

PhD candidate interested in applying for FI/FPU fellowships in the DRYLAND project

The role

The Institute of Environmental Assessment and Water Research (IDAEA-CSIC) is seeking a motivated predoctoral candidate interested in applying for an FPU or FI fellowship to join the DRYLAND project. The research will focus on understanding how drought affects soil biogeochemical cycles and mountain water quality. The work will involve field sampling, laboratory experiments, data analysis, and ecosystem modelling, aiming to improve our understanding of ecosystem resilience to climate-induced water stress.

About de project

DRYLAND aims to unravel how drought drives the mobilization of carbon, nutrients, and trace elements from high-mountain soils, and how these processes propagate to streams and rivers. The PhD project crosses scales and disciplines, combining: Lab experiments with undisturbed soil cores & advanced stable isotope (^{13}C ^{15}N) techniques, high-frequency sensor networks in mountain catchments (Aigüestortes National Park), soil & water chemistry, microbial activity & greenhouse gas fluxes and data analysis & process-based modelling to predict water quality under climate change.

This is a unique opportunity to work at the interface between soil microbial ecology, hydrology and global change science, contributing to a timely question: **How do droughts reshape carbon and nutrient cycling in mountain ecosystems?**

What do we look for?

- **Qualifications**
MSc in Environmental Sciences, Ecology, Biology, Earth Sciences, Env. Engineering or related fields.
Strong academic record & motivation to apply for FPU/FI.
- **Professional experience**
{Required experience}
- **Competences**
Interest in soil & water biogeochemistry, microbial ecology, fieldwork, and data analysis.
Experience with R is a plus

The group

You will be integrated at IDAEA-CSIC and CREAM (UAB), collaborating with field ecologists, biogeochemists, modellers, and sensor-technology specialists. Training includes:

- Hands-on work in field and controlled lab experiments
- Advanced analytical methods (IRMS, GHG analysis, Isotope pool dilution, Isotope tracing)
- Access to Pyrenees Limnological Observatory (LOOP)
- Participation in conferences, workshops, and summer schools

- Mentoring, weekly supervision meetings, and support in fellowship preparation

Our group values collaboration, open discussion, and supportive supervision. PhD candidates also benefit from a thesis committee and CREA's and IDAEA's doctoral training environment.

The institute

The **Institute of Environmental Assessment and Water Research (IDAEA)** is an environmental research center of the **Spanish National Research Council (CSIC)**. Distinguished by its interdisciplinary approach, our research spans chemistry, biology, toxicology, hydrology, and geology, addressing a wide range of environmental challenges.

At IDAEA, we investigate the origin and health effects of emerging contaminants, the atmosphere-ocean exchange and biogeochemistry of anthropogenic chemicals, paleoclimatic changes, and the use of chemometric tools for big data analysis. Our expertise also extends to water resource management, air quality issues, and circular economy strategies.

Our research is grounded in the One Health concept, recognizing the deep interconnection between the health of humans, animals, plants, and ecosystems. With a strong capacity for interdisciplinary research, we tackle environmental challenges at local, regional, and global scales.

Founded in 2008 and structured into two main departments—Environmental Chemistry and Geosciences—IDAEA was recognized as a "Severo Ochoa" Center of Excellence in 2020, underscoring our scientific leadership and global impact.

We offer a diverse and inclusive environment where no discrimination against disability, gender, nationality, religion or sexual orientation will occur during the selection process.

How to apply?

Those interested may email their CV (max 2 pages), academic transcript of records and a motivation letter (max 1 page) to Lluís Gómez Gener at lluis.gomez@idaea.csic.es, adding PhD position to the email subject.

Deadline: 30th November 2025