PhD Opportunity in Hydrogeology and Hydrochemistry of Saline Systems (4-Year Contract)

The role

The PhD candidate will contribute to the PACTOSAL (Anthropogenic imPACTs On SALine hydrogeological systems) project, which aims to investigate the impacts of anthropogenic pressure and climate change on saline hydrogeological systems, with a particular focus on saline lakes and coastal lagoons. The research will combine fieldwork, water and sediment sampling, laboratory analyses, and numerical modelling to improve our understanding of human-induced hydrogeological impacts and contaminant dynamics on these sensitive systems. As part of a multidisciplinary and international team, the candidate will gain advanced training in hydrogeology, geochemistry, and numerical modelling, and will benefit from collaboration with leading experts and research stays abroad. This PhD offers the opportunity to develop a unique profile at the interface between water resources management and environmental science, while contributing to innovative strategies for the sustainable management and protection of fragile saline ecosystems.

What do we look for?

- ### Qualifications
  - Master's degree in Hydrogeology, Environmental Geochemistry, Civil/Geotechnical Engineering, Environmental Sciences, Geosciences, or related fields.
- ### Competences
  - Experience in one or more of the following skills will be highly valued: hydrogeological/hydrological/hydrochemical assessment and modelling (FEFLOW, MODFLOW, SWAT, PHREEQC), geographic information systems (ArcGIS, QGIS), remote sensing, and scientific writing.
  - Good communication skills in English (spoken and written).
  - Ability to work independently and in a multidisciplinary, international team.

Working conditions

- Contract duration: **4-year full-time contract**
- Estimated annual salary: **€20,000 (Year 1)** and **€25,000 (Years 2–4)** (according to the call)
- Location: **Barcelona** (possibility of partial remote work)
- Starting date: **January 2026** (tentative)

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 hydrogeology, hydrology, chemistry, biology, toxicology, 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. Within this framework, the *Subsurface Water Research* subgroup focuses on groundwater resources, addressing issues related to both groundwater quantity and quality, and investigating the impacts of climate change and anthropogenic pressures.

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.