

Regional Science Dialogues for Peace
and Sustainable Development

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Special Session Proposal

Special Session Title

Tropical Deforestation – Measurement, Economic Drivers, and Human Consequences

Organizer/Convenor:

Lukas Vashold

Vienna University of Economics and Business

lukas.vashold@wu.ac.at

Presenters:

Francesco Scarazzato, Vienna University of Economics and Business

Joseph Stemmler, University of Oxford

Lukas Vashold, Vienna University of Economics and Business

Mathias Weidinger, University of Oxford

Ulrich Wohak, Vienna University of Economics and Business

Abstract

The Intergovernmental Panel on Climate Change (IPCC) identified deforestation in the tropics and forest regrowth in the temperate zone as major factors for global CO₂ emissions and removals, respectively. The continued loss of tropical forests has disastrous consequences for local biodiversity, regional climate, and the livelihoods and peaceful livelihoods of indigenous peoples. It also has grave ramifications for global climate change. We propose a special session to present frontier research rooted in the field of economics on this topic. The geographic scope of the research presented in this session is global, ranging from Brazil over Sub-Saharan Africa to India, utilizing innovative data sources and econometric methods to examine the causes, economic drivers, as well as local consequences of deforestation.

This session first explores different satellite-based approaches to measure deforestation exposure and assesses their impact on estimating socioeconomic responses. It will then proceed to shed light on one of the main drivers of deforestation in the tropics, by examining the causal effects of demand-driven agricultural expansion exemplified by the cattle industry in Brazil. The session proceeds by presenting innovative empirical research on the microeconomic foundations of the decision processes of land-owners for clearing forest, with an application to optimal design of Payment for Ecosystem Services. In a similar vein, another presentation concerns the introduction of a theoretical framework integrating spatial and intertemporal dimensions of forest evolution within the context of private ownership, and explore the optimal design of policy measures such as unitization to deter deforestation. Lastly, research on how the adverse effects of climate change, in the form of depressed schooling outcomes caused by increased heat stress, can be mitigated through the proximity to forest-like vegetation in India.

The convenor of this special session is confident that both the global geographical scope as well as the topical diversity of this session garners the interest of researchers with academic backgrounds beyond the economic sciences. As such, this session aims to foster the interdisciplinary dialogue on the regional causes and consequences of deforestation and bolster international collaboration among researchers in general and of the presenters in particular, all of whom are at an early stage in their academic careers.