

Two postdoctoral researchers in *land-based, climate change mitigation modelling for the European forest sector*

Karlsruhe Institute of Technology, Campus Alpin (IMK-IFU),
Garmisch-Partenkirchen, Germany

Overview

We are seeking two postdoctoral researchers in the field of land-based, climate change mitigation modelling for the forest sector in Europe. The positions will contribute to the European Commission funded (Horizon Europe) ForestPaths project, held within the Land Use & Climate Change Research Group (<https://landchange.imk-ifu.kit.edu/>) and the Global Land Ecosystem Modelling Group (<https://lemg.imk-ifu.kit.edu/>) of the Karlsruhe Institute of Technology (KIT), located at KIT's attractive 'Campus Alpin' in Garmisch-Partenkirchen, Germany. Specifically, we seek to employ:

- A land use modeller to further develop, test and apply the CRAFTY agent-based model of land use change (see: <https://landchange.imk-ifu.kit.edu/CRAFTY>) in evaluating land-based, climate change mitigation scenarios and policy options for the forest sector in Europe. You will contribute to the coupling of CRAFTY with the LPJ-GUESS vegetation model within the LandSyMM modelling framework (<https://landsymm.earth/>) and use the model to explore policy pathways, including engaging with key policy stakeholders (ref: FP-LUCCG);
- An ecosystem modeller to further develop, test and apply the LPJ-GUESS vegetation model (<https://lemg.imk-ifu.kit.edu/themes/land-climate-interactions>) in evaluating vegetation dynamics and carbon cycling for the forest sector in Europe. You will contribute to improving and testing forest management implementation in LPJ-GUESS and explore, for a range of scenarios, how these affect carbon uptake as well as habitat structural diversity (ref: FP-LEMG).

Your specific roles will be to contribute to the further development and application of these models individually, but also in an integrated way within the LandSyMM modelling framework (<https://landsymm.earth/>). The positions will also entail small contributions to teaching and group administration. **We offer** a multi-disciplinary, highly collaborative and friendly team, well connected to national and international research networks and activities. Salary and benefits will be based on the Collective Agreement for the German Public Service Sector (TV-L EG13). The positions are available from June 2022 for 2 years initially with the potential for extension beyond this period.

Qualifications

You will have a PhD degree in a relevant discipline and strong quantitative skills in computer modelling and coding (e.g., Fortran, C, C++, Java, Python) and the analysis of large-scale datasets in the environmental sciences (GIS experience alone is insufficient). Depending on the position applied for,

experience with statistical analysis, scenario analysis, ecological economics, ecosystem modelling, computational social sciences and/or computer programming is desirable. You will need to have proficiency in the English language, both spoken and in writing and preferably a working knowledge of German. Willingness to travel to interact with consortia partners is required. Further information can be obtained from Prof. Mark Rounsevell (mark.rounsevell@kit.edu) for FP-LUCCG and Prof. Almut Arneith (almut.arneth@kit.edu) for FP-LEMG.

Applications

Applications should be sent by email to Sylvia Kratz (sylvia.kratz@kit.edu) by **Friday 18 March 2022**, quoting the relevant reference, FP-LUCCG or FP-LEMG. Applications should be submitted within a single PDF document that includes your CV, publications list (with citations), a short (1-2 page) letter of motivation and contact details for 2 referees. The motivation letter should clearly state your computer modelling experience and how your research interests relate to the job specifications provided above. Please also indicate where you heard about this job opportunity. Applications that are incomplete or do not address these criteria will not be considered.

Interviews will be held remotely on **Thursday 31 March or Friday 1 April 2022**.

KIT strives to achieve gender balance at all levels of employment. We therefore particularly encourage female candidates to apply for this position. With appropriate qualifications, applications from persons with handicaps are treated preferentially.