

# How to find UK marine data

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## Quick guide:

To find information about datasets of interest:

1. Use keywords, and spatial/temporal searches on the MEDIN Data Discovery Portal (<http://portal.oceannet.org/search/full>)
2. Search by theme on the MEDIN Reference Data Layers site ([http://www.oceannet.org/download\\_gis/](http://www.oceannet.org/download_gis/))
3. View the links listed in the 'useful links' section of the MEDIN website ([http://www.oceannet.org/online\\_data\\_by\\_theme/](http://www.oceannet.org/online_data_by_theme/))
4. Search the websites of the MEDIN Data Archive Centres (DACs) - [http://www.oceannet.org/data\\_submission/](http://www.oceannet.org/data_submission/)
5. Search the websites of the 'Other Sources' listed below
6. Search for monitoring programme information using UKDMOS [http://www.ukdmos.org/v\\_ukdmos\\_edios\\_v2/search.asp](http://www.ukdmos.org/v_ukdmos_edios_v2/search.asp)

## Introduction

The purpose of this paper is to provide the reader with an overview of the best ways to find existing marine data in the UK, and evaluate whether it will be suitable for reuse by them. Reuse of data is increasingly being seen as an important way to increase productivity and reduce costs associated with collection of data. For example, the UK's Technology Strategy Board (TSB) are preparing a funding call to stimulate commercial reuse of data from NERC's network of environmental data centres.

The primary portal in the UK for finding marine data is provided by the Marine Environmental Data & Information Network (MEDIN). The MEDIN website provides access to authoritative marine data, via a map and text based search interface which pulls together the marine data holdings of government departments, research institutions and private companies.

The results of searches on the MEDIN portal either point directly to online data that can be downloaded, or will provide further details about how to access the data. In addition to the search facility, the MEDIN website also provides a facility for searching for commonly used marine reference datasets/layers. These provide the marine 'base map' for coastal data and information, such as distributions of species, geological features and habitats and biotopes. Finally, the MEDIN website also has a 'Useful links' page, which also provides further links to information about data, such as 'ocean met data', and 'time series data'.

MEDIN not only provides these search facilities but also provides secure long-term management of marine datasets through the Data Archive Centres (DACs). Searches for information on the MEDIN website will often point to the DACs to provide a greater level of detail about data, and to provide access to these data holdings.

Whilst MEDIN is the primary source for information about marine data holdings in the UK, it has not yet been possible to link directly to all the data sources in all instances, and therefore it may be necessary to also carry out some searches on other sites, as listed below.

Finally, another method for finding information about possible data holdings is to look for information about marine monitoring programs through the UK Directory of Marine Observing Systems (UKDMOS).

## The MEDIN website

To access the MEDIN website, go to <http://www.oceannet.org/>.

### Finding data

To search for data, go to [http://www.oceannet.org/finding\\_data/](http://www.oceannet.org/finding_data/). From this site, searches can be performed to discover marine datasets through [the data discovery portal](#), and [reference datasets/layers](#) can be found through selection of themes of interest.

#### Data discovery portal

The data discovery portal provides users with a single point of access to information about individual datasets held by government departments, research institutions and private companies. Click on 'Data Discovery Portal' (<http://portal.oceannet.org/search/full>) from the 'finding data' page.

To [search by text](#), enter some search terms into the 'Search' text box. Related words should be put inside speech marks, e.g. "seawater density", "underwater noise".

To [search by a specific time period](#), click on the 'Date Range' link and insert a start date and end date, to define the time interval of interest.

There are two ways to define [geographic areas of interest](#) for the search:

- Using the drop-down menus specifying a country, sea, UK sea area or ICES (International Council for Exploration of the Sea) box
- Using the interactive map to draw a rectangle over the area of interest.

There is also a link for '[Advanced Search](#)', which provides more ways to refine the search. All input through the Advanced Search is via selection of terms from controlled vocabularies which appear when the user clicks inside each search box. The options include:

- [Search by Theme](#) in which data themes, sub themes and parameters of interest can be selected
- [Search by other terms](#) in which a data holder, data access type (covering conditions of data access and use) and data format (e.g. database, movie, document etc) can be selected

Once all the relevant search definitions have been entered, click on 'Search'.

The site will then provide a list of records describing data that match your search criteria. To establish if the dataset is of interest, click on the title of a record to expand the information available about the dataset. A green light beside 'Online Resource Present' indicates that the data are directly available online. Records that do not have a green light, will include more information about how to access the data.

### Reference data

The reference data pages can be accessed by clicking on the 'Reference layers' ([http://www.oceannet.org/download\\_gis/](http://www.oceannet.org/download_gis/)) link on the 'Finding data' page. This provides a facility for searching for commonly used marine reference datasets/layers by INSPIRE (Infrastructure for Spatial Data in Europe) theme. Reference layers provide the marine 'base map' for coastal data and information, such as distributions of species, geological features and habitats and biotopes.

Once a theme has been selected, the user is presented with a list of descriptions of relevant datasets. Traffic light icons are used to indicate accessibility. If the data has a green or amber light, the data can be directly downloaded by clicking on the 'Download' link (amber indicates that there will be specific licensing restrictions related to the data). If the data has a red light, this means that the data are not available for download, but information regarding access to the data will be available by clicking on the 'More Information' link. On the search results page, there are also options to view the datasets via a web map, view more detailed information about the dataset, and view a list of co-located data.

### Useful links

The useful links section of the MEDIN website provides categories of links on the left navigation bar. Whilst not all of these links relate to data, there are many sites that do provide more information about data availability.

### The DACs

MEDIN provides secure long-term storage of and access to marine data through the Data Archive Centres (DACs). The DACs are currently developing the technology for direct delivery of data through MEDIN, and they provide links to their data from the MEDIN portal. However as this technology is not yet fully developed, it may also be necessary to search the relevant DAC website for more detailed information on their data holdings. The DACs are listed below with links to their primary online search facilities:

- **The British Geological Survey** – The coverage of available data may be viewed and searched online via the **BGS Offshore GeoIndex** (<http://www.bgs.ac.uk/GeoIndex/offshore.htm>). The Offshore GeoIndex is also available as a **Web Map Service** (<http://www.bgs.ac.uk/geoindex/wms.htm>) so that the layers can be added to desktop GIS. The current method to request data is to contact the **BGS Marine Enquiry team** by email ([offshoredata@bgs.ac.uk](mailto:offshoredata@bgs.ac.uk)) or telephone with a list of the data required (sample and geophysical line numbers) or with a specific enquiry. A portal is also available for searching **Strategic Environmental Assessment (SEA) data** (<http://www.bgs.ac.uk/data/sea/>).
- **The British Oceanographic Data Centre (BODC)** - [https://www.bodc.ac.uk/data/where\\_to\\_find\\_data/](https://www.bodc.ac.uk/data/where_to_find_data/). Includes marine biological, chemical,

physical and geophysical data, with databases containing measurements of nearly 22,000 different variables.

- **The Met Office** - All ship and buoy data are exchanged internationally via the WMO GTS and are available through the [International Comprehensive Ocean Atmosphere DataSet \(ICOADS\)](http://icoads.noaa.gov/) (<http://icoads.noaa.gov/>). Real-time data (previous 24 hours) from the Met Office moored buoys, light vessels and coastal stations around the UK are available via the [Met Office web-site](http://www.metoffice.gov.uk/weather/marine/observations/) (<http://www.metoffice.gov.uk/weather/marine/observations/>). All UK Argo float data are archived by BODC and are available through the two [Global Argo Data Assembly Centres \(GDACS\)](http://www.coriolis.eu.org/) in France (Coriolis - <http://www.coriolis.eu.org/>) and [USGODAE](http://www.usgodae.org/argo/argo.html) (<http://www.usgodae.org/argo/argo.html>). Global marine climate datasets maintained by the Met Office Hadley Centre are made available for download (<http://www.metoffice.gov.uk/hadobs/>) free of charge for scientific research and private study.
- **The Archaeology Data Service** - ADS holdings are split between 'monument inventories' and 'archives' and this division is explicit on the [ADS website](http://archaeologydataservice.ac.uk/) (<http://archaeologydataservice.ac.uk/>) with separate search mechanisms for each.
- **The Archive for Marine Species and Habitats data (DASSH)** – Data are accessible through [http://www.dassh.ac.uk/SEABED/data\\_access.php?](http://www.dassh.ac.uk/SEABED/data_access.php?), and through the National Biodiversity Network Gateway.
- **UK Hydrographic Office INSPIRE Portal and MEDIN Bathymetry Data Archive Centre** - <http://www.ukho.gov.uk/inspire/Pages/home.aspx>. Currently the following data types are available through the portal:
  1. Limits around the UK as maintained by the UKHO's 'Law of the Sea' department.
  2. Ships' Routing Measures as approved by the International Maritime Organisation (IMO), and/or the Maritime and Coastguard Agency (MCA) (as National Competent Authority).
  3. Bathymetric surveys from various sources, including a large number funded by the Department for Transport through the MCA under the Civil Hydrography Programme.
- **UK Hydrographic Office Products and services** - <http://www.ukho.gov.uk/ProductsandServices/Pages/Home.aspx> - including Digital & Paper charts, Maritime Safety Information, and Digital & Paper publications.
- **Cefas and Marine Scotland** – FishDAC (<http://www.cefas.defra.gov.uk/publications-and-data/fishdac.aspx>, and [www.scotland.gov.uk/FISHdac](http://www.scotland.gov.uk/FISHdac)) has prioritised EU-mandated fish surveys that are part of established series. It contains data collected by UK research vessels on the most recent international bottom trawl surveys, covering significant geographical areas, species and environments. Other data sets currently available include fish stomach record contents and nursery and spawning area data (including GIS layers).

## Other sources

Although MEDIN is the primary portal for accessing UK marine data, there are a number of other organizations that provide access to marine data. The following list is not exhaustive, but provides links to some of the other main suppliers of marine data:

- **MMO Master data registry** - <http://www.marinemanagement.org.uk/evidence/mdr.htm>. A pdf list of spatially referenced environmental data currently containing information to support the MMO's business and regulatory and decision-making functions.

- **Crown Estates Marine Data Exchange** - <http://www.marinedataexchange.co.uk/>. The Marine Data Exchange provides access to survey data and reports collated during the planning, building and operating of offshore renewable energy projects
- **Marine Scotland Interactive** - <http://www.scotland.gov.uk/Topics/marine/science/MSInteractive> is the new resource for providing access to spatial data held by Marine Scotland. It currently concentrates on themed marine environmental data covering renewable energy, monitoring, conservation and marine spatial planning.
- **Channel Coastal Observatory real time data** ([http://www.channelcoast.org/data\\_management/real\\_time\\_data/charts/](http://www.channelcoast.org/data_management/real_time_data/charts/)),
- **Channel Coastal Observatory Map Viewer and Data Catalogue** [http://www.channelcoast.org/data\\_management/online\\_data\\_catalogue/](http://www.channelcoast.org/data_management/online_data_catalogue/) - the Map Viewer enables users to visualize online the aerial photography, swath bathymetry, and other coastal data such as Digital Terrain Models and sediment distribution maps. The Data Catalogue is a searchable database of coastal data collected by the Regional Coastal Monitoring Programmes.
- **NBN gateway UK biodiversity data** - <http://data.nbn.org.uk/> - explore UK Biodiversity data.
- **English Heritage** - <http://www.english-heritage.org.uk/professional/archives-and-collections/> - this site provides information about an outstanding range of items from paintings and archaeological artefacts relating to English Heritage's sites, to the public archive covering the historic environment of England; or <http://www.heritagegateway.org.uk/gateway/> for information about England's heritage
- **Royal Commission for the Ancient and Historical Monuments of Scotland** - <http://canmore.rcahms.gov.uk/> enables searching of the RCAHMS databases
- **Royal Commission for the Ancient and Historical Monuments of Wales** - <http://www.coflein.gov.uk/> - enables searching of the national monuments record of Wales

## Monitoring Programmes

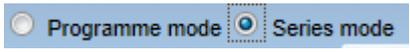
An alternative method for finding data is by searching for information on monitoring programmes. This can be done through the **UK Directory of Marine Observing Systems (UKDMOS)**. UKDMOS is a searchable metadatabase of marine monitoring conducted by UK organisations. The UKDMOS discovery service gives a detailed description of marine environmental monitoring programmes and networks as well as of the related monitoring stations.

UKDMOS can be searched from [http://www.ukdmos.org/v\\_ukdmos\\_edios\\_v2/search.asp](http://www.ukdmos.org/v_ukdmos_edios_v2/search.asp). The upper section of the page is devoted to the map search, which allows the user to specify which base layers to view (right panel), and provides a range of functions including allowing the user to pan around the map, zoom in and out, identify objects on the map, and select the area of interest using a rectangle (left panel).

The lower part of the screen is devoted to the search arguments. One or more of these fields can be completed. The map and search arguments can be combined to produce a more tightly defined set of results.

The results of the search include an overview map with the location of the search results, and below the map the results themselves. Initially the listing shows the results related to the observational

programmes, but this can be switched to "series" mode via the button on the right of the map

 . By clicking the  you can view the list of stations under the programme that match the search query. Press  to view all stations under the programme. Click the  icon to open the full details.

The search query can be saved as a bookmark by clicking on 'Store Query', and the results can be downloaded as a .csv file by clicking on 'Export Result'.

## Contact us

*For more information about MEDIN, or to seek further support in finding UK marine data, please contact us at: [enquiries@oceannet.org](mailto:enquiries@oceannet.org)*