

A CONTRIBUTION TO ENHANCING POLICY COHERENCE AND SYNERGIES BETWEEN THE CLIMATE AND BIODIVERSITY REGIMES

Edgar Fernández Fernández Juan Pablo Sierra Suárez Ximena Bénard-Tertrais

April 2025

Cite as:

Fernández Fernández, E., Sierra Suárez, J.P., Bénard-Tertrais, X., (2025), A contribution to enhancing policy coherence and synergies between the climate and biodiversity regimes, Transforma

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Acknowledgements

This working paper was funded by the generous support of the Climate Emergency Collaboration Group (CECG). We are thankful for the feedback received from the following reviewers: Alexandra Deprez, Fiona Dobson, Catalina Gonda, Vanessa Morales, Jimena Nieto, Carly Siege and Calder Tsuyuki-Tromlinson. We also thank the insights received from Natalia Daza, Juan José Guzmán, Juan Monterrey, Martín Pérez, María Carolina Pinilla, Benjamín Quesada, Emilio Spataro and Sofía Vargas and members of our Transforma team: Alejandra Lopez, Maritza Florián, Laura Juliana Arciniegas, Diana Barba and Angélica Mateus.



Key takeaways

It is paramount that coordinated and mutually supportive signals emerge from the international climate and biodiversity policy arenas in order for countries and other stakeholders to plan and implement their actions to tackle these and other societal challenges and global crises simultaneously and coherently at the national, subnational and local levels, where the Conventions are implemented. The same can be said about the need for more holistic and integrated assessments from science that aim to fill in the knowledge gaps about how best to enhance synergies and avoid trade-offs between climate and biodiversity action. For this, more collaboration, fluid communication and responsiveness between bodies of the Conventions and between bodies of the intergovernmental science-policy panels is needed.

Creating or reactivating at least one dedicated space at the UNFCCC and the Paris Agreement to deal with cooperation and synergies between climate and biodiversity (or the three Rio Conventions) is a must for effectively enhancing policy coherence. Because of the interdependence of climate and biodiversity and climate change and biodiversity loss, having a dedicated space to review and give guidance to Parties on these issues and for communicating and exchanging invitations and responses with the bodies of the CBD is key for the implementation of the UNFCCC and the Paris Agreement.

A new momentum has been given to the climate-biodiversity synergies agenda on the international stage during the last five years. The synergies-related targets of the GBF, the multiple signals for synergistic action contained in the CMA decision on the GST-1 outcome, the collaboration initiated as a result of the COP28 Joint Statement on Climate, Nature and People, and the process for enhanced policy coherence launched at CBD COP16, constitute stepping stones towards the achievement of important outcomes on synergies at COP30, both under the negotiated and the non-negotiated agendas. This momentum could have also informed and influenced in several ways the updated NBSAPs and the new NDCs that countries have been and will be submitting during 2024-2025, as is the case of Colombia's updated NBSAP and Panama's Nature Pledge.

The conditions are given for 2025 to be a pivotal year for a holistic enhancement of policy coherence for climate-biodiversity synergies through the following recommendations:

In the negotiated agenda of the UNFCCC COP30, Parties discuss and adopt a decision in which they 1) agree on substantive elements for guiding the implementation of the synergies-related outcomes of the GST-1 decision and Article 5 of the Paris Agreement; 2) agree to create or reinvigorate existing spaces in the UNFCCC process for the continuation of Party-driven discussions and consideration of issues related to climate-biodiversity synergies. A possible new space could be a work programme on synergies under the SBSTA and the SBI, which a joint SBSTA-SBI agenda item should complement for Parties to assess and steer the work programme and propose draft decisions to the CMA. An alternative or a complement to the foregoing could be to reactivate and reinvigorate the existing SBSTA agenda item on cooperation with relevant international organizations as a space to discuss and prepare recommendations to the COP/CMA on issues related to synergies among the Rio

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Conventions. **An ad hoc technical expert group** could also be established for producing guidance and recommendations on relevant matters related to synergies that the COP/CMA would mandate. Finally, a request could be made to the Executive Secretary to invite the Executive Secretaries of the other Rio Conventions to enhance further collaboration through the joint liaison group, including through the development and implementation of **a joint work programme of the Rio Conventions** to support Parties in enhancing policy coherence at the domestic level.

- In the non-negotiated agenda of COP30, the launch of the TFFF would be a key milestone for the provision of funds for the conservation of standing tropical forests, independently of whether they are threatened or not and not just narrowly focused on climate change mitigation outcomes. It would help developing countries decrease their dependence on carbon markets to conserve their forests.
- In the science arena, the CBD COP16 invitation to the IPBES to consider undertaking an assessment on biodiversity and climate change is a golden opportunity for mutual collaboration between the IPBES and the IPCC to close knowledge gaps about climate-biodiversity synergies and trade-offs. The same applies to the recent IPBES plenary decision to invite the IPCC to consider co-sponsoring a new workshop on biodiversity and climate change.
- At the national planning and implementation level, countries that have not yet communicated their updated NBSAPs and new NDCs could still benefit from the Climate Nature Coordination Platform's (CNCP) technical support for coherently formulating and implementing these instruments. It is paramount for countries to set up an adequate coordination structure with sufficient levels of political alignment to achieve coherence.
- In terms of finance, addressing financial issues such as the biodiversity finance gap, the climate finance gap and the double- or triple-counting in developed countries' finance reporting to the Rio Conventions would be paramount for unlocking more significant support for synergies by Parties at the Conventions level. Not only should ODA finance for both climate as a principal objective and biodiversity as a principal objective continue to increase, but ensuring that there is no double- or triple-counting would help build trust in finance targeting climate-biodiversity synergies.

In terms of the process to achieve a negotiated outcome at COP30, a draft CMA7 decision containing a substantive negotiated outcome on synergies and establishing a space for Parties to discuss and prepare decisions would need to start being negotiated at the 62nd session of the subsidiary bodies (SBs62), in June 2025, for increasing its chances of success. The two more realistic spaces for undertaking these negotiations would be:

- Either a new SBSTA and SBI joint agenda item on climate-biodiversity or Rio Conventions synergies -which would first need to be included in the SBs62 provisional agenda-;
- Or using the already existing SBSTA agenda item on cooperation with other relevant international organizations, which has been a "sleeping agenda item" for more than fifteen years.



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1. Introduction

The enhancement of synergies between the climate and biodiversity policy frameworks has gained momentum in recent years, although the issue is not new. The Rio Summit in 1992 came out with three sister Conventions (the United Nations Convention on Climate Change (UNFCCC¹), the Convention on Biological Diversity (CBD²) and the United Nations Convention to Combat Desertification (UNCCD³)), which are collectively known as the Rio Conventions. Since then, the need for coherence in implementing the three international regimes has been acknowledged.

The early years of the Rio Conventions were marked to some extent by a sense of willingness by the Parties to collaborate that led to some fluid exchanges between the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) and the UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA), the establishment of a joint liaison group among the secretariats of the three Conventions, and the development of a joint work programme on the biological diversity of dry and sub-humid lands between the CBD and the UNCCD. However, overall, each regime has developed its own rules, instruments and arrangements in a siloed way. Today, there is no dedicated space or channel in the UNFCCC regime, at the level of its subsidiary and decision-making bodies, for effectively collaborating and communicating with the CBD and the UNCCD to support each other and send coherent signals to their respective Parties.

While recognizing the need for synergies among the three Rio Conventions and the interlinkages and interdependencies between them, this policy brief will focus on the synergies between the climate and biodiversity regimes, and specifically the need for policy coherence from the international level, where the policy signals are sent, to the national and local levels, where both regimes are implemented. In that sense, it provides a partial analysis of what would be needed to enhance policy coherence among the three Rio Conventions and would benefit from a complementary analysis that considers the specifics of the UNCCD regime. It has a special focus on how to bring on board the climate change regime since not only does climate change itself have negative impacts on biodiversity, but also climate action can either contribute synergistically to halting and reversing biodiversity loss or have negative impacts on biodiversity when mitigation and adaptation measures are not well designed, do not take into account sustainability limits or do not account for unintended consequences.

It should be acknowledged from the start that synergies is an approach for more effective implementation and that all work on synergies at both the international and national levels should focus on delivering improved action on the ground for the mutual benefit of biodiversity, climate and people. This approach is paramount not only because human well-being, climate stability and ecosystems' ecological integrity and resilience are all interdependent, but because it allows for a more efficient use of the limited resources and capacities available to tackle different global crises.



¹ (<u>United Nations, 1992</u>).

² (<u>CBD Secretariat, 2011</u>).

³ (<u>UNCCD, 1994</u>).

2025 is a crucial year for the climate-biodiversity synergies agenda since UNFCCC's 30th session of the Conference of the Parties (COP30) will take place in Brazil, one of the most megadiverse countries in the world and home, together with eight more countries from South America, of a key ecosystem for the stability of the climate system: the Amazon biome. As COP30 Presidency, Brazil has included the synergies agenda among its priorities and has invited the other two Rio Conventions Presidencies to be part of its "Circle of Presidencies" (Federative Republic of Brazil, 2025). One of the most expected outcomes of the non-negotiated agenda is the launch of the Tropical Forest Forever Facility (TFFF), a Brazil-led initiative (Brazilian Government, 2024). COP30 is thus a golden opportunity for the UNFCCC process to link with the synergies-related outcomes from CBD COP16 (Oct-Nov 2024), in particular decision 16/22 on biodiversity and climate change (CBD, 2024a), something on which COP29 did not deliver.

As a contribution to the reflections and discussions that will take place this year for crafting a successful outcome on climate-biodiversity synergies at COP30 and beyond, **this policy brief aims to provide clarity to negotiators, civil servants, civil society organizations and other relevant stakeholders on different aspects whose understanding is essential for engaging in discussions around synergies at the international level and their implementation at the national level.** These aspects are the interlinkages between biodiversity and the climate system; the interlinkages between the biodiversity and climate change international regimes; the role of concepts like nature-based solutions and ecosystem-based approaches in the synergies discussion; the opportunities for synergies and risks of climate action for biodiversity; the problem of double-counting synergistic finance; and the opportunities moving forward for greater collaboration on synergies at the international policy level, the science-policy interface level and the national level, with the view of delivering synergistic action on the ground.

2. Biodiversity and the climate system

"Biological diversity" (commonly referred to as "biodiversity") is defined in the CBD as "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (<u>CBD Secretariat, 2011</u>). It is this diversity that underpins the stability, resilience, and adaptive capacity of ecosystems that provide essential contributions and services to people and the planet⁴, including those that are climate-related, such as carbon sequestration, long-term carbon storage, and protection from storms and floods, and those not climate-related, such as clean water, air quality, pollination, food, medicine, nutrient cycling, aesthetic and recreation (<u>Rogers et al., 2022</u>).

⁴ For example, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Intergovernmental Panel on Climate Change (IPCC) co-sponsored workshop report highlights that "higher genetic, species and ecosystems diversities help to reduce risk in the face of uncertain changes in climate and keep adaptation options open" (<u>Pörtner et al., 2021</u>).



At the same time, the "climate system," as defined in the UNFCCC, comprises "the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions". The biosphere⁵ is thus one of the interacting components of the climate system on which its stability depends.

Both biodiversity and the climate system play an essential role in the stability and resilience of the Earth System as a whole. Biosphere integrity and climate change have been identified by the authors of the planetary boundaries framework as "core planetary boundaries". They argue that large changes in one of them might, on their own, lead to a new state of the Earth System, different from the Holocene state of the last 11,700 years, since "transitions between time periods in Earth history have often been delineated by significant shifts in climate, the biosphere, or both" (Steffen et al., 2015).



Climate and biodiversity, as well as the global crises of climate change and biodiversity loss, are intertwined. One crisis cannot be solved without solving the other, and they both have negative consequences on people's well-being and the ecosystems they depend on (<u>Pörtner et al., 2023</u>).

Biodiversity and ecosystems contribute to addressing climate change in many ways and have been qualified by the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR6) as "fundamental to climate resilient development" (<u>IPCC, 2022a</u>). Not only do high-integrity ecosystems uptake larger amounts of carbon dioxide from the atmosphere and store it for longer periods of time than low-integrity ecosystems, they also help people to adapt to climate change while providing them with multiple contributions or ecosystem services that are essential for their survival and well-being (<u>Rogers et al., 2022</u>). According to the IPCC AR6, maintaining the resilience of biodiversity and ecosystem services at a global scale depends on effective and equitable conservation of approximately 30% to 50% of Earth's land, freshwater and ocean areas, including currently near-natural ecosystems (<u>IPCC, 2022a</u>)⁶.

However, biodiversity is highly vulnerable to climate change, currently being the third direct driver or cause of biodiversity loss, only after changes in land and sea use and the direct exploitation of organisms (<u>IPBES, 2019</u>; <u>Jaureguiberry et al., 2022</u>), and with the possibility of becoming the first driver by mid-century (<u>IIASA, 2024</u>). The IPCC AR6 states clearly that climate change has already caused substantial damages and increasingly irreversible losses in terrestrial, freshwater, coastal, and open ocean marine ecosystems (<u>IPCC, 2022a</u>).

Ecosystems have limited capacity to adapt to climate change. According to the IPCC AR6, hard limits to adaptation, i.e., when no adaptive actions are possible to avoid intolerable risks, have already been reached in some ecosystems. Others are near the hard limits of their natural adaptation

⁶ The 30% conservation commitment contained in Target 3 of the Kunming-Montreal Global Biodiversity Framework (GBF) speaks to this finding.



⁵ The biosphere is defined by the IPCC as "the part of the Earth system comprising all ecosystems and living organisms, in the atmosphere, on land (terrestrial biosphere) or in the oceans (marine biosphere), including derived dead organic matter, such as litter, soil organic matter and oceanic detritus" (IPCC, 2021). Similarly, the IPBES provides the following definition: "the sum of all the ecosystems of the world. It is both the collection of organisms living on the Earth and the space that they occupy on part of the Earth's crust (the lithosphere), in the oceans (the hydrosphere) and in the atmosphere. The biosphere is all the planet's ecosystems" (IPBES, 2018).

capacity, and additional ones will reach limits with increasing global warming. Ecosystems already reaching or surpassing hard limits include some warm-water coral reefs, some coastal wetlands, some rainforests and some polar and mountain regions (<u>IPCC, 2022a</u>).

At the same time, increasing global warming levels reduce the effectiveness of ecosystem-based approaches to climate change mitigation and adaptation. Not only do ecosystems become less resilient and their adaptive capacity decreases, but their capacity to sequester and store carbon is reduced, which has raised many questions over their ability to maintain long-term carbon storage in a world in which greenhouse gas (GHG) emissions continue to rise, primarily due to the production and consumption of fossil fuels.

A stable climate system is thus paramount for maintaining and restoring biodiversity and healthy ecosystems on which that same stability depends. This makes measures such as reducing emissions from deforestation and conserving and restoring biodiversity and ecosystems an essential component of climate action. At the same time, it makes steep emission cuts and phasing out of fossil fuels essential not only to addressing climate change but also maintaining biodiversity.

3. Interlinkages between biodiversity and climate change international regimes

Box 1. The text of the UNFCCC

The term "biodiversity" is not mentioned at all in the UNFCCC text (United Nations, 1992). However, ecosystems are mentioned both in the preamble and in the operative part of the Convention. The preamble refers both to the adverse effects of climate change on ecosystems and to the importance in terrestrial and marine ecosystems of sinks and reservoirs of GHGs. The operative part refers to the adverse effects of climate change on "natural and managed ecosystems" (Article 1.1). It includes, as part of the ultimate objective of the Convention, the achievement of a level of stabilization of GHG concentrations in the atmosphere that would prevent dangerous anthropogenic interference with the climate system "within a time frame sufficient to allow ecosystems to adapt naturally to climate change" (Article 2). It also establishes the commitment of all Parties, taking into account common but differentiated responsibilities, to promote and collaborate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all GHG not controlled by the Montreal Protocol, including biomass, forest and oceans as well as other terrestrial, coastal and marine ecosystems (Article 4.1(d)).

Box 2. The text of the CBD

In the same way that the UNFCCC text does not mention biodiversity, the CBD text does not mention the term "climate change".



Box 3. The text of the Paris Agreement⁷

The Paris Agreement (United Nations, 2015) mentions biodiversity in its preamble, when it notes "the importance of ensuring the integrity of all ecosystems⁸, including oceans, and the protection of biodiversity". In the operative text, the Paris Agreement includes ecosystems as a consideration to have in the context of adaptation (Article 7), and it mentions the resilience of ecosystems among the areas of cooperation and facilitation to enhance understanding, action and support concerning loss and damage (Article 8). Forests are mentioned as part of the sinks and reservoirs of GHG referred to in Article 4.1(d) of the Convention for which Parties should take action to conserve and enhance (Art 5.1). Parties are also encouraged to take action to implement and support existing frameworks under the Convention for policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests (Art. 5.2). Importantly, it reaffirms the importance of incentivizing, as appropriate, "non-carbon benefits" associated with such approaches (Art. 5.2).

Box 4. The text of the Kunming-Montreal Global Biodiversity Framework (GBF)⁹

In addition to recognizing climate change as the third direct driver of biodiversity loss, the GBF (<u>CBD, 2022</u>) includes three targets that aim to promote synergies between climate action and action to halt and reverse biodiversity loss¹⁰:

Target 8: Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solution and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.



Target 11: Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as regulation of air, water, and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

Target 19(e): Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at

¹⁰ These targets have strong linkages with targets 2, 3 and 10, which prioritize action in the places most important for delivering nature's contributions to people.



⁷ The Paris Agreement was adopted in 2015 by decision 1/CP.21 (<u>UNFCCC, 2015</u>) with the purpose to enhance the implementation of the Convention through more concrete long-term goals and an ambition mechanism for climate action in this and the next decades.

⁸ The IPCC AR6 defines "**ecosystem integrity**" as "the ability of ecosystems to maintain key ecological processes, recover from disturbance, and adapt to new conditions" (<u>IPCC, 2022a</u>).

⁹ The GBF was adopted in 2022 by CBD COP decision 15/4 (<u>CBD, 2022</u>). Building on the lessons learned from the Strategic Plan for Biodiversity 2011-2020, it sets four long-term goals related to the 2050 vision of a world living in harmony with nature and 23 action-oriented global targets for urgent action over the decade to 2030.

least \$200 billion per year by 2030, including by: (e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;

Brief history of efforts at the international regime level to promote policy coherence between the biodiversity and climate change agendas

Until now, international efforts towards integration and coherence between the climate and biodiversity international agendas have mostly come from the CBD, largely through, but not limited to, its agenda items on biodiversity and climate change (SBSTTA and COP) and cooperation with other conventions and international organizations (Subsidiary Body on Implementation (SBI) and COP). These efforts have included, among others, developing technical guidance and advice for integrating biodiversity considerations in the implementation of the UNFCCC, the Kyoto Protocol and the Paris Agreement. This work started at COP5, with decision V/4 to prepare scientific advice before CBD COP6 (<u>CBD, 2000a</u>)¹¹, and there has been a CBD COP decision on biodiversity and climate change at every CBD COP since COP7.

From the UNFCCC and the Paris Agreement side, there has never been a standing agenda item on climate change and biodiversity. Nevertheless, in the early years of the UNFCCC, the UNFCCC SBSTA showed great interest in cooperating and promoting synergies between the Rio Conventions, especially in the context of its agenda item on cooperation with relevant international organizations. For example, at its 14th session, the UNFCCC SBSTA (<u>UNFCCC, 2001a</u>) responded to specific invitations from the CBD SBSTTA by calling for the involvement of climate change expertise in a CBD pilot assessment on the interlinkages between climate change and biodiversity, endorsing the creation of a joint liaison group between the secretariats of the three Conventions, and supporting a request for the IPCC to develop a technical paper on the interlinkages between climate change and biodiversity¹².

At its 17th session (Oct. 2002), the UNFCCC SBSTA produced, for the first and last time, a recommendation of a draft decision on cooperation with other Conventions for adoption by the UNFCCC COP (UNFCCC, 2002a). Through this decision, adopted at COP8 (decision 13/CP.8), the UNFCCC COP affirmed the need for enhanced cooperation between the Rio Conventions "with the aim of ensuring the environmental integrity of the conventions and promoting synergies under the common objective of sustainable development, in order to avoid duplication of efforts, strengthen joint efforts and use available resources more efficiently" (UNFCCC, 2003). Importantly, it requested the SBSTA to continue and enhance cooperation with the CBD SBSTTA and the Committee on Science and Technology of the UNCCD; and "supported" the mandate of the joint liaison group of the Rio Conventions¹³.

¹³ One year before, through the Marrakesh Ministerial Declaration at COP7 (decision 1/CP.7, Nov. 2001), the UNFCCC COP had, for the first time, recognized that the synergies between the three Rio Conventions should continue to be explored through various channels, in order to achieve sustainable development (<u>UNFCCC, 2002b</u>).



¹¹ See below, p. 18.

¹² The publication of the technical paper prepared by the IPCC was welcomed by the UNFCCC SBSTA (<u>UNFCCC,</u> <u>2004a</u>).

However, the UNFCCC Parties' interest in cooperating with the two other Rio Conventions diminished drastically in the mid-2000s', as demonstrated starting at the SBSTA's 24th session (UNFCCC, 2006a). At this session, after considering the paper on options for enhanced cooperation among the three Rio Conventions (UNFCCC, 2004b), which was prepared jointly by the CBD, UNCCD and UNFCCC secretariats in the context of the joint liaison group, conclusions from this SBSTA emphasized alignment only at the national level, signaling a lack of interest in advancing cooperation at the international level¹⁴. This was also the last time the SBSTA made a substantive statement about cooperation among the Rio Conventions under its agenda item on cooperation with relevant international organizations. Since its 32nd session in 2010, the SBSTA has practically limited itself to consider and take note of a regular information paper from the secretariat summarizing relevant cooperative activities with UN entities and other international organizations that contribute to the work under the Convention (UNFCCC, 2010).

The above means there is no dedicated space for the UNFCCC SBSTA, the COP or the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) to discuss and make decisions on issues related to synergies between biodiversity and climate change (e.g., how the protection and restoration of biodiversity can help tackle climate change; how to minimize negative and foster positive impacts of climate action on biodiversity), or for them to respond to or uptake invitations and initiatives from the CBD COP or the CBD SBSTTA.

Notwithstanding the foregoing, by means of general decisions such as the so-called "cover decisions" and the decision on the first Global Stocktake (GST-1) outcome (UNFCCC. 2024a), a new momentum has been recently given to the need for synergies between climate and biodiversity in the UNFCCC regime. This new momentum began paving its way at COP25, with its cover decision 1/CP.25, which underlines "the need to address biodiversity loss and climate change in an integrated manner," in addition to "the essential contribution of nature to addressing climate change and its impacts" (UNFCCC, 2020). Decision 1/CP.25 also highlights the role of oceans as an integral part of the Earth's climate system and convenes a dialogue on the ocean and climate change to strengthen mitigation and adaptation action.

Two years later, both UNFCCC COP26 and CMA3 cover decisions 1/CP.26 and 1/CMA.3 reproduced in their preambles the Paris Agreement preambular paragraph that notes **the importance of ensuring the integrity of all ecosystems and the protection of biodiversity**¹⁵ and, in their operative parts, emphasized "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, 2021a; UNFCCC,

¹⁵ This preambular paragraph was subsequently reproduced in the preambles of COP27 and CMA4 cover decisions (decisions 1/CP.27 and 1/CMA.4) (<u>UNFCCC, 2022a</u>; <u>UNFCCC 2022b</u>) and in the preamble of decision 1/CMA5 on the outcome of the first global stocktake (decision 1/CMA.5) (<u>UNFCCC, 2023</u>).



¹⁴ The SBSTA concluded that "cooperation at the national level, including through the national focal points, provides the greatest opportunities for efficient and effective cooperation on issues of relevance to the three Rio Conventions". It also noted "the important role of the JLG [Joint Liaison Group] in promoting information exchange, including on activities relating to technology transfer, capacity-building and experiences from the national capacity self assessments".

<u>2021b</u>)¹⁶. UNFCCC COP26 cover decision's preamble also recognized "the interlinked global crises of climate change and biodiversity loss, and the critical role of protecting, conserving and restoring nature and ecosystems in delivering benefits for climate adaptation and mitigation, while ensuring social and environmental safeguards".

New elements were brought by UNFCCC COP27 and CMA4 cover decisions 1/CP.27 and 1/CMA.4 (UNFCCC, 2022a; UNFCCC 2022b), which introduced a preambular paragraph recognizing "the critical role of protecting, conserving and restoring water systems and water-related ecosystems in delivering climate adaptation benefits and co-benefits, while ensuring environmental and social safeguards"¹⁷. Also, in their preambular parts, both decisions underlined "the urgent need to address, in a comprehensive and synergistic manner, the interlinked global crises of climate change and biodiversity loss in the broader context of achieving the Sustainable Development Goals, as well as the vital importance of protecting, conserving, restoring and sustainably using nature and ecosystems for effective and sustainable climate action"18. Both decisions also included a section on forests, in which the UNFCCC COP27 cover decision recalled that "Parties should collectively aim to slow, halt and reverse forest cover and carbon loss" and CMA4 cover decision recalled Article 5.2 of the Paris Agreement. In that same section, both decisions encouraged Parties "to consider, as appropriate, nature-based solutions or ecosystem-based approaches, taking into consideration United Nations Environment Assembly resolution 5/5¹⁹, for their mitigation and adaptation action while ensuring relevant social and environmental safeguards".

Finally, at the most recent UNFCCC COP29 in 2024, decision 1/CMA.5 on the outcome of the GST-1 (UNFCCC, 2024a) introduced some important new elements related to biodiversity. First in the mitigation section it: emphasized "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 gases and by conserving biodiversity, while ensuring social and environmental safeguards, in line with the Kunming-Montreal Global Biodiversity Framework" (para. 33); noted "the need for enhanced support and investment, including through financial resources, technology transfer and capacity-building, for efforts towards halting and reversing deforestation and forest degradation by 2030 in the context of sustainable development and poverty reduction, in accordance with Article 5 of the Paris Agreement" (para. 34); and invited Parties "to preserve and restore oceans and coastal ecosystems and scale up, as appropriate, ocean-based mitigation action" (para. 35). Second, in the adaptation section, the CMA: encouraged "the implementation of integrated, multi-sectoral solutions, such as land-use management, sustainable agriculture, resilient food systems, nature-based solutions and ecosystem-based approaches, and protecting, conserving and restoring nature and ecosystems, including forests, mountains and other terrestrial and

¹⁹ At its fifth session, in March 2022, the United Nations Environment Assembly (UNEA-5) adopted Resolution 5/5 "Nature-based solutions for supporting sustainable development", in which a definition of "nature-based solutions" was agreed. (<u>UNEP, 2022</u>).



¹⁶ This paragraph was reproduced in the operative parts of COP27 and CMA4 cover decisions (<u>UNFCCC, 2022a;</u> <u>UNFCCC 2022b</u>).

¹⁷ This preambular paragraph was reproduced in the preamble of decision 1/CMA5 on the outcome of the first global stocktake .

¹⁸ This paragraph was reproduced in the preamble of decision 1/CMA5 on the outcome of the first global stocktake.

marine and coastal ecosystems, which may offer economic, social and environmental benefits such as improved resilience and well-being" (para. 55); noted "that ecosystem-based approaches, including ocean-based adaptation and resilience measures, as well as mountain regions, can reduce a range of climate change risks and provide multiple co-benefits" (para. 56); and introduced the 2030 adaptation target of "reducing climate impacts on ecosystems and biodiversity and accelerating the use of ecosystem-based adaptation and nature-based solutions, including through their management, enhancement, restoration and conservation and the protection of terrestrial, inland water, mountain, marine and coastal ecosystems" (para. 63(d)). Third, in the international cooperation section, the CMA encouraged Parties and non-Party stakeholders "to enhance cooperation on the implementation of multilateral environmental conventions and agreements, particularly their work under the Rio Conventions, to facilitate the achievement of the purpose and long-term goals of the Paris Agreement and the Sustainable Development Goals in a synergistic and efficient manner" (para. 163).

A clear signal from these GST-1 decision paragraphs is that neither the 2030 mitigation and adaptation targets nor the long-term goals of the Paris Agreement can be met without better alignment of climate and biodiversity action. **COP30 is an opportunity to start getting concrete about operationalizing these paragraphs, including Article 5 of the Paris Agreement** -transcribed in para. 34 of the GST-1 decision-, which do not have a dedicated space for Parties to discuss and take decisions to advance their implementation.

Regardless of the clear direction from the COPs, today, the only formal channel of cooperation between the UNFCCC and the CBD is **the joint liaison group of the secretariats of the Rio Conventions**. However, this form of cooperation has been limited in recent years to implementing a **joint capacity-building programme** and organizing activities around **the Rio Conventions Pavillion** (<u>UNFCCC, 2024b</u>), and no in-depth assessments exist about the role and effectiveness of the joint liaison group in responding to the COPs directives and contributing to the implementation of synergies at the national and sub-national levels. **CBD COP decision 16/22** has opened the way to reestablish connections between the UNFCCC and the CBD (and the Rio Conventions more generally), in a context where the appetite for synergies has increased now that instruments and mechanisms such as the Paris Agreement and the GBF are ready to be implemented.

4. Nature-based solutions and ecosystem-based approaches

Two approaches have been introduced as alternative options to connect climate and biodiversity action, and promote other social benefits, in decisions of the UNFCCC COP, the Paris Agreement CMA and the CBD COP. These are **"ecosystem-based approaches"** and **"nature-based solutions"** (Figure 1). Most decisions containing these approaches use "and/or" to provide flexibility for Parties to choose among them, reflecting **divergent views among Parties about the pertinence and potential misuse of the concept of nature-based solutions and the meaning and relationship between both concepts. Thus, we consider it necessary to provide some clarity on where they come**



from, what understandings of them exist and what are the politics around them, so as to inform the climate-biodiversity synergies discussion.



Figure 1. Approaches to Climate-Biodiversity Synergies

On the one hand, **"ecosystem based-approaches"** is generally associated with **the CBD "ecosystem approach"**, a core concept to achieving the goals of the Convention²⁰. There have been different efforts from the CBD side to provide guidance on using ecosystem-based approaches for climate action, the most recent being the "voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction"²¹.

The concept of **"nature-based solutions"** (NbS) has increasingly gained traction in the last fifteen years. It was first used in 2008 in a report published by the World Bank detailing the climate change mitigation and adaptation benefits of the bank's investments in biodiversity conservation (<u>The World Bank, 2008</u>). The following year, the International Union for Conservation of Nature (IUCN) adopted the concept in a position paper published for UNFCCC COP15, in which NbS to climate change were promoted "as an integral part of broader adaptation and mitigation plans and strategies" (<u>IUCN, 2009</u>).

Since then, there have been many attempts by international organizations and non-governmental organizations to precisely define and clarify NbS as an approach, with the aim to advance investment and action on NbS (e.g., NbS definitions by the European Commission (European Comission, 2015), IUCN (Cohen-Shacham et al., 2016), the International Institute for Environment and Development (IIED) (IIED, 2021) and The World Bank (World Bank, 2022)).

The concept of NbS and its utilization has, however, proven to be divisive both among non-State actors and States. E.g., recent research has identified two main NbS narratives in the context of international climate governance: a pro-NbS narrative held primarily by international organizations, large non-governmental organizations and the private sector, and a non-NbS narrative often held by local and Indigenous organizations and grassroots groups (Melanidis, 2022). The authors warn, however, that these narratives are not static: they are rapidly changing and actively influencing each other in the process.

²¹ Adopted by CBD COP decision 14/5 (<u>CBD, 2018a</u>). CBD COP decision 16/22 requested them to be updated and to include mitigation (<u>CBD, 2024a</u>).



²⁰ Adopted by the CBD as its primary framework of action through decision II/8 (<u>CBD, 1995</u>). In decision V/6 (<u>CBD, 2000b</u>) and decision VII/11 (<u>CBD, 2004a</u>), it was defined as "a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way", emphasizing that "the application of the ecosystem approach will help to reach a balance of the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources".

Some of the concerns around this approach relate to "the term [being] sometimes used to refer to measures that have negative impacts on biodiversity and good quality of life" (Pörtner et al., 2021), "that it may lead to the misunderstanding that NbS on its own can provide a global solution to climate change" (IPCC, 2022a); as well as, e.g., misuse of the NbS concept for climate mitigation through offsetting practices (e.g., Bolivia, Brazil, Argentina, South Africa, Cuba); potential impacts on rights holders such as Indigenous Peoples and local communities, framers, women and youth; the IUCN Global Standard for NbS²² becoming the multilaterally agreed standard for the implementation of NbS (e.g. Brazil); the barriers to access finance that a complex set of criteria would impose on implementers on the ground; and the need to simplify access for rights holders and developing countries (TWN, 2023).

Despite the concerns around it, some countries have pushed since the early 2020s to bring NbS into the international policy arena by proposing its inclusion in UNFCCC and CBD COP decisions and UNEA resolutions, with a first missed attempt at UNFCCC COP26 and CMA3 (<u>Gerresten, 2021</u>).

In March 2022, the Fifth Session of the United Nations Environment Assembly (UNEA-5) adopted Resolution 5/5 "Nature-based solutions for supporting sustainable development" (<u>UNEP, 2022</u>), where **the following multilaterally agreed definition of NbS, building on the one from IUCN, was approved**:



"[A]ctions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges²³ effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits".

The resolution recognizes, among others, that NbS "[r]espect social and environmental safeguards, in line with the three "Rio conventions" [...] including such safeguards for local communities and indigenous peoples"; that they are "among the actions that play an essential role in the overall global effort to achieve the Sustainable Development Goals"; and that they "may contribute significantly to climate action, while [...] acknowledging that they do not replace the need for rapid, deep and sustained reductions in greenhouse gas emissions, but can improve action for adaptation and resilience to and mitigation of climate change and its impact". Furthermore, it acknowledges that the concept of NbS "is cognizant of and in harmony with the concept of ecosystem-based

²³ Among the "major social, economic and environmental challenges" that can be addressed through NbS, the resolution mentions "biodiversity loss, climate change, land degradation, desertification, food security, disaster risks, urban development, water availability, poverty eradication inequality and unemployment, as well as social development, sustainable economic development, human health and a broad range of ecosystem services".



²² See below p. 17.

approaches identified under the Convention on Biological Diversity^{"24}. By providing these clarifications, UNEA NbS definition aims to address some of the main concerns around NbS²⁵.

One feature that clearly stems from UNEA's definition is that **NbS must provide biodiversity benefits**. This matches IUCN's NbS definition ("... simultaneously providing human well-being and biodiversity benefits), the same as principle 5 of IUCN's eight NbS principles ("NbS maintain biological and cultural diversity and the ability of ecosystems to evolve over time") and criterion 3 of IUCN's eight criteria of the Global Standard for NbS ("NbS result in a net gain to biodiversity and ecosystem integrity")(<u>Cohen-Shacham et al., 2024</u>).

In the same year, 2022, joint references to both NbS and ecosystem-based approaches were included in the cover decisions of UNFCCC COP27 and the Paris Agreement CMA4²⁶, as well as in the GBF adopted at CBD COP15²⁷. This opened the door for new references to both concepts in the CMA5 decision on the outcome of the GST-1²⁸ and the CBD COP16 decision 16/22 on biodiversity and climate change (<u>CBD, 2024a</u>), despite persistent reluctance to NbS by some countries²⁹.

Neither the CBD COP, the UNFCCC COP, nor the Paris Agreement CMA have an agreed-upon definition of NbS among their Parties, despite using the concept in several decisions. However, COP27 and CMA4 cover decisions encouraged Parties to consider UNEA resolution 5/5 when considering NbS for their mitigation and adaptation action, while ensuring relevant social and environmental safeguards³⁰.

The concerns of some countries and the lack of common understanding around NbS have nevertheless not been an obstacle for some countries to establish policy frameworks and instruments around NbS, as has been the case for Colombia, Germany, Ecuador, the UK and France (Davis et al., 2024). A recent analysis of National Adaptation Plans (NAPs) submitted by developing countries as of 31 July 2024 shows that 44 out of 57 include at least one mention of "ecosystem-based adaptation" or "nature-based solutions", with the first being mentioned in 39 NAPs, both being mentioned in 16 NAPs, and NbS alone being mentioned in 5 NAPs, and NAPs submitted more recently having a higher likelihood of mentioning NbS (Terton et al., 2024).

The fact that developed countries are prioritizing NbS as the approach to be used could have some influence on their financial support decisions. E.g., a recent report (<u>OECD, 2024</u>) indicates



²⁴ The interlinkage between NbS and "ecosystem-based approaches" is also recognized by IUCN (<u>Cohen-Shacham et al., 2024</u>): "The NbS concept is founded on the Ecosystem Approach, its 12 principles adopted at CBD COP5 2004 in Kenya, and the work done on ecosystem-based approaches since 2009 (e.g. ecosystem-based approaches to climate change adaptation, EbA and disaster risk reduction, Eco-DRR), but while these were developed to address the main objectives of the CBD, the NbS concept's main added value lays in its focus on addressing the major global societal challenges, as articulated in the SDGs".

²⁵ The resolution was initially proposed by the EU to facilitate implementation of the concept of NbS and avoid its misuse (<u>Council of the European Union, 2022</u>).

²⁶ See above, p. 13.

²⁷ See above, p. 10.

²⁸ See above, p.13-14.

²⁹ E.g., in 2023, South Africa noted that there currently exists a divergence of views and lack of clear consensus with regards to the definition, interpretation and application of NbS, and expressed its preference for the CBD to primarily promote ecosystem-based approaches to climate change adaptation, mitigation and disaster risk reduction, "rather than promoting the double barrel concept of NbS and/or Ecosystem-based approaches". (<u>CBD CHM, 2023</u>)
³⁰ See above, p. 13.

that **the proportion of total biodiversity-related official development finance (ODF) targeting several objectives, where biodiversity is marked as a significant objective, has been increasing over time** and that this reflects greater attention to integrating biodiversity-related aspects across development cooperation and may reflect growing mainstreaming of biodiversity. E.g., the share of Development Assistance Committee (DAC) members' biodiversity-related bilateral ODF that also targets climate change over 2015-2022 was, on average, 83%. While this is a positive signal towards enhancing synergies in finance, the same report shows that, from 2015 to 2022, bilateral ODF from DAC members grew between 8 and 27% and, at the same time, **flows towards biodiversity as a principal objective decreased by 17%**. This points out the importance, also highlighted in the report, of ODF for biodiversity with a principal objective to continue to grow and remain constant.

From the above analysis, we can see that **despite persistent concerns from several countries and other stakeholders around the concept, interpretation and implementation of NbS, NbS continue to gain traction in domestic policy instruments and development finance for climate**, as biodiversity considerations are increasingly taken into account in projects mainly designed to tackle other societal challenges such as climate change.

5. Opportunities for synergies and risks of climate action on biodiversity

Not taking advantage of the opportunities for synergistic climate and biodiversity action and avoiding or reducing the risks of climate action on biodiversity has always been a major concern from the CBD side, due in part to the well-documented and already present impacts of climate change on biodiversity described in the sections above, and to the risk of negative impacts that various climate change mitigation and adaptation measures may have. In this regard, in 2000, the CBD COP, through decision V/4 (CBD, 2000a), requested the CBD SBSTTA to prepare scientific advice to integrate biodiversity considerations, including biodiversity conservation, in the implementation of the UNFCCC and its Kyoto Protocol³¹. Further, CBD Parties crafted target 8 of the GBF to not only focus on minimizing the impact of climate change on biodiversity but also on minimizing negative and fostering positive impacts of climate action on biodiversity³². Risks and opportunities can come from nature- or technology-based mitigation and adaptation actions.

In the case of **land-based mitigation measures**, e.g., the IPCC AR6 has indicated that **carefully and appropriately implemented Agriculture**, **Forestry and Other Land Use (AFOLU) measures can deliver substantial co-benefits and help address many of the wider challenges associated with land management**, **while**, **if badly deployed**, **they may exacerbate trade-offs with the conservation of habitats**, **adaptation**, **biodiversity and other services** (<u>Nabuurs et al., 2022</u>). The IPCC recognizes that AFOLU measures can contribute to GHG mitigation in three different ways: 1) by reducing emissions as a sector itself; 2) by removing carbon dioxide from the atmosphere; 3) by providing raw materials that can be used as substitutes for fossil fuels for the decarbonization of

³² In this line too: paragraph 4(e) of CBD COP decision 14/5.



³¹ See above, p. 11.

other sectors; and this through actions like the protection, sustainable management and restoration of natural and modified ecosystems (<u>Nabuurs et al., 2022</u>).

We hereby provide a brief, non-exhaustive analysis of the opportunities and risks of climate action for biodiversity, so as to contribute to providing clarity about some of the areas in which coherent signals are needed from the international climate and biodiversity regimes, including on environmental and social safeguards, and where governments could focus their efforts for enhancing synergies and avoiding trade-offs when implementing those regimes. We use as a basis the classification contained in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and IPCC co-sponsored workshop report (Pörtner et al., 2021) (hereby "the joint workshop report") of measures that can have co-benefits for climate mitigation, climate adaptation and biodiversity objectives and climate action measures, either nature- or technology-based, that may have risks for biodiversity.

5.1. Nature-based measures with the highest potential to deliver co-benefits

The two most outstanding nature-based measures highlighted in the joint workshop report for combined biodiversity protection and climate change mitigation, and with significant adaptation **co-benefits**, are:

- **1.** Avoiding and reversing the loss and degradation of carbon- and species-rich ecosystems on land and in the ocean.
- 2. Restoring carbon- and species-rich ecosystems on land and in the ocean.

The report also highlights that sustainable agriculture and forestry practices (such as diversification of planted crop and forest species, agroforestry and agroecology) can improve adaptive capacity, enhance biodiversity, increase carbon storage in farmland and forest soils and vegetation, and reduce GHG emissions. We will hereby focus on the first two measures, which should be a central aspect of any strategy and planning for implementing synergies at the domestic level.

i. Avoiding and reversing the loss and degradation of carbon- and species-rich ecosystems

While avoided deforestation of tropical forests provides the largest shares of mitigation potential in the AFOLU sector, since they account for the highest rates of deforestation and associated GHG emissions (Nabuurs et al., 2022), it is essential to build on a broader understanding of ecosystem roles to recognize the significant contributions of diverse ecosystems—including wetlands, peatlands, savannas, grasslands, and coastal ecosystems like mangroves and seagrasses—as critical carbon sinks and stocks and providers of co-benefits (WWF, 2022). These ecosystems not only absorb and store substantial amounts of carbon dioxide but also support climate adaptation by maintaining biodiversity, regulating water cycles, and reducing disaster risks. Furthermore, the ocean plays a crucial role in regulating the climate, underscoring the need for a comprehensive



approach that extends beyond forests to protect and restore a wide range of ecosystems vital for climate change mitigation and adaptation.

In this vein, the GST-1 decision emphasized the importance of conserving, protecting and restoring nature and ecosystems, including forests and "other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases" (<u>UNFCCC, 2024a</u>). Similarly, decision 16/22 of the CBD underscores the vital role of biodiversity and ecosystem integrity³³, including animal populations, in addressing climate change through mitigation, adaptation, and resilience-building (<u>CBD, 2024a</u>). This holistic approach emphasizes the importance of protecting and restoring a diverse range of ecosystems to safeguard their functionality and integrity, thereby maximizing their contributions to global climate goals.

Despite references to a wide variety of ecosystems other than forests in the UNFCCC and Paris Agreement texts and in decisions from their governing bodies such as the above-mentioned GST-1 decision, the main focus of the climate international regime has been on forests, through the REDD+ mitigation framework established in different UNFCCC COP decisions³⁴. Notably, the REDD+ framework remunerates developing countries that undertake REDD+ activities through results-based payments (Guay, 2020), and establishes safeguards such as the respect for the knowledge and rights of Indigenous Peoples and members of local communities, and the consistency of actions "with the conservation of natural forests and biological diversity, ensuring that the actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits". From its side, the CBD COP has provided advice on the application of relevant biodiversity safeguards with regard to REDD+ (<u>CBD, 2012</u>).

An essential gap of the REDD+ framework is that it only focuses on forests threatened by deforestation or degradation, leaving out of the equation **standing forests that are not in danger** but contain important carbon stocks. Accessing finance for well-conserved forests that are not under immediate threat has proven to be a major challenge for developing countries, to which initiatives such as the Tropical Forest Forever Facility (TFFF) (<u>Banga et al., 2024</u>) and the High Integrity Forest Investment Initiative (HIFOR) are trying to respond (<u>HIFOR, n.d</u>).

Another important gap of the REDD+ framework -and the UNFCCC regime in general- is that it does not provide a definition of "forest" that would distinguish between "natural" or "native" forests and tree plantations, which generally come as monocultures³⁵. Such a distinction would help prevent issues such as not counting natural forest conversion into tree plantations as deforestation (<u>Moss</u>, <u>2013</u>).

³⁵ The only forest definition in the UNFCCC regime has been the one applied to land-use, land-use change and forestry activities under the Kyoto Protocol (decision 16/CMP.1, Annex). It did not provide any distinction between natural or native forests and plantations (<u>UNFCCC, 2006b</u>).



³³ Conserving or halting conversion of terrestrial, freshwater and marine ecosystems of high ecological integrity has been identified in the recent IPBES nexus assessment as one of the broad categories of highly synergistic response options (<u>IPBES. 2024a</u>).

³⁴ Starting at COP16, with "REDD" standing for reducing emissions from deforestation and reducing emissions from forest degradation, and the "+" standing for conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks.

The IPCC has identified **the reduction of deforestation and forest degradation** as one of the most effective options for climate change mitigation, by conserving existing carbon pools in forest vegetation and soil, while simultaneously providing numerous co-benefits and preserving biodiversity and ecosystem services more effectively and at a lower cost than other measures such as afforestation and reforestation, but with potential adverse side effects such as reducing the potential for agriculture land expansion, restricting the rights and access of local people to forest resources, or increasing the dependence of local people to insecure external funding (<u>Nabuurs et al., 2022</u>). According to the IPCC, measures to protect forests involve controlling the drivers of deforestation and forest degradation, as well as other activities such as establishing protected areas, improving law enforcement, forest governance and land tenure, supporting community forest management and introducing forest certification (<u>Nabuurs et al., 2022</u>).

ii. Restoring carbon- and species-rich ecosystems

The IPCC defines "**restoration**" as involving "human interventions to assist the recovery of an ecosystem that has been previously degraded, damaged or destroyed" (<u>IPCC, 2022c</u>). In the case of forest restoration, the IPCC AR6 clarifies that this is a form of reforestation that prioritizes ecological integrity, although the forest can still be managed (<u>Nabuurs et al., 2022</u>).

Ecosystem restoration has multiple co-benefits for climate mitigation and adaptation, biodiversity and people. One example is using ecosystem-based approaches with adaptation purposes to restore the mangrove and wetland ecosystems on whose ecosystem services coastal communities in the Paz River basin in El Salvador are dependent (<u>UNEP, 2024</u>). Among the reported benefits were better protection of houses behind the barrier of mangroves during high tides, increased productivity of local fisheries, recovery of crab populations, job creation for women and greater social cohesion. Another example is a project for reversing fragmentation in Madagascar's wildlife-rich forests through reforestation with native species, with the double aim of bringing biodiversity and human benefits. The project has brought benefits for the island's biodiversity and for more than 1,300 households that have benefited directly or indirectly from alternative income schemes included in the project to compensate for the impact of setting aside land for restoration (<u>GPFLR, 2020a</u>).

The IPCC AR6 identified nature restoration as an adaptation option that is not only highly beneficial for ecosystems and ecosystem services, but also has the potential to reduce the exposure or vulnerability of more than 5 billion people worldwide (<u>New et al., 2022</u>).

The importance of ecosystem restoration for advancing different dimensions of sustainable development, including as a means of tackling climate change and biodiversity loss, has been widely recognized and there is growing international support for restoration with initiatives like the UN Decade on Ecosystem Restoration (2021-2030) (UNGA, 2019).

Box 5. Overcoming costs of restoration

High costs are usually cited as a challenge to land and forest restoration. Different approaches are used to overcome this challenge. E.g.: In Brazil, the Native Vegetation Protection Law of 2012 allowed the mixing of commercially valuable tree species with native species in restoration projects as a way to compensate farmers for the opportunity cost of not using land for



agriculture. An experimental project found out that intercropping of exotic eucalyptus as a transitional stage in tropical forest restoration had positive impacts for restoration, such as nine times greater biomass accumulation than in native only plantings, and the income generated helped to cover 44%-75% of restoration implementation costs (Brancalion et al., 2019). In Costa Rica, the Monte Alto Forest Reserve Foundation has used ecotourism as one of its pillars for restoring the once heavily degraded Nosara River basin (GPFLR, 2020b). Also, in Costa Rica, private owners are compensated for forest protection and natural regeneration through the environmental services payment programme managed by the National Forestry Financing Fund (FONAFIFO). The programme is financed from diverse sources, such as a tax on fossil fuel consumption (FONAFIFO, n.d).

5.2. Risks from nature-based mitigation measures

While nature-based mitigation measures are clearly important, the following risks outline why policies advancing these measures must be developed in coordination with biodiversity goals.

The joint workshop report points out that **big monoculture plantations of bioenergy crops** (including trees, perennial grasses or annual crops) are detrimental to ecosystems and hamper the achievement of numerous sustainable development goals (SDGs). It also signals that **afforestation**, **and reforestation with monocultures**, **especially with exotic trees**, are often detrimental to ecosystems and do not clearly benefit adaptation (<u>Pörtner et al., 2021</u>).

i. Bioenergy crops

Firstly, the Net Zero Emissions by 2050 scenario projects a rapid increase in the use of bioenergy to displace fossil fuels, accounting for almost all renewable fuel growth through 2030 as estimated by the International Energy Agency (IEA) (IEA, 2023a). Bioenergy has already doubled to 14 million tonnes in the preceding decade and global supply and demand for biomass is expected to exceed a 250% increase by 2027, to well over 36 million tonnes (EPN, 2023).

Driven by the subsidization of industrial bioenergy production, forest biomass exploitation can lead to ecosystem degradation and biodiversity loss. For instance, in 2023 only, the demand for wood pellets in Asia grew by 20%. This has led to massive forest destruction in Indonesia, with a large expansion of monoculture tree plantations, enhanced by the country's co-firing schemes (when biomass is used alongside fossil fuels, here coal)(<u>Bastable, 2024</u>).

Some see bioenergy as "the energy source with highest potential to conflict with biodiversity protection", mainly due to habitat loss driven by land-use intensity that requires bioenergy production, but also because of its elevated prospects in tropical areas within the top biodiversity locations (top-ranked 30% of areas of highest priority for biodiversity protection) (<u>Santangeli et al</u>, <u>2015</u>).

Modern biofuels, based on advanced industrial processes and engendering fewer environmental impacts, have been seen to provide clean alternatives to traditional forms of bioenergy, especially



for developing economies (<u>IEA Bioenergy, 2023</u>). Countries such as Brazil and India have been worldwide leaders in that agenda, but concerns remain as to whether modern biofuels are really limiting their impact on biodiversity.

In 2017, for instance, Brazil launched its National Biofuels Policy to support the country's Nationally Determined Contribution (NDC) biofuel commitments. While this policy has stimulated technological progress and market expansion, concerns undermining the program's sustainability have risen. These have included food crop displacement and risks of deforestation and biodiversity loss due to land-use changes driven by biofuel crop expansion, particularly in the Amazon and Cerrado, but also traceability issues with inputs like soy and fertilizers, and weak environmental safeguards, including the absence of considerations for bioenergy's water footprint (Grangeia et al., 2022)

In contrast to large-scale bioenergy monoculture crops, it has been argued that bioenergy crops could have potential co-benefits for climate and biodiversity "when woody or perennial grass bioenergy crops are planted in severely degraded areas, or as a non-dominant component of agricultural landscapes previously dominated by single mono-cultural crops (...), especially when established in agricultural landscapes dominated by annual crop production" (Smith et al., 2021).

If not carefully planned, an increase in bioenergy crops could drive significant land-use change, water use and biodiversity loss (Hanssen et al., 2021; EPN, 2023), and compete with food security (Heimlich, 2015). These impacts have even been recognized by the IPBES Global Assessment, which highlighted that "the large-scale deployment of bioenergy plantations and afforestation of non-forest ecosystems can come with negative side effects for biodiversity and ecosystem functions" (IPBES, 2019).

ii. Afforestation and reforestation with monocultures

According to the IPCC AR6 (<u>Nabuurs et al., 2022</u>), **reforestation³⁶ and afforestation³⁷ have a wide variety of potential co-benefits and trade-offs, but they depend on aspects such as location, scale, and choice and management of tree species**, e.g., "well-planned" afforestation can help address land degradation and desertification, and "well-planned, sustainable reforestation" may enhance climate resilience and biodiversity and provide a variety of ecosystem services important for surrounding communities. This can be the case of "modest reforestation projects that are adapted to the local socioecological context and consider local as well as distant trade-offs" (<u>Smith et al., 2021</u>).

The joint workshop report (<u>Pörtner et al., 2021</u>) pointed out some of the negative impacts on biodiversity and ecosystem services from afforestation and from reforestation with monocultures, as follows:

1. Large-scale tree planting (as is the case with bioenergy crop planting, which can include but is not limited to trees) can negatively impact biodiversity and food production because of

³⁷ Afforestation: "conversion to forest of land that historically has not contained forests" (<u>IPCC, 2022c</u>).



³⁶ Reforestation: "conversion to forest of land that has previously contained forests but has been converted to some other use" (<u>IPCC, 2022c</u>).

competition for land and can have displacement effects on other land uses, causing indirect land-use change within the same region or elsewhere.

- **2.** Afforestation can reduce existing carbon storage, cause further biodiversity loss, displace local people, or curtail their access to land and its use.
- **3.** Monocultures can increase pests and diseases.
- **4.** Plantations of exotic species can impact biodiversity, adaptive capacity, and many ecosystem services not related to timber production or carbon sequestration, especially if the planted species becomes invasive.

5.3. Risks from technology-based mitigation measures

i. Transition minerals

Mining the minerals required for the energy transition seriously affects biodiversity and the ecosystems in which these minerals are found. Critical minerals are indeed essential for fabricating and operating renewable energy technologies, including copper, cobalt, lithium, nickel, and rare earth elements for electric vehicles and batteries, silicon and selenium for solar panels, and aluminum and zinc for wind and hydropower (<u>UN Secretary, 2024</u>).

The IEA (IEA, 2022) estimates that demand for such critical minerals will triple by 2030 and quadruple by 2040. This raises significant concerns about, amongst others, environmental degradation, especially in mineral-rich countries like Latin America and Africa. Mining these minerals and their supply puts pressure on freshwater, species, and ecosystems (UN Secretary, 2024). Today, global mining areas coincide spatially with protected areas (7%) and with key biodiversity areas (8%), and most of these areas, 82%, target critical materials for renewable energy, which warns that the mining risks for biodiversity will grow as mining for renewable energy materials keeps increasing (Sonter et al., 2020).

Additionally, transition minerals mining has human implications. It is currently estimated that more than half of the minerals- and metals-rich lands are located on or near the lands of Indigenous and peasant peoples (<u>Owen et al., 2022</u>). Despite being owners and custodians of these lands, Indigenous Peoples have often been excluded from decision-making around minerals mining and dispossessed of their lands and resources while suffering from a negatively impacted habitat and populations' health (<u>UN Secretary, 2024</u>). Efforts to safeguard the integrity of the ecosystems where minerals are mined are needed for inclusive conservation practices. These safeguards include the guaranteed implementation of the right to free and prior informed consent, the protection of Indigenous, land and environmental defenders, and even new models of co-ownership and co-development (<u>Avellaneda et al., 2024</u>).

ii. Large-scale hydropower

Hydropower currently accounts for about 15% of global electricity production and over 50% of renewable energy generation (<u>IEA, 2023b</u>). Its affordability, flexibility and reliability make it an



attractive renewable energy source, but it has significant impacts on biodiversity as fragmentation of nature flow regime determines the ability of rivers to sustain biodiversity and deliver on its ecosystem services (<u>Thieme et al., 2021</u>). Many existing and potential hydropower dams are in hotspots of freshwater biodiversity, such as megadiverse rivers like the Amazon (<u>Winemiller et al., 2016</u>). Hydropower impacts habitats up and downstream, fragmenting ecosystems and increasing flooding risks. Changes to river connectivity and exchange between rivers and with groundwater and floodplains further exacerbate declines of freshwater ecosystems (<u>Gasparatos et al., 2017</u>; <u>He et al.,</u> <u>2024</u>). In fact, implementing the proposed hydropower expansion in free-flowing rivers would cause substantial losses in the provision of biodiversity's ecosystem services for a relatively small (less than 2%) increase in renewable energy capacity (<u>Thieme et al., 2021</u>). Some solutions that maintain hydropower development but reduce its impacts on river fragmentation include strategic planning for downstream flow re-regulation and mitigating dam impacts with biodiversity offsets, including the restoration and protection of free-flowing rivers (<u>Thieme et al., 2021</u>).

5.4. Risks of mitigation deterrence arising from nature-based carbon offsetting

Due to their near-term mitigation potential, AFOLU measures, and to a greater extent those that remove carbon dioxide from the atmosphere, have been widely promoted to offset carbon dioxide emissions. Since 1997, the Kyoto Protocol established the clean development mechanism (<u>UNFCCC</u>, n.d), through which Annex I Parties were able to use certified emission reductions from a non-Annex I Party to achieve compliance with their quantified emission limitation and reduction commitments, claiming that this would also help non-Annex I Parties in achieving sustainable development. This way, the door was open for internationally offsetting GHG emissions. In Article 6, the Paris Agreement established a similar voluntary market arrangement through which emissions reductions from one Party could be used by another Party to fulfil its NDC. Offsets are then commonly used by major emitting countries in their NDCs as part of their strategies to meet their net-zero pledges in the context of the Paris Agreement's global target of achieving a balance between anthropogenic GHG emissions by sources and removals by sinks of GHG in the second half of this century. Companies also heavily rely on voluntary offsetting schemes to claim to be "net-zero".

As many key stakeholders are now relying on carbon credits to offset their emissions, the net-zero aligned strategy based on offsetting has raised concerns (<u>Pörtner et al., 2021</u>) regarding issues such as challenges of additionality, problems with overstated emissions reductions and double-counting, difficulty in monitoring and verification, the unclear permanence of such actions and potential equity impacts of actions like large-scale tree planting. **Here, we highlight the impacts on biodiversity arising from mitigation deterrence caused by offsetting.**

Carbon Gap (<u>Höglund et al., 2023</u>) defines mitigation deterrence as "the risk of delaying or stopping emissions reductions due to the availability of alternative mitigation options, among them carbon removal"³⁸. **Mitigation deterrence, therefore, occurs when nature-based carbon offsetting incentivizes emitters to solely compensate emissions rather than truly reduce them, jeopardizing the GST-1 decision call to transition away from fossil fuels.**

³⁸ It also applies to other mitigation options like carbon capture and storage (CCS) and offsetting.



A good example of mitigation deterrence is found in the energy sector. The world's largest fossil-fuel producers – BP, Shell, Chevron and ExxonMobil, among others – are using or planning to use tens of millions of carbon offsets as a core instrument to meet their net-zero goals and cancel out most of their emissions while having no concrete plan to actually reduce their overall supply of fossil fuels (<u>Trencher et al., 2023</u>). An analysis of the world's top 50 companies with net-zero targets (³/₄ of which are fossil fuel companies) reveals that half of their credits carbon offsets came from REDD+ forest protection projects and 8% from projects that removed CO2 from the atmosphere through notably tree-planting (<u>Gabbatiss, 2023</u>), regardless of the growing evidence that these initiatives do not systematically reduce forest sector emissions (namely, deforestation) (<u>Dufrasne & Wyburd , 2023</u>; <u>West et al., 2023</u>). In Peru's Cordillera Azul National Park, for instance, allegations of overstated emissions cuts through a carbon credit program led to a doubling of tree loss (<u>Davey, 2023</u>).

As a warning of the risk of mitigation deterrence, the IPCC AR6 (<u>Nabuurs et al., 2022</u>) has indicated that despite the AFOLU sector offering significant near-term mitigation potential at relatively low cost, **"it cannot compensate for delayed emission reductions in other sectors"**. Along the same lines, the IPBES-IPCC joint workshop report highlighted that **NbS could only be effective for climate mitigation with ambitious reductions in all human-caused GHG emissions**, **i.e.**, **"when complementing rapid emissions reductions in energy production, transportation, agriculture, building and industrial sectors"** (<u>Pörtner et al., 2021</u>). The same logic is contained in UNEA-5 resolution 5/5, in which States have acknowledged that **NbS "do not replace the need for deep and sustained reductions in greenhouse gas emissions"**. In this line, it has been suggested that **limited sustainable Carbon Dioxide Removal (CDR) should be used, in priority, to counterbalance truly residual emissions that cannot be eliminated** (<u>Deprez et al., 2024</u>).

In the end, mitigation deterrence negatively impacts biodiversity and ecosystems, as it contributes to global warming and climate change, which is the third direct driver of biodiversity loss. Increasing global warming and the consequent increase of climate-related risks undermine the ability of ecosystems to contribute to climate change mitigation and adaptation, as has been recognized in the IPCC AR6 (IPCC, 2022a) and the joint workshop report (Pörtner et al., 2021). In this way, a perverse incentive is generated by the existing biodiversity finance gap, estimated at \$700 billion per year (CBD, 2022), since developing countries generally seek to access international carbon markets to attract financial resources for their conservation efforts and the achievement of their biodiversity goals and targets. By selling carbon credits that others will use to offset their emissions, developing countries contribute to mitigation deterrence, which, in the end, generates negative impacts on the ecosystems they are trying to conserve.

5.5. Risks from adaptation measures not accounting for unintended outcomes (maladaptation)

Maladaptation is defined by the IPCC as "actions that may lead to the risk of adverse climate-related outcomes, including via increased GHG emissions, increased or shifted vulnerability to climate change, more inequitable outcomes, or diminished welfare, now or in the future. Most often,



maladaptation is an unintended consequence" (<u>IPCC, 2022c</u>). **Considering unintended consequences when planning for adaptation is thus necessary to avoid maladaptation.** The IPCC AR6 (<u>IPCC, 2022a</u>) suggested that **maladaptation can be avoided by flexible, multi-sectoral, inclusive and long-term planning and implementation of adaptation actions with benefits to many sectors and systems**.

The IPCC AR6 (IPCC, 2022a) highlighted some of the adverse outcomes that maladaptive actions such as fire suppression in naturally fire-adapted ecosystems and hard defenses against flooding can have over biodiversity and ecosystem resilience to climate change, e.g., reduction of space for natural processes, degradation, replacement or fragmentation of ecosystems, and the reduction of ecosystems' resilience and the ability to provide ecosystem services for adaptation.

The importance of taking into account large uncertainties in projected future climate change and dynamics of socioecological systems and of adopting adaptation responses that provide the flexibility to be able to adjust over time was highlighted in the IPBES-IPCC joint workshop report (<u>Pörtner et al., 2021</u>). E.g., in light of the uncertainty in projections of future water stress for trees in many places, forests containing mixed tree species provide more flexibility than monocultures of drought resistant tree species.

The Voluntary Guidelines for the Design and Effective Implementation of Ecosystem-based Approaches to Climate Change Adaptation and Disaster Risk Reduction and Supplementary Information (Secretariat of the CBD, 2019), which were requested to be updated by CBD COP16 (CBD, 2024a), contain important principles and safeguards that can help prevent maladaptation and its negative impacts on biodiversity.

6. The problem of double-counting synergistic finance

A barrier to advancing the climate-biodiversity synergies agenda at the Conventions level is the concern around double-counting of finance reported by developed countries both as climate finance to the UNFCCC and as biodiversity finance to the CBD. This has been a major concern for developing countries, taking into consideration both the biodiversity finance gap of \$700 billion per year (CBD, 2022) and the climate finance needs of developing countries identified in their NDCs amounting to \$5.8-5.9 trillion for the pre-2030 period (SCF, 2021; (UNFCCC, 2024a). It has also been the reason why some countries oppose the inclusion of references to climate and biodiversity finance alignment in COP/CMA decisions³⁹.

³⁹ Example of the not inclusion, in the CMA6 decision on the new collective quantified goal (NCQG), of a paragraph recognizing "the crucial synergies and interdependencies between finance for climate, biodiversity, land degradation and sustainable development goals", and resolving "to enhance and foster such synergies with a view to gain co-benefits", which appeared as paragraph 15 of the "Streamlined compilation of proposals serving as transition to Presidency draft decision text, including options emanating from Ministerial consultations on CMA6 agenda item 11(a) New collective quantified goal on climate finance", <u>version 21/11/2024, 3:00am</u>.



Double-counting of climate and biodiversity finance originates in the way that members of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) (\underline{OECD} , n.d) use the OECD Rio Markers for international finance reporting obligations (\underline{DAC} , 2025).

The Rio Markers have been used since 1998. They were designed to track the degree to which DAC members integrate and mainstream environmental considerations into their development cooperation activities and to support members in preparing their national reports to the Rio Conventions. DAC members must indicate whether or not each development finance activity targets the objectives of the Rio Conventions through four Rio Markers: biodiversity, desertification, climate change mitigation and climate change adaptation (the latter introduced in 2009).

Activities are screened and "marked" as targeting the conventions as:

- 1. A "principal" objective when the objective is explicitly stated as fundamental in the design of, or the motivation for, the activity -;
- **2.** A "significant" objective when the objective is explicitly stated but is not the fundamental driver or motivation for undertaking or designing the activity -;
- **3.** Or not targeting its objective when the activity does not target the objective in any significant way -.

Overlaps between Rio markers can be possible when the same activity simultaneously addresses multiple objectives and may apply to more than one Rio marker.

Notably, the OECD is clear that the Rio Markers is a qualitative methodology that applies to activities as a whole and was not intended to provide a quantification of finance (DAC, 2025). However, by drawing on their data, most OECD DAC members use the Rio Markers as a starting point for reporting on finance to the Rio Conventions. As a second step, DAC members select a coefficient to estimate the total level of finance to be reported to the Conventions (DAC, 2024). The coefficient applied is usually different if applied to an activity marked as a "principal" or a "significant" objective. It varies among DAC members since there is no common reporting standard. For example, for reporting to the CBD, most DAC members apply a 100% coefficient for activities marked as a "principal" objective, and the range of coefficients for activities marked as a "significant" objective varies from 1% to 100%, with a gradual convergence designing to the use of a 40-50% coefficient, and with a 40% coefficient being used by the EU.

Because of the possibility of overlaps between Rio Markers when the same activity addresses multiple objectives at the same time, the use of the Rio Markers by DAC members to report on their international financial obligations to the Rio Conventions has the inherent **risk of double or triple-counting** finance for the same activity among two or the three Rio Conventions. In recognition of this risk, the OECD explicitly warns that "[w]hile the Rio marker system allows for multiple environmental policy objectives of an activity to be reflected, this needs to be taken into account when aggregating data across several markers. **To avoid double- or triple-counting the same activity, aggregate figures for biodiversity, climate change mitigation, climate change adaptation and desertification-related development finance should not be added up. Statistical presentations should be prepared for one marker at a time (and resulting totals for each marker should not be added up) or the overlap should be presented and treated to avoid double-counting" (<u>DAC, 2025</u>).**



Hence, to avoid the risk of double- or triple-counting and to create trust among countries that this is not happening, not only should DAC members follow the above OECD recommendations of not aggregating development finance across several Rio Markers, but it would also be important to establish a set of rules in the reporting systems of each of the Rio Conventions that would aim to avoid double or triple counting, including by agreeing on a common methodology for reporting on synergistic finance, ensuring transparency in the traceability of financial flows and the indicators used for financial interventions targeting synergies between the Rio Conventions. **Such indicators could be integrated into the GBF monitoring framework as part of Target 19(e) indicators**⁴⁰. **Additionally, as an outcome of the next revision of the Paris Agreement's Enhanced Transparency Framework's Modalities, Procedures and Guidelines in 2028, it could be asked that developed country Parties report on these indicators and the criteria used to select them.**

7. Looking forward

Decisions in the international policy arena provide signals that influence countries' and other stakeholders' choices about their course of action when planning and implementing at the domestic level. Simplistic signals and the narratives built around them can lead to detrimental outcomes for the issue we expect to address and/or for other aspects of sustainability that are not (well) taken into account. Science plays an important role in informing policy-makers to shape those signals. More robust and scientifically accurate signals can lead to positive outcomes on the ground that can help make a case for strengthening convention-level collaboration.

In the previous sections, we showed how climate mitigation and adaptation actions can produce beneficial outcomes when considering those other aspects of sustainability in their planning and implementation and, conversely, detrimental outcomes when not doing so.



There is a need for more integrated and holistic signals from the international climate and biodiversity policy arenas that would enable countries and other stakeholders to plan and implement their actions to tackle these and other societal challenges and global crises simultaneously and coherently.

The same can be said about the need for more holistic and integrated assessments from science that aim to fill in the knowledge gaps about how best to enhance synergies and avoid trade-offs between climate and biodiversity action. For this, more collaboration, fluid communication and responsiveness among bodies of the Conventions and among bodies of the intergovernmental science-policy panels is needed.

⁴⁰ The CBD SBSTTA will consider submissions for the inclusion of additional indicators in the GBF monitoring framework at a meeting to be held before CBD COP17 (paragraphs 30(b) and 31 of CBD COP decision 16/31) (<u>CBD</u>, <u>2025a</u>).



7.1. International policy

It is in the context of the current lack of dedicated space for the UNFCCC SBSTA, the COP or the CMA to discuss and make decisions on issues related to climate and biodiversity⁴¹ that CBD COP16, in its decision 16/22 on biodiversity and climate change, made a call for Parties, observers and other stakeholders to submit, by May 2025, "their views on options for enhanced policy coherence, including a potential joint work programme of the Rio conventions, to be compiled by the Executive Secretary for the attention of the Joint Liaison Group of the Rio Conventions" (<u>CBD, 2024a</u>) and to be submitted by the CBD Executive Secretary for consideration of the CBD SBSTTA at a meeting to be held before COP17.

Enhancement of policy coherence should be sought at all levels: local, subnational, national, regional and international and in line with the whole-of-government and whole-of-society approach enshrined in the GBF. It is paramount that coordinated and mutually supportive signals emerge from the international and regional spheres to promote synergies at the national, subnational and local levels, where the conventions are implemented.

However, collaboration between the UNFCCC and the CBD is not possible within the current context, where there is no dedicated space at the UNFCCC and the Paris Agreement to deal with synergies between biodiversity and climate change, as well as a lack of substantive consideration of issues under the SBSTA agenda item on cooperation with relevant international organizations. Much guidance and advice on climate and biodiversity synergies has been developed under the CBD (<u>CBD</u>, <u>n.d</u>). In most cases, the CBD has invited the bodies of the UNFCCC and its Parties to use these products without any response or uptake from the UNFCCC side.

Creating or reactivating at least one dedicated space at the UNFCCC and the Paris Agreement to deal with cooperation and synergies between climate and biodiversity (or the three Rio Conventions) is a must for effectively enhancing policy coherence. Because of the interdependence of climate and biodiversity and climate change and biodiversity loss, having a dedicated space to review and give guidance to Parties on these issues and for communicating and exchanging invitations and responses with the bodies of the CBD is key for the implementation of the UNFCCC and the Paris Agreement. This is in line with the mandates that both the COP and the CMA have to keep under regular review the implementation of their respective international instruments and take the decisions necessary to promote their effective implementation (Article 7.2 of the UNFCCC and Article 16.4 of the Paris Agreement).

Some not mutually exclusive options for such dedicated space could be:

- The creation of a climate-biodiversity work programme under the SBSTA and SBI of the UNFCCC and the Paris Agreement and a corresponding agenda item⁴²;
- The reactivation of the SBSTA agenda item on cooperation with other international organizations;

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⁴¹ See above, p. 8-11.

⁴² A proposal for a climate-biodiversity workstream under the UNFCCC already exists (<u>WWF, 2024</u>).

- A strengthened and reinvigorated joint liaison group of the Rio Conventions through the establishment of a joint work programme of the three Conventions under it;
- The establishment by the SBSTA, the COP and/or the CMA, of an ad hoc technical expert group⁴³.

The first two options could provide a platform for enhanced collaboration among the subsidiary bodies of the CBD and the UNFCCC regarding the development and promotion of guidance and advice to the Parties of both Conventions, as they would provide the currently missing space at the UNFCCC regime for communicating and exchanging invitations and responses with the subsidiary bodies of the CBD. Developing technical guidance could also be one of the activities for the joint liaison group to include as part of the joint work programme of the Rio Conventions or the task to be given to the ad hoc technical expert group with the engagement of biodiversity experts from the CBD.

Potential issues to be addressed by the UNFCCC and Paris Agreement climate-biodiversity work programme, the joint work programme of the Rio Conventions, and/or the ad hoc technical expert group could be aspects such as:

- The coherent formulation and implementation of National Biodiversity Strategies and Action Plans (NBSAPs) under the CBD, NDCs, NAPs, adaptation communications and long-term strategies under the Paris Agreement and the UNFCCC, and land degradation neutrality targets under the UNCCD;
- The implementation of Article 5 of the Paris Agreement, in particular, developing guidance to retaining and restoring the ecological integrity of natural carbon sinks and reservoirs to prioritize activities that maximize long-term carbon storage, adaptive capacity and biodiversity outcomes. This could include a revision of the definition of "forests" that enables the distinction between different types of forests and their condition;
- The implementation of paras. 33, 34, 35, 55, 63(d) and 163 of the GST-1 decision, including the milestones for achieving the target to halt and reverse deforestation and forest degradation by 2030 and the development of social and environmental safeguards, in line with the GBF;
- The consideration of the sustainable use of CDR in keeping with sustainability limits, taking
 into account the GST-1 call to transition away from fossil fuels in order to keep the 1.5°C Paris
 Agreement temperature goal, and the need to ensure that limited sustainable CDR is
 prioritized for the best climate and societal uses (i.e., to counterbalance truly hard-to-abate
 residual emissions rather than to offset current fossil fuel emissions), and the need to
 develop social and environmental safeguards for CDR projects in line with the Rio
 Conventions;
- The enhancement of transparency of reporting and traceability of finance flows to optimize co-benefits and synergies of finance (as in target 19(e) of the GBF), while avoiding double or triple counting.

⁴³ There has already been a proposal to establish an ad hoc technical expert group for the implementation of Article 5 of the Paris Agreement (<u>CAN-Ecosystems working group, 2024</u>).



7.2. Science-policy interface

In April 2002, the IPCC published a technical paper on climate change and biodiversity (<u>IPCC, 2002</u>), prepared in response to a request from the CBD SBSTTA that the UNFCCC SBSTA also supported. This has been the only experience of formal collaboration between the IPCC and the CBD. Since the IPBES was established in 2012, collaboration between the IPBES and the IPCC has been mostly limited to informally exchanging information on ongoing and upcoming work, sharing experiences on implementing their work programmes, and co-sponsoring a workshop on biodiversity and climate change.

Similarly as what happens in the international policy arena, where the CBD has been more proactive in trying to engage with the UNFCCC, efforts towards enhancing collaboration among the two bodies at the science-policy interface for climate change and biodiversity -i.e., the IPCC and the IPBES- have come mainly from the IPBES side. The IPBES-IPCC co-sponsored workshop (Pörtner et al., 2021) that took place virtually in 2020, which originated from a decision of the IPBES 7th Plenary, was never formally recognized by the IPCC Plenary. Recent formal requests for collaboration from the IPBES Plenary to the IPCC Plenary are still pending a response (Fernández Fernández et al., 2024). At COP16, the CBD welcomed (CBD, 2024a) the IPBES 10th plenary session decision (IPBES, 2023) to foster further collaboration with the IPCC. At its 11th session held in December 2024, the IPBES plenary decided on new ways to continue engaging with the IPCC, including by inviting the IPCC to participate in and to consider co-sponsoring a workshop on biodiversity and climate change in support of the IPBES 2nd global assessment of biodiversity and ecosystem services (IPBES, 2025).

Another recent concrete opportunity for collaboration between IPBES and IPCC stems from COP16's decision 16/11 (<u>CBD, 2024b</u>), where the CBD invited the IPBES to consider including potential additional assessments in its rolling work programme, one of them being an assessment of biodiversity and climate change. In line with the encouragement for further collaboration between the IPBES and the IPCC⁴⁴ contained in the preamble of COP16's decision 16/35 (<u>CBD, 2025b</u>), agreeing to undertake this assessment would open another opportunity for the IPBES to reiterate and update its request for collaboration to the IPCC, in particular in sight of the preparation of the IPCC seventh Assessment Report. The CBD invitation was, however, not considered by the IPBES Plenary at its 11th session in December 2024.

7.3. National planning and implementation

Calls for coherence between national climate and biodiversity planning and implementation processes have come mainly from the CBD rather than the UNFCCC.

Since the Paris Agreement was adopted, the CBD COP has made different calls for NDCs' formulation and implementation to be aligned with biodiversity considerations. E.g.:

⁴⁴ As well as the Science-Policy Interface of the UNCCD.



- Decision XIII/4 (<u>CBD, 2016</u>) encouraged Parties and other Governments, when developing their NDCs and implementing associated domestic measures, "to fully take into account the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, and to integrate ecosystem-based approaches", and to involve the national focal points to the CBD in this work and ensure that information and tools and guidance developed under the CBD are used.
- Decision 14/5 (<u>CBD, 2018a</u>) encouraged Parties to integrate climate change issues and related national priorities into NBSAPs and to integrate biodiversity and ecosystem integrity considerations into national policies, strategies and plans on climate change, such as NDCs and national climate change adaptation planning; and it also encouraged Parties and other Governments to integrate ecosystem-based approaches when updating their NDCs and pursuing domestic climate action under the Paris Agreement, taking into account the importance of ensuring the integrity and functionality of all ecosystems, including oceans, and the protection of biodiversity.
- Decision 14/30 (<u>CBD, 2018b</u>) encouraged Parties to the CBD that are also Parties to the UNFCCC or the UNCCD to consider the relevance of their actions to implement the CBD, including their NBSAPs, with actions for the achievement of their NDCs to the Paris Agreement and their national action programmes, and to also consider ecosystem-based approaches.

Along the same lines, **the recent COP16 decision 16/22** (<u>CBD, 2024a</u>) urged Parties to promote synergies between revised NBSAPs, relevant national (biodiversity) targets and other national planning processes such as the ones established under the UNFCCC and the Paris Agreement, in coordination with the focal points of those other multilateral environmental agreements, including through national coordination, planning, review and reporting processes, in a complementary and synergistic manner.

Box 6. Panama's Nature Pledge

Panama is working on a strategic framework called the "Nature Pledge" that aims to integrate the targets contained in its NDC, its NBSAP and its Land Neutrality Strategy (LNS) with the view of maximizing synergies between actions to combat climate change, biodiversity loss and land degradation. As part of the Nature Pledge, Panama is looking to update and strengthen its national commitments contained in the three instruments, identify synergies, facilitate their joint implementation, identify intelligent investments, enhance understanding, and align finance flows with climate and environmental goals. The Nature Pledge has been officially included in Panama's Government Strategic Plan.

On the other hand, **the only precedent under the UNFCCC where the COP promoted the alignment of a climate planning instrument with planning instruments from other conventions** seems to have been in the guidelines for the preparation of National Adaptation Programmes of Action (NAPAs), which were adopted by decision 28/CP.7 (<u>UNFCCC, 2001b</u>). One of the guiding elements in the guidelines was "a complementary approach, building upon existing plans and programmes", which included national action plans under the UNCCD, NBSAPs under the CBD and national sectoral policies. It should be noted that this unique precedent relates only to adaptation, and no specific calls for alignment have been made regarding mitigation action.



In the absence of specific calls from the UNFCCC COP/Paris Agreement CMA side for a coordinated process at the national level for the formulation of NDCs (to be submitted 12-9 months before UNFCCC COP30) and the preparation of revised NBSAPs (to be submitted at CBD COP16), **eighteen countries sent a strong political message by signing the COP28 Joint Statement on Climate, Nature and People** (<u>COP28 UAE, 2023</u>) **at the margins of COP28 in Dubai** (2023). This statement called for countries to foster stronger synergies, integration and alignment in the planning and implementation of national climate, biodiversity and land restoration plans and strategies, with a focus on ambition, comprehensiveness and coherence between the next round of NDCs, updated National Adaptation Plans (NAPs) and forthcoming revised NBSAPs. This also resulted in a "Climate-Nature Coordination Platform" (CNCP), which is co-led by the NDC Partnership and the NBSAP Accelerator Partnership (NDC Partnership, 2024).

Coordination at the technical level in domestic planning and implementation processes strongly depends on national authorities understanding the need for synergies and their political willingness to create them. This speaks to the challenges of internal coordination by different ministries and departments to enhance coherence and the need to set up an adequate coordination structure with sufficient levels of political alignment. Colombia's 2024 revised NBSAP and Panama's "Nature Pledge" are quite unique examples of positive steps in this direction (Boxes 6 and 7).

Box 7. Coherence between NDCs and NBSAPs: Colombia's revised NBSAP

At COP16, Colombia submitted its revised NBSAP (Ministerio de Ambiente y Desarrollo Sostenible, 2024), which was prepared in 2024 through a participatory process involving more than 23,000 persons and 15 ministries. Many of the recommendations contained in it come from the territories. Four of the six national targets are aligned with the NDC, and ambition was raised in three of them. For example, the deforestation target went from 50,000 hectares per year by 2030 in the NDC to 33,000 per year by 2030 in the NBSAP; the NBSAP maintained the NDC target of almost 1 million hectares of ecological restoration by 2030, but extended its scope to include 3 million hectares of productive reconversion; the NBSAP maintained the NDC target of increasing up to 68% the amount of treated wastewater by 2030; finally, while the NDC contained activities related to planning and management of protected areas but did not define a target, the NBSAP defined a target of 34% of Colombia's terrestrial zones, continental waters and coastal and marine zones under a conservation scheme by 2030. Another key highlight of Colombia's updated NBSAP is that it subsumed biodiversity governance with climate change governance through the National Climate Change System (SISCLIMA). Furthermore, the NBSAP explicitly mentions thirteen concrete actions it contains for making progress towards the integration of the biodiversity and climate agendas, including with the participation of Indigenous Peoples and local communities, and affirms the hope that the next NDC builds on the NBSAP's proposals so that Colombia can position itself as a regional leader in the recognition and integration of biodiversity as a pillar of climate action.



8. Conclusion

A new momentum has been given to the climate-biodiversity synergies agenda at the international stage during the last five years through decisions from the UNFCCC COP, the Paris Agreement CMA and the CBD COP, including as part of the broader synergies agenda of the three Rio Conventions. The synergies-related targets of the GBF, the multiple signals for synergistic action contained in the CMA decision on the GST-1 outcome, the collaboration initiated as a result of the COP28 Joint Statement on Climate, Nature and People, and the process for enhanced policy coherence launched at CBD COP16, constitute stepping stones towards the achievement of important outcomes on synergies at COP30, both under the negotiated and the non-negotiated agendas. This momentum could have also informed and influenced in several ways the updated NBSAPs and the new NDCs that countries have been and will be submitting during 2024-2025, as is the case of Colombia's updated NBSAP and Panama's Nature Pledge.

However, additional and more concrete efforts are still necessary to enhance policy coherence both at the international and domestic levels and between them so as to take advantage of all the opportunities for enhancing synergies and avoiding or reducing trade-offs. Despite several efforts already being deployed at different levels, lost opportunities for synergies and avoidable trade-offs between climate and biodiversity have been materializing at the implementation level, either because of problems in the design and implementation of the measures or because they have been used with the purpose of "greenwashing". Joint design and implementation efforts would be needed in the first case, and strong accountability mechanisms would be necessary in the second case.

Choices made at the domestic level can be determined and influenced by the signals being sent at the international level. Therefore, domestic planning and implementation could largely benefit from coherent signals and invitations sent from the governing bodies of both the UNFCCC and the CBD regimes, including guidance on synergies planning and implementation. Over the years, there have been different requests and invitations from the CBD COP to the UNFCCC COP that have not had any response or uptake, as well as multiple guidance from the CBD side for Parties to maximise synergies and reduce trade-offs with biodiversity when undertaking climate action without this guidance being recognized or welcomed in any way from the UNFCCC side and without any participation from the UNFCCC in its development.

This lack of effective communication channels between both regimes at the decision-making level has had some negative consequences both for climate ambition and for biodiversity, e.g., when using nature for mitigation purposes not as a complement but in replacement of deep, rapid and sustained GHG reductions in other sectors, especially by major emitters that are not planning to transition away from fossil fuels, and when biodiversity impacts and benefits are not fully taken into account. On the other side of the coin, some signals that have been sent by the governing bodies, even without mutual coordination, have helped to raise interest in synergies and promote action among some countries, which shows the potential that better communication and coordination at the international level could have for boosting more synergistic domestic action. Therefore, creating or reactivating at least one dedicated space at the UNFCCC and the Paris Agreement to deal with



cooperation and synergies between climate and biodiversity (or the three Rio Conventions) is a necessary step for effectively enhancing policy coherence.

The conditions are given for 2025 to be a pivotal year for a holistic enhancement of policy coherence for climate-biodiversity synergies through the following recommendations:

In the negotiated agenda of the UNFCCC COP30, Parties discuss and adopt a decision in which they 1) agree on substantive elements for guiding the implementation of the synergies-related outcomes of the GST-1 decision and Article 5 of the Paris Agreement; 2) agree to create or reinvigorate existing spaces in the UNFCCC process for the continuation of Party-driven discussions and consideration of issues related to climate-biodiversity synergies. A possible new space could be a work programme on synergies under the SBSTA and the SBI, which a joint SBSTA-SBI agenda item should complement for Parties to assess and steer the work programme and propose draft decisions to the CMA. An alternative or a complement to the foregoing could be to reactivate and reinvigorate the existing SBSTA agenda item on cooperation with relevant international organizations as a space to discuss and prepare recommendations to the COP/CMA on issues related to synergies among the Rio Conventions. An ad hoc technical expert group could also be established for producing guidance and recommendations on relevant matters related to synergies that the COP/CMA would mandate. Finally, a request could be made to the Executive Secretary to invite the Executive Secretaries of the other Rio Conventions to enhance further collaboration through the joint liaison group, including through the development and implementation of a joint work programme of the Rio Conventions to support Parties in enhancing policy coherence at the domestic level.

In the non-negotiated agenda of COP30, the launch of the TFFF would be a key milestone for the provision of funds for the conservation of standing tropical forests, independently of whether they are threatened or not and not just narrowly focused on climate change mitigation outcomes. It would help developing countries decrease their dependence on carbon markets to conserve their forests.

In the science arena, the CBD COP16 invitation to the IPBES to consider undertaking an assessment on biodiversity and climate change is a golden opportunity for mutual collaboration between the IPBES and the IPCC to close knowledge gaps about climate-biodiversity synergies and trade-offs. The same applies to the recent IPBES plenary decision to invite the IPCC to consider co-sponsoring a new workshop on biodiversity and climate change.

At the national planning and implementation level, countries that have not yet communicated their updated NBSAPs and new NDCs could still benefit from the Climate Nature Coordination Platform's (CNCP) technical support for coherently formulating and implementing these instruments. It is paramount for countries to set up an adequate coordination structure with sufficient levels of political alignment to achieve coherence.



In terms of finance, addressing financial issues such as the biodiversity finance gap, the climate finance gap and the double- or triple-counting in developed countries' finance reporting to the Rio Conventions would be paramount for unlocking more significant support for synergies by Parties at the Conventions level. Not only should ODA finance for both climate as a principal objective and biodiversity as a principal objective continue to increase, but ensuring that there is no double- or triple-counting would help build trust in finance targeting climate-biodiversity synergies.

In terms of the process to achieve a negotiated outcome at COP30, a draft CMA7 decision containing a substantive negotiated outcome on synergies and establishing a space for Parties to discuss and prepare decisions would need to start being negotiated at the 62nd session of the subsidiary bodies (SBs62), in June 2025, for increasing its chances of success. The two more realistic spaces for undertaking these negotiations would be:



Either a new SBSTA and SBI joint agenda item on climate-biodiversity or Rio Conventions synergies -which would first need to be included in the SBs62 provisional agenda-;



Or using the already existing SBSTA agenda item on cooperation with other relevinternational organizations, which has been a "sleeping agenda item" for more than fift years.



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