NC Internship Programme 2026

NC Programme

National Capabilities for UK Challenges (NC-UK)

Project Title

Hydrogeochemical Sampling and Data Investigation at UKCEH's Plynlimon Research Catchments.

Supervisors

Maud van Soest (Lead) - UKCEH

Jade Hatton - JNCC

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UKCEH Site

Bangor

Project Overview

This six-week summer internship focuses on the collection, processing, and analysis of hydrogeochemical data from the Plynlimon catchments in mid-Wales. The intern will contribute directly to the UK Centre for Ecology & Hydrology's long-term environmental monitoring programme by supporting routine sampling, assessing data quality, and undertaking exploratory analysis of hydrogeochemical data to identify trends and environmental drivers. The project also offers strong cross-programme links with the Floods and Droughts Research Infrastructure (FDRI). The intern will be able to draw on the recently published Plynlimon Hydrology (1968-2010) dataset produced by the FDRI team, as well as the Severn Trap hydrology data now streamed to the FDRI data portal via telemetry. Integrating these datasets with hydrochemical observations will enhance the contextual understanding of catchment behaviour and support more robust interpretation of long-term environmental change. Overall, the internship blends fieldwork, laboratory work, and data analysis, offering a holistic introduction to catchment-scale hydrology and biogeochemistry.

Key tasks

- Assist with routine hydrogeochemical sampling at Plynlimon during a field visit in early July

- Prepare and process environmental samples in the laboratory
- Carry out data entry, quality checks and metadata documentation
- Perform exploratory data analysis using statistical and visualisation tools (e.g., R)
- Compare recent measurements with long-term-term datasets to spot anomalies or emerging trends
- Contribute to internal reporting, including short written summaries and supporting figures
- Take part in regular team meetings and discussions

Expected Outcomes

- Clean, quality-checked dataset – A well-organised dataset with documented checks and clear processing steps.
- Short analytical report – A concise summary of key trends, findings, and any anomalies identified during analysis.
- Reproducible R scripts – Clear, well-commented scripts covering data cleaning, processing, and visualisation.
- Presentation-ready figures – A set of visuals suitable for use in reports, presentations, and internal discussions.
- Reflective skills summary – A brief reflection outlining the skills gained and contributions made during the project.

The ideal candidate will have the following skills:

- Currently studying environmental science, hydrology, geography, ecology, chemistry, or a related discipline (Bachelor undergraduate, Master or PhD student)
- Basic understanding of freshwater systems and environmental processes
- Ability to work safely and effectively in outdoor field conditions
- Strong attention to detail in data handling and record-keeping
- Willingness to learn and take on new tasks

Extra Information

The internship will provide the applicant with hands-on experience in hydrological and hydrochemical fieldwork, alongside training in environmental data analysis and exposure to real-world research workflows. They will contribute directly to long-term environmental monitoring and nationally significant datasets, while developing transferable skills valuable for further postgraduate study or a future career in the environmental sector.

The internship offers a rare opportunity to work at one of UK's most intensively studied catchments, contributing to datasets that underpin national and international research.

The project can be tailored to the intern's interests, allowing deeper exploration of topics such as climate impacts, land-use change, nutrient cycling, or statistical modelling.

There may be opportunities to present findings internally or contribute to future publications, depending on progress.