

Title: Transdisciplinary Pathways for Addressing the Biodiversity-Climate-Society Nexus: Insights and Collaborative Opportunities

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Abstract:

The Biodiversity-Climate-Society nexus represents a complex system of interdependent challenges that require integrative and transformative approaches to be addressed effectively. Drawing on insights from the EU-funded BIOTRAILS project, this session will explore how transdisciplinary frameworks—bridging scientific research, local knowledge, policy, and practice—can be harnessed to drive meaningful biodiversity conservation and adaptation strategies.

BIOTRAILS serves as a foundational case for the session by taking a perspective of four value chains (cocoa, gold, cultural handicrafts and fisheries and aquaculture) extracted and cultivated in Peru, Ghana, Brazil and Greece accordingly. This will illustrate how collaborative models built through participatory modelling methods can map and analyse the dynamic interactions within social-ecological systems, integrating the viewpoints of various stakeholders including policy makers, NGOs, private sector and indigenous communities.

This session aims to highlight the key approaches for understanding and managing the feedback loops and leverage points within the Biodiversity-Climate-Society nexus. By emphasising cross-sectoral engagement and multi-scale perspectives, we aim to illuminate pathways for achieving transformative change, moving from isolated interventions to systemic shifts in governance, policy, and practice from the individual level all the way to the communities of policy and practice.

The session remains open and encourages contributions from diverse external projects and initiatives. We seek to foster a rich dialogue on how a systems-thinking approach can address the cascading effects of biodiversity loss, climate change, and socio-economic shifts. Presentations and discussions will emphasise the importance of participatory decision-making, co-management, and co-design of solutions that account for complexity and uncertainty in socio-ecological systems for achieving transformation.

Key Themes:

- Transdisciplinary approaches to biodiversity and ecosystem management
- Complexity and feedback loops within the Biodiversity-Climate-Society nexus
- Participatory modelling and co-design in management strategies
- Policy frameworks for adaptive governance in complex socio-ecological systems
- Cross-sectoral collaboration and multi-scale solutions for biodiversity and climate resilience

This session welcomes contributions from projects and initiatives that explore the complex interdependencies between biodiversity, climate, and society. We particularly encourage presentations that engage with system dynamics, participatory approaches, and innovative governance models that can guide future transformative action in biodiversity conservation. We are exploring the opportunity to publish the most relevant contributions presented in this session in a special issue of a high-impact journal, such as *Ecosystems and People*, to ensure the dissemination of innovative approaches and findings to a wider audience.