University of Natural Resources and Life Sciences Vienna – responsibility for Humans and Nature. We work for the sustainable use and protection of natural resources.

The Department of Forest- and Soil Sciences, Institute of Forest Ecology is currently seeking a

Postgraduate Research Associate
Project employment
(Reference code: 227)

Extent of employment: 30 hours per week
Duration of employment: February/March 2021, limited to January/February 2024

Workplace: Vienna, Tulln and Europe (field work)

Gross monthly salary and pay grade in terms of collective agreement for university staff (payable 14 times per year): B1, € 2.228,60

Responsibilities

The PhD project will contribute to the recently funded BIODIVERSA project MixForChange, for which the overall objective is to evaluate mixed tree plantations as nature-based solutions to fight the causes and consequences of climate change. Forest landscape restoration and afforestation have recently received much international attention as a crucial opportunity for mitigating climate change. In the face of climate change, adaptation and mitigation by forests are ultimately linked, because the ability of forests to sequester carbon in the long run depends on the ability of trees to cope with multiple stresses. Evidence suggests that mixed tree plantations are more efficient in sequestrating carbon, while better coping with climate change-related stress. These mixed plantations thus represent an opportunity for a nature-based solution for climate change mitigation and adaptation.

Using a global network of tree biodiversity experiments (TreeDivNet), MixForChange will provide a mechanistic understanding of how tree diversity, stand components and management (thinning and fertilization) influence both the potential of mixed tree plantations to mitigate (C sequestration) and adapt (drought and herbivory resilience) to climate change both above and below ground.

As a PhD student within MixForChange, you will have the opportunity to develop your networks within academy, practioners and policy-makers. Your work will include field sampling at several locations across Europe, as well as data processing and writing of scientific publications and project reports.

The successful candidate will be mainly based at the Institute of Forest Ecology of BOKU Vienna.

In this large, international project you will work on the question how mixed tree plantations, in interaction with climate change, affect the belowground sequestration of carbon by roots and mycorrhiza. You will also study how the community of mycorrhizal species is influenced by mixtures and try to identify key fungal species affecting carbon sequestration.

The field work will encompass methods such as ingrowth cores, nets and bags and soil sampling for quantifying root and mycorrhiza growth and abundance. Colonization rates of mycorrhiza as well as DNA-based analysis of the fungal community will be conducted in the lag, focusing mainly on ectomycorrhizal symbiosis but seeking to study arbuscular mycorrhizal fungi as well.

Students on BSc and MSc level working alongside in the project must be coordinated and instructed during field sampling campaigns and during data preparation.

Required skills and qualifications

- Diploma degree in Forest Ecology, Soil Sciences, Biology, Mycology or other equivalent university degree
- Driving licence B (for field work)
- Good skills in English (both written and oral)

Desirable skills and qualifications

- Sound knowledge on roots and/or mycorrhiza and/or soil carbon
- Experience with field work, morphotyping of ECM fungi, DNA-based soil community analyses, and/or advanced statistical techniques are merits
- Ability to communicate in German is an advantage
- Particular emphasis will be placed on personal skills as team player as well as the ability to take initiative and work independently
- Eligibility to register to one of BOKUs doctoral programmes

Applications can be submitted until: 6th of January 2021

University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

People with disabilities and appropriate qualifications are specifically encouraged to apply.

Please send your job application incl.

- motivation letter
- CV
- Contact information of 2 academic referees
- Transcript of records, highlighting the fields of expertise
- Scientific publications as available, copy of thesis

to Personnel department, University of Natural Resources and Life Sciences, Peter-Jordan-Straße 70, 1190 Vienna; E-Mail: kerstin.buchmueller@boku.ac.at. **(Reference code: 227)**

We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process.

www.boku.ac.at