respin

FACTSHEET

IPBES and IPCC explained: Why and How to Engage as an Expert

Overview of IPBES and IPCC

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services **(IPBES)** and the Intergovernmental Panel on Climate Change **(IPCC)** provide policymakers with scientific assessments on biodiversity, ecosystem services, and climate change. While distinct, their work is complementary, informing global and national decision-making. Both are independent intergovernmental bodies that are administered under the United Nations system, with the IPBES Secretariat hosted by UNEP and the IPCC Secretariat hosted by WMO.

Mission and Focus of IPBES and IPCC

Established in 2012, IPBES strengthens the science-policy interface for biodiversity and ecosystem services. It assesses biodiversity and ecosystem services globally, identifies policy-relevant knowledge gaps, supports policy formulation and implementation, and promotes capacity-building. It conducts global, regional and thematic assessments producing reports such as the **Global Assessment (2019)**, **Transformative Change and Nexus Assessments (2024)**, which inform the **Convention on Biological Diversity (CBD)** and other MEAs. Key audiences include policymakers, researchers, conservation practitioners, and stakeholders, including Indigenous Peoples and local communities.

Founded in 1988, the IPCC assesses climate change science, including physical science, impacts, adaptation and vulnerability as well as mitigation approaches and strategies. It synthesises knowledge through reports such as the **Sixth Assessment Report (AR6), and special thematic and methodological reports**, which inform climate negotiations under the **United Nations Framework Convention on Climate Change (UNFCCC)**, and other MEAs. Key audiences include national governments, UNFCCC, climate scientists and the public.

Key Differences and Similarities Between IPBES and IPCC

Feature	IPBES	IPCC
Scientific Focus	Biodiversity & ecosystem services	Climate change
Knowledge Systems	Draws on scientific peer-reviewed and grey literatures, as well as Indigenous and local knowledge (ILK)	Primarily scientific peer-reviewed literature but grey literature can also be considered. Currently examining the IPBES ILK approach and lessons learned
Scenario Modeling	Context-specific and participatory approaches-including the Nature Futures Framework (NFF)	Assesses global climate models results across a variety of future scenarios such as Representative Concentration Pathways (RCPs) and Shared Socioeconomic Pathways (SSPs)
Policy Engagement	Identifies policy options with explicit policy support function	Presents policy relevant science without being policy prescriptive
Assessment duration	2–4 years	2–7 years
Expert Training	Offers early career fellowships & implements a work plan focusing on capacity-building	No formal training, but supports early-career researchers and scientists from developing countries through fellowships

Complementary Roles of IPBES and IPCC

Biodiversity loss and climate change are interconnected crises. The two organisations work together or complement each other to address these challenges:

- **Collaborations** – A 2021 **IPBES-IPCC co-sponsored workshop** emphasised integrated climate-biodiversity policies, and there is regular sharing of information between the two organisations[1]. At its ninth plenary in 2022, IPBES invited national focal points (NFPs) to collaborate with their IPCC counterparts. The Plenary also encouraged IPBES members, stakeholders and research institutions to advance knowledge and research on biodiversity-climate interlinkages.
- **Understanding Feedback Loops** – The assessments of how biodiversity loss contributes to climate change, and of climate-induced biodiversity loss, are covered to various degrees by the work of both organisations.
- **Cross-Sectoral Insights** – IPCC assesses climate change impacts and projections, while IPBES focuses on observed trends in biodiversity and ecosystem services.

Why Get Involved?

Getting involved in IPBES or IPCC assessments and their work programmes offers a strategic opportunity to develop and advance professional networks and strengthen the policy impact of your research expertise.

Benefits of Expert Engagement

As an expert:

- **Contributions to governance and influence** – Contributions shape international climate and biodiversity governance.
- **Professional growth and networking** – Collaboration with leading experts enhances career prospects.
- **Capacity Building** – Training and networking opportunities expand expertise.
- **Visibility & Recognition** – Experts are credited in the assessment reports and high impact publications. IPBES Fellows become part of the Fellowship Alumni network.

As an institution supporting experts' engagement:

- **Reputation and prestige** – Enhances institutional prestige and international standing in climate and biodiversity science.
- **Identify research frontiers** – Gain early insights into critical knowledge gaps, guiding future research priorities and securing funding opportunities.
- **Boost capacity & skills** – Develop cutting-edge expertise in complex global assessments, fostering interdisciplinary collaboration and enriching teaching.
- **Direct policy influence** – Ensure your research directly informs international policy, increasing its real-world impact and relevance.

[1] IPCC-LXI/INF. 10

IPBES and IPCC Assessment Processes and Opportunities for Expert Engagement

How Experts can Engage in IPBES and IPCC

Both platforms rely on voluntary expert contributions for their assessments and other parts of their work programme. Organisations employing experts that are nominated to contribute to IPBES or IPCC will need to enable experts to dedicate sufficient time to their contributions, as below.

Roles of Experts in the assessments

Role	Description	Estimated time commitments	
		IPBES over 2–4 years	IPCC over 2–7 years
IPBES Assessment Co-chairs	Lead the overall assessment process and coordinate expert teams	At least 30%	**Varies depending on type of report: Special Reports – partial time commitment over approx. 2 years Working Group Reports – partial time commitment over approx. 3 years
IPCC Working Group Co-chairs	Co-lead the overall assessment for their specific Working Group and coordinate expert teams for that assessment	NA	
Coordinating Lead Authors (CLAs)	Lead specific chapters, coordinate writing and ensure coherence	At least 20%	
Lead Authors (LAs)	Draft key sections of reports and synthesize knowledge	Approximately 15%	
Review Editors (REs)	Ensure that reviewer comments are addressed and incorporated	Approximately 10%	
Contributing Authors (CAs)	Provide specialised input on specific topics	Approximately 10%	
Expert Reviewers	Submit comments on draft reports to evaluate scientific rigor during external review process	A few days to a few weeks, depending on scope of review	
Early-Career Engagement	IPBES Fellows contribute to developing sections or parts of the chapters IPCC Chapter Scientists assist in the technical aspects of the assessments	Approximately 15% for IPBES Fellows	

**Further details on the time commitment for IPCC experts are discussed in a dedicated open-hour webinar when the IPCC issues its periodic call for author nominations.

Becoming an Expert

IPBES

- IPBES issues a public call for experts, for the role of co-chairs, CLAs, LAs and REs and fellows to contribute to the full assessments. Candidate applications need to be supported by their home institution, government, or an appropriate organisation. For experts and fellows' calls, check the Notification section on the IPBES website homepage.
- Interested candidates must complete an online application form and submit their curriculum vitae (CV) through the IPBES web portal. To access the web portal, nominees will need to register on the IPBES website at https://ipbes.net/user/register.
- The assessment's Management Committee reviews nominations. Selection is based on the candidate's merit, academic qualifications, and individual expertise and how co-chairs see complementarity and abilities of selected experts across the assessment team. Diversity in geographical distribution, disciplinary background and gender are guiding principles.
- All nominated candidates are informed of the selection outcome, typically within a few months after the application deadline.
- Selected experts and fellows are expected to attend author meetings and training workshops to structure the assessment and define responsibilities. Fellows receive additional training to gain an in-depth understanding of IPBES assessment processes and the science-policy interface.
- Those who are not nominated by Governments or stakeholders may still contribute as **Contributing Authors** (CAs) if requested by the selected experts (CLAs) based on their expertise, or as Expert Reviewers.

Become an Expert Reviewer

- Log in or register on the IPBES website.
- Apply to become an external reviewer.
- Attend the online dialogue on the assessments for additional information.
- Access the assessment documents and review them.
- Submit your comments online.

IPCC

- The IPCC Working Group co-chairs are elected by IPCC member governments during a plenary session at the start of each assessment cycle, following nominations by member governments.
- IPCC issues a call for authors' nominations for CLAs, LAs and REs for each of its three Working Groups. Governments of IPCC member countries, observer organisations and the Bureau nominate experts. For expert calls, check the News section on the IPCC website homepage.
- Experts may also be identified based on their publications and contributions to the field. Nominations include a detailed CV outlining expertise and qualifications.
- The IPCC Working Group or Task Force Bureau reviews nominations. Selection is based on scientific expertise relevant to the assessment topics.
- Efforts are made to ensure regional diversity, gender balance, and a mix of experienced and new authors. Experts from developed and developing countries, industry, and non-profit organisations may be included.
- Experts not selected as authors may participate as **Expert Reviewers**, providing feedback on draft reports.

Become an Expert Reviewer

- Expert Reviewers must register via a dedicated IPCC web portal to participate in the review process.
- Registration is generally open to all qualified individuals who can demonstrate relevant expertise.
- The IPCC Working Group or Task Force Bureau may also invite specific experts based on their specialised knowledge.

For more details, experts can visit the respective IPBES and IPCC websites or contact their national focal points (NFPs) to explore participation opportunities.

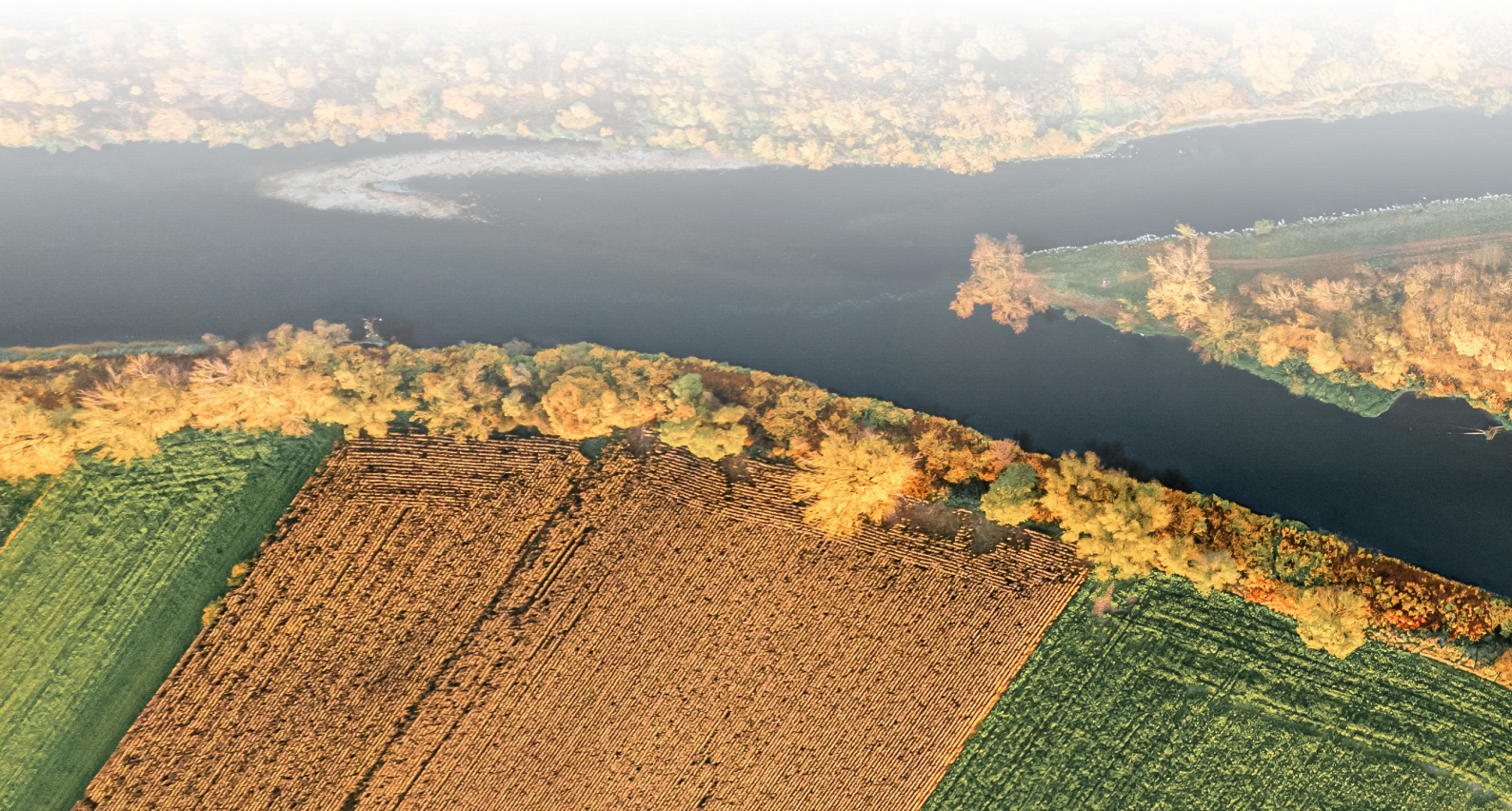
Other Ways to Engage

- Participate in expert task forces or working groups on themes like data, indigenous knowledge, or communication.
- Participate in the IPBES Stakeholder Day held before each plenary.
- Participate in workshops and expert meetings on specific topics, methodologies and cross-cutting issues.
- Address knowledge gaps highlighted in the IPBES and IPCC reports by conducting research and publishing findings accessible to authors.
- Apply to be nominated as an expert to participate in scoping meetings to shape the content of the assessments.
- Both platforms strongly emphasise stakeholder engagement:
    - Register as an IPBES stakeholder to receive regular information and opportunities to get involved;
    - Become an accredited observer organisation to participate in plenary meetings and influence the process;
    - Engage with national and/ or sub-regional platforms that coordinate input from national actors to amplify and supplement the work of focal points.

Expert Financial Support

Experts selected for a role within an IPBES and IPCC assessment accept the relevant conditions, including that their time is committed to this work on a pro-bono basis. **Experts from developing countries receive financial** support to attend author meetings and possibly other relevant meetings, covering travel costs and per diem for the meeting days. Selected experts from **developed countries must secure their own funding to cover the costs of participating** in meetings. Some funders, such as the EU's Horizon Europe, encourage researchers to engage in IPBES and IPCC and allow grant funds to cover related time and travel costs. Selected experts are expected to attend all author meetings (typically 2 or 3) and may be asked to participate in additional meetings and communication efforts.

The fellowship program is unpaid. However, expenses for attending meetings are covered for fellows from developing countries and countries with economies in transition. Fellows from developed countries are expected to cover their own expenses and are encouraged to seek support from their home institutions.



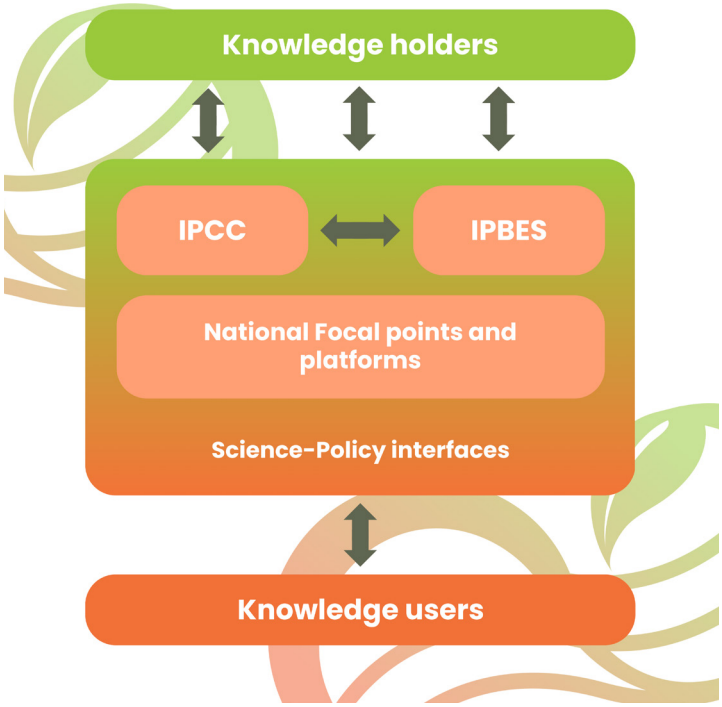
Barriers and Solutions to Participation

Some barriers to participation and potential solutions

BARRIERS	SOLUTIONS
Lack of institutional recognition, support and integration of participation into career progression.	Formal recognition, monetary support & incentives to experts. NFPs and national platforms can also help experts by communicating the relevance and policy impact of IPBES/IPCC processes to institutions.
Time constraints and workload, which must be balanced with other professional responsibilities.	Encourage experts to **proactively integrate** IPCC/IPBES commitments into their annual work plans and discuss them with department heads early on.
Limited financial support, particularly for experts from developed countries.	Establish or allocate specific institutional funds to cover travel, accommodation, and essential operational costs for experts. Explore partnerships with relevant industry, government agencies, or foundations to secure additional funding.
Language and inclusivity barriers - the dominance of English in assessment processes and reports can be a challenge for non-native English speakers. But may also enrich the author's team.	Actively seek out and nominate experts from diverse linguistic and cultural backgrounds with active moderation that would support and engage non-native English speakers. NFPs and national platforms also have a role in disseminating IPBES/IPCC processes and products in the national language.

Call to Action

IPBES and IPCC provide essential scientific assessments for biodiversity and climate -related policy. Experts from all disciplines are vital contributors to these processes. To further engage, experts are encouraged to contact their National Focal Points (NFPs), who coordinate national participation in IPBES and IPCC activities. A list of NFPs can be found in the IPBES[2] and IPCC[3] websites to explore opportunities to contribute to upcoming assessments, dialogues and capacity-building initiatives.



The RESPIN Project and EU Support

The RESPIN project, supported by the European Union, strengthens IPCC-IPBES collaboration by fostering interdisciplinary research and expert engagement. Through initiatives like RESPIN, policymakers receive robust, science-based guidance on integrating climate and biodiversity strategies. For more information, read our factsheet 'Closing the gaps: how the RESPIN Project unites IPBES and IPCC experts'.

[2] National Focal Points | IPBES secretariat

[3] https://www.ipcc.ch/apps/contact/interface/focalpoints.php

Funded by the European Union

respin-project.eu

RESPIN project

This project receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135490. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the EU nor the REA can be held responsible for them.

respin

FACTSHEET

Business for Biodiversity and Climate: Leveraging Insights from IPCC and IPBES

Climate change and biodiversity loss are reshaping markets, regulations, supply chains, and investor expectations. Therefore, to thrive in a changing world, businesses need to take bold, science-based action to align with global goals, responding to climate change and biodiversity loss. The IPBES and IPCC assessments offer scientifically grounded information to understand risks, unlock innovation, and help businesses spot emerging opportunities, and lead the transition to a more sustainable and resilient economy.

Call for action

- **Integrate biodiversity and climate considerations into core business strategies** to support long-term business growth, sectoral resilience and economic sustainability.
- **Leverage knowledge assessed and synthesised by IPBES and IPCC** to reduce impact across operations and value chains, set scientifically robust targets and transparently disclose dependencies, impacts and progress on nature and climate.
- **Align business strategies and actions with global frameworks** such as the Kunming-Montreal Global Biodiversity Framework and the Paris Agreement to maximise business contributions to tackling the interconnected crises of biodiversity loss and climate change.
- **Collectively take timely action** to halt and reverse biodiversity loss by 2030 and reduce GHG emissions in line with the Paris Agreement goal.

What are IPCC and IPBES, and why are they important

- 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, policy-relevant, and scientifically rigorous assessments** on climate change and biodiversity, respectively. Both are independent intergovernmental bodies supported by the United Nations system.

- Their **technical reports** are produced through a transparent and inclusive process that involves hundreds of volunteer experts globally assessing the latest scientific and grey literature. Drafts are publicly reviewed to ensure **rigour and scientific integrity**.

- A key strength of both platforms is their **intergovernmental nature, which ensures legitimacy and transparency, through processes such as approval** of the summary for policymakers by their members (governments) – 195 for the IPCC (as of 30/05/2025) and 150 for IPBES (as of 30/05/2025). Their assessment reports **inform international policy frameworks** such as the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD).

- **Businesses are recognised by both platforms** as essential actors in responding to the climate and biodiversity crises. Their reports offer evidence, scenarios, and methodologies that businesses can use to align their strategies with science-based targets and global goals.

Why are IPCC and IPBES relevant to business?

- **Shaping policy and regulation**: The findings of the IPCC and IPBES reports can influence the development of new international and national policies and regulations that shape markets, such as carbon pricing mechanisms, stricter environmental regulations, and incentives for renewable energy and can identify and assess both risks and opportunities for businesses. For example, the IPBES Global Assessment Report on Biodiversity and Ecosystem Services informed the Kunming-Montreal Global Biodiversity Framework and the EU's Nature Restoration Law. Similarly, the European Climate Law (EU's commitment to climate neutrality by 2050) is heavily based on information from IPCC reports.

- **Influencing investor behaviour**: With the rise of environmental, social, and governance (ESG) investing, the IPCC and IPBES reports provide key insights into climate- and nature-related risks and opportunities, guiding capital flows toward more sustainable business models (e.g., reports from Network for Greening the Financial System are often based on IPCC and IPBES reports and findings).

- **Guiding frameworks for business action and disclosure**: The scientific evidence provided by IPCC and IPBES informs key frameworks. For instance, the Taskforce on Nature-related Financial Disclosures (TNFD), that guide businesses in identifying, assessing, disclosing, and acting on climate and nature-related risks, and aligning strategies with global sustainability goals. The ongoing IPBES methodological assessment of the impact and dependency of business on biodiversity and nature's contributions to people (the "IPBES Business and Biodiversity Assessment"; see box 1) will further strengthen this knowledge base, offering tailored guidance for businesses to contribute to global biodiversity goals.

Box 1. Upcoming IPBES Business and Biodiversity Assessment

IPBES is currently undertaking a methodological assessment of the impact and dependency of business on biodiversity and nature's contributions to people (business and biodiversity assessment), which will be considered by the 12th meeting of the IPBES Plenary in February 2026. The assessment will categorise the dependencies and impacts of business and financial institutions on biodiversity and nature's contributions to people, which incorporates ecosystem services and other analogous concepts, including in relation to Indigenous Peoples and local communities. It will assess methods for measuring direct dependencies and impacts and, where appropriate, indirect dependencies and impacts, and will assess options for actions by businesses and by others, including Governments, the financial sector, indigenous peoples and local communities, and civil society, that interact with business.

How can businesses integrate the outcomes of IPCC and IPBES assessments?

- **Understand dependencies and impacts on nature and climate:** IPCC and IPBES assessments identify the key contributors to climate change and the primary threats to biodiversity, respectively, and evaluate the significance of these factors at various scales. This information enables businesses to examine how their operations and value chains affect biodiversity and ecosystem services, how they depend on them, and the potential risks they face from climate change and biodiversity loss – particularly in sectors with high nature dependency such as agriculture, fisheries, forestry and fossil fuels (IPBES Transformative Change Assessment, KM9). The **upcoming IPBES Business and Biodiversity Assessment** will be especially instrumental, offering detailed classifications and methodologies for businesses to measure and understand these dependencies and impacts throughout their value chains. IPBES assessments also provide detailed classifications of ecosystem services and biodiversity indicators that businesses could utilise to map their interactions with nature. The IPCC offers guidance for businesses to estimate their greenhouse gas emissions, information to evaluate the impacts of those emissions on the climate system, and the potential climate-related risks (both physical and transition) to business operations, supply chains, and value chains.

- **Integrate biodiversity and climate into business strategies**: Businesses can integrate biodiversity and climate considerations into their core business strategies, including setting targets for reducing negative impacts, managing their risks, increasing positive contributions for nature and climate, and transparently reporting on progress. Leveraging IPBES's call for integration on biodiversity and climate action and IPCC's decarbonization emphasis, businesses can prioritise actions with synergistic benefits such as nature-based solutions (NbS; see box 2).

- **Collaborate and work in partnerships**: Businesses can work with governments, NGOs, Indigenous Peoples and local communities to align their actions with global sustainability goals, such as the Sustainable Development Goals (SDGs), the Kunming-Montreal Global Biodiversity Framework, the Paris Agreement and targets described in national plans such as National Biodiversity Strategies and Action Plans (NBSAPs) or the Nationally Determined Contributions (NDCs). For example, public-private partnerships in the water sector have been an important vehicle for financing investments to meet the SDGs (IPBES Global Assessment SPM, D4).

Box 2. Nature-based Solutions: Integrated Action for Nature and Climate

Nature-based solutions (NbS) offer businesses a powerful avenue for developing actions that can simultaneously deliver benefits for biodiversity, climate and society (IPBES Global Assessment SPM, D8, D9). For instance, a company compensating for its unavoidable operational emissions through tree planting could restore degraded native woodlands with native species instead of planting fast-growing monocultures. This NbS approach not only sequesters carbon, but improves natural habitats, soil health, water regulation and offers social benefits for Indigenous Peoples and local communities. This integrated approach, informed by IPBES and IPCC insights, delivers more comprehensive and resilient outcomes than single-objective actions.

- **Inspire Innovation**: Businesses play a crucial role in driving systemic change by investing in technologies that could reduce biodiversity loss, support restoration, and advance climate solutions such as renewable energy, clean technologies, and NbS with co-benefits for nature, climate and society (IPBES Transformative Change SPM, B3, C1; IPCC AR6 Synthesis Report SPM C.7).

- **Increase transparency**: Businesses are being asked by investors to publicly disclose environmental information and adopt transparent reporting practices to enhance accountability and inform stakeholder decision-making (IPBES Global Assessment SPM; IPCC WGII 2022 C.5.1). See box 3.

- **Align financial investments:** Businesses play a crucial role in addressing financial gaps for biodiversity, climate and sustainability. They can contribute by halting investments in activities that contribute to the climate and/or biodiversity crises, investing in activities with potential to reduce harm and/or have positive impacts, adopting sustainable finance instruments, and adapting business models to reflect ecological and economic interconnections as highlighted in the IPBES Nexus Assessment and the IPCC reports.

Box 3. Transparency and Disclosure: A Business Priority

Clear and transparent disclosure of a company's impacts and dependencies on climate and biodiversity is a strategic requirement for credibility, risk management, and access to sustainable finance. Frameworks like the Taskforce on Nature-related Financial Disclosures (TNFD), the Science Based Targets initiative (SBTi), and the Science Based Targets Network (SBTN) are increasingly adopted and require science-based corporate reporting.

IPBES and IPCC assessments offer robust scientific foundations to improve reporting practices, helping businesses to:

- Identify material impacts and dependencies.
- Understand links between their operations/supply chains and major biodiversity loss or climate drivers.
- Assess risks and opportunities based on global scientific scenarios.
- Set and report on aligned targets using recognised methodologies.

Improving the quality, traceability, and scope of environmental and carbon reporting is key to building trust, meeting stakeholder expectations, and enabling the transition toward a truly sustainable economy.

How can businesses engage with both IPBES and IPCC?

- Contribute expertise and knowledge through IPBES stakeholder consultations or, where eligible, by serving as an expert reviewer or author. See factsheet on *IPBES and IPCC explained: why and how to engage as an expert.*
- **Promote the uptake of IPBES and IPCC findings** in the business community.
- Businesses can use IPBES and IPCC evidence to **advocate for stronger environmental policies and incentives**, supporting the transition toward more sustainable economic systems.
- Businesses can make voluntary **financial contributions** to IPBES, acknowledging its crucial role in delivering objective scientific assessments on biodiversity and ecosystem services.

References

IPBES. 2019. Summary for policymakers of the global assessment report on biodiversity and ecosystem services. Edited by S. Díaz et al. IPBES. DOI: 10.5281/zenodo.3553579.

IPBES. 2024. Summary for Policymakers of the Thematic Assessment Report on the Interlinkages among Biodiversity, Water, Food and Health [the Nexus Assessment]. Edited by P. D. McElwee et al. IPBES secretariat, Bonn, Germany. DOI:10.5281/zenodo.13850289.

IPBES. 2024. Summary for Policymakers of the Thematic Assessment Report on the Underlying Causes of Biodiversity Loss and the Determinants of Transformative Change and Options for Achieving the 2050 Vision for Biodiversity [the Transformative Change Assessment]. Edited by K. O'Brien et al. IPBES secretariat, Bonn, Germany. DOI: 10.5281/zenodo.11382230.

IPCC. 2022. Summary for Policymakers. In: Climate Change 2022: Impacts, Adaptation and Vulnerability [AR6 WGII]. Edited by H.-O. Pörtner et al. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–33. DOI: 10.1017/9781009325844.001.

IPCC. 2023. Summary for Policymakers. In: Climate Change 2023: Synthesis Report [AR6 Synthesis Report]. Edited by H. Lee and J. Romero. IPCC, Geneva, Switzerland, pp. 1-34. DOI:10.59327/IPCC/AR6-9789291691647.001.

Funded by the European Union

respin-project.eu

RESPIN project

This project receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135490. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the EU nor the REA can be held responsible for them.

respin

FACTSHEET

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.

REFERENCES

IPBES. 2019. Summary for policymakers of the global assessment report on biodiversity and ecosystem services. Edited by S. Díaz et al. IPBES. DOI: 10.5281/zenodo.3553579.

IPBES. 2024. Summary for Policymakers of the Thematic Assessment Report on the Interlinkages among Biodiversity, Water, Food and Health [the Nexus Assessment]. Edited by P. D. McElwee et al. IPBES secretariat, Bonn, Germany. DOI: 10.5281/zenodo.13850289.

IPBES. 2024. Summary for Policymakers of the Thematic Assessment Report on the Underlying Causes of Biodiversity Loss and the Determinants of Transformative Change and Options for Achieving the 2050 Vision for Biodiversity [the Transformative Change Assessment]. Edited by K. O'Brien et al. IPBES secretariat, Bonn, Germany. DOI: 10.5281/zenodo.11382230.

IPCC. 2022. Summary for Policymakers. In: Climate Change 2022: Impacts, Adaptation and Vulnerability [AR6 WGII]. Edited by H.-O. Pörtner et al. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–33. DOI: 10.1017/9781009325844.001.

IPCC. 2023. Summary for Policymakers. In: Climate Change 2023: Synthesis Report [ARR 6 Synthesis Report]. Edited by H. Lee and J. Romero. IPCC, Geneva, Switzerland, pp. 1-34. DOI:10.59327/IPCC/AR6-9789291691647.001.

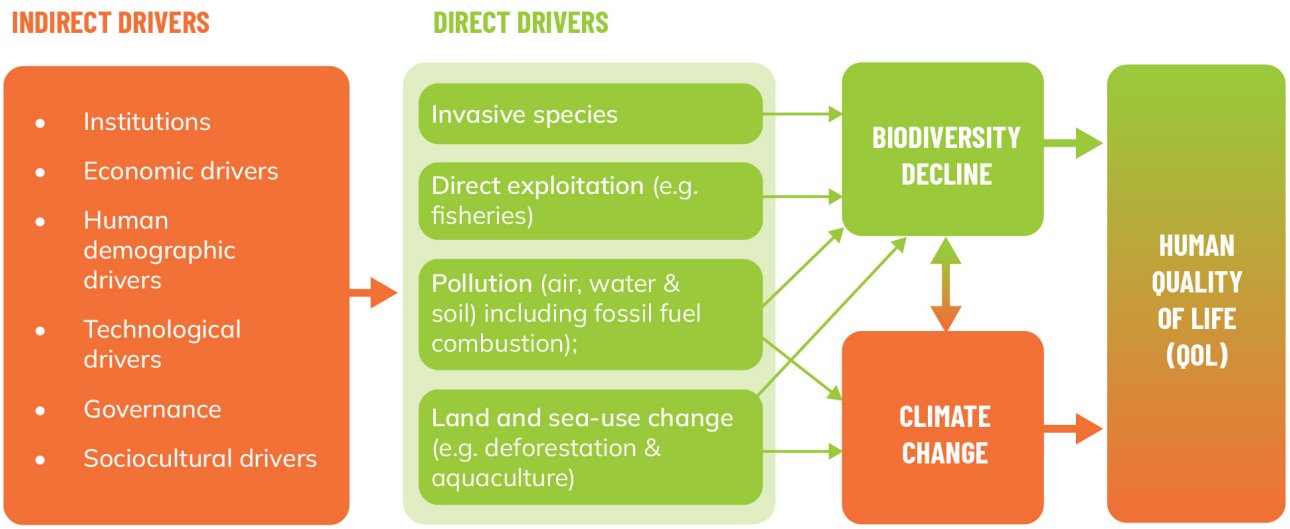


Fig. 1: Shared drivers of biodiversity loss and climate change (IPCC-IPBES co-sponsored workshop)

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 having 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.

Funded by the European Union

respin-project.eu RESPIN project

This project receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135490. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the EU nor the REA can be held responsible for them.

respin

FACTSHEET

Closing the Gaps: How the RESPIN Project Unites IPBES and IPCC Experts

Overview

The RESPIN project (REinforcing Science-Policy INterfaces for integrated biodiversity and climate knowledge and policies) is a Horizon Europe-funded initiative.

This factsheet aims to provide both policymakers and experts with a clear understanding of how the RESPIN project supports and promotes the interfaces between biodiversity and climate science and policy.

The project bridges the divide between biodiversity and climate knowledge and, crucially, within biodiversity and climate policies, by **fostering knowledge exchange between IPBES and IPCC experts and engaging with policymakers**.

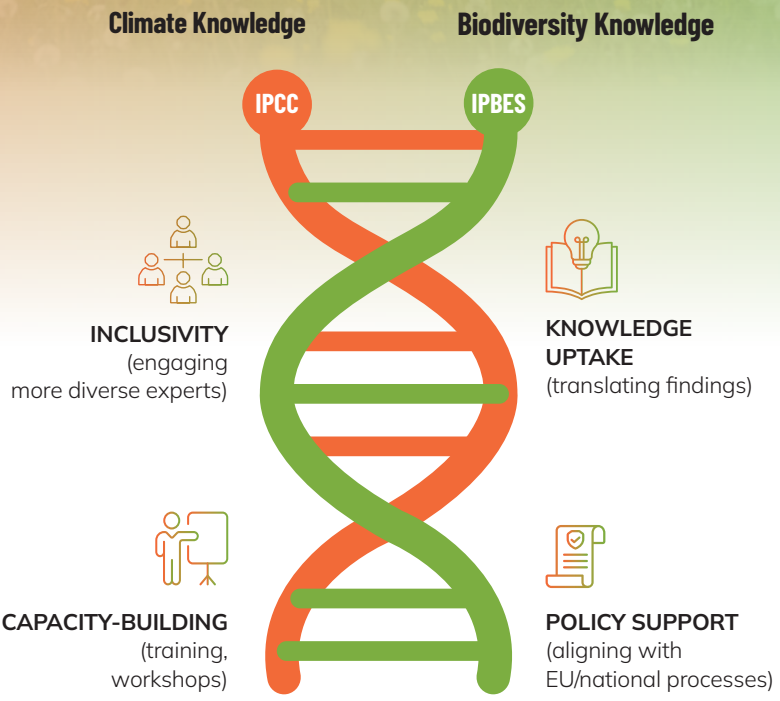


Fig. 1: RESPIN: REinforcing Science-Policy INterfaces for integrated biodiversity and climate knowledge and policies

RESPIN goes beyond simply bringing the two communities together. It actively supports both by:

- promoting more inclusive engagement of experts,
- strengthening the uptake of knowledge into policy, and
- enhancing capacity-building and collaboration efforts.

By fostering greater collaboration between climate and biodiversity knowledge and policy domains, RESPIN enables more coherent, inclusive, and impactful environmental governance—one that addresses both crises together rather than in parallel.

Ultimately, RESPIN supports EU and national policymakers in gaining access to integrated policy support tools and provides experts working with IPBES and IPCC with new opportunities for collaboration and institutional learning.

Why biodiversity and climate science must work together

Although climate change and biodiversity loss are two of the most urgent environmental challenges of our time and are deeply interconnected, scientific and policy responses are mainly developed in siloed approaches. Strategies stay fragmented, often resulting in low effectiveness and even counterproductivity. Examples are National Biodiversity Strategies and Action Plans (NBSAPs) for biodiversity and Nationally Determined Contributions (NDCs) for climate (guided by distinct conventions, CBD and UNFCCC, respectively), where indicators, reporting mechanisms, monitoring systems, and evaluation procedures differ. The policy decisions of both conventions could benefit from integrated approaches that account for the complex interplay between climate systems and ecosystems. Coordinating actions across the climate and biodiversity domains would allow policymakers to identify trade-offs, avoid unintended consequences, and maximise co-benefits. The science-policy interfaces **IPBES** (**Intergovernmental Platform on Biodiversity and Ecosystem Services**) and **IPCC** (**Intergovernmental Panel on Climate Change**) can give sound scientific input into developing such approaches, including on the societal challenges faced in addressing climate change and biodiversity loss jointly.

It remains crucial to bridge the gaps in science, policy and strategy development and implementation.

Key barriers: What prevents effective integration of IPBES and IPCC findings?

Through expert collaboration, the RESPIN Project has identified the following gaps:

KNOWLEDGE GAPS

a. **Fragmented knowledge systems due to uneven engagement:** Climate and biodiversity knowledge is disjointed because not all regions, knowledge systems, and stakeholder groups are equally involved in the IPBES and IPCC processes. Regions like Central Africa, Central Asia, and Latin America are underrepresented, and there's a lack of connection between national focal points (NFPs) within and between countries. As a result, the holistic understanding of climate and biodiversity issues is often incomplete and lacks diverse perspectives, which weakens the ability to create well-rounded, inclusive solutions.

b. **Barriers to expert engagement:** There are obstacles and disincentives that prevent experts and decision-makers from fully participating in and utilising the IPBES and IPCC processes.

c. **Lack of integration between different data sources and knowledge systems:** A missing translation of existing information hinders the uptake of knowledge at regional (e.g. European), national, and local levels and the connection between knowledge needs and provision. There is a need for better data integration, policy coherence, and collaboration between climate and biodiversity efforts across different levels of governance.

d. **Scientific complexity and inaccessible language:** Scientific knowledge from IPBES and IPCC is not always translated and communicated in a manner that is readily accessible and applicable for policymakers and decision makers at all levels. The use of complex language /jargon and a lack of tailored communication strategies limit the effective dissemination and uptake of this crucial knowledge.

POLICY GAPS

e. **Policy and structural barriers:** Institutional silos and fragmented policy cycles hinder the integration of IPBES and IPCC outputs into national, regional (e.g. EU), and global frameworks. Legal frameworks often fail to align with scientific findings, limiting policy effectiveness.

f. **Weak Science-Policy Interfaces (SPIs):** Mechanisms for interaction and knowledge transfer between scientific community (IPBES and IPCC) and policymakers are not always effective. There are differences in capacities and experiences among countries in supporting and engaging in these SPIs.

g. **Insufficient integration of IPBES and IPCC knowledge in EU policies:** Existing EU policies and mechanisms could better leverage the integrated scientific knowledge from IPBES and IPCC for more effective action.

h. **Timing misalignment between assessments and policy cycles:** The uncoordinated planning of scientific assessments and policy processes makes it difficult to use IPBES and IPCC reports effectively in decision-making or act in a timely manner. Policy cycles, such as the Kunming-Montreal Global Biodiversity Framework (GBF 2030) or the EU Common Agricultural Policy (CAP 2027), are long-term but tend to engage scientific output at the last moment.

RESPIN's contribution: How is RESPIN bridging the gaps?

The RESPIN Project is closing the gaps and uniting IPBES and IPCC experts by:

- **Empowering knowledge holders**: To address uneven engagement of knowledge holders and barriers to expert engagement, RESPIN assessed engagement levels and barriers of diverse knowledge holders in IPBES and IPCC in a landscape analysis (Deliverable D.1.1, mid 2025) and the capacity building needs of NFPs (D1.2, mid 2025). Tailored capacity-building activities such as workshops and webinars try to meet these needs, e.g. the webinar on institutional support for assessment authors (June 2025). Mutual understanding and long-term collaboration of knowledge holders on climate change and biodiversity is fostered by networking meetings (e.g. PESC-RESPIN joint meeting in Brussels, March 2025).
- **Empowering knowledge users at national and sub-national level**: To tackle the gap in knowledge uptake, RESPIN identified gaps and barriers in using IPBES and IPCC findings across various levels, aiming to improve data integration, policy coherence and collaboration between climate and biodiversity efforts. For example, the project organised subnational workshops to co-develop ideas on addressing the identified gaps and barriers in Colombia, Spain and Germany (D2.2, mid 2025).
- **Developing future perspectives for SPI engagement at the EU level**: To support the closing of policy gaps, RESPIN integrates IPBES and IPCC findings into EU decision-making, e.g. through workshops with EU decision makers (see the workshop report for D3.1, September 2024). To enhance policy coherence, the project performed a coherence analysis of EU strategies versus IPBES and IPCC findings (D 3.2, mid 2025). EU delegations were supported in international negotiations (e.g. in IPBES 11 on the nexus assessments and the transformative change assessment). Furthermore, the project works with BioAgora on the Science Service for Biodiversity (SSBD) to help facilitate the IPBES and IPCC knowledge uptake by providing an open platform to explore knowledge-policy interaction and support decision-making.
- **Upscaling and communication**: RESPIN raises awareness of IPBES and IPCC processes and outputs by translating findings into accessible resources such as factsheets, developing online training courses (the first one is planned for the end of 2025), establishing a collaborative platform, and fostering strategic partnerships for effective outreach and dissemination.

Recommendations for closing the gaps

To bridge these gaps, we propose:

FOR EXPERTS

- **Strengthen interdisciplinary research and data-sharing** between biodiversity and climate science communities.
- **Focus research efforts** on the specific knowledge gaps highlighted in IPBES and IPCC assessments.
- **Work collaboratively** with policymakers and other stakeholders to translate research findings into accessible and policy-relevant formats, e.g. policy briefs, factsheets or online courses.
- **Actively participate** in IPBES and IPCC assessments and related activities to contribute knowledge and perspectives.

FOR DECISION/POLICYMAKERS

- **Support and facilitate interdisciplinary collaboration** between climate and biodiversity experts, including providing institutional support for experts to engage in both the IPBES and IPCC processes.
- **Use research findings** from IPBES and IPCC to inform policies that address both climate and biodiversity goals.
- **Create and/ or strengthen mechanisms for regular dialogue** between scientists, policymakers, and other stakeholders to ensure mutual understanding and actionable outcomes.

Concrete Action for follow-up

The RESPIN project will go on in its efforts to bridge gaps and overcome siloed approaches. To get involved, you can:

- **Stay informed:** Visit respin-project.eu for the latest news and updates.
- **Participate in workshops:** Join stakeholder co-design workshops. Open calls will be announced in late 2025.
- **Explore our self-learning online courses**, available from the end of 2025.
- **Read RESPIN outputs**, such as factsheet on "IPBES and IPCC explained- why and how to engage as an expert.
- **Take part in networking activities**, national and regional workshops
- **Follow us on social media** – Connect with RESPIN on LinkedIn for updates on outputs and training opportunities.
- **Contact us** at info@respin-project.eu for any inquiries.

Funded by
the European Union

respin-project.eu

RESPIN project

This project receives funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101135490. Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the EU nor the REA can be held responsible for them.