

Candidate Information

Position:	Senior Research Fellow
School/Department:	School of Biological Sciences
Reference:	24/111956
Closing Date:	Monday 24 June 2024
Salary:	£46,497 to £50,790 per annum
Anticipated Interview Date:	Thursday 4 July 2024
Duration:	Fixed term available for 3 years or until 30 June 2027, whichever is sooner.

JOB PURPOSE:

The Co-Centre for Climate + Biodiversity + Water is seeking to recruit an experienced and highly motivated Senior Postdoctoral Research Fellow to join our research team and play a leading role as part of a new inter- and transdisciplinary research Co-Centre. Research will span several Schools at Queen's University Belfast, as well as across partner institutions in the Co-Centre. Research will focus on evaluating and synthesizing evidence regarding the impacts of climate change, biodiversity loss, and water quality on ecosystem services and human health. The successful candidate will lead efforts to assess the role of various ecosystems in carbon sequestration, water regulation, biodiversity conservation, and the development of nature-based solutions (NbS) to address societal challenges. The team will explore the application of AI and Large Language Models to the synthesis and recovery of ecological and environmental evidence from the literature.

The Co-Centre for Climate + Biodiversity + Water is an exciting new tri-jurisdictional initiative spanning Northern Ireland, Great Britain and the Republic of Ireland and involving 14 partner institutions. The Co-Centre is managed jointly by QUB and Trinity College Dublin and funded by the Science Foundation Ireland (SFI), DAERA and UKRI. The Co-Centre aims to be the home of research, innovation, and policy development across the interlinked challenges of climate change, biodiversity loss, and water quality declines on the islands of Ireland and Britain, with the goal of integrating research across both islands to address these crises.

The post holder will be part of the School of Biological Sciences but will work across the three faculties at Queen's as well as multiple partner institutions as part of the interdisciplinary team based in the dedicated Co-Centre Hub. The successful candidate will be expected to support and mentor other research colleagues. The successful candidate will have responsibilities in independent high-level research, supervision and mentoring, planning, collaboration and outreach. The post is available immediately.

MAJOR DUTIES:

Teaching:

1. Contribute to the work of participating Schools at QUB through limited teaching and associated tasks within own research specialisation.
2. Be responsible for practical work where applicable and advise students on techniques.

Research:

1. Develop the research activities of the Co-Centre by sustaining a personal research plan and managing and undertaking research activities in accordance with a specific project plan in the appropriate research team.
2. Collate, assess, and validate scientific literature and data on carbon, biodiversity, and water fluxes across ecosystems such as peatlands, forests, saltmarshes, and agricultural landscapes.
3. Utilize AI tools and large language models to analyse data and extract insights on the effectiveness of different management interventions.
4. Develop and refine models to predict the impacts of climate change and land-use changes on ecosystem functions.
5. Engage in interdisciplinary research to link ecological changes with public health outcomes and societal impacts.
6. Contribute to policy and management recommendations by providing reliable, evidence-based solutions to enhance sustainability and resilience in land use.

7. Sustain a high-quality publication record by publishing scientific reports, findings in peer-reviewed journals, and presenting at conferences.
8. Develop research proposals and funding bids in collaboration with others.
9. Negotiate and secure funding contracts in research specialism to support self (and possibly a group of colleagues).
10. Within the research project, take a lead in setting research objectives and a programme of implementation.
11. Direct, coach and develop research staff, where appropriate.
12. Ensure that research projects are completed on time and within budget.

Administration/Contribution to the Community:

1. Contribute to the Co-Centre Education and Public Engagement programme by developing external links.
2. Develop links with relevant research groups, industry and NGOs to encourage knowledge transfer that can inform policy and generate opportunities for future research projects.
3. Carry out designated administrative duties.

ESSENTIAL CRITERIA:

1. A relevant degree with a PhD completed in Ecology, Environmental Science, Conservation Biology, or a related field.
2. A high academic standing with a growing reputation in research within subject specialism.
3. Demonstrated experience in ecosystem service or nature-based solutions research, with a strong publication record.
4. Experience, achievement and growing reputation in the discipline, reflected in relevant national committee memberships and/or involvement in national research events.
5. Experience of developing research methodologies and devising models, approaches, critiques and methods.
6. Experience with AI tools relevant to ecological research and proficiency in statistical analysis.
7. A publication record relative to career stage in peer-reviewed journals or invited presentations that are REF returnable.
8. Strong skills in data management, analysis and synthesis.
9. Skills in managing and motivating staff.
10. Ability to secure grants/contracts independently or as a leader of a section in major projects.
11. Ability to devise, advise on and manage research programmes.
12. Ability to supervise work of others in research team.
13. Ability to contribute to the Co-Centre and School's outreach programme with evidence of establishing links with industry, community groups etc.
14. Excellent IT skills e.g. Microsoft Office suite.
15. Excellent oral and written communication skills.
16. Ability to communicate complex information effectively.
17. Supervise research projects of undergraduate and post graduate students.
18. Excellent inter-personal skills.
19. Proven ability to work effectively both independently and as part of a multidisciplinary team.
20. Ability to manage resources.
21. Demonstrate commitment to equality, diversity and inclusion through continuous development and modelling of inclusive behaviours.
22. Irregular hours including evening, weekend and other out-of-hours work may be a component of the research at times.
23. 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 in organising and delivering workshops, seminars, and publicity events.
2. Experience with large language models and their application in ecological research.
3. Experience in stakeholder engagement and policy development.
4. Have experience of coding in Python and R, or other similar languages.
5. A background in agro-ecology, climate-health, or carbon dynamics would be useful.
6. Knowledge of GIS and remote sensing technologies.