GLOBAL CENTRE ON BIODIVERSITY FOR CLIMATE

Research Grant Competition 4 Theme Paper

Global Centre on Biodiversity for Climate

September 2026



Department for Environment Food & Rural Affairs

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This paper sets out the rationale and background for the theme of the fourth GCBC Research Grant Competition (RGC4):

RGC4 Theme: Enabling transformative change: addressing drivers of biodiversity loss in three critical regions.

Overview

This GCBC research call builds on the Transformative Change Assessment[1] undertaken by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the UK Government's Nature security assessment on global biodiversity loss, ecosystem collapse and national security[2].

Proposals should explore interventions to address underlying drivers of biodiversity loss to improve poverty outcomes in the **Coral Triangle**, **Congo Basin** and **Amazon regions**. Research priorities within the theme for this call are:

- Socio-ecological dynamics and transformative pathways
- Commodity markets and financial flows
- Governance and institutions

This Theme Paper presents the focal geographies and research priorities for RGC4, including indicative research questions in the annex, and eligibility criteria. This paper should be read alongside the updated GCBC Research Strategy, which provides the longer-term framework for the programme's research.

1 *IPBES (2024) 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. O'Brien, K., Garibaldi, L. and Agrawal, A. (eds). IPBES Secretariat, Bonn, Germany. https://doi.org/10.5281/zenodo.11382215*

2 *HM Government (2026) Nature security assessment on global biodiversity loss, ecosystem collapse vand national security. Department for Environment, Food and Rural Affairs, UK. https://www.gov.uk/government/publications/nature-security-assessment-on-global-biodiversity-loss-ecosystem-collapse-and-national-security*



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1. Geographies and Ecosystems of Critical Concern

Unprecedented rates of global biodiversity loss and ecosystem degradation are undermining the ecosystem services that underpin the lives of billions of people. The recent UK Government Nature security assessment on global biodiversity loss, ecosystem collapse and national security identified six regions of strategic ecological importance due to their vulnerability to degradation or collapse.

Three of these regions fall within the geographic regions in which GCBC operates (Latin America and the Caribbean, sub-Saharan Africa, and Southeast Asia and the Pacific). These form the basis of the geographic focus for RGC4: **the Amazon**, **the Congo Basin**, and **the Coral Triangle**. Specific country eligibility is set out in Annex I.

Through this research call, GCBC aims to fund projects covering terrestrial, marine and freshwater ecosystems within these three regions, aiming to create a balanced portfolio of projects across key ecosystems under pressure.

Proposals are welcome on priority ecosystems within the Amazon, Congo Basin and Coral Triangle where degradation is driven by the structural and systemic forces this call is designed to address, and which underpin GCBC's Research Strategy.

We particularly encourage projects covering socioecological systems that are underrepresented in the GCBC portfolio, including coral reefs, open ecosystems, mixed-used landscapes, wetlands, and peatlands across the three eligible regions.

We also welcome whole-systems research approaches that may cover multiple ecosystems.

Applicants should provide justification for the selection of the ecosystems or socio-ecological systems that they are focusing on.


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2. Drivers of Biodiversity Loss and Climate Change

The direct and underlying drivers of biodiversity loss in the Amazon, Congo Basin, and Coral Triangle are relatively well understood. While specific drivers vary between contexts, several are consistently associated with biodiversity loss and ecosystem degradation[3].

In the **Amazon**, agricultural expansion, extractive industries, and associated governance challenges are among the major drivers, amplified by complex interactions between deforestation, fire and climate change.

In the **Congo Basin**, forest loss is associated with smallholder agriculture and fuel production, compounded by weak governance and limited enforcement, with globally important peatlands facing increased vulnerability to climate change due to proposed oil and gas developments.

In the **Coral Triangle**, climate change, overfishing and land-use change in associated terrestrial ecosystems are key drivers of biodiversity decline.

Climate change plays a dual role in these contexts. It is both a driver of ecosystem degradation across all three regions, through increased drought frequency, ocean warming, and extreme weather events, and amplified as a consequence of that degradation.

As forests, peatlands, and coastal ecosystems are lost, globally important carbon sinks are impacted, undermining climate resilience and stability. Addressing the structural drivers of ecosystem loss is therefore inseparable from both climate mitigation and adaptation goals, and this call is designed to generate evidence relevant to both.

Despite knowledge of direct and indirect drivers of biodiversity loss and climate change, the conditions under which interventions can tackle these drivers and deliver transformative change for sustainable biodiversity, climate and livelihood benefits are less well understood.

3 *The order in which these regions are presented does not imply a ranking of priority or research need. Each presents distinct and urgent evidence gaps, and GCBC welcomes proposals across all three. The existing evidence base varies considerably between regions, with the Amazon having received comparatively more research attention than the Congo Basin or Coral Triangle, and strong proposals from any of the three focus regions have the potential to make a significant contribution to the global evidence base on transformative change.*



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3. The Systemic Challenge: Driving Transformative Change

Commodity markets, financing mechanisms, governance systems, and political economy dynamics are widely recognised as structural drivers of ecosystem degradation, climate change and entrenched poverty, yet they have proven resistant to intervention across a range of policy and wider approaches.

Research examining the conditions, scales and mechanisms under which they can be successfully addressed, and the consequences for ecosystems, climate resilience and communities remain underdeveloped.

This constrains effective, transformative policy, governance and investment decisions.

The IPBES Transformative Change Assessment provides a framework for understanding how biodiversity loss can be addressed through systemic change (IPBES, 2024).

It highlights five strategies through which transformative change can be achieved. These are shown in Figure 1, with no strategy sufficient to tackle the systemic challenges in isolation.

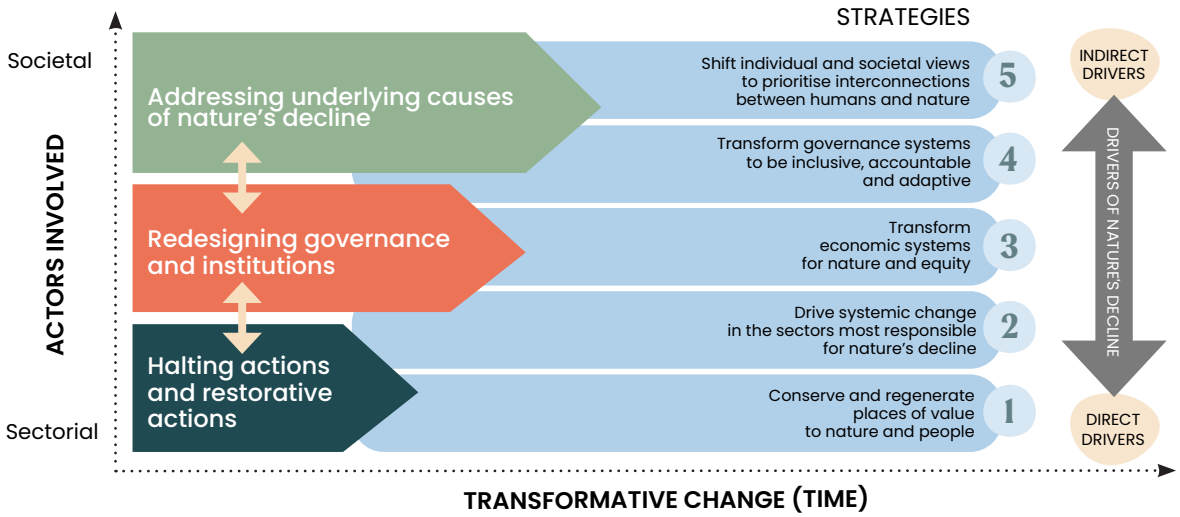


Figure 1. The five strategies identified by IPBES to enable transformative change and address direct and indirect drivers of biodiversity loss and nature's decline[4].

In the contexts of the Amazon, Congo Basin and Coral Triangle, three areas represent the greatest gaps in our understanding of how to implement transformative change:

1. Understanding of **socio-ecological dynamics** remains underdeveloped, including how human behaviour, resource use and demand, governance and ecological change interact through feedback loops.
2. Evidence is limited on the conditions under which interventions in **supply chains and commodity market governance** can successfully redirect production, investment and incentives away from ecosystem degradation and towards nature-positive development.
3. Understanding of **governance and institutional arrangements** that produce lasting change.

Together, these themes define the central focus of RGC4 on enabling transformative change by addressing the underlying structural and systemic drivers of biodiversity loss.

The call seeks to generate actionable evidence across three critical regions on how they can be addressed to deliver lasting benefits for biodiversity, climate resilience and local livelihoods.

4 *Figure adpated from: Gosnell, H., Reyes-García, V., Zinngrebe, Y., Almeida Magris, R., Benessaiah, K., Bonilla-Moheno, M., Chandipo, R., Claudet, J., Gemmill-Herren, B., Goldstein, B., Huntjens, P., Ifejika Speranza, C., Nakao, F. Pandit, R., Pereira, L., Raab, K., Soares, T., Tittonell, P., Guo, X., Miwa, K., Joly, C., Zaccagnini, M., Guibal, C., and Garibaldi, L. (2024). Chapter 5: Realizing a sustainable world for nature and people: transformative strategies, actions and roles for all. In: 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. IPBES secretariat, Bonn, Germany. https://doi.org/10.5281/zenodo.11382248. Licensed under CC BY 4.0.*

4. Research Priorities for RGC4

Building on the evidence and challenges outlined above, RGC4 invites proposals addressing at least one of three priority research themes set out below – with example research questions in Annex I. Proposals should identify a specific socio-ecological challenge within at least one of the three focal regions.

For example, research examining how deforestation in a particular landscape contributes to climate risk exposure and livelihood loss for dependent communities should be designed to identify the structural and systemic drivers of that challenge and generate evidence on pathways for addressing them.

Research should engage with the dynamics of the socio-ecological system as a whole, rather than treating ecological and social dimensions in isolation.

Priority 1

Socio-ecological dynamics and transformative pathways

Priority 2

Commodity markets and financial flows

Priority 3

Governance and institutions



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Research Priority 1:

Socio-ecological dynamics and transformative pathways

Transformative change depends on interactions with and between human behaviour, social values, resource use and demand, and ecological systems undergoing change, including deforestation, coral reef degradation, peatland loss and wetland degradation.

This research priority focuses on understanding the dynamics of socioecological systems under pressure within the Amazon, Congo Basin, and Coral Triangle. This includes exploring feedback loops, leverage points, and pathways through which transformative change can occur.

Research under this call should develop tools, models, and evidence that can inform how decisions about land, sea, and resource use are made across scales at which environmental change and human responses interact.

Research should be designed to explore the roles of a wide range of stakeholders, generating findings relevant to the decisions of governments, Indigenous and local communities, public and private decision-makers, and practitioners operating in these regions. This priority maps against Strategies 1 and 5 of the IPBES Transformative Change Assessment.

Research Priority 2:

Commodity markets and financial flows

Global commodity markets, financial systems and political-economic structures are drivers of ecosystem degradation across all three focus regions.

However, evidence remains limited on the conditions under which supply-chain interventions, regulatory instruments, financial policies, and subsidy reform can deliver durable and equitable, and environmentally sustainable outcomes.

Research from a range of disciplinary and methodological perspectives that addresses these evidence gaps is welcome, with RGC4 particularly interested in research that identifies leverage points within commodity and financial systems operating in at least one of the three focal regions, and generates evidence with clear relevance to governance, regulatory, or investment decision-making.

This priority maps against Strategy 3 of the IPBES Transformative Change Assessment.



Research Priority 3:

Governance and institutions

Governance failures, including insecure tenure, weak enforcement, fragmented mandates, and misaligned incentives, are known enablers of ecosystem degradation across the three focus regions. Yet empirical evidence remains limited on which governance arrangements and mechanisms produce lasting biodiversity and livelihood outcomes under differing conditions and scales.

RGC4 seeks research on governance and institutional performance at national, regional, and transboundary scales, including on what has worked, what has not, what could work, and under what political and institutional conditions.

This includes fragile and conflict-affected contexts, complex marine governance systems, and settings where systemic change may emerge through pathways beyond formal governance reform.

Research may be grounded in a single focus region, provided it engages with governance dynamics across scales. This priority maps against Strategy 4 of the IPBES Transformative Change Assessment.

Annex II presents indicative research questions associated with each priority area. These are illustrative rather than exhaustive, intended to demonstrate the type and scope of tractable, policy-relevant research that GCBC is interested in.

Applicants are encouraged to draw on them and/or develop their own research questions within the themes, provided they are methodologically robust and engage with relevant structural and systemic dimensions affecting biodiversity and the livelihoods of nature-dependent communities in the focal regions.

In line with the GCBC's Theory of Change, proposals should demonstrate a clear pathway from research design to evidence that can inform governance, policy, and/or public and private decision-making affecting biodiversity, climate, and poverty outcomes in the focal regions.

Proposals that engage comparatively across multiple regions are welcome.



5. High-Level Eligibility Criteria

To be eligible for funding under RGC4, proposals must meet the following high-level criteria. Applications that do not satisfy these requirements will not proceed to assessment.

ODA eligibility	GCBC uses UK government Official Development Assistance (ODA) funds; projects must therefore promote the economic development and welfare of eligible countries as a primary objective. The primary intended beneficiaries of the research must be people living in ODA-eligible countries. Research that benefits ODA-eligible countries only as a secondary or incidental outcome will not meet this requirement. A full list of eligible countries is presented in Annex I.
ICF eligibility	GCBC funding is categorised as International Climate Finance (ICF) and must additionally deliver climate adaptation and/or mitigation objectives.
Research and development	Proposals must constitute genuine research and development: creative and systematic work undertaken to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge (OECD, 2015). Projects that are primarily implementation, service delivery, piloting without a substantive research component, or capacity-building without original research, are not eligible.
Fit to a research priority	Proposals must engage substantively with at least one of the three research priorities set out in Section 4, and must demonstrate clear alignment with the systemic and structural focus of this call. Proposals that are primarily locally grounded research studies without engagement with structural, governance, or systemic dimensions will not be considered eligible.
Geographic scope	Research must be conducted in or directly relevant to at least one of the three focus regions: the Amazon, the Congo Basin, or the Coral Triangle including the mangroves of the South China Sea and Sundaland forests. Research must focus on countries covered by OECD DAC eligibility. A full list of eligible countries is provided in Annex I.
Project duration	Projects must not exceed 48 months in duration.
Grant size	Applications can request a minimum of £200,000 and a maximum of £1,500,000 of GCBC funding. Proposals at the lower end of this range are expected to be concise, well-scoped pieces of work such as desk-based synthesis, systematic review, or focused modelling studies. Larger grants are anticipated for more complex, multi-strand projects that address a range of research questions or bring together multiple disciplinary perspectives, methodological approaches, or stakeholder engagement activities, for example, projects combining modelling, workshops, and policy engagement across systemic topics, as well as for empirical research involving substantial fieldwork and co-development across multiple governance or geographic contexts.
Lead organisation	The lead organisation must be a research organisation.
GEDSI compliance	Proposals must demonstrate a credible approach to gender equality, disability, and social inclusion that meets GCBC's baseline GEDSI requirements, to be set out in the call documentation. Proposals that do not meet the minimum GEDSI standard will not be eligible in funding.
Community of Practice Partcipation	GCBC will establish a Community of Practice (CoP) for RGC4 to support learning, synthesis and collaboration across funded projects. This is a condition of funding rather than an eligibility criterion. All successful applicants will be expected to participate appropriately in CoP activities, including periodic research exchanges. Proposals should acknowledge this expectation and, where possible, indicate how the project would contribute to and benefit from it.

6. What Makes a Strong Proposal

This section sets out GCBC's expectations for the design and conduct of research funded under RGC4. These expectations reflect both the nature of the research challenge, which requires approaches capable of engaging with complexity across ecological, social, economic, and governance dimensions simultaneously, and GCBC's broader commitments to research quality, equity, and impact.

Research quality

GCBC's approach to assessing research quality draws on the Research Quality Plus (RQ+) framework, which holds that quality is multi-dimensional, context-dependent, and should be assessed systematically and empirically rather than through proxy indicators such as publication metrics, journal prestige, or institutional reputation.

Drawing on this approach, GCBC assesses proposals on the intrinsic merits of the research question and design, adapted to the specific demands of ODA-funded, systems-oriented research.

The specific assessment criteria against which proposals will be scored will be set out in the call documentation. Strong proposals will demonstrate:

- **Conceptual clarity and importance:** The research questions should be clearly articulated, well-grounded in the existing evidence base, and address a genuine and significant gap in knowledge relevant to the systemic drivers of biodiversity loss and their human development consequences in the focus regions. Proposals should demonstrate a sophisticated understanding of why the question matters and what answering it would contribute.
- **Methodological rigour and appropriateness:** The proposed methods should be robust, well-justified, and appropriate to the research question and context. Proposals should demonstrate feasibility, sound analytical approaches, and appropriate handling of uncertainty. Where relevant, they should reflect a systems perspective, considering interactions across ecological, social, and institutional dimensions rather than treating challenges in isolation.

Originality and contribution

Proposals should demonstrate what is genuinely novel about the research and how it advances beyond the existing state of knowledge. Incremental extensions of well-established evidence are unlikely to meet GCBC's standards for this call; proposals should be positioned at the frontier of knowledge in their chosen area.

Systems approach

GCBC's research agenda is organised around three interacting systems levels: 1) structural and enabling systems, including governance arrangements, political economy, finance flows, and institutions; 2) socio-ecological systems, including the ways environmental change interacts with human welfare, livelihoods, and adaptive capacity; and 3) cultural and epistemic systems, including the values, knowledge systems, and worldviews that shape how communities relate to nature and whose knowledge informs decisions.

Proposals are not required to engage all three levels, but those that connect two or more are particularly encouraged as they are best placed to generate evidence that is both contextually grounded and structurally informed.

Scale and ambition

Given this call's focus on structural and systemic drivers of biodiversity loss, proposals should demonstrate engagement with conditions and dynamics that extend beyond the purely local.

Proposals should be designed to generate findings that speak to the structural conditions shaping outcomes across landscapes, regions, or systems, rather than findings whose relevance is confined to a single site or community.

Proposals that generate insights with transferable relevance across governance contexts, commodity systems, or regional settings are particularly encouraged.

Co-development of research questions and design

Research on systemic drivers of biodiversity loss and their human development consequences is most likely to generate policy-relevant and equitable findings when research questions and design are developed in genuine partnership with the communities, governance actors, practitioners, and policy users whose lives and decisions are at stake.

Proposals should demonstrate how time and resources have been, or will be, allocated to the co-development of research questions and design with relevant stakeholders before or alongside primary research activity.

The appropriate form of partnership will vary with the nature of the research question and the regional context, but proposals should articulate clearly who the relevant partners are where applicable, what role they will play in shaping the research, and how the design ensures that the knowledge produced serves the interests of those most affected.

Evidence for use

Alongside research quality, GCBC places strong emphasis on how research is designed and positioned to inform policy, practice, or wider public or private decision making. Proposals should demonstrate credible and contextually grounded thinking about how findings will be generated, communicated, and engaged with in ways that make them usable.

This includes identifying the specific policy, regulatory, or investment decisions the research is designed to inform; the actors and institutions that would need to act on the evidence; and the mechanisms through which findings will reach relevant decision-making processes at national, regional, or international levels.

Proposals should set out appropriate outputs and products, such as evidence briefs, decision-support tools, or targeted syntheses, as well as the timing and channels of stakeholder engagement.

GCBC recognises that pathways from research to policy influence are rarely linear and that researchers cannot be held accountable for whether policy change ultimately occurs.

Assessment therefore focuses on the credibility and realism of how research is positioned for use, rather than on the promise of specific outcomes. Proposals should demonstrate a coherent and realistic account of how research outputs connect to processes of use and influence, including consideration of enabling conditions, institutional dynamics, and potential barriers to uptake.

7. Assessment

Proposals will be assessed at concept note stage followed by a full stage application for those who are successful.

Full details of the assessment framework and criteria, scoring scale, and application requirements will be set out in the call documentation..



Annex I

Research must be conducted in, or be directly relevant to, ODA-eligible countries within the regions laid out below, as defined by the 2025 OECD DAC List of ODA Recipients.

French Guiana is an overseas territory of France and is not on the DAC list. Applicants should verify current DAC list status at the time of application as the list is subject to periodic revision.

Table 1. ODA-eligible countries within each of the three focus regions.

Region	ODA-eligible countries
Amazon	Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, Venezuela
Congo Basin	Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Gabon, Republic of the Congo
Coral Triangle	Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands, Timor-Leste



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Annex II

Table 2. Indicative research questions under RGC4's research priorities are set out below. Applicants are encouraged to draw on these and/or develop their own questions.

Research Priority 1: Socio-ecological dynamics and transformative pathways	
Socioecological system dynamics and leverage points	• How can socio-ecological systems in the target regions be mapped and characterised to identify the feedback loops, thresholds, and interdependencies that shape how ecological, climate and human systems interact? What methods are most effective for doing so across different governance and cultural contexts? • Where within coupled socio-ecological systems in these regions are the highest-leverage intervention points for positive change, including in contexts where climate change is compounding ecosystem degradation? How does this vary across biophysical, governance, economic, and social dimensions? • What evidence is there of potential positive social tipping points leading to transformative change?
Social values and norms	• Under what conditions have shifts in values, behaviours, or social norms in these regional contexts historically catalysed broader systemic change in how ecosystems are managed? What mechanisms drove diffusion of those shifts across communities or landscapes? • How do Indigenous and local knowledge systems and the cultural dimensions of human-nature relationships in these specific regional contexts shape both the drivers of ecosystem degradation and the conditions under which transformative responses become possible? • How do communities in the Amazon, Congo Basin, and Coral Triangle currently understand and respond to ecosystem change? What evidence exists on the effectiveness of different community-led approaches to ecosystem stewardship at scales beyond the individual site such as at regional or national scales?
Future scenarios	• What plausible future scenarios emerge when the interaction between human behaviour, resource use, climate change and ecological change in these regions is projected? What do those scenarios imply for the livelihoods, welfare and climate resilience of nature-dependent communities under different governance, economic and climatic conditions?



Research Priority 2: Commodity markets and finance flows

Finance flows	• How do positive and negative finance flows interact to affect environmental (including climate) outcomes in the Amazon, Congo Basin, or Coral Triangle? Where are the most effective leverage points for influencing the balance of those flows? Under what conditions do climate and nature finance reinforce rather than undermine each other?
Commodity markets	• How do global commodity demand signals translate into specific land and sea use decisions at national and landscape scales in these regions? • Where along commodity supply chains do the most tractable intervention points reside to affect environmental and climate outcomes in the Amazon, Congo Basin, or Coral Triangle? • What are the distributional consequences for smallholder producers, forest-dependent communities, and Indigenous people of different commodity system transition pathways? Under what conditions do these transitions generate co-benefits for climate, nature and people, rather than new burdens for the most marginalised?
Structures and regulation	• What governance mechanisms, including regulatory instruments, certification schemes, and due diligence requirements, have most effectively reduced harmful commodity flows in these regions? What determines their reach into smallholder and informal sectors where leakage is greatest?
Power dynamics	• How does the concentration of economic and political power in commodity and extraction sectors shape the political feasibility of governance reform? What conditions enable reform?
Subsidy reform	• Under what conditions have subsidy reform, true cost accounting, or the internalisation of environmental costs produced durable reductions in harmful land and sea use change in tropical forest and marine contexts? What political economy conditions enabled or prevented reform?



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Research Priority 3: Governance and institutions

Governance and effectiveness and reform	• Under what institutional and political conditions has governance reform, including tenure reform, enforcement strengthening, or institutional redesign, produced durable biodiversity and livelihood outcomes in the Amazon, Congo Basin, or Coral Triangle? What explains variation in outcomes across contexts?
Multi-level and transboundary governance	• How do governance arrangements interact across local, national, and transboundary scales to enable or undermine effective ecosystem stewardship, including the integration of climate adaptation and mitigation objectives alongside biodiversity and livelihood goals? What institutional designs most effectively bridge these scales and under what conditions have integrated approaches to climate and biodiversity governance produced better outcomes than siloed ones? • How can transboundary governance frameworks for shared ecosystems be designed and supported to be more effective and equitable, and what political conditions are necessary for their functioning?
Information, accountability and decision-making	• What data, monitoring systems, and information services are needed to support effective decision-making on ecosystem governance in these regions? What mechanisms are most effective for reducing information asymmetries between different actors?
Political economy and pathways to change	• How do power dynamics between state and non-state actors, different levels of government, and between domestic and international actors, shape governance outcomes for ecosystems, and under what conditions have more equitable power arrangements produced better ecological and social outcomes? • In contexts of state fragility and armed conflict, such as the eastern Congo Basin, how has systemic change in ecosystem and climate outcomes been achieved (or how could it be) through pathways other than formal governance reform, including through community diffusion, private sector leadership, or informal institutional arrangements, and what conditions enable these alternative pathways?





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