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SESSION DESCRIPTION

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Bridging climate, biodiversity, and finance: integrating ecosystem services into economic decision-making through the birofin project

Hosts:

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Abstract:

As the twin crises of biodiversity loss and climate change accelerate, their combined economic consequences are reshaping risk landscapes for governments, businesses, and financial institutions. Yet, current models and decision-making tools often treat nature- and climate-related risks as separate domains, limiting our ability to design effective responses. The Birofin project — a four-year research collaboration between leading academic institutions, public agencies, and private financial actors — addresses this gap by integrating ecosystem services dynamics into macroeconomic modelling, scenario analysis, and financial risk assessment.

This session presents key insights from the project's first phases, including the macroeconomic impacts of soil degradation and pollination loss, the potential outcomes of large-scale conservation scenarios, and the cost-effectiveness of targeted abatement measures. It also outlines ongoing research on water-related ecosystem services and model refinements aimed at capturing interregional flows and systemic tipping points.

By linking ecosystem service valuation with climate scenarios, Birofin advances the development of “radical realism” in scenario modelling — providing decision-makers with actionable knowledge to inform mitigation strategies, investment decisions, and policy design. The session will bring together researchers, financial practitioners, and policymakers to discuss how these approaches can support a nature- and people-positive future, address equity concerns, and guide the governance of ecosystem services in a rapidly changing political and economic context.

Goals and objectives of the session:

This session builds on the BIROFIN project, bringing finance, science, and business together to co-create approaches for managing biodiversity-related risks and opportunities in a changing climate. The main objective is to explore how climate scenarios can be translated into biodiversity loss impacts, how these impacts affect the value of ecosystem services in macro-economic analysis, and how such insights can underpin credible transition planning. Alongside risk assessments, the session will address abatement

measures and nature-based solutions — tackling both sides of the coin: understanding systemic risks and identifying actionable opportunities.

Participants will gain access to the latest research on biodiversity–climate–economy interactions, exchange perspectives on what information is most valuable (or still missing), and examine practical ways to embed these insights into robust nature transition plans. The session combines knowledge sharing with interactive dialogue and co-creation, aiming to move risk management from analysis to action. Ultimately, it seeks to demonstrate how integrating ecosystem service valuation into financial modelling and decision-making can accelerate systemic change towards a nature-positive, climate-resilient economy while addressing governance, equity, and global interdependence.

Planned output / Deliverables:

The session aims to result in a set of tangible outputs aimed at advancing the integration of ecosystem services knowledge into financial and policy decision-making. Key deliverables could include a synthesis report summarising the main insights from the session discussions — including identified data needs, methodological priorities, and opportunities for collaboration — which will be shared with participants and the broader ESP community. In addition, the session will feed directly into ongoing BIROFIN project outputs, such as scenario-based policy briefs, a methodological paper on linking climate and biodiversity impacts in macroeconomic models, and the development of practical guidance for embedding ecosystem service valuation into transition planning. The outcomes of the session will also inform the design of follow-up workshops, capacity-building materials, and targeted stakeholder dialogues with financial institutions, policymakers, and businesses, ensuring that the knowledge generated extends beyond the conference and contributes to actionable pathways for a nature-positive and climate-resilient economy.

Session format:

This session is planned as a highly interactive half-day workshop (approximately 3 hours) combining research presentations, panel dialogue, and co-creation exercises. We invite abstract submissions from researchers, practitioners, policymakers, and financial sector experts working on biodiversity–climate interactions, ecosystem services valuation, macroeconomic modelling, nature-related risk assessment, or transition planning. The session will begin with a series of concise presentations (5–10 minutes each) highlighting cutting-edge research, case studies, and methodological innovations. These contributions will set the stage for a moderated panel discussion, where experts from science, finance, business, and policy will reflect on emerging insights and their practical relevance.

In the second part of the session, participants will join facilitated breakout groups to identify critical knowledge gaps, discuss data needs, and explore opportunities for collaborative approaches to managing biodiversity-related risks and opportunities. Findings from these discussions will be synthesised in a final plenary segment, contributing directly to a shared research and policy agenda. This dynamic format ensures that contributors not only present their work but also actively shape the conversation on how ecosystem service knowledge can inform financial decision-making, risk management, and credible transition strategies.

Voluntary contributions accepted:

Yes, I allow any abstract to be submitted to my session for review

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