



Post title:	Marine Mapping Scientist
Ref No:	2019/10
Grade:	H
Type of appointment:	Fixed Term Appointment for 6 months with possibility of extension up to 12 months (maternity cover)
Location	Peterborough
Team:	Marine Monitoring and Evidence

Team Background

You will work in JNCC's Marine Monitoring and Evidence Team.

The work of the Marine Monitoring and Evidence Team covers a range of marine evidence activities and functions, including:

- Organising offshore seabed surveys to gather additional information to support designation, monitoring and assessment of offshore marine protected areas;
- Enhancing our understanding of the marine environment through fine-scale and broad-scale marine habitat mapping (www.emodnet-seabedhabitats.eu) and their relationships to physical and oceanographic parameters;
- Understanding human impacts on the marine environment through spatial mapping of human activity footprints and their pressures, the assessment of habitat and species sensitivity and using this information together to assess vulnerability;
- Maintenance of the national benthic marine database (Marine Recorder) (www.jncc.defra.gov.uk/MarineRecorder) and the national marine habitat classification (www.jncc.defra.gov.uk/MarineHabitatClassification);
- Development of standards, guidelines and methods at a UK and international level for matters such as data management and marine survey (<http://www.emodnet-seabedhabitats.eu/mappingguide>);
- Provision of expert advice to national and international fora (e.g. advice to the European Environment Agency on the EUNIS habitat classification <http://eunis.eea.europa.eu/about.jsp>).
- Coordination of the UK Marine Monitoring Programme working under the UK Marine Monitoring and Assessment Strategy (UKMMAS) with other UKMMAS partners through the Healthy and Biologically Diverse Seas Evidence Group (HBDSEG).

Post background

Mapping of marine habitats is core to JNCC's marine work, supporting the monitoring, assessment, protected sites, marine advice and natural capital programmes of work as well as the work of other organisations and industry. This post is part of the team that deliver this marine mapping work.

The **Marine Habitat Mapping project** works to improve the quality and coverage of the UK's marine habitat mapping resource. This includes the collation, standardisation, combination and confidence assessment of a UK compilation of habitat maps derived from survey¹, continuing work started with other European countries by the MESH project, and developed further to expand the coverage of maps across European waters (e.g. in the Atlantic area through MESH Atlantic) particularly to facilitate implementation of European policies such as the Marine Strategy Framework Directive.

Development of seabed habitat maps relies heavily on seabed habitat and biotope classification. Whilst this area of work has been developed in UK and integrated across Europe, some areas of the classification are data-poor and require further development to assimilate new seabed data acquired over the last 5-10 years.

Marine surveys only cover a small proportion of UK and European seas. Where there are gaps in this coverage of survey maps, habitat models of the seabed have been developed both for the UK and through international consortia (UKSeaMap and EUSeaMap² respectively). EUSeaMap phase 1 (2009-2012) delivered the 'Habitats' element of a wider initiative developed by the European Commission called EMODnet (European Marine Observation and Data network), which aims to improve access to all marine data across Europe. Phase 2 of the EMODnet project ran from 2013 to 2016 and followed on from the work of EUSeaMap to improve on modelling approaches, data quality and validation as well as creating the first broad-scale seabed habitat map of the Eastern Mediterranean and Black Sea. JNCC is now leading a consortium of 12 partners in Phase 3 of the EMODnet project which runs between 2017 and 2019 (with a possible 2-year extension to 2021).

An agreed consistent map for all European seabed habitats will lead to a more coherent assessment of the status of Europe's seas, as required by the Marine Strategy Framework Directive. The set of seabed maps and models are also used for making interpreted products which show the distribution of 'listed' habitats: EC Habitats Directive Annex I and OPSAR and Habitats of Principal Importance³. Sample data from Marine Recorder and other sources are also used in this work.

Post Duties

The post-holder will be working closely with a second Marine Mapping Scientist in the Marine Monitoring and Evidence Team to cover a temporary promotion of the staff member who is backfilling a period of maternity leave. The post-holder will work on the Marine Habitat Mapping and EMODnet Seabed Habitats Projects, and will therefore be exposed to the full range of marine habitat mapping work undertaken by JNCC. The post-holder will undertake a range of duties such as (but not limited to):

- Take a lead role in the collation, cataloguing, re-interpretation and management of existing UK seabed habitat data;

¹ UK marine habitat mapping products maintained by JNCC: <http://jncc.defra.gov.uk/seabedhabitatmapdata>

² EUSeaMap: <http://www.emodnet-seabedhabitats.eu/default.aspx?page=2025>

³ Previously BAP Priority Habitats

- Contribute to the effective dissemination of marine mapping information relevant to marine nature conservation to the UK Government, the Devolved Administrations, the country nature conservation agencies and others;
- Work collaboratively and build relationships with partners from across Europe as part of the European EMODnet Seabed Habitats consortium;
- Use physical datasets, agreed thresholds and methods established by EMODnet Seabed Habitats to produce the next update to the 'EUSeaMap' broad-scale habitat map for the Atlantic sea basins;
- Maintain and further develop dissemination of marine benthic habitat data through online interactive mapping systems and other portals, including working with contractors to develop the online portal for the EMODnet Seabed Habitats project;
- Building relationships and liaising with colleagues in the Statutory Nature Conservation Bodies, UK Government, Devolved Administrations and research organisations to promote and coordinate the preparation and acquisition of quality assured marine habitat maps and associated data;
- Providing advice on seabed habitat mapping to internal and external colleagues and the public;
- Participate in and/or manage contracts to support JNCC and its marine mapping work.

In order to account for changes in priorities during the period of employment the post-holder may be required to fulfil duties within the Marine Directorate other than those listed above. These duties will require the same set of competencies listed below.

The majority of the work will be office-based; however, the post-holder will also be required to attend meetings and workshops in UK and possibly Europe, which is likely to involve staying away from home on occasion overnight or for up to a week's duration.

Competencies

Applicants will be required to demonstrate the specialist, technical and core competencies (skills, knowledge and behaviours) set out below. The post-holder will be expected to have those marked Essential at the outset, whilst those marked Desirable can be developed whilst in post.

Specialist and Technical

Degree or equivalent qualification and relevant recent practical work experience that provides the following **essential** knowledge and experience:

- Knowledge and understanding of the UK's marine biodiversity, including a working knowledge of the national and/or EUNIS marine habitat classification system and the spatial and temporal variation in habitat character.
- Knowledge of the types of data available from marine biological surveys of the seabed in inshore or offshore environments, including remote-sensing, sampling and in-situ marine survey techniques, and the limitations associated with these data.
- Extensive experience in the use of standard office software, databases, and GIS packages (preferably ESRI™ ArcGIS or Quantum GIS) to manipulate, interrogate

and interpret spatial datasets, including experience of integrating and analysing different types of marine data from multiple sources.

- Knowledge of, and practical experience in, **at least one** of the following:
 - Statistical computing using R.
 - Experience working with oceanographic data including ocean colour, wave and tidal models.
 - Creation of seabed habitat maps and/or models using seabed survey data and/or oceanographic data.

Core

Making Effective Decisions

- Identify a range of relevant and credible information sources and recognise the need to collect new data when necessary from internal and external sources. **Essential**
- Invite challenge and where appropriate involve others in decision making to help build engagement and present robust recommendations. **Essential**

Leading and Communicating

- Communicate using appropriate styles, methods and timing, including digital channels, to maximise understanding and impact. **Essential**

Collaborating and Partnering

- Establish relationships with a range of stakeholders to support delivery of business outcomes. **Essential**
- Deal with conflict in a prompt, calm and constructive manner. **Desirable**

Delivering at Pace

- Regularly monitor own work against milestones or targets and act promptly to keep work on track and maintain performance. **Essential**

(Full details of the Civil Service competency framework can be found on our website (under 'Jobs with JNCC').

Salary

£27,398 per annum

Hours of work

Normal minimum hours of attendance for the post are 36 hours per week over a 5-day period, Monday to Friday. Flexi time is available.

Annual Leave Entitlement

The annual leave allowance is 25 days per year, rising to 30 days per year after 5 years service. There are also 12 days public and privilege leave. Staff appointed on a part time basis will receive this leave pro rata.

The closing date for this post is 09:00 on 08 April 2019

The anticipated interview date is during week commencing 22 April 2019