



## Job opportunity

Post-doc position: Macroinvertebrate communities in intermittent rivers: responses to multiple stressors

*The French national research institute for agriculture, food and environment (INRAE) is a public research institute gathering 12,000 people, with 268 research, service or experimental units, spread in 18 centres across France. INRAE is among the world leaders in agriculture and food sciences, and in plant and animal sciences. Its research aims to develop solutions for sustainable agriculture, quality food and management of ecosystems and their natural resources.*

### Mission and activities

■ You will work in the research unit [Riverly](#) (pluridisciplinary research on hydrosystem functioning), in the Lyon-Villeurbanne site of >100 scientists. The Riverly unit comprises 7 teams developing research on ecology, ecotoxicology, hydrology, hydraulics, environmental chemistry and diffuse pollution. You will contribute to a highly dynamic unit in the fields environmental monitoring and modeling, and its application to management and public policy. Riverly is internationally known for its hydrological and ecological databases and models, and its developed in-situ sampling methods.

In particular, you will be part of the [EcoFlows](#) team and will actively contribute to the Intermittent-MMS project for which this position has been created. The intermittent-MMS project aims to characterize the responses of macroinvertebrate communities in 20 intermittent rivers in the Rhône basin to contrasting anthropogenic stressors. Specifically, from local to river network scales, you will explore the distribution of aquatic species and identify the independent and interacting factors that shape biodiversity in these dynamic ecosystems, helping to guide their management. This 18-month postdoctoral position is part of a 2-year project that starts in May 2022.

■ Your main activities will be:

- Organising existing ecological datasets from previous and current research projects, and collecting complementary data owned by regional and local stakeholders;
  - Characterising anthropogenic stressor gradients at relevant spatial scales (site to river network), using a range of environmental GIS layers, including drying dynamics, as obtained from loggers, observations and hydrological modelling;
  - Defining relevant alpha and beta diversity metrics (from both taxonomic and functional perspectives) to quantify the effects of multiple stressors (urbanization, agriculture, contamination, ...) on intermittent rivers macroinvertebrates communities;
  - Analysing and quantifying the respective and interacting effects of the different stressors;
  - Disseminating the results through primary papers in high-impact peer-reviewed journals; Providing an operational report to guide management by stakeholder collaborators;
  - Communicating results through oral presentation at an international conference in 2023.
- Under the direct supervision of Jérémy Piffady and Thibault Datry, you will work with other EcoFlows team members contributing to the project (with competencies in characterization of stressors and relevant scales, ecology, statistics and GIS). You will have the opportunity to be a core contributor to the rich scientific and social interactions in a team including approx. a dozen PhD and postdoctoral researchers, and to participate in other project sampling campaigns.

■ Role-specific conditions:

- You will be based in a shared office located in Lyon-Villeurbanne, with all informatics devices
- The centre is located near 'la Doua' university campus and is easily accessible by public transport

## Person specification

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- Qualification: PhD in ecology or in biostatistics applied to ecology
- Competencies: data analysis using R, GIS background
- Knowledge: freshwater ecology, community ecology, functional ecology ; inter-/trans-disciplinary work abilities
- Transferable skills: teamwork, excellent English oral and written communication skills

### ↘ Job conditions

- Unit Pluridisciplinary research on hydrosystem functioning - [Riverly](#)
- Postal code / City : 69100 Villeurbanne
- Contract type: Post-doctoral position
- Contract time: 18 months
- Expected start date: 01/07/2022 or the latest 01/09/2022
- Salary : €2371.13–2919.39 / month, depending on experience

### ↘ How to candidate

Send a CV, cover letter and the contact details of 2 references to:

Jérémy Piffady ([jeremy.piffady@inrae.fr](mailto:jeremy.piffady@inrae.fr)) and Thibault Datry ([thibault.datry@inrae.fr](mailto:thibault.datry@inrae.fr))

✘ Application deadline : **20 June 2022**

Shortlisted candidates will be interviewed by videoconference.