

BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

winter 2025/26



UNIVERSITÄT
BAYREUTH

Donnerstag/Thursday
15.01.2026
12:30 in H6, GEO



Prof. Dr. Hans-Jörg Vogel

Helmholtz Centre for Environmental Research

The Soil Bio-Physical Complex and Soil Functions.

Soils play a central role for the functioning of our ecosystems and the well-being of humanity. Soils are not only the basis for the production of food and other raw materials, they also provide functions such as water storage and filtration, nutrient cycling, carbon storage and being the habitat of an overwhelming biodiversity. These functions emerge from complex interactions of small scale biological, physical and chemical processes. If we want to predict the impact of soil management and climate change on soil functions to support a sustainable development, the required models need to be based on a profound understanding of the underlying processes. In this presentation we discuss how small scale processes can be represented in a systemic soil model addressing soil functions and their dynamics at the scale of landscapes.

