITES, Ramsar, and CMS etc.) (Locke et al. 2019; Birdlife 2022). The importance of cooperation between conventions is widely recognized at the international level (Peña Moreno and Romero 2018) and was stressed in the 2021 Kunming Declaration (CBD 2021), but problems can arise at national level in countries where different conventions may be the responsibility of different ministries, with different people involved. Responsibility for the UNFCCC and CBD, in particular, are often separated in this way.

Despite this separation at national level, the agendas of the UNFCCC climate-change and CBD biodiversity COPs have increasingly overlapped in recent years. At the UNFCCC’s COP26 in Glasgow in November last year, more than 100 countries, covering 85% of the world’s forests, pledged to halt and reverse deforestation by 2030 (https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/). This commitment, which included both Brazil and Russia, came with almost US$14 billion of pledged funding. If these commitments are fulfilled, and a reduction in deforestation starts well before the 2030 deadline, they would have a major impact on the conservation of forest biodiversity. However, it was not just forests, since the final agreement, known as the Glasgow Climate Pact, recognized the importance of “protecting, conserving, and restoring nature and ecosystems to achieve the Paris Agreement temperature goal … including through forests and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases and by protecting biodiversity, while ensuring social and environmental safeguards” (UNFCCC 2022). This broader wording was particularly welcome in view of the past tendency of the climate community to focus entirely on trees (often without adequate reference to natural forests or species diversity). The UNFCCC COP27, to be held in Sharm El Sheikh, Egypt, two weeks before COP15, includes a day on biodiversity.

The umbrella term “nature-based solutions” (NbS) was widely used in discussions in Glasgow. The IUCN definition of NbS—“actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously benefiting people and nature”—is similar to the wording in the Glasgow Climate Pact, but the term itself did not appear in the final text. This reflects the discomfort of some delegates with the term as a result of past misuse, as well as concerns that these “solutions” may undervalue biodiversity and separate people from nature (IIED 2021). Similar concerns have limited the use of the term in the CBD’s GBF, with some delegates preferring the term “ecosystem-based approaches,” or “ecosystem approaches” in CBD terminology. Very recently, however, a resolution on “Nature-based solutions for supporting sustainable development” was adopted at the Fifth session of the United Nations Environment Assembly, held online and in Nairobi on 28th February to 2 March 2022 (UNEP 2022). This resolution defined NbS as “actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.” Hopefully, this definition and the UNEA endorsement will make NbS acceptable to everyone and ensure that terminological disagreements do not derail the entire GBF process. NbS has great potential, particularly for addressing the causes and consequences of climate change, but it is essential that possible trade-offs between multiple objectives, such as carbon and biodiversity, are recognized and addressed (Seddon et al. 2020; Jung et al. 2021; Zhu et al. 2021).

**Political commitments vs negotiating positions**

The current state of the GBF text may come as a surprise to anyone who follows global conservation issues largely through media headlines. New commitments to biodiversity conservation, at all levels and in all sectors of the economy and society, are frequently reported, suggesting a surge in support similar to the one that has resulted in greatly increased action on climate change in the last few years. However, commitments are not enough to bend the curve of global biodiversity loss, highlighting the need for a solid and actionable GBF. The negotiators at meetings of the Open-Ended Working Group on the GBF text are mostly career civil servants, whose job is to represent
their country’s position rather than negotiate compromises. Few, if any, heads of state are expected to attend the second part of the CBD-COP15 in Montreal, but this meeting will include a “high-level segment” on 15–17 December 2022, in which environment ministers are expected to participate. Minsters can and do compromise, and this segment is intended to provide the political momentum to push the GBF over the line. However, the gulf between each country’s political commitments – most recently in the Kunming Declaration (CBD 2021) from the equivalent high-level segment of COP15 (Part 1) last October – and the current negotiated text of the GBF is still huge.

Monitoring progress

A major criticism of the Aichi Targets was that most of them lacked quantifiable elements and available indicators, so that monitoring progress was difficult or impossible (Butchart, Di Marco, and Watson 2016). In contrast, monitoring has been central to the GBF from the beginning, to ensure that it will be possible for Parties to assess progress in meeting their targets and evaluate the effectiveness of measures and actions (CBD Secretariat 2022b). In the initial drafts of the GBF, some of the targets ignored or overlooked key elements of drivers of biodiversity loss and others included quantified targets that were not practical to monitor. However, the framework has subsequently evolved to better incorporate the mechanisms underlying biodiversity loss, which were inadequately addressed in the Aichi Targets. In parallel, a monitoring framework has been developed to provide the key data needed for monitoring progress and to allow for interventions in cases of deviations (CBD Secretariat 2022b). In most cases, this data will be synthesized into indicators, which are then used to track progress toward the targets in the GBF.

The monitoring framework leverages existing capacity and data, and builds on the work being done through organizations such as GEOBON, ForestGEO, GBIF, eBird, iNaturalist, IUCN and UNEP-WCMC. Yet, studies have shown that data are uneven (Hughes et al. 2021) and that the alternatives frequently used to develop spatial priorities are also biased (Hughes et al. 2021). Filling data gaps and building capacity will be crucial for countries to develop accurate baselines and monitoring approaches, but many countries lack the resources and expertise to generate and use such data. Ensuring that these countries have the necessary skills and resources to develop National Biodiversity Strategies and Action Plans (NBSAPS) that align with the goals and targets of the GBF will therefore be a crucial first step and will require both financial support and capacity building (Birdlife 2022). A two-way flow of information – from local to global and vice versa – is essential in order to support decisions made at the local, national, regional, and global levels. Integrating information from different sources will be a major challenge. Data sharing should follow the FAIR (Findability, Accessibility, Interoperability, and Reuse) and CARE (Collective benefit, Authority to control, Responsibility, and Ethics) principles (CBD Secretariat 2022).

The need for leadership

Nobody expects the Open-Ended Working Group to produce a clean text, agreed by all 196 Parties, in time for the second part of the CBD-COP15 in Montreal in December. Even if all Parties are in a compromising mood – for which there was little evidence in Nairobi – there is simply no time to go through the text, line by line, and bracket by bracket. Success will require leadership both from China, as President of the CBD-COP15, and from the CBD Secretariat, and more negotiations than just the 5th WG2020 meeting before the COP15 Part 2. China has a lot of credibility in biodiversity conservation, with the concept of Ecological Civilization providing a framework for positive global change, and the implementation of Ecological Redlines demonstrating a new mechanism for biodiversity protection (Schmidt-Traub et al. 2020; Bai, Fang, and Hughes 2021). The CBD Secretariat has accumulated experience in editing text and achieving productive compromises: two skills that are very much needed in these final months!

The key problematic issues are known and need to be negotiated with key countries and groupings in advance of the second part of the CBD-COP15, while minor issues of wording and terminology are addressed by a small group of editors. Brevity and clarity are highly desirable, but they will not always be achievable. The overall structure of the GBF is agreed and the task now is to reach consensus on the text, and solutions to the outstanding contentious issues. Time is not on our side, but everyone at COP15 in Montreal will understand the need for an agreement now after the two-year delay. The Kunming Declaration of October 2021 stressed the need for transformative change (CBD 2021), defined by IPBES (2019) as “A fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values.” The world will be watching and expects nothing less.

After the agreement

Agreement on the Post-2020 Global Biodiversity Framework is just the first step of the process to halting and reversing global biodiversity loss. The Strategic Plan for Biodiversity 2011–2020 was agreed in Nagoya in 2010, but only partly implemented and not successful in its major goal of reducing biodiversity loss. The GBF has been designed from the beginning to avoid the major problems within the 2011–2020 Plan, to facilitate
implementation, and to monitor progress, but it is only a plan and success is not guaranteed. Full and effective implementation will require both continued high-level involvement and informed public pressure.

Progress needs to be trackable on a user-friendly digital platform, such as the IUCN’s Contributions for Nature Platform (www.iucn.org/resources/contribution-tool/contributions-nature-platform). This platform allows IUCN constituents to document their intended and ongoing contributions to IUCN’s Nature 2030 Programme and could serve the same function for the GBF. Currently it is open only to the IUCN constituents, but there are plans to open it to the public soon, and other efforts by organizations like UNEP-WCMC are also underway. Public communication has not been a CBD strength, but transformative change needs to involve everybody, and that requires public access to real-time information and the promotion of public participation in data collection and conservation. People need to be able to access information on what their and neighboring countries are doing to meet the GBF goals and targets and to track progress across scales. Furthermore, organizations at all scales, as well as individuals need to be educated, empowered and enabled to contribute to conservation and sustainable development. Guided by the global goals and conservation priorities (Mair et al. 2021; Zhu et al. 2021; Jung et al. 2021), such a platform could galvanize support from the public, guide conservation activities at all levels, and identify timely interventions in the event of deviations.

Ultimately both the agreement and the fulfillment of the GBF is dependent upon actions at the National level. Parties need to strive to look at “what can be agreed upon” rather than striving for the ideal text for each party. Ecological security represents an overlooked component of national security, and highlighting the critical importance is needed at all levels, and translated to actions across all sectors including public and private sectors, agriculture, and crucially the finance sector to enable mainstreaming conservation and restoration and enhance synergetic actions with sustainable development and climate change mitigation. Part of the framework will also require a greater responsibility on the part of higher-income economies to be responsible for its imported footprint, and critical financial contributions. Ultimately the success of the GBF is contingent on the actions of parties, and working together to agree on priorities and enact the necessary actions is dependent on the combined will of all Nations, and their actions control the future of global biodiversity.

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