UK Location Metadata Editor

User Guide

Version 2.2 February 2013



Document Control

Change Summary

Version	Date	Author/Editor	Change Summary
0.1	10/08/2010	Justin Rowles and Keith Giles	First Issue.
0.2	25/11/2010	Justin Rowles and Peter Parslow and David Buck	UK Location branding applied, updates for 1.1
0.3	10/12/2010	Peter Parslow and David Buck	Annex 1 included.
0.4	16/12/2010	Peter Parslow and Justin Rowles	To align with Beta 1.2
0.5	14/01/2011	Peter Parslow	To align with Beta 1.3, and describe GEMINI 1 import
0.6	11/03/2011	Peter Parslow	To align with Beta 1.4, and incorporating clarifications suggested by Scottish SDI
2.0	18/08/2011	Peter Parslow	To align with Release 2.0, and incorporating many other comments, including restructured to separate dataset/series metadata and service metadata.
2.1	26/04/2012	Michael Gordon	To align with Release 2.1 and incorporating various comments.
2.1.1	24/05/2012	Michael Gordon	Incorporating various comments.
2.2	21/02/2013	Michael Gordon	To align with Release 2.2

References

Ref.	Author/Title/Version/Date of Publication
[1]	UK Location Metadata Editor release 1.1
[2]	UK GEMINI, v2.1, August 2010. Published by Association for Geographic Information
[3]	Metadata Guidelines for Geospatial Data Resources – Part 2, August 2010, Published by Association for Geographic Information
[4]	INSPIRE Metadata Implementing Rules: Technical Guidelines based on EN ISO 19115 and EN ISO 19119, v1.2 revised 2010-06-16 (MD_IR_and_ISO_v1_2_20100616)
[5]	Technical Guidance for the implementation of INSPIRE View Services, v3.0, dated 2011-03-21
[6]	UK Location Discovery Metadata Service Operational Guide, Edition 2-0, July 2011

Glossary

The following definitions apply in relation to this document:

Term	Definition	
Discovery Metadata	Information about a data or service resource, used to discover and access its suitability for sharing or re-use.	
INSPIRE	Infrastructure for Spatial Information in Europe	
UK LOCATION	UK Location Programme. The cross-government business change programme for the design, build and deployment of the central components of the UK Location Information Infrastructure and the coordination of data publishing by data providers.	
URL	Unique Resource Locator.	
XML	eXtensible Markup Language	
XML Document	A collection of data represented in XML.	

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UK Location Introduction

Introduction

The UK Location Discovery Metadata Service (DMS) lies at the heart of the UK Location Information Infrastructure (UK Location) and the delivery of the UK Location Strategy and INSPIRE - 'to know what data we have'.

- The Metadata Editor is a key part of the Discovery Metadata Service that underpins the coordinated and regulated publishing of public sector location information to the INSPIRE standards and UK Location application profiles. It allows data users to evaluate and use public sector location information using on-line services to view, download and invoke as part of an end business application.
- The UK Location Metadata Editor has been developed by Ordnance Survey for UK Location and is provided it two formats. This guide is for use in conjunction with the Online UK Location Metadata Editor.

Target Audience

The primary audience for this specification are those Data Provider and Publishers responsible for using the UK Location Metadata service for the production of GEMINI 2.1 Metadata.

Assumed Knowledge

This document does not assume that the reader is familiar with the UK Location Metadata Editor. In addition to the publication of the User Guide we have also published a series of videos through You Tube at http://www.youtube.com/uklocation to give a practical demonstration of the topics covered in this Guide.

Resources

The latest versions of all the UK Location Metadata Editor referred to in this guide can be found via the UK Location Resource Centre:

http://location.defra.gov.uk/resources/discovery-metadata-service

Where to Obtain More Information

The latest information, additional resources, and contact form can be obtained by visiting the <u>UK Location</u> web site. UK Location Accessing the service

Accessing the service

Open a web browser and navigate to UK Location Metadata Editor. You will see the page below:



- 9 There are three panels above.
- The header section contains information about the site, and a link bar with links to pages which are visible to guest (not logged in) users. More options will be available once logged in (below).
- 11 The left panel is a search panel. It can be folded away when not required.
- The right ('main pane') panel currently contains an introductory message. It will be used for administration, search results, metadata viewing, and so on.

UK Location Administrative

Administrative

Log on

In the top right are two text fields for entering username and password. Enter the system credentials provided by your system administrator and click the *Login* button. If the credentials are not accepted, you will see an error message. Please contact your system administrator to check your username and password.

14 You will now see the main home page for the UK Metadata Editor, with further options depending on your role available to you under the *Administration and Metadata Creation Tab* (top left).

Log off

At any time other than while editing a record, you may click the *Logout* button in the top right. Your session will be immediately terminated and you will see the home page with login options as above.

Change Password

From the home page, while logged in, click on the *Administration and Metadata Creation Tab* which has been added, top left. You will see the *Administration and Metadata Creation* page, which is divided into sections:



UK Location Administrative

17 Under the *Personal info* section (above), click on the *Change password* link.

18 You may now change your password by entering your current password and the requested new password (twice). Your password choice may or may not be considered sufficiently secure, and you may be required to enter a longer, or less vulnerable choice.

Change user information

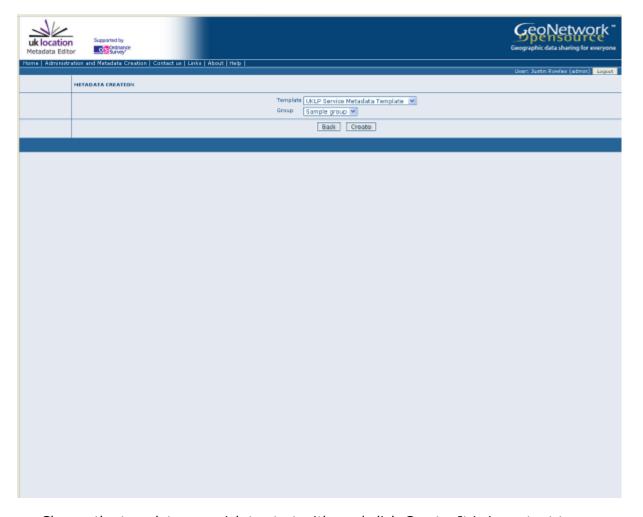
- From the Administration and Metadata Creation page, under the Personal info section (see 'Change Password' section), click on the Change user information link.
- You may now change your personal information. None of this information is used in any way or passed out of the system.

Data creation

New metadata from template

21 All users can see a basic set of UK Location templates, one each for dataset, series, and service. These have been designed so that the mandatory elements are available, and the optional ones can be added. Your group administrator may have added other templates.

- From the Administration and Metadata Creation page, under the Metadata section (above), click on the New metadata link.
- 23 You will be offered a choice from a drop-down list of templates or an error message if you have no templates available.

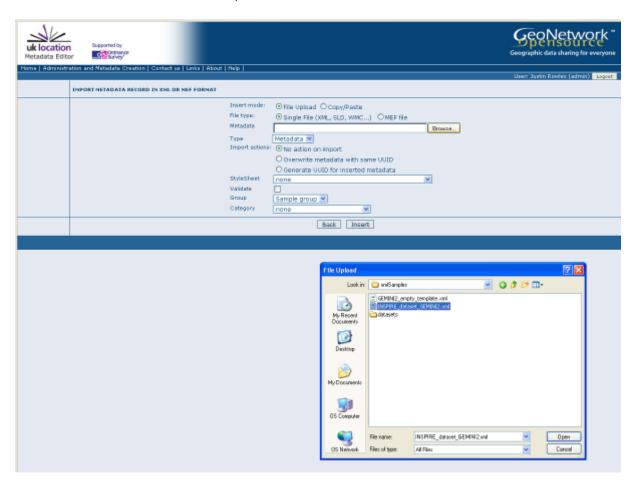


- Choose the template you wish to start with, and click Create. It is important to choose the correct template, because 'service metadata' and 'dataset metadata' have different requirements and structures. It is not possible to change a half-completed record from "service" to "dataset" or vice versa. A metadata record for a 'dataset series' is very similar to a dataset metadata record, but it is still best to start from the correct template.
- 25 You may now edit the metadata record (see 'data edit' section)

New metadata from upload

From the *Administration and Metadata Creation* page, under the *Metadata* section (above), click on the *Metadata insert* link.

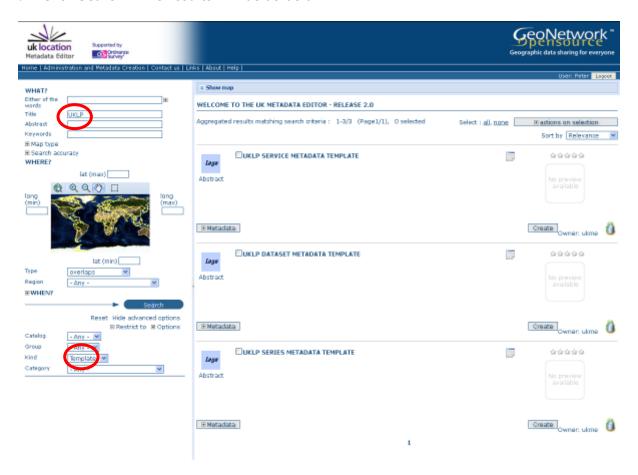
- 27 You will be presented with a selection of options for uploading a variety of information types and formats.
- To upload a single XML record which is already in Gemini 2.1 format, leave all defaults, then choose the file you wish to upload in the *Metadata* field, using the *Browse* button on the right. To upload and convert a Gemini 1 or ESRI ISO XML record, select "GEMINI_1-to-GEMINI_21" or "ESRI_ISO-to-GEMINI_21" in the *StyleSheet* drop down; you will still need to manually edit the record in order to make it Gemini 2.1 valid.
- Select the appropriate *Import Action* depending on what you want to do with the file Identifier (UUID). UK Location uses the file identifier to manage the life cycle of metadata records in the Discovery Metadata Service (data.gov.uk). When a record is collected with the same file identifier as an existing record, it is treated as a new version of that record, and overwrites it. Therefore, if you are uploading a metadata record in order to create a new record based on it, choose *Generate UUID for inserted metadata*. If you are uploading a record in order to refine it (e.g. to change your telephone number), then choose *Overwrite metadata with same UUID*. If you are sure you deleted the earlier version from this instance of GeoNetwork, then you could choose *No action on import*.



- 30 Click Insert.
- You should now see a page confirming that your metadata has been inserted. If not, please check your metadata is valid using an XML editor or viewer. Internet Explorer has an XML view facility which will perform basic checks.
- Your metadata is immediately available in searches, and will also appear on your home page as a recently edited record.
- To use any of the non-default upload options, please see the GeoNetwork documentation for details. Note that if you choose "Validate", this performs a basic validation against the ISO XML schema, and does not perform rules based validation for GEMINI. See page 22 for information on validating records.

Creating templates

- All users can see a basic set of UK Location templates, one each for dataset, series, and service. These have been designed so that the mandatory elements are available, and the optional ones can be added.
- 35 From the *Home page*, click on the *Advanced* link to get more search options.
- Enter UKLP in the *Title* section, then expand the *Restrict To* section and choose *Template*.
- 37 Click Search. The results will be as below.

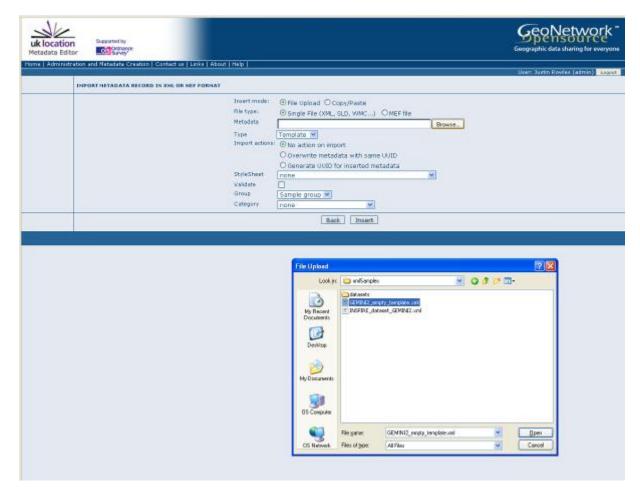


You can create copies of these templates, amend them for your own data and save them as templates into your own group. In GeoNetwork, a template is the same as a metadata record, except that the fileIdentifier is not populated.

- GeoNetwork users are members of groups. You and your colleagues in the same group may need to create a number of metadata records with a lot of information in common, such as the Metadata point of contact and Responsible organisation(s), or a particular Keyword "originating controlled vocabulary", or a specific geographic bounding box, or specific use limitations and constraints. You may also have elements that you do not plan to use, such as Conformity, if you have not tested your data against the INSPIRE specifications, and do not intend to state conformance to any other specification. In these cases, you may want to create a group template, or simply to copy your first valid metadata record.
- There are several ways you can do this:
 - a) Copy the metadata record, that is create the first record, then either:
 - i) when you have it on screen (as a result of a search for example), choose "Create" (rather than "Edit"). If you belong to more than one group, choose which group to put the copy in.
 - ii) download and save it locally; then upload it using "Metadata insert" on the "Administration and Metadata Creation" page. Insert it as "Type" = "Metadata", making sure you instruct GeoNetwork to "Generate UUID for inserted metadata", otherwise you will receive an error stating that the record already exists (unless you deleted it, of course).
- You could send the downloaded record to anyone else to upload as a 'master' for them but do make sure you instruct them to change the fileIdentifier.
 - b) Create a template, either:
 - i) upload a record, inserting it as "Type" = "Template"
 - ii) create a template from one of the existing ones. This is the same as creating a metadata record, but before switching views, scroll to the bottom and select Type: Template.

Template From Uploaded File

- To upload a record as a template, go to the *Administration and Metadata Creation* page and click on the *Metadata Insert* link.
- Leave all defaults except the *Type* option, which should be changed to *Template*, then choose the file you wish to upload in the Metadata field, using the *Browse* button on the right.



- 44 Click Insert.
- You should now see a page confirming that your template has been inserted. If not, please check your template is valid using an XML editor or viewer. Internet Explorer has an XML view facility which will perform basic checks.
- Once the template has been uploaded, it will automatically appear in the list of templates available when you create new metadata.

UK Location Data search

Data search

The left hand panel (which can be folded away when not required) presents a set of user criteria for searching metadata present on this server. Search results are limited to those you are permitted to view, some or all of which you may be permitted to edit.

Basic: What

All text entered in the *What* section will be used to search (at least) the *Metadata Title, Abstract* and *Keyword* sections.

Advanced



What

- More complex searches can be defined in this section, including facilities to search explicitly within *Metadata Title* or *Keyword*, and to exclude metadata containing specified words from search results.
- 50 Please see the GeoNetwork documentation for details.

UK Location Data search

Where

The *Map* tool allows you to 'draw' a bounding box to restrict your search. Also included are a set of predefined bounding boxes which are minimal supersets of various national boundaries.

52 You also have option to choose intersection types with the specified bounding box.

When

This section enables you to limit your search temporally, either with respect to the last change time or the temporal extent of the metadata.

Inspire (not shown in screenshot)

Annex

You may restrict your search to documents falling within the Inspire annexes.

Source type

Inspire records may be for either services or datasets. You may choose either or both.

Service type

If the dataset represents a service, then the search can be limited to one service type.

Theme

A full list of Inspire themes across all three annexes is included and each theme can be explicitly included or excluded from the search results.

UK Location Data edit

Data edit

Edit

Documents in search results which you are eligible to edit will have an *Edit* button underneath them. Once you enter edit mode, the options are identical to those at *Metadata creation*.

There may be records which you are eligible to view but not to edit. These will not have an *Edit* button. Please contact your system administrator if you believe you should be able to edit more records.

UK GEMINI 2 Data Entry Views

- 60 To enter discovery metadata, you are presented with two main views:
 - · the default view, which presents the full data entry form,
 - GEMINI section views, which display the metadata elements, generally grouped as per INSPIRE. The additional UK GEMINI2 elements not in INSPIRE have been placed on in appropriate section.
- Which view you use will be down to individual preference, but it is recommended that you enter the metadata using the section tabs, but review using the full view, including running the automated Checks. GeoNetwork always opens each record in which ever view you were last using.
- In addition, you can optionally view the metadata in ISO or as the raw XML document.

XML View

If you are comfortable directly editing XML, or you have an XML section you wish to directly paste in, then you can select the XML View to directly edit the record.

Please exercise caution as this approach requires excellent understanding of the Gemini 2.1 XML standard.

Background

- 64 GEMINI (and INSPIRE) describe the metadata elements in a "flat" way: each element is described as though it stands alone, although some elements do have "sub elements".
- 65 ISO 19115 has a more relational model, and ISO 19139 maps this to the tree structured approach required for an XML file.
- For example, GEMINI elements Title, Alternative title, Dataset reference date, and Unique resource identifier are all parts of ISO's "citation" metadata property. The "originating controlled vocabulary" sub-element of Keyword and the "specification" sub-element of Conformity both use the same citation structure, distinguished by being at a different place in the XML "tree".

UK Location Data edit

The GeoNetwork interface is built around this tree structured XML encoding. In general, there is a box around each branch of the XML tree. This is most obvious when the ability to insert, delete or have multiple occurrences of an element takes place a few steps nearer the root of the tree. For example, GEMINI allows multiple Spatial reference system elements; and requires simply the 'code' identifying the reference system – but the ability to repeat the reference system is several "boxes" further out than the code.

Adding, deleting, moving elements

- 68 Geonetwork has a

 icon where you can add an element, or another occurrence of an element.
- 69 It has a ⋈ where you can delete an element or section.
- 70 allows you to move an element or section further down the document; allows you to move it up. These should only be available where the schema allows it. As yet, GEMINI, INSPIRE and the UK portal do not pay any attention to the order of elements. Except that if GEMINI only expects one where ISO allows more as with temporal extent then any others would be "extensions" and would be ignored by GEMINI validation.

Data entry

- Generally, if an element is available for entry, there is a text box. Mandatory fields (e.g. Title) are indicated with a small red star. If a field is mandatory and empty, the text box is highlighted in red. For "sub-elements", this only indicates that the sub-element is mandatory within its context it may be possible to remove the entire element. For example, Vertical Extent is optional, but if you have one, the minimum and maximum values are mandatory.
- Optional elements that do not currently exist in the record have a "label" with a \pm icon: click the icon to get the text box.
- It is possible to delete elements such as lineage, which are optional in the underlying ISO standard. This could result in a record which is not valid for UK Location, GEMINI or INSPIRE purposes. This will be reported when you choose "Check".
- 74 If there is a drop down list next to the

 icon, in order to get the correct content, you need to select the relevant entry before clicking the icon. See sections below for help on deciding the relevant entry, because the lists are populated from the full ISO 19139+ISO 19119 standard.
- ⁷⁵ GEMINI and the UK Location profile are 'open ended'; that is, you can include other ISO metadata elements beyond those described here and the record will still be valid. They will be ignored, although they may be searchable in the UK portal.

Drop down lists

Where the contents of a field can only be one of a range of values, such as dataset language, or topic category code, these values are generally available from a drop down list.

UK Location Data edit

In other cases, where the field is technically free text, but there are a range of common expected values, such as Spatial reference system, then there is a "helper" drop down list to the right of the text entry box, labelled "Suggestions". If you select the value you want here, the text entry is completed for you – note that the value the system puts in the text field may well be encoded. For example selecting "OSGB 1936" populates the text with a URN encoded version of the EPSG code for that reference system.

- The Dataset language and metadata language fields have a long list of options, and a short list of suggestions.
- There is a known bug in GeoNetwork at present: when you first add a new element, some suggestions do not appear. If you expect a suggestions list, and don't get one, save the record the suggestion list will then appear.

Context sensitive help ("tooltips")

- Each heading (box or element label) has context sensitive help, just click on the heading. Unlike many windows tooltips, you need to click the help box again to dismiss it. For GEMINI elements, the text is taken from the GEMINI standard and/or Guidelines.
- There is a known bug in GeoNetwork at present: when you first add a new element, you may get the wrong tooltip. If you save the record, you will get the correct tooltip.

Saving your results

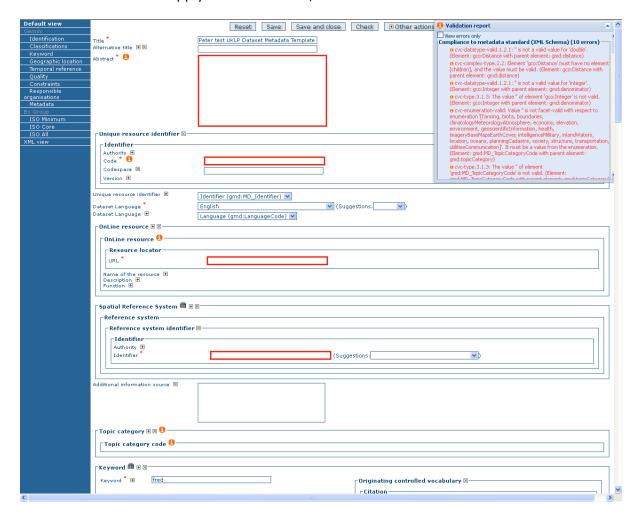
Once you have finished, click *Save* and *Close*. You may also from time to time click *Save* while editing. The *Save* action cannot be undone. This *Save* action will persist the data on the server you are using, not on your personal machine. This should only be a temporary measure; UK Location takes no responsibility for files saved on the server – your master copy should be saved within your own systems. To save locally, please see section Data download.

UK Location Data validation

Data validation

Validation

While editing a record, you may validate it against the Gemini 2.1 rules by selecting the *Check* button shown at the top and bottom of the page. There are several XSD based rules which apply to Gemini data, and also a Schematron rule.



84 You may save a record which does not validate and come back to it later.

UK Location Data download

Data download

Save as XML

At present, metadata records can only be downloaded from the search results page, or when you have just finished editing a record.

There is a 'sheet of paper' icon on the top right of each search result, which will open the data in plain XML in a new browser page or offer to save to disk (browser specific). Note that the file should be saved in UTF-8; some browsers (for example Internet Explorer 7) default to ANSI encoding. An ANSI encoded file can be converted to UTF-8 using Windows Notepad: open the file, make sure you don't change anything, then "save as", selecting UTF-8.

Data deletion

Delete

- Documents in search results which you are eligible to delete will have a *Delete* button underneath them.
- There may be records which you are eligible to view but not to delete. These will not have a *Delete* button. Please contact your system administrator if you believe you should be able to delete more records.
- There is a confirmation dialog to prevent accidental deletions, but once confirmed the deletion is permanent.

ANNEX 1 Element by element

- This annex specifies how to create each GEMINI element using the UK Location Metadata Editor. It only suggests what to put in the element if the contents are required / specified by UK Location or INSPIRE but does not attempt to replicate what is in GEMINI or its guidance documents, except to identify which element is which particularly because the elements don't appear in the same order in GEMINI as they do in its guidance document.
- Note that the tabs on the Metadata Editor are named after sections in the INSPIRE Metadata Regulations¹, and contain the INSPIRE metadata elements described in each section. The extra elements that are part of GEMINI but not part of INSPIRE are placed on appropriate tabs. The "Default view" shows all the elements, it is the sum of the GEMINI tabs.
- In general, this document assumes you are starting with one of the provided templates, or a template derived from them.
- This version has been revised to match release 2 of the Metadata Editor, and also in the light of feedback from Ordnance Survey GB, the Scottish SDI, Land & Property Services, Northern Ireland, and other users.
- This following sections are most useful if you have [2] GEMINI or [3] the GEMINI guidance documents available. The elements are presented here in the order they are defined in GEMINI. Generally, the GEMINI guidance and / or [6] the UK Location DMS Operational Guide give clear guidelines on what to put in each element, independent of the metadata editor used; this document concentrates on how to achieve that with the UK Location Metadata Editor.
- ⁹⁵ In most cases, the GeoNetwork "label" is the same as the GEMINI element name.

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http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:326:0012:01:EN:HTML

Dataset or series metadata elements

Title

GEMINI Metadata element number 1

GEMINI 2.1 section number 5.1

GEMINI Guidelines 2 section number A.1

Equivalent INSPIRE element Resource title

GEMINI section Identification

Multiplicity 1

Note: initially, this field contains the template title. It is a good idea to edit this straight away, so that you do not end up with lots of saved records with the same title.

97 The title will be searchable in the UK and EC portals.

Alternative title

GEMINI Metadata element number 2

GEMINI 2.1 section number 5.2

GEMINI Guidelines 2 section number A.2

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is alternateTitle

GEMINI section Identification

Multiplicity 0..*

The alternative titles will be searchable in the UK portal, as free text.

Dataset language

GEMINI Metadata element number 3

GEMINI 2.1 section number 5.3

GEMINI Guidelines 2 section number A.3

Equivalent INSPIRE element Resource language

GEMINI section Identification

Multiplicity 1..*

- This element is set to 'eng' in the templates. If you need to change that simply select a different language from the drop down. If you need to add additional dataset languages use the ⊞ icon, this new entry temporarily appears labelled "metadata language", but does populate an additional "dataset language".
- Although it is optional in GEMINI and INSPIRE, it is mandatory in ISO 19115; the INSPIRE encoding guidelines currently state that if there is no textual information in the dataset, it should be set the same as the metadata language.

Abstract

GEMINI Metadata element number 4

GEMINI 2.1 section number 5.4

GEMINI Guidelines 2 section number A.4

Equivalent INSPIRE element Resource abstract

GEMINI section Identification

Multiplicity 1

101 The abstract will be searchable in the UK portal, as free text.

Topic category

GEMINI Metadata element number 5

GEMINI 2.1 section number 5.5

GEMINI Guidelines 2 section number A.5

Equivalent INSPIRE element Resource topic category

GEMINI section Classifications

Multiplicity 1..*

Select the topic category code from the dropdown; these are set by ISO 19115. If you want to express more than one, use the \pm icon to add further topic category elements, and select the value for each.

103 That is, you can't do a multiple selection from the drop down list.

104 The topic category will be searchable in the UK portal.

Keyword

GEMINI Metadata element number 6

GEMINI 2.1 section number 5.6

GEMINI Guidelines 2 section number A.6

Equivalent INSPIRE element Keyword value, and Originating

controlled vocabulary

GEMINI section Keyword

Multiplicity 1..*

- The large box labelled Keyword allows you to have several keywords from one vocabulary, or to have uncontrolled keywords, that is from no vocabulary. To indicate that a group of keywords are uncontrolled, delete the "Originating controlled vocabulary" box.
- 106 It is possible to delete the Keyword box but if you have no keywords, your record will not be valid.
- To add keywords from more than one vocabulary, click the ⊞ icon at the Keyword box level. This allows you to select a "type" for the keyword, from a drop down list, but this is not required by INSPIRE or GEMINI. It is possible to add more than one date in the citation of the vocabulary, but there is no need to do this.
- To describe an INSPIRE dataset, include at least one keyword from the GEMET register of INSPIRE themes. The list is available as a 'thesaurus' in the editor; click the con, and select "inspire-theme.rdf", then choose the keyword(s) you want. To see definitions of the themes, visit http://www.eionet.europa.eu/gemet/inspire themes. Close the "Keywords selection" dialogue by clicking "add" in the bottom right corner. A new keywords element is created, containing the keywords. There is a known issue: the 'citation' created does not include the publication date; it should be 2009-06-30².
- 109 Controlled keywords will be searchable in the UK portal; uncontrolled keywords will be searchable as free text.

Temporal extent

GEMINI Metadata element number 7

GEMINI 2.1 section number 5.7

GEMINI Guidelines 2 section number A.7

Equivalent INSPIRE element Temporal extent

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² this citation format is subject to confirmation from the INSPIRE Initial Operating Capability Task Force

GEMINI section Temporal reference

Multiplicity 0..*

110 INSPIRE requires either the temporal extent or one of the INSPIRE dataset reference dates, although for GEMINI temporal extent is mandatory. ISO allows more than one temporal extent; GEMINI only expects one – others will be ignored.

- 111 Temporal extent can be used as a search filter in the UK portal.
- Ignore the "Time Period" identifier; it is required by ISO 19139, and can stay as set in the template.
- Enter the begin and end dates as YYYY-MM-DD; GEMINI allows this to be as coarse a century, but ISO 19139 requires at least the year. GEMINI, INSPIRE & ISO allow for the temporal extent to be 'open ended', that is it allows for only one date to be specified. The *UKLP DMS Operational Guide* [6] describes this as "before" or "after"; the editor and underlying standards have no mechanism to encode "now". If you need to enter an open ended period ("since xxx" or "until xxx"), you can leave the begin and/or end date empty, even though they are red and have stars.
- If you need to enter only a single date, perhaps to express the temporal extent as a single whole year, then delete the Temporal Extent which came from the template, and create a new one by selecting "Temporal Extent" in the drop down (rather than "Spatial Temporal Extent"), then clicking on the ∃ icon. If you choose TimePeriod from the next drop down, you will be back at the original template, so choose Time Instant. Do not select "Time Edge" or "Time Node".
- You will then need to provide an "Identifier" (any string that does not start with a numeric digit), and then enter your date (and time, if you want) there are a lot of choices here, but it does accept a standard ISO 8601 date, as above.
- If you need to recreate the temporal extent period, ensure you select "Temporal Extent (gmd:EX_TemporalExtent)" in the drop down before clicking the ℍ next to the Temporal Extent prompt. Select "Time period (gml:TimePeriod)" before clicking the ℍ next to the innermost "Temporal Extent" label. You will need to enter an Identifier ("T1" in the template) it has to be unique in the metadata record, not start with a number, and not contain any spaces. Next, select "Begin date (gml:beginPosition)" before clicking ℍ next to the first "Choice". Finally, select "End date (gml:endPosition)" before clicking ℍ next to the second "Choice".

Dataset reference date

GEMINI Metadata element number 8

GEMINI 2.1 section number 5.8

GEMINI Guidelines 2 section number A.8

Equivalent INSPIRE element Date of publication, Date of last

revision, Date of creation

GEMINI section Temporal reference

Multiplicity 0..*

INSPIRE requires either the temporal extent or one of the INSPIRE dataset reference dates, although for GEMINI both are mandatory. The Metadata Editor has a repeatable box labelled "Dataset Reference Date"; within each box, you specify a date and the 'date type', as per the GEMINI sub-elements. If you want to enter a second date, you will need to choose between Date and DateTime in order to get the date (or date time) selector.

118 If you are only going to provide one, provide the most recent, although if your dataset is continually updated and you are not planning to reissue the metadata regularly, then you may not want to give a 'date of last revision' and you may want the initial publication date to appear as 'date of creation' rather than give the impression that the data was published a long time ago and never updated. You should only give one date of creation!

Lineage

GEMINI Metadata element number 10

GEMINI 2.1 section number 5.9

GEMINI Guidelines 2 section number A.9

Equivalent INSPIRE element Lineage

GEMINI section Quality

Multiplicity 1

Bounding latitudes and longitudes

GEMINI Metadata element number 11, 12, 13, 14

GEMINI 2.1 section number 5.10, 5.11, 5.12, 5.13

GEMINI Guidelines 2 section number A.10, A.11, A.12, A.13

Equivalent INSPIRE element Geographic bounding box

GEMINI section Geographic location, in the Geographic

element / Bounds box

Multiplicity 1

You can enter the coordinates in the four text entry boxes, or draw a rectangle on the map. The drop down will populate the box for you, but at present only offers a selection of countries. 120 If you accidently delete the whole "geographic element", you can get it back by selecting "Bounds (gmd:EX_GeographicBoundingBox)" before clicking the ⊕ icon alongside "geographic element".

Extent

GEMINI Metadata element number 15

GEMINI 2.1 section number 5.14

GEMINI Guidelines 2 section number A.14

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is EX_GeographicDescription.

geographicidentifier

GEMINI section Geographic location, as an option

within "Geographic element"

Multiplicity 0..*

This is available if you select "Extent (gmd:EX_GeographicDescription)" before clicking the ⊞ icon alongside "geographic element".

122 Select "Identifier (gmd:MD_Identifier)" from the drop down before clicking the ⊞ icon next to "Geographic identifier". This allows you to enter the "code" (GEMINI sub element) and optionally add the "authority" – which opens a whole citation box, as for the thesaurus citation above.

Vertical extent information

GEMINI Metadata element number 16

GEMINI 2.1 section number 5.15

GEMINI Guidelines 2 section number A.15

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is EX VerticalExtent

GEMINI section Geographic location

Multiplicity 0..*

123 This section allows you to enter the minimum and maximum value GEMINI sub elements. You will need to know what kind of "Vertical CRS" to choose from that drop down, and complete the required fields for that kind of CRS.

Spatial reference system

GEMINI Metadata element number 17

GEMINI 2.1 section number 5.16

GEMINI Guidelines 2 section number A.16

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is referenceSystemIdentifier

GEMINI section Identification

Multiplicity 0..*

This is placed in the "identification" section, rather than in "Geographic location", to avoid giving the impression that it is the reference system of the bounding box.

The UK Location encoding recommendation is to use the URN form of reference to an EPSG code, such as "urn:ogc:def:crs:EPSG::4258" for ETRS89. Enter this in the "Identifier" field, which implements the GEMINI sub-element "code identifying the spatial reference system"; ignore the other optional fields. EPSG codes are available at http://epsq-registry.org

The following are in common use in the United Kingdom; several of them are available in the "Suggestions" drop down:

Common name	EPSG code as URN	Available in "Suggestions"
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Projected Coordinate Systems

British National Grid urn:ogc:def:crs:EPSG::27700 As "OSGB 1936 / British

National Grid"

Irish Grid urn:ogc:def:crs:EPSG::29903 As "TM 75 / Irish Grid"

Irish Transverse urn:oqc:def:crs:EPSG::2157 As "ETRS89 / Irish Transverse

Mercator Mercator

Geodetic Coordinate Reference Systems

ETRS89 2D urn:ogc:def:crs:EPSG::4258 As "ETRS89"

ETRS89 3D urn:ogc:def:crs:EPSG::4937 No

WGS84 2D urn:ogc:def:crs:EPSG::4326 As "ITRS / WGS84"

WGS84 3D urn:ogc:def:crs:EPSG::4327 No

OSGB36 urn:ogc:def:crs:EPSG::4277 No

Common name EPSG code as URN Available in "Suggestions"

Vertical Coordinate Reference Systems

Odnance Datum -

urn:ogc:def:crs:EPSG::5701 No

Newlyn

Belfast Lough urn:ogc:def:crs:EPSG::5732 No

127 If you need to cite a spatial reference system which does not have an EPSG code, then you will need to also provide the "Authority" for the identifier that you enter.

Spatial resolution

GEMINI Metadata element number 18

GEMINI 2.1 section number 5.17

GEMINI Guidelines 2 section number A.17

Equivalent INSPIRE element This implements the "distance" choice

in the INSPIRE "spatial resolution"

element.

GEMINI section Quality

Multiplicity Include where you can; GEMINI

expects only one, INSPIRE allows several; see also Equivalent scale.

For GEMINI and INSPIRE, this has to be specified in metres, and the UK Location encoding recommendation is to specify this by entering "urn:ogc:def:uom:EPSG::9001" in the "Units of measure" field; this is already in the UKLP templates.

129 Then enter the distance in metres in the mandatory field.

Resource locator

GEMINI Metadata element number 19

GEMINI 2.1 section number 5.18

GEMINI Guidelines 2 section number A.18

Equivalent INSPIRE element Resource locator

GEMINI section Identification, within the OnLine

resource box

Multiplicity 0..* but UK Location rather depends on

these!

The resource locator has to be an http URL. The OnLine resource box also contains three sub-elements: Name of the resource, Description, Function. These are optional, but are encouraged, and should improve the user experience in the central catalogue.

Data format

GEMINI Metadata element number 21

GEMINI 2.1 section number 5.19

GEMINI Guidelines 2 section number A.19

Equivalent INSPIRE element None – this is not an INSPIRE discovery

metadata element. The ISO equivalent

is distributionFormat

GEMINI section Quality

Multiplicity 0..* but required if a Resource locator

is given

This is a repeatable box. For each one, the name and version sub-elements are mandatory. You can ignore the "specification" sub-element.

Responsible organisation

GEMINI Metadata element number 23

GEMINI 2.1 section number 5.20

GEMINI Guidelines 2 section number A.20

Equivalent INSPIRE element Responsible party

GEMINI section Responsible organisations³

Multiplicity 1..*

- The whole "Responsible organisation" box is repeatable. ISO makes the email address and role (drop down) mandatory; for GEMINI, the organisation name is also mandatory.
- Roles: for UK Location, use "owner" for the Data Provider and "publisher" for the Data Publisher or if you are both provider and publisher. If the data was created by someone other than the Data Provider, this should also be recorded, using the role

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³ The INSPIRE Metadata Regulation's section is actually called "Organisations responsible for the establishment, management, maintenance and distribution of spatial data sets and services"

value "Originator". Unfortunately, ISO does not allow a single 'Responsible party' to have more than one role – to achieve that, you have to repeat the whole section.

- The GEMINI "postal address" sub-element becomes a whole structure in ISO; the labels should be self explanatory.
- GEMINI "telephone number" is specifically "Voice" within the "Telephone Number" box, alongside "facsimile number".
- GEMINI "web address" is specifically the URL within the "Web Address" box; the other child elements are optional.

Frequency of update

GEMINI Metadata element number 24

GEMINI 2.1 section number 5.21

GEMINI Guidelines 2 section number A.21

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is

maintenanceAndUpdateFrequency

GEMINI section Temporal reference

Multiplicity 0..1

This is mandatory in GEMINI (for datasets and series), but optional in INSPIRE and therefore UK Location. However, it is strongly encouraged for UK Location.

Limitations on public access

GEMINI Metadata element number 25

GEMINI 2.1 section number 5.22

GEMINI Guidelines 2 section number A.22

Equivalent INSPIRE element Limitations on public access

GEMINI section Constraints, within the Resource

constraints / Legal constraints box

Multiplicity 1..*

- Both this element and "Use constraints" are encoded as ISO Resource constraints, so appear as two similar boxes in the Metadata Editor. The inner label, for the actual free text box, distinguishes them.
- There is now no pre-population of the "Limitations on public access" field for the Datasets template so all templates are consistent.

- 140 INSPIRE: "When Member States limit public access to spatial data sets and spatial data services under Article 13 of Directive 2007/2/EC, this metadata element shall provide information on the limitations and the reasons for them."
- Mandatory, and INSPIRE guidance specifies an explicit statement if there are no limitations: "no limitations".
- In order to enter the 'free text' expected by GEMINI and INSPIRE, the "Access constraints" drop down has to say "Other restrictions". It is possible to add other values here, using the 'plus', this would allow you to specify specific constraints that exist in the ISO list, in addition to the "other restrictions" plus free text,
- Integration of UK Location with the INSPIRE portal and UK government's data.gov.uk may result in tighter instructions about how to describe limitations.

Use constraints

GEMINI Metadata element number 26

GEMINI 2.1 section number 5.23

GEMINI Guidelines 2 section number A.23

Equivalent INSPIRE element Conditions applying to access and use

GEMINI section Constraints, within the Resource

constraints / Constraints box

Multiplicity 1..*

- Both this element and "Limitations on public access" are encoded as ISO Resource constraints, so appear as two similar boxes in the Metadata Editor. The inner label, for the actual free text box, distinguishes them. There is a known issue: the Metadata Editor label for this element is currently "Use limitation".
- There is now no pre-population of the "Use constraints" field for the Datasets template so all templates are consistent.
- 146 INSPIRE: "This metadata element defines the conditions for access and use of spatial data sets and services, and where applicable, corresponding fees as required by Article 5(2)(b) and Article 11(2)(f) of Directive 2007/2/EC."
- Mandatory, and INSPIRE Regulation requires an explicit statement if there are no conditions: "no conditions apply". You can enter a URL here, which points to a description of the conditions, such as a licence. The editor does not currently support entering the URL as a sub-element simply enter it in the free text area.
- Integration of UK Location with the INSPIRE portal and UK government's data.gov.uk may result in tighter instructions about how to describe these conditions / use constraints.

Although not highlighted in red the "Use Constraints" field is mandatory but is not currently checked on validation.

Additional information source

GEMINI Metadata element number 27

GEMINI 2.1 section number 5.24

GEMINI Guidelines 2 section number A.24

Equivalent INSPIRE element Not an INSPIRE element, the ISO

equivalent is supplementalInformation

GEMINI section Identification

Multiplicity 0..1

Metadata language

GEMINI Metadata element number 33

GEMINI 2.1 section number 6.1

GEMINI Guidelines 2 section number A.26

Equivalent INSPIRE element Metadata language

GEMINI section Metadata

Multiplicity 0..1; required for INSPIRE.

This is set to 'eng' in the template. For INSPIRE metadata records, it has to be an EC language, and English is the only EC language commonly in use in the UK.

Metadata date

GEMINI Metadata element number 30

GEMINI 2.1 section number 6.2

GEMINI Guidelines 2 section number A.25

Equivalent INSPIRE element Metadata date

GEMINI section Metadata

Multiplicity 1

This element is not editable; it is set by the Metadata Editor when the file is saved. It may be used by the central Discovery Metadata Service when collecting records, to determine whether the metadata record has changed.

Metadata point of contact

GEMINI Metadata element number 35

GEMINI 2.1 section number 6.3

GEMINI Guidelines 2 section number A.27

Equivalent INSPIRE element Metadata point of contact

GEMINI section Metadata

Multiplicity 1..*

Roles: UK Location encoding requires 'point of contact'. The structure is the same as Responsible organisation, at 0. Unfortunately, ISO does not allow a single 'Responsible party' to have more than one role – to achieve that, you have to repeat the whole section, or include a cross reference. Cross references are not currently supported by the Metadata Editor.

Unique resource identifier

GEMINI Metadata element number 36

GEMINI 2.1 section number 5.25

GEMINI Guidelines 2 section number A.28

Equivalent INSPIRE element Unique resource identifier

GEMINI section Identification

Multiplicity 1 (although ISO allows more)

- The "code" sub-element is mandatory, and should be a recognisable identifier within the context of your organisation. If it is not guaranteed to be unique across UK Location and INSPIRE, then you should specify the "Codespace" sub-element; for UK location this should be the internet domain of the data owner/provider. You should ignore the "Authority" and "Version" sub-elements.
- 154 If you are inserting a new Unique resource identifier, it is best to select "Identifier (gmd:RS_Identifier)" before clicking the +, as the alternative (gmd:MD_Identifier) does not allow for "Codespace"

Resource type

GEMINI Metadata element number 39

GEMINI 2.1 section number 5.26

GEMINI Guidelines 2 section number A.31

Equivalent INSPIRE element Resource type

GEMINI section Not editable

Multiplicity 1

This is set by the choice of template, to 'dataset', 'series', or 'service'. The reason is that if you change it (particularly to / from service) then some of the XML structure needs to change. Just choose the correct template!

Conformity

GEMINI Metadata element number 41

GEMINI 2.1 section number 5.27

GEMINI Guidelines 2 section number A.32

Equivalent INSPIRE element Conformity: specification and degree

GEMINI section Quality, within the Data quality info /

Data quality / Report / Domain

consistency / Result box!

Multiplicity 0..*; required if claiming conformance

to INSPIRE.

156 If you want to provide a conformity statement, choose "Domain consistency" when adding the "Report", then "Conformity" for the "Result". Then you can provide the title and date for the specification, explanation and degree.

- 157 GEMINI adds an "explanation" sub-element, which is not in INSPIRE.
- This is an area where the deeply nested XML structure results in a lot of nested boxes. You only need to complete the mandatory sections. If you want to say you are conformant, i.e. you want to set the GEMINI "degree" sub-element to 'true', then tick the check box labelled "Degree". Leave it empty for degree = false i.e. tested and not conformant.
- If you do not want to claim conformance to anything, for example, you want the INSPIRE 'degree' to be 'not tested', the INSPIRE guidance is to not include a conformity statement at all. Delete at the "Report" level, because the "Data quality info" element in the XML also includes the GEMINI Lineage element.
- At present, there is no clear guidance from the European Commission as to how to cite their specifications. UK Location recommends that if your dataset conforms to an INSPIRE data specification (or you wish to declare that it does not conform to such a specification) then refer to the relevant INSPIRE data specification Implementing Rule e.g. "COMMISSION REGULATION (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services", date: 2010-12-08, with an explanation that references the document by URL: "See http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:323:0011:0102:EN:PDF". You could also refer to the specific data specification, e.g. "INSPIRE Data Specifications on Addresses Guidelines v 3.0.1", date: 03.05.2010

Equivalent scale

GEMINI Metadata element number 43

GEMINI 2.1 section number 5.28

GEMINI Guidelines 2 section number A.33

Equivalent INSPIRE element This implements the "Equivalent scale"

choice in the INSPIRE "spatial

resolution" element.

GEMINI section Quality

Multiplicity 161 Include where you can; GEMINI

expects only one, INSPIRE allows several; see also If you need to cite a spatial reference system which does not have an EPSG code, then you will need to also provide the "Authority" for the identifier that

you enter.

Spatial resolution.

This is implemented as a choice of 'Spatial resolution' (the ISO structure – like INSPIRE – considers them as alternatives). When you add a "Spatial resolution" box, choose "Equivalent scale" inside it, and then enter the "Denominator", for example "10000" for 1:10 000.

Non-GEMINI elements

File identifier

This element is not editable; it is set by the Metadata Editor when the file is saved. It us used by the central Discovery Metadata Service when collecting records, to determine whether the metadata record is new or is a replacement for an existing one.

Hierarchy level name

If the resource type (ISO hierarchy level) is not dataset, ISO requires a hierarchy level name. When using the 'series' or 'service' template, it can be edited in the 'Metadata' section. At present, it is ignored within UK Location.

Service metadata elements

Title

GEMINI Metadata element number 1

GEMINI 2.1 section number 5.1

GEMINI Guidelines 2 section number A.1

Equivalent INSPIRE element Resource title

GEMINI section Identification

Multiplicity 1

Note: initially, this field contains the template title. It is a good idea to edit this straight away, so that you do not end up with lots of saved records with the same title.

166 The title will be searchable in the UK and EC portals.

Alternative title

GEMINI Metadata element number 2

GEMINI 2.1 section number 5.2

GEMINI Guidelines 2 section number A.2

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is alternateTitle

GEMINI section Identification

Multiplicity 0..*

167 The alternative titles will be searchable in the UK portal, as free text.

Dataset language

GEMINI Metadata element number 3

GEMINI 2.1 section number 5.3

GEMINI Guidelines 2 section number A.3

Equivalent INSPIRE element Resource language

GEMINI section Identification

Multiplicity 0: Although this is allowed in GEMINI, it

is not possible in the ISO standard for

service metadata

Abstract

GEMINI Metadata element number 4

GEMINI 2.1 section number 5.4

GEMINI Guidelines 2 section number A.4

Equivalent INSPIRE element Resource abstract

GEMINI section Identification

Multiplicity

168 The abstract will be searchable in the UK portal, as free text.

169 If you need to express a "spatial resolution" in your service metadata, INSPIRE advises putting it in the abstract.

Topic category

GEMINI Metadata element number 5

GEMINI 2.1 section number 5.5

GEMINI Guidelines 2 section number A.5

Equivalent INSPIRE element Resource topic category

GEMINI section Classifications

Multiplicity 0: Although it is allowed in GEMINI, it is

not applicable to services, and is not

available in the ISO standard for

service metadata.

Keyword

GEMINI Metadata element number 6

GEMINI 2.1 section number 5.6

GEMINI Guidelines 2 section number A.6

Equivalent INSPIRE element Keyword value, and Originating

controlled vocabulary

GEMINI section Keyword

Multiplicity 1..*

The large box labelled Keyword allows you to have several keywords from one vocabulary, or to have uncontrolled keywords, that is from no vocabulary. To indicate that a group of keywords are uncontrolled, delete the "Originating controlled vocabulary" box.

- 171 It is possible to delete the Keyword box but if you have no keywords, your record will not be valid.
- To add keywords from more than one vocabulary, click the ⊕ icon at the Keyword box level. This allows you to select a "type" for the keyword, from a drop down list, but this is not required by INSPIRE or GEMINI. It is possible to add more than one date in the citation of the vocabulary, but there is no need to do this.
- To describe an INSPIRE service, include at least one keyword from Part D.4 of the Metadata Regulation; this is in addition to the "Spatial data service type" element. For example, to indicate an INSPIRE View Service, you may state or 'infoMapAccessService' or 'humanGeographicViewer'. The list is available as a 'thesaurus' in the editor; click the icon, and select "inspire-service-taxonomy4.rdf", then choose the keyword(s) you want. However, the citation should be the title of the regulation: "Commission Regulation (EC) No 1205/2008 of 3 December 2008 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards metadata Text with EEA relevance"².
- See the notes for data set keywords for information on including an INSPIRE theme keyword.
- 175 Controlled keywords will be searchable in the UK portal; uncontrolled keywords will be searchable as free text.

Temporal extent

GEMINI Metadata element number 7

GEMINI 2.1 section number 5.7

GEMINI Guidelines 2 section number A.7

Equivalent INSPIRE element Temporal extent

GEMINI section Temporal reference

Multiplicity 0..*

- 176 INSPIRE requires either the temporal extent or one of the INSPIRE dataset reference dates, although for GEMINI temporal extent is mandatory. ISO allows more than one temporal extent; GEMINI only expects one others will be ignored.
- 177 Temporal extent can be used as a search filter in the UK portal.

- Ignore the "Time Period" identifier; it is required by ISO 19139, and can stay as set in the template.
- Enter the begin and end dates as YYYY-MM-DD; GEMINI allows this to be as coarse a century, but ISO 19139 requires at least the year. GEMINI, INSPIRE & ISO allow for the temporal extent to be 'open ended', that is it allows for only one date to be specified. The *UKLP DMS Operational Guide* [6] describes this as "before" or "after"; the editor and underlying standards have no mechanism to encode "now". If you need to enter an open ended period ("since xxx" or "until xxx"), you can leave the begin and/or end date empty, even though they are red and have stars.
- If you need to enter only a single date, perhaps to express the temporal extent as a single whole year, then delete the Temporal Extent which came from the template, and create a new one by selecting "Temporal Extent" in the drop down (rather than "Spatial Temporal Extent"), then clicking on the ⊞ icon. If you choose TimePeriod from the next drop down, you will be back at the original template, so choose Time Instant. Do not select "Time Edge" or "Time Node".
- You will then need to provide an "Identifier" (any string that does not start with a numeric digit), and then enter your date (and time, if you want) there are a lot of choices here, but it does accept a standard ISO 8601 date, as above.
- If you need to recreate the temporal extent period, ensure you select "Temporal Extent (gmd:EX_TemporalExtent)" in the drop down before clicking the \boxplus next to the Temporal Extent prompt. This produces some nested boxes, each labelled Temporal Extent. Then select "Time period (gml:TimePeriod)" before clicking the + next to the innermost "Temporal Extent" label. You will need to enter an Identifier ("T1" in the template) it has to be unique in the metadata record, not start with a number, and not contain any spaces. Next, select "Begin date (gml:beginPosition)" before clicking \boxplus next to the first "Choice". Finally, select "End date (gml:endPosition)" before clicking \boxplus next to the second "Choice".

Dataset reference date

GEMINI Metadata element number 8

GEMINI 2.1 section number 5.8

GEMINI Guidelines 2 section number A.8

Equivalent INSPIRE element Date of publication, Date of last

revision, Date of creation

GEMINI section Temporal reference

Multiplicity 0..*

Note: in the context of a service metadata record, this element represents the date of creation / publication / revision of the service being described, not of the datasets which that service serves.

- INSPIRE requires either the temporal extent or one of the INSPIRE dataset reference dates, although for GEMINI both are mandatory. The Metadata Editor has a repeatable box labelled "Dataset Reference Date"; within each box, you specify a date and the 'date type', as per the GEMINI sub-elements. If you want to enter a second date, you will need to choose between Date and DateTime in order to get the date (or date time) selector.
- If you are only going to provide one, provide the most recent, although if your dataset is continually updated and you are not planning to reissue the metadata regularly, then you may not want to give a 'date of last revision' and you may want the initial publication date to appear as 'date of creation' rather than give the impression that the data was published a long time ago and never updated.

Level Description

Whilst Level Description is not a GEMINI element, it is required in service records. To enter this select the appropriate "scope description" from the drop down. For a service record, select "Other", and enter the Level Description in the free text entry box (e.g. "service").

Lineage

GEMINI Metadata element number 10

GEMINI 2.1 section number 5.9

GEMINI Guidelines 2 section number A.9

Equivalent INSPIRE element Lineage

GEMINI section Quality

Multiplicity 0: Although it is allowed in GEMINI, it is

not applicable to services, and is not available in the ISO standard for

service metadata.

Bounding latitudes and longitudes

GEMINI Metadata element number 11, 12, 13, 14

GEMINI 2.1 section number 5.10, 5.11, 5.12, 5.13

GEMINI Guidelines 2 section number A.10, A.11, A.12, A.13

Equivalent INSPIRE element Geographic bounding box

GEMINI section Geographic location, in the Geographic

element / Bounds box

Multiplicity 0..1

- You can enter the coordinates in the four text entry boxes, or draw a rectangle on the map.
- 188 The drop down will populate the box for you, but at present only offers a selection of countries.
- 189 If you accidently delete the whole "geographic element", you can get it back by selecting "Bounds (gmd:EX_GeographicBoundingBox)" before clicking the ⊕ icon alongside "geographic element".

Extent

GEMINI Metadata element number 15

GEMINI 2.1 section number 5.14

GEMINI Guidelines 2 section number A.14

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is EX_GeographicDescription.

geographicidentifier

GEMINI section Geographic location, as an option

within "Geographic element"

Multiplicity 0..*

This is available if you select "Extent (gmd:EX_GeographicDescription)" before clicking the ⊞ icon alongside "geographic element".

191 Select "Identifier (gmd:MD_Identifier)" from the drop down before clicking the ⊞ icon next to "Geographic identifier". This allows you to enter the "code" (GEMINI sub element) and optionally add the "authority" – which opens a whole citation box, as for the thesaurus citation above.

Vertical extent information

GEMINI Metadata element number 16

GEMINI 2.1 section number 5.15

GEMINI Guidelines 2 section number A.15

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is EX_VerticalExtent

GEMINI section Geographic location

Multiplicity 0..1

This section allows you to enter the minimum and maximum value GEMINI sub elements. You will need to know what kind of "Vertical CRS" to choose from that drop down, and complete the required fields for that kind of CRS.

Spatial reference system

GEMINI Metadata element number 17

GEMINI 2.1 section number 5.16

GEMINI Guidelines 2 section number A.16

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is referenceSystemIdentifier

GEMINI section Identification

Multiplicity 0..1, although ISO allows more

This is placed in the "identification" section, rather than in "Geographic location", to avoid giving the impression that it is the reference system of the bounding box.

- The UK Location encoding recommendation is to use the URN form of reference to an EPSG code, such as "urn:ogc:def:crs:EPSG::4258" for ETRS89. Enter this in the "Identifier" field, which implements the GEMINI sub-element "code identifying the spatial reference system"; ignore the other optional fields. EPSG codes are available at http://epsg-registry.org
- The following are in common use in the United Kingdom; several of them are available in the "Suggestions" drop down:

Common name	EPSG code as URN	Available in "Suggestions"
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Projected Coordinate Systems

British National Grid urn:ogc:def:crs:EPSG::27700 As "OSGB 1936 / British

National Grid"

Irish Grid urn:ogc:def:crs:EPSG::29903 As "TM 75 / Irish Grid"

Irish Transverse urn:oqc:def:crs:EPSG::2157 As "ETRS89 / Irish Transverse

Mercator Mercator

Geodetic Coordinate Reference Systems

ETRS89 2D urn:ogc:def:crs:EPSG::4258 As "ETRS89"

ETRS89 3D urn:ogc:def:crs:EPSG::4937 No

WGS84 2D urn:ogc:def:crs:EPSG::4326 As "ITRS / WGS84"

WGS84 3D urn:ogc:def:crs:EPSG::4327 No

OSGB36 urn:ogc:def:crs:EPSG::4277 No

Common name EPSG code as URN Available in "Suggestions"

Vertical Coordinate Reference Systems

Odnance Datum -

urn:ogc:def:crs:EPSG::5701 No

Newlyn

Belfast Lough urn:ogc:def:crs:EPSG::5732 No

196 If you need to cite a spatial reference system which does not have an EPSG code, then you will need to also provide the "Authority" for the identifier that you enter.

Spatial resolution

GEMINI Metadata element number 18

GEMINI 2.1 section number 5.17

GEMINI Guidelines 2 section number A.17

Equivalent INSPIRE element This implements the "distance" choice

in the INSPIRE "spatial resolution"

element.

GEMINI section Quality

Multiplicity 0: Although it is allowed in GEMINI and

INSPIRE, it is not available in the ISO standard for service metadata *INSPIRE* recommends that a service record that needs to indicate a spatial resolution

does so in its abstract.

Resource locator

GEMINI Metadata element number 19

GEMINI 2.1 section number 5.18

GEMINI Guidelines 2 section number A.18

Equivalent INSPIRE element Resource locator

GEMINI section Identification, in the OnLine resource

box.

Multiplicity 0..* but UK Location rather depends on

these!

The resource locator has to be an http URL. The OnLine resource box also contains three sub-elements: Name of the resource, Description, Function. These are optional, but are encouraged, and should improve the user experience in the central catalogue.

For an INSPIRE service, this is most likely a link to the service capabilities document, e.g. http://example.org/WMSServer?service=WMS&request=GetCapabilities. See [4] the INSPIRE Metadata technical guidelines for a brief discussion of other kinds of services.

Data format

GEMINI Metadata element number 21

GEMINI 2.1 section number 5.19

GEMINI Guidelines 2 section number A.19

Equivalent INSPIRE element None – this is not an INSPIRE discovery

metadata element. The ISO equivalent

is distributionFormat

GEMINI section Quality

Multiplicity 0..* but required if a Resource locator

is given

This is a repeatable box. For each one, the name and version sub-elements are mandatory. You can ignore the "specification" sub-element.

Responsible organisation

GEMINI Metadata element number 23

GEMINI 2.1 section number 5.20

GEMINI Guidelines 2 section number A.20

Equivalent INSPIRE element Responsible party

GEMINI section Responsible organisations⁴

Multiplicity 1..*

The whole "Responsible organisation" box is repeatable. ISO makes the email address and role (drop down) mandatory; for GEMINI, the organisation name is also mandatory.

201 Roles: for UK Location, use "owner" for the Data Provider and "publisher" for the Data Publisher or if you are both provider and publisher. If the data was created by someone other than the Data Provider, this should also be recorded, using the role

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⁴ The INSPIRE Metadata Regulation's section is actually called "Organisations responsible for the establishment, management, maintenance and distribution of spatial data sets and services"

value "Originator". Unfortunately, ISO does not allow a single 'Responsible party' to have more than one role – to achieve that, you have to repeat the whole section.

- The GEMINI "postal address" sub-element becomes a whole structure in ISO; the labels should be self explanatory.
- 203 GEMINI "telephone number" is specifically "Voice" within the "Telephone Number" box, alongside "facsimile number".
- 204 GEMINI "web address" is specifically the URL within the "Web Address" box; the other child elements are optional.

Frequency of update

GEMINI Metadata element number 24

GEMINI 2.1 section number 5.21

GEMINI Guidelines 2 section number A.21

Equivalent INSPIRE element None – this is not an INSPIRE element.

The ISO equivalent is

maintenanceAndUpdateFrequency

GEMINI section Temporal reference

Multiplicity 0..1

This is mandatory in GEMINI (for datasets and series), but optional in INSPIRE and therefore UK Location. However, it is strongly encouraged for UK Location.

Limitations on public access

GEMINI Metadata element number 25

GEMINI 2.1 section number 5.22

GEMINI Guidelines 2 section number A.22

Equivalent INSPIRE element Limitations on public access

GEMINI section Constraints, within the Resource

constraints / Legal constraints box

Multiplicity 1..*

- 206 Both this element and "Use constraints" are encoded as ISO Resource constraints, so appear as two similar boxes in the Metadata Editor. The inner label, for the actual free text box, distinguishes them.
- 207 INSPIRE: "When Member States limit public access to spatial data sets and spatial data services under Article 13 of Directive 2007/2/EC, this metadata element shall provide information on the limitations and the reasons for them."

- Mandatory, and INSPIRE guidance specifies an explicit statement if there are no limitations: "no limitations".
- In order to enter the 'free text' expected by GEMINI and INSPIRE, the "Access constraints" drop down has to say "Other restrictions". It is possible to add other values here, using the 'plus', this would allow you to specify specific constraints that exist in the ISO list, in addition to the "other restrictions" plus free text,
- Integration of UK Location with the INSPIRE portal and UK government's data.gov.uk may result in tighter instructions about how to describe limitations.

Use constraints

GEMINI Metadata element number 26

GEMINI 2.1 section number 5.23

GEMINI Guidelines 2 section number A.23

Equivalent INSPIRE element Conditions applying to access and use

GEMINI section Constraints, within the Resource

constraints / Constraints box

Multiplicity 1..*

- Both this element and "Limitations on public access" are encoded as ISO Resource constraints, so appear as two similar boxes in the Metadata Editor. The inner label, for the actual free text box, distinguishes them. There is a known issue: the Metadata Editor label for this element is currently "Use limitation".
- 212 INSPIRE: "This metadata element defines the conditions for access and use of spatial data sets and services, and where applicable, corresponding fees as required by Article 5(2)(b) and Article 11(2)(f) of Directive 2007/2/EC."
- Mandatory, and INSPIRE Regulation requires an explicit statement if there are no conditions: "no conditions apply". You can enter a URL here, which points to a description of the conditions, such as a licence. The editor does not currently support entering the URL as a sub-element simply enter it in the free text area.
- Integration of UK Location with the INSPIRE portal and UK government's data.gov.uk may result in tighter instructions about how to describe these conditions / use constraints.

Additional information source

GEMINI Metadata element number 27

GEMINI 2.1 section number 5.24

GEMINI Guidelines 2 section number A.24

Equivalent INSPIRE element Not an INSPIRE element, the ISO

equivalent is supplementalInformation

GEMINI section Identification

Multiplicity 0..1

Metadata language

GEMINI Metadata element number 33

GEMINI 2.1 section number 6.1

GEMINI Guidelines 2 section number A.26

Equivalent INSPIRE element Metadata language

GEMINI section Metadata

Multiplicity 0..1; required for INSPIRE.

This is set to 'eng' in the template. For INSPIRE metadata records, it has to be an EC language, and English is the only EC language commonly in use in the UK.

Metadata date

GEMINI Metadata element number 30

GEMINI 2.1 section number 6.2

GEMINI Guidelines 2 section number A.25

Equivalent INSPIRE element Metadata date

GEMINI section Metadata

Multiplicity 1

This element is not editable; it is set by the Metadata Editor when the file is saved. It may be used by the central Discovery Metadata Service when collecting records, to determine whether the metadata record has changed.

Metadata point of contact

GEMINI Metadata element number 35

GEMINI 2.1 section number 6.3

GEMINI Guidelines 2 section number A.27

Equivalent INSPIRE element Metadata point of contact

GEMINI section Metadata

Multiplicity 1..*

Roles: UK Location encoding requires 'point of contact'. The structure is the same as Responsible organisation, at 0. Unfortunately, ISO does not allow a single 'Responsible party' to have more than one role – to achieve that, you have to repeat the whole section, or include a cross reference. Cross references are not currently supported by the Metadata Editor.

Unique resource identifier

GEMINI Metadata element number 36

GEMINI 2.1 section number 5.25

GEMINI Guidelines 2 section number A.28

Equivalent INSPIRE element Unique resource identifier

GEMINI section Identification

Multiplicity 0..1 in GEMINI; not expected for

INSPIRE or UK Location.

- The "code" sub-element is mandatory, and should be a recognisable identifier within the context of your organisation. If it is not guaranteed to be unique across UK Location and INSPIRE, then you should specify the "Codespace" sub-element. You should ignore the "Authority" and "Version" sub-elements.
- 219 If you are inserting a new Unique resource identifier, it is best to select "Identifier (gmd:RS_Identifier)" before clicking the +, as the alternative (gmd:MD_Identifier) does not allow for "Codespace"

Spatial data service type

GEMINI Metadata element number 37

GEMINI 2.1 section number 7.1

GEMINI Guidelines 2 section number A.29

Equivalent INSPIRE element Spatial data service type

GEMINI section Classifications

Multiplicity 1

The INSPIRE Metadata Regulation specifies particular values, which are repeated in GEMINI and its guidelines, and are available in the suggestions drop-down.

Coupled resource

GEMINI Metadata element number 38

GEMINI 2.1 section number 7.2

GEMINI Guidelines 2 section number A.30

Equivalent INSPIRE element Coupled resource

GEMINI section Identification

Multiplicity 0..*

GEMINI follows the INSPIRE encoding, which uses the ISO "operatesOn" element for this.

- This element is mandatory for view and download service metadata records. It should be repeated for each coupled resource. Following the pattern in [5], current INSPIRE guidance is to populate the xlink sub-element with a URL to the metadata record of the coupled resource: either an HTTP/GET call on the GetRecordById operation of the Discovery Service or a direct link to the ISO 19139 metadata document.
- ²²³ If the master copy of the metadata record for the coupled resource is published in a web accessible folder, browse to that record and copy / paste the full URL into the xlink sub-element. You can leave the metadata uuid sub-element empty.
- If the master copy is held in an INSPIRE Discovery Service, or other OGC catalogue server, you will need to create the GetRecordById request. If there is a copy of the record in your 'group' in the editor where you are creating the service record, you can use the icon; this allows you to search the records currently stored in your group in the GeoNetwork database, and create relationships to those records. It returns the fileIdentifier (a uuid), and populates the xlink (if it is empty).
- If you are using your organisation's instance of the editor, and it is also serving as your discover service, then the xlink sub-element should be correctly populated. Otherwise, you will need to replace the 'domain' part of the xlink with the URL for your discovery service, retaining the fileIdentifier (metadata uuid, CSW id) at the end of the path. The fileIdentifier can also be left as the value of the "Metadata uuid" sub-element.

Resource type

GEMINI Metadata element number 39

GEMINI 2.1 section number 5.26

GEMINI Guidelines 2 section number A.31

Equivalent INSPIRE element Resource type

GEMINI section Not editable

Multiplicity

This is set by the choice of template, to 'dataset', 'series', or 'service'. The reason is that if you change it (particularly to / from service) then some of the XML structure needs to change. Just choose the correct template!

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Conformity

GEMINI Metadata element number 41

GEMINI 2.1 section number 5.27

GEMINI Guidelines 2 section number A.32

Equivalent INSPIRE element Conformity: specification and degree

GEMINI section Quality, within the Data quality info /

Data quality / Report / Domain

consistency / Result box!

Multiplicity 0..*; required if claiming conformance

to INSPIRE.

227 If you want to provide a conformity statement, choose "Domain consistency" when adding the "Report", then "Conformity" for the "Result". Then you can provide the title and date for the specification, explanation and degree.

- 228 GEMINI adds an "explanation" sub-element, which is not in INSPIRE.
- This is an area where the deeply nested XML structure results in a lot of nested boxes. You only need to complete the mandatory sections. If you want to say you are conformant, i.e. you want to set the GEMINI "degree" sub-element to 'true', then tick the check box labelled "Degree". Leave it empty for degree = false i.e. tested and not conformant.
- If you do not want to claim conformance to anything, for example, you want the INSPIRE 'degree' to be 'not tested', the INSPIRE guidance is to not include a conformity statement at all. Delete at the "Report" level, because the "Data quality info" element in the XML also includes the GEMINI Lineage element.
- At present, there is no clear guidance from the European Commission as to how to cite their specifications. For INSPIRE, UK Location recommends "COMMISSION REGULATION (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services", date: 2010-12-08, with the URL to this document in the explanation: http://eur-
 - lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:323:0011:0102:EN:PDF
- For an INSPIRE View Service, i.e. where the service conforms but the data does not, you can use: "Technical Guidance for the implementation of INSPIRE View Services Version 3.0", date: 2011-03-21, with an explanation "See the referenced

specification at:

http://inspire.jrc.ec.europa.eu/documents/Network_Services/TechnicalGuidance_Vie wServices v3.0.pdf"

Equivalent scale

GEMINI Metadata element number 43

GEMINI 2.1 section number 5.28

GEMINI Guidelines 2 section number A.33

Equivalent INSPIRE element This implements the "Equivalent scale"

choice in the INSPIRE "spatial

resolution" element.

GEMINI section Quality

Multiplicity 0: Although it is allowed in GEMINI and

INSPIRE, it is not available in the ISO standard for service metadata. *INSPIRE recommends that a service record that needs to indicate a spatial resolution*

does so in its abstract.

Non-GEMINI elements

File identifier

This element is not editable; it is set by the Metadata Editor when the file is saved. It us used by the central Discovery Metadata Service when collecting records, to determine whether the metadata record is new or is a replacement for an existing one.

Hierarchy level name

If the resource type (ISO hierarchy level) is not dataset, ISO requires a hierarchy level name. This is set to 'service' in the UKLP service template, but can be edited in the 'Metadata' section. At present, it is ignored within UK Location.