



MEDIN Metadata

Creating Metadata with ArcCatalog

Version 1.2

2010-06-07



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1. INTRODUCTION

1.1 Scope

This document describes a method by which MEDIN metadata (version 2.3.1) can be generated using ESRI ArcCatalog. The method makes use of the standard metadata editor provided with ArcGIS. ArcCatalog stores metadata using a bespoke XML encoding but provides an ArcToolbox function to transform metadata to ISO 19139. The ISO 19139 metadata that is produced in this way is not valid (at version 9.3¹) and, in any case, does not conform to the MEDIN encoding requirements. Consequently a new stylesheet has been written to convert ESRI encoded metadata to MEDIN Discovery Metadata Standard v2.3.1. This stylesheet can be implemented using a second ArcToolbox function.

The method of creating metadata described in this document is not automatic and does require user intervention. However, it should be possible to automate some of the steps (eg the transformation step and subsequent synchronisation) using ESRI ArcObjects. An automated solution would best be implemented as an extension to ArcCatalog. The requirements for such a solution are not in the scope of this document. The intention is to describe a method for creating metadata that uses only native ESRI ArcCatalog components.

This document describes the creation of metadata for datasets. Out of scope is the creation of metadata for services and dataset series.

1.2 Abbreviations

CRS	Coordinate Reference System
ESRI	Environmental Systems Research Institute
XML	eXtensible Mark-up Language
XSL	eXtensible Stylesheet Language
XSLT	eXtensible Stylesheet Language Transformation

1.3 System Requirements

The system requirements for metadata management with ArcCatalog are as follows:

1. ESRI ArcGIS 9.2 or later
2. ESRI ArcGIS .NET Support²
3. Microsoft .NET Framework 2.0

1.4 Document Development

This document has been written with reference to ArcGIS Desktop version 9.3.³

1.5 Deliverables

The deliverable associated with this document is a ZIP file (20100430_EsriIsoXslt_v1.0.zip) containing resources which are relevant to the creation, transformation and viewing of metadata in ESRI ArcCatalog. The contents of the ZIP file are as follows:

¹ Bug report submitted to ESRI(UK)

² .NET support is part of the standard ArcGIS Desktop installation but it is not necessarily installed by default. However, if it has not been installed the installation can be modified using the installation disks. The .NET support package has not been installed if there is no DotNet folder in the the ArcGIS folder (e.g. C:\Program Files\ArcGIS\DotNet).

³ Product Version 9.3.0.1770. Service Pack 1 (build 9.3.1.1850)

1. ESRI ISO (proprietary) to MEDIN ISO 19139 > EsriIsoToMedin_v1.0.xslt – see section **Error! Reference source not found.** for a full description
2. MEDIN Metadata Stylesheets – see section 5
 - a. Source Files
 - i. MEDIN Images > header_bg.jpg
 - ii. MEDIN Images > log.gif
 - iii. MEDIN CRS.xsl
 - iv. MEDIN.xsl
 - b. Windows Installer
 - i. MedinStylesheets.Install.msi

2. ARCCATALOG AND METADATA

2.1 Default Metadata Editor

ArcCatalog provides two metadata editors. In order to create MEDIN metadata we need to use the ISO Wizard. To select the ISO Wizard as the default metadata editor select Tools > Options from the menu to display the Options dialog (Figure 2).

Select the Metadata tab and then select “ISO Wizard” in the Metadata Editor combo box at the bottom of the tab. Click OK to apply the changes.


2.2 Metadata Toolbar

The metadata toolbar provides a set of controls for managing metadata in ArcCatalog (Figure 1). To display the toolbar select Tools > Customize from the menu to open the Customize dialog. Check the box next to Metadata in the Toolbars list on the Toolbars tab.



Figure 1 – ArcCatalog Metadata Toolbar

It is also possible to set working synchronisers (essentially a .dll file that updates set metadata elements automatically e.g. geographic bounding box) by selecting Tools > Customize >

Commands tab > Select Metadata from the Categories menu > Drag  “Set Working Synchronizers...” to the Metadata Toolbar.

The function of each of the controls is described in Table 1. The controls are enabled only when the Metadata tab, in the main application, is selected.

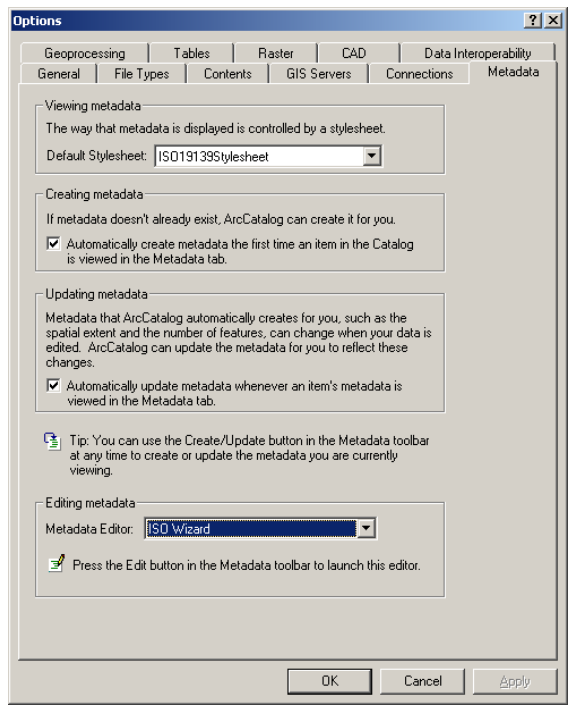









Figure 2 – ArcCatalog Options Dialog

Table 1 – ArcCatalog Metadata Controls Description

Control	Function
Stylesheet: 	Select the stylesheet to be used to view the metadata (see section 2.3)
	Edit metadata
	Metadata properties (not described in this document)
	Create or update metadata
	Import metadata
	Export metadata
	Set Working Synchronizers

2.3 Viewing Metadata

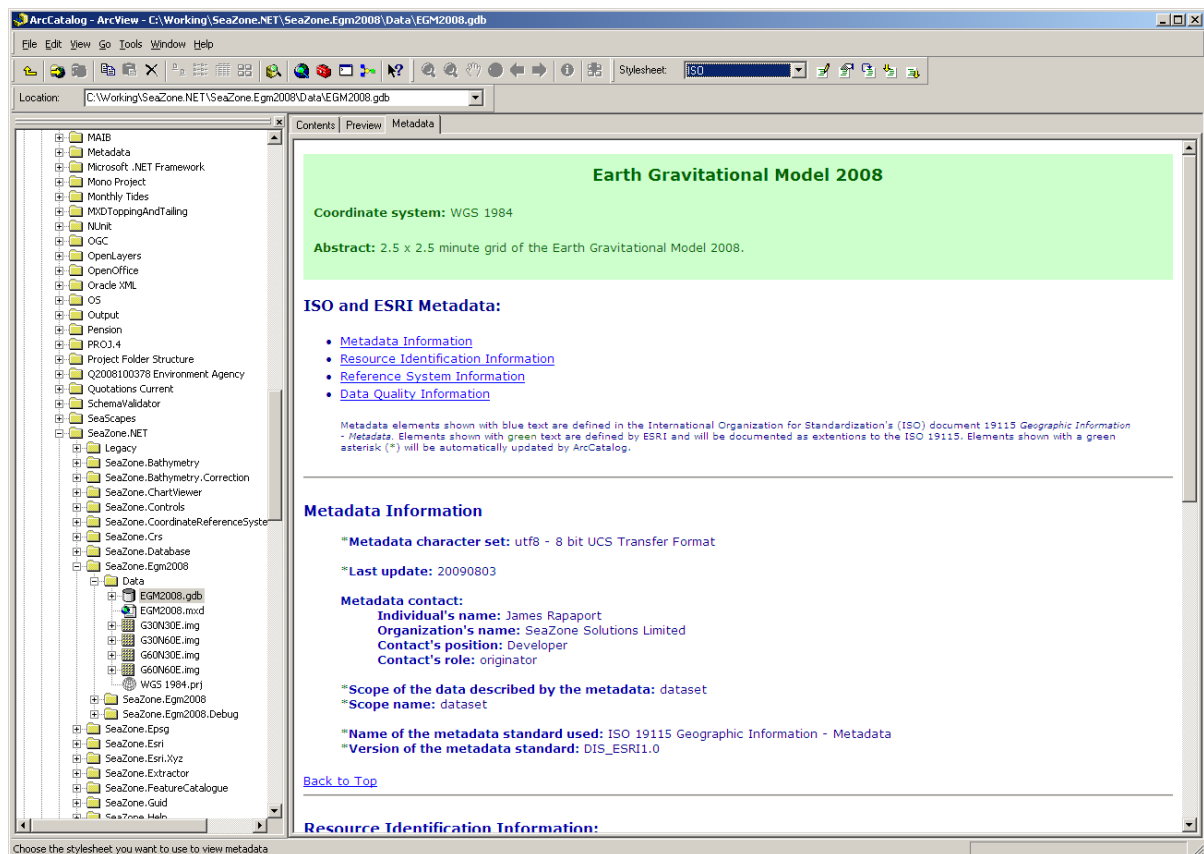


Figure 3 – Viewing Metadata in ArcCatalog

If a dataset has metadata associated with it the metadata can be viewed in ArcCatalog. First select the dataset in the Table of Contents or the Contents tab. Next select the Metadata tab to switch to the metadata view (Figure 3). The underlying metadata are encoded in XML but, in order to improve the readability of the metadata, they are transformed on the fly to HTML for display in the metadata tab using an XSL stylesheet. Several different stylesheets are provided with ArcCatalog which provide different views of metadata. The stylesheet in use may be changed using the Stylesheet combo box on the Metadata Toolbar.

2.4 Editing Metadata

Select a dataset in the Table of Contents or Contents tab and click the Edit Metadata control on the Metadata Toolbar to open the metadata editor. Since the default editor has been changed to the ISO Wizard, the ISO Metadata Wizard editor should appear (Figure 4).

The wizard can be navigated using the tree view on the left of the dialog (if this is not visible click the Show Contents button). The tree view also indicates which metadata elements are mandatory but not completed using an asterisk. The wizard only considers the obligation on elements in the ISO 19115 standard. Elements that are optional in ISO 19115 but have been changed to mandatory in the MEDIN standard will not be marked as mandatory in this wizard.

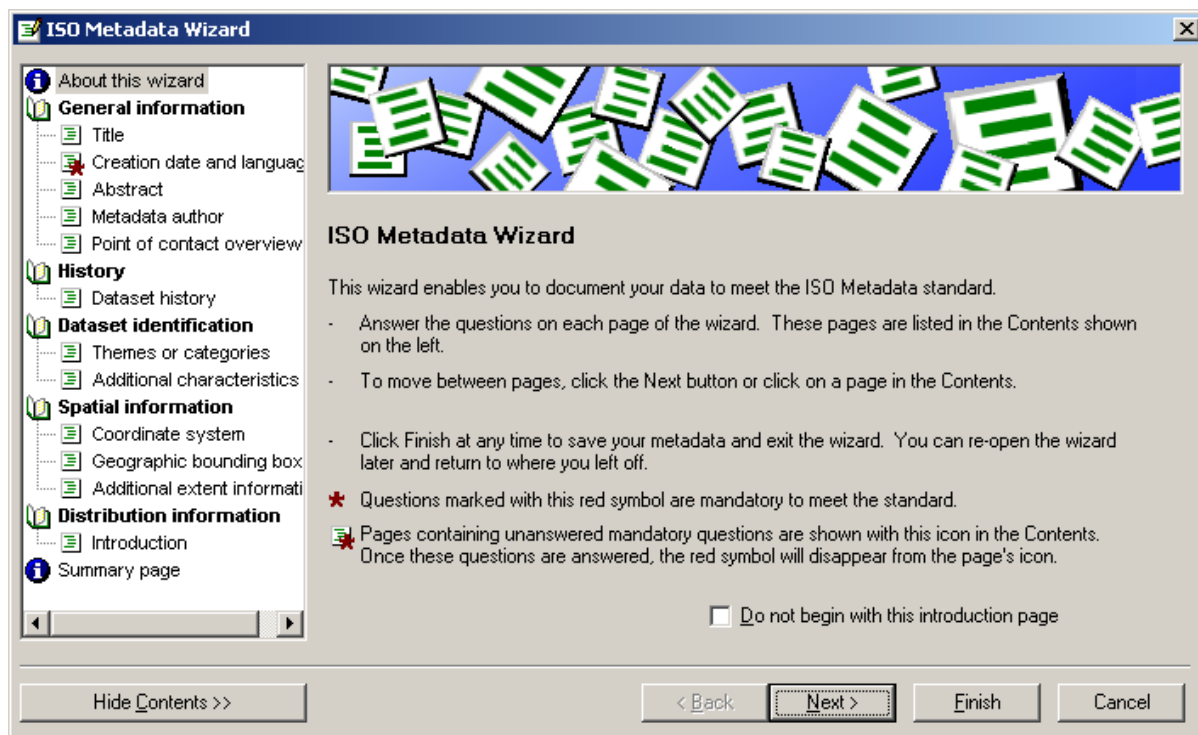


Figure 4 – ArcCatalog ISO Metadata Wizard

2.5 Metadata Format

Metadata generated by ArcCatalog are encoded using XML but using a set of elements that have been defined by ESRI. The native encoding standard is not ISO 19139 which is required by the MEDIN metadata specification. However, ArcCatalog does provide a means of translating the ArcCatalog metadata to standalone files encoded in ISO 19139. This is performed using the ArcToolbox ESRI Metadata Translator (Figure 5).

The ISO 19139 encoded metadata that is created in this way is neither valid nor is it quite in the format that is required by the MEDIN encoding rules. Therefore, a new stylesheet has been written to translate metadata from ESRI ISO format xml to output ISO 19139 metadata according to the MEDIN encoding rules. This stylesheet can be applied using the ArcToolbox XSLT Transformation tool (Figure 6).

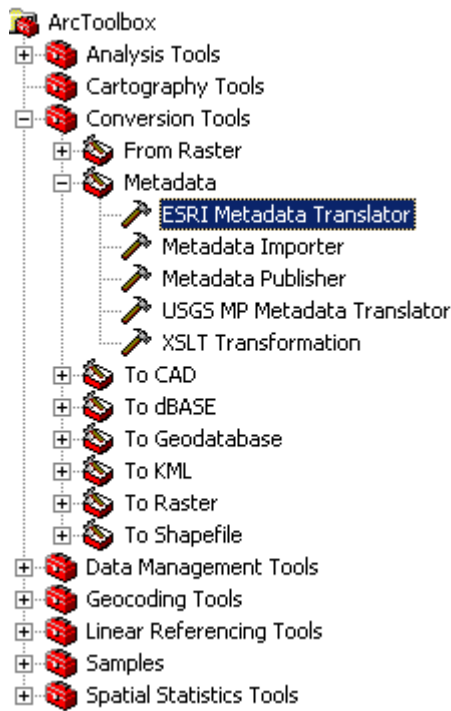


Figure 5 – ArcToolbox Metadata Translator

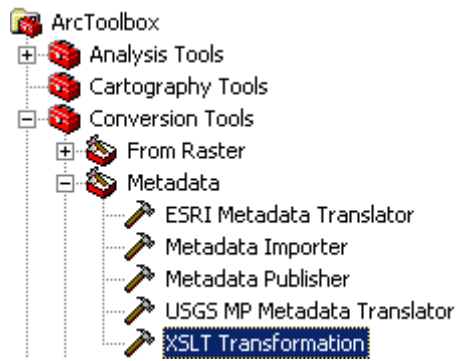


Figure 6 – ArcToolbox XSLT Transformation

3. CREATING MEDIN METADATA WITH ARCCATALOG

3.1 Introduction

This section gives a step by step guide to creating MEDIN conformant metadata with ArcCatalog's ISO Metadata Wizard and ArcToolbox functions. The process involves the use of a bespoke stylesheet (EsriIsoToMedin_v1.x.xsl) which is provided with this document.

3.2 ArcCatalog ISO Metadata Wizard

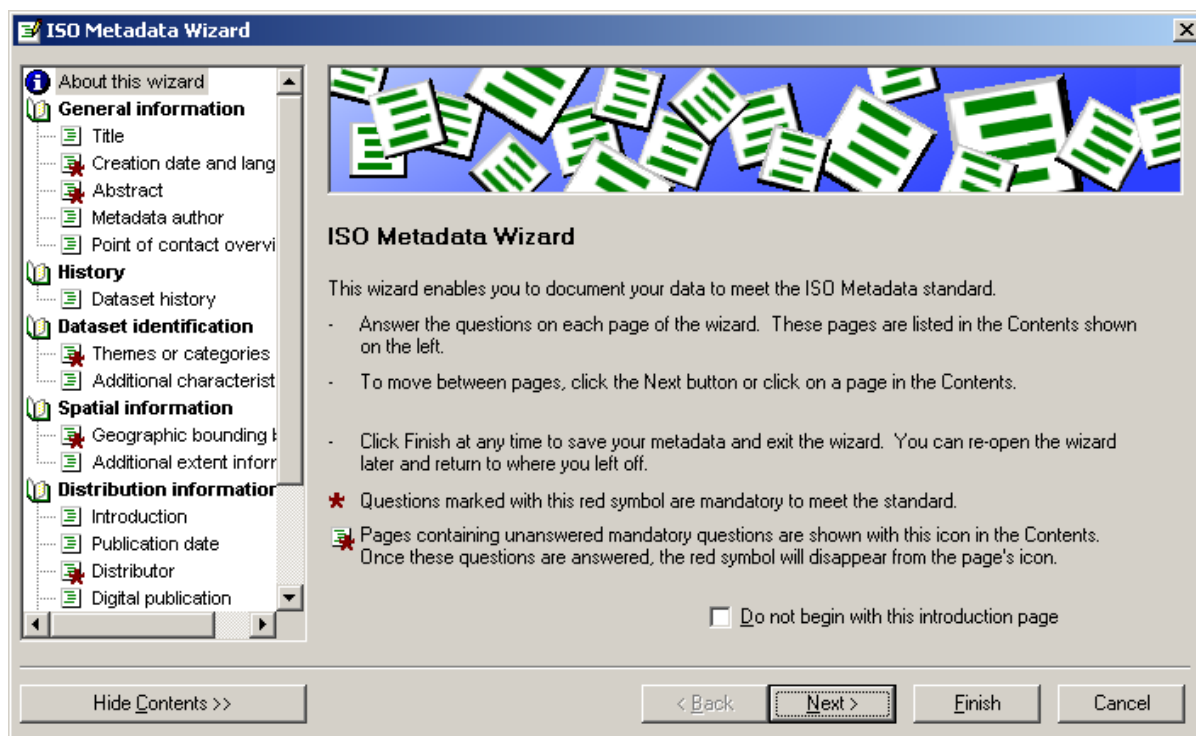


Figure 7 – ISO Metadata Wizard Start Page

Ensure that the ISO Metadata Wizard is the default metadata editor (see 2.1). Ensure that the metadata toolbar is open (see 2.2). Select a dataset in ArcCatalog and click the metadata tab of the main viewing window (see 2.3). The metadata toolbar becomes enabled. Click the Edit metadata toolbar button to open the ISO Metadata Wizard.

Note that when the ISO Metadata Wizard first opens, it displays an introduction page. Furthermore, if metadata have not been entered for the dataset, mandatory elements are marked with a red asterisk. This is explained on the introduction page. The obligation of elements that is displayed in the editor conforms to the ISO 19115 base standard, not to the MEDIN metadata standard. However, they act as a useful guide in creating valid metadata. Additional validation, using Schematron (available to download from the MEDIN website), is required to ensure that a metadata record is valid according to the MEDIN standard.

Click the Next button to advance to the Title page.

3.3 ISO Metadata Wizard – Title Page

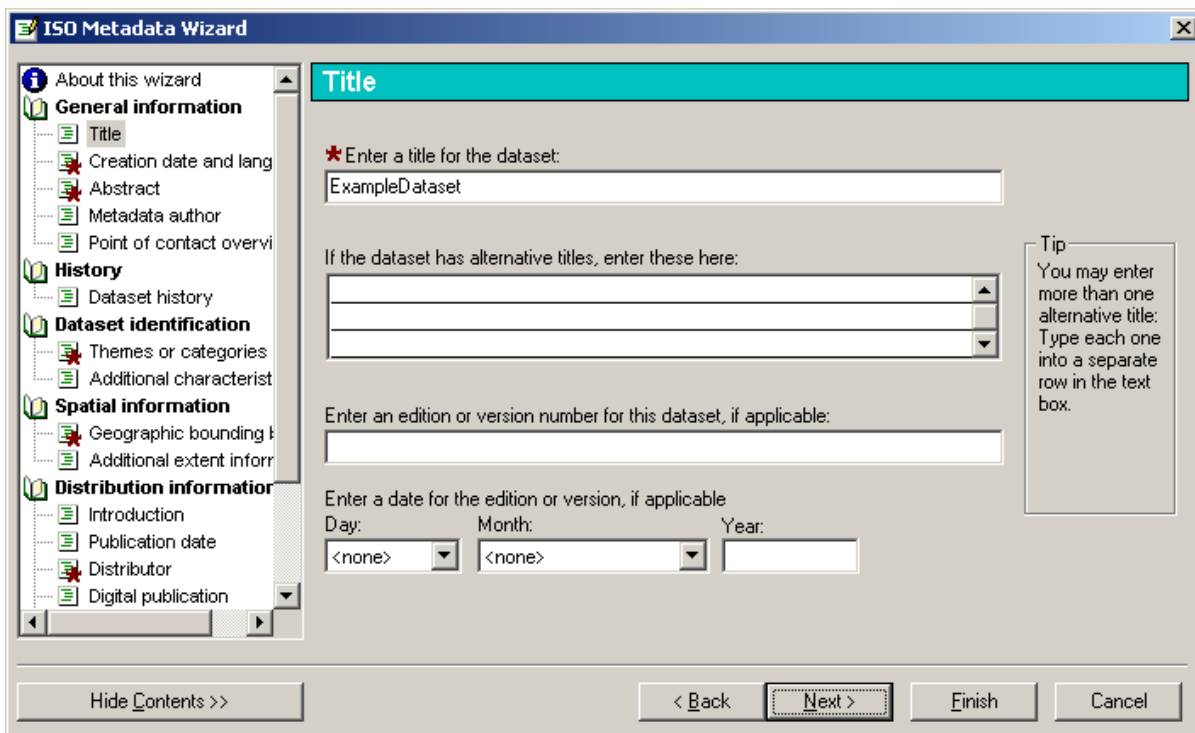


Figure 8 - ISO Metadata Wizard - Title Page

3.3.1 Resource Title

By default the title is set to the filename of the dataset. However, this can be changed. In addition alternative titles for a dataset can be added on this page.

3.3.2 Other Elements

An optional version number and version data may be added on this page.

3.3.3 Next

Click the Next button to proceed to the Creation date and language page.

3.4 ISO Metadata Wizard – Creation Date and Language Page

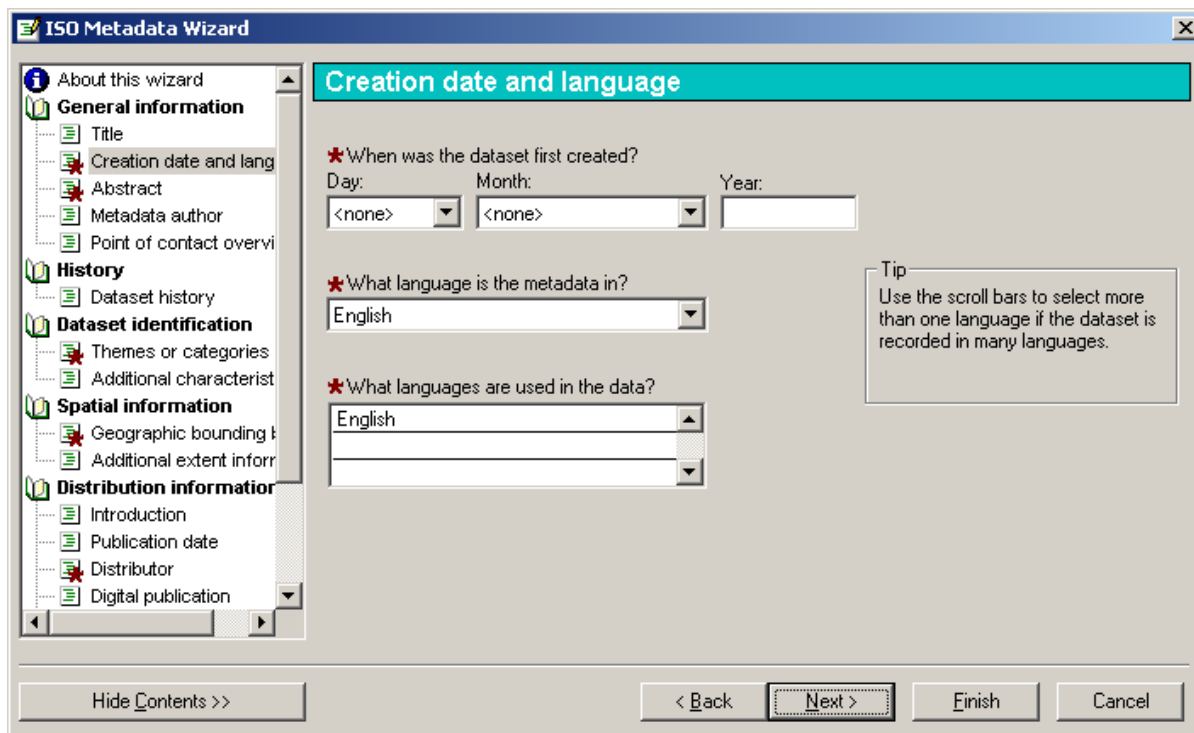


Figure 9 – ISO Metadata Wizard – Creation Date and Language Page

3.4.1 Date of Creation (C)

All metadata elements on this page are mandatory. Enter the date of creation of the dataset.

3.4.2 Metadata Language (M)

Enter the language used in the metadata. Languages are chosen from a predefined combo box. The list includes English, Welsh, Irish and Scots Gaelic. It does not include Cornish.

3.4.3 Resource Language (C)

Enter the language or languages that are used in the data. Each row in the control exposes an identical combo box.

3.4.4 Next

Click the Next button.

3.5 ISO Metadata Wizard – Abstract Page

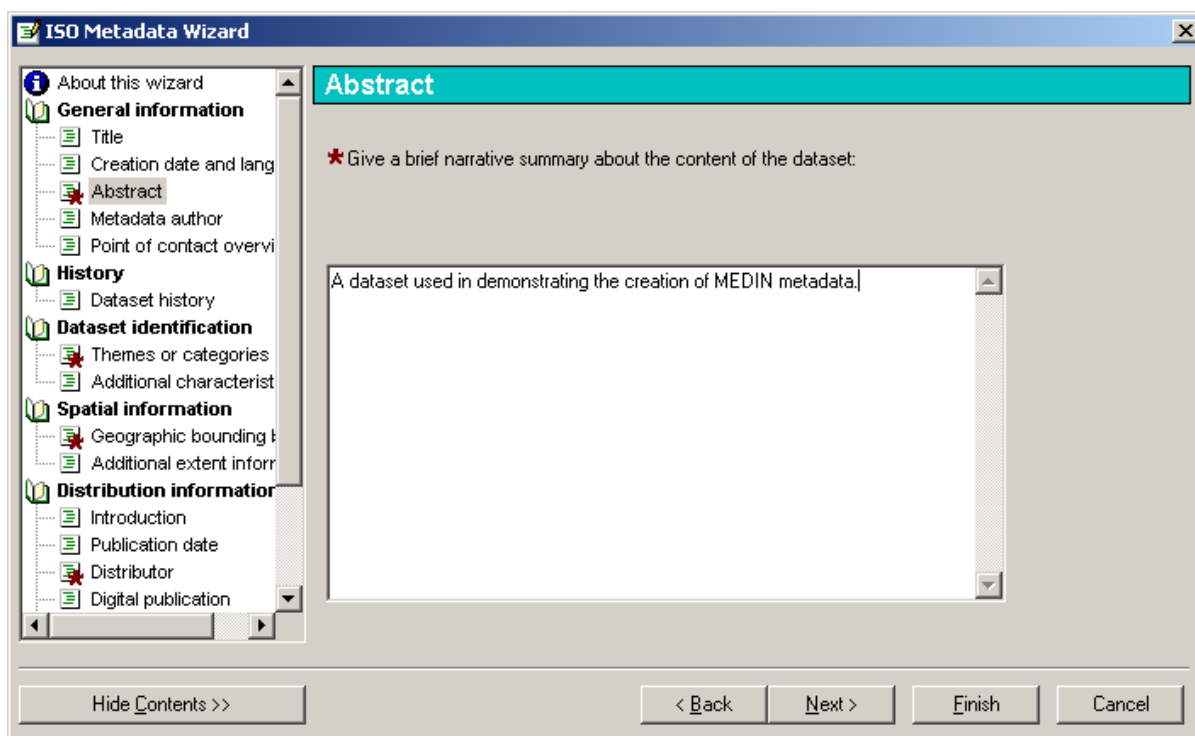


Figure 10 – ISO Metadata Wizard – Abstract Page

3.5.1 Resource Abstract (M)

Enter the abstract for the dataset in the text box that is provided on this page.

3.5.2 Next

Click the Next button.

3.6 ISO Metadata Wizard – Metadata Author Page

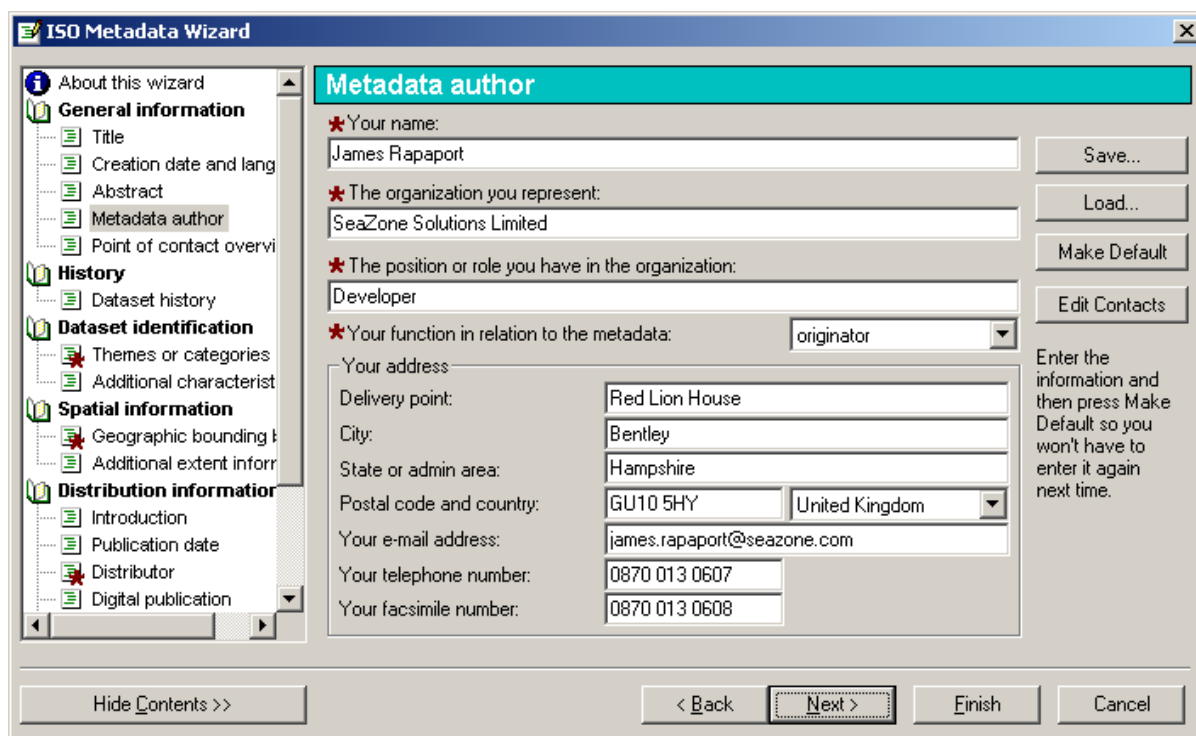


Figure 11 – ISO Metadata Wizard – Metadata Author Page

3.6.1 Metadata Point of Contact (M)

Enter details for the metadata point of contact. Note that provision is made to save contact information for future use. Click the Save... button to save the data in the contacts database.

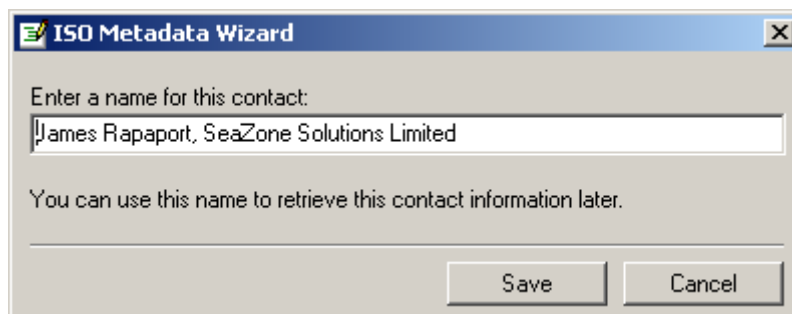


Figure 12 – ISO Metadata Wizard – Save Contact

In addition, if the particular contact information will be used by default in other metadata records, click the Make Default button. The next time this page is displayed the default contact details will be displayed.

Information stored in the contacts database may be edited. Click the Edit Contacts button. Data values in each column can be edited and entire rows can be deleted.

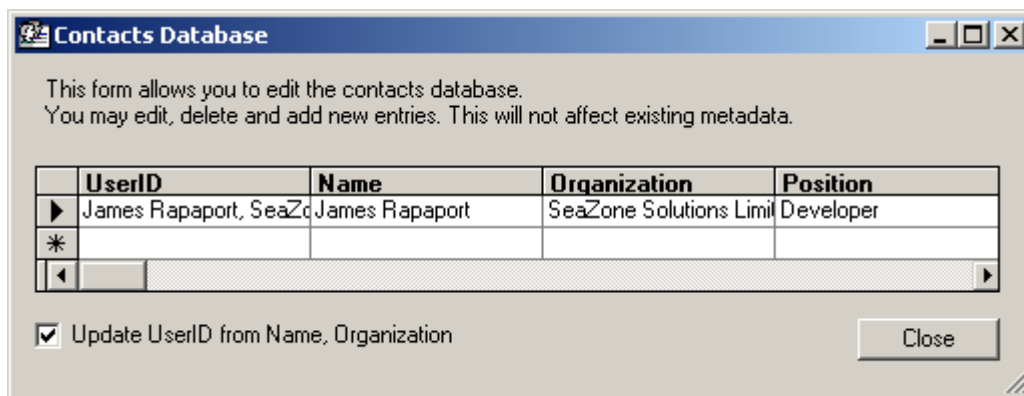


Figure 13 – ISO Metadata Wizard – Contacts Database

3.6.2 Next

Click the Next button.

3.7 ISO Metadata Wizard – Point of Contact Overview Page

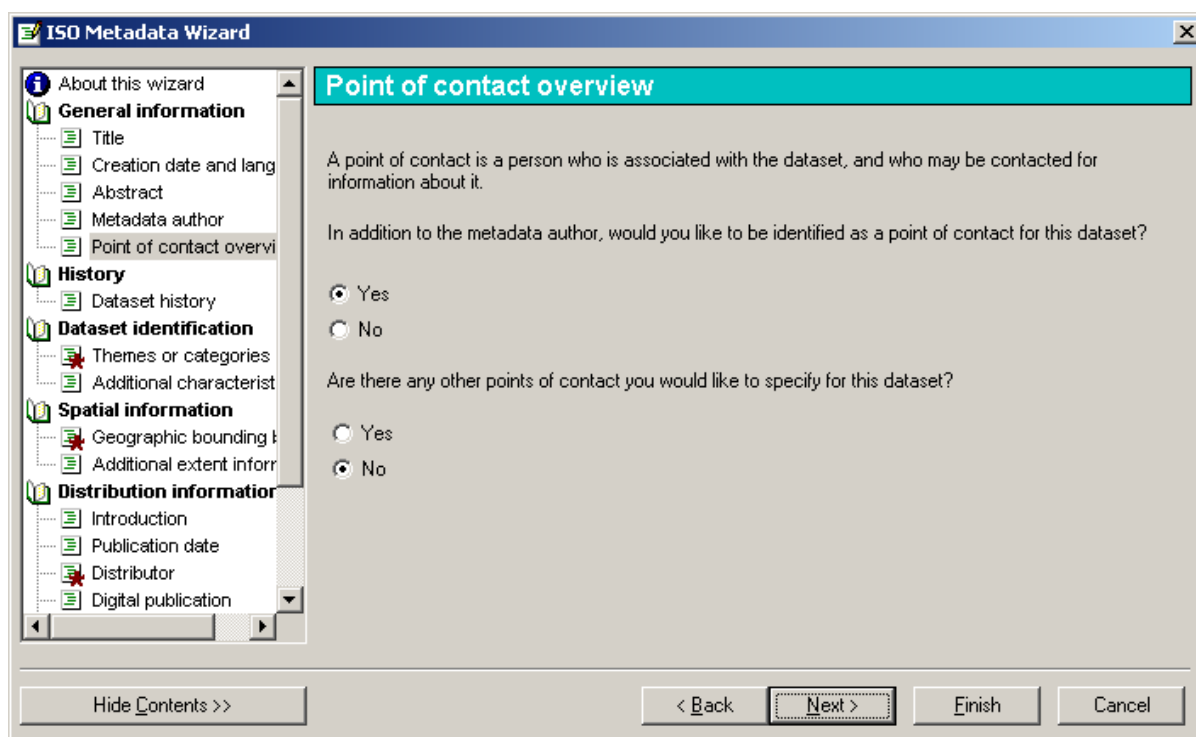


Figure 14 – ISO Metadata Wizard – Point of Contact Overview Page

This page exposes two radio button sets. The first, if Yes is checked, will enter the metadata author’s details as a point of contact for the dataset. The second set, if Yes is checked will allow the entry of further contact information for the dataset.

To add more than one additional point of contact, return to this page, click the Yes radio button in answer to “Are there any other points of contact you would like to specify...?” and click the Next button. A further point of contact page will be added. Alternatively, use the “Do you wish to add another point of contact?” radio button on the subsequent points of contact pages. Click Yes, and then next.

Note that at least one point of contact must have the role “custodian” and at least one must have the role “originator” to comply with the MEDIN requirements. Therefore, at least two additional points of contact must be added using this page.

Click Next.

3.8 ISO Metadata Wizard – Point of Contact Page

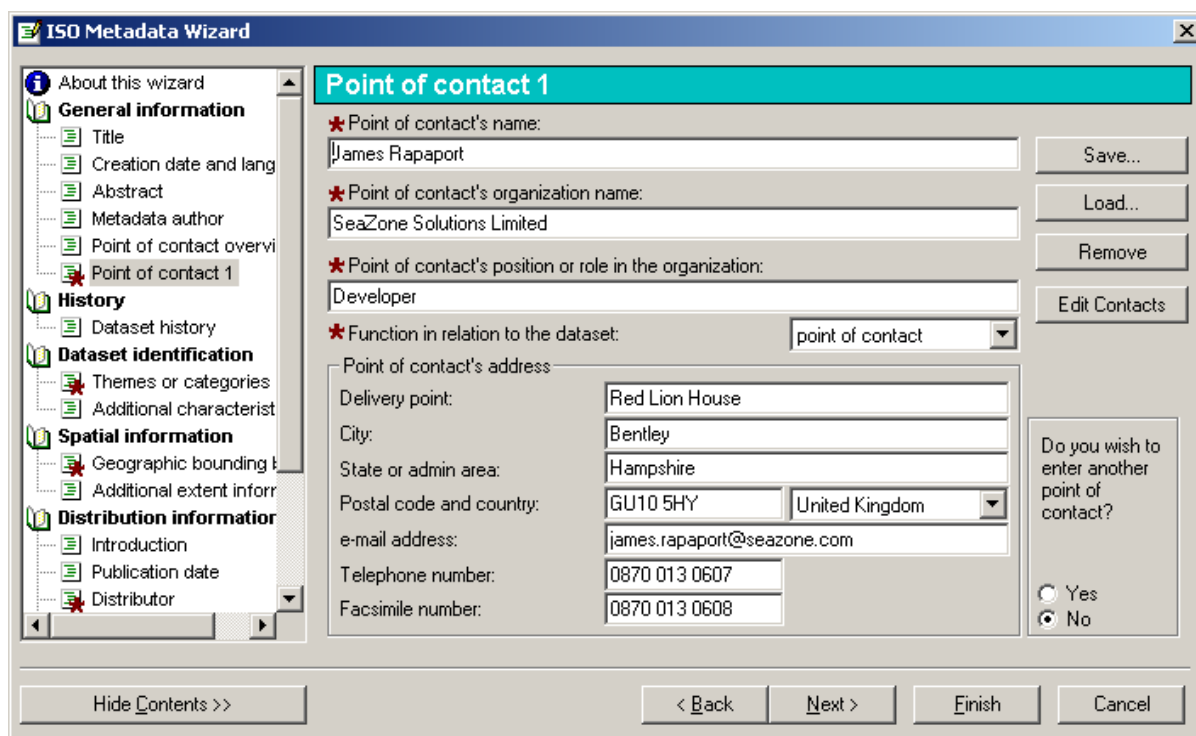


Figure 15 – ISO Metadata Wizard – Point of Contact X Page

3.8.1 Originator (M)

Add contact information for the Originator. Ensure that the "Function in relation to the dataset" value is set to "originator".

3.8.2 Data Point of Contact (M)

Add contact information for the data point of contact. Ensure that the "Function in relation to the dataset" value is set to "custodian".

3.8.3 Next

Click the Next button.

3.9 ISO Metadata Wizard – Dataset History Page

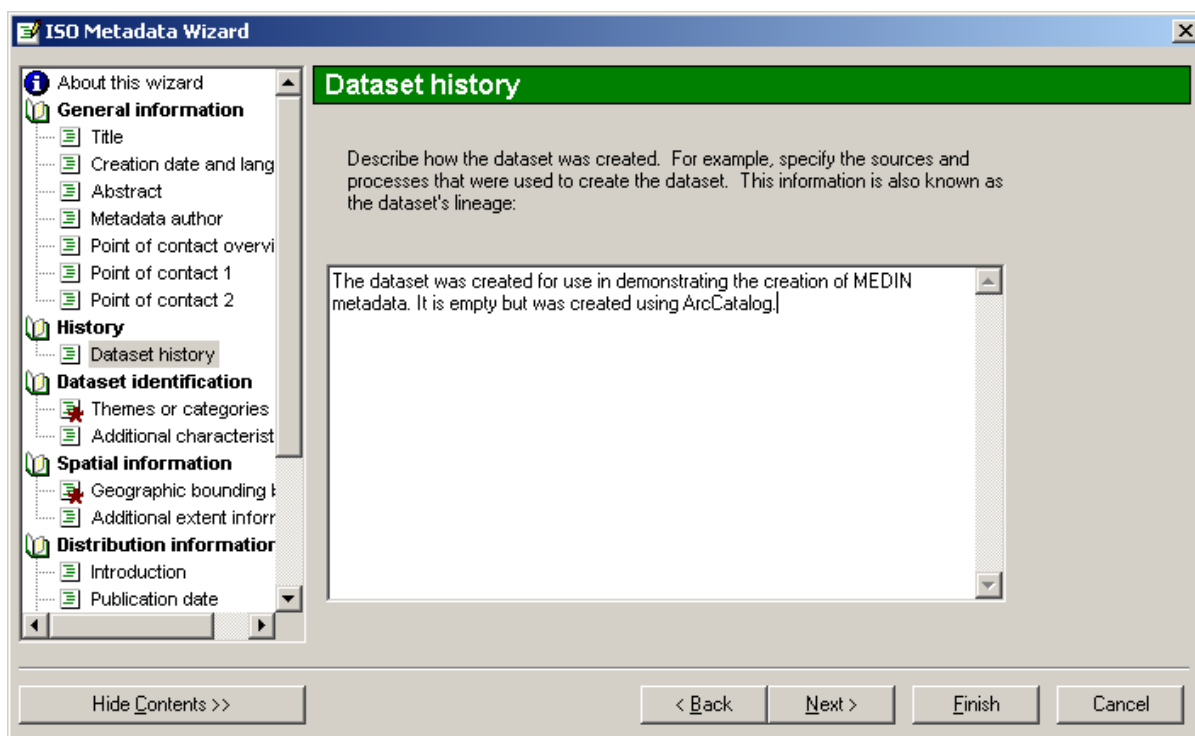


Figure 16 – ISO Metadata Wizard – Dataset History Page

3.9.1 Lineage (C)

Enter the lineage or history of the dataset in the text box provided.

3.9.2 Next

Click the Next button.

3.10 ISO Metadata Wizard – Themes or Categories Page

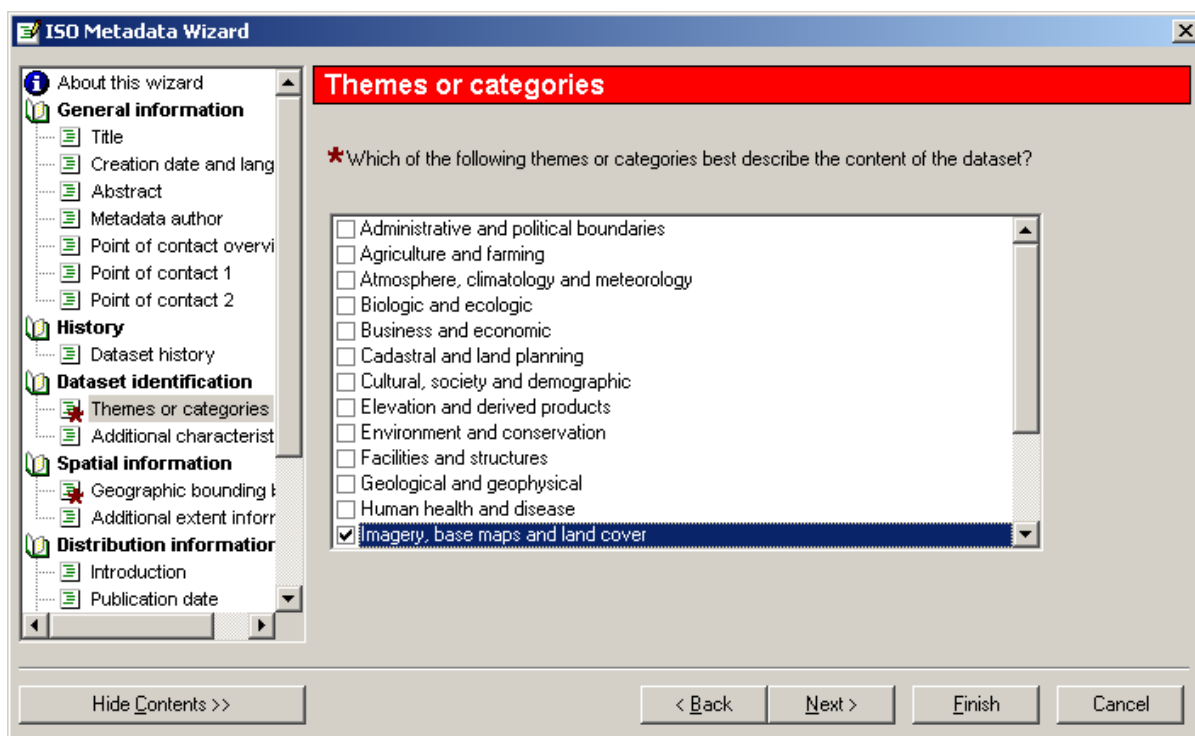


Figure 17 – ISO Metadata Wizard – Themes or Categories Page

3.10.1 Topic Category (C)

Select one or more values describing the broad category into which the dataset may be classified.

3.10.2 Next

Click the Next button.

3.11 ISO Metadata Wizard – Additional Characteristics Page

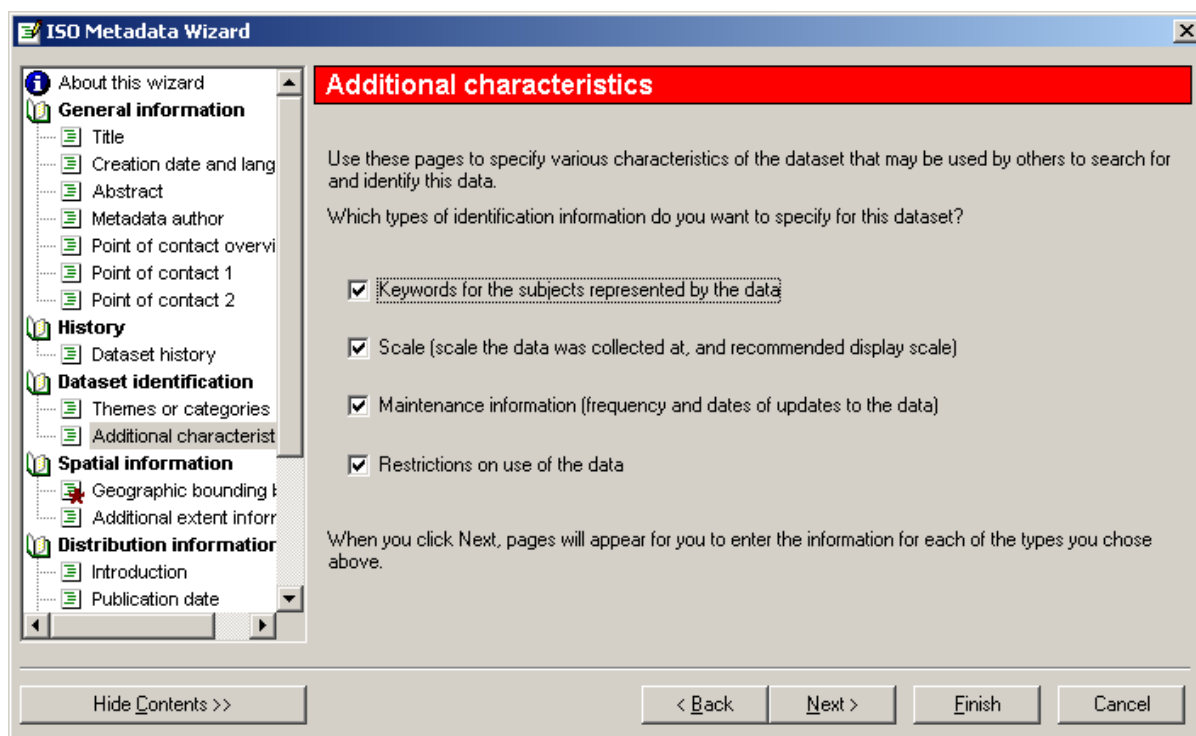


Figure 18 – ISO Metadata Wizard – Additional Characteristics Page

This page controls whether the data entry pages for Keywords, Scale, Maintenance and Restrictions will be exposed. In order to comply with MEDIN metadata all pages must be viewed so check all the boxes.

Click the Next button.

3.12 ISO Metadata Wizard – Maintenance Information Page

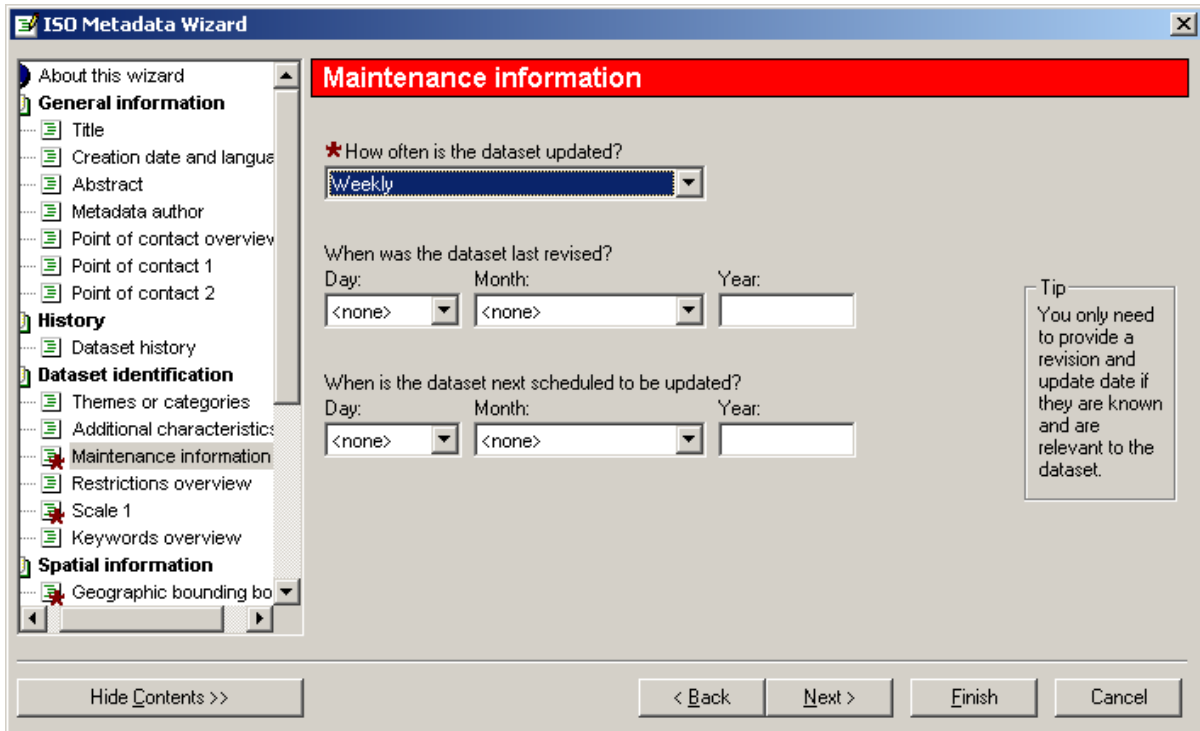


Figure 19 – ISO Metadata Wizard – Maintenance Information Page

3.12.1 Frequency of Update (C)

Use the combo box to select the appropriate frequency of update for the dataset.

3.12.2 Next

Click the Next button.

3.13 ISO Metadata Wizard – Restrictions Overview Page

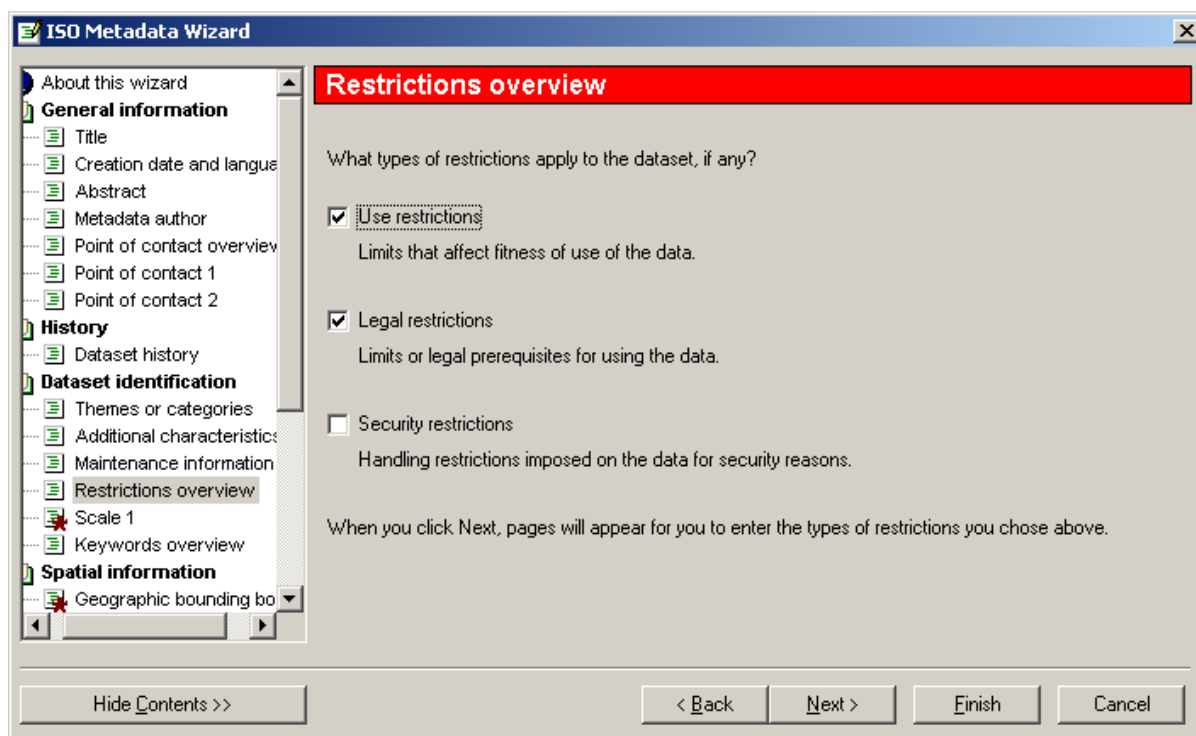


Figure 20 – ISO Metadata Wizard – Restrictions Overview Page

This page controls which subsequent pages for Use Restrictions, Legal Restrictions, and Security Restrictions will be exposed. For the purposes of MEDIN metadata select Use Restrictions and Legal Restrictions.

Click the Next button.

3.14 ISO Metadata Wizard – Use Restrictions Page

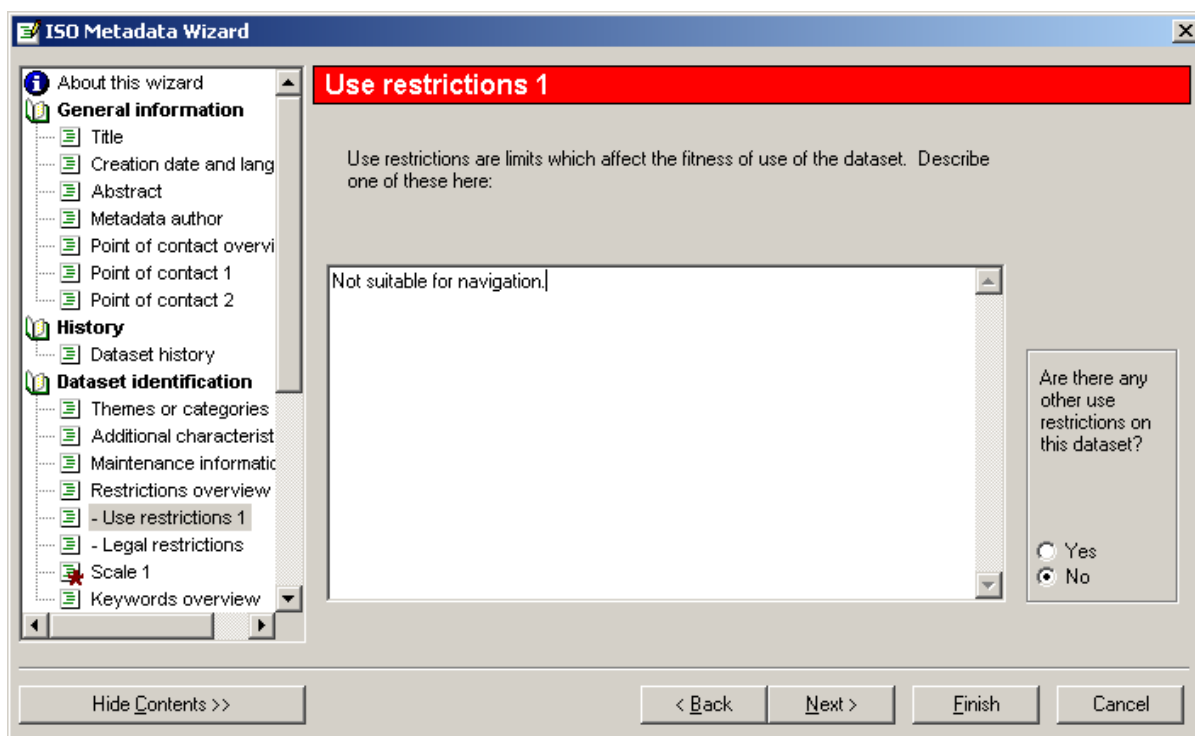


Figure 21 – ISO Metadata Wizard – Use Restrictions X Page

3.14.1 Conditions for Access and Use Constraints (M)

Enter the information describing the use limitations that are applied to the dataset.

3.14.2 Next

Click the Next button.

3.15 ISO Metadata Wizard – Legal Restrictions Page

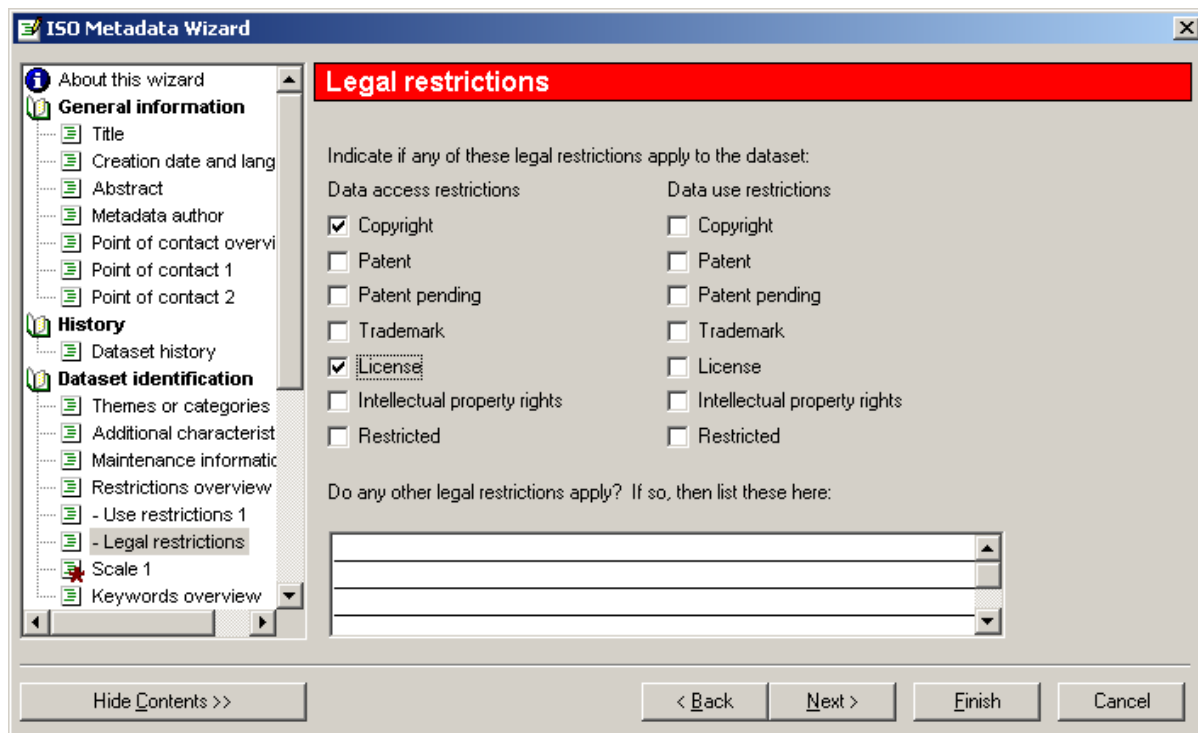


Figure 22 – ISO Metadata Wizard – Legal Restrictions Page

3.15.1 Limitations on Public Access (M)

Use the check boxes listed under Data Access Restrictions to enter information about limitations on public access to the data.

If there are no limitations in public access, this must be noted in the other restrictions list box (below the label "Do any other legal restrictions apply? If so, then list these here"). The phrase "no restrictions apply" shall be entered.

3.15.2 Next

Click the Next button.

3.16 ISO Metadata Wizard – Scale Page

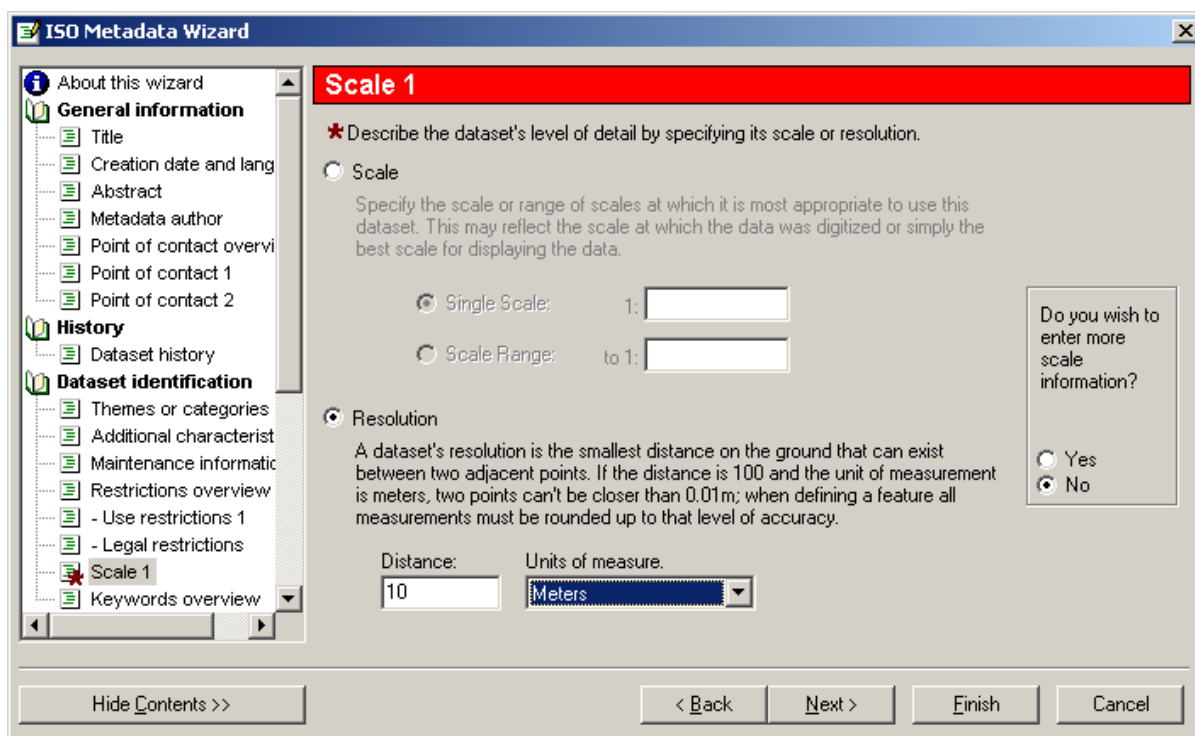


Figure 23 – ISO Metadata Wizard – Scale X Page

3.16.1 Spatial Resolution (C)

Use the Resolution control to enter a distance measurement describing the resolution of the data. Note that the distance measurement units shall always be metres.

3.16.2 Next

Click the Next button.

3.17 ISO Metadata Wizard – Keywords Overview Page

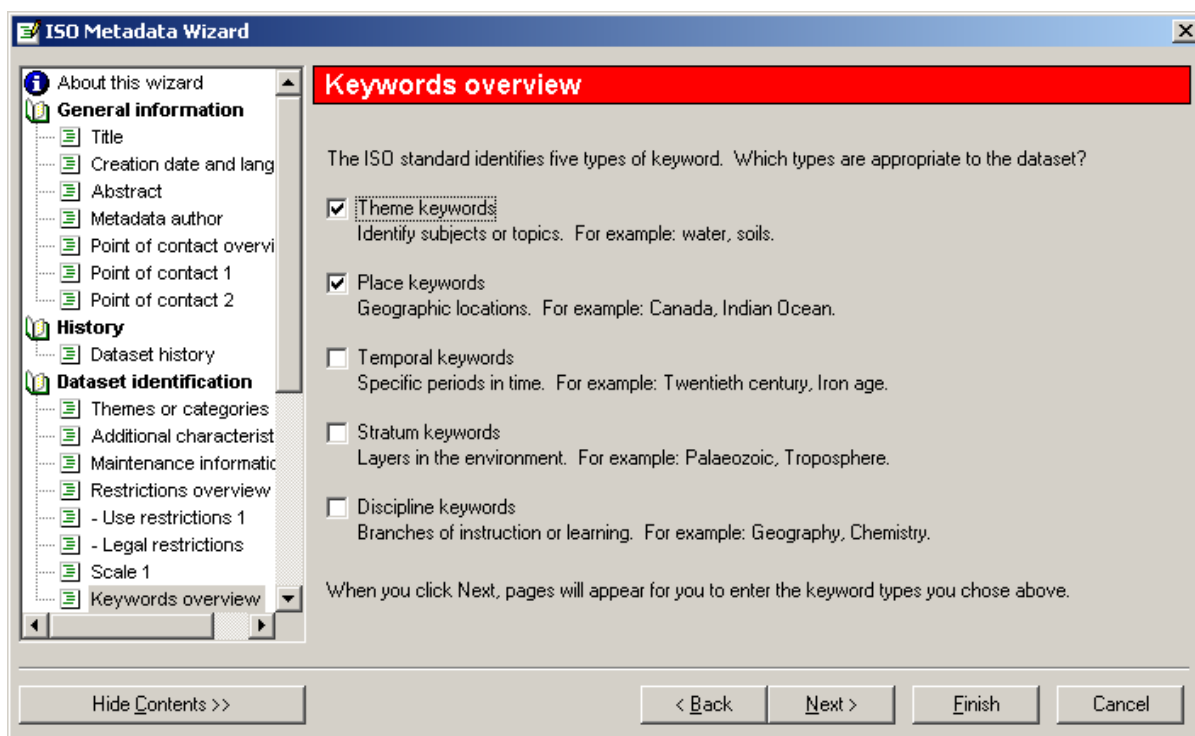


Figure 24 – ISO Metadata Wizard – Keywords Overview Page

This page controls which keywords data entry pages will be exposed by the wizard. Use Theme keywords to describe aspects of the dataset and Place keywords to describe the geographic extent by identifiers.

Click the Next button.

3.18 ISO Metadata Wizard – Theme Keywords Page

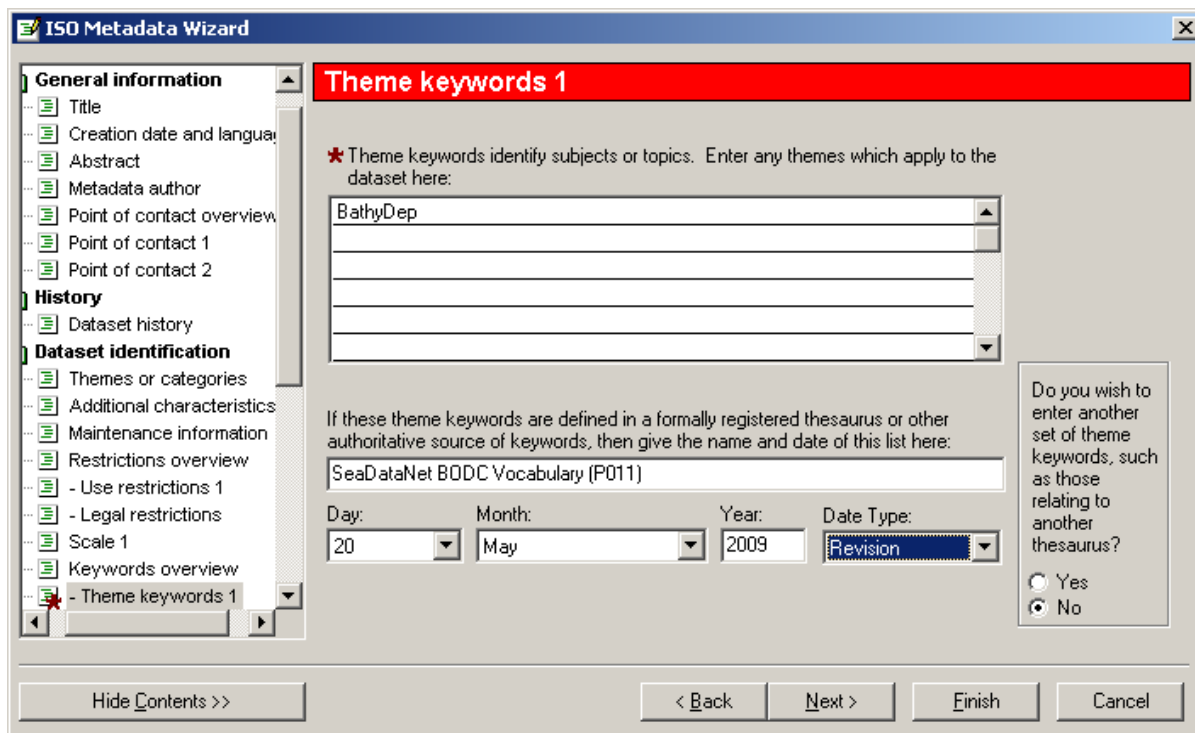


Figure 25 – ISO Metadata Wizard – Theme Keywords Page

3.18.1 Keywords (M)

Enter keywords in the list box provided. In order to comply with the MEDIN standard the name of the thesaurus and its date must be entered using the text box and other controls provided.

MEDIN proposes that keywords are selected from the MEDIN Discovery Keywords list held in, and made available through the, NERC Vocabulary Server.⁴

Where the CRS of the vertical extent cannot be defined by an identified entry in a registry or by provision of the full set of parameters, it can be defined using keywords chosen from the Vertical Coordinate Coverages list.⁵ This list is also made available through the NERC Vocabulary Server.

3.18.2 Next

Click the Next button.

⁴ See <http://vocab.ndg.nerc.ac.uk/>. The URI of the list is <http://vocab.ndg.nerc.ac.uk/list/P021/50>

⁵ <http://vocab.ndg.nerc.ac.uk/list/L131/3>

3.19 ISO Metadata Wizard – Place Keywords Page

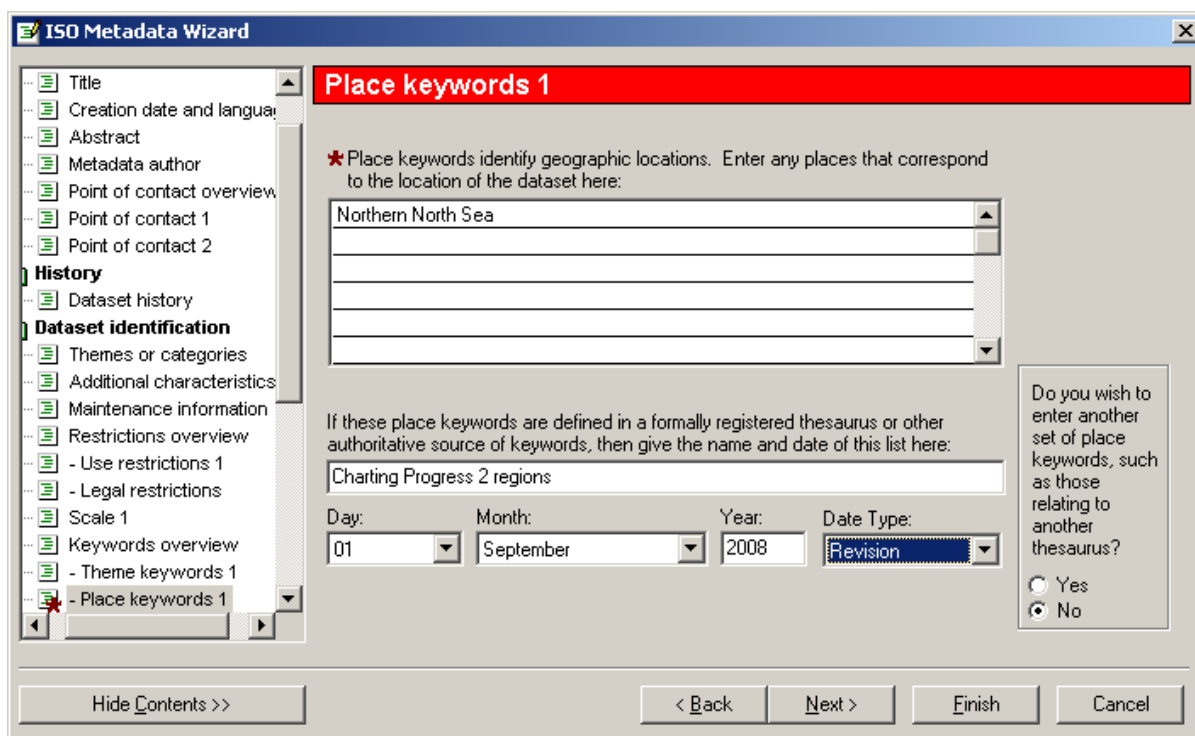


Figure 26 – ISO Metadata Wizard – Place Keywords Page

3.19.1 Extent (M)

Use the place keywords page to enter geographic extents. Note that the controlled vocabulary from which the extent names are drawn must be defined using the thesaurus text box and the date controls.

3.19.2 Next

Click the Next button.

3.20 ISO Metadata Wizard – Coordinate (Reference) System Page

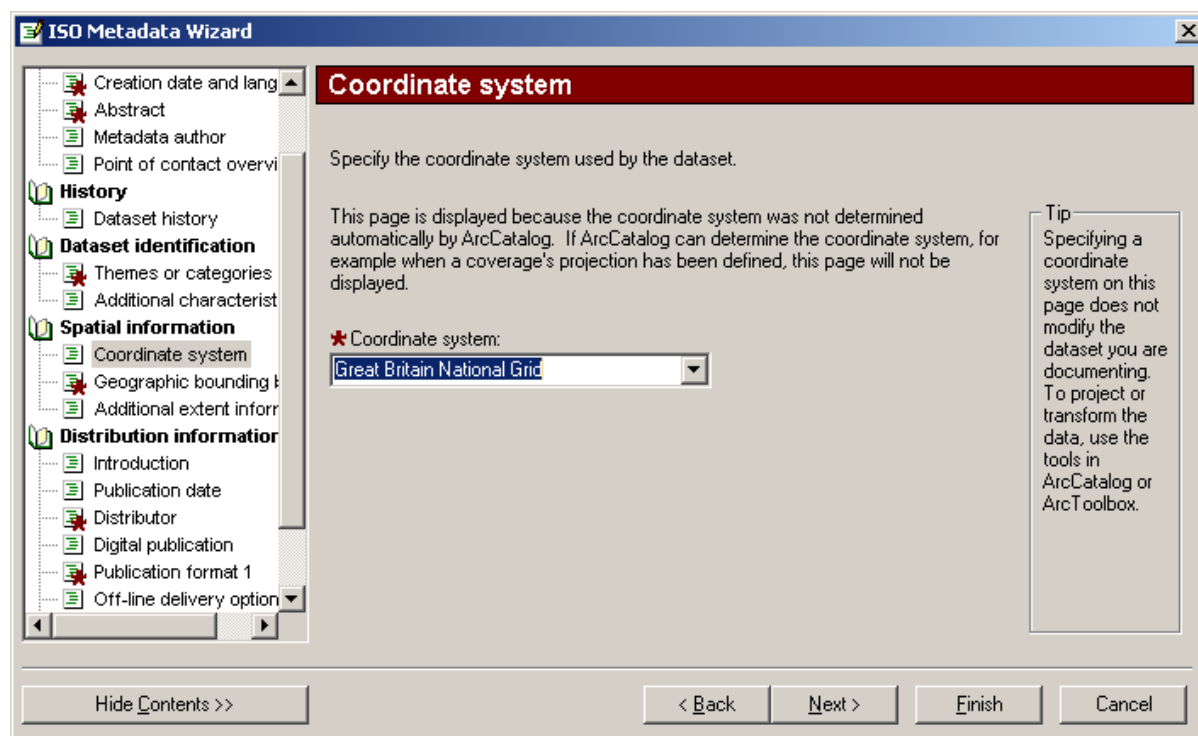


Figure 27 – ISO Metadata Wizard – Coordinate (Reference) System Page

3.20.1 Spatial Reference System (M)

In normal circumstances the CRS will be determined from the dataset. However, if the CRS is not defined for the dataset the coordinate system page will be displayed. It is strongly recommended that the CRS is defined properly using the standard ArcCatalog dialogs, in the following way:

1. Right click on the dataset in ArcCatalog
2. Select Properties... from the menu to display the properties dialog
3. Click the XY Coordinate System tab
4. Click the Select button to browse for the CRS from those provided
5. Click OK to apply the selected CRS

The list of CRSs in the ISO Metadata Wizard is confusing and appears to include a mixture of CRS names and projection names. British National Grid is listed as "Great Britain National Grid".

Note that the term Coordinate System is used in ArcGIS. This ArcGIS term is equivalent to the ISO 19111 term Coordinate Reference System. It should not be confused with the ISO 19111 definition of Coordinate System.

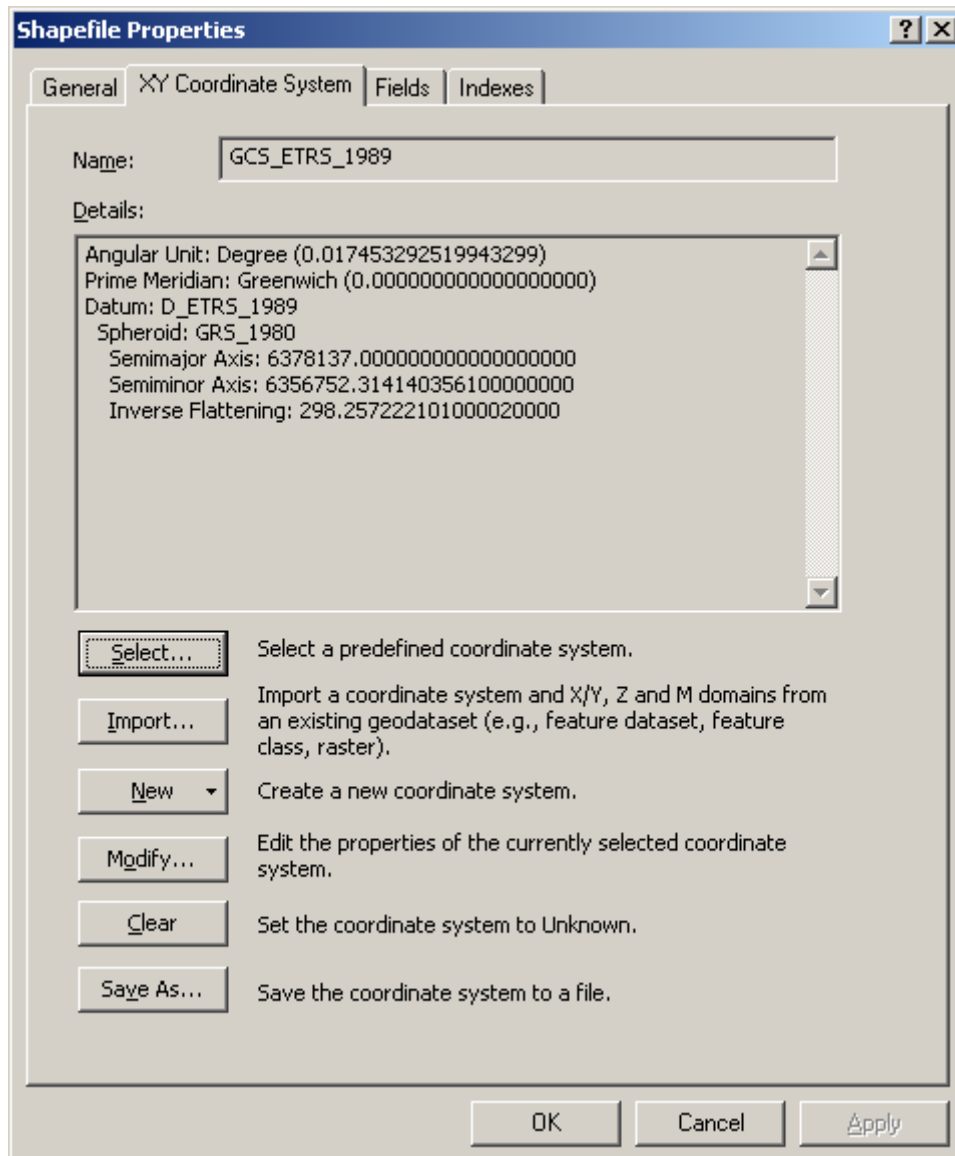


Figure 28 – Dataset Properties XY Coordinate System Tab

3.21 ISO Metadata Wizard – Geographic Bounding Box Page

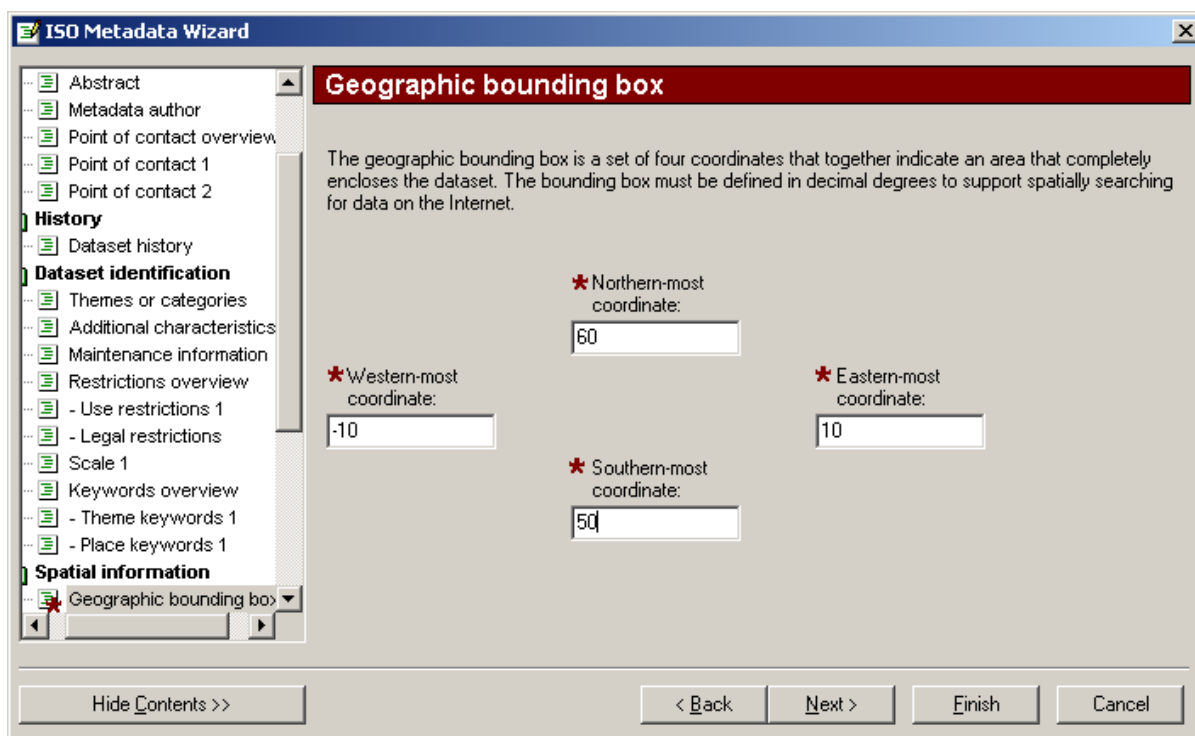


Figure 29 – ISO Metadata Wizard – Geographic Bounding Box

3.21.1 Geographic Bounding Box (M)

In normal circumstances the geographic bounding box will be populated automatically from the dataset. However, if the bounding box cannot be determined (in the case of the demonstration dataset it is empty so in fact has no bounding box) the geographic bounding box page will be displayed. Enter the numerical values of the bounding box in the text boxes provided noting that the values must be given in decimal degrees and that knowledge of the coordinate reference system of the coordinates is not important (ie they do not need to be referenced to, for example, a WGS 84 based system since the geographic bounding box is approximate).

3.21.2 Next

Click the Next button.

3.22 ISO Metadata Wizard – Additional Extent Information Page

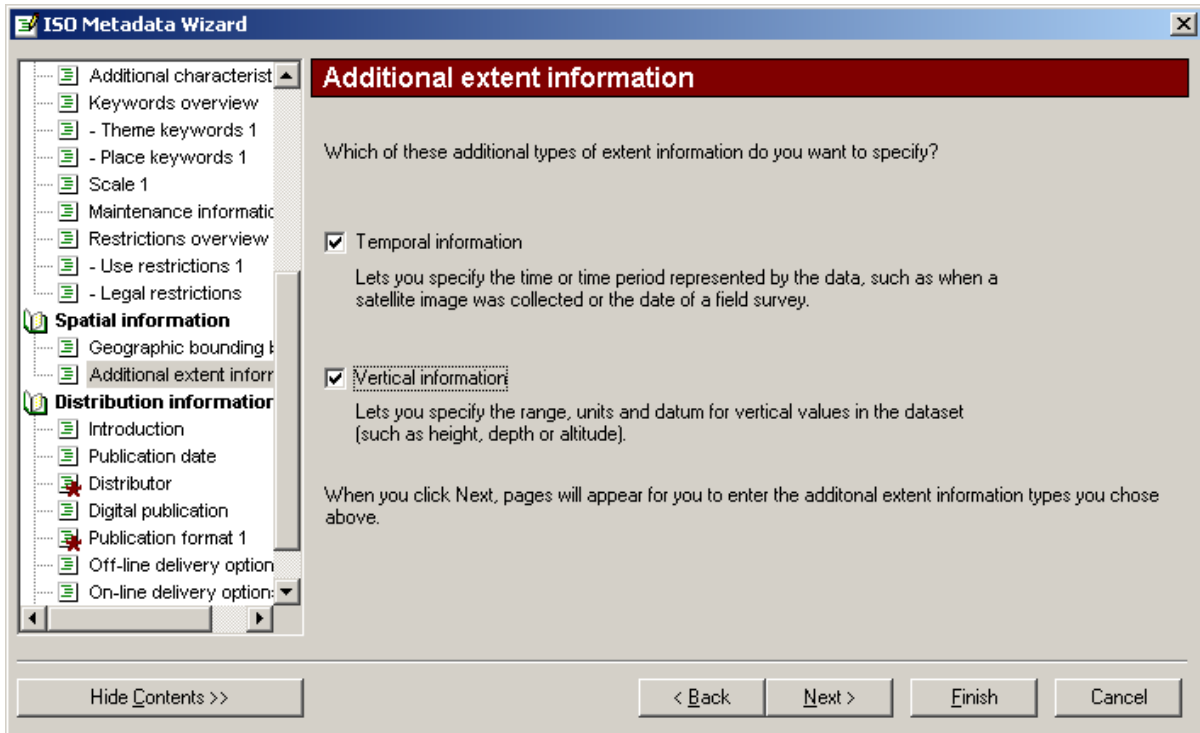


Figure 30 – ISO Metadata Wizard – Additional Extent Information Page

Temporal and vertical extent information may be included. The additional extent information page controls which data entry pages will be exposed to the user. Temporal extent information must be provided if known. Vertical extent information is optional.

3.23 ISO Metadata Wizard – Temporal Information Page

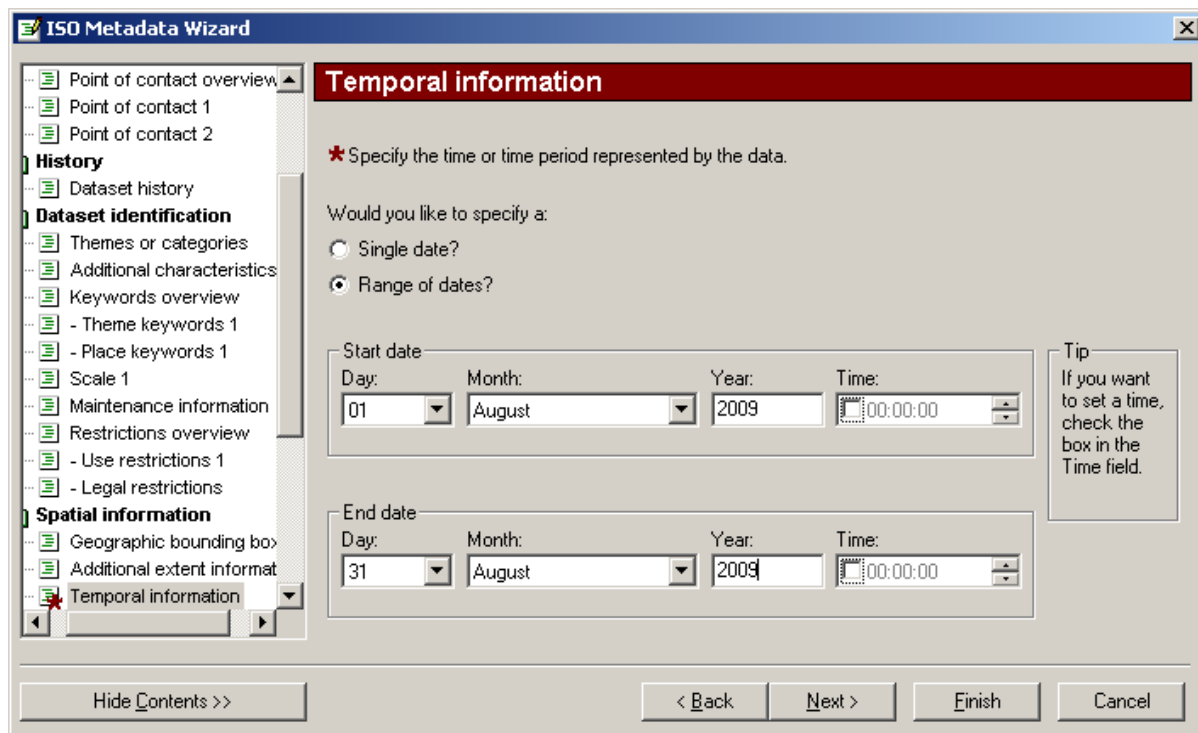


Figure 31 – ISO Metadata Wizard – Temporal Information Page

3.23.1 Temporal Extent (C)

The temporal extent is mandatory for datasets and series. A start date and an end date must be provided.

3.23.2 Next

Click the Next button.

3.24 ISO Metadata Wizard – Vertical Information Page

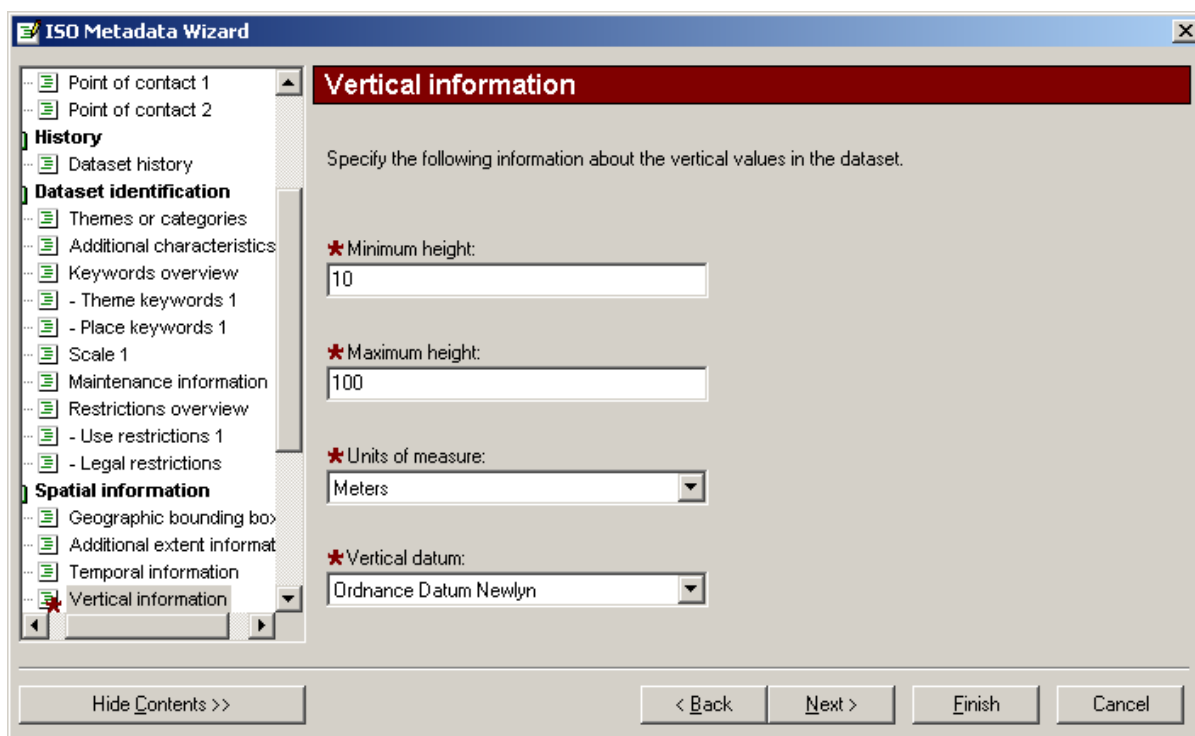


Figure 32 – ISO Metadata Wizard – Vertical Information Page

3.24.1 Vertical Extent (O)

Enter the vertical extent, units and vertical datum using the controls provided. However, it is found that the vertical extent information is not encoded correctly in the ISO 19139 output so use of this page to encode vertical extent information is not recommended.

3.24.2 Next

Click the Next button.

3.25 ISO Metadata Wizard – Publication Introduction Page

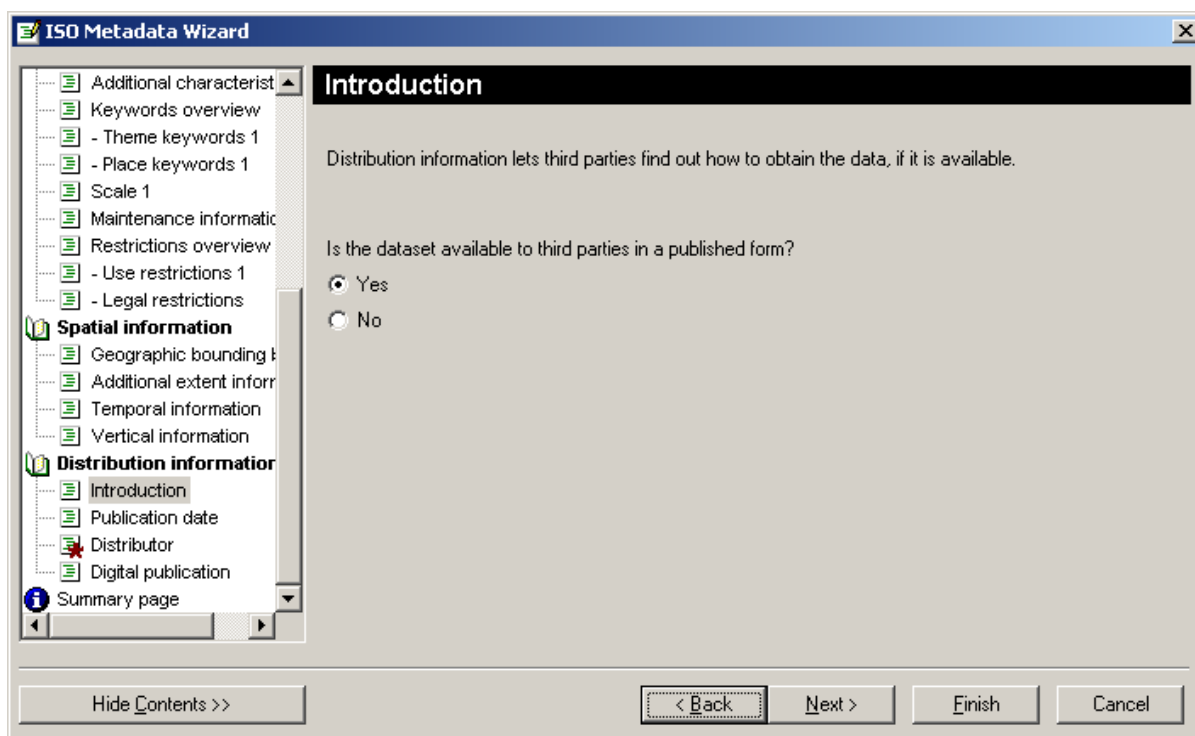
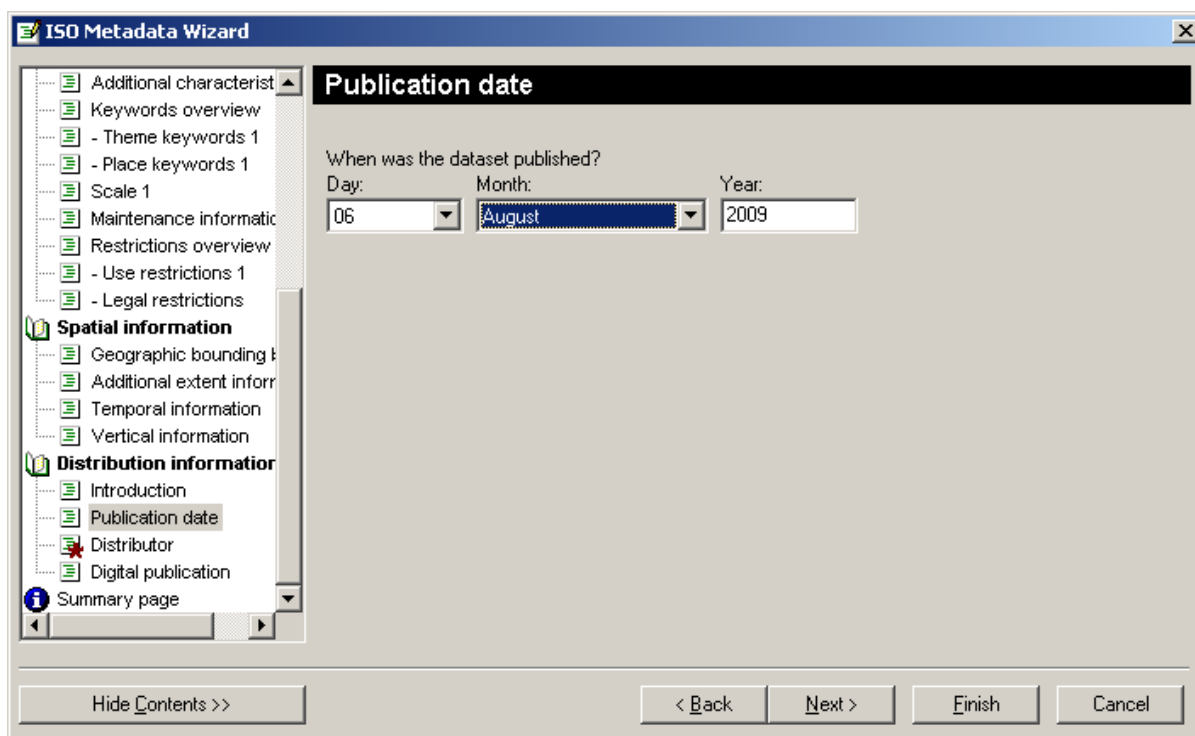


Figure 33 – ISO Metadata Wizard – Publication Introduction Page

Ensure that the Yes radio button is selected.

Click the Next button.

3.26 ISO Metadata Wizard – Publication Date Page



ISO Metadata Wizard

Publication date

When was the dataset published?

Day: 06 Month: August Year: 2009

Hide Contents >> < Back Next > Finish Cancel

Figure 34 – ISO Metadata Wizard – Publication Date Page

3.26.1 Date of Publication (M)

Enter the date of publication of the dataset using the controls provided.

3.26.2 Next

Click the Next button.

3.27 ISO Metadata Wizard – Distributor Page

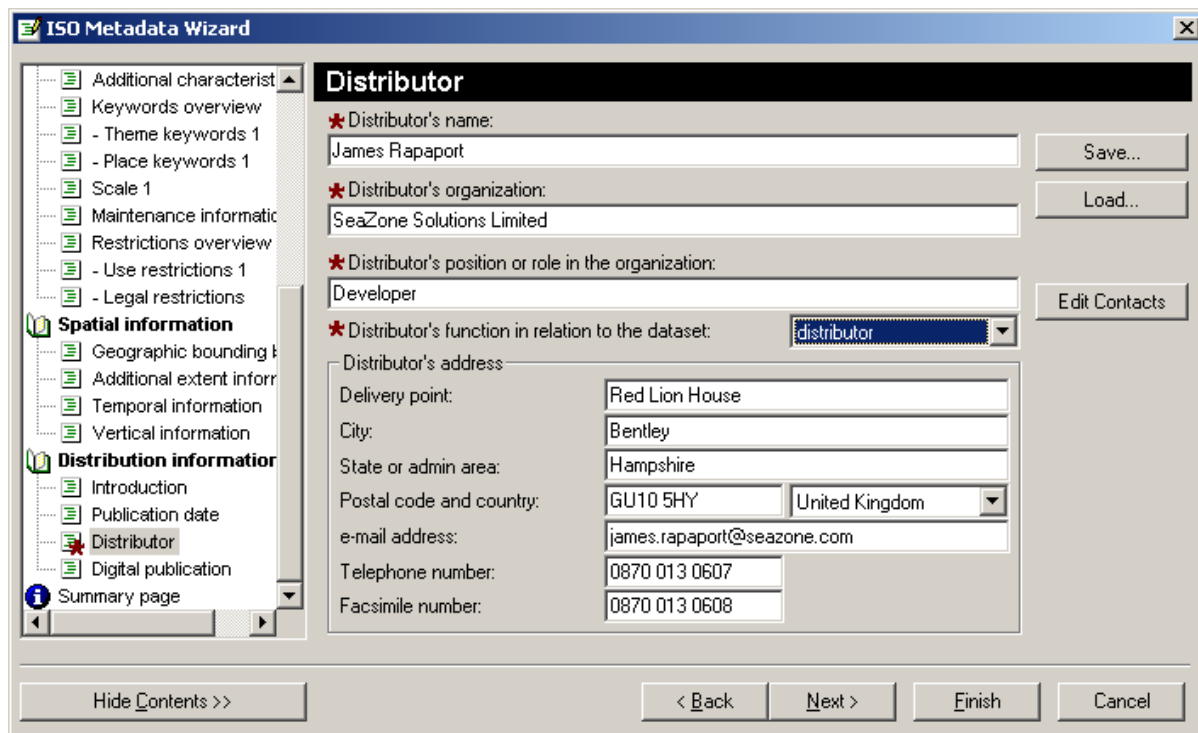


Figure 35 – ISO Metadata Wizard – Distributor Page

Enter information relating to the distribution of the dataset. This metadata element is not required for MEDIN metadata but it is a mandatory element in the UK GEMINI 2.0 element set.

Click the Next button.

3.28 ISO Metadata Wizard – Digital Publication Page

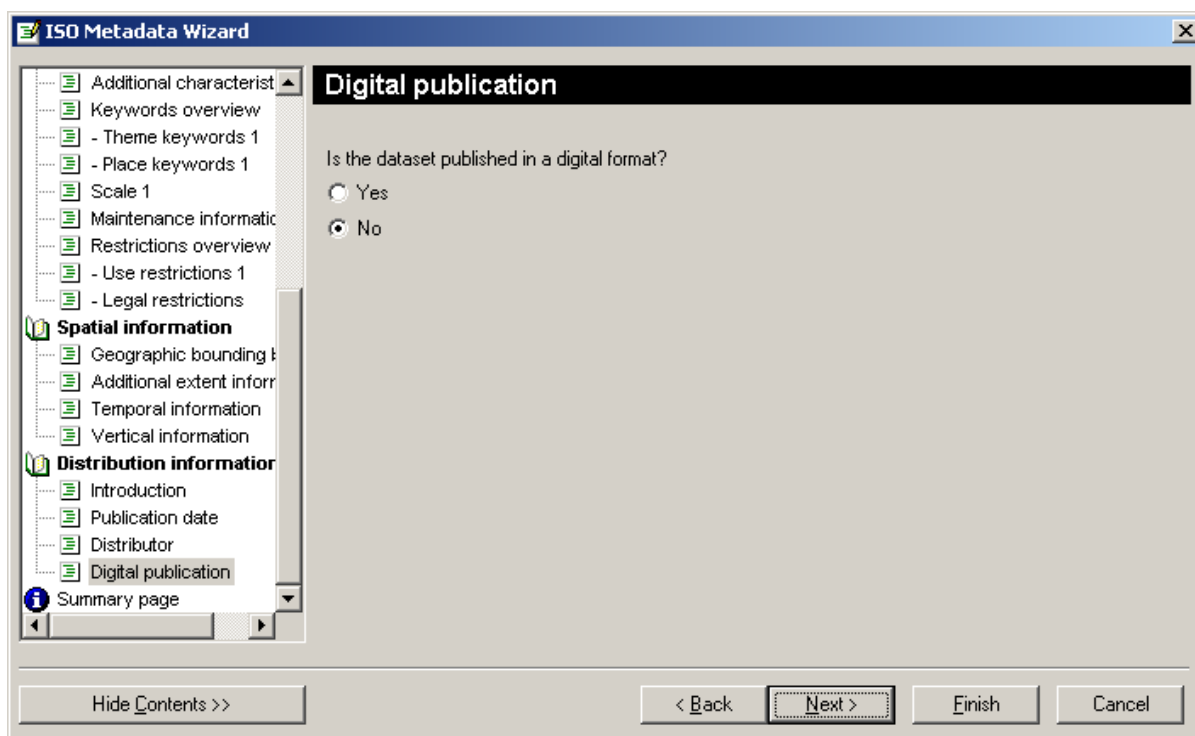


Figure 36 – ISO Metadata Wizard – Digital Publication Page

Select the Yes radio button if the dataset is published online.

Click the Next button.

3.29 ISO Metadata Wizard – Digital Publication Format Page

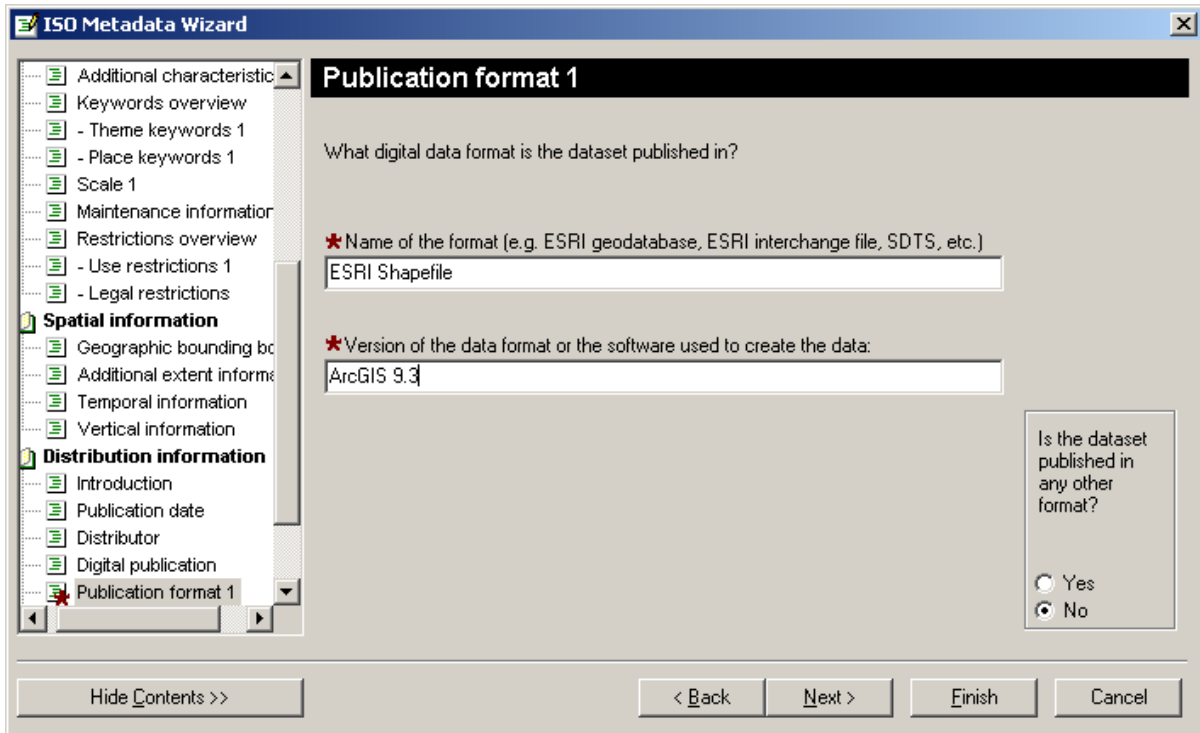


Figure 37 – ISO Metadata Wizard – Publication Format Page

Enter the format of the dataset. While the ISO Wizard records this information as the distribution format, the ESRI ISO to MEDIN stylesheet shall use the content to populate the MEDIN format.
Click the Next button.

3.30 ISO Metadata Wizard – Off-line Delivery Options Page

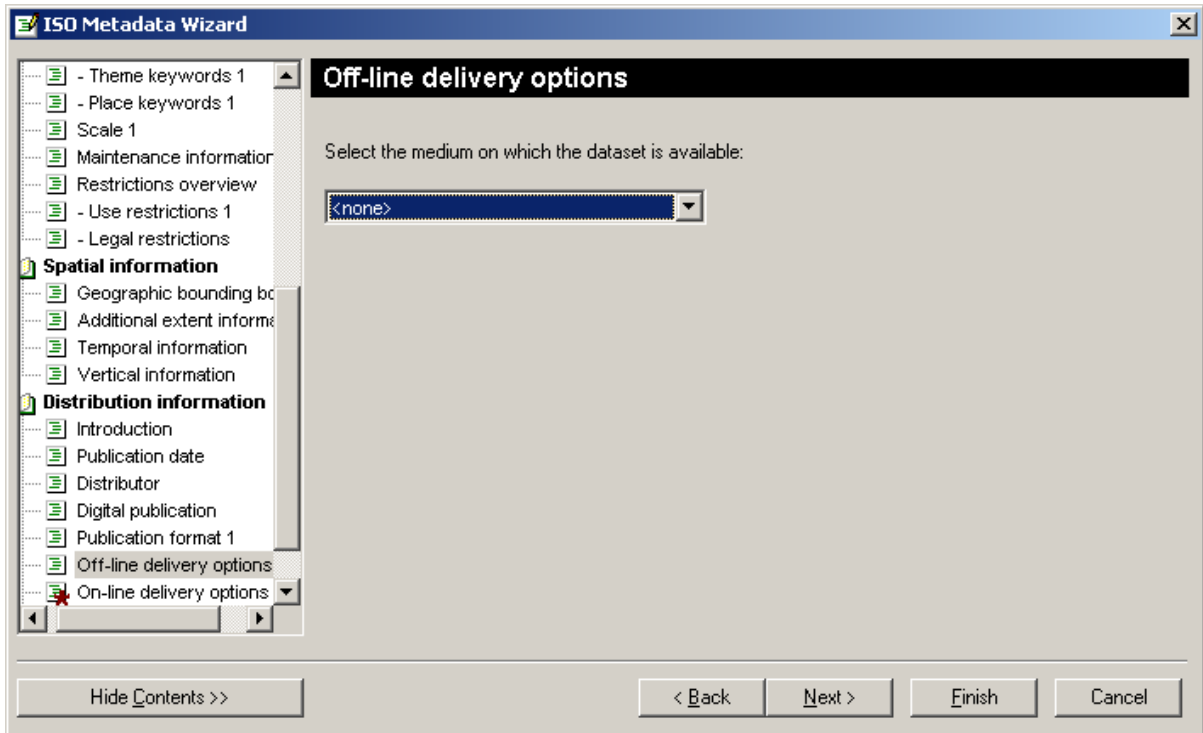


Figure 38 – ISO Metadata Wizard – Off-line Delivery Options Page

Enter the medium on which the data can be delivered using the control provided.
Click the Next button.

3.31 ISO Metadata Wizard – On-line Delivery Options Page

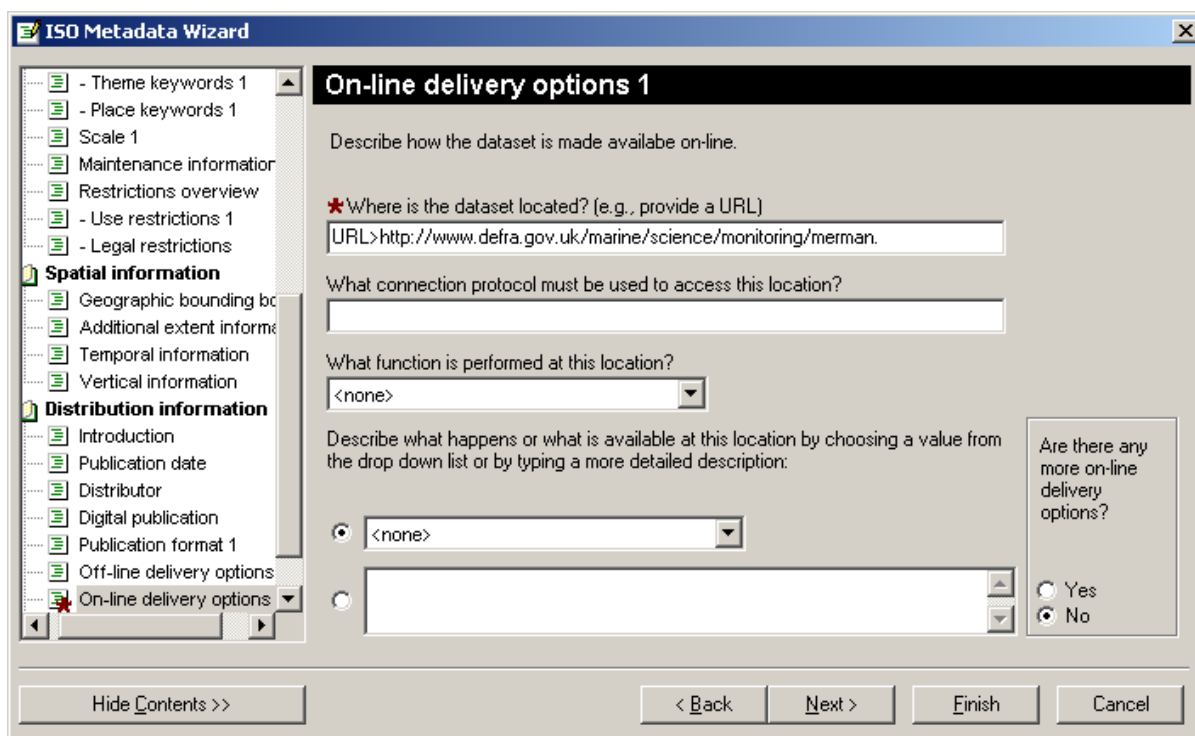


Figure 39 – ISO Metadata Wizard – On-line Delivery Options Page

3.31.1 Resource Locator (C)

Enter the URL of the dataset if it is published online.

3.31.2 Next

Click the Next button.

3.32 ISO Metadata Wizard – Ordering Process Page

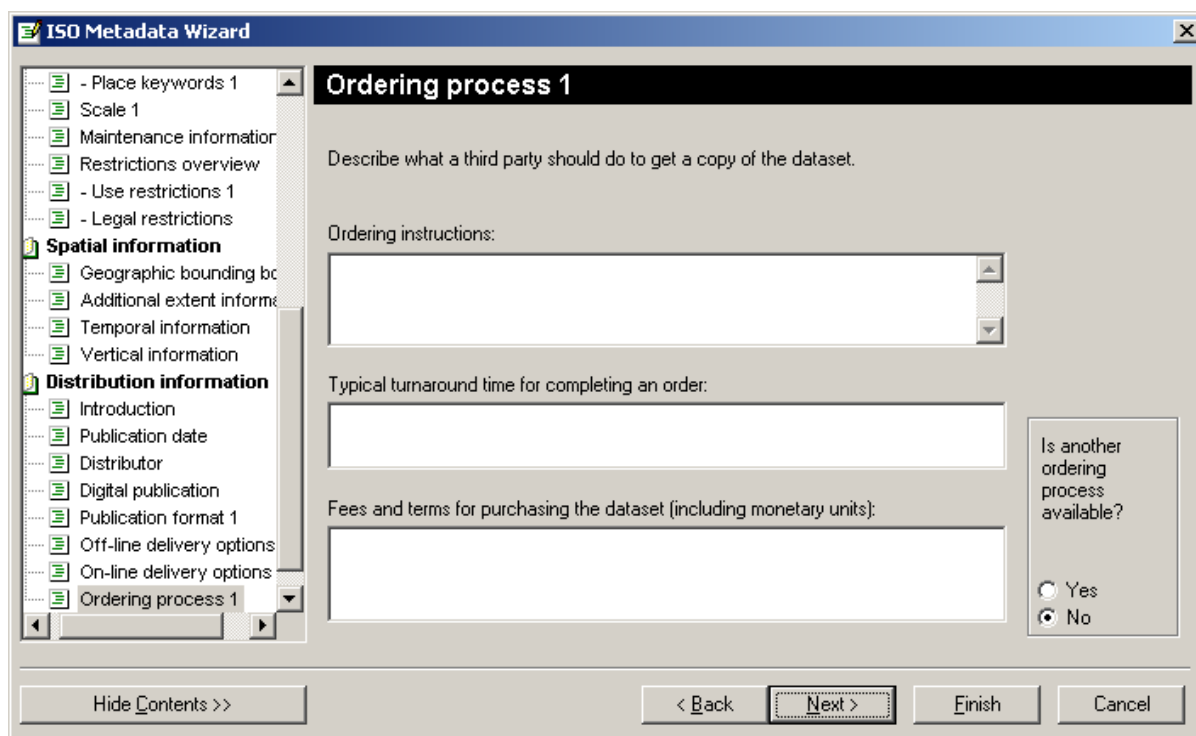


Figure 40 – ISO Metadata Wizard – Ordering Process Page

Ordering information may be entered using the controls on this page. However, it is not required by the MEDIN metadata standard.

3.33 ISO Metadata Wizard – Summary Page

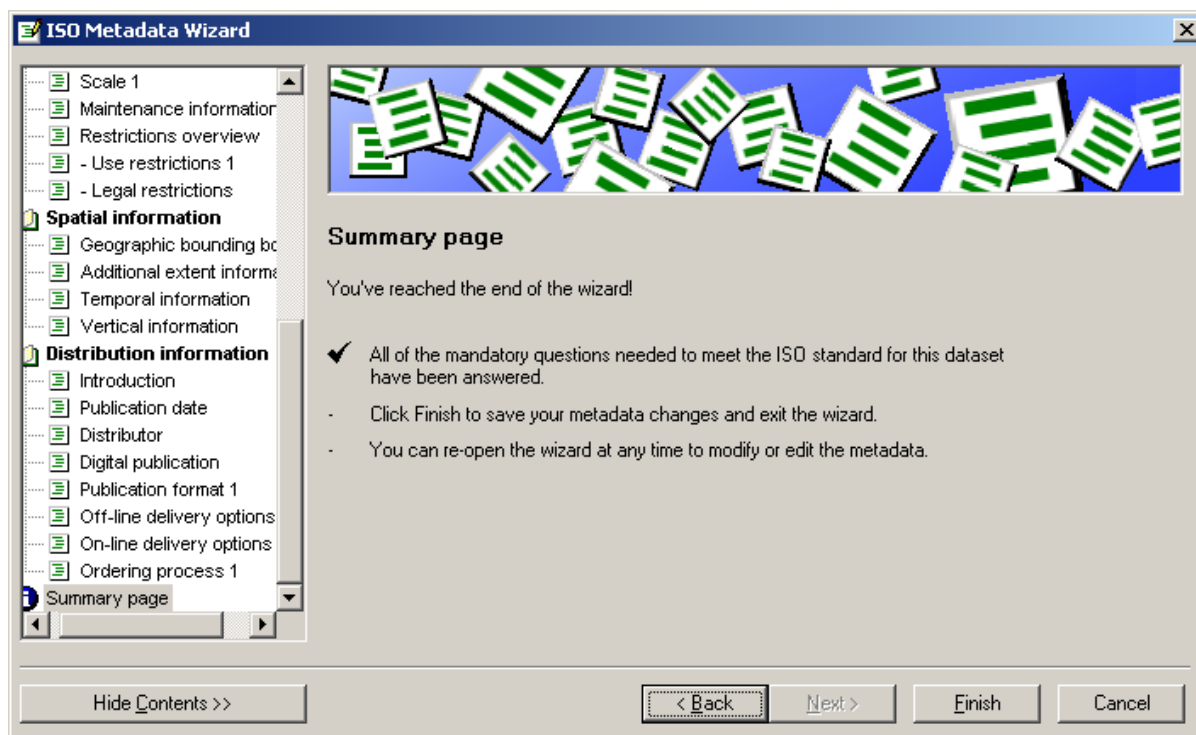


Figure 41 – ISO Metadata Wizard – Summary Page

Metadata entry is complete. Click the Finish button to save the metadata and close the wizard.

4. TRANSLATE TO MEDIN DISCOVERY STANDARD V2.3.1

4.1 Introduction

The ESRI ISO Metadata Wizard encodes metadata using a bespoke XML format which is based on ISO 19115. ESRI ArcToolbox includes an xslt transformer which can be used to transform the metadata to the MEDIN metadata profile using the stylesheet provided which transforms the exported metadata and ensures its validity. The process for transforming metadata using ArcCatalog is explained in this section. Any XSLT translator that supports XSLT v1.0 can be used to transform the metadata.

4.2 ESRI ArcToolbox XSLT Transformation

4.2.1 Opening the Translator

Using the ArcToolbox folder tree, navigate to ArcToolbox \ Conversion Tools \ Metadata \ XSLT Translator. Double click the XSLT Transformation tool to open the dialog (Figure 42). It is also possible to perform a batch transformation by right clicking the XSLT Transformation tool and selecting "batch..."

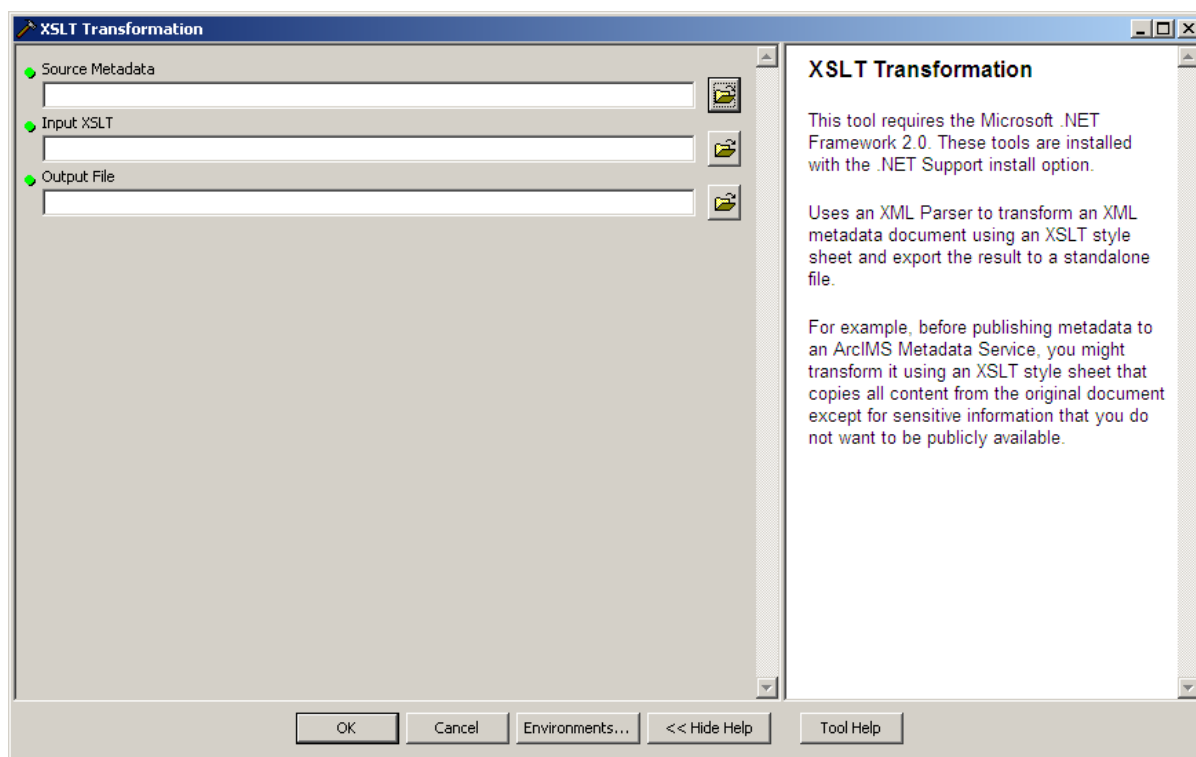


Figure 42 – ESRI XSLT Translator

4.2.2 Source Metadata

The source metadata textbox identifies the item that will be transformed. It can be a dataset with associated ESRI ISO encoded metadata or by a standalone XML file. Select an item using the button next to the textbox. Note that the Output File textbox is automatically populated after an input file has been selected.

4.2.3 Input XSLT

The input XSLT textbox identifies the stylesheet that will be used in the translation. Navigate to the MEDIN stylesheet `EsriIsoToMedin_v1.x.xslt` and select it. The `EsriIsoToMedin_v1.x.xslt` stylesheet is documented in Annex A

4.2.4 Run

Click the OK button to run the translation.

5. MEDIN STYLESHEETS

5.1 Introduction

Stylesheets are provided for viewing metadata in ArcCatalog. The stylesheets are provided in the following ways:

1. Windows installer file
2. Source files

There is no difference in the content of the files. However, the Windows installer facilitates the installation of the stylesheets but it is possible to add them manually to the system. The stylesheets depend on image files. Unfortunately it is not possible to use relative paths in the stylesheets to access the images. Therefore, the images must be installed in the location that is specified in the stylesheets:

C:/Program Files/SeaZone/MEDIN ArcGIS Stylesheets/MEDIN Images/

5.2 Installation

5.2.1 Windows Installer

A windows installation file is provided. It installs the following data:

1. C:\Program Files\SeaZone\MEDIN ArcGIS Stylesheets
 - a. MEDIN.xsl
 - b. MEDIN CRS.xsl
2. C:\Program Files\SeaZone\MEDIN ArcGIS Stylesheets\MEDIN Images
 - a. header_bg.jpg – the header image containing the MEDIN logo
 - b. log.gif – an image used in the stylesheet

NOTE: The stylesheets must be copied from:

C:\Program Files\SeaZone\MEDIN ArcGIS Stylesheets

to

[ArcHome]\Metadata\Stylesheets

folder in order to function with ArcCatalog. Do not move the images.

5.2.2 Source Files

The ZIP archive containing the deliverables contains the following items:

1. MEDIN Metadata Stylesheets > Source Files
 - a. MEDIN.xsl
 - b. MEDIN CRS.xsl
 - c. MEDIN Images
 - i. header_bg.jpg
 - ii. log.gif

To install the stylesheets from the ZIP archive:

1. Create the following folder: C:\Program Files\SeaZone\MEDIN ArcGIS Stylesheets
2. Extract the contents of the MEDIN Metadata Stylesheets > Source Files folder to this folder
3. Copy the stylesheets (MEDIN.xsl and MEDIN CRS.xsl) to [ArcHome]\Metadata\Stylesheets. ArcHome represents the location in which ArcGIS is installed. For example, if ArcGIS is installed in the default location ArcHome=C:\Program Files\ArcGIS.

5.2.3 ArcCatalog

ArcCatalog may be running during installation. However, in order that the changes are reflected in the interface it must be restarted. If installation was successful the Stylesheet combo box of the Metadata toolbar will contain two new items: MEDIN and MEDIN CRS. Select a dataset, open the Metadata tab and select one of the stylesheets to view the contents.

5.3 Metadata - MEDIN

The MEDIN stylesheet is designed to display metadata in ArcGIS. It will work with metadata that are encoded in the ESRI ISO XML or in ISO 19139.

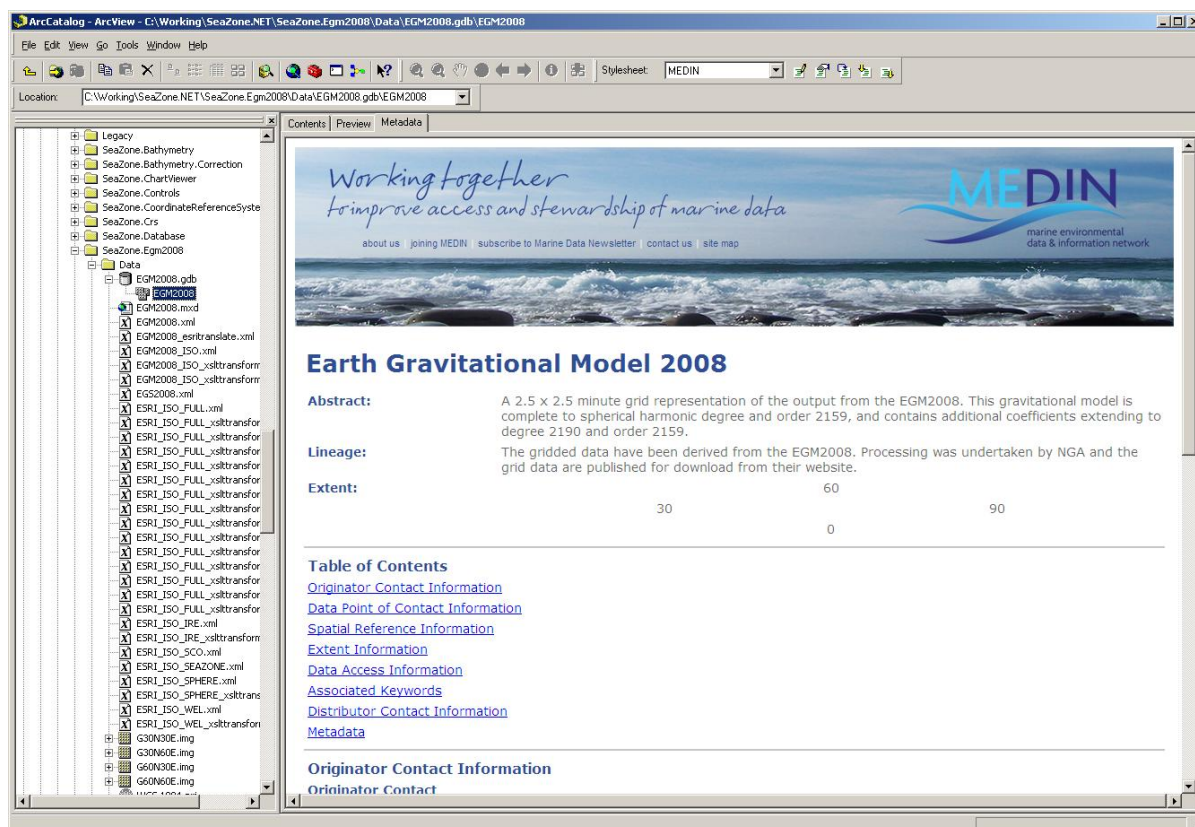


Figure 43 – Metadata Stylesheet

5.4 Coordinate Reference System – MEDIN CRS

A stylesheet is provided for viewing CRS information. The stylesheet uses an EPSG URN to query the online EPSG registry⁶ and styles the GML data that are returned as HTML. A live internet connection is required in order that the query string can be sent and the data returned.

The EPSG URN is derived either from valid ISO 19139 metadata or valid ESRI ISO format metadata associated with a dataset. ESRI CRS names are converted to EPSG URNs by the stylesheet.

Not all CRSs identified in ESRI ArcGIS are registered in the EPSG Registry. The EPSG Registry is currently limited to definitions of CRSs that are either national or regional in scope or of relevance to the oil and gas industry. The EPSG Registry will return exception information if the requested resource is not found. In this event the exception report will be displayed by the stylesheet (Figure 45).

⁶ <http://www.epsg-registry.org>

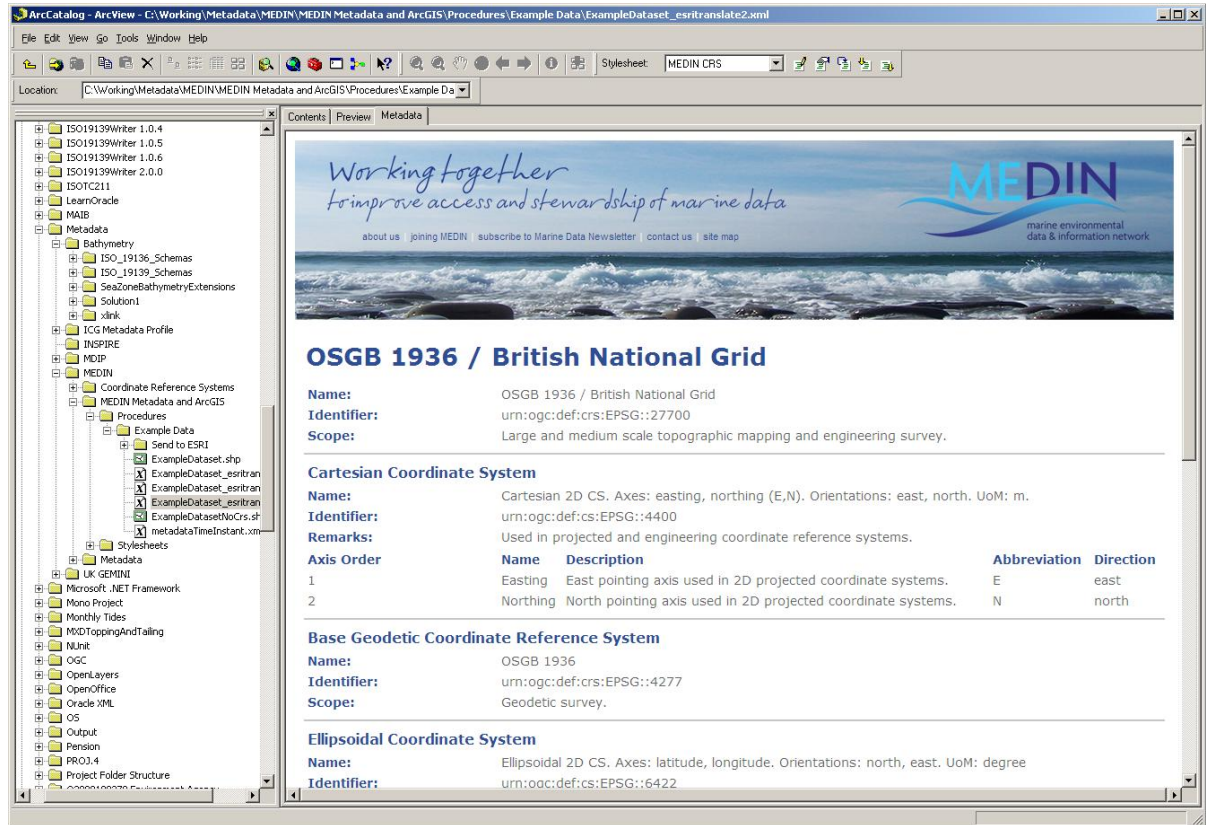


Figure 44 – Coordinate Reference System Stylesheet

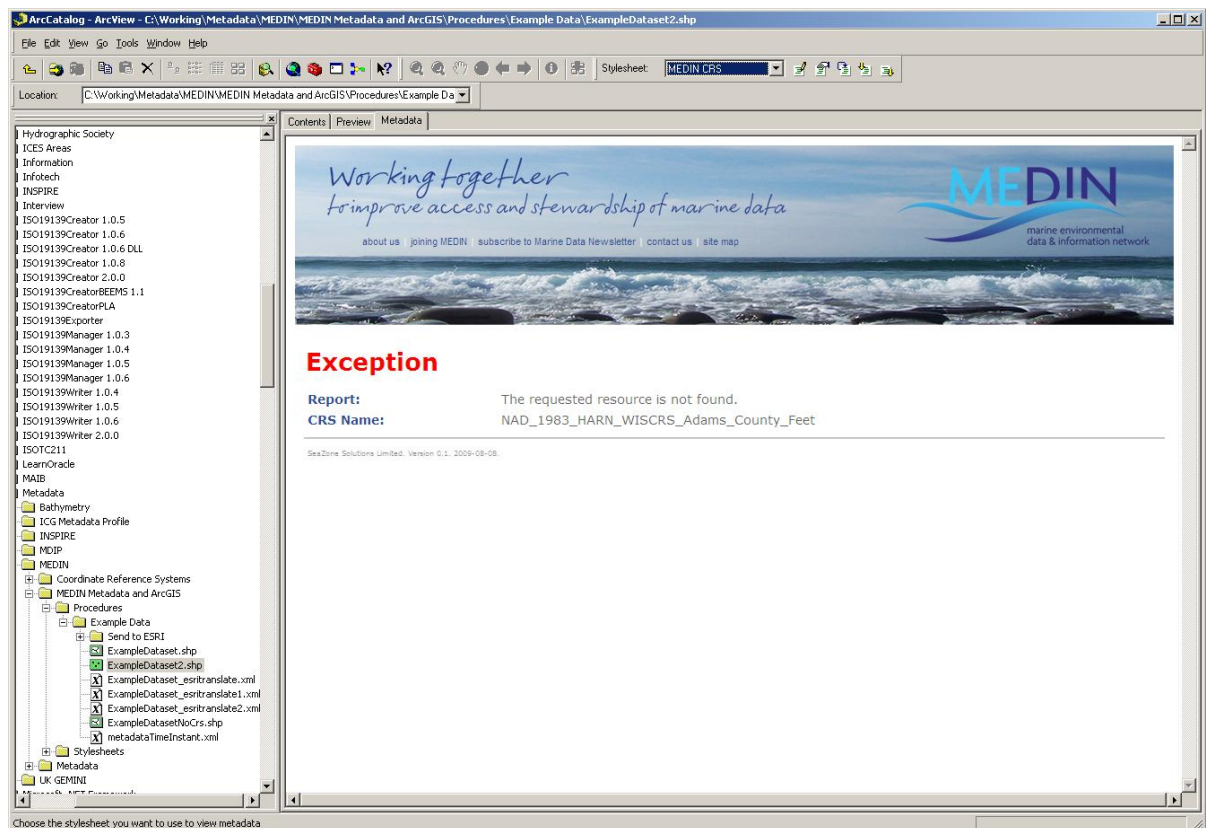


Figure 45 – CRS Stylesheet Exception Report

5.5 Trouble Shooting

5.5.1 Warning – Not Implemented

In some cases users may receive a warning when attempting to view metadata via a stylesheet. This is not a problem that is specific to the MEDIN stylesheets but is more general in nature. The cause is usually related to Microsoft operating system patches and ArcGIS patches. In general ArcGIS users should ensure that the most recent service pack for ArcGIS is installed. However, should this warning appear it is recommended that users contact the ESRI helpdesk.

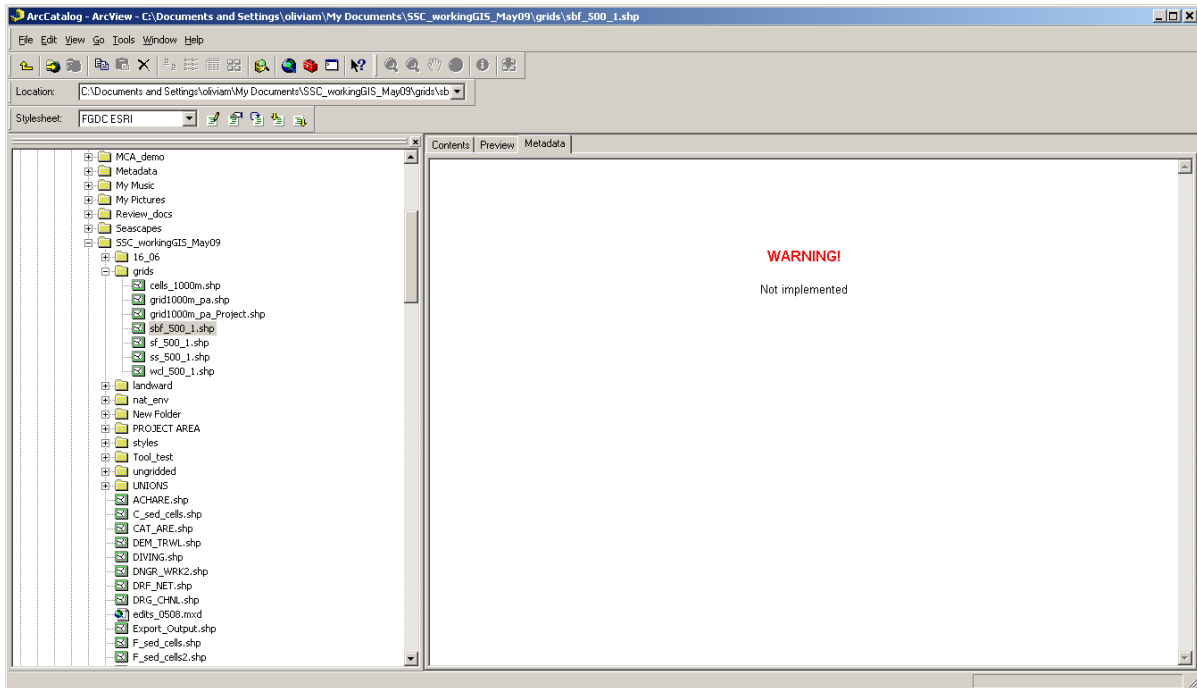


Figure 46 – Warning – Not Implemented

Annex A EsriIsoToMedin.xslt

Author: Peter Edmonds, SeaZone Solutions Limited

Version number: 1.0

Date of release: 2010-04-30

Version 0.1:

The stylesheet is designed to transform ESRI ISO metadata produced by the ESRI ISO Metadata Editor (Wizard) in ESRI ArcCatalog to the MEDIN discovery metadata standard v2.3. The XML produced by ArcCatalog is not valid ISO 19139 XML and contains certain elements which are not valid according to MEDIN. In addition it lacks certain content.

The stylesheet addresses these problems. It will map the relevant elements from the ESRI ISO xml encoding choosing the relevant ISO element where possible, falling back to the FGDC (also in the ESRI ISO XML) if necessary. If neither exist, the element will not be written, or if the element is 'mandatory' according to MEDIN, a 'nilReason' of "missing" will be written.

Where FGDC elements are mandatory a default string of "REQUIRED:..." is encoded by ESRI. If this is present, the element is treated as though it does not exist.

The stylesheet can be implemented using the XSLT Transformation ArcToolbox function (ArcToolbox \ Conversion Tools \ Metadata), or any other XSLT transformation software.

The stylesheet is provided "as is," without warranty of any kind, express or implied. Under no circumstances shall MEDIN, SeaZone or any contributing parties be held liable for any damages arising in any way from the use of this schema.

Version 1.0

- Added comments to output xml
- Fixed descriptive keyword thesaurus problem
- Updated Resource ID to be more robust >> May need revision to incorporate a UUID/GUID
- Fixed conversion from YYYYMM > YYYY-MM date format problem
- Fixed Temporal extent id to be more robust
- Fixed thesaurusName element position on nilReason
- Fixed Spatial reference nilReason logic
- Updated responsible party constraints (e.g. must have custodian and originator contact for data, if not then nilReason)
- Tightened descriptive keywords constraints
- Added Geographic Identifier keywords
- Added Vertical Extent/Datum Information
- Extended ESRI>EPSG conversion codes
- Moved Distributor contact to //MD_DataIdentification/pointOfContact