

Candidate Information

Position:	Research Fellow in Deep Sea Environmental Impact Assessment
School/Department:	Biological Sciences
Reference:	23/110885
Closing Date:	Monday 15 May 2023
Salary:	£36,333 - £37,386 per annum
Anticipated Interview Date:	Tuesday 30 May 2023
Duration:	18 months or until 31 October 2024, whichever is sooner

JOB PURPOSE:

To join the research team led by Dr Patrick Collins, Lecturer in Marine Science, School of Biological Sciences, Queen's University Belfast to work on an EU Funded Programme, Horizon 2020: Technology based impact assessment tool for sustainable, transparent Deep Sea Mining exploration and exploitation (TRIDENT).

We are looking for a Research Fellow to join the QUB Marine Biology Research Group to play a key role in the TRIDENT programme. TRIDENT is tasked with developing technologies and recommended protocols within the European context for managing and monitoring (in real time) the environmental impacts of deep-sea mining.

This 18-month full-time PDRA research position will assist Dr Collins in fulfilling QUB's obligation in the TRIDENT project and will be assisted by an additional PDRA to be appointed at the same time. The successful candidate will be an employee at Queen's University Belfast based either in the main campus or at the Portaferry marine station.

The PDRA will primarily focus on collating existing data relating to the deep-sea mining test site on Tropic Seamount, offshore Mauritania. The data will be interrogated to assess its suitability for an environmental baseline (e.g. assign biotopes using ROV collected video). Data gaps will be identified and prioritised for field work in 2024, with a special emphasis on magnitude and spatial extent of mining impacts to determine baseline parameter sensitivity.

The PDRA will be involved at the initial stages of the project focussing on the development of an environmental baseline assessment of the simulated deep sea mining test site on Tropic Seamount, offshore Mauritania; advancing our understanding of the geological and benthic boundary background environmental processes at Tropic Seamount which possesses cobalt crusts and ferromanganese nodules, assessing the environmental impact of simulated mining against the baseline and improving environmental baseline draft recommendations.

The candidate will drive the QUB TRIDENT research agenda, under the direction of Dr Collins, assist in postgraduate supervision, networking, and collaborations across the TRIDENT programme and beyond, carry out data analysis and lead on publications.

MAJOR DUTIES:

1. To carry out a habitat/biotope of a tropical Seamount near the Canaries, using ROV acquired imagery.
2. To collate and review existing survey work in relation to the tropical seamount in order to identify knowledge gaps.
3. To work towards the categorization and description of potential environmental impacts based on previous deep-sea mining studies, with special emphasis on magnitude and spatial extent of mining impacts to determine baseline parameter sensitivity.
4. Develop and plan an area of personal research and expertise, and/or undertake research under supervision within a specific research project or as a member of a research team.
5. Design, develop and refine experimental apparatus, field research or experiments in order to obtain reliable data.
6. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.

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8. Prepare, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
9. Assist grant holder in the preparation of funding proposals and applications to external bodies.
10. 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.
11. 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.
12. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.

ESSENTIAL CRITERIA:

1. Hold or about to hold a PhD in Marine Biology or related field.
2. At least 3 years' relevant research experience to include:
 - Experience with marine image-based data analysis
 - Experience with habitat/biotope mapping.
3. Ability to contribute to broader management and administrative processes.
4. Contribute to the School's outreach programme by links with industry, community groups etc.
5. Research interest/experience in deep-sea mining and its impacts.
6. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
7. Ability to communicate complex information clearly.
8. Ability to build contacts and participate in internal and external networks.
9. Demonstrable intellectual ability.
10. Ability to assess and organise resources.
11. Must be willing to work offshore on a short (2-3 week) deep-water survey (January, 2024).
12. Willingness to travel throughout EU to attend TRIDENT meetings/workshops (approximately 2-4 times per year).

DESIRABLE CRITERIA:

1. Understanding of marine policy relating to environmental impact assessment.
2. Background in benthic ecology.
3. Experience working on a survey vessel acquiring ROV-based imagery data.
4. Understanding of the International Seabed Authority deep-sea mining guidelines.
5. Team player.
6. Hold a valid STCW-95 and ENG 1 Seafarers medical.