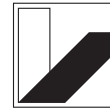


BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

winter 2025/26



UNIVERSITÄT
BAYREUTH

Donnerstag/Thursday

4.12.2025

12:30 in H6, GEO



Prof. Dr. Achim Bräuning

Institute of Geography, Friedrich-Alexander-University
Erlangen-Nürnberg

The impact of climate change on tropical tree species and forest ecosystems

- new approaches and results on dendroecology in the tropics

Tropical and subtropical regions are amongst the hotspots of changing climate and environmental conditions. In temperate and boreal climate zones, the analysis of tree rings (dendroecology) has served as an important proxy to analyze the impact of climate change on tree ecophysiology and forest growth, and to reconstruct natural climate variability over the past millennia. In the tropics, however, applications of dendroecological approaches can be challenging, since the formation of annual tree rings is species-specific and depending on the climatic conditions.

With the establishment of new methods, the recent years have seen a broad expansion of dendroecological research into tropical regions worldwide. The presentation will summarize the state of development in tropical dendroecology and will show examples of different approaches studying tree rings and forests in tropical regions. Beside tree-ring width, stable isotope analysis, quantitative wood anatomy, and the monitoring of cambial dynamics and stem circumference variations will be addressed.

Beside opportunities, knowledge gaps and limitations of tropical dendroecology as well as future research directions will be discussed.

