PEDRR
Ecosystems for Disaster Risk Reduction and Adaptation

FEBA
Friends of Ecosystem-based Adaptation

Promoting Nature-based Solutions in the Post-2020 Global Biodiversity Framework

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About PEDRR and FEBA

The Partnership for Environment and Disaster Risk Reduction (PEDRR) is a global alliance of 27 UN agencies, NGOs and specialist institutes. Friends of EbA (FEBA) is a global collaborative network of more than 80 agencies and organisations working in EbA working jointly to share experiences and knowledge, to improve the implementation of EbA related activities on the ground, and to raise awareness and understanding of EbA in adaptation planning processes and multilateral policy frameworks. The CBD COP recognizes FEBA as a key partner "to support Parties in their efforts to promote ecosystem based approaches to climate change adaptation" (Decision 14/5).

Introduction

This paper was developed as input to the evolving deliberations on the post-2020 Global Biodiversity Framework (GBF) under the Convention on Biological Diversity (CBD). It sets out general principles by which **Nature-based Solutions (NbS) can contribute to addressing biodiversity loss and ensuring people benefit from nature**. Strengthening the emphasis on NbS in the GBF has the potential to bring about transformational change in society's relationship with nature, accelerate progress towards the Sustainable Development Goals (SDGs) and ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled.

The role of healthy and resilient ecosystems in providing benefits to people is recognised not only under the CBD, but in various other major policy frameworks, such as the 2030 Agenda for Sustainable Development, the United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement, the Ramsar Convention on Wetlands, the United Nations Convention to Combat Desertification (UNCCD) and the Sendai Framework for Disaster Risk Reduction. Increased focus on incorporating nature into a range of sectoral and overarching strategies to meet societal challenges is a cornerstone of addressing current global sustainability challenges. Such an approach is also central to the CBD's mandate. Parties of the Convention can make full use of this opportunity to promote integration of NbS in the GBF (see CBD/POST2020/PREP/2/1) as a pathway to achieving the 2030 action targets and ultimately the 2050 Vision.

Key Messages

- Nature-based Solutions (NbS) – defined as *actions to protect, sustainably manage, and restore natural or modified ecosystems to address societal challenges, simultaneously providing human well-being and biodiversity benefit* – are crucial for sustainable development. The sustainability, cost-effectiveness, and scalability of NbS make them one of the best tools available to implement the GBF and ensure the necessary transformative change to fulfil the 2050 Vision.
- As an umbrella term, NbS encompasses approaches of working with nature, such as ecosystem-based adaptation (EbA), ecosystem-based disaster risk reduction (Eco-DRR), and ecosystem-based mitigation (EbM). NbS as an overarching concept can be used to support communication and mainstreaming of these different subsets across international, multilateral agreements/global frameworks and their audiences. Bringing clarity to the terminology is critical to mainstream understanding and ensure the incorporation of NbS approaches in the GBF.
- The sustainable management actions of natural and modified ecosystems and change in behavioural norms that form the backbone of many NbS can contribute to achieving the majority of proposed GBF Action Targets (see Figure 3) and should be referenced specifically as a means to achieve multiple benefits.
- The framework should mention the need to ensure that measures to conserve biodiversity are themselves designed to be resilient to current and future global challenges, and to provide benefits to all people, current and future generations.
- Indicators that measure NbS implementation and effectiveness need to be developed and incorporated into the GBF. Increased efforts to address indicator development may be required to fully close this gap. Indicators also need to be aligned with targets of other frameworks (e.g. 2030 Agenda for Sustainable Development, UNFCCC, UNCCD) to reap synergies for effective monitoring, reporting and verification. Recognising that many of the suggested indicators would require further methodological development, members of the FEBA and PEDRR networks are ready to support Parties and the CBD Secretariat in this regard.

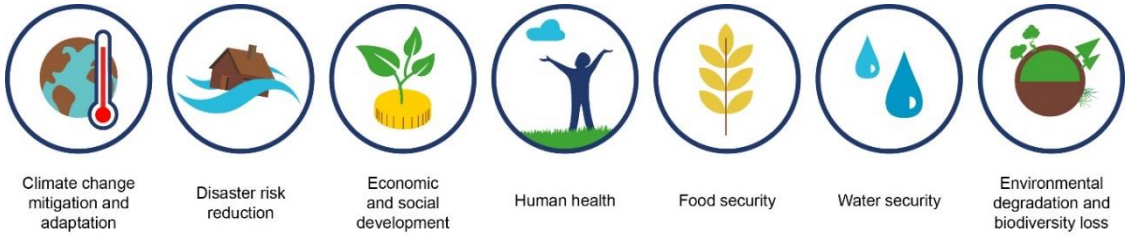

Figure 1 *Major societal challenges addressed by Nature-based Solutions. IUCN Global Standard for NbS 2020.*

Bringing clarity to the terminology

The term Nature-based Solutions (NbS) has become widely used in a number of policy processes in recent years, in line with the growing recognition that the well-being of human communities and natural systems are interconnected, and that ecosystem services play a key role in addressing global challenges – when ecosystems are sustainably managed and effectively conserved. However, concerns have been raised about introducing the term NbS in the GBF, which had not yet been defined or used in official CBD documents.[1] Addressing these terminology issues in the context of the GBF, including appropriate references to commonly accepted definitions of the terms involved, is critical to clarify and support the mainstreaming of NbS across international, multilateral agreements/global frameworks and their audiences.

As part of a pathway to reconciling this issue, the recently launched **IUCN Global Standard for Nature-based Solutions** now provides an internationally recognized framework to standardize NbS approaches, increase the scale and impact of NbS, prevent unanticipated negative outcomes or misuse, and help funding agencies, policy makers, and other stakeholders assess the effectiveness of NbS implementation.

Nature-based Solutions:
Nature-based Solutions are actions to protect, sustainably manage, and restore natural or modified ecosystems, which address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits (IUCN Global Standard for NbS, 2020).

Ecosystem-based Adaptation:
EbA is the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change (CBD, 2009 & 2010).

Ecosystem-based Disaster Risk Reduction:
Eco-DRR is the sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim to achieve sustainable and resilient development (Estrella & Saalismaa, 2013).

Why Nature-based Solutions?

As an umbrella term, NbS encompasses approaches of working with nature, such as ecosystem-based adaptation (EbA), ecosystem-based disaster risk reduction (Eco-DRR), and ecosystem-based mitigation (EbM). Operational approaches such as EbA and Eco-DRR demonstrate the application of NbS to address a particular societal challenge – in this case, climate adaptation and disaster risk reduction. **NbS as an overarching concept can be used to support communication and mainstreaming of these different subsets across international multilateral agreements/global frameworks and their audiences.**

EbA and Eco-DRR have been further developed in the CBD Technical Series 93 on the "*Voluntary Guidelines for the Design and Effective Implementation of Ecosystem-based Approaches to Climate Change Adaptation and Disaster Risk Reduction*",[2] which were adopted by the Conference of the Parties to the CBD at its fourteenth meeting (Sharm El-Sheikh, Egypt, 17 – 29 November 2018; CBD 14/5).

NbS can address societal challenges, enhance human well-being, and support the aims of a wide variety of policies, including those relating to water resources management, food security, human health, climate change adaptation and mitigation, disaster risk reduction, combating desertification, sustainable development, and agriculture practices, fisheries and aquaculture, ocean and coastal zone management, while enhancing biodiversity and ecosystem functions. NbS provide co-benefits for all sectors of society, from vulnerable communities to global industries, by providing provisioning services and diversifying income streams that reduce vulnerability to climate-induced hazards.

[1] A new CBD information paper CBD/SBSTTA/24/INF/11 aims to provide further clarification. However, the last sentence of the definition of NbS here may cause confusion and we suggest to adjust as follows: "*Nature-based solutions are broader than ecosystem-based approaches to adaptation, as it includes, but is not limited to, actions to conserve biodiversity, to mitigate against climate change, to improve resilience to climate change and disasters and to sustainably manage land, water and oceans*."

[2] Secretariat of the Convention on Biological Diversity (2019). Voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction and supplementary information. Technical Series No. 93. Montreal, 156 pages. *https://www.cbd.int/doc/publications/cbd-ts-93-en.pdf*

The importance of NbS in the post-2020 Global Biodiversity Framework

Figures 2 and 3. *Nature-based Solutions for sustainable development, and selected targets of the updated zero draft post-2020 global biodiversity framework (CBD/POST2020/PREP/2/1) with possible NbS approaches. UNEP/PEDRR 2020.*

NbS are "a powerful ally to address societal challenges" (IUCN Global Standard for NbS, 2020), are "a fundamental part of action for climate and biodiversity" (UN Climate Action Summit, 2019), and "offer the best way to achieve human well-being" (UNEP, 2020). NbS are one of the best tools society has to underpin the current draft 2030 Mission in the GBF: "*To take urgent action across society to put biodiversity on a path to recovery for the benefit of the planet and people*".

Due to their potential to reconcile a variety of human needs, while also protecting and restoring biodiversity and ecosystem functioning, innovative NbS approaches are increasingly being endorsed to improve progress towards multiple goals. The sustainability, cost-effectiveness and scalability of NbS has been extensively documented.[3] Scaling up the implementation of NbS has the potential to trigger the transformative change needed to deliver on biodiversity, climate, development, and health targets.

The goals and targets from the updated zero draft of the GBF (CBD/POST2020/PREP/2/1) are already aligned with NbS principles and showcase NbS as a tool for addressing different societal challenges, including covering ecosystem-based approaches, such as EbA and Eco-DRR (see Figure 3). However, the benefits and advantages of NbS as practical means to achieve the goals and vision could be further incorporated and would provide a useful baseline to assist Parties in addressing issues around implementation approaches. This should be enhanced in the final version of the framework so as to mainstream NbS as well as to ensure alignment of the GBF with other international conventions and frameworks.[4] **Focusing on NbS as a cornerstone of the GBF will:**

1. **Draw attention to the already existing toolbox of solutions to achieve targets**
2. **Promote concrete interlinkages with other global frameworks, including the 2030 Agenda for Sustainable Development and the UNFCCC Paris Agreement**

[3] See, for example, *Narayan et al., 2017*; *World Bank, 2019*;; *Reguero et al., 2020*; *Chausson and Turner et al. 2020*
[4] For example, NbS has been identified as a priority for UNFCCC COP26 by the UK presidency: *https://www.gov.uk/government/speeches/increasing-ambition-towards-a-climate-resilient-zero-carbon-economy*

NbS demand sustained actions, investments, and policies that break away from current short-term, reactive approaches, in order to deliver both direct and indirect long-term benefits. Ensuring NbS is a prominent feature in the GBF and setting relevant indicators (see below), will support the mainstreaming of biodiversity and nature in providing cross-sectoral solutions to the environmental and humanitarian crises the world is facing.

Proposed goals, targets and indicators in the updated zero draft of the GBF

The updated zero draft (CBD/POST2020/PREP/2/1) shows the continued evolution of the GBF, in terms of the treatment of NbS, Eco-DRR, and EbA. However, there is still room to further improve coherence and strengthen the incorporation of NbS. A main gap that should be closed is the lack of a mention in the draft framework of the need to ensure that both measures to conserve biodiversity and NbS themselves are designed to be resilient to climate change, to ensure natural resources and ecosystem services can be relied on into the future. More specific suggestions for the proposed individual goals and targets are provided in the tables below.

PROPOSED GOALS	COMMENTS AND ISSUES TO CONSIDER
2050 Goals **Goal B.** Nature's contributions to people have been valued, maintained or enhanced through conservation and sustainable use supporting the global development agenda for the benefit of all people.	**Consider adding**: "through conservation, **restoration**, and sustainable use"; and "supporting the global development agenda **across sectors**…" The use of the word "valued" requires clarification: does it mean appreciated, assessed in terms of their value, or allocated a value through a specific mechanism? The wording 'global development agenda' should be replaced with 'sustainable development agenda' to make clear the link to the 2030 Agenda for Sustainable Development and the SDGs. Consider adding references on the following: - all people, current and future generations - the realization of the right to a safe, clean, healthy, and sustainable environment and stable climate - fairly and equitably shared
2030 Milestones **B.1.** Nature contributes to the sustainable diets and food security, access to safe drinking water and resilience to natural disasters for at least [X%] million people. **B.2.** Nature is valued through green investments, ecosystem service valuation in national accounts, and public and private sector financial disclosures.	Milestone B.1. lists only a few aspects of NbS contributions and specifically contains a term that is soon to be outdated, as it is the view of bodies, such as UNDRR, that there are no natural disasters. There are natural hazards, with disasters containing the critical component of insufficient risk management by people. Milestone B.2. is rather vague, with no indicator. **Consider changing Milestone B.1.** from: "Nature contributes to the sustainable diets and food security, access to safe drinking water and resilience to natural disasters for at least [X%] million people." to "**Nutrition, food security and safe drinking water are ensured using methods that build on NbS and preserve ecosystem health, enhances climate change adaptation and mitigation efforts, and resilience to natural hazards for at least [X] million people.**" **Consider changing Milestone B.2.** from: "Nature is valued through green investments, ecosystem service valuation in national accounts, and public and private sector financial disclosures." to "**The value of nature to people's needs is reflected through green investments, ecosystem service valuation in national accounts, public and private sector financial disclosure, and true cost accounting in the private and public sector. These valuation mechanisms are increased by [x] percent**."

Proposed targets

The changes made to the Action Targets in the updated zero draft GBF (CBD/POST2020/PREP/2/1), based on the views presented by the Parties so far, represent progress, especially with greater inclusion of NbS (Targets 7, 10), and related approaches (e.g. green/blue space in Target 11). The following suggestions would further refine the targets, using NbS as an instrument driving transformative change.

- NbS could be framed in the GBF as a way to enlist the contribution of biodiversity conservation and nature in meeting the Sustainable Development Goals (SDGs), beyond SDGs 14 (Life Below Water) and 15 (Life on Land), which are already explicitly intertwined with the objectives of the CBD. Overconsumption and unsustainable use of biological resources is a key factor for the degradation of biodiversity on the one hand and the perpetuation of poverty and inequality on the other, and the opportunities presented by NbS in this regard could be better reflected in the framework. **NbS are crosscutting, advancing multiple SDGs, including SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-Being), SDG 5 (Gender Equality), SDG 6 (Clean Water and Sanitation), SDG 8 (Decent Work and Economic Growth), SDG 11 (Sustainable Cities and Communities) and SDG13 (Climate Action).**
- The Action Targets should mention the need to identify areas that are important for NbS; this could be added to Target 1 on spatial planning, Target 13 on integrating biodiversity values into policies and plans, or Target 7 on nature-based solutions for climate change.

PROPOSED TARGETS	COMMENTS AND ISSUES TO CONSIDER
Targets 8-12 *chapeau*, section (b): "Meeting people's needs through sustainable use and benefit-sharing"	**Consider amending: "**Meeting people's needs through sustainable use, **nature-based solutions** and **inclusive** benefit sharing"
Target 7. By 2030, increase contributions to climate change mitigation adaptation and disaster risk reduction from nature-based solutions and ecosystems based approaches, ensuring resilience and minimizing any negative impacts on biodiversity	NbS and specific operational approaches (e.g., EbA and Eco-DRR) are by definition designed to meet the needs of people, while benefiting biodiversity and ecosystems, and thus this target is better placed under the chapeau section b) (**"Meeting people's needs through enhanced use and benefit sharing**") instead of section a) (**"reducing threats to biodiversity"**). At the same time, there needs to be a milestone added or text added to proposed target 7 - to ensure that measures to conserve biodiversity and NbS are themselves designed to be resilient to climate change and disasters**.** The aim of 'minimising' negative impacts on biodiversity is weak; the target could make reference to **biodiversity inclusive** NbS, which **avoid negative impacts** and ideally have positive impacts on biodiversity. Consider **amending to**: "**ensuring that climate action avoids negative impacts on biodiversity and people**". The target as framed currently **lacks ambition and specificity** and could be reframed as a **quantitative target**, which is SMART; for example, including measures of absolute area of ecosystem-based approaches and NbS for mitigation, adaptation, and disaster risk reduction, the number of people whose resilience is improved due to NbS for adaptation and disaster risk reduction, or the amount of emissions reductions due to NbS for mitigation.
Target 10. By 2030, ensure that, nature based solutions and ecosystem approach contribute to regulation of air quality, hazards and extreme events and quality and quantity of water for at least [XXX million] people.	**Consider amending to**: "…ensure that nature-based solutions and ecosystem**-based** approach**es**…" To address issues of overlap with Target 7, **consider removing the reference to hazards and extreme events**. **Consider adding** references to the following: - the realization of the right to a safe, clean, healthy and sustainable environment and stable climate - for all people - reducing the risks for human health - the complementarity between NbS and ecosystem-based approaches

Proposed indicators

As explained in documents recently presented for peer review, the focus in identifying potential indicators for the draft monitoring framework of the GBF has been on those that are currently operational at the global level and have underlying data and an organisation committed to their periodic update. While the rationale for the scoping of indicators with this approach is highly sensible and pragmatic, it means that the current proposal presented for review includes very few indicators that are suited to measuring either the application of NbS, or their outcomes. This is likely due to the fact that past efforts to develop indicators for biodiversity or sustainable development have not incorporated specific NbS approaches. **However, explicitly including NbS in the targets is meaningless without the right indicators, as elements not covered by the monitoring framework are likely to receive less attention in implementation.** The following table suggests edits to improve current indicators (for Target 11) and lists additional potential indicators to monitor NbS uptake (for Targets 1, 5, 7, 8, 9 and 10). In addition to voluntary efforts supported by interested Parties, joining forces with other policy processes promoting NbS could help to close this gap.

Recognising that many of the suggested indicators would require further methodological development, members of the FEBA and PEDRR networks are ready to support Parties and the CBD Secretariat in this regard.

PROPOSED GOAL	COMMENTS AND ISSUES TO CONSIDER
Goal B: Nature's contributions to people have been valued, maintained or enhanced through conservation and sustainable use, supporting the global development agenda for the benefit of all people.	Indicators for **Goal B** could focus on the capacity of ecosystems to provide services, rather than number of beneficiaries. However, recognising that the number of deaths from disasters may not be the best indicator for the regulatory function of natural systems, it is still a tangible measure of how those regulatory functions are supporting humans. Monitoring elements for nature's material contributions should include a condition of sustainability; increased use is not always positive. To align biodiversity conservation with NbS to mitigation, indicators could ensure that indices of carbon storage and carbon sequestration are included here. References to the Paris Agreement which was included in the Zero Draft under Goal B have been removed, and could be reinstated **Consider adding**: - Area of peatlands with verified impacts for carbon sequestration/storage - Are of mangroves with verified impacts for carbon sequestration/storage - Proportion of wetland habitats in floodplains - Status of vegetation cover in upland catchments - Trends in extent and state of ecosystems that store and sequester high levels of carbon - Trends in protection of settlements through protected and restored ecosystems - Trends of fish stocks that are scientifically assessed and sustainably managed

PROPOSED TARGET	COMMENTS AND ISSUES TO CONSIDER
Target 1. By 2030, [50%] of land and sea areas globally are under spatial planning addressing land/sea use change, retaining most of the existing intact and wilderness areas, and allow to restore [X%] of degraded freshwater, marine and terrestrial natural ecosystems and connectivity among them.	Indicators for trends in extent and % change in extent of wetlands should cover key types of wetlands separately, including peatlands, salt marshes, wetlands over permafrost, intertidal mudflats and sandflats. **Consider adding**: - Area of rehabilitated wetlands - Area of degraded watershed slopes restored - Area of restored mangrove forest
Target 5. By 2030, manage, and where possible control, pathways for the introduction of invasive alien species, achieving [50%] reduction in the rate of new introductions, and control or eradicate invasive alien species to eliminate or reduce their impacts, including in at least [50%] of priority sites.	Restoring native vegetation seeks to eliminate the condition of vulnerability and fill the ecological niche which was degraded allowing invasion in the first instance, to prevent re-invasion and encourage biodiversity, which should be incorporated into indicators for Target 5. **Consider adding:** - Area of restored native vegetation after eradication of invasive alien species

PROPOSED TARGET	COMMENTS AND ISSUES TO CONSIDER
Target 7. By 2030, increase contributions to climate change mitigation adaption and disaster risk reduction from nature-based solutions and ecosystems based approaches, ensuring resilience and minimizing any negative impacts on biodiversity.	Indicators for Target 7 should cover both actions and outcomes, e.g. inclusion of NbS in national strategies and action plans for adaptation and disaster risk reduction (differentiating those with/without concrete targets) and measures of area or % emissions as outcomes. **Consider adding:** - # of countries that include biodiversity and/or NbS in their NAPs (including % target) - # of countries that include biodiversity and/or NbS in their NDCs (including % target) - # of DRR / CCA plans incorporating NbS (including % target) - # of national climate change policies incorporating NbS actions and concepts (including % target) - # of countries that include biodiversity and/or NbS in their agriculture policies - Trend and extent of ecosystems important for NbS mitigation and adaptation, in particular areas of irrecoverable carbon, or gazetted zones for sustainable use - # of Coastal Zone Management strategies developed - # of wetland and forest management plans developed - contribution of NbS to greenhouse gas emission reduction (at global level or as committed to in individual countries' NDCs)
Target 8. By 2030, ensure benefits, including nutrition, food security, livelihoods, health and well-being, for people, especially for the most vulnerable through sustainable management of wild species of fauna and flora.	**Consider adding** to the indicators for Target 8**:** - % conservation of aquatic wild species and/or area of MPAs - # of community-specific alternative livelihood plans developed - Financial resources saved by applying NbS
Target 9. By 2030, support the productivity, sustainability and resilience of biodiversity in agricultural and other managed ecosystems through conservation and sustainable use of such ecosystems, reducing productivity gaps by at least [50%].	**Consider adding** to the indicators for Target 9**:** - Trends in agricultural land used for agroforestry - Trends in agricultural land used for climate-smart agriculture - Trends in agricultural land used for agroecology - % land important for delivering ecosystem services related to food conserved/protected
Target 10. By 2030, ensure that, nature based solutions and ecosystem approach contribute to regulation of air quality, hazards and extreme events and quality and quantity of water for at least [XXX million] people.	**Consider adding** to the indicators for Target 10**:** - # of countries that use NbS for the regulation of air quality - # of countries that use or institute NbS for water quality and quantity regulation - % land important for delivering ecosystem services related to water conserved/protected - # of watersheds with improved flow regulation due to NbS
Target 11. By 2030, increase benefits from biodiversity and green/blue spaces for human health and wellbeing, including the proportion of people with access to such spaces by at least [100%], especially for urban dwellers.	**Consider adding** to the indicators for Target 11: - % of urban areas that are biodiverse, green/blue space for public use for all

Conclusion

Parties to the CBD and other stakeholders participating in the development of the GBF should ensure that NbS are integrated in the framework within its Goals and Action Targets, but also as a tool that underpins their implementation ensuring the necessary transformative change to fulfil the 2050 Vision. This can be achieved by ensuring the targets and goals promote the uptake of NbS across different sectors and policies and ensuring NbS are referenced specifically as the avenue to implementation (as in Targets 7 and 10).

Synergies should also be ensured with other key international policy frameworks and commitments such as the SDGs, UNFCCC, and UNCCD, both in terms of goals, targets and indicators, and means of implementation (e.g., monitoring, reporting, capacity development and finance). If the current framework is to become a framework beyond CBD, it is especially important that it articulate relevant indicators and ensures alignment with the SDGs, UNFCCC and UNCCD especially with regards to the global uptake of NbS.

Indicators that measure NbS implementation and effectiveness need to be linked to NbS-related targets in order to ensure that these approaches are adopted in line with goals of the GBF. Such an approach would facilitate collaboration with stakeholders in other policy areas in implementation and mainstreaming of the GBF, including through enhancing the relevance of the GBF with the climate, land degradation, and wider sustainable development agendas. There is an opportunity here for the CBD to ride the wave of calls by Parties and UN entities to "build back better and greener" from the COVID-19 pandemic and lead by example – by setting strong targets that fully integrate NbS. Members of the FEBA and PEDRR networks are ready to support the CBD Secretariat and Parties in this regard.

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This paper is presented as a contribution to the ongoing discussions towards the adoption of a Post-2020 Global Biodiversity Framework (GBF). The views presented herein do not necessarily represent the official position of any organisations listed here. The content of this document does not preclude the debates to be held in and the outcomes of the meetings related to the negotiation and adoption of the GBF.