

Integrating Climate and Biodiversity Policy and Action: IPBES and IPCC Insights

The Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) are internationally recognised bodies that **provide authoritative, science-based and policy-relevant assessments** on existing knowledge on climate change and biodiversity, respectively. Both are independent intergovernmental bodies that are administered under the United Nations system. Their assessments are produced through a rigorous process, broad expert participation and intergovernmental legitimacy.

Climate Change and Biodiversity Loss: Interlinked Crises

- Climate and biodiversity are inextricably connected and influence each other in complex ways, with many potential cascading effects and feedback loops. This interdependence means that the escalating crises of climate change and biodiversity loss are not separate challenges, but share common underlying drivers ([IPCC and IPBES co-sponsored workshop](#) 2020; see Figure 1 below) and their impacts can undermine human health and well-being ([IPBES Nexus Assessment SPM KM-A1](#)).
- Isolated policy or intervention approaches targeting climate change or biodiversity loss independently are insufficient or even counterproductive. Efforts to solve one issue may inadvertently worsen the other. An integrated approach in policymaking and action to address both crises offers the opportunity to maximise benefits for climate, nature and society ([IPBES Nexus Assessment SPM KM-C2, KM-B3](#)), optimise resource use, and enhance the resilience of both natural and human systems ([IPCC AR6 WGII SPM D4](#)).
- The IPBES Transformative Change and Nexus Assessments emphasise the need for “whole-of-society” (involving all sectors of society) and “whole-of-government” (involving all levels of government) approaches to address the underlying causes of biodiversity loss that derive from our dominant ways of living, producing, and consuming. This call resonates strongly with the need for urgent climate resilient development action through equitable and just choices and integrated actions across governance levels, sectors and timeframes ([IPCC AR6 WGII SPM D1 and D2](#)). Fig. 1 also illustrates priority areas for aligned policy responses.

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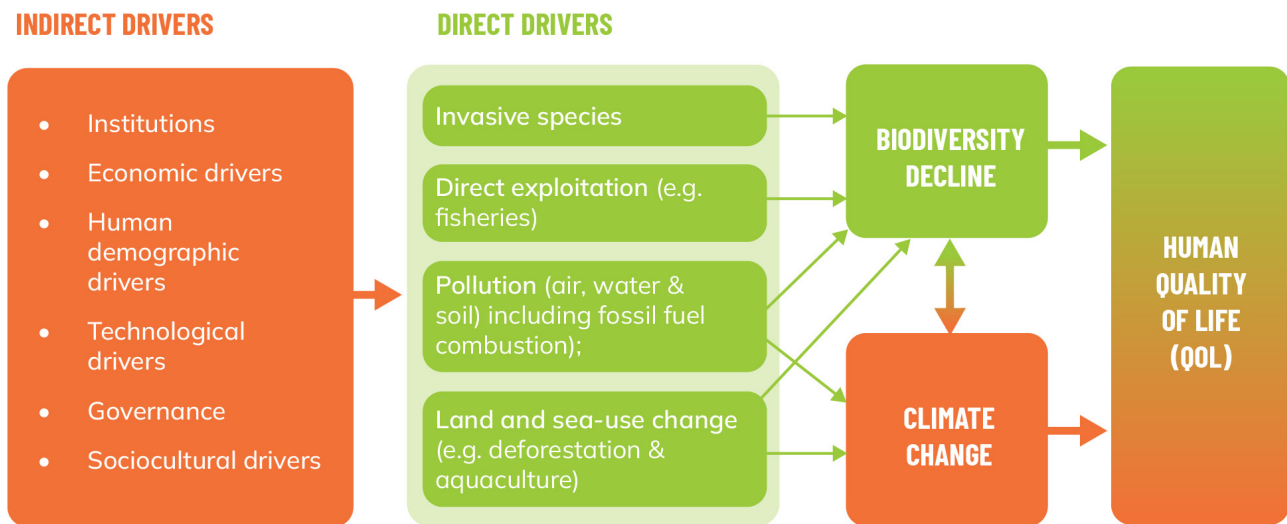


Fig. 1: Shared drivers of biodiversity loss and climate change (IPCC-IPBES co-sponsored workshop)

Synergies and trade-offs in solutions for climate and biodiversity action

Governments can drive solutions that address both climate change and biodiversity loss through integrated strategies that recognise and manage synergies and trade-offs across sectors, systems, and scales. One of the [main findings](#) from the IPBES-IPCC co-sponsored workshop held in 2021 emphasises that well-designed actions can generate multiple benefits while minimising unintended harm, particularly when guided by inclusive governance, clear goals, and coordinated policies.

IPBES and IPCC have outlined actionable pathways for governments to design policies that reduce trade-offs and potentially unlock co-benefits. Some key strategies include the following:

1 Integrated planning ([IPBES Nexus Assessment SPM C6](#)):

- **Integrated land-use, sea-use and urban planning** can align objectives across varied sectors and governance levels (see Table 1), such as agriculture, energy, and nature conservation, to optimise the use of land and sea while minimising trade-offs ([IPCC AR6 Synthesis Report SPM C.3.5](#)). This approach can leverage ‘win-win’ solutions like **nature-based solutions** (NbS) and green infrastructure to deliver climate mitigation/adaptation and benefits for biodiversity and society.

- **Urban spatial planning** can integrate **green roofs**, **parks**, and **urban forests** (e.g. street trees, green corridors, etc.) to cool cities ([IPCC AR6 Synthesis Report SPM A.3.2](#)), manage water, enhance biodiversity, thereby improving public health ([IPBES Nexus Assessment Figure SPM.8](#)).

2 Sustainable economic and financial instruments:

- **Carbon pricing:** Well-designed carbon pricing mechanisms (e.g., carbon taxes and emissions trading) can promote emissions reduction and protection of ecosystems and generate public revenue. The IPCC AR6 Synthesis Report SPM ([C.6.4](#)) highlights that scaled-up carbon pricing, with revenue supporting vulnerable households and communities, contributes to equitable transitions.
- **Fiscal reform:** Governments can play a critical role by reforming fiscal policies consistently with national circumstances — **eliminating, reducing or reforming harmful subsidies** (e.g., for fossil fuels or unsustainable agriculture) and promoting positive incentives. This change might require costly interventions in the short-term, but it can have long-term benefits from redirecting financial flows toward renewable energy, sustainable agriculture, and ecosystem restoration ([IPBES Nexus Assessment C5, C9, D3, IPCC AR6 Synthesis Report SPM C.2.5, C.6.4](#)).



3

Sustainable legal and regulatory frameworks:

- **Area-based conservation: Protected Areas (PAs) and Other Effective Area-Based Conservation Measures (OECMs)** can secure the integrity of ecosystems and thereby safeguarding their natural ability to contribute to climate change mitigation (e.g., through carbon storage) and adaptation (e.g., vegetation and coral reefs can protect coastal areas from floods). The services they provide are invaluable, underpinning human livelihoods and well-being through the provision of food, recreation and water regulation ([IPBES Nexus Assessment B2, C1, IPCC AR6 WGII SPM D4](#)).
- **Impact assessments:** Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments (SEAs) can identify, predict, and mitigate negative effects of development, particularly for energy and infrastructure, on climate and biodiversity. These tools can facilitate the integration of climate and biodiversity considerations into planning from the outset, as highlighted in the IPBES Global Assessment (2019).
- **Sectoral regulations and incentives:** Implementing sustainable regulations (e.g., preventing and restoring degradation of soils and ecosystems, promoting climate-smart agriculture) and offering incentives for practices that benefit biodiversity and climate can shift behaviour across forestry and agricultural sectors. Forest-based mitigation programs that incorporate social and environmental safeguards (e.g., the Cancun Safeguards) adopted under the UNFCCC to guide the United Nations Reducing Emissions from Deforestation and Forest Degradation (UN-REDD+) are considered essential to prevent perverse outcomes and promote co-benefits for nature and people.

4

Cross-sectoral collaboration and engagement:

- **Coordinated governance:** Integrated action relies on strong coordination mechanisms and inclusive and integrated governance ([IPCC AR6 Synthesis Report SPM C.1](#)). This can involve building partnerships, breaking down silos, and aligning policies through improved communication and shared goals.
- **Institutional mechanisms:** To implement such collaboration, institutional governance mechanisms, such as multi-stakeholder platforms, inter-ministerial committees, and regular cross-sectoral dialogues, are essential. These mechanisms help identify synergies, reduce trade-offs, and ensure policies are both efficient and socially inclusive. The IPCC AR6 Synthesis Report SPM ([C.6](#)) underscores the importance of clear goals, coordination across

policy domains, and inclusive processes for effective climate action. The IPBES Nexus Assessment SPM ([KM-D1](#)) highlights that holistic, equitable, adaptive, and participatory “nexus governance approaches” can foster integrated, whole-of-society solutions.

- **Knowledge diversity:** Cooperation and inclusive decision-making with Indigenous Peoples and local communities, as well as recognition of the inherent rights of Indigenous Peoples, are essential to draw on diverse knowledge systems that can enable credible climate and biodiversity actions. Inclusivity supports climate-resilient development, effective adaptation and mitigation across ecosystems, and ensures locally appropriate and socially acceptable solutions ([IPBES Transformative Change Assessment SPM KM-8; IPCC AR6 Synthesis Report SPM C.3.6, C.6.5](#)).
- **Capacity building and knowledge sharing:** Fostering collaborative learning environments, providing training, and sharing lessons learned among policymakers and practitioners can also strengthen integrated approaches ([IPBES Global Assessment SPM D3; IPBES Nexus Assessment SPM D5; IPCC WGII SPM C.5](#)).

5

Investment in research, monitoring and innovation:

- Research plays a vital role in highlighting climate-biodiversity interlinkages, identifying potential tipping points, and developing innovative solutions.
- Investments in robust monitoring and evaluation frameworks can ensure accountability and track progress toward integrated outcomes (e.g., how NbS projects contribute to both carbon sequestration and species recovery). These evidence-based approaches also support adaptive management ([IPCC AR6 Synthesis Report SPM C.5.5](#)).

6

Education and public awareness:

- Public awareness and education enable individuals, communities, and decision-makers to act. Through climate literacy, biodiversity education, and community-based approaches, individuals gain a better perception of risks and are more likely to change their behaviour. Campaigns, curriculum reform, and climate services can therefore shift demand towards low-carbon and biodiversity-friendly choices, thereby shaping more sustainable societies ([IPBES Transformative Change Assessment SPM B10; IPCC AR6 Synthesis Report SPM C.3.8](#))

Table 1: Examples of actions for different levels of governance

Integrated action must be coordinated across scales: Local conservation efforts benefit from supportive national and global policies

Level	Actions	Examples	Sources
Local	Engage Indigenous Peoples and local communities in ecosystem management. Implement urban greening and conservation projects.	Community-led actions and restoration measures are helping to ameliorate climate impacts and provide 'safe havens' to affected freshwater species. For example, the Skolt Sámi of Finland have introduced adaptation measures to aid survival of culturally significant Atlantic salmon stocks in the Näätämö watershed.	IPBES Global Assessment (Chapter 4)
National	Align national climate and biodiversity policies. Establish payment for ecosystem services (PES) and carbon markets that reward biodiversity protection. Develop cross-ministry coordination bodies. Support research and extension services to promote climate-smart, biodiversity-friendly technologies.	Costa Rica's Payment for Ecosystem Services (PES) scheme integrates forest conservation with climate mitigation and rural development. The program compensates landowners for conserving forests, sequestering carbon, and protecting water sources, contributing to national climate and biodiversity goals.	IPBES Global Assessment (Chapter 5)
Global	Strengthen international treaties and financial mechanisms. Increase funding for joint climate-biodiversity initiatives Share technology and best practices. Encourage ambitious conservation targets and scaling up nature-based climate mitigation and adaptation.	With support from the Global Environment Facility (GEF), Latin American countries are scaling up joint climate-biodiversity initiatives. Argentina is advancing ecosystem-based fisheries management, while Chile, Peru, and Colombia are promoting sustainable seafood, coastal resilience, and fisher capacity building. These efforts strengthen adaptation, support livelihoods, and foster cross-sector collaboration.	IPCC AR6 WGII (Chapter 12)

Conclusion and Recommendations

Climate change and biodiversity loss demand unified actions. Integrated strategies informed by IPCC and IPBES findings can drive joint solutions across scales and sectors that create a resilient and sustainable future for both people and the planet. This factsheet aims to support governmental decision-makers in designing coordinated strategies for climate resilience and biodiversity conservation. The following are recommended:

- 1 Mainstream biodiversity and climate in all sectors
- 2 Promote inclusive, participatory governance, including engaging Indigenous Peoples and local communities.
- 3 Align targets and indicators – harmonise climate and biodiversity strategies, goals and monitoring systems.
- 4 Invest in co-benefit solutions – prioritise actions that address both biodiversity and climate crises simultaneously.
- 5 Strengthen cross-convention collaboration – enhance synergies between international and regional treaties, agreements and platforms on climate and biodiversity, such as the Paris Agreement, Kunming-Montreal Global Biodiversity Framework, and European Green Deal.



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