

# Gathering data to plan marine protected areas – how can we use it?

Marine Objective Theme: State of the Marine Environment

## What's the problem?

We want to protect and conserve important habitats and species found in the UK's marine environment and have a duty to do so. One way to do this is through the identification, designation and management of areas considered important to protect. The UK Government has made a commitment to deliver such a network of marine protected areas, and have made provisions for this to occur in the Marine and Coastal Access Act 2009 (via Marine Conservation Zones (MCZs)). To enable this to be realised, the Joint Nature Conservation Committee and Natural England have established four MCZ Regional Projects to help take forward the identification of MCZs. This project has collated and mapped national datasets to provide the contextual background for stakeholder engagement and as a starting point for Regional Projects data collection.

## What were the aims of the project?

It was important to ensure the best data was accessed and made available for the UK Marine Protected Area (MPA) planning process. In order to achieve this, there was a need to collate a range of data (e.g. biological, physical and socio-economic) from a range of organisations. We also needed to ensure that all data were easily interpreted, accessed and used by those responsible for the identification of MPAs such as the Regional Projects which have been established to ensure stakeholder engagement for the identification of MCZs in England. These data will also be used in the equivalent processes being developed within the Devolved Administrations.

Objectives of the research were to collate and improve data layers on biological and physical aspects of the marine environment, including the provision of data on current habitat maps; the distribution of species and habitats of conservation importance; mapping of marine biodiversity and the production of sensitivity matrices. In addition datalayers of geology and geomorphology have been created. All datalayers have been made available through the MEDIN portal, and stakeholder engagement has been enabled through an interactive webGIS.

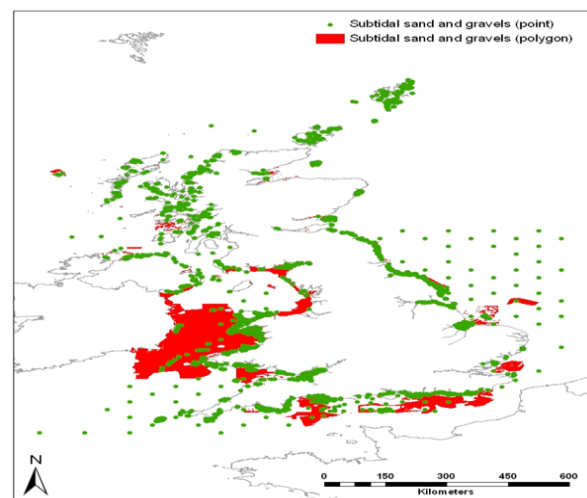


Figure 1. Derived datalayer for subtidal sands and gravels (MarLIN)

## Which policy areas will the research inform?

This work will support the delivery of MCZs, a new mechanism to be delivered as part of the Marine and Coastal Access Act. The current aim is to designate a network of sites by 2012.

The availability of these data layers and the data collection tool will also be of importance to the Marine Management Organisation (MMO) which will be responsible for taking forward Marine Planning in UK waters.



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## What are the results from the project and how can we use them?

Data layers have been generated that cover all UK waters, that is, UK offshore waters and territorial waters of England, Wales, Scotland, Northern Ireland and the Isle of Man. Work has provided:

1. Improvements to the current habitat maps for UK waters through the provision of new datasets and 'confidence' assessment layers where the habitat category is based on modelled data;
2. The generation of a data layer showing the nature and distribution of geological and geomorphological features of importance found in UK waters with an associated confidence assessment;
3. Maps showing the distribution of 83 species of conservation importance (including a range of algae, invertebrates and fish);
4. The distribution of 32 listed habitats (UK Biodiversity Action Plan (BAP) and OSPAR priority habitats) and the distribution of 15 key non-native species such as the Slipper limpet (*Crepidula fornicata*). In addition an intertidal habitat layer has been developed for England;
5. Digital maps indicating the seabed energy layers (e.g. tide and current generated kinetic energy) in UK waters which is important in the understanding of the distribution of marine habitats and species;
6. Maps showing the marine biodiversity for inshore and offshore areas; and
7. Residual current flow mapped to a fine resolution to enable the assessments of larval connectivity.

All the above datalayers are now available to the Regional Projects who have been using them to inform the selection of MCZs. More widely, these data layers will be available to the funding bodies and other public bodies (for non commercial purposes), who will find them useful in other aspects of marine planning and the management of human activities.

In addition sensitivity matrices have been drawn up with the help of literature reviews and expert judgement to assist in the consideration of the pressure of various

activities on the features to be conserved.

To aid access to the various datalayers a webGIS has been developed which offers stakeholder the use of interactive maps through which they can supply information on their activities within the marine environment. These resulting amalgamated datalayers will be made available to the MCZ process as it progresses and to inform a wide range of other marine planning processes. The webGIS can be accessed at [www.mczmapping.org](http://www.mczmapping.org) and will remain a live site for the duration of the MCZ projects (until December 2011)

This ambitious project has developed a number of unified datalayers for our UK marine waters and these are helping to ensure MCZs are based on the best available science.

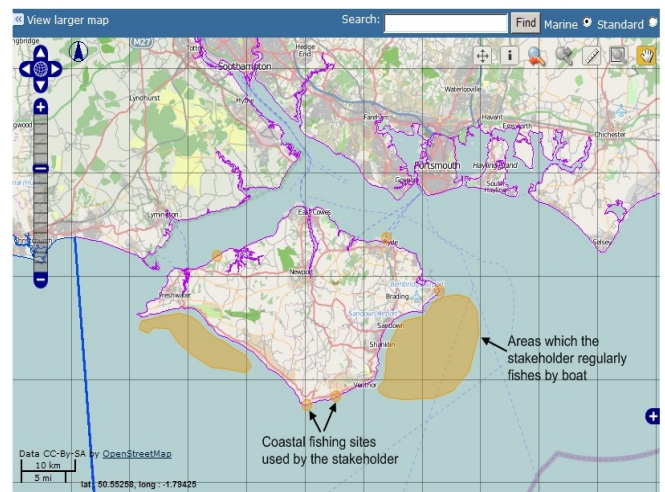


Figure 2. Example of stakeholder digitising on the WebGIS showing where they regularly fish near the Isle of Wight (Source: exeGesIS).

## Where can I find further information about this and related research?

ABPmer is leading a consortium of organisations to deliver the contract objectives and is guided by a Project Steering Group consisting of all funding partners.

For more information please contact Claire Brown (023) 8071 1840, [cbrown@abpmer.co.uk](mailto:cbrown@abpmer.co.uk).



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