

## JOB DESCRIPTION

**JOB ROLE:** Post-doctoral Research Scientist

**JOB HOLDER:** Tba

**JOB PURPOSE:** To conduct high quality scientific research and data management to help deliver the OCEAN DEOXYFISH project objectives

**ACCOUNTABILITY:** Line management of the Post-doctoral research scientist will be provided by Prof David Sims who is accountable to the Director of Science



### Essential experience/skills/qualifications:

- Completed a PhD degree in a relevant discipline
- Publication of scientific papers as first author in leading international journals
- Experience with databases (MS Access, SQL) and their management
- Experience with Application Programming Interfaces (APIs) to access and download datasets
- Good command of at least one programming environment such as R, Python, C (C++/C#), or similar
- Technical expertise in species distribution modelling (using methods such as Generalised Additive Models or Bayesian Additive Regression Trees) with a focus on animal datasets
- Experience working with large environmental datasets including processing, management, mapping and spatial analyses
- Experience working with Earth System Models and climate projection datasets (e.g. CMIP6) including sourcing, processing and mapping projections
- Strong mathematical and statistical background with application to ecology
- Knowledge of research design, analysis and reporting
- Expert data management and organisational skills
- Experience working with environmental data including processing, management and mapping
- Excellent teamwork with willingness to provide technical support to lab members' research alongside own designated projects
- Willingness to take ownership of projects and communicate project updates
- Excellent communication and interpersonal skills
- Experience working in a laboratory setting and carry out tasks in compliance with Health and Safety and other relevant Regulations
- To ensure responsibilities identified within internal processes such as Health & Safety Guidelines are robustly met by all Research Team members

**Desirable experience/skills/qualifications:**

- A relevant Masters in computer science, Geographical Information Systems, environmental science and management, spatial planning, or a related field
- Experience working with broad- and fine-scale animal movement data including analysis
- Experience with building software programmes and/or analysis packages
- Experience working with human activity datasets (e.g. fishing effort, shipping traffic)
- Ability to communicate about technical topics to less technical audiences
- Experience with Git and GitHub
- Experience processing and developing interactive maps and/or visualisations
- Experience working with climate projection datasets including sourcing and processing
- Experience in the application of theory and statistics in an animal movement context
- Ability to source and synthesise multiple data types (e.g. netcds, shapefiles etc.) to consolidate into comprehensive multi-factor analyses
- Creative approach to new research questions with skills in complex pattern recognition, critical thinking, flexibility and reproducibility

**Key responsibilities and skills**

- Undertake high-quality research to deliver objectives of the OCEAN DEOXYFISH project working both individually and/or collectively with in-house and remote team members.
- Lead to completion a specified set of research objectives in the areas of database management and programming, shark movement ecology and environmental modelling, and assessing impacts of anthropogenic threats on sharks
- Conduct accessing, archiving and management of environmental and animal movement datasets including developing necessary interfaces
- Design and lead the preparation, analysis and writing of scientific publications and contribute skills and expertise to additional publications led by other team members.
- Write novel analyses and develop code to facilitate research within the project whilst providing coding support within the wider team
- Contribute to bio-logging tag development, maintenance and programming in the lab and field
- Present research at national and international conferences
- Engage with both national and international collaborators to undertake and report results
- Engage in regular group meetings to progress research objectives and support lab members.
- Provide technical support and assistance in training postgraduate students with defined projects.
- Undertake relevant in-house and external training to enhance professional development with relevant mandatory training
- Working in a laboratory setting and carrying out tasks in compliance with Health and Safety and other relevant Regulations
- Undertake adhoc tasks identified as being within the job holder's capabilities