

PhD-Position

**Department of Ecosystem Management, Climate and Biodiversity
Institute of Hydrobiology and Aquatic Ecosystem Management**

Starting on January 1st, 2026, the FWF-funded project “*Global warming effects on macrophytes’ role in lowland rivers (MARITE)*” will investigate how aquatic macrophytes influence water temperature and ecosystem functioning in small lowland rivers embedded in intensively used landscapes. The project combines field monitoring with modelling approaches to better understand the role of macrophytes under climate change conditions.

A central part of the study is to investigate, in situ, how macrophytes buffer water temperature fluctuations and how this influences key ecosystem functions such as river metabolism. By comparing river sections with and without macrophytes, we will quantify their buffering capacity under daily and stochastic temperature variability. Complementary mesocosm experiments will test how temperature fluctuations affect macrophytes and their interactions with phytoplankton, phytobenthos, and macroinvertebrates.

Overall, the PhD project offers the opportunity to work at the interface of field ecology, experimental research, and ecological modelling, with a strong focus on climate change impacts on freshwater ecosystems.

Tasks

- Study macrophytes' buffering effect on water temperature variability and ecosystem functions (e.g., metabolism), comparing macrophyte-dominated and macrophyte-free sections under daily and stochastic temperature fluctuations
- Conduct mesocosm experiments on temperature fluctuation effects and species interactions
- Preparation and completion of the PhD thesis

Profile

- Master's degree (preferably in Biology, Ecology, Environmental Sciences or related disciplines)
- Experience with field surveys and laboratory experiments
- Basic knowledge in ecological modeling
- Knowledge of aquatic macrophyte species is an advantage
- Strong communication skills and motivation for teamwork

Additional desirable qualifications:

- First experience with scientific presentations and publications
- Problem-oriented thinking and team spirit

Our Offer

- 3-year PhD position (starting 01.03.2026) with a possible extension for 6 months within an interdisciplinary team at the BOKU University, Vienna (BOKU)
- Employment at the Institute of Hydrobiology and Aquatic Ecosystem Management
- Potential enrollment in the BOKU Doctoral School [*Human River Systems in the 21st Century*](#)
- Employment conditions according to FWF standards: 30 h/week, gross monthly salary of approx. EUR 2,800 (14x per year)

Application

If you are motivated and meet the qualifications, we look forward to your application. Please send the following documents as a single PDF by November 11, 2025: One-page motivation letter; Curriculum Vitae (including publication list, if relevant); Contact details of two referees to Dr. Elisabeth Bondar-Kunze (elisabeth.bondar@boku.ac.at) and Prof. Thomas Hein (thomas.hein@boku.ac.at) For further questions, please contact the above-mentioned persons.

Please note: The general admission criteria of BOKU must be fulfilled (see [BOKU website](#) for details).