

# Mapping Habitats on the OSPAR List of Threatened and/or Declining Species and Habitats

## Guidance for Supplying Data

Every December, the Joint Nature Conservation Committee (JNCC) requests that Contracting Parties to the OSPAR Commission resubmit their entire OSPAR habitats datasets to the JNCC.

Each Contracting Party should have a national co-ordinator who is responsible for co-ordinating necessary work at the national level. When Contracting Parties submit datasets, JNCC checks the data for consistency, combines into a single database and publishes online. The data can be found on the [EMODnet Seabed Habitats interactive map](#).

Contracting Parties are requested to submit:

1. **Data:**
  - a. Polygon data in shapefiles
  - b. Point data in spreadsheets<sup>1</sup>
2. **Metadata:**

A single Excel file for each dataset containing three sections:

  - a. Contact Information
  - b. Dataset Level Metadata
  - c. Survey Level Metadata

When supplying data, Contracting Parties must notify JNCC of any datasets currently extant in the database which are to be removed and replaced by the new submissions.

## 1 Data (spreadsheet and GIS format)

Contracting Parties are provided with a pre-formatted Excel spreadsheet (OSPAR Habitat Data Template.xls) and ESRI™ shapefile (OSPAR Habitat Data Template.shp) as templates for entering data in the correct format.

An example dataset is also provided (OSPARHab2010GB1v1 Data - Example.xls). Table 1 describes the data exchange format required for submission of data as either a spreadsheet or a GIS file (it is the same for both).

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<sup>1</sup> There is no need to submit polygon centroids in the points dataset

**Table 1 Data exchange format for OSPAR habitat data submitted as a spreadsheet or GIS file; in the ‘Obligation’ column, M stands for mandatory, O stands for optional and C stands for conditional.**

Field name	Field type	Obligation	Description	Guidance
<b>GUI</b>	Text (17)	M	Globally Unique ID for each dataset.	<p><b>“OSPARHab” + year + 2-letter country code</b> (corresponding to ISO 3166-1) <b>+ 1 alpha/numeric character + “v” + version of dataset</b>, e.g. if the Netherlands supplied 2 datasets in 2015, they may be called OSPARHab2015NL1v1 and OSPARHab2015NL2v1. If amendments are made to dataset OSPARHab2015NL2v1 the new version will become OSPARHab2015NL2v2.</p> <p>It is recommended that you relate the "alpha/numeric character" to a broad theme that is consistent across years, for example:</p> <ul style="list-style-type: none"> <li>○ A specific habitat type; or</li> <li>○ Data received from a specific agency; or</li> <li>○ Data sourced from a specific database.</li> </ul>
<b>RecordKey</b>	Text (20)	M	Unique key for each habitat record within a dataset.	<p>For example:</p> <ul style="list-style-type: none"> <li>• 1, 2, 3, 4, 5, 6.....through to 99999999; or</li> <li>• A unique alpha/numeric string "MRMIT60000001E37", "MRMIT60000001E38", "MRMIT60000001E38" etc...</li> </ul>

Field name	Field type	Obligation	Description	Guidance
<b>HabType</b>	Text (60)	M	OSPAR threatened and/or declining habitat.	<p>Choose from:</p> <ul style="list-style-type: none"> <li>• <b>Carbonate mounds</b></li> <li>• <b>Coral Gardens</b></li> <li>• <b><i>Cymodocea</i> meadows</b></li> <li>• <b>Deep-sea sponge aggregations</b></li> <li>• <b>Intertidal <i>Mytilus edulis</i> beds on mixed and sandy sediments</b></li> <li>• <b>Intertidal mudflats</b></li> <li>• <b>Littoral chalk communities</b></li> <li>• <b><i>Lophelia pertusa</i> reefs</b></li> <li>• <b>Maerl beds</b></li> <li>• <b><i>Modiolus modiolus</i> horse mussel beds</b></li> <li>• <b>Oceanic ridges with hydrothermal vents/fields</b></li> <li>• <b><i>Ostrea edulis</i> beds</b></li> <li>• <b><i>Sabellaria spinulosa</i> reefs</b></li> <li>• <b>Seamounts</b></li> <li>• <b>Sea-pen and burrowing megafauna communities</b></li> <li>• <b><i>Zostera</i> beds</b></li> </ul>
<b>HabSubType</b>	Text (60)	M	Sub-type of OSPAR threatened and/or declining habitat (where applicable).	<ul style="list-style-type: none"> <li>• For HabType = <i>Zostera</i> beds: either “<b><i>Zostera marina</i> beds</b>” or “<b><i>Zostera noltii</i> beds</b>” or “<b>Unknown</b>”</li> <li>• For HabType = Intertidal mudflats: either “<b>Marine intertidal mudflats</b>” or “<b>Estuarine intertidal mudflats</b>” or “<b>Unknown</b>”</li> <li>• For HabType = <i>Sabellaria spinulosa</i> reefs:</li> </ul>

Field name	Field type	Obligation	Description	Guidance
				<p>either “<b><i>Sabellaria spinulosa</i> reefs on rock</b>” or “<b><i>Sabellaria spinulosa</i> reefs on mixed (sediment) substrata</b>” or “<b>Unknown</b>”</p> <ul style="list-style-type: none"> <li>For all other habitats: “<b>Not Applicable</b>”</li> </ul>
<b>AltHabType</b>	Text (254)	O	Habitat as described in an alternative system (e.g. its original description, a more detailed description or equivalent EUNIS code)	Free text; e.g. “Gorgonian coral garden” or “A5.5331”
<b>AltHabClas</b>	Text (254)	C	<p>Name (and version if appropriate) of the Habitat classification system or list in which the value recorded in AltHabType is defined.</p> <p>Conditional – must be completed if AltHabType is completed.</p>	<p>In order of preference:</p> <ul style="list-style-type: none"> <li>A URL to a controlled vocabulary list, webpage or document that contains a definition of the habitat; <ul style="list-style-type: none"> <li>E.g. “http://jncc.defra.gov.uk/MarineHabitatClassification”</li> </ul> </li> <li>The name and version of the classification system. <ul style="list-style-type: none"> <li>E.g. “EUNIS version 2007-11”</li> </ul> </li> </ul>
<b>AltHabRel</b>	Text(20)	C	<p>Relationship between AltHabType and OSPAR HabType definitions, from the EU INSPIRE <a href="#">QualifierLocalName codelist</a>.</p> <p>Conditional – must be completed if AltHabType is completed.</p>	<p>One of the following:</p> <ul style="list-style-type: none"> <li>“<b>congruent</b>” (habitat definitions are identical);</li> <li>“<b>included in</b>” (AltHabType is conceptually a subtype of the OSPAR HabType);</li> <li>“<b>includes</b>” (The OSPAR HabType is conceptually a subtype of AltHabType);</li> <li>“<b>overlaps</b>” (There is a certain overlap between the AltHabType and OSPAR HabType, but none of the other specific relationships (congruent, included in, includes) holds.</li> </ul>

Field name	Field type	Obligation	Description	Guidance
<b>HabStatus</b>	Text (20)	M	Presence or absence of habitat. This field is to allow for changes in distribution over time, where a habitat may have existed in the past but is no longer present. The original record indicating the presence of the habitat in the past should remain in the dataset.	Choose from: <ul style="list-style-type: none"> <li>• <b>Present</b></li> <li>• <b>Absent [GUI-RecordKey of original record]</b> E.g. if the original record has GUI = OSPARHab2011GB5v1 and RecordKey = 23, enter "Absent OSPARHab2011GB5v1-23" in a new record.</li> </ul>
<b>Certainty</b>	Text (9)	M	Gives an indication of the certainty of identification of the habitat type (HabType).	Choose from: <ul style="list-style-type: none"> <li>• <b>Certain</b> (habitat matches the definition, and there is documentary/visual evidence that this habitat does exist/had existed previously)</li> <li>• <b>Uncertain</b> (habitat is suspected to exist/had existed, but there is no documentary/visual evidence)</li> <li>• <b>Unknown</b></li> </ul>
<b>Determiner</b>	Text (254)	M	Name of person and/or organisation that identified the OSPAR habitat.	Free text; e.g. "JNCC"
<b>DetDate</b>	Date	M	Date of determination of the OSPAR habitat.	<p>All dates must be supplied as text in the format <b>YYYY-MM-DD</b> (ISO date format); text format is required because Excel does not recognise dates before 1900-01-01 in date format.</p> <p>If the data were originally recorded in the OSPAR habitat classification system the (latest) date of habitat identification should be entered.</p> <p>If the data were translated into the OSPAR habitat classification system from another classification, the date of translation should be entered.</p>
<b>SurveyKey</b>	Text (30)	O	<b>Unique</b> key to divide up the dataset into logical divisions (e.g. representing real separate surveys, different survey	<b>2-letter country code (corresponding to ISO 3166-1) + "_" + free-text</b>

Field name	Field type	Obligation	Description	Guidance
			techniques, data from different sources, museum collections, databases etc.). SurveyKey links to the Survey Level Metadata form (see Section 2), where survey details are described in full.	<p><b>code (e.g. NO_Cruise2010110)</b></p> <p>Each SurveyKey must have an associated Survey Level Metadata form (see Section 2).</p> <p>Each SurveyKey must be unique to an individual survey or data source. SurveyKeys may be reused across datasets, but only if the data are truly related, please see the Survey Level Metadata of the currently published OSPAR database for a list of SurveyKey values used to date.</p>
<b>StartDate</b>	Text (10)	M	Date the habitat was first recorded at this location.	<p>All dates must be supplied as text in the format <b>YYYY-MM-DD</b> (ISO date format); text format is required because Excel does not recognise dates before 1900-01-01 in date format.</p> <p>For repeat-sample point stations, the dates should refer to the first and last time the habitat was recorded at the station.</p> <p>For single-sample point stations, the dates should be identical.</p> <p>For polygons, the dates should refer to the dates of the survey.</p>
<b>EndDate</b>	Text (10)	M	Date the habitat was last recorded at this location.	

Field name	Field type	Obligation	Description	Guidance
<b>DateType</b>	Text (2)	M	<p>A one or two character code that identifies the type of dates used in StartDate and EndDate.</p> <p>Explicitly stating the code avoids any ambiguity, which might lead to subtly different interpretations.</p>	<p>Choose from:</p> <ul style="list-style-type: none"> <li>• <b>D</b> Dates specified to the nearest day.</li> <li>• <b>DD</b> Dates specified to a number of days.</li> <li>• <b>O</b> Dates specified to the nearest month (first day of the month to the last day of the month).</li> <li>• <b>OO</b> Dates specified to a range of months (first day of the start month to the last day of the end month).</li> <li>• <b>Y</b> Dates specified to the nearest year (first day of the year to the last day of the year).</li> <li>• <b>YY</b> Dates specified to a range of years.</li> <li>• <b>-Y</b> Only EndDate to the nearest year known (leave StartDate blank).</li> <li>• <b>ND</b> or <b>U</b> 'No date' or 'unknown'. Enter the date the dataset was compiled in EndDate and leave StartDate blank.</li> </ul>
<b>PlaceName</b>	Text (254)	O	Name of place referred to in reference to the feature e.g. on a chart or in a report.	Free text; e.g. "Darwin Mounds"
<b>DataOwner</b>	Text (254)	M	Name of person or organisation that own the data.	Free text; e.g. "JNCC"
<b>Accuracy</b>	Long integer (Precision 10)	O	Spatial positioning accuracy of data points/polygons.	Value in metres; e.g. "10" means the given position of the habitat is accurate to $\pm 10$ metres.
<b>Latitude</b>	Long integer (Precision 10)	M (point data only)	Latitude of the recorded habitat (point data only).	Must use World Geodetic System 1984 (WGS84) geographic coordinate system, and decimal degrees (up to 8 decimal places).
<b>Longitude</b>			Longitude of the recorded habitat (point data only).	
<b>[Optional extra fields]</b>	-	O	Add any other data you would like to record; a description of these field(s) is then to be given in the Dataset Level Metadata form (see Section 2). Please add as many fields as you like to display extra information you may possess.	<p>Please keep field names to <math>\leq 10</math> characters and free of spaces, to allow import into GIS software.</p> <p>e.g. field name = "Salinity", "Comments", "Depth", etc.</p>

Note 1: in the Excel spreadsheet template, click on the field names for a short description of the fields.

Note 2: drop-down lists are programmed into the spreadsheet template to ensure data are entered correctly; however, please be aware that when data are copied and pasted into the spreadsheet, these lists are deleted, which removes your ability to automatically validate your data. To account for this issue, conditional formatting has also been programmed into the data spreadsheets; this means that if data are enter incorrectly, the cell will turn red.

To preserve conditional formatting when pasting data into the spreadsheet, choose the '**Paste Values**' option.



## 2 Metadata

Contracting Parties are provided with an Excel spreadsheet entitled OSPAR Habitat Metadata Template.xls; one spreadsheet should be completed for each dataset (i.e. each GUI). The file is divided into three sections:

### 1. Contact Information

This may be the national co-ordinator or the specific person/organisation that collation the particular dataset.

### 2. Dataset Level Metadata

Use this form to describe the dataset as a whole; this includes its geographic coverage and use constraints. Additional data fields are also defined here (see bottom row of Table 1).

The following fields are mandatory and must be completed: GUI, Title, Description, Co-ordinate System, Geographic Coverage, Temporal Coverage, Use and Access Constraints.

### 3. Survey Level Metadata

A new Survey Level Metadata form is completed for each SurveyKey cited in the data. (Three are present in the metadata template file; to add a new form, right click on one the Survey Level Metadata worksheet tabs, click *Move or Copy* and select the box labelled *Click to copy*.)

The purpose of this form is to minimise the amount of repeated information in the data tables and the total size of the datasets. It is also this system that is used on the OSPAR mapping website.

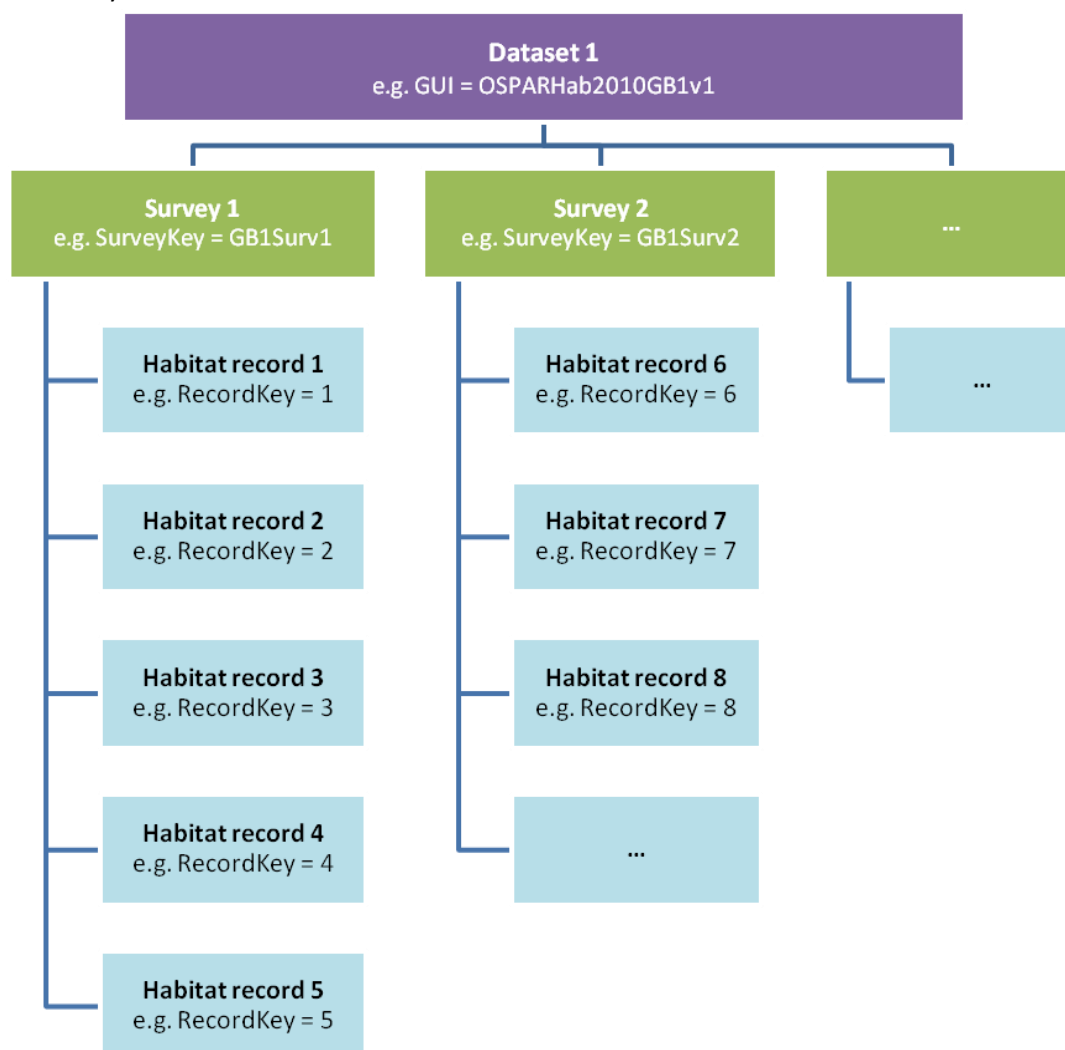
Use SurveyKey to divide the dataset in any way you wish (e.g. representing real separate surveys, survey techniques, data from different sources, museum collections, databases, etc.). Survey techniques and data sources are then elaborated on in the Survey Level Metadata forms.

If no Survey Level Metadata forms are completed, Dataset Level Metadata must be completed in full.

Guidance for filling in the metadata forms is given in the file itself and an example metadata file is also provided to accompany the example datasets (OSPARHab2010GB1v1 Metadata - Example.xls).

### 3 Data Structure

Figure 1 shows the general structure of a dataset with examples showing the use of GUI, SurveyKey and RecordKey.



**Figure 1** Flow chart showing relationships between data (habitat records) and metadata (information at the dataset level and the survey level) for a dataset.

### 4 Naming Conventions

Clearly naming the various submitted files is important for effective data storage; therefore the following conventions are advised:

**Data files:**

[GUI] & "Data." & [file format]

e.g. OSPARHab2010NO1v1 Data.shp

OSPARHab2010NO2v1 Data.xls

**Metadata files:**

[GUI] & "Metadata.xls"

e.g. OSPARHab2010NO1v1 Metadata.xls

OSPARHab2010NO2v1 Metadata.xls

## 5 Folder Contents

Contracting Parties are supplied with a folder containing the following:

**Templates:**

OSPAR Habitat Data Template.xls

OSPAR Habitat Data Template.shp

OSPAR Habitat Metadata Template.xls

**Example Datasets:**

OSPARHab2010GB1v1 Data - Example.xls

OSPARHab2010GB1v1 Metadata - Example.xls

**Documents:**

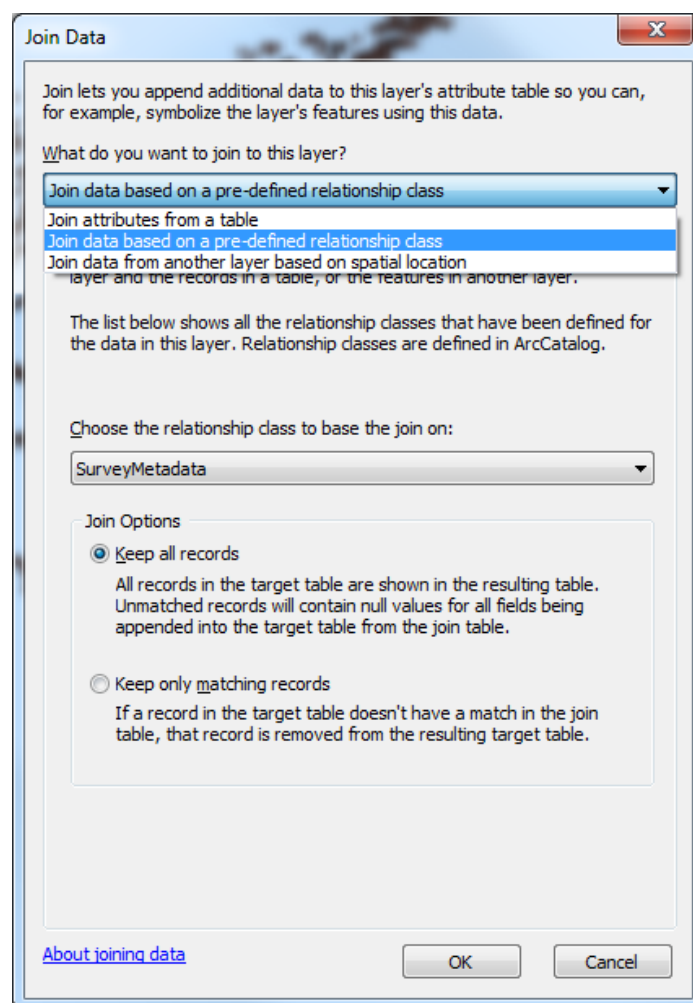
OSPAR Habitat Data Submission Guidance v1.5.pdf (*This document*)

## 6 The database

The latest combined database is available in both an ESRI File Geodatabase and Spatialite database. Two spatial layers are included: Points (containing point locations of habitats) and Polygons (containing polygonal extent information about habitats). Dataset level metadata and survey level metadata are included as two tables in the database: DatasetMetadata and SurveyMetadata.

In the ESRI file geodatabase, pre-defined “Relationship classes” are also present, which define the relationships between the data (Points and Polygons) and metadata. For example, using ArcGIS, the metadata information can be added to the Points or Polygons data tables by doing the following:

1. Right-click on layer name in ArcMap
2. Select Joins and Relates > Join...
3. Choose to Join data based on a pre-defined relationship class:



4. Choose the relationship class to base the join on (DatasetMetadata or SurveyMetadata) and click OK.