

## **MEDIN Resources and Applications (Work Stream 5)**

Report of Working Group Meeting held 6 Oct 2011

### **Background**

The Marine Data and Information Network (MEDIN) was established to create and maintain a framework to improve the discovery, accessibility and usability of marine data and information in the UK. Current aims (for 2011/12) for MEDIN are to:

1. Increase the content and usage of the MEDIN Portal ([www.oceannet.org](http://www.oceannet.org))
2. Consolidate the Data Archive Centre (DAC) network and improve the flow of data
3. Maintain good communication and linkage across relevant UK initiatives
4. Ensure a good fit of MEDIN with key international and European data initiatives
5. Establish widespread adoption of best practice standards for metadata and data
6. Coordinate and provide access to marine and coastal reference and other core datasets
7. Assess MEDIN performance against user expectations and needs
8. Identify and help deliver cross cutting data products, tools and other resources that will benefit MEDIN sponsors and the marine data community.

The above aims are being delivered through 7 different Work Streams. The Resources and Applications Work Stream (WS 5) is responsible for items 6, 7 and 8. The Working Group associated with the Work Stream is co-chaired by Mike Osborne of OceanWise and Matt Harrison of BGS, who are the authors of this report.

### **Marine Reference Data**

A successful outcome of past Working Group meetings was to identify the needs of users for reference data (item 6 above), to describe what is meant by reference data and to document obstacles and issues preventing its availability and use. These meetings culminated in MEDIN preparing an 'Action Plan for Reference Data', which was published in June 2011 following its acceptance by the MEDIN Executive Team and is available on the MEDIN website<sup>1</sup>.

A key aim of the Action Plan is to deliver a set of well-managed marine reference datasets that can be discovered and accessed via the MEDIN Portal. To achieve this key aim, the Action Plan requires that MEDIN work with data holders to make them aware of the importance of their data (as, or as input to, marine reference data) and to encourage data holders to manage and publish their data in ways that are compliant with good practice and MEDIN standards.

The Action Plan also calls for the setting up of an area on the MEDIN web site that focuses on reference data and provides users access, either directly or by providing a link to an existing resource. The latter option is preferred and is consistent with the aims of the UK Location Programme and the data.gov.uk initiative in which MEDIN represents the marine thematic domain.

---

<sup>1</sup> [http://www.oceannet.org/library/work\\_stream\\_documents/documents/action\\_plan\\_for\\_ref\\_data\\_v1.0\\_%2020110614.pdf](http://www.oceannet.org/library/work_stream_documents/documents/action_plan_for_ref_data_v1.0_%2020110614.pdf)

## Objectives of Working Group Meeting

It is important that MEDIN continues to obtain the opinion of users of marine data. It is equally important that MEDIN appreciates the position of data holders and the challenges they face in managing and publishing data. There are many pressures on data holders and users alike, and numerous initiatives within the UK and Europe, aiming to improve data management and access. MEDIN is mindful of these pressures and aims to help data holders respond to these initiatives, as well as meeting the overall aims of MEDIN, which are very similar.

An objective of the meeting on 6 Oct 2011 was to remind data users and data holders of the aims of MEDIN generally, and Work Stream 5 and the Action Plan in particular. A second objective was to start the process of engaging with data holders to provide an overview of these wider data initiatives and consider what resources, if any, MEDIN can provide to help data holders respond positively to MEDIN and to these other initiatives. Finally, a third objective of the meeting was to establish a conceptual design for the Reference Data pages on the MEDIN website.

## Meeting Proceedings

A total of 16 members of Working Group attended the meeting, with 6 apologies (see Annex I). Representatives of many of the data holders responsible for reference datasets identified in Action Plan attended the meeting. Presentations were provided by the Working Group co-chairs and John Pepper as follows:

1. MEDIN and the Resource and Applications Work Stream (Matt Harrison)
2. The Marine Reference Data Action Plan (Mike Osborne)
3. Government Policy Landscape – Help or Hindrance? (John Pepper)

A copy of these presentations is included as Annex II. There were then short presentations from each data holder present. The MCA had submitted a report by email prior to the meeting and Mike Osborne read this out. A summary of these is presented below:

MCA	Intends and is working towards Civil Hydrography Programme (CHP) data being made available under a modified 'Open Government Licence', [modified] to ensure that sensitivities surrounding navigational uses are addressed.
UKHO	Is working closely with MCA to meet its and MCA's obligations with regard to data release and INSPIRE requirements by making the CHP and potentially other data available. Is in discussion with Defra about this.
BGS	INSPIRE compliant data services available from Nov. Metadata publication deadlines already met. MAREMAP making good progress. Two joint cruises this year. Several high resolution datasets in progress. Seabed sediment data DigSBS250 significantly upgraded and is released in conjunction with marine hard substrate data. These data including bedrock, Digrock250, are available for licence from <a href="http://www.bgs.ac.uk">www.bgs.ac.uk</a> .
MMO	Intends to make as much data as possible available. Issues include data

	protection for fishing activity (VMS) data and the cleansing of legacy consents data from the old licensing system (MCMS).
Marine Scotland	Has a wish for generic tools to help make data available. Needs to look into the status and plans for current and legacy consents data.
DECC	New dataset on licenses in North Sea available soon. Wells dataset on website. Would welcome help from MEDIN on metadata and discussion about the creation of a generic transformation tool.
The Crown Estate	Renewable Energy and Aggregate Lease/Licence Area data available for download on website and looking into the possibility of providing web services to facilitate access to data (WMS/WFS). COWRIE web site is being updated, access to non-confidential data from renewables developers will remain.
DEFRA	Aiming to make all data publicly available (unless there is a reason to prevent this). MEDIN already working on web page to make the MCZ Data Layers (created under MB0103) available.
CEFAS	Internal data management project progressing well with extensive catalogue of Cefas data holdings created. Discussion required on what constitutes reference data and how local and rescue data could be made available without being misleading at a national level. Would welcome generic advice about the best way to provide view and download services.

## Break Out Sessions

Two break out sessions were planned, the first to consider the content and functionality requirements of the reference data web pages on the MEDIN portal and the second to consider the additional resources that would help data holders meet MEDIN (and hence other government) standards. Because of time constraints, the latter session was merged with data holders presentations and data holders were asked to identify any issues and if they felt MEDIN could help, and how. The results of the breakout session are presented in the next section.

## Comments on Reference Data Action Plan and Web Pages

There was unanimous agreement that MEDIN should play a coordinating role with regard to identifying and coordinating the release of reference data and that the Action Plan was a good starting point. It was felt that on the one hand the number of datasets needed to be prioritised, so as to avoid an unmanageable number, but on the other hand best use should be made of MEDIN resources should data holders wish to publish data that has not been prioritised.

It was suggested that use cases (e.g. to underpin emergency response activities) could be used to identify required datasets and rank these on the web pages. It should be noted that this approach was taken to identify the datasets in the Action Plan but MEDIN should be open to new datasets being included as described above. Where possible, ranking by INSPIRE theme was considered more appropriate and helpful with regard to future compliance. However, example use cases could be included to improve familiarity and understanding of how reference data is accessed.

There was agreement that, while accurate data should be the goal, a degree of pragmatism must be included, taking into account the status of current datasets. To mitigate this, metadata should record the standard and provenance of the data, so that this is clear to the user and hence reduce the risk of the data being used inappropriately.

The most authoritative source of data should be utilised but the dataset may not be definitive. Where this is the case, it was agreed that some form of improvement plan should be prepared and published by the data holder. MEDIN has a role to encourage and coordinate this and to provide a link to the improvement plan against each dataset on the web pages of MEDIN Portal.

Access to each dataset should be facilitated by a click through licence, so this does not act as a barrier to re-use. There is a need to simplify licensing as a lot of time goes into ensuring compliance with licensing, especially when many different licenses from different data providers are used.

It was stressed that whatever form the Reference Data pages took they must be accurate and kept up to date. Data holders should keep MEDIN informed of new datasets and updates to existing datasets as soon as they are published so changes to the MEDIN Portal can be expedited.

### **Reference Data Web Pages Conceptual Design**

Key information from the break out session on content and functionality of the Reference Data web pages has been collated and is presented below:

1. Datasets to be categorised by INSPIRE Theme where applicable or listed separately where this is unavailable or undefined (e.g. non protected shipwrecks)
2. Each dataset to have MEDIN compliant metadata created and maintained, with link to XML file on the Reference Data page. Metadata to be created by data owner and published
3. Each dataset to be listed with name, owner, last updated, with an icon link to metadata (XML file), view and download and status.
4. Status information for each dataset to contain flag as red, amber, green with details, caveats and warnings, licence type and details, INSPIRE compliance and a link to a published Quality Improvement Plan (as a pdf) for that dataset
5. There should be an email address for feedback to be sent to MEDIN core team, to be forwarded to data owner as appropriate
6. Functionality to include sending emails to a registered list of recipients when page is updated
7. Where reference data includes a spatial area e.g. Marine Plan Areas then there should be the ability to search metadata records based on this area as the search criteria.

In addition, the following ideas were suggested for consideration:

1. Intelligent search facility based on series of questions which would return datasets for a given use case or purpose e.g. Marine Spatial Planning
2. Amazon style suggestions for other datasets based on those selected by user

3. Basket functionality to collect datasets from disparate locations and to send email with details when ready to download.

### **Follow-Up Actions**

The following actions were recorded from the meeting:

- 1) All presented wished to be kept informed of progress and take an active role in the Working Group. Action: MO/MH
- 2) It seems sensible to combine the effort required to facilitate the publishing of MCZ Data Layers with that required for Reference Data in general. Kay Thorn at BODC is undertaking this work. This would be investigated. Action: MO/Helen Campbell
- 3) Design ideas for the Reference Data web pages from the meeting as described above would be fleshed out, with potential collaboration with the MCZ Data Layer work (item 2 above). Action: MO/MH
- 4) An initial list of Reference Datasets will be compiled with the required information for the web page design and circulated. See Annex II for an initial list. This would be passed to MEDIN (Helen Campbell) to manage as input to the Reference Data pages. List attributes would include information to manage the list e.g. metadata date, URL to external FTP site etc. Action: MO/Helen Campbell
- 5) A questionnaire would be developed to gather the information required from data holders as input from Working Group members. Action: MO/Helen Campbell.

## **Annex I – Working Group Members involved in the Meeting**

William Heaps	ABP
Matt Harrison	BGS
Helen Campbell	BODC
Dave Morris	CEFAS
Janette Lee	CEFAS
Peter Doheny	DECC
Carole Kelly	Defra
Alison Collier	Gardline
John Pepper	John Pepper Consultancy
David Bruce	Marine Scotland
Duncan Hume	MMO
Mike Osborne	OceanWise
Peter Edmonds	The Crown Estate
Mark Halliwell	UKHO
<b>Apologies</b>	
Anne Kemp	Atkins Global
Gaynor Evans	BODC
Mike Rose	Environment Agency
Bev MacKenzie	IMarEST
André Cocuccio*	MCA
Martin Newman	English Heritage
Mark Stileman	Ordnance Survey

\* André submitted a report by email, which was read out by Mike Osborne.

## **Annex II – Presentations included at the Meeting**

1. MEDIN and the Resource and Applications Work Stream (Matt Harrison)
2. The Marine Reference Data Action Plan (Mike Osborne)
3. Government Policy Landscape – Help or Hindrance? (John Pepper)

### Annex III – Reference Datasets Prioritised for inclusion on the MEDIN Portal

Theme	Title	Data Holder(s)
Elevation (Annex II)	Mean High Water Line (Spring Tides in Scotland)	Ordnance Survey / UKHO
	Mean Low Water Line (Spring Tides in Scotland)	Ordnance Survey
	Lowest Astronomical Tide Line (Chart Datum – 0m contour)	UKHO (see below for UK Baseline)
	Hydrographic Survey Data	CHP Data –UKHO on behalf of MCA Non CHP – UKHO on behalf of various
	Sea Bed Digital Elevation Model	Defra (using data supplied by UKHO)
Geology (Annex II)	Seabed Sediments (SBS250)	BGS
	Bed Rock Geology (DigRock250)	BGS
	UKCS Geological Basins	DECC
	Hydrocarbon Fields	DECC
Production and Industrial Facilities (Annex III)	Pipelines (Hydrocarbon)	DECC
	Surface Infrastructure (Hydrocarbon)	DECC
	Subsea Infrastructure (Hydrocarbon)	DECC
	Wells (Hydrocarbon)	DECC
	Offshore Wind Farm Infrastructure (Transmission Cables)	The Crown Estate
	Wave and Tidal Infrastructure (Transmission Cables)	The Crown Estate
	Offshore Wind Farm, Wave and Tidal Infrastructure (Devices, Inter-array Cables, Sub Stations)	UKHO / Licensing Authority (MMO, Marine Scotland, WAG, DOENI)
	Submarine Cables (Telecoms, Power)	Kingfisher Information Service / Licensing Authority (MMO, Marine Scotland, WAG, DOENI)
	Coastal Outfalls / Intakes	Ordnance Survey / UKHO
	Berthing and Harbour Facilities	Ordnance Survey / UKHO
Agricultural and Aquaculture Facilities (Annex III)	Fish Farms	The Crown Estate
Cadastral Parcels (Annex I)	Extent of the Realm	Ordnance Survey on behalf of the Boundary Commissions
	UK Baseline (and Internal Waters)	UKHO on behalf of UK Government
	UK Territorial Sea Limits	UKHO on behalf of UK Government
	UK Fishing Limit	UKHO on behalf of UK Government
	UK Continental Shelf Limits	UKHO on behalf of UK Government

	UK Pollution Zone	UKHO on behalf of UK Government
	UK Gas Importation and Storage Zone	UKHO on behalf of UK Government
	UK Renewable Energy Zone	UKHO on behalf of UK Government
	Renewable Energy Zone (Designation of Area) (Scottish Ministers) Order 2005	UKHO on behalf of the Scottish Government
Protected Sites (Annex I)	SPAs / SACs / MNRs / SSSIs	JNCC
	Protected Wrecks	EH / RCAHMS / RCAHMW / DOENI
Area Management Restriction / Regulation Zones & Reporting Units (Annex III)	UK Continental Shelf Designations	DECC
	Quadrants	DECC
	Licensed Blocks	DECC
	Licensed Sub Areas	DECC
	Offshore Wind Lease Areas (Rounds 1, 2, 3)	The Crown Estate
	Wave and Tidal Energy Lease Areas	The Crown Estate
	Marine Minerals Extraction Lease/Licence Areas	The Crown Estate
	Safety Zones	DECC
	Strategic Environmental Assessment (SEA) Areas	DECC
	Marine Plan Areas	Defra
	Charting Progress 2 Areas	Defra
	ICES Areas	ICES
	National and IMO adopted Traffic Separation Schemes (TSS)	UKHO on behalf of MCA / IMO
	Military Practice & Exercise Areas	MOD (UKHO)
	Licensed Disposal Sites	Cefas (Marine Scotland / DOENI). Cefas consolidates into single database for UK - TBC
	Classified Bivalve Mollusc Harvesting Areas	Cefas. Need equivalent for Scotland and NI.
Shellfish Waters (England) and Shellfish Waters (Wales)	Cefas. Need equivalent for Scotland and NI.	
Sea Regions (Annex III)	SeaVox Areas (International)	IHO (S-23) / SeaDataNet
	Marine Gazetteer Named Sea Areas	MEDIN (Geodata Institute)
	Marine Gazetteer Points of Interest	MEDIN (Geodata Institute)
Shoreline Facilities (TBA)	Coastal Protection	Ordnance Survey / UKHO, EA, SEPA
Wrecks and Obstructions (TBA)	Wrecks and Obstructions	UKHO RCAHMS / RCAHMW / DOENI
Tidal Surfaces (TBA)	Vertical Offshore Reference Frame: - Zones of applicability	UKHO

	<ul style="list-style-type: none"> <li>- Separation Grids</li> <li>- Executable / DLL</li> </ul>	
MPA Data Layers	Biophysical datasets (MB102)	Marine Protected Areas network planning datasets being hosted by MEDIN on behalf of Defra
	Classifying deep water habitats (MB105)	
	Marine pressures datasets (MB106)	

Notes:

- 1) Data holders are as understood by MEDIN and the Working Group at the time of writing. Confirmation from the data holders in most cases has been obtained but not all. Hence, the list should be considered as a ‘work in progress’. Please contact the Working Group Co-Chair, Mike Osborne, directly if you have a comment.
- 2) MEDIN does not endorse or accept any liability whatsoever for use of the above listed datasets. Fitness for purpose should be confirmed directly with the data holder.
- 3) Coastline is included in a number of INSPIRE themes e.g. Hydrography. For simplicity, it is included here in Elevation (Annex II). A number of area datasets include a shoreward boundary that is coterminous with the shoreline although this may be un- or ill-defined.
- 4) National Limits and Boundaries are excluded from INSPIRE Annex I ‘Administrative Units’, which are in fact assigned to the INSPIRE themes ‘Cadastral Parcels’, ‘Hydrography’ (Annex I) and/or ‘Sea regions’ (Annex III) (see <https://inspire-registry.jrc.ec.europa.eu/registers/FCD/items/156>). It is assigned here to Cadastral Parcels, which is to be confirmed.
- 5) Wrecks and Obstructions are not included explicitly in any INSPIRE themes. However, wrecks that are protected e.g. under the Protection of Wrecks Act (1973) or the Protection of Military Remains Act (1986) are included in Protected Sites (Annex I). An area surrounding the protected wreck site may be designated and defined and is included in Protected Sites.