

A Marine Data and Information Strategy for the UK – A MEDIN Discussion Paper for the MSCC

1. Introduction

In the UK Marine Science Strategy published by MSCC¹, MEDIN was tasked to consider whether developing an Information Strategy would “help to address the important issues of discovery and accessibility of data, good data management and the harmonisation and promotion of policies on marine data.” This note provides the MEDIN response to that request.

Two possible approaches were discussed by the MEDIN Executive Team: A relatively light document containing a statement of objectives and key principles, outlining a general approach and identifying the commitments required from UK marine organisations in terms of data and information management; or a more comprehensive document which identifies specific actions and activities needed to deliver the main objectives, including the development of key data resources and management processes to support them.

After discussion, the MEDIN Executive Team agreed to take the former, light document, approach, bearing in mind that MEDIN was established by MSCC’s predecessor to deliver improved management of marine data and information, and so already exists as the vehicle for defining and delivering UK Marine Data and Information Strategy. A draft strategy along these lines is outlined below and recommended to the MSCC. Readers are referred to the MEDIN Business Plan for 2011-2014², which provides detail on activities planned to deliver the strategy over the next three year period

2. Objectives

The ultimate aim is to ensure that valuable marine data, collected often at significant cost and effort, are securely archived and are easily available for re-use, as encapsulated in the phrase: “Collect once, use many times.” The strategy applies to all marine data (public and private sector) and will deliver benefits to all in the marine community.

We suggest that the objectives for a UK Marine Data and Information Strategy could be derived from the above quote from the Marine Science Strategy, as follows:

- To deliver improved discovery and accessibility of marine data.
- To establish good data management practices across the UK marine sector, through adoption of common standards, and the use of the MEDIN network of accredited marine Data Archive Centres as the main archival system.
- To establish a common set of policies on marine data, to provide consistent and clear terms and conditions for data use.

¹ UK Marine Science Strategy, Published by DEFRA on behalf of the MSCC, 2010, <http://www.defra.gov.uk/environment/marine/documents/science/mscc/mscc-strategy.pdf>

² MEDIN Business Plan for 2011-2014, MEDIN Executive Team, September 2010, http://www.oceannet.org/library/downloadable_content/documents/medin_business_plan_2011_14.pdf

The strategy will deliver benefits across the five key areas of Marine Monitoring, Marine Management and Planning, Scientific Research, Public Access to Data, and Reducing Cost, in terms of:

- An improved evidence base for decision making and marine planning.
- Efficiency gains in sourcing and ingesting data to meet project aims
- Improved access to data, supporting its re-use and so maximising past investment in data
- Coordination of marine survey and research activities, resulting in efficient use of expensive marine facilities.
- Consistent and clearer terms and conditions for data use, resulting in lower uncertainty, sustainability and more accurate project cost estimates.
- Support to marine public sector information holders in meeting their INSPIRE and Government Transparency agenda obligations.

3. Delivery Mechanism

The primary delivery vehicle for the Data and Information Strategy will be MEDIN. The MEDIN Business Plan for 2011-2014 defines the priorities for this 3 year period, which for the Marine Data and Information Strategy can be summarised as follows:

- Establish and consolidate single central Marine Data Discovery Tool, which allows users to search across all key UK Marine Data sets.
- Consolidate, and build adoption of, the network of accredited Marine Data Archive Centres, and through these establish streamlined publication of marine data.
- Establish widespread adoption of standards for metadata and data – necessary to ensure easy discovery and reuse of data, and to support onward publication to National and European Initiatives.
- Coordinate and provide access to key reference data sets. A number of core reference data sets have been identified as critical in a wide variety of applications, and MEDIN has an important role in coordinating the specification, creation, publication and maintenance of these data sets.

Note that the MEDIN Business Plan, and annual work programmes are subject to approval by the MEDIN Sponsors' Board, and so through this route a process exists for the updating and renewal of the Data and Information Strategy.

4. Data Collector / Owner Responsibilities

It is important to recognise that the objectives of the Marine Data and Information Strategy can only be achieved if individual members of the marine community recognise and accept their own responsibility in terms of putting in place good data management practices, adopting and adhering to agreed standards, providing funding to support key infrastructure, and working cooperatively with other members of the marine community (through MEDIN).

4.1 Managing and Processing Basic Data

MEDIN has established a common set of Basic Principles for good data management, which it encourages all in the marine sector to adopt.

- Collect data according to agreed standards
- Generate metadata in standardised format.
- Establish clear conditions for data reuse and access. The preference is to apply the Open Government Licence³ so that data are freely available for re-use without limit on purpose.
- Make arrangements for data to be securely archived within recognised data archive centre.

4.2 Funding

The strategy should recognise that funding, in addition to that allocated to internal data management resources, is necessary to support core capability and the maintenance of common data resources. Through its paper on DAC funding⁴, MEDIN has recommended that.

- Organisations with a strategic interest in maintaining a national marine DAC capability are involved in the collaborative funding of this capability.
- Organisations who have signed up to the MEDIN principles of improving management of and access to marine environmental data support the coordination role provided by MEDIN.
- Those who fund the collection of marine data also bear the responsibility to ensure the data are archived and available for re-use.
- Data will be available free of cost from the MEDIN DAC network wherever possible.

4.3 Participation

The UK does not have a centralised marine data base or marine data management capability, but instead key members of the marine sector organisations are working through MEDIN to consolidate a coordinated network. For this approach to work effectively, it is essential that all members of the marine community cooperate in the development and adoption of standards and resources, to ensure that these meet their own requirements, and that their own data are easily accessed and re-used by others. Thus all are encouraged to engage directly in the MEDIN Working Groups that are developing and implementing these resources.

5. Recommendation to MSCC

MEDIN recommends the above approach for a Data and Information Strategy to the MSCC and, if directed, will aim to produce a formal paper to the MSCC for adoption.

³ <http://www.nationalarchives.gov.uk/doc/open-government-licence/>

⁴ MEDIN Data Archive Centre Network – A Recommended Approach for Funding, January 2011,

6. Documents

UK Marine Science Strategy: UK Marine Science Strategy, Published by DEFRA on behalf of the MSCC, 2010, <http://www.defra.gov.uk/environment/marine/documents/science/mscc/mscc-strategy.pdf>

MEDIN Business Plan: MEDIN Business Plan for 2011-2014, MEDIN Executive Team, September 2010, http://www.oceannet.org/library/downloadable_content/documents/medin_business_plan_2011_14.pdf

Approaches to data policy in the marine sector, N.Pittam, C. Hill, S. Saxby, Research Project Report for MEDIN December 2010
http://www.oceannet.org/library/work_stream_documents/key_docs.html

MEDIN DAC Funding Review: MEDIN Data Archive Centre Network – A Recommended Approach for Funding, January 2011

MEDIN Recommended Contract Clauses for Data Collection:
http://www.oceannet.org/marine_data_standards/medin_approved_standards/documents/medin_contract_clause_for_data.pdf