UNIVERSITY OF LINCOLN
JOB DESCRIPTION

JOB TITLE	Post-Doctoral Research Associate in Modelling Coastal Nature-based Solutions				
DEPARTMENT	School of Life and Environmental Sciences (Department of Geography)				
LOCATION	Lincoln Campuses				
JOB NUMBER	CHS110	**GRADE**	7	**DATE**	April 2024
REPORTS TO	Dr Mark Schuerch				

CONTEXT

The University of Lincoln, Department of Geography, is looking for a highly motivated Post-Doctoral Research Associate (PDRA) to join the *Catchments and Coasts Research Group* and contribute to the delivery of the NERC project on the *Co-designing effective Nature-based Solutions in coastal West Africa*. The project involves interdisciplinary work on developing Nature-based Solutions in Coastal West Africa and modelling their efficiency with regards to providing coastal protection benefits. The project runs from February 2024-February 2027 and is a collaboration between four Universities across in the UK and Sierra Leone as well as a number of Non-Governmental Organizations (NGOs) in West Africa.

The successful candidate will hold a PhD degree in Physical Geography, Environmental Science, or a related discipline, and have a track record of research in hydrodynamic modelling and coastal environments/ecosystems, and will be fluent in at least one common programming language. Experience in working across different spatial scales and working with Geographic Information System will be highly desired. The candidate should further demonstrate willingness and ability to work across disciplines and lead small teams of researchers.

Being part of this project will allow the post holder to participate in international project workshops, overseas fieldwork in coastal West Africa, and developing a research profile in the emerging field of coastal Nature-based Solutions to climate change.

JOB PURPOSE

The Post-Doctoral Research Associate is responsible for conducting research on the project, as directed by the Principal Investigator, and is expected to operate with a significant degree of autonomy. They are not expected to operate as an independent researcher.

This post is to support the UoL team to lead on the measurement and modelling of sediment dynamics and hydrodynamics of mangrove forests in study site across coastal West Africa, particularly focussing on assessing how differently designed mangrove restoration sites respond to climate change and sea-level rise and what their contribution to reduction in coastal flood risks will be. This work will involve the design and completion of local field surveys as well as the development, application, and evaluation of numerical hydrodynamic models of mangrove study sites in Sierra Leone, Liberia and Guinea. In doing so, there will be a need to intensely collaborate with researchers from different disciplines, including from ecology, engineering, geography and social sciences, as well as with local NGOs and coastal communities.

The post holder may be required to help supervise the work of more junior researchers, incl. PhD students from Lincoln and other project partners and coordinate their research with national and international collaboration partners.

The PDRA will contribute towards writing the final project report, publishing the project results in international peer-reviewed journals, and present their work at project-internal workshops and international conferences.

KEY RESPONSIBILITIES

Literature Surveys
Undertake literature surveys and other investigations of the state-of-the-art, and prepare reports as required.
Programme of Research
Undertake a programme of research under the direction of the Principal Investigator, demonstrating a significant level of autonomy. Lead in the production of high quality research outputs, including reports, papers and other publications of national/international standing.
Project Management
Perform project management activities, planning, scheduling, monitoring and reporting on progress of research projects.
Liaison and Networking
Identify and liaise with internal and external collaborators, and with colleagues in the Department, maintaining positive and effective working relationships.
Internal Research Activities
Participate in and help to organise internal research activities, including seminars, research meetings and conferences.
Continuous Professional Development
Undertake continuous professional development activities.
Grant Applications
Contribute to the production of grant applications.
Teaching Support
Engage in teaching support activities, up to a maximum of six hours per week, possibly including leading a small number of units (no more than two per annum). Aid in the supervision of postgraduate research students.

In addition to the above, undertake such duties as may reasonably be requested and that are commensurate with the nature and grade of the post.

ADDITIONAL INFORMATION

Scope and dimensions of the role
This is primarily a research-focussed role, with clear objectives in terms of project deliveries.

Key working relationships/networks	
Internal	**External**
• Principal Investigator • Head of Research Centre • Head of School • Other research and academic staff within the school	• Research collaborators • Sponsors and clients

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PERSON SPECIFICATION

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Selection Criteria	**Essential (E) or Desirable (D)**	**Where Evidenced Application (A) Interview (I) Presentation (P) References (R)**
Qualifications:		
PhD or equivalent in Physical Geography, Environmental Science, or a related discipline (good candidates may be accepted with a PhD pending, subject to publication record)	**E**	**A**
Extensive knowledge on coastal (eco-)systems	**E**	**A/I**
Experience:		
Extensive experience in coastal fieldwork and numerical modelling	**E**	**A/I**
Authorship of research outputs of national/international standing	**E**	**A/I**
Experience of research in coastal environments and ecosystems	**E**	**A/I**
Teaching support	**D**	**A/I**
Experience in working across different spatial scales	**D**	**A/I**
Experience working with Geographic Information System	**D**	**A/I**
Skills and Knowledge:		
Ability to design, conduct and project manage original research in the subject area	**E**	**A/I**
Excellent written communication, including the ability to write reports and research outputs	**E**	**A/I**
Ability to prioritise own workload and work to specified deadlines under pressure	**E**	**A/I**
Ability to communicate complex subjects orally	**E**	**A/I**
Modelling sediment- and hydrodynamic processes	**E**	**A/I**
Fluent in at least one common programming language	**E**	**A/I**
Competencies and Personal Attributes:		
Flexible approach to workload	**E**	**I**
Ability to work independently and as part of a team	**E**	**I**
Enthusiasm and commitment	**E**	**I**
Willingness and ability to work across disciplines and lead small teams of researchers	**E**	**I**

Essential Requirements are those, without which, a candidate would not be able to do the job. **Desirable Requirements** are those which would be useful for the post holder to possess and will be considered when more than one applicant meets the essential requirements.

Author	Mark Schuerch	**PBP**	AH