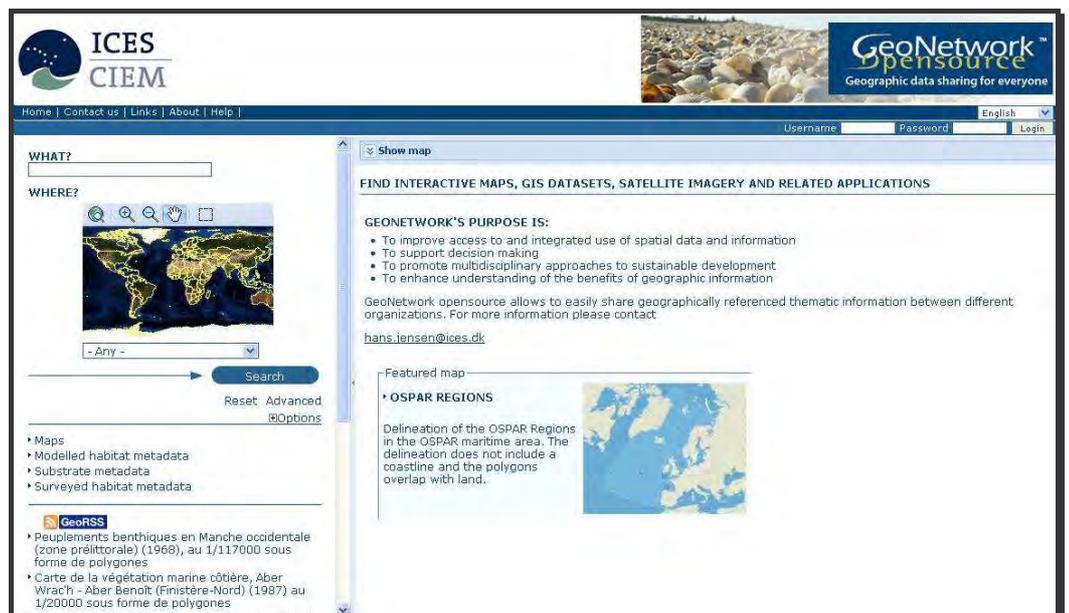


Metadata Capture User Guide

For the Working Group on Marine Habitat Mapping (WGMHM)
 of the International Council for the Exploration of the Sea (ICES)

GeoNetwork software, Version 2.6.3



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1. Preface

The Working Group on Marine Habitat Mapping (WGMHM) 2008 recognised that National Status Report information remains hidden within the WG reports rather than being widely available, e.g. via a web portal. It also recognised that the reports do not build, year by year, into a compiled catalogue of mapping studies. The proposed solution is to make the outlines of habitat mapping areas available online, linked to simple metadata.

Following 2009 and 2010 WGMHM meeting recommendations, work has been done through a collaboration between the ICES data Centre and Ifremer to build a webGIS application showing the progress of habitat mapping throughout the ICES area. The habitat outline maps are now integrated in the ICES Spatial Facility (<http://geo.ices.dk>) as special layers with some additional functionality linking habitat map outlines with their metadata description. The ICES Spatial Facility host a collection of reference maps and other maps from the ICES community, that can be displayed in combination with the habitat maps. The ICES Spatial Facility is based on:

- GeoServer (<http://geoserver.org/display/GEOS/Welcome>) – Open source software for sharing of spatial data (features WMS/WFS/WCS)
- GeoNetwork (<http://geonetwork-opensource.org/>) Open source software for metadata handling

The ICES Spatial Facility integrates the functionalities of GeoServer and GeoNetwork and creates the important linkage between the spatial datasets and their metadata.

Following 2011 WGMHM comments on the explanation of the metadata fields, this document provides guidelines to use the GeoNetwork opensource software.

This guide is based on the following document: GeoNetwork User Manual, Release 2.6.4 by the GeoNetwork Opensource Developers, 2011, <http://geonetwork-opensource.org/manuals/2.6.4/users/GeoNetworkUserManual.pdf>

2. Introduction

The metadata profile used by GeoNetwork opensource to describe geographic data stored in the ICES catalogue is based on the International standard ISO 19115:2003, encoded according to the implementation scheme 19139:2007.

GeoNetwork provides a set of simplified metadata templates based on the standards ISO19115/19119. You can switch to another view of the template at any time while editing.

- The most important fields are presented and described in the **Default view**.
- The entire metadata profile is presented in an advanced view. The visualization and edition of the entire metadata structure is organised **by package** (12 sections) or **by ISO group** (ISO minimum, ISO Core, ISO all).
- The **XML view** shows the entire content of the metadata in the original hierarchical structure, which is made up of tags and closing tags. It requires knowledge of XML language.

The Default view shows a template called “Template for WGMHM (ISO 19115:2003/19139)”:

- **It is highly recommended to use this template**, which shows the main fields from different categories of information in a single view. The template is similar to the default view for vector data in GeoNetwork, but some modifications have been added.
- However, if you need to add more metadata elements, you can switch to the advanced view by package or by ISO group at any time while editing.

Using basic commands of the editor:

- Some fields are mandatory. They are flagged with a red asterisk *****.
- You can add multiple fields by clicking on the  symbol next to the element. You can also delete existing fields by clicking on the  symbol.
- You can change the field order of the same kind by clicking on the symbol  next to the element.
- The symbol  allows the opening, for the fields Descriptive keywords and Reference system information, of a thesaurus.
- Some fields are free text fields. Therefore, you can enter text in the field. Some fields are drop down lists. You must select only one option from the list. Some fields are pre-filled with a default value which can be modifiable or not.
- A standard definition for each field can be read by a left-click with the mouse on the element name.

This manual is intended for practical use, therefore the fields are presented in the order they appear in the default view.

3. Adding new metadata

3.1. Creating a new record

Administrators wishing to load new metadata should connect to the GeoNetwork interface where they can manage all their metadata:

<http://geo.ices.dk/geonetwork/srv/en/main.home>

Beforehand, they must register with the overall administrator of the system, Hans Mose Jensen (hans.jensen@ices.dk).

In the home page, in top left menu, click on the Administration tab and then select New metadata from the list on the admin page.

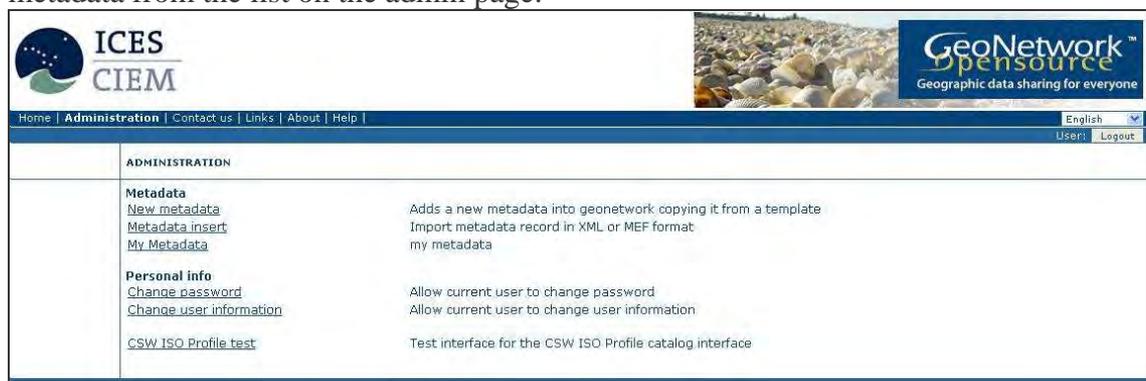


Figure 3.1: Administration panel

From the Metadata creation page, select the "Template for the WGMHM (ISO19115:2003/19139)" and "WGMHM" from the drop-down menus and click on Create.

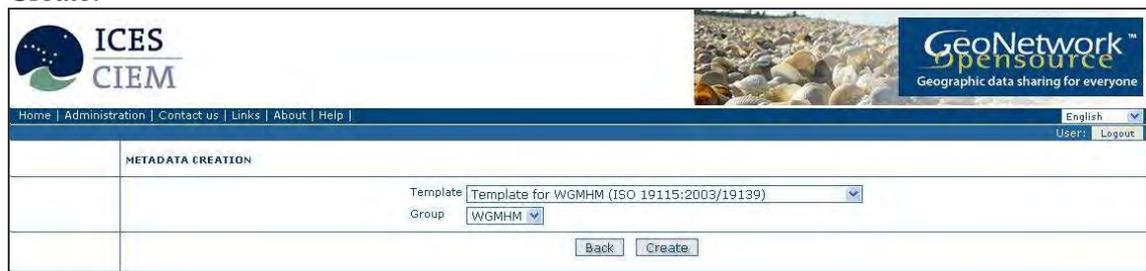


Figure 3.2: Template and Group selection

3.2. Closing the editing session



Figure 3.3: Row buttons in editing session

After creating a new metadata, you could validate the current metadata record against standard rules and recommendations by clicking on "Check". The validation report displays the list of rules checked and their status.

If you wish to continue creating your metadata at a later time, you can click on "Save" or "Save and close".

3.3. Creating a thumbnail

To complete the metadata you can also insert a thumbnail image of the data. From the editing menu, click on the "Other actions" button and then select Thumbnails.

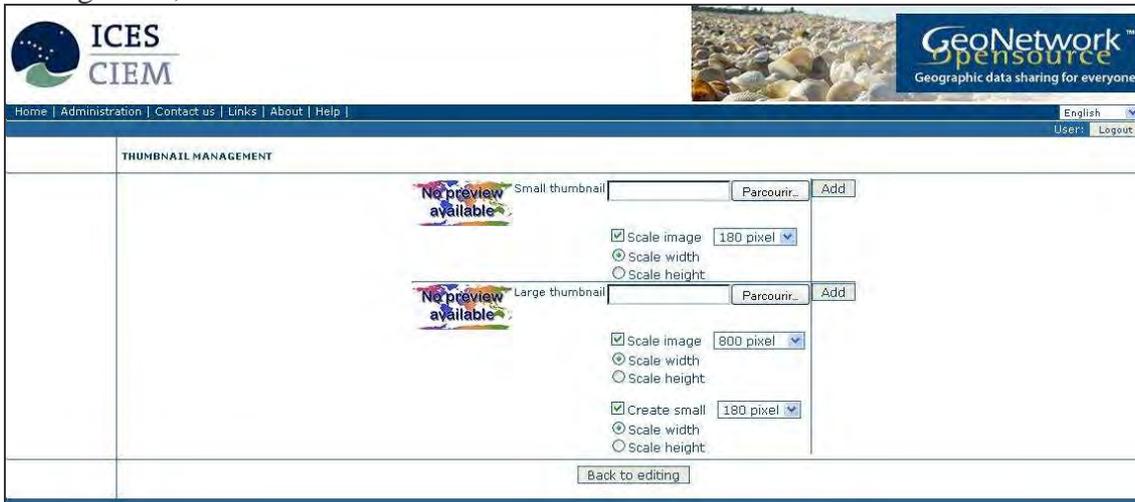


Figure 3.4: the thumbnail management panel

Using the Large thumbnail option allows you to create both a small and large thumbnail in one go. A large thumbnail allows users to properly evaluate the data usefulness. It will be a significant reproduction of the real dataset, possibly inclusive of the legend. You can use GIF, PNG and JPEG images as inputs for the thumbnails.

A pop-up window will appear allowing you to browse your files on your computer. Select the file you wish to create a thumbnail with by double-clicking on it.

Then click on "Add" and on "Back to editing". Your thumbnail will be added and displayed on the editing page.

3.4. Assigning the privileges and map category

Finally you have to set the privileges and category to your metadata. On top of each individual record, you will always see a row of buttons including an "Other actions" button. Click on it and select "Privileges" then "Categories".

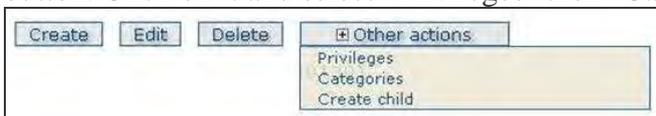


Figure 3.5: "Other actions" button of individual record

In the privileges action, you can choose all rights for your group (WGMHM).

Groups	Publish	Download	Interactive Map	Featured	Editing	Notify	
All	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Set All
Guest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Clear All
WGMHM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set All				
							Clear All

Figure 3.6: Privileges settings

A brief description for privileges already selected:

Publish: users in the specified group(s) are able to see the map, i.e. if searching with matching criteria;

Download: users in the specified group(s) are able to download the map;

Interactive map: users in the specified group(s) are able to get an interactive map;

Featured: when selected, the map is placed in the features maps on the home page;

Notify: users in the WGMHM group receive notification that the map has been uploaded.

Categories	Assigned
Maps	<input type="checkbox"/>
Modelled habitat metadata	<input type="checkbox"/>
Substrate metadata	<input type="checkbox"/>
Surveyed habitat metadata	<input type="checkbox"/>

Figure 3.7: Category setting

In order to facilitate searching for specific habitat maps, each metadata description should be categorized in one of the three categories created in GeoNetwork for WGMHM habitat maps: "Modelled habitat metadata", "Substrate metadata" and "Surveyed habitat metadata".

The other categories (presently only "Maps") are being used for background maps, i.e. ICES statistical areas, OSPAR regions or a review for each category above. As the ICES Spatial Facility is used by the entire ICES community other map types are expected to be added to the collection.

4. Identification information

This section contains information specific to the data (name, creation date, geographical area, etc). It remains within the strict framework of the information on the data.

The screenshot shows a web form titled "Identification info". On the left side, there are labels for various fields: "Title *", "Alternate title [icon] [icon]", "Date *", "Date type *", "Edition [icon]", "Presentation form [icon] [icon]", "Abstract *", "Purpose [icon]", and "Status [icon] [icon]". On the right side, the corresponding input fields are: a text box containing "Template for WGMHM (ISO 19115:2003/191...", an empty text box, a date input field with a "Clear" button, a dropdown menu set to "Publication", an empty text box, a dropdown menu set to "Digital map", a large empty text area (highlighted with a red border), another empty text area, and a dropdown menu set to "On going".

Figure 4.1: Default view - Identification info (1)

4.1. Title*

The title of the resource is the name by which it is formally known. It must be sufficiently precise to describe the data content. The title may include a few words about the map contents, year of publication, scale and type of layer. It can remain in the language of origin.

Examples:

- *Carte des peuplements macrobenthiques de la Baie de Seine et de la Manche centrale sud (1976), au 1/117000 sous forme de polygones*
- *Chichester Harbour intertidal vegetation survey 2005*

4.2. Alternate title*

Each alternative title **MUST ABSOLUTELY** correspond to a record in the Data Exchange Format (DEF). The alternate title of the dataset is in the form of a two letter country code (which correspond to [ISO 3166-1](#)) plus six digits.

Examples:

- *GBxxxxxx for United Kingdom,*
- *IExxxxxx for Ireland*
- *DKxxxxxx for Denmark*

4.3. Date* and Date type*

These fields are used to indicate one or more representative dates in the life of the data (creation, publication, revision). It must include at least one date.

The screenshot shows a web form with two main fields: 'Date*' and 'Date type*'. The 'Date*' field is an empty text input box with a 'Clear' button to its right. The 'Date type*' field is a dropdown menu currently showing 'Publication' selected, with other options 'Creation' and 'Revision' visible. To the right of the form is a calendar for July 2011, showing the days of the week and dates from 1 to 31. The time is displayed as 14:17.

Figure 4.2: Identification info - Date and Date type

When the date is incomplete, it is shown "01" for the day and January for the month. The Date type can specify what kind of event matches the date entered. These dates are the dates of digital documents:

- o date of creation of digital data,
- o the date of publication (or distribution of the data or scientific publication)
- o the review date (or update or version) of the digital data.

4.4. Presentation form

This field specifies the type of presentation of the data. Default: Digital map. You can change it by using the drop down list.

4.5. Abstract*

This field includes a brief and significant summary of the content of the resource:

- a short description of the geographical extent,
- a summarized origin of the document,
- short description, for example, of the type of data, study method (techniques, year(s) of the study ...), mapping methodology, digitizing methodology, scale of use...

Examples:

- o *Carte des peuplements macrobenthiques de la Baie de Seine et de la Manche centrale sud (1976), au 1/117000 sous forme de polygones*

This map of the macrobenthic communities of the Seine Bay and south-central English Channel is reproduced from the map (scale = 1:117000) by Franck Gentil and Louis Cabioch from the Roscoff Oceanological Observatory, entitled "Carte des peuplements macrobenthiques de la Baie de Seine et de la Manche centrale sud" (Map of the macrobenthic communities of the Seine Bay and south-central English Channel) published in 1997. The documents, at the origin of this data set,

are the result of research works made on the macrobenthic communities of the Seine Bay, as part of a systematic survey of the English Channel benthos. To realise this survey, 436 samples were collected between 1971 and 1976 on board the *Pluteus II*, a CNRS oceanographic vessel run by the Roscoff Biological Station (CNRS = Centre National de la Recherche Scientifique / French National Centre for Scientific Research).

This map was digitized in 2003, as part of the REBENT programme, i.e. the surveying network for the benthic fauna and flora. The original legend is transferred to the "ORIG_HAB" attribute data field. The harmonization with the EUNIS typology is in progress, as part of the REBENT and Interreg-MESH programmes.

- **Habitat suitability map for mussel beds in Dutch Wadden Sea**

The dataset represents the habitat suitability for mussel beds in the Dutch Wadden Sea. The dataset is the result of a model (Multifactorial GLM). Eight underlying datasets such as depth, orbital velocity, current velocity, sediment composition, mussel beds area's, etcetera have been combined to create a habitat suitability index (in percentage) for mussel beds .

4.6. Purpose

Purpose for which the study was conducted

Examples:

- Nature conservation, Research ...

4.7. Status

Status of the data within the drop down list

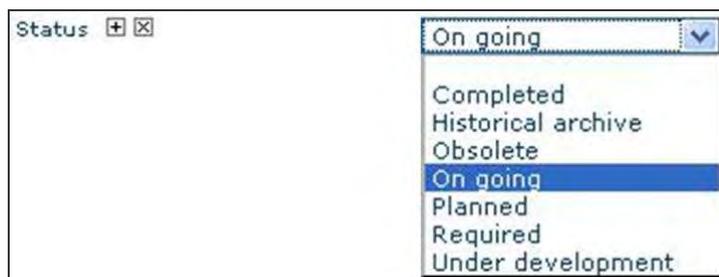


Figure 4.3: Identification info - Status

4.8. Point of contact

This section specifies the person(s) or the organization(s) to contact for additional information. You must fill in at least the Organisation name, the Role and the Electronic mail address.

Figure 4.4: Default view - Identification info (2) - Point of contact

The organisation name: identification of the responsible organisation associated with the data. This field is mandatory if Individual name is not entered.

The role*: this element defines the role of the responsible organisation in relation to the data. Choose an item in the drop down list.

Tableau 4.1: Identification info - Point of contact - drop down list and definition

Role	Definition
Author	Party who authored the resource
Custodian	Party that accepts accountability and responsibility for the data and ensures appropriate care and maintenance of the resource
Distributor	Party who distributes the resource
Originator	Party who created the resource
Owner	Party who owns the resource
Point of contact	Party who can be contacted for acquiring knowledge about or acquisition of the resource
Principal investigator	Key party responsible for gathering information and conducting research
Processor	Party who has processed the data in a manner such that the resource has been modified
Publisher	Party who published the resource
Resource provider	Party who supplies the resource
User	Party who uses the resource

The Electronic mail address*: an email address group can be specified.

4.9. Maintenance and update frequency*

Figure 4.5: Default view - Identification info (3)

This section specifies the frequency of scheduled update of the data, according to a closed list of possibilities.

If any changes are scheduled, select "Not planned" in the dropdown list.

If the frequency for the scheduled update is not available in the list, use the code "Unknown", and specify the frequency in free text either in the <Maintenance note> or in the <User defined maintenance frequency>.

Tableau 4.2: Identification info - Maintenance - drop down list and definition

Maintenance	Definition
Annually	Data is updated every year
As needed	Data is updated as deemed necessary
Biannually	Data is updated twice each year
Continual	Data is repeatedly and frequently updated
Daily	Data is updated each day
Fortnightly	Data is updated every two weeks
Irregular	Data is updated in intervals that are uneven in duration
Monthly	Data is updated each month
Not planned	There are no plans to update the data
Quarterly	Data is updated every three months
Unknown	Frequency of maintenance for the data is not known
Weekly	Data is updated on a weekly basis

4.10. Descriptive keywords

Keywords can help searching. Enter keywords that describe your map.

Each keyword must be specified by a type. The type gives you a choice of five categories which allow you to specify whether the keyword relates to discipline (Discipline), places (location), geological strata (stratum), periods (time), and themes (theme). If there is any doubt about the type of keyword, it falls under the “Theme” category.

It is best to enter each keyword in a new field depending on the type of keyword.



Figure 4.6: Identification info - Several descriptive keywords

Default theme keywords: Marine habitat mapping
 Habitats and biotopes, from GEMET – INSPIRE themes thesaurus

Figure 4.7: Default view - Identification info (4) - Descriptive keywords

You can modify these keywords or add new ones.

For example, if you want to change the keyword "habitats and biotopes" from the GEMET – INSPIRE themes thesaurus, click on the symbol next to the element. Then chose the "Inspire_themes.rdf" thesaurus and select the keyword(s) which correspond to your thematic.

Figure 4.8: Identification info - Descriptive keywords - Keywords selection

Tableau 4.3: GEMET - INSPIRE themes thesaurus

INSPIRE theme	Definition
Addresses	Location of properties based on address identifiers, usually by road name, house number, postal code.
Administrative units	Units of administration, dividing areas where Member States have and/or exercise jurisdictional rights, for local, regional and national governance, separated by

INSPIRE theme	Definition
	administrative boundaries
Agricultural and aquaculture facilities	Farming equipment and production facilities
Area management/restriction/regulation zones and reporting units	Areas managed, regulated or used for reporting at international, European, national, regional and local levels. Includes regulated fairways at sea or large inland waters, areas for the dumping of waste, prospecting and mining permit areas, coastal zone management areas ...
Atmospheric conditions	Physical conditions in the atmosphere
Bio-geographical regions	Areas of relatively homogeneous ecological conditions with common characteristics
Buildings	Geographical location of buildings
Cadastral parcels	Areas defined by cadastral registers or equivalent
Coordinate reference systems	Systems for uniquely referencing spatial information in space as a set of coordinates (x, y, z) and latitude and longitude and height, based on a geodetic horizontal and vertical datum
Elevation	Digital elevation for land, ice and ocean surfaces. Includes terrestrial elevation, bathymetry and shoreline
Energy resources	Energy resources including hydrocarbons, hydropower, bio-energy, solar, wind ... where relevant including depth/height information on the extent of the resource
Environment monitoring facilities	Location and operation of environmental facilities includes observation and measurement of emissions, of the state of environmental media and of other ecosystem parameters by or on behalf of public authorities
Geographical grid systems	Harmonised multi-resolution grid with a common point of origin and standardised location and size of grids cells.
Geographical names	Names of areas, regions, localities, cities, suburbs, towns or settlements, or any geographical or topographical feature of public or historical interest
Geology	Geology characterised according to composition and structure. Include bedrock, aquifers and geomorphology

INSPIRE theme	Definition
Habitats and biotopes	Geographical areas characterised by specific ecological conditions, processes, structure, and (life support) functions that physically support the organisms that live there
Human health and safety	Geographical distribution of dominance of pathologies, information indicating the effect on health or well-being of humans linked directly or indirectly to the quality of the environment
Hydrography	Hydrographic elements, including marine areas and all other water bodies and items related to them, including river basins and sub-basins
Land cover	Physical and biological cover of the earth's surface including artificial surfaces, agricultural areas, forests, (semi-)natural areas, wetlands, water bodies
Land use	Territory characterised according to its current and future planned functional dimension or socio-economic purpose (e.g. residential, industrial, commercial, agricultural, forestry, recreational)
Meteorological geographical features	Weather conditions and their measurements
Mineral resources	Mineral resources including metal ores, industrial minerals ... where relevant including depth/height information on the extent of the resource
Natural risk zones	Vulnerable areas characterised according to natural hazards, e.g. floods, landslides and subsidence, earthquakes ...
Oceanographic geographical features	Physical conditions of oceans (currents, salinity, wave heights...)
Orthoimagery	Geo-referenced image data of the Earth's surface, from either satellite or airborne sensors
Population distribution – demography	Geographical distribution of people, including population characteristics and activity levels, aggregated by grid, region, administrative unit or other analytical unit
Production and industrial facilities	Industrial production sites, including installations concerning integrated pollution prevention and control and water abstraction facilities, mining, storage sites
Protected sites	Area designed or managed within a framework of international, Community and Member States'

INSPIRE theme	Definition
	legislation to achieve specific conservation objectives
Sea regions	Physical conditions of seas and saline water bodies divided into regions and sub-regions with common characteristics
Soil	Soils and subsoil characterised according to depth, texture, structure and content of particles and organic material, stoniness, erosion, where appropriate mean slope and anticipated water storage capacity
Species distribution	Geographical distribution of occurrence of animal and plant species aggregated by grid, region, administrative unit or other analytical unit
Statistical units	Units for dissemination or use of statistical information
Transport networks	Road, rail, air and water transport networks and related infrastructure. Include links between different networks
Utility and governmental services	Includes utility facilities such as sewage, waste management, energy supply and water supply, administrative and social governmental services as public administrations, civil protection sites, schools and hospitals

4.11. Use limitation

Figure 4.9: Default view - Identification info (5)

This section corresponds to the legal restrictions on use. This allows with free text to indicate the restrictions under which the data must be used and what to do in other cases.

Examples:

- *These files are intended for personal use. Any commercial use of these data is strictly prohibited. For any use other than personal, please contact the digital data custodian.*

- Any modification of these data is subject to preliminary authorization. Please contact the person in charge of REBENT project.
- Data is available under the terms of the ICES Data Policy. (See: http://geo.ices.dk/ices_dp.html)

4.12. Access constraints and Use constraints

Selecting options from the drop down list, enter the constraints ensuring the protection of privacy or intellectual property, and any restrictions, limitations or warnings to obtain the data.

If none of the values from the defined list are appropriate, then specify "Other restrictions" and complete the field <Other constraints> (cf. § 4.13), which is free text.

4.13. Other constraints

This field becomes mandatory if Access constraints and Use constraints are not entered.

This element shall provide information by free text on:

- Any fees necessary to access and use the data, if applicable, or refer to a uniform resource locator (URL) where information on fees is available.
- Quote obligations on resumption of digital data made available.

Example:

- Reference citation is required in the bibliography.

4.14. Spatial representation type

Indicate whether the data is vector, raster, tabular, triangular mesh, 3D ... The field is filled automatically according to the model chosen for entering metadata (vector or raster).

4.15. Equivalent scale*

An equivalent scale is generally expressed as an integer value expressing the scale denominator.

4.16. Language*

The language(s) used within the data. Default: English.

4.17. Character set

Character code used for the data set. Default: Utf8. **Do not modify.**

4.18. Topic category code*

The topic category is a high-level classification scheme to assist in the grouping and the search of available spatial data resources. Select the main ISO category or categories through which your map could be classified:

Tableau 4.4: Identification info - ISO topic categories

Topic categories	Definitions
Biota	Flora and/or fauna in natural environment
Boundaries	Legal land descriptions
Climatology, meteorology, atmosphere	Processes and phenomena of the atmosphere
Economy	Economic activities, conditions and employment
Elevation	Height above or below sea level
Environment	Environmental resources, protection and conservation
Farming	Rearing of animals and/or cultivation of plants
Geoscientific information	Information pertaining to earth sciences
Health	Health, health services, human ecology, and safety
Imagery base maps earth cover	Base maps
Inland waters	Inland water features, drainage systems and their characteristics
Intelligence military	Military bases, structures, activities
Location	Positional information and services
Oceans	Features and characteristics of salt water bodies (excluding inland waters)
Planning cadastre	Information used for appropriate actions for future use of the land
Society	Characteristics of society and cultures
Structure	Man-made constructions
Transportation	Means and aids for conveying persons and/or goods
Utilities communication	Energy, water and waste systems and communications infrastructure and services

4.19. Extent

Figure 4.10: Default view - Identification info (6)

4.19.1. Temporal extent

It defines the time period covered by the content of the data. It is expressed by an interval of dates expressed through the beginning date and the end date of the interval.

4.19.2. Geographic bounding box

This is the extent of the resource in geographic space, given as a bounding box. There are three different ways to fill this field:

- Enter the westbound and eastbound longitudes and southbound and northbound latitudes, with a precision of at least two decimals. GeoNetwork automatically fills in the coordinates to the fifth decimal place.
- Select a country, a region, an ocean or a sea from the drop down list.
- Draw a rectangle on the map.

Check that westbound < eastbound and southbound < northbound.

4.19.3. Extent

It defines the depth range surveyed by the content of the data. You have to indicate the height of the lowest and highest points of the data set. Don't forget to mention the retained unit.

4.20. Supplemental information

Enter useful information that does not fit elsewhere in the metadata. For example:

- Information about the attribute table of the layer.
- Information about the classification system or typology.

5. Distribution information

This section provides information about options for accessing the data or obtaining other on-line resources related to the data through the web.

The screenshot shows a web form titled "Distribution Information". It contains several fields and sections:

- Name ***: A text input field with a red box around it.
- Version ***: A text input field with a red box around it.
- Transfer options**: A section containing three "OnLine resource" entries.
 - OnLine resource 1**:
 - URL ***: A text input field with a red box around it.
 - Protocol**: A dropdown menu set to "Web address (URL)".
 - Name of the resource**: A text input field.
 - Description**: A text area.
 - OnLine resource 2**:
 - URL ***: A text input field containing "http://geo.ices.dk/geonetwork/srv/en/resou".
 - Protocol**: A dropdown menu set to "File for download".
 - File**: A button labeled "File Upload".
 - Description**: A text area.
 - OnLine resource 3**:
 - URL ***: A text input field with a red box around it.
 - Protocol**: A dropdown menu set to "OGC Web Map Service (ver 1.1.1)".
 - Name of the resource**: A text input field.
 - Description**: A text area.

Figure 5.1: Default view - Distribution information

5.1. Name*

Name of the data transfer format.

Examples:

- *Shapefile*
- *TIFF*

5.2. Version*

Version of the format (date, number ...).

Example:

- *ESRI ArcGIS 9.3*

5.3. Transfer options

This section is used to specify the technical details for access to the online data (download, WMS ...).

5.3.1. OnLine resource

You can create multiple instances of web addresses to indicate via which one the dataset can be acquired, and various documents referring to the dataset. Each information should include a link, a protocol and a description of the resource.

URL: It shows the exact web address for direct access to the data (without using the home pages of the site).

Protocol: It indicates the link type described in the drop down list; Web address (URL) is the only protocol to use.

Description: Detailed description of the online source. Indicate clearly here the title of the links, as it is this text which appears in the metadata record.

6. Reference system information

This section contains information about the spatial reference system of the data.



Figure 6.1: Default view - Reference system information

6.1. Code*

This field provides an alphanumeric value identifying the reference system used. GeoNetwork open source uses the EPSG codes which are numeric codes associated with the coordinate system definition.

Default value: WGS 1984

This code can be modified. It must be sought via the symbol  and added to the metadata record. Thus the code and the name of the system are clearly shown and standardized.

Using elements from the advanced view, you may add more details on data projection, ellipsoid and datum.

7. Data quality info

This section provides a general assessment of the quality of the data.

Study of the data quality is not intended to say whether the data are good or bad but simply to verify that the suggested quality level fits in with the planned application and user requirements.

The screenshot shows a web form titled "Data quality info". On the left side, there are labels for various fields: "Hierarchy level", "Title", "Date", "Date type", "Explanation", "Pass", and "Statement". Each label has an asterisk indicating it is a required field. The "Date" field has a "Clear" button next to it. The "Pass" field has a checkbox. The "Statement" field has a small icon next to it. The form is enclosed in a black border. Red boxes are drawn around the "Title", "Date", and "Explanation" input areas.

Figure 7.1: Default view - Data quality info

7.1. Hierarchy level

It describes the hierarchal level of data quality. Choose the element in the drop down list. The items most widely used are the “Data” set for spatial datasets and “Series” for spatial dataset series.

7.2. Statement

This element becomes mandatory if the hierarchal level element is equal to Dataset or Series.

This free text gives a general explanation of the production processes used for creating the data. It outlines the history of data describing the main stages of production and qualification of the data, indicating data that enabled the manufacturing, the different steps of production, monitoring and correcting phases...

8. Metadata

This section provides information about the metadata itself and the metadata author.

The screenshot shows a web form titled "Metadata" with the following fields and values:

- File identifier: 2f7a53f2-590c-45f4-a4ad-9c2594893cbe
- Metadata language: English (dropdown menu)
- Character set: UTF8: 8-bit variable size UCS Transfer Format, based on ISO/IEC 10646
- Date stamp: 2011-07-04T16:37:09
- Metadata standard name: ISO 19115:2003/19139
- Metadata standard version: 1.0

The "Contact" section is expanded and contains the following fields:

- Individual name: (empty text box)
- Organisation name: (empty text box)
- Role: Point of contact (dropdown menu)
- Voice: (empty text box)
- Facsimile: (empty text box)
- City: (empty text box)
- Administrative area: (empty text box)
- Postal code: (empty text box)
- Country: (empty dropdown menu)
- Electronic mail address: (empty text box, highlighted with a red border)

Figure 8.1: Default view - Metadata

8.1. Metadata language*

The language used within the metadata. **Default: English.**

8.2. Metadata standard name and Metadata standard version

Standard chosen when creating the metadata sheet. **Do not modify.**

8.3. Contact*

This section provides information about the author(s) or the organisation(s) responsible for the metadata record. You must fill in at least the Organisation name, the Role and the Electronic mail address.

The organisation name: identification of the responsible organisation associated with the metadata. This field is mandatory if Individual name is not entered.

The role*: this element defines the role of the responsible organisation associated with the metadata. Choose an item in the drop down list.

The Electronic mail address*: an email address group can be specified.

9. Executive summary

The **main mandatory fields** that may not be waived are the following:

Section	Fields
Identification info	Title Alternate title Date and Date type Abstract Maintenance and update frequency Equivalent scale (Denominator) Language (used for documenting data) Topic category code
Distribution information	Name Version
Reference system information	Code
Metadata	Language (used for documenting metadata) Metadata author

Some **optional but critical fields** which should be filled in:

Section	Fields
Identification info	Presentation form Purpose Status Point of contact: Organisation name, Role, Electronic mail address Descriptive keywords Use limitation Access and Use constraints Other constraints Spatial representation type Extent: Temporal extent, Geographic bounding box, Extent (i.e. Vertical extent)

Section	Fields
Distribution information	Transfer options: URL, Protocol, Description
Data quality information	Hierarchy level Statement

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