



The **Technical University of Munich (TUM)** is one of Europe's top universities. It is committed to excellence in research and teaching, interdisciplinary education and the active promotion of promising young scientists. The university also forges strong links with companies and scientific institutions across the world. TUM was one of the first universities in Germany to be named a University of Excellence. Moreover, TUM regularly ranks among the best European universities in international rankings. - The TUM School of Life Sciences on the TUM Campus Weihenstephan is specialised on the major geopolitical challenges of the 21st century, especially on pressing issues of global change and food security.

The interdisciplinary joint project **Landscapes under Climate Change - Influence of management and climate change on interactions of terrestrial and aquatic ecosystems**

is headed by Prof. Dr. Jörg Völkel (Coordinator), PD Dr. Michael Dannenmann (Karlsruhe Institute of Technology), Prof. Dr. Jürgen Geist, Prof. Dr. Dr.h.c. Ingrid Kögel-Knabner & Prof. Dr. Michael Schloter.

Climate change influences the (nutrient) matter balance in the near subsurface, and therefore the interaction patterns between terrestrial and aquatic ecosystems in cultural and natural landscapes will change and put ecological and economic soil functions and ecosystem services at risk. C, N, P compounds play a prominent role in the search for mitigation and adaptation strategies. Changes in the metabolic balance of soils and soil-borne sediments are closely linked to changes in the microbiome. The complex interaction patterns in the near subsurface (critical zone) of terrestrial ecosystems are directly linked to aquatic ecosystems via substance inputs to water bodies, whose biodiversity is particularly at risk. In cultural landscapes, the form of land use is of utmost importance, especially grassland and its management. In search of suitable mitigation strategies, the project investigates these changes in the sink and source function of the C, N, P reservoirs along a climatic gradient in the Bavarian Forest near Regensburg from the montane to the colline stage within the same natural unit. In the context of the project, quasi-natural grassland sites without current and without previous soil management form the reference conditions. They are contrasted with long-term intensively used sites. On the basis of these scenarios, the interactions between landscape and climate will be illuminated and, in comparison with the corresponding regulations such as the Water Framework Directive and the Soil Protection Ordinance, management strategies will be developed with the aim of maintaining soil functions under climate change conditions and reducing undesirable inputs from terrestrial to aquatic systems. In addition to cultural landscape genesis, the structure of the near-surface subsurface with material stocks, layer structure, weathering phenomena, pedogenesis and slope water flow is of fundamental importance. Hence, the interdisciplinary project combines the competences of geomorphology, soil science, microbiology, stable isotope biogeochemistry, hydrology and aquatic systems biology.

The following position will be available from **November 1st, 2023** or later as soon as possible

1 Scientific Assistant (E13 TV-L, full-time, temporary)

Job Description (M.Sc., Diplom, PhD welcomed but not required)

The Scientific Assistant works at the Division of Geomorphology and Soil Science, TUM Campus Freising-Weihenstephan. Together with the coordinator and the five principal investigators the successful applicant coordinates the joint project as contact person for all participants. Scientific participation is expected.

TASKS

- Coordination and management of field and laboratory work
- Obtaining permits, dealing with authorities and owners
- Reporting and co-publication of the data
- Development of further research collaborations
- Co-organisation of workshops



*Opportunities
for Talents*

TUM

Technische Universität München

REQUIREMENTS

- M.Sc., Diploma in soil sciences, all kind of geosciences, biology, hydrology, agricultural sciences, etc.
- Knowledge in the field of (cultural) landscape genesis and (paleo) ecosystem research
- Knowledge of pedological and sedimentological analysis (field and laboratory)
- Very good English skills, communication skills and willingness to work in a team
- Driving licence and practice

The position is limited to 1.5 years (project duration).

TUM aims to increase the number of women employees, and applications from women are expressly welcomed. People with disabilities, with essentially the same suitability and qualification, will be preferred. As you apply for a position at the Technical University of Munich (TUM), you provide personal data. Please note our data protection information according to Art. 13 Data Protection Basic Regulation (DSGVO) on the collection and processing of personal data in connection with your application <http://go.tum.de/554159>. By submitting your application, you confirm that you have taken note of the data protection information of the TUM.

The appointment procedures continue until the positions are filled in. If you are interested, please send your complete application with CV, letter of motivation, a brief statement of research experiences and interests, diplomas and the names and contact information of two references in a single PDF file to geomorphologie@ls.tum.de

Contact:

Technische Universität München

Extraordinariat für Geomorphologie und Bodenkunde
Prof. Dr. Jörg Völkel
Hans-Carl-von-Carlowitz-Platz 2
D-85354 Freising