

## **Net zero, nature and supply chain vulnerabilities: macrofinancial and environmental implications**

14-15 October 2024  
Lincoln's Inn, London

**The Centre for Economic Transition Expertise (CETEx), Sustainable Macro and the Deutsche Bundesbank are pleased to invite you to this jointly organised conference.**

The conference will focus on the macrofinancial and environmental implications of the growth of net zero transition-related supply chains, and address the different dimensions of how nature loss and climate change disrupt global supply chains and thereby generate macrofinancial instability.

### **Context**

Rising geopolitical tensions are undermining the dependability of global supply chains, including those for renewable energy technology and critical minerals. Environmental shocks resulting from climate change and ecological degradation are compounding supply chain disruptions, thereby jeopardising economic output and stability.

As the severity and frequency of environmental shocks intensify and place greater pressure on global supply chains, they will increasingly generate macrofinancial instabilities such as economic losses, price volatility and fiscal and financial distress. The transition to a net zero economy itself entails major shifts in supply chains and economic activity. Emerging markets and developing economies face not only the most immediate and extreme impacts of climate change and nature loss but also the most acute social and environmental trade-offs related to the net zero transition.

The rapid deployment of clean energy technologies, which require sufficient supply of transition-critical materials, is a central feature of this transition. Environmental conservation, health and other societal outcomes need to be balanced against the enormous economic potential of moving up renewable energy value chains. Social and environmental risks that can arise from the mining of transition-critical materials involve human rights violations, bribery and corruption, emissions, pollution, deforestation and water stress. These problems can exacerbate community tensions and deter investments in high-risk areas.

Managing the risks and seizing the opportunities presented by the net zero transition necessitates a greater understanding of both the macrofinancial dynamics and the social

and environmental trade-offs at play in the scaling up of transition-related supply chains – which the conference intends to address.

### Information and contact

Organising Committee: Elena Almeida, David Barmes, Julia Bingler, Chiara Colesanti Senni, Simon Dikau, Joe Feyertag, Paolo Krischak, Alain Naef, Sophie Scharlin-Pettee, Agnieszka Smolenska, and Nicole Toftum.

Scientific Committee: Simon Dietz, Swati Dhingra, Roger Fouquet, Matthias Kaldorf, Konstantin Makrelov, Maria Nikolaidi, Lisa Sachs, Romain Svartzman, Anna Valero, Frank Venmans, Yao Wang, and Sophie Zhou.

### Conference Agenda (paper presenters are highlighted in bold)

#### 14 October – Day 1

9:00 to 9:30 – Arrival and breakfast

9:30 to 9:45 – Opening remarks

9:45 to 11:15 – Session 1: Renewable energy supply chains

- *Modelling the implications of the European Critical Raw Materials Act on the value chain of lithium: can European sovereignty be achieved without sufficiency?* **Vincent d’Herbemont** (IFP Energies Nouvelles), **Pauline Bucciarelli** (IFP Energies Nouvelles & University of Paris Nanterre), Emmanuel Hache (IFP Energies Nouvelles, University of Paris Nanterre & The French Institute for International and Strategic Affairs), L. M. Malbec (University of Paris Nanterre)
- *Cleaner Energy, Higher Risk? Firm-level Exposure to Critical Minerals.* **Viet Nguyen** (London School of Economics)
- *The potential environmental impacts of mining required for electric vehicle production.* **Leonard Weber** (Vienna University of Economics and Business & Bocconi University)

Moderator: Simon Dikau (London School of Economics)

11:15 to 11:30 – Tea and coffee break

11:30 to 13:00 – Session 2: Climate policy and financial markets

- *Pricing Sovereign Transition Risks.* **Matt Burke** (University of Sheffield & University of Cambridge), Matthew Agarwala (University of Cambridge, University of Sussex & Yale University) Patrycja Klusak (University of Cambridge & Heriot-Watt University), Kamiar Mohaddes (University of Cambridge)
- *The Impact of Climate Policies on Financial Markets: Evidence from the EU Carbon Border Adjustment Mechanism.* Mengjie Shi (Goethe University Frankfurt & Deutsche Bundesbank), **Yupu Zhang** (University of Edinburgh), Christoph Meinerding (Deutsche Bundesbank)
- *Estimating the impact of climate-related financial risks on the value of residential properties in the UK.* **Harriet Richards** (Bank of England)

Moderator: Professor Ulrich Volz (SOAS)

13:00 to 14:15 – Lunch

14:15 to 15:45 – Session 3: Climate scenarios and macro modelling

- *Optimal Climate Policy as if the Transition Matters.* Emanuele Campiglio (University of Bologna, RFF-CMCC European Institute on Economics and the Environment & London School of Economics), Simon Dietz (London School of Economics & CESifo), **Frank Venmans** (London School of Economics & University of Mons)
- *Macro-financial Ripples of Climate Change in CESEE Countries.* Meri Papavangjeli (Charles University & Bank of Albania), **Margerita Topalli** (Bank of Albania)
- *Energy Transition and Geoeconomic Fragmentation: Implications for Climate Scenario Design.* Charlotte Gardes-Landolfini (International Monetary Fund), **Pierpaolo Grippa** (International Monetary Fund), William Oman (International Monetary Fund), Sha Yu (International Monetary Fund)

Moderator: Paolo Krischak (Deutsche Bundesbank)

15:45 to 16:00 – Tea and coffee break

16:00 to 17:00 – Keynote speech by Luiz Awazu Pereira da Silva

17:00 to 20:00 – Reception

**15 October – Day 2**

9:00 to 9:30 – Arrival and breakfast

9:30 to 11:30 – Session 4: Nature loss and impacts on the transition

- *Financial exposures to and drivers of ecosystem tipping points.* Lydia Marsden (University College London), **Josh Ryan-Collins** (University College London), Jesse F. Abrams (University of Exeter), Timothy M. Lenton (University of Exeter)
- *The 'soy-meat complex': agriculture and the net zero transition in Brazil.* **Fernando Rugitsky** (University of the West of England Bristol)
- *The macrofinancial risks of the nature transition: implementing the 30x30 Global Biodiversity Targets.* **Katie Kedward** (University College London), Adam Poupard (World Bank)
- *At the helm: The role of ports in shaping a sustainable and climate-positive supply chain.* Allyson Browne (High Ambition Climate Collective), **Jacob Armstrong** (Transport and Environment)

Moderator: Elena Almeida (London School of Economics)

11:30 to 11:45 – Break

11:45 to 12:45 – Panel discussion on the geopolitics of energy supply chains in the transition

- **Peter Olive** (NLA International, Herminius Strategic Intelligence, Pacific Forum, former Head of UK Ministry of Defence Global Strategic Trends Programme)
- **Claudio Baccianti** (Deutsche Bundesbank)
- **Daniela Gabor** (SOAS)

Moderator: Agnieszka Smolenska (London School of Economics)

12:45 to 13:00 – Closing remarks

13:00 to 14:30 – Lunch