Institute for Industrial Production (IIP)
Chair of Business Administration, Production and Operations Management
Prof. Dr. Frank Schultmann

Institute of Environmental Engineering (IfU)
Chair of Ecological Systems Design (ESD)
Prof. Dr. Stefanie Hellweg

Master Thesis

The working group Resource Management in the Built Environment (KIT) and Environmental System Design (ETH Zuerich) are eligible for a thesis in **German** or **English** on the following topic:

Spatio-temporal Identification and Assessment of Biodiversity Impacts for Bio-based Building Material Pathways

Background

Bio-based building materials (e.g., wood species, straw/hemp/flax, agricultural residues) are considered climate-friendly, but their biodiversity impacts are heterogeneous and vary across space and time. There is a lack of a spatially explicit biodiversity assessments of biobased building materials considering also land-use change.

Contents of the thesis

Select suitable bio-based building material pathways (e.g., agricultural residues such as straw/hemp, agricultural products like flax, and selected wood species) and applications (insulation, structural materials). Integrate different data sources into a consistent framework for biodiversity assessment of building materials (with spatial and temporal variability). Calculate trade-off maps by region/application considering biodiversity – carbon trade-offs with conventional materials.

Requirements

Special previous knowledge in the field of biobased material and biodiversity assessment is not necessary. Good comprehension and independence for research are required. The offer is mainly aimed at students of industrial-, civil- and environmental engineering at ETH Zuerich and KIT, but also at students of other disciplines. Biodiversity assessment methodology and database assistance is provided by ESD

Contact

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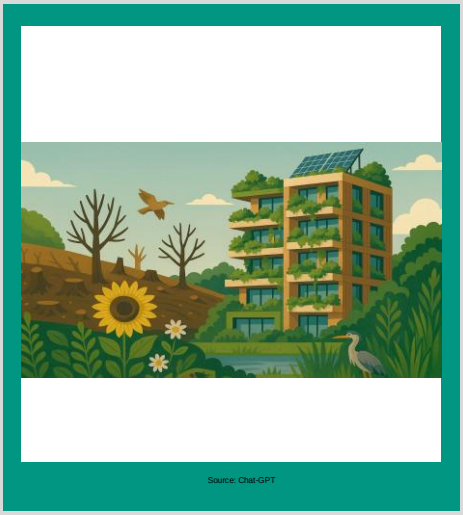

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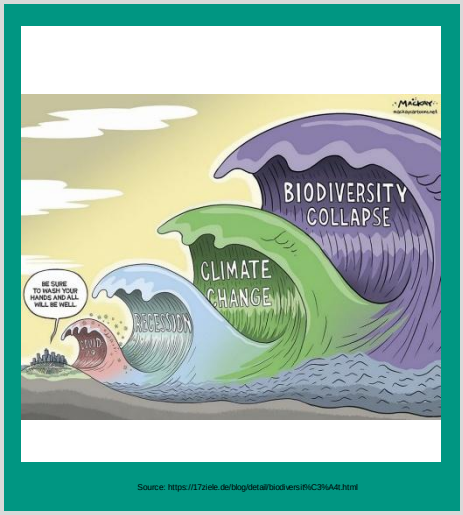

Source: https://17ziele.de/blog/detail/biodiversit%C3%A4t.html