10 PhD positions (m/f)

In the Research Cluster

"Effects of climate change on biodiversity and ecosystem services in semi-natural, agricultural and urban landscapes and strategies for management of climate change (Landklif)"

Funded as part of the Bavarian climate research network bayklif (https://www.bayklif.de/) we seek applicants within the following research areas: animal ecology, plant ecology, evolutionary ecology, climate and land use modelling, remote sensing, ecosystem services and nature conservation

Background: Climatic conditions and land use have significant impacts on habitats, biodiversity and ecosystem services. The transformation of near natural habitats into agricultural or settlement areas changes the species inventory, the provision of ecosystem services and the adaptation potential of ecosystems to changing climatic conditions. At the local level, there is often a positive correlation between biodiversity and ecosystem functions. However, it is little understood (1) how climatic gradients and the composition and configuration of landscapes influence biodiversity and the provision of ecosystem services, (2) which interactions exist between climatic conditions and land use, and (3) whether biodiversity at population, species community and landscape level improves the resilience against climate change and extreme climatic events. In a joint and highly integrated study design the LandKlif Network investigates the biodiversity and multi-functionality of semi-natural, agricultural and urban landscape areas in different climate zones of Bavaria, in order to answer these questions and to develop options for the mitigation of climate change as well as the adaptation to changing climatic conditions.

Positions are open in the following subprojects:

SP1: Climate change in a landscape context: functional biodiversity and biotic ecosystem services

PhD project 1: Pollinator diversity, pollination of wild plants and crops, and adaption to extreme climatic events.

PhD project 2: Insect herbivore and antagonist diversity, biological pest control and novel pathways for sustainable agriculture in the context of climate change

Further information: Prof. Dr. Ingolf Steffan-Dewenter, Department of Animal Ecology and Tropical Biology (https://www.biozentrum.uni-wuerzburg.de/zoo3/startseite/), University of Würzburg. Email: Ingolf.steffan@uni-wuerzburg.de

Applications: Please send your application as a single pdf file per email to *Ingolf.steffan@uni-wuerzburg.de* and *michaela.jaeger@uni-wuerzburg.de* latest until 17th September 2018. Interviews of invited candidates will be held in the week from 24-27 September. Planned starting date is 1-15 November 2018.

SP2: Threatened species diversity, biomass and functional diversity of arthropods and microbes along climate gradients in forested, agricultural and urban areas

PhD project 1 (presumably located in the Nationalpark Bavarian Forest): Biomass, arthropod diversity and microbial decomposers response to climate and landscape land-use and their interaction.

PhD project 2 (presumably located in Fieldstation Fabrikschleichach): Functional (phylogenetic) diversity, threatened species diversity and arthropod decomposer community response to climate and landscape land-use intensity and their interaction.

Further information: Prof. Dr. Jörg Müller, Department of Animal Ecology and Tropical Biology, Fieldstation Fabrikschleichach (https://www.biozentrum.uni-wuerzburg.de/station/startseite/), University of Würzburg. Email: joerg.mueller@uni-wuerzburg.de

Applications: Please send your application as a single pdf file per email to *joerg.mueller@uni-wuerzburg.de* and *hermine.wohlpart@uni-wuerzburg.de* latest until 17th September 2018. Interviews of invited candidates will be held from 27-28 September in Fabrikschleichach. Planned starting date is 1-15 November 2018.

SP4: Restoration of urban biodiversity and ecosystem services to improve climatic resilience and invasion resistance

PhD project: Natural and designed plant communities, ecosystem functions under climate change scenarios, interaction with invasive alien plants

Further information: Prof. Dr. Johannes Kollmann, Chair of Restoration Ecology, Department of Ecology and Ecosystem Management (http://www.roek.wzw.tum.de), Technical University of Munich. Email: jkollmann@wzw.tum.de

Applications: Please send your application as a single pdf file per email to *jkollmann@wzw.tum.de* and *Kerstin.josten@tum.de* latest until 15th August 2018. Interviews of invited candidates will be held in the first week of September. Planned starting date is 1th October 2018.

SP5: Impacts of climate change on phenology – the role of synchrony and variability across scales in the landscape

PhD project: Variability in phenology across scales as factor for resilience against climate change impacts, phenological cameras, UAV flights, remote sensing, frost experiments

Further information: Prof. Dr. Annette Menzel, Chair of Ecoclimatology, Department of Ecology and Ecosystem Management (http://www.oekoklimatologie.wzw.tum.de), Technical University of Munich. Email: annette.menzel@tum.de

Applications: Please send your application as a single pdf file per email to *annette.menzel@tum.de* and *fleischner@forst.wzw.tum.de* latest until 15th September 2018. Interviews of invited candidates will be held in the third week of September. Planned starting date is 1th December 2018.

SP6: Modelling adjustment to new climate conditions in a landscape context: identification of risk zones and management options

PhD project: Developing and analysing spatially explicit simulations of communities' responses to changes in climate (mean and variability). The focus of analysis will be on understanding the importance of the landscape context for the ability of local communities to adapt to changing climatic regimes.

Further information: PD Dr. Thomas Hovestadt, Department of Animal Ecology and Tropical Biology, University of Würzburg.
(https://www.biozentrum.uni-wuerzburg.de/evolutionaryecology/startseite/)
Email: hovestadt@biozentrum.uni-wuerzburg.de

Applications: Please send your application as a single pdf file per email to *hovestadt@biozentrum.uni-wuerzburg.de* latest until December 31st, 2018. Planned starting date is January-March 2019.

SP7: Mapping of land use and ecosystem services using remote sensing

PhD project: Current and future crop yield levels – assessments based on remote sensing time series and climate model outputs

Further information: PD Dr. Christopher Conrad, Department of Remote Sensing (www.remote-sensing.eu), University of Würzburg. Email: christopher.conrad@uni-wuerzburg.de

Applications: Please send your application as a single pdf file per email to *l-geofernerkundung@uni-wuerzburg.de* latest until 17th September 2018. Interviews of invited candidates will be held in the week from 24-27 September. Planned starting date is 1-15th November 2018.

SP9: Modelling and evaluation of ecosystem services under climate change

PhD project 1: Modelling of ecosystem services facing climate change

PhD project 2: Evaluation of ecosystem services and scenarios by stakeholders

Further information: Prof. Dr. Thomas Koellner, Professorship of Ecological Services (www.pes.uni-bayreuth.de/en University of Bayreuth. Email: thomas.koellner@uni-bayreuth.de

Applications: Please send your application as a single pdf file per email to thomas.koellner@uni-bayreuth.de latest until 30th September 2018. Planned starting date is January 1st, 2019.

General requirements: We are seeking highly motivated PhD students with strong interest and expertise in the above described research areas and a fitting MSc degree. Scientific writing and communication skills in English are required. For the projects including field work and contact with land-owners a driver license is mandatory and German language skills are beneficial. The candidates are expected to work both individually and in team and to be able to integrate into an interdisciplinary, ambitious project.

Salary and conditions: Salary and benefits are according to public service positions in Germany (TVL/65%). The planned duration of the PhD projects is three years. The doctoral thesis will be done as a series of English manuscripts. We offer the membership in an international research team, modern facilities and a structured graduate training program. Female scientists are particularly encouraged to apply. Disabled applicants will be preferentially considered in case of equivalent qualification.

Applications: Please send your applications as **a single pdf file** per email to ***the above named project leaders***. Applications should include a cover letter, a short summary of research interests, CV, complete certificates, and the names (with email addresses) of two potential referees.