

Title:	MESH Metadata guidance
Author(s):	Natalie Coltman (JNCC)
Document owner:	Natalie Coltman (natalie.coltman@jncc.gov.uk)
Reviewed by:	Jon Davies (JNCC)
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MESH Metadata guidance

The MESH Project is a multinational project that aims to produce seabed habitat maps for north-west Europe and to develop international standards and protocols for seabed mapping studies. The end products include an online metadata catalogue of mapping studies and an online interactive mapping system presenting maps of the seabed habitats around north-west Europe ([MESH webGIS](#)). One of the first tasks for the MESH project was to compile an inventory of existing seabed habitat mapping studies, and produce a [metadata catalogue](#) describing these studies. The metadata catalogue is populated using MS Excel template spreadsheets which are imported into a central MS Access database. This document provides guidance on how to complete the information in each metadata field; the set of metadata fields makes up a metadata record for a seabed habitat mapping study.

Currently the metadata catalogue is separated into two sets of fields; **core** (these are the **yellow fields**) and **additional** (these are the **blue fields**). The list of **core** metadata fields was designed to assist in the prioritisation of datasets to be included in the seabed habitat map for north-west Europe, and shown on the MESH webGIS. It should be possible to enter most of the core fields from abstracts without the metadata provider needing access to the actual datasets. If the metadata provider does not know the information for a field marked as required, the provider should enter the word “Unknown” rather than leave the field blank. Once these core fields have been completed, datasets selected for inclusion in the MESH project will require **additional** fields to be completed. The provider may need access to the datasets themselves in order to complete these additional fields.

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Core fields	Format	Obligation	Guidance
<i>Globally Unique ID</i>	Text (8)	Required	Globally unique identifier (GUI) of dataset. Consists of 2 letter country code (which corresponds to ISO3166-1) plus 6 digits. For example, a dataset from the United Kingdom would be written GB000005. The final 6 characters can be used freely although we suggest sequential numbering of datasets. Each Globally Unique ID must be unique: if you are collating metadata to contribute to the MESH Project, contact us (info@searchMESH.net) to be assigned your starting GUI for your metadata entries.
<i>Locally Unique ID</i>	Text (60)	Optional	Field to identify the dataset internally in the organisation responsible for creating the metadata, e.g. from an internal data management system. For example, "HA9909_WK_MAP_HAB".
<i>Dataset title</i>	Text (255)	Required	The title of the dataset is the name by which it is commonly known. If the dataset doesn't already have a name it should be given a title that describes its contents. This will include the data subject, date range and geographic extent, for example "Seagrass distribution map for Brittany for the period 1998 to 2002".
<i>Geographic location of dataset</i>	Text (255) Set list	Required	The regional sea(s) in which the dataset falls. Select one or more from the following list: Northern North Sea Southern North Sea Eastern Channel Western Channel Bay of Biscay Celtic Sea Atlantic South West Approaches Irish Continental Shelf Irish Sea Minches & West Scotland Scottish Continental Shelf Faroe-Shetland Channel Rockall Trough & Bank Atlantic North West Approaches

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			Contact info@searchmesh.net if you require a shapefile containing these regional seas. If more than one area is selected, they should be separated by a semi-colon (;) and be written in full i.e. "Northern North Sea; Southern North Sea", not "Northern; Southern North Sea"
<i>Date start</i>	Date (dd/mm/yyyy)	Required	Start day, month and year of data capture. If the start day and month of the data capture are not known, use 01/01/yyyy. If no start date is known, enter "Unknown" in this field. If the metadata record relates to a map for which more than one data capture period has been conducted, then the date of the start of the first data capture period should be entered in <i>Date start</i> .
<i>Date end</i>	Date (dd/mm/yyyy)	Required	End day, month and year of data capture. If the end day and month of the data capture are not known, use 31/12/yyyy. If no end date is known, enter "Unknown" in this field. If the metadata record relates to a map for which more than one data capture period has been conducted, then the date of the end of the last data capture period should be entered in <i>Date end</i> .
<i>Theme</i>	Text (30) Set list	Required	The general theme of the dataset. Only Themes in this list should be used – select one only: Boundaries Geological and physical Hydrographical Habitats Communities Species Human use Management and regulation Environmental protection The ' <i>Communities</i> ' theme should be selected for raw benthic sampling data which have not been interpreted to particular habitats, but which consist of species lists and abundances for more than one species. The ' <i>Habitats</i> ' theme should be used for benthic data which have been assigned to habitat categories; ' <i>Species</i> ' refers to datasets describing the distribution of a single taxon.

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<i>Contact</i>	Text (255)	Required	<p>The <i>Contact</i> is the person nominated by the <i>Data owner</i> to act as first point of contact for the dataset. The text in this field must match an entry in the [Organisation] field of the <i>Contact details</i> worksheet. If there is no existing match, add an entry to the <i>Contact details</i> worksheet. The text in the <i>Contact</i> field should start with the full organisation name. Acronyms may be included in parenthesis for clarity e.g. 'Centre for Environment, Fisheries and Aquaculture Science (CEFAS)'. Subsequent text should be entered after a pipe character (' '). Contacts are best distinguished using the Job Title, Department/Team, and City:</p> <p>Joint Nature Conservation Committee Biodiversity Data Specialist, Data Services Team, Peterborough</p> <p>Joint Nature Conservation Committee Seabirds 2000 Coordinator, Seabirds and Cetaceans Team, Aberdeen</p>
<i>Data owner</i>	Memo	Required	<p>Person or organisation that has Intellectual Property Rights (IPR) over the dataset. The text in this field must match an entry in the [Organisation] field of the <i>Contact details</i> worksheet. If there is no existing match, add an entry to the <i>Contact details</i> worksheet.</p> <p>The text in the <i>Data owner</i> field should be the full organisation name. No additional information is to be included. As above, acronyms may be included in parenthesis for clarity e.g. 'Centre for Environment, Fisheries and Aquaculture Science (CEFAS)'.</p>
<i>Usage constraints</i>	Memo	Required	<p>This field is used to indicate the terms and conditions under which people may use the dataset.</p>
<i>Data type</i>	Text (30) Set List	Required	<p>The format of the dataset. Select one from:</p> <ul style="list-style-type: none"> Database or spreadsheet GIS vector polygon GIS vector point GIS vector polyline GIS raster Acoustic image Paper map Other – for example reports, or electronic maps which are not GIS files Unknown

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			If your metadata entry is for a polygon map which was created from point files, spreadsheets and acoustic images, enter "GIS vector polygon" in this field, i.e. the final format of the dataset.
<i>Dataset version</i>	Date (mm/yyyy)	Required	This refers to the version of the dataset i.e. the year of compilation of the dataset, which may be different to the survey date. If the date of the dataset is unknown, the publication date of a report associated with the data should be included. The full reference should also be given in <i>Reference</i> field (Additional Fields). If the year of the dataset is known but the month is unknown, the date should be given as 01/yyyy. If the date of the dataset is known and there is no publication date, the date should be given as 99/9999.
<i>Abstract</i>	Memo	Required	<p>A general summary description of the dataset. Remember that this field appears on the online metadata catalogue and is a primary means for users to identify datasets of interest: try to make the text in this field comprehensive but concise. Include a brief description of the geographical extent and completeness of the data collection, e.g. "Irish Sea 50% of Intertidal zone for Republic of Ireland and Northern Ireland coast", or "The Wash, complete coverage below high tide mark."</p> <p>Include any other information that you feel would be useful for others to make an assessment of the dataset's potential uses and value. For example, whether the dataset requires a substantial amount of processing.</p>
<i>Classification scheme</i>	Text (20) Set list	Required	<p>The classification scheme used to describe the seabed in points or polygons in this dataset. Only schemes in this list should be used:</p> <ul style="list-style-type: none"> EUNIS Lifeforms Local MNCR Substrate only <p>If the dataset does not contain a classification of the seabed into benthic types, then this <i>Classification scheme</i> field should be populated with "NA".</p>

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<i>Classification scheme details</i>	Text (255)	Optional	Details about the habitat classification scheme used to describe the seabed in points or polygons in this dataset. Include also an indication of the precision of assignments if appropriate, for example "Polygons classified to MNCR 97.06 biotope complex level".
<i>Associated datasets</i>	Memo	Optional	The <i>Globally Unique ID(s)</i> of any other relevant datasets; for example a paper map from which an electronic map has been digitised, or an electronic map from which a second map has been derived. Similarly, if a dataset has more than one version recorded in the metadata catalogue, subsequent and/or previous datasets should be recorded here.

Additional fields	Format	Obligation	Comments
Reference	Memo	Optional	A full citation for a report produced based on the dataset (published or unpublished) e.g. author(s), publication date, full title & publishing details
Survey technique	Memo Set list	Required	<p>The survey technique(s) employed to collect the data used to create the dataset. Select one or more survey technique(s) from the list (sub-headings only):</p> <p>1.1.</p> <p>Acoustic techniques</p> <ul style="list-style-type: none"> Multibeam echo sounder Single beam echo sounder Side scan sonar Interferometric sonar AGDS Multibeam ground discrimination 3D seismic imagery Sub bottom profiling <p>Benthic sampling techniques</p> <ul style="list-style-type: none"> Grabs Cores Trawls Dredges

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			<p>Sediment analysis Particle size analysis Geotechnical measurements</p> <p>Video and imaging techniques Towed video Diver video ROV Drop camera Sediment profile imagery</p> <p>Remote sensing techniques Aerial photography Airborne digital imagery Satellite imagery LIDAR</p> <p>Direct observation techniques Diver survey Intertidal survey</p> <p>Other Model Other (please give details in <i>Survey technique details</i> field)</p> <p>Do not use the bold headings in this field. If multiple techniques are selected, they should be separated by a semi-colon (;) and be written in full i.e. "Multibeam echo sounder; Drop camera", not "Multibeam; Camera". To add a survey technique, contact info@searchMESH.net.</p>
Survey technique details	Memo	Required	<p>For each survey technique employed, record any additional comments. For example:</p> <p>Grabs: type of gear, penetration depth, sieve mesh size, volume Dredges: type of gear, length of tow, total area sampled AGDS: track spacing Side scan sonar: operating frequency, swathe width Multibeam echo sounder: operating frequency, resolution, track spacing, percentage coverage of area</p>

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Data collected by	Text (255)	Required	The individual, a group of individuals, organisation or contracting organisation which collected the data. Where a large number of individuals were involved in data collection, the name of the organisation or contracting organisation is preferred as an entry here.
Spatial reference system	Text (20)	Required	The spatial reference system of the dataset, e.g. WGS 1984 (LatLong), WGS84 (UTM zone 31N), OSGB (EN), OSGB (LL) Give as much information as possible. Note that the MESH Data Exchange Formats specifies WGS 1984 Lat Long as the datum and coordinate system to be used for exchange of electronic data within the MESH project. The <i>Spatial reference system</i> field should refer to the datum and coordinates of the original dataset before any conversion.
ICES rectangle	Memo Set list	Required	The ICES rectangle within which the dataset falls. Contact info@searchmesh.net to obtain a shapefile of ICES Rectangles. There are two different grid systems used to define ICES rectangles. For example, the rectangles that cover the Belgian coast may be called: 31F2 which is equivalent to Area IVc block 28 31F3 which is equivalent to Area IVc block 29 Use the first of these codes (31F2 or 31F3). If the dataset falls in more than one ICES rectangle, the rectangles should be separated by a semi-colon (;) and be written in full.
Purpose of study	Text (30) Set list	Required	The purpose for which the study was conducted. Select one or more from: Nature conservation Fisheries Aggregate industry Oil and gas industry Research Coastal development If more than one method is selected, they should be separated by a semi-colon (;) and be written in full.

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Scale of final map	Text (255)	Optional	The scale of the final map, e.g. 1:250000.
Mapping method	Set list	Optional	<p>The method(s) used to create the habitat polygons from the raw data. Select one or more from:</p> <ul style="list-style-type: none"> Mapped directly (e.g. from an image – aerial photo, side scan, backscatter) Expert judgement Interpolated track data Interpolated point data Supervised classification Unsupervised classification Predictive modelling Created by combining datasets Unknown <p>If more than one method is selected, they should be separated by a semi-colon (;) and be written in full e.g. “Expert judgement; Interpolated point data” not “Experts; Interpolated”.</p>