



Human use of freshwaters has exceeded their capacity to maintain biodiversity and provide ecosystem functions. One way to avoid this capacity exceedance is the definition of "safe operating spaces" (SOS), within which ecosystems can maintain a given function despite multiple environmental stressors. An SOS thus guarantees that physically or biologically mediated functions are not impacted outside acceptable boundaries, which should allow for ecosystem resilience. However, there is an apparent gap between the demand for scientifically-defined SOS and the paucity of studies defining such boundaries from hydro-ecological data. In the framework of an interdisciplinary project that aims at delineating thresholds and SOS for stream ecosystem functions, the Department of River Ecology invites applications for a:

Ph.D. student (m/f/x) in freshwater ecology

Your tasks:

You will quantify trophic transfer efficiencies between macroinvertebrates and their resources along a gradient of agricultural land use intensity. The work couples estimates of macroinvertebrate secondary production with natural abundance stable isotopes through field sampling in various streams of the Harz/Central German Lowland Observatory (www.tereno.net) and mesocosm experiments in our mobile experimental containers (www.ufz.de/index.php?en=42379).

Your profile:

You are highly motivated and hold an M.Sc. in ecology, biology, or related sciences. You are enthusiastic about integrating different fields of freshwater ecology in an interdisciplinary project. We expect the motivation to work in an interdisciplinary team and the capability to work independently. Applicants should preferably be trained in freshwater macroinvertebrate taxonomy, gut content analysis, biostatistics and should be willing to conduct extensive fieldwork. Practical skills in sampling for and analysis of stable isotope data ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) are very much appreciated. An EU level B, BE or equivalent driving license is required.

We offer:

You will be employed for three years with a salary according to German civil service level 13 at 65 % (TVÖD) under an employment contract with the UFZ. The position will be located in Magdeburg in Central Germany, approx. 150 km west of Berlin. The planned start of the project is in November 2022. Both mandatory and optional graduate school courses are available through the Helmholtz Graduate Schools TRACER (<https://www.ufz.de/index.php?en=46670>) and HIGRADE (www.higrade.ufz.de).

Please submit your application, incl. a cover letter, CV (please omit photos or information on age or marital status) and relevant attachments using the application portal with the following link: <https://recruitingapp-5128.de.umantis.com/Vacancies/2546/Application/New/2>.

For more detailed information, please contact:

PD Dr. Patrick Fink

patrick.fink@ufz.de

PD Dr. Mario Brauns

mario.brauns@ufz.de