



The Altermatt lab at the Department of Aquatic Ecology at Eawag and the Department of Evolutionary Biology and Environmental Studies (IEU) at the [University of Zurich](https://www.unizh.ch) have a vacancy for a

Postdoc Position on *Developing Analytical Pipelines and Analyses to Survey Invasive Alien Species in Aquatic Systems using eDNA* (2 years)

Invasive alien species (IAS) are globally and nationally a main driver of biodiversity loss. IAS can be found in all ecosystems but are particularly prevalent and problematic in aquatic ecosystems, as their management and control—once established—is very difficult or even impossible. Consequently, prevention and early warning are essential, and both are depending on surveillance and monitoring. Environmental DNA (eDNA) is emerging as a suitable tool for spatial and temporal surveillance and early recognition and monitoring of arrival and establishment of IAS, yet generalization, robustness and implementation are still under development.

In this Postdoc project, you will establish and develop analytical pipelines to analyse and survey invasive alien species using existing eDNA datasets. The initial focus will be on IAS in Central Europe/Switzerland, but pipelines should be scalable across Europe and beyond. **Own contributions and ideas are explicitly encouraged** and extensive intellectual freedom to shape the project is provided.

The project involves: **i) establishing reference databases** for IAS metabarcoding analyses (literature based/data mining across multiple markers/taxonomic groups); **ii) develop end-to-end semiautomated analytical pipelines** for eDNA metabarcoding analyses with respect to IAS monitoring and detection, allowing self-guided analysis of IAS signals in eDNA metabarcoding data sets and provide measures of confidence of IAS detections; **iii) proof-of-principle testing and application of these pipelines on existing aquatic eDNA datasets** (fish and invertebrates), building on high-resolution eDNA time-series and >250 routine monitoring sites across Switzerland.

The project is fully funded and links to the NRP82 initiative “[Smart Monitoring of Swiss Waters \(FutureProof\)](#)” and a research grant by the Swiss Federal Office for the Environment (BAFU/FOEN). The results of the project shall be published in leading peer-reviewed journals, follow FAIR principles, and also result in implementation-ready application tools in close collaboration with stakeholders.

The position is to be filled with a motivated candidate capable of taking a leading role in advanced data analysis and programming, with a focus on IAS assessment in freshwater systems using eDNA datasets.

To apply, you must have a PhD degree in Molecular Ecology, Bioinformatics, Biodiversity or Data Sciences, or a closely related science field. You should have previous experience in bioinformatics and eDNA metabarcoding data analyses, and knowledge on analysing biodiversity/IAS datasets. General experience in programming and data-analysis is expected. A strong conceptual background in molecular ecology/freshwater ecology and a good understanding of ecological theory are an asset. A demonstrated interest in open and reproducible science (e.g. FAIR principles, experience with versioning tools) is an advantage. The working language in the groups is English. Fluency in speaking and writing is required. Additional German or French language skills for stakeholder interactions are helpful.

The project is led by Prof. Dr Florian Altermatt at University of Zurich and Eawag. The successful applicant will be based and hired in the group of Prof. Dr Florian Altermatt (www.altermattlab.ch) at University of Zurich and Eawag (Dübendorf, Switzerland). The project allows collaborations with national/cantonal stakeholders. The position is fully funded for two years and is expected to start in Q4 of 2026 or Q1 2027.

We are looking for a highly motivated, enthusiastic and independent person with a passion for science and implementation.

At Eawag, we have a working environment in which people with different experiences, strengths, and perspectives can fully contribute and further develop. Here, you can help us advance! We promote genuine participation, exchange, and mutual understanding. We create structures that enable the compatibility of work and other areas of life, such as care work, and continuously make efforts to reduce barriers.

Do you have specific requirements regarding the application process or the position, or do you need additional information? Talk to us about it—we will be happy to support you with possible flexible workplace, working hours, and job design solutions. For further information please visit our website about [Eawag](#) as well as our [conditions](#) of employment.

Applications must be submitted by 14 August 2026. Your application should include a letter describing your interests and their relevance to this position, a complete CV, university diplomas, and the names and contact information for three references.

For further questions, consult www.altermattlab.ch or contact [Prof. Dr Florian Altermatt](#).

We look forward to receiving your application through this webpage. Any other way of applying will not be considered. Please click on the link below, this will take you directly to the application form.

<https://apply.refline.ch/673277/1364/pub/1/index.html>