

Achieving a Decision at COP30 to increase collaboration between the Rio Conventions to achieve synergistic climate and biodiversity outcomes

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Authors

V. Young, B. Mackey, V. Morales, M. Rao, R. Smith, C. Kormos,
A. De Gemmis, A. Lambrecht, C. Gonda

Audience: UNFCCC Parties and Negotiators

Aim

To foster a decision, at UNFCCC COP30, that: recognises the importance of **synergies between climate change mitigation/adaptation and biodiversity** for achieving the goals of the Paris Agreement; reflects the importance of retaining and improving the **integrity of ecosystems** for minimising risks to ecosystem carbon reservoirs; requires parties to consider the importance of synergies in their NDCs; and results in a concrete pathway of actions to be undertaken at the multilateral level to **halt and reverse deforestation and forest degradation by 2030**.

Recommendations

The frameworks, goals, targets and rules adopted by each of the Rio Conventions have been largely developed in isolation, until recently ignoring opportunities for positive synergies, and blind to the perverse outcomes of actions that purport to fulfil the goals of one Convention but undermine the goals of another. A decision is needed at COP 30 that enables concrete steps to be taken towards:

- Achieving a shared understanding of the importance of biodiversity and ecosystem integrity for maximising ecosystem services essential for climate resilient sustainable development, retaining ecosystem carbon stocks and protecting the ability of ecosystems to accumulate carbon in biosphere reservoirs and support natural carbon cycling over the long term.
- Facilitating agreed definitions of key terms and identifying current climate rules and actions in land, forests and other ecosystems that warrant updating and supplementary materials.
- Examining the gaps in climate models and how to better reflect natural ecosystems and the roles of biodiversity and ecosystem integrity in regulating the global carbon cycle and atmospheric concentrations of CO₂, and recommend a pathway for improving modelling involving IPBES and the IPCC.

- Identifying immediate priorities for maximising synergistic climate and biodiversity action and the synergies that can be achieved by protecting and restoring ecosystem integrity and priorities for preventing perverse outcomes.
- Securing a mandated, 5-year 'Action Plan for Implementation' to create an accountable, legally-grounded pathway required to meet the 2030 target to halt and reverse deforestation and forest degradation.

A joint work programme or a UNFCCC mandated AHTEG, with expertise drawn from each Convention is needed to:

- Identify gaps in the operational frameworks adopted by each Convention.
- Assess the current rules and metrics used in the UNFCCC, UNCCD and K-M GBF and how they can be modified and harmonised.
- Outline the risk factors that reduce ecosystem integrity and thereby increase current and future risk of harming biodiversity, undermining SDG goals and releasing otherwise avoidable ecosystem carbon to the atmosphere.
- Develop proposals for ongoing joint work and recommend mechanisms for progressing that work including a joint UNCCD/CBD/UNFCCC work programme to fully operationalise the ecosystem goals of each Convention,

develop a new and common, assessment, indicators and monitoring framework that reflects the functional role of biodiversity, in all its complexity, in underpinning ecosystem integrity and the goals of each Convention including by utilising the UN SEEA-EA framework to provide a common information base to enable consistent and comprehensive accounting for ecosystem services including their climate mitigation and adaptation benefits.

The elements above would provide political and technical support for ongoing efforts to further align the UNFCCC with the other Rio Conventions and support progress towards more substantive institutional arrangements, such as a dedicated Climate and Nature Work Programme that will better embed the opportunities provided by cross-Convention synergies, and accelerate implementation of UNFCCC biodiversity related decisions.

A Climate and Nature Work Programme under the UNFCCC SBSTA/SBI would operationalize the Global Stocktake (GST) guidance—including on protecting, conserving and restoring ecosystems and on halting and reversing deforestation by 2030; enable cross-framework alignment to facilitate alignment with the Kunming–Montreal Global Biodiversity Framework (KMGBF) and the UNCCD Strategic Framework; develop guidance to mainstream and implement land-use and forest actions in NDCs, NAPs, NBSAPs, and LDN targets with a strong focus on implementation of national plans. The Work Programme would also coordinate across constituted bodies (e.g., PCCB, CGE, transparency and finance bodies) and thematic work (e.g. oceans; agriculture and food security) and connect national plans to the Conventions Action Agendas and Presidency pledges and initiatives.

Background

The Rio Conventions - the UN Convention on Biological Diversity (UNCBD), the UN Convention to combat Desertification (UNCCD) and the UN Framework Convention on Climate Change (UNFCCC) - are products of the Rio Earth Summit in Brazil in 1990. These transformational instruments were designed to meet global environmental challenges to the viability and well being of Life on Earth. Principles articulated in the 1992 Rio Declaration on the Environment and development are still applicable today. Principle 4 stressed that environmental protection is a key pillar of sustainable development and principle 7 emphasised that ‘States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth’s ecosystem’.

More than 30 years later the challenges we face are far greater and more urgent. Synergistic solutions for nature, climate and people must be prioritised and implemented. Each Convention must re-assess how to build greater policy coherence and provide improved guidance for governments, business and communities on how to deliver synergistic, mutually reinforcing outcomes for climate and biodiversity in land, forests and other ecosystems to underpin all the ecosystem services provided by biodiversity that support community well being and climate resilient livelihoods.

The first call to break down the silos between the Rio Conventions began at the pre UNFCCC COP meeting in Costa Rica in 2025 when, in her opening address, Christiana Figueres admonished us all by asking ‘how stupid were we to imagine we could deal with the entwined biodiversity and climate crises in silos?’ COP 25 made the first post Paris Agreement decision in the mitigation section of the Cover decision in Madrid calling for integrated climate and biodiversity action (1.CP/25 para 15). Several similar decisions at UNFCCC COPs followed, but one of the most important was a Decision at COP28, designed to reset climate ambition following a ‘Global Stocktake’ of achievements, challenges and actions needed to limit warming to 1.5 degrees. 1/CMA.5 para 33 emphasised:

“...the importance of conserving, protecting and restoring nature and ecosystems towards achieving the Paris Agreement temperature goal, including through enhanced efforts towards halting and reversing deforestation and forest degradation by 2030, and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gasses and by conserving biodiversity, while ensuring social and environmental safeguards, in line with the Kunming-Montreal Global Biodiversity Framework;”

Current moves to build greater policy coherence between the Rio Conventions are being led by the UN CBD (CBD16/22) closely followed by the UNCCD (UNCCD 16/8). COP 30 in Brazil provides a unique opportunity for the UNFCCC to align with and reinforce these decisions. A UNFCCC mandate for doing so is contained in the Preamble to the Paris Agreement which notes ‘the importance of ensuring the integrity of all ecosystems...and the protection of biodiversity.’ (3.6 paras. 12&13). The preamble is highly relevant for interpretation and implementation of the Paris Agreement as, among other things, ecosystem integrity is fundamentally important for the retention of and minimising risks to, ecosystem carbon reservoirs – as specified in Article 5 of the Paris Agreement and Article 4.1(d) of the UNFCCC (see below).

What is more, the current governance of forests and related land-use matters under the UNFCCC is fragmented, with relevant actions scattered across disparate workstreams such as international cooperation measures organised by Article 6, the MWP (Mitigation Work Programme), the GGA (Global Goal on Adaptation), Energy Transition measures and accounting rules on Forests & Land Use. This fragmentation leads to inefficiency, policy incoherence and a lack of a central, driving force for implementation within the UNFCCC.

Why is synergistic climate and biodiversity action critically important?

Biodiversity is a system driver that underpins every ecosystem service on which humanity depends, including carbon storage and removals of excess CO₂ from the atmosphere: the more an ecosystem retains its native biodiversity, the lower the risk, the greater the quantity and higher the quality of the ecosystem services it provides. The stability and quality of all ecosystem services are under threat from over-exploitation and all forms of damage to, and fragmentation of, biodiversity and ecological integrity.

Human activity has already exceeded 7 of 9 planetary boundaries (1) and as a result we are now facing global crises in biodiversity, water, food, health and climate change, all of which are interconnected and none of which can be solved in isolation. This crucially important point was emphasized by IPBES in its 2024 Nexus Assessment Report which examined the interdependencies between multiple crises and offered holistic solutions aimed at improving outcomes across sectors and systems (2).

Protecting and restoring biodiversity and ecosystem integrity is a common responsibility of each of the Rio Conventions (3). Achieving the goals and targets of the K-M GBF depends on it, as does retaining and restoring ecosystem carbon reservoirs required by the Paris Agreement and ecological restoration undertaken to support the goals of the UNCCD.

While important progress is being made on ecosystem integrity as a multilateral policy priority, a greater shared understanding is required among experts in both climate and biodiversity who contribute to UNFCCC, CBD and UNCCD decision making, about the central role of biodiversity and ecosystem integrity in achieving their respective goals and ensuring intergenerational equity.

Achieving a shared understanding

The ecological integrity of ecosystems - also referred to as ecosystem integrity - in general terms refers to the ability of ecosystems to maintain key ecological processes, recover from disturbance, and adapt to new conditions (4) and continue their processes of self-organization and regeneration (5). In more practical terms, it relates to an ecosystem’s capacity to maintain its biodiversity and characteristic composition, structure, functioning and regeneration over time given prevailing environmental, including climatic, conditions and natural disturbance regimes (6).

Achieving the goals of each of the Rio Conventions requires a shared understanding of the functional role of species and genetic diversity in ecosystem processes, the ecosystem services they provide, including climate mitigation and adaptation, and their contribution to maintaining planetary boundaries of the processes that regulate the stability and resilience of the Earth system.

Achieving climate mitigation and adaptation goals requires the retention of relatively stable carbon stocks in the biosphere, which is in turn reliant on retaining and recovering the natural components of biodiversity that underpin ecosystem integrity. The integrity of an ecosystem is reduced or lost through degradation from land use that impacts its structure, composition and functioning (7). It is imperative that we improve understanding that protecting and restoring ecosystem integrity protects and maximizes all the ecosystem services on which humanity relies, including carbon sequestration and retention. For example, ecosystems with higher ecological integrity store more carbon per hectare and store it more securely and for longer periods of time than forests managed for wood production, which is critically important when we consider that primary tropical forests alone store enough carbon to push us well past 1.5C if emitted to the atmosphere (8).

Preventing further loss, fragmentation and damage to natural ecosystems is essential if we are to achieve the goals of each Convention. Importantly, GOAL A of the KM-GBF, to retain and recover ecological integrity and its 2030 targets are firmly pointed at helping to achieve this urgent goal. Ecological integrity to ensure resilient, long-lived restoration outcomes is also an important consideration for the UNCCD for achieving its goal to combat desertification.

The Challenge for the UNFCCC

With every increment of global warming ecosystem carbon reservoirs are under increasing threat from rising climate trends and extremes. The ability of ecosystems to retain carbon in the face of escalating climate-related risks is dependent upon both their ecological integrity, and our success in simultaneously reducing emissions from fossil fuels to limit warming to as close as possible to 1.5 degrees (1).

To date, climate policy has largely ignored the fact that ecosystem protection and restoration is a critical complementary mitigation action to ending fossil fuel emissions for achieving net zero emissions, stabilising atmospheric concentrations of CO₂ and capping global warming. Forest loss and degradation has disrupted the stabilising role of ecosystems in the global carbon cycle(9). The focus in land sector mitigation policy on net annual fluxes of GHG, and their use in inventories to offset fossil fuel emissions, has resulted in a failure to recognize the mitigation value of ecosystem carbon retention and thus allowed the ongoing destruction of the living world that plays a vital role in regulating our climate. **We must bring to the front and centre of climate policy the protection and restoration of biodiversity and ecosystem integrity, not to offset fossil fuel emissions but to maximise the climate mitigation and adaptation benefits of climate action in land, forests and other ecosystems.**

Despite the well-established scientific understanding of the role of biodiversity in ecosystem integrity and the significant role of ecosystems in the global carbon cycle (10,11) and recognition by the IPCC of the superior mitigation benefits of ecosystem protection and of high synergies between climate and biodiversity in carbon dense ecosystems, such as primary forests, (12), the UNFCCC has yet to provide guidance on how best to deliver synergistic climate and biodiversity outcomes. Nor has operational guidance been developed to give effect to the ecosystem provisions of the Climate Convention and Paris Agreement. Filling this gap necessitates revisiting or at least supplementing current LULUCF accounting rules to include information on the integrity, stability and risks to ecosystem carbon stocks (reservoirs).

Failure to understand the importance of biodiversity protection and restoration for climate is manifest in the UNFCCC where LULUCF rules developed under the Kyoto Protocol are biodiversity blind, focus on the mechanics of net annual fluxes of atmospheric CO₂ and ignore the fact that biodiversity and related ecological processes remove carbon from the atmosphere, retain it in living and dead biomass and soil pools for very long periods, and reduce the risks to these ecosystem carbon reservoirs.

Transposing LULUCF rules to REDD+ without factoring in biodiversity and ecosystem integrity has meant that degraded forests and plantations are considered to have equal mitigation value and risk levels as primary forests. This is not the case as primary, old growth and mature forests store more carbon at lower risk. The consequence is that LULUCF and REDD+ rules have (albeit inadvertently) created a global legacy of high-risk climate mitigation action in forests that has had little impact on preventing deforestation and forest degradation in developed or developing countries.

Nor has the IPCC yet grappled with the implications for climate mitigation of ongoing biodiversity loss and associated declines in ecosystem integrity, although they have reflected on the need to do so. It is sobering that the current set of climate change models (11) do not factor in the role that biodiversity and ecosystem integrity play in carbon cycles and what this means for modelled climate risk assessments and pathways to limiting warming. This limitation has been noted by the IPCC (AR6 WG III) but no recommendations have been made on how to address this fundamental gap.

Examining this gap would benefit from either a joint IPCC/IPBES work programme or utilising an Adhoc Technical Expert Group (AHTEG) or developing a UNFCCC Work Programme on Climate and Nature. Regardless of which pathway is used relevant experts must be brought together to deliver advice and guidance in a pre-2030 timeline. It is critically important to do so as soon as possible because when the integrity of carbon dense ecosystems is damaged their capacity to sequester and store large and relatively stable carbon stocks is damaged and they are at increased risk of releasing more carbon to the atmosphere.

It is not an exaggeration to say that if biodiversity is ignored in climate mitigation measures then climate action in land forests and other ecosystems will have a high risk of failure, reducing both the capacity of ecosystems to draw down carbon from the atmosphere and their capacity to store carbon for the long periods of time necessary to achieve a balance of emissions and removals in the atmosphere.

Protecting and restoring biodiversity should not be thought of as merely a co-benefit of climate action. Rather, it must be understood as a pre-requisite for successful, low-risk climate mitigation and adaptation in land, forests and other ecosystems (13).

Retaining existing ecosystem carbon reservoirs is essential for achieving the Paris Agreement long-term temperature goal. Therefore new policy approaches are needed to foster this critically important climate mitigation outcome.

By making climate and biodiversity decisions without considering the inter-dependencies, we are prevented from engaging in the systems thinking needed to solve these inter-connected problems. This failure in systems thinking and analysis results in turn from the failure to understand the levers that drive systemic change. Ignoring the impact of climate action on biodiversity and ecological integrity increases the likelihood of losing or damaging many essential ecosystem services on which humanity relies. Tellingly, a leading agricultural scientist is now joining the call to recognize that biodiversity is a system driver that climate mitigation action in the land sector should be built upon (14).

Priorities for synergistic action

1. Protecting and restoring forests in the forest Mitigation Work Programme

CBD SBSTTA 27/5 recognised that: “Halting and reversing deforestation and forest degradation is a shared objective of the three Rio conventions, which was articulated in a joint brochure published in 2012.[1]” and “the protection and restoration of forests was mentioned as one of the cross-cutting themes of the Rio conventions during the technical information exchange on enhanced cooperation and policy coherence to support the implementation of the Rio conventions held on 15 June 2025.”

The same CBD SBSTTA decision identified elements that need to be incorporated or strengthened in the expanded programme of forest work, including “The conservation of primary and high-integrity forests and the restoration of connectivity through integrated landscape planning.” The Annexe to the CBD SBSTA decision provides guidance on protection, restoration and sustainable forest management in forests and outlines areas where greater guidance is needed for state parties.

The approach being taken by the CBD provides a robust pathway for achieving synergistic climate and biodiversity outcomes in forests, particularly as it would improve the resilience and stability of forests and their capacity to adapt to climate stressors.

Prioritising synergistic climate and biodiversity action in forests is needed in order to minimise risks to their ecosystem carbon stocks and maximise their role in limiting warming to as close as possible to 1.5 degrees and well under 2 degrees.

[1] See

https://unfccc.int/resource/docs/publications/rio_20_forests_brochure.pdf

2. Strengthening the UNFCCC role in preventing deforestation and forest degradation.

Arguably the biggest barrier to delivering synergistic climate and biodiversity outcomes is the persistent failure of any of the Rio Conventions to deliver on pledges and decisions to halt and reverse deforestation and forest degradation.

Emissions from both deforestation and forest degradation are stubbornly high and requires a new approach from the UNFCCC. To remedy this, the current fragmentation of forest action under the UNFCCC and the Paris Agreement, must be addressed. A dedicated 5-year action plan to halt and reverse deforestation and forest degradation by 2030 (18) is needed that places emphasis on securing outcomes across a range of forest-related negotiation tracks in the UNFCCC, with a mandate provided to the SBI (Subsidiary Body for Implementation), to support a streamlining and efficient approach for consolidating existing work concerning forests within the UNFCCC. It would build on the current high-level political momentum and provide a clear pathway for the UNFCCC to embrace the pre 2030 urgency, without creating new tracks of negotiations. This could be done by more streamlined negotiations and concrete areas of action on:

1. Guidance on the implementation of national plans to halt and reverse deforestation and forest degradation by 2030;
2. Measures concerning land rights and tenure of IPs&LCs;
3. Guidance on financial systems reform, debt relief, and scaling up high-integrity finance for forests to halt and reverse deforestation and forest degradation by 2030 and to maintain and restore forest ecosystem integrity;
4. Addressing drivers of deforestation and forest degradation related to agriculture and commodities trade;
5. Improving monitoring systems of deforestation and forest degradation through dialogue, reporting, and accountability; and
6. Enhancing International Cooperation and establishing a legacy of ongoing high-level political engagement to halt and reverse deforestation and forest degradation by 2030 and to align climate action in the land sector with the KM-GBF and the UNCCD land degradation neutrality target

3. The imperative to protect and restore ecosystem integrity

The well-being of humanity and Intergenerational equity requires that we provide mechanisms and incentives for the retention of all remaining areas of ecosystems with high ecological integrity, prioritising those that harbour substantial carbon stocks. It also requires that we: increase effective protection and restoration of all natural ecosystems; avoid and eliminate incentives and subsidies for actions that degrade ecosystems including through fragmenting landscapes; and explicitly prevent the loss of species and genetic diversity as a core component of synergistic climate and biodiversity action.

The highest synergies between climate mitigation, adaptation and biodiversity are found in high integrity carbon dense natural ecosystems like primary forests, peatlands and coastal vegetated zones (IPCCC AR6 WG 111). And the greatest opportunities for delivering synergistic climate and biodiversity outcomes and reducing the risks to long-term carbon storage in ecosystems are provided by well resourced and well managed Protected and Conserved Areas, Indigenous and Traditional Territories, Connectivity Conservation initiatives and Other Effective area-based Conservation Measures (OECM).

Areas of high ecological integrity are irrecoverable in any relevant time frame to achieve the objectives of the Rio Conventions, and in many cases are not recoverable at all and are therefore a high priority for synergistic action. (IPCC AR6 WG 111).

4. The role of Protected Areas

The CBD recognises that retaining all areas of high ecological integrity is essential for achieving its 2030 and 2050 goals and targets (KM-GBF Goal A & Target 1). Given their larger carbon stocks (per hectare) than degraded areas, and their greater stability, retaining high integrity, carbon-dense, ecosystems is also critically important for achieving the Paris Agreement temperature goal and reducing escalating risks to large ecosystem carbon reservoirs.

Recent analyses of the contribution made by Protected Areas to climate mitigation is provided in the IUCN/WCPA Technical Report , Enhancing Climate Change Mitigation in Protected Areas (19)which demonstrates that “protected and conserved areas are

the most effective solution to addressing the biodiversity/climate change nexus and ensuring that natural ecosystems can continue their critical role of capturing and storing carbon. Second to protection is restoration, including ensuring the permanence of restored areas through PCA (Protected and Conserved Areas) establishment and management.” Key insights from the report include:

- The overlap between areas of high importance for biodiversity and areas of high importance for CO₂ sequestration and long-term storage are not equally distributed across countries or ecosystems. The ecosystems of highest importance for the climate biodiversity nexus are primary forests, peatlands, savannas, native grasslands and coastal blue carbon;
- Many national and regional governments, as well as transboundary initiatives, have already developed the policy frameworks and underlying analyses needed to address biodiversity and climate change in tandem;
- Methodologies already exist to quantify the role of protected and conserved areas in climate change mitigation and are being used in many jurisdictions to assess the GHG emission reductions to be achieved by the creation of new PCAs;
- Restoration has a role to play if careful attention is paid to ensuring restoration has benefits for both biodiversity and climate change mitigation, and does not have unintended negative consequences for either;
- Leveraging climate change financing for protected areas enhancement can ensure that two purposes are served with the same investments, while ensuring more resources are made available for well-aligned climate and biodiversity action on the ground.

Synergies between biodiversity, ecosystem integrity and Climate Adaptation

The protection and restoration of our most carbon dense ecosystems is a high priority in order to help avoid catastrophic climate change and critical for delivering adaptation benefits for people and nature. The capacity of species and ecosystems to adapt to climate change is absolutely dependent upon retaining and recovering ecosystem integrity as it is the biodiversity at all levels that provides for their natural adaptive capacity in response to human influenced climate change (18). Furthermore, the greater quality and quantity of ecosystems services arising from high integrity ecosystems are also critical for human adaptation and in particular for Indigenous and local communities. High-integrity ecosystems have greater stability, resilience, capacity to adapt, and provide higher quality ecosystem assets and services that contribute to human wellbeing (20). Ecosystem integrity therefore is fundamental to maximising the adaptation benefits from ecosystem services in addition to retaining its most important climate mitigation value: securing long-lived and relatively stable carbon storage (7).

Every ecosystem provides important ecosystem services for human well-being. It behoves each of the Rio Conventions to ensure that any action that damages biodiversity, ecological integrity or its capacity to adapt to stressors that are increasing with climate change is prevented. The UNFCCC must play its role in preventing damage and loss to biodiversity and ecosystem integrity and retaining and recovering their ability to adapt to climate change.

The role of the UNCCD

While improving the protection of carbon dense natural ecosystems is the highest priority for achieving synergistic climate and biodiversity outcomes, there is a critically important role for ecological restoration, and reforestation programs aimed at reversing land degradation, to ensure they are designed to maximise climate, biodiversity and other ecosystem service benefits.

Improving the resilience and resistance of ecosystems to threats that are increasing with climate change (pests, disease, drought and fire) is a common imperative of all three of the Rio Conventions and arguably many other multi-lateral agreements. Ecological principles therefore should guide all restoration action.

For example, focusing restoration on buffering and reconnecting even small areas of natural, carbon dense ecosystems and fostering regeneration, connectivity and recovery of degraded natural ecosystems, including forests, are relevant for the effectiveness of each Convention.

Improving the information base and metrics for success – assessing and monitoring Ecosystem Integrity

A system that provides reliable information to Parties for assessing the relative benefits and risks of management actions for mitigation would enable parties to prioritize such actions is needed and is essential for providing an information base for decision-makers to facilitate greater and practical policy coherence between the CBD, UNCCD and UNFCCC. Improving capacity to monitor ecosystem integrity is essential to assess whether we are in fact achieving Global Biodiversity Framework objectives and UNFCCC and UNCCD goals. Guidance, criteria and indicators are necessary for Parties to report on the condition and stability of their carbon dense ecosystems and the risks to those ecosystems. Current monitoring frameworks frequently use a range of approaches many of which were not developed specifically for this purpose. Furthermore, many rely on modelled and assumed impacts and on remotely sensed data which are not sufficiently calibrated with field survey data to map ecosystem degradation. As a result, existing frameworks are often not sufficiently accurate or precise to form an adequate basis for land use planning exercises or to monitor progress towards CBD and UNFCCC convention goals accurately. However, recent advances in modelling techniques create a cost effective and readily accessible pathway for assessing and monitoring ecosystem integrity at all relevant scales (21). A review of techniques used is found in Chapter 4 or Enhancing Climate Change Mitigation in Protected Areas (22).

The importance of identifying differences in the ecological integrity of ecosystems (ecosystem integrity) is highlighted by the work of the UN Statistical Commission in the development and refinement of the new global statistical standard for the System of Environmental Economic Accounting - Ecosystem Accounts (SEEA-EA) that incorporates the measurement of condition of ecosystem assets (23). This common information base, and reference level based on ecosystem integrity, can reveal priorities for synergistic between biodiversity and climate actions. SEEA accounts are being compiled and used for land management decision-making at local, regional, national and continental scales, with over 50 countries producing some national-level ecosystem accounts. The data in these existing accounts, and their ongoing refinements, can and are being used for national reporting to the UNFCCC, K-M GBF and UNCCD. These ecosystem accounts can be integrated with national economic accounts to reveal the superior economic benefits of retaining and restoring high integrity ecosystems and be included in national balance sheets.

Developing guidelines on synergies

Developing robust guidance on maximising synergistic outcomes would require a range of experts and practitioners including ecologists, Earth system scientists and environmental economists, as well as Indigenous Peoples and local communities, who understand and can communicate the complex relationships between the natural patterns and components of biodiversity (including diversity at the genetic, species and community levels), ecosystem integrity, and why retaining and restoring the ecological integrity of ecosystems is fundamentally important for minimizing the risks to ecosystem carbon reservoirs (stocks) and keeping Earth's vast ecosystem carbon stores out of the atmosphere (24).

Without such guidance, including revised or supplemented accounting rules, climate action to protect and restore carbon dense ecosystems, including Earth's primary and other natural forests, will remain ineffectual and do little to change the business-as-usual focus on net annual sequestration, nor shift the focus away from afforestation, reforestation and maintaining young, highly modified forests, towards retaining and recovering the maturity and ecological integrity of natural forests.

New metrics are required to: (a) provide incentives for management actions that protect the stability and reduce the risks to, ecosystem carbon stocks (reservoirs), (b) reflect the importance of ecosystem integrity for maximizing and retaining carbon storage over the long term, (c) recognize the functional role of biodiversity in underpinning ecological integrity of ecosystems, and (d) utilise as a reference level the carbon carrying capacity of primary ecosystems (25).

Conclusions

Working together, the UNCCD, UNFCCC and CBD could ensure ecosystem dynamics and the factors that influence them are far better reflected in climate mitigation outcomes and improve the resistance, resilience and adaptive capacity of natural ecosystems thereby better enabling the retention and recovery of the carbon reservoirs needed to limit warming to as close as possible to 1.5 degrees while also achieving the Goals of the K-M GBF and UNCCD.

The proposed synergistic approach would support implementation of COP 28 decision 1/CMA.5 and underpin a robust decision at COP 30 on the forest Mitigation Work Programme. It would also ensure:

- The Retention of all high integrity ecosystems is prioritised by each Convention;
- Restoration action under each Convention supports ecological recovery;
- Climate action in the LULUCF sector aligns with and contributes to achieving the goals and targets of the KM-GBF;
- The climate mitigation and adaptation goals of the Paris Agreement as reinforced in COP 28 decision 1/CMA.5, are supported by actions taken under each Convention;
- The goals of the UNCCD to prevent further degradation and foster ecological recovery of degraded lands, as per UNCCD 16/8, are supported;
- A robust pathway for halting and reversing deforestation and forest degradation by 2030 is developed; and
- High integrity forests and other bio-diverse carbon dense ecosystems that are irrecoverable by 2050 would have improved protection and conservation management.

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