

## Candidate Information

<b>Position:</b>	Research Fellow (Co-Centre for Climate+ Biodiversity+ Water)
<b>School/Department:</b>	School of Natural and Built Environment
<b>Reference:</b>	24/111873
<b>Closing Date:</b>	Monday 10 June 2024
<b>Salary:</b>	£37,841 per annum
<b>Anticipated Interview Date:</b>	Tuesday 2 July 2024
<b>Duration:</b>	24 months

### JOB PURPOSE:

The Co-Centre for Climate+ Biodiversity+ Water is seeking to recruit an experienced and motivated Research Fellow to play an active role as part of a new research project team across several Schools at Queen's University Belfast. The Co-Centre is an exciting new tri-jurisdictional initiative spanning Northern Ireland, Great Britain and the Republic of Ireland, which is managed jointly by QUB and Trinity College Dublin and funded by the Science Foundation Ireland (SFI), DAERA and UKRI.

The Co-Centre will seek to be the home of research, innovation, and policy development across the interlinked challenges of climate change, biodiversity loss, and water degradation on the islands of Ireland and Britain, with the goal of integrating research across both islands to address these crises. The Research Fellow will assist in the Monitoring Platform of the Co-Centre which aims to develop new monitoring approaches and evidence-based research results for climate, biodiversity and water to support effective decision-making. This post will specifically assist in the Monitoring Platform Project which aims to deliver a holistic understanding of peatland restoration past, present and future, through digital technologies.

Working as part of a team of researchers, the post holder will examine the role of 'transitions' by exploring how peatland ecosystems have responded to previous climate/environmental events. We will investigate peatland change over time and more broadly how terrestrial ecosystem changes are related to extreme events.

The post will be part of the School of Natural and Built Environment but will work as part of a multi-disciplinary team based in the dedicated Co-Centre Hub. The successful candidate will have responsibilities in independent research, supervision, planning, collaborations, and outreach and the post is available immediately.

### MAJOR DUTIES:

1. Develop and undertake research under supervision and as a member of the Co-Centre Monitoring Platform team within the Palaeo-modelling for peatland ecosystems research project.
2. Design, develop and refine the use modelling approaches- Holocene Peat Model (HPM) or Digibog to look at how peatlands will respond under future climate scenarios in terms of their net carbon balance and other factors.
3. Examine approaches to rehabilitate peatlands, ecologically (plant macros), and hydrologically (testate amoebae).
4. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to the area of research of Palaeo-modelling for peatland ecosystems.
5. Work with the research team to test modelling approaches for peatland restoration and recovery under extreme climate events.
6. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
7. Prepare, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
8. Assist grant holder in the preparation of funding proposals and applications to external bodies.

9. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
10. Carry out occasional undergraduate supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
11. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.

**ESSENTIAL CRITERIA:**

1. Normally have or be about to obtain (usually within three months) a relevant PhD in Palaeoecology, Geography, Ecology, Environmental Sciences or closely related areas.
2. Substantial relevant research experience in peatland, ecological (plant macros) and hydrological (testate amoebae) modelling.
3. Experience in peat modelling approaches (e.g. Holocene Peat Model (HPM) or Digibog).
4. Experience in terrestrial surveying and ground-based monitoring to investigate carbon accumulation, land-use (peatland ecosystems, biodiversity) change.
5. Experience of using Geographical Information Systems (ArcGIS or open GIS such as QGIS).
6. Ability to work in a multi-disciplinary environment as part of a research team.
7. Ability to contribute to teaching delivery, skills for green transition and science communication.
8. Ability to contribute to broader management and administrative processes.
9. Contribute to the Co-Centre and School's outreach programme by links with industry, community groups etc.
10. Methodical approach to project management and record keeping.
11. Sufficient knowledge in the research methods and techniques to work within established research programmes.
12. Excellent IT skills e.g. Microsoft Office suite.
13. Excellent oral and written communication skills.
14. Ability to communicate complex information clearly.
15. Ability to build contacts and participate in internal and external networks.
16. Excellent inter-personal skills.
17. Ability to assess and organise resources.
18. Ability to work independently and on own initiative.
19. Demonstrate commitment to equality, diversity and inclusion through continuous development and modelling of inclusive behaviours.
20. Irregular hours including evening, weekend and other out-of-hours work may be a component of the research at times.
21. Must be willing to travel to national and international meetings and other opportunities for collaborative research as required on an ad-hoc basis.

**DESIRABLE CRITERIA:**

1. Experience of advanced palaeoecological modelling approaches.
2. Experience of use of remote sensed imagery to monitor land-use (peatland ecosystems, biodiversity) change.
3. Experience in the use of spatial data analysis techniques to integrate multivariate environmental land use (peatland ecosystems) data sets.
4. Experience of research interactions with industry / community and voluntary sector.