Course title: EOTIST Standard course

Course subject: Computer Sciences

Teacher: Lluís Pesquer, Ester Prat

LESSON SC2 - EXERCISE
METADATA ROLES

EOTIST project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 952111

[H2020 WIDESPREAD-05-2020 (Twinning)]

TABLE OF CONTENTS

OBJECTIVES

Document the Core ISO metadata in XML format

KEY ELEMENTS

Download, visualization. Core ISO elements.

SOFTWARE

GeM+

DATA

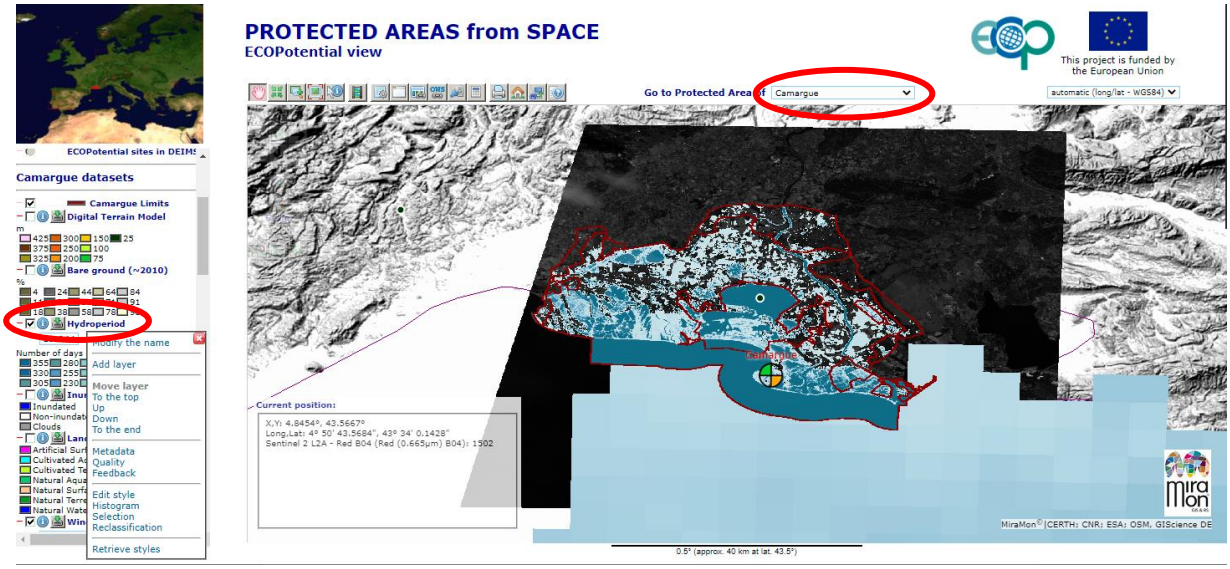
Camargue_Hydroperiod_2016.xml

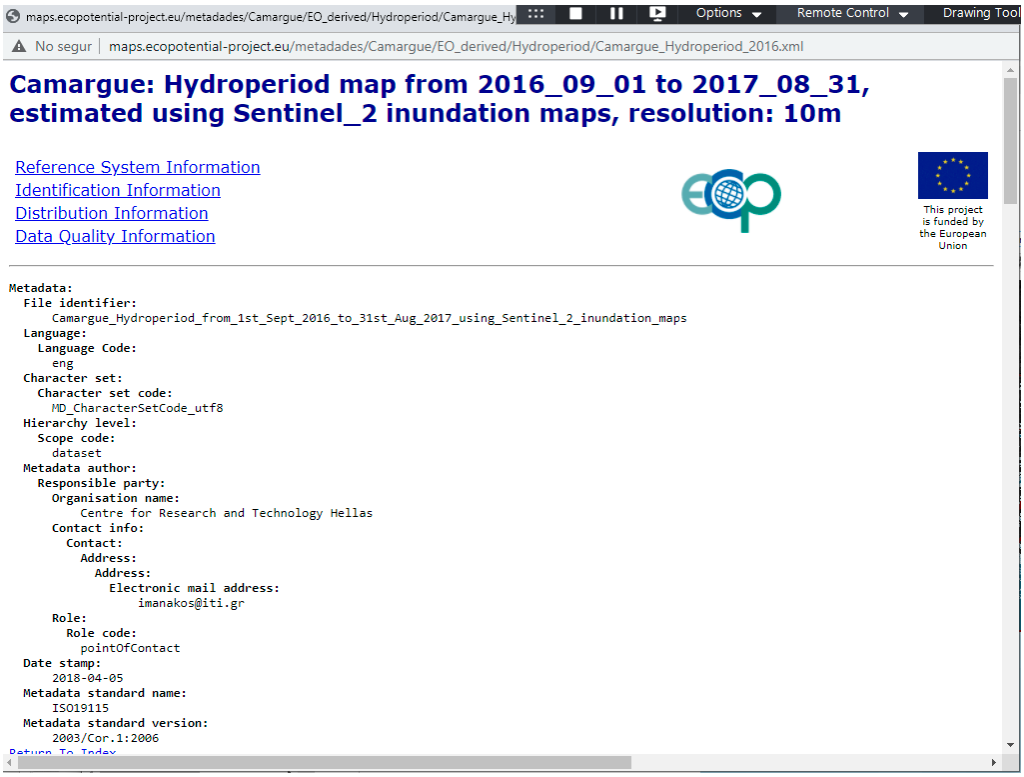
Es_Zepa_SPA_Medalpatl_202012.shp

1. DOCUMENT CORE ISO METADATA IN XML FORMAT

Download the XML metadata from the ECOPOTENTIAL project server[1]:

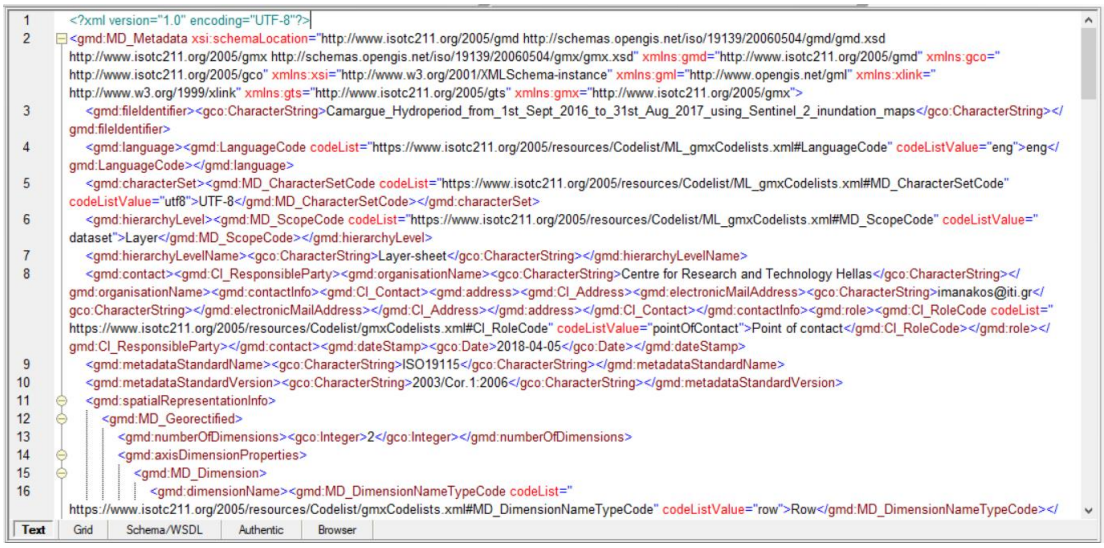
- https://ecopotential.grumets.cat/
- Camargue hydroperiod



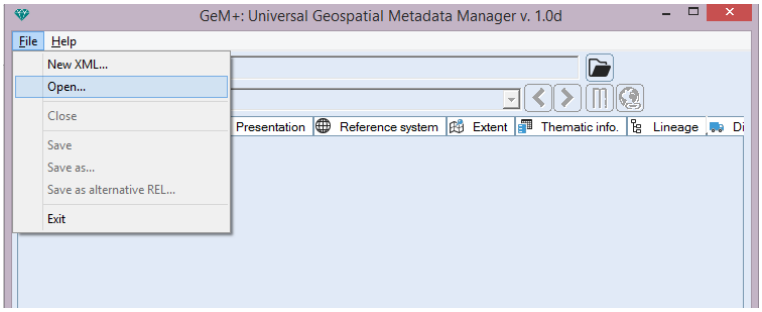


[1] In case the server is not running, you can find the XML file in the Data folder: Camargue_Hydroperiod_2016.xml

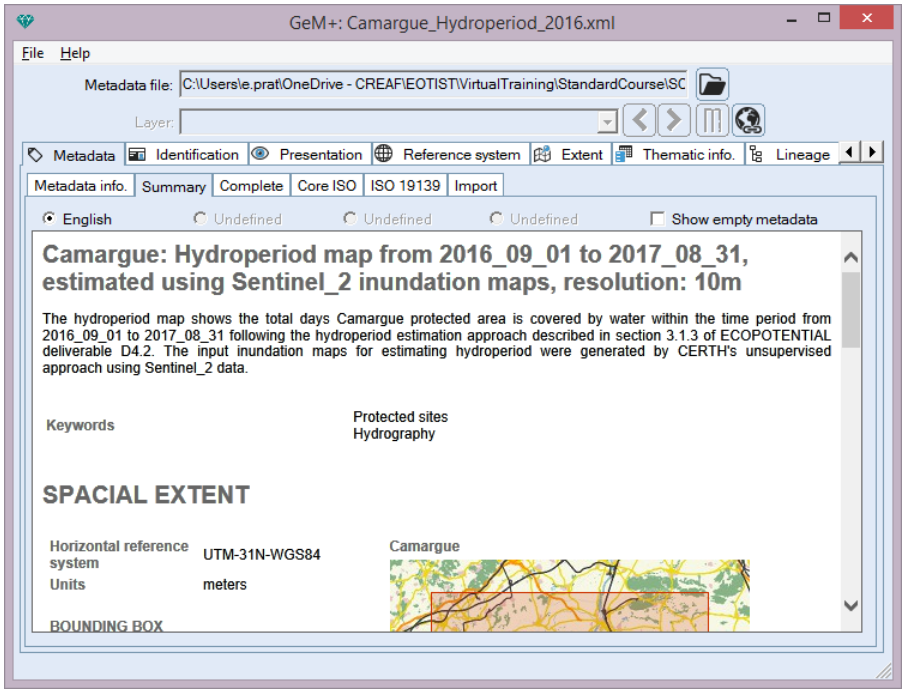
Open the file with a Notepad or with an XML editor:



Now open the file with GeM+:

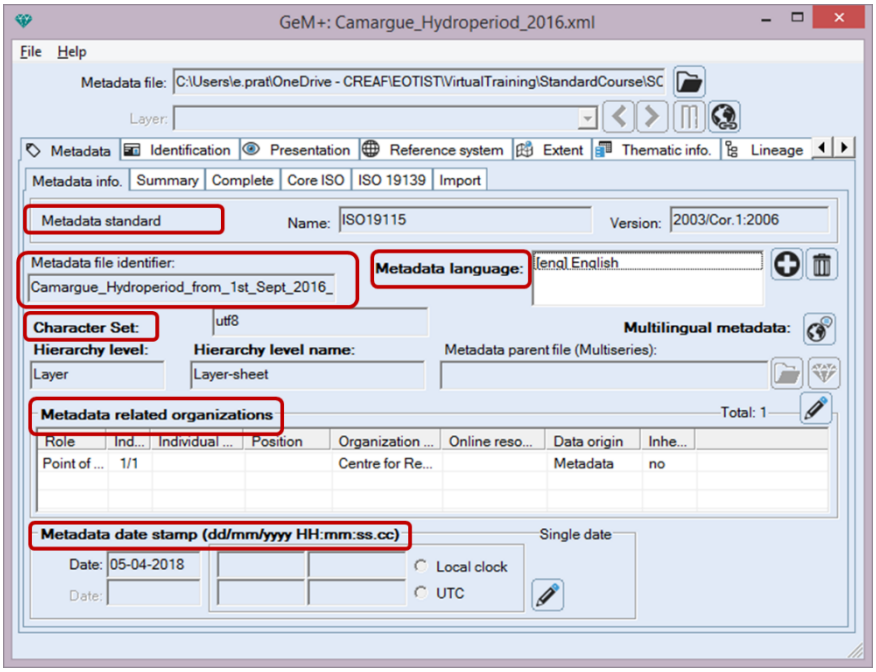


The XML metadata document is automatically displayed in a nicer and more understandable summary view:



ISO CORE ELEMENTS

Identify the ISO 19115 core elements in the different section tabs:



Metadata standard name (O)
(MD_Metadata.metadataStandardName)

Metadata standard version (O)
(MD_Metadata.metadataStandardVersion)

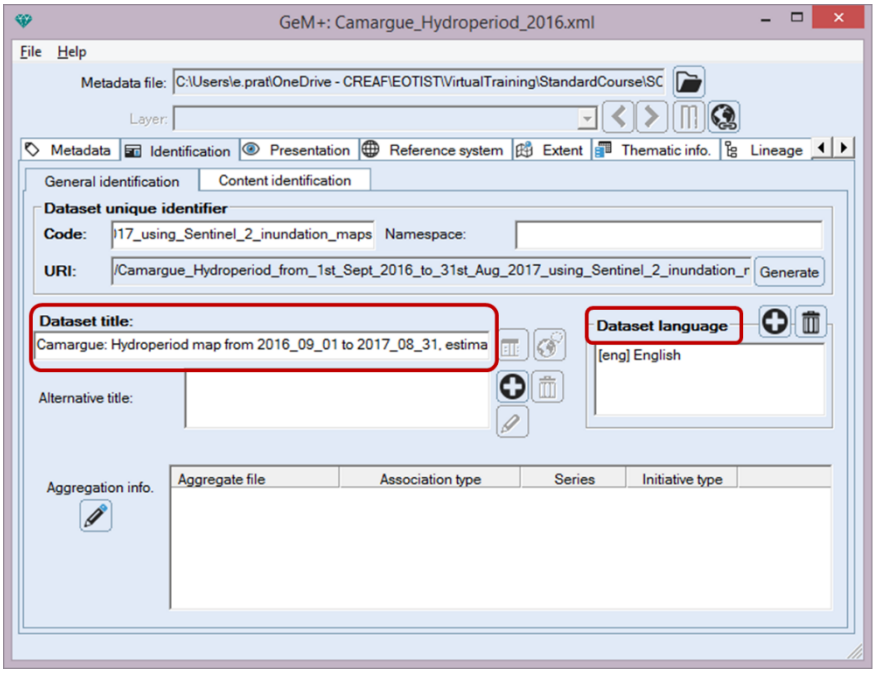
Metadata file identifier (O)
(MD_Metadata.fileIdentifier)

Metadata language (C)
(MD_Metadata.language)

Metadata character set (C)
(MD_Metadata.characterSet)

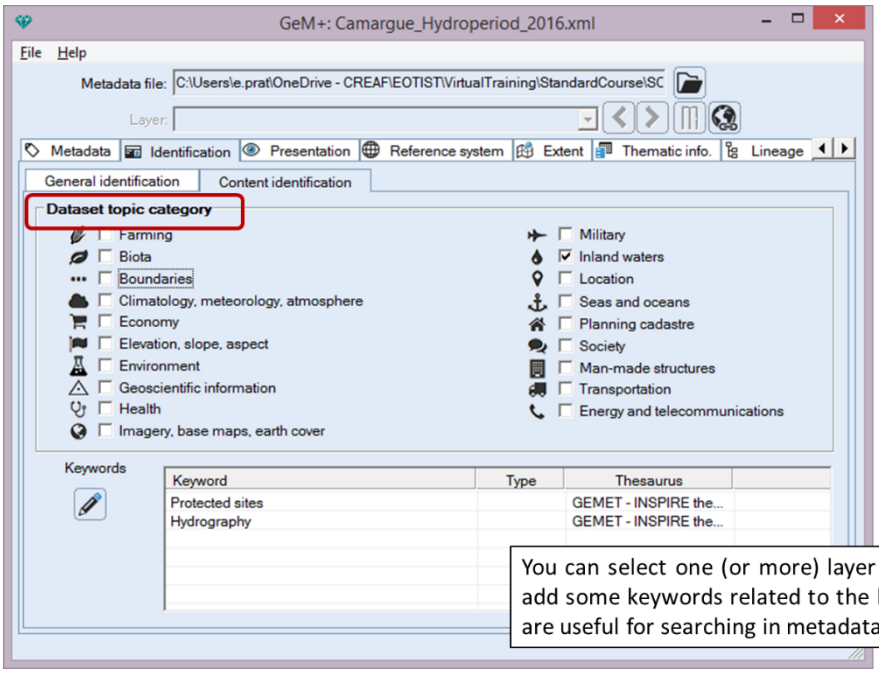
Metadata point of contact (M)
(MD_Metadata.contact > CI_ResponsibleParty)

Metadata date stamp (M)
(MD_Metadata.dateStamp)



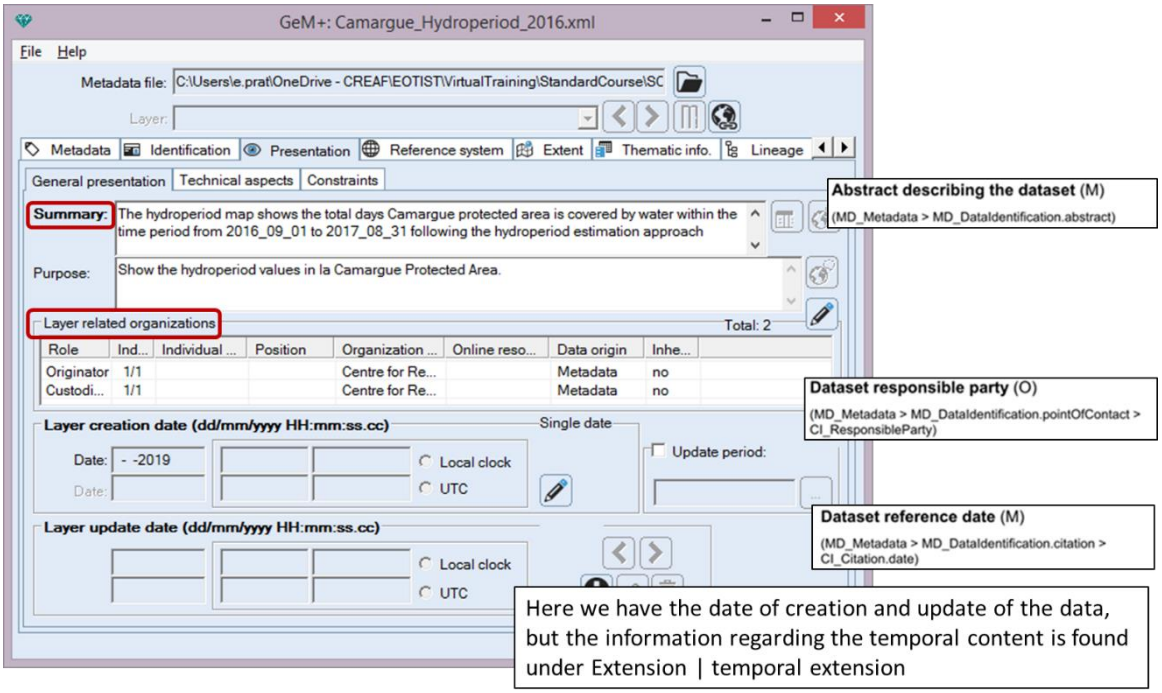
Dataset title (M)
(MD_Metadata > MD_DataIdentification.citation > CI_Citation.title)

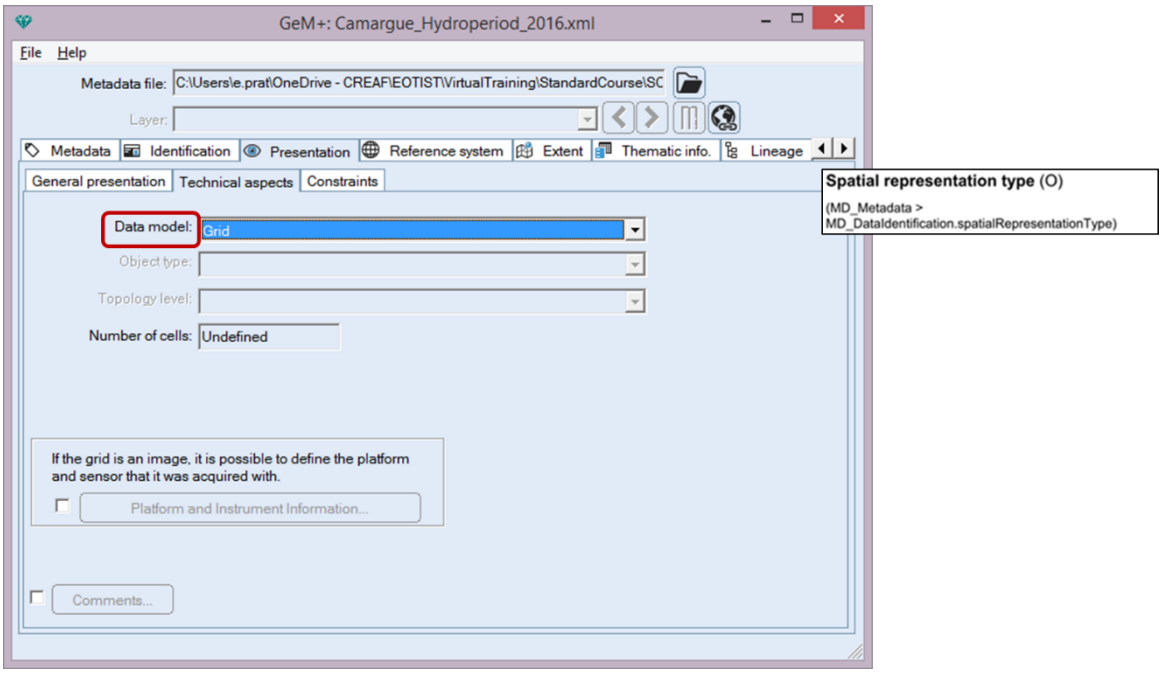
Dataset language (M)
(MD_Metadata > MD_DataIdentification.language)

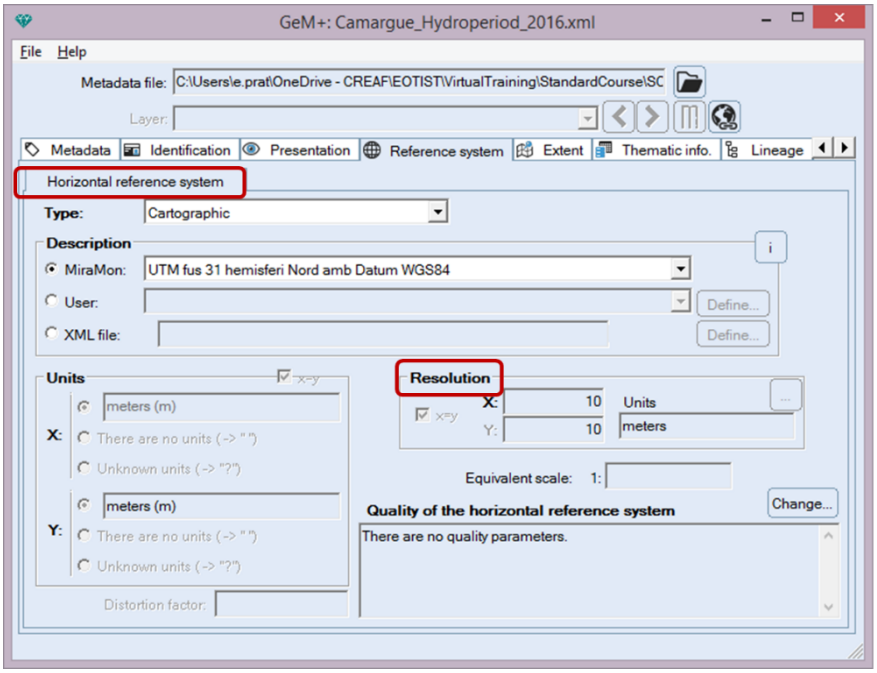


Dataset topic category (M)
(MD_Metadata > MD_DataIdentification.topicCategory)

You can select one (or more) layer theme categories from the list and add some keywords related to the base. Both categories and keywords are useful for searching in metadata catalogs.

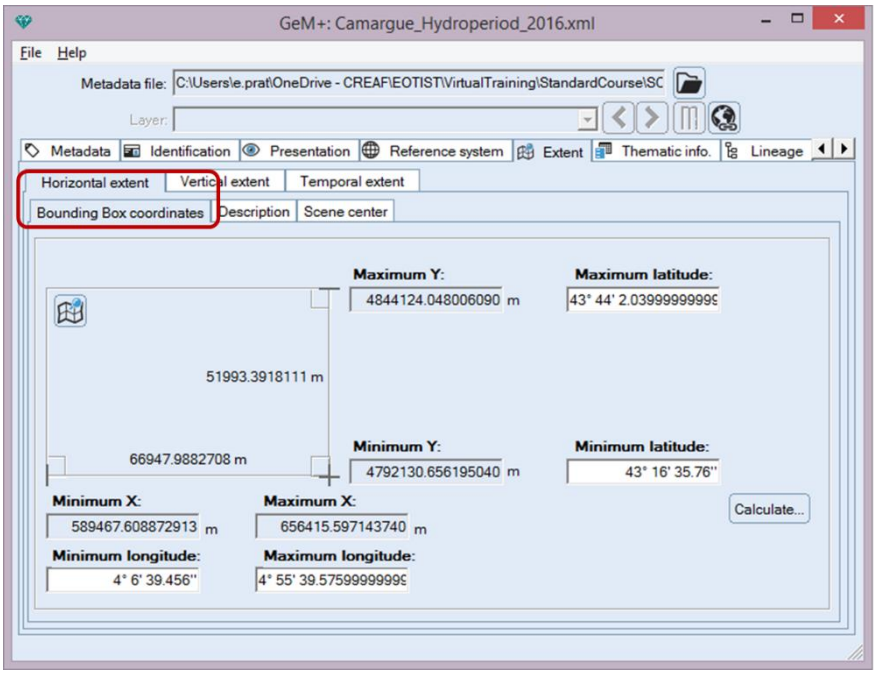

GeM+: Camargue_Hydroperiod_2016.xml
File Help
Metadata file: C:\Users\e.prat\OneDrive - CREAF\EOTIST\VirtualTraining\StandardCourse\SC
Layer:
Metadata Identification Presentation Reference system Extent Thematic info. Lineage
General presentation Technical aspects Constraints
Summary: The hydroperiod map shows the total days Camargue protected area is covered by water within the time period from 2016_09_01 to 2017_08_31 following the hydroperiod estimation approach
Purpose: Show the hydroperiod values in la Camargue Protected Area.
Layer related organizations
Total: 2
Role Ind... Individual ... Position Organization ... Online reso... Data origin Inhe...
Originator 1/1 Centre for Re... Metadata no
Custodi... 1/1 Centre for Re... Metadata no
Layer creation date (dd/mm/yyyy HH:mm:ss.cc)
Single date
Date: - -2019
Local clock
UTC
Update period:
Layer update date (dd/mm/yyyy HH:mm:ss.cc)
Local clock
UTC
Abstract describing the dataset (M)
(MD_Metadata > MD_DataIdentification.abstract)
Dataset responsible party (O)
(MD_Metadata > MD_DataIdentification.pointOfContact > CI_ResponsibleParty)
Dataset reference date (M)
(MD_Metadata > MD_DataIdentification.citation > CI_Citation.date)
Here we have the date of creation and update of the data, but the information regarding the temporal content is found under Extension | temporal extension


GeM+: Camargue_Hydroperiod_2016.xml
File Help
Metadata file: C:\Users\e.prat\OneDrive - CREAF\EOTIST\VirtualTraining\StandardCourse\SC
Layer:
Metadata Identification Presentation Reference system Extent Thematic info. Lineage
General presentation Technical aspects Constraints
Data model: Grid
Object type:
Topology level:
Number of cells: Undefined
If the grid is an image, it is possible to define the platform and sensor that it was acquired with.
Platform and Instrument Information...
Comments...
Spatial representation type (O)
(MD_Metadata > MD_DataIdentification.spatialRepresentationType)

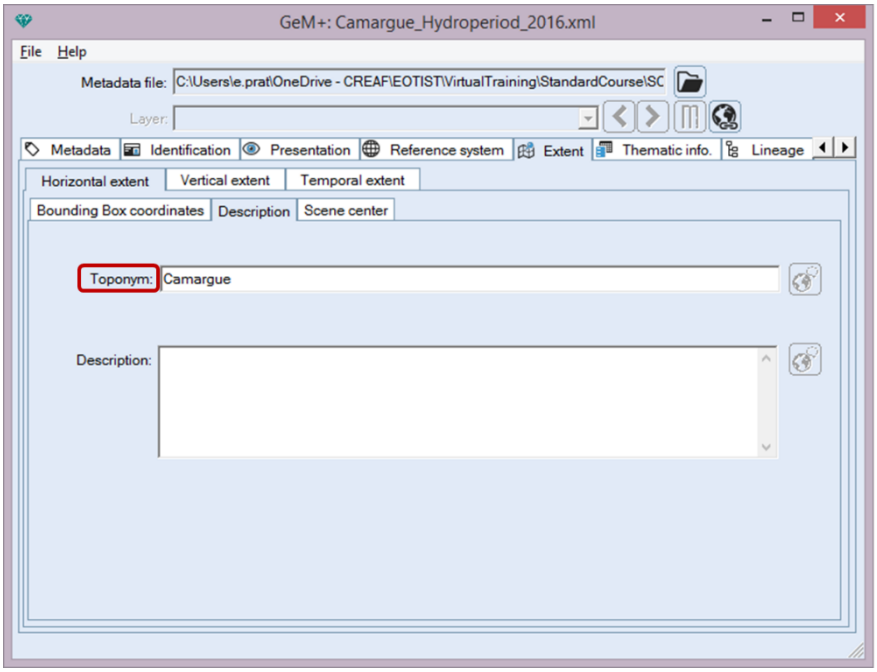


Reference system (O)
(MD_Metadata > MD_ReferenceSystem)

Spatial resolution of the dataset (O)
(MD_Metadata > MD_DataIdentification.spatialResolution > MD_Resolution.equivalentScale or MD_Resolution.distance)

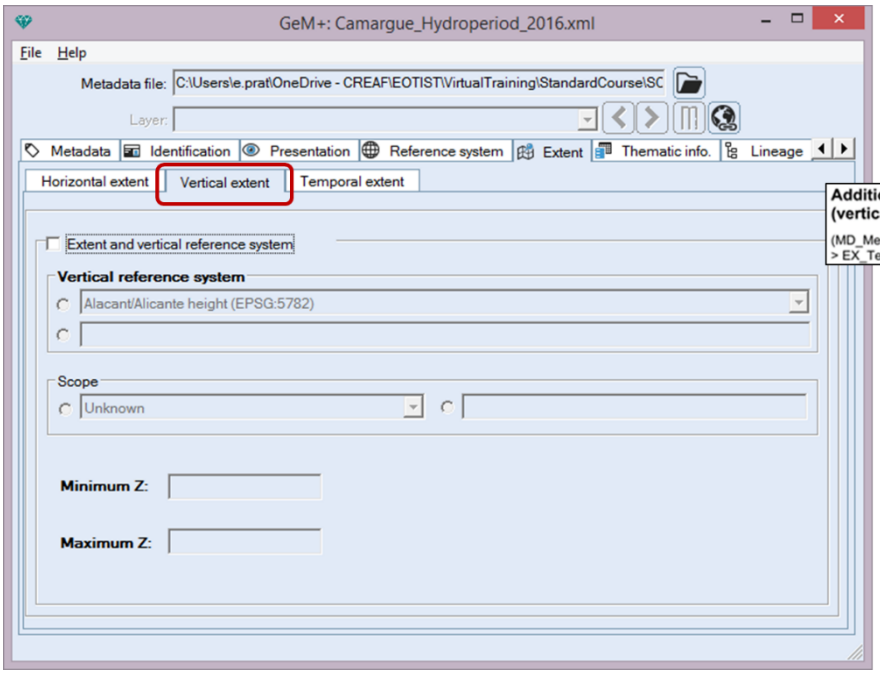


Geographic location of the dataset (by four coordinates or by geographic identifier) (C)
(MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_GeographicExtent > EX_GeographicBoundingBox or EX_GeographicDescription)



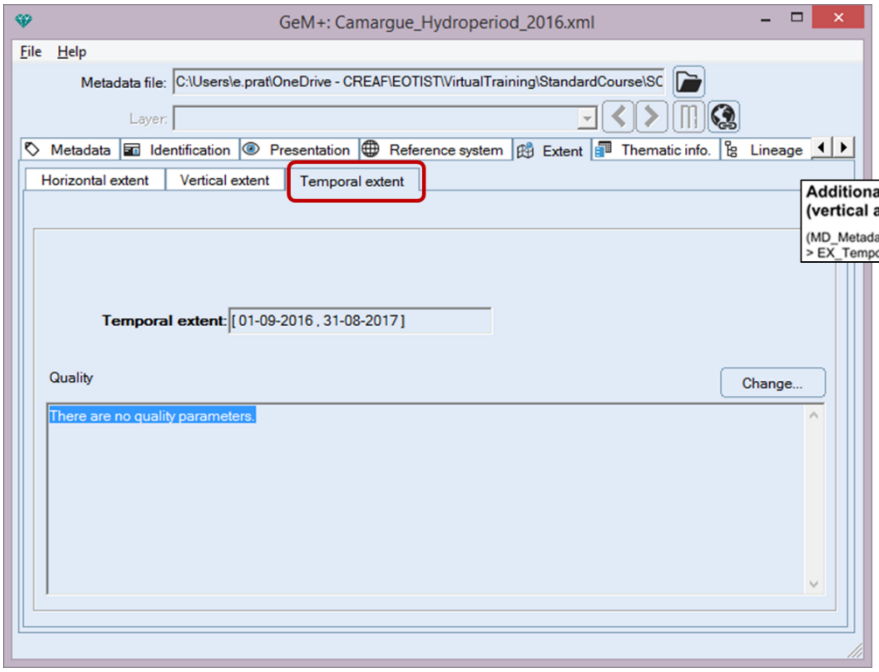
Geographic location of the dataset (by four coordinates or by geographic identifier) (C)

(MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_GeographicExtent > EX_GeographicBoundingBox or EX_GeographicDescription)



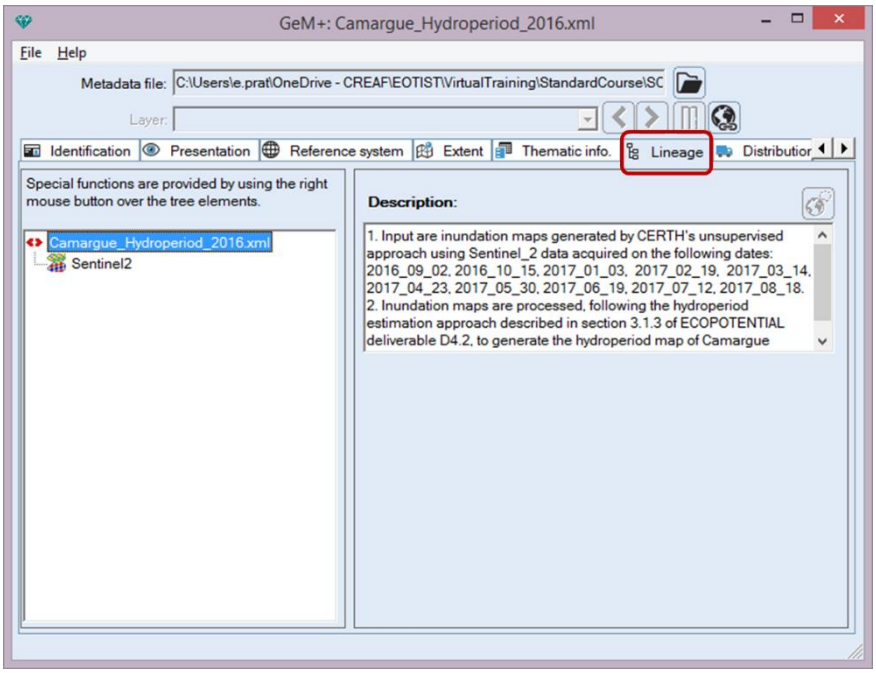
Additional extent information for the dataset (vertical and temporal) (O)

(MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_TemporalExtent or EX_VerticalExtent)



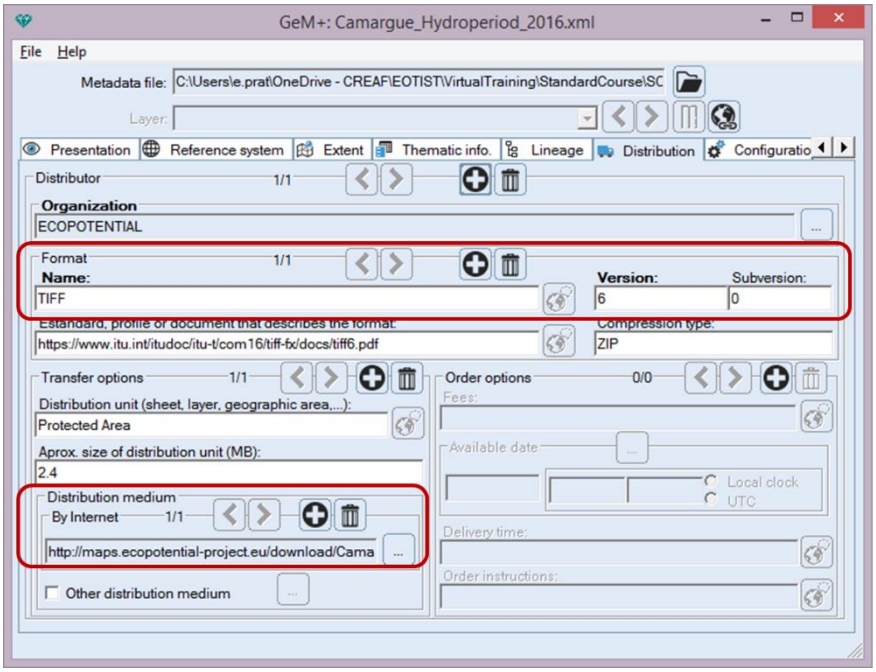
Additional extent information for the dataset (vertical and temporal) (O)

(MD_Metadata > MD_DataIdentification.extent > EX_Extent > EX_TemporalExtent or EX_VerticalExtent)



Lineage (O)

(MD_Metadata > DQ_DataQuality.lineage > LI_Lineage)

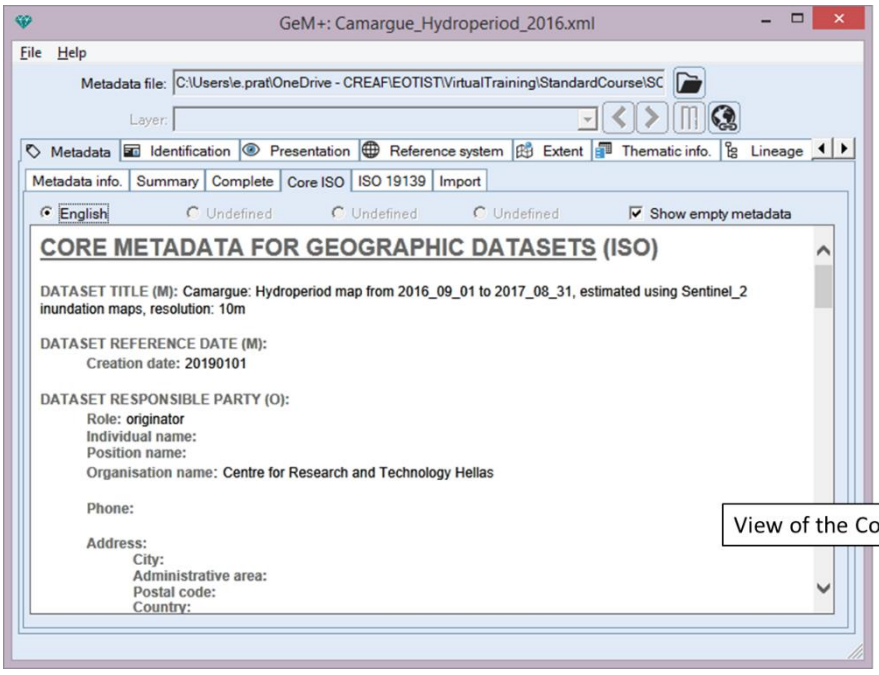


Distribution format (O)

(MD_Metadata > MD_Distribution > MD_Format.name and MD_Format.version)

On-line resource (O)

(MD_Metadata > MD_Distribution > MD_DigitalTransferOption.onLine > CI_OnlineResource)



View of the Core ISO metadata

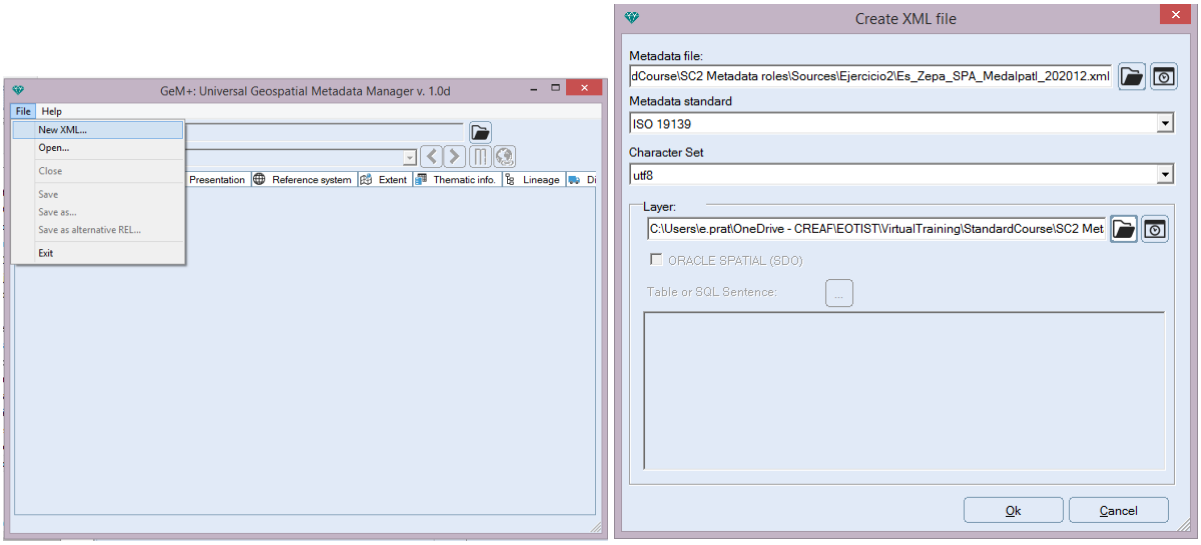
Now try it by downloading an XML file from the EEA Geospatial data Catalogue:

- https://sdi.eea.europa.eu/catalogue/srv/eng/catalog.search#/home

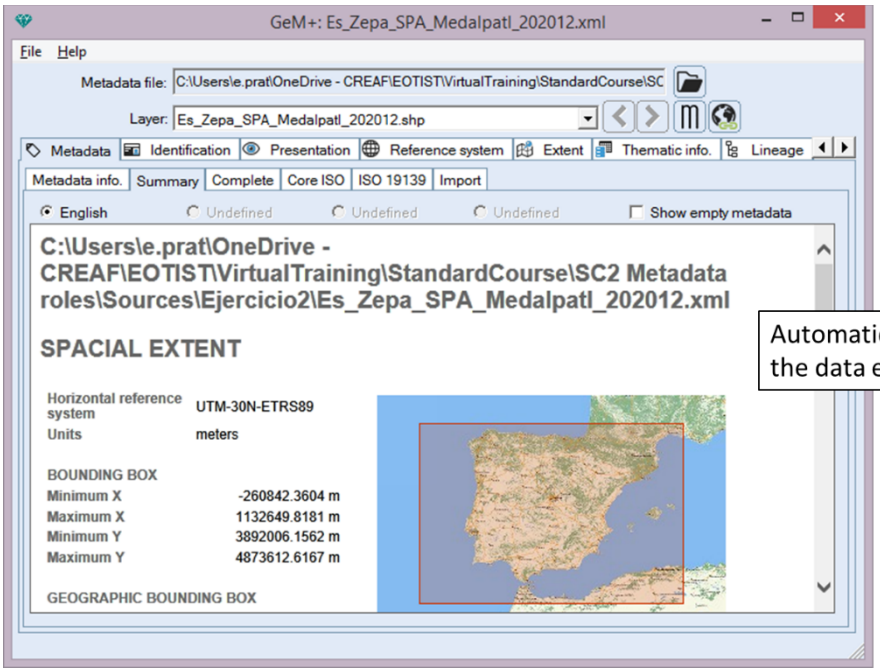
Note: The metadata files are available at the bottom of the page. If you click on the *Download metadata* button, the metadata will display in XML format in the web browser. To download the file you should click with the right button and select *Save link as…* from the drop-down menu.

2. AUTOMATIC EXTRACTION OF DATA AND METADATA EDITION IN XML

Open the GeM+ and create a New XML for the Es_Zepa_SPA_Medalpatl_202012.shp layer in the Data folder.



Some of the metadata attributes are automatically filled from the layer itself:

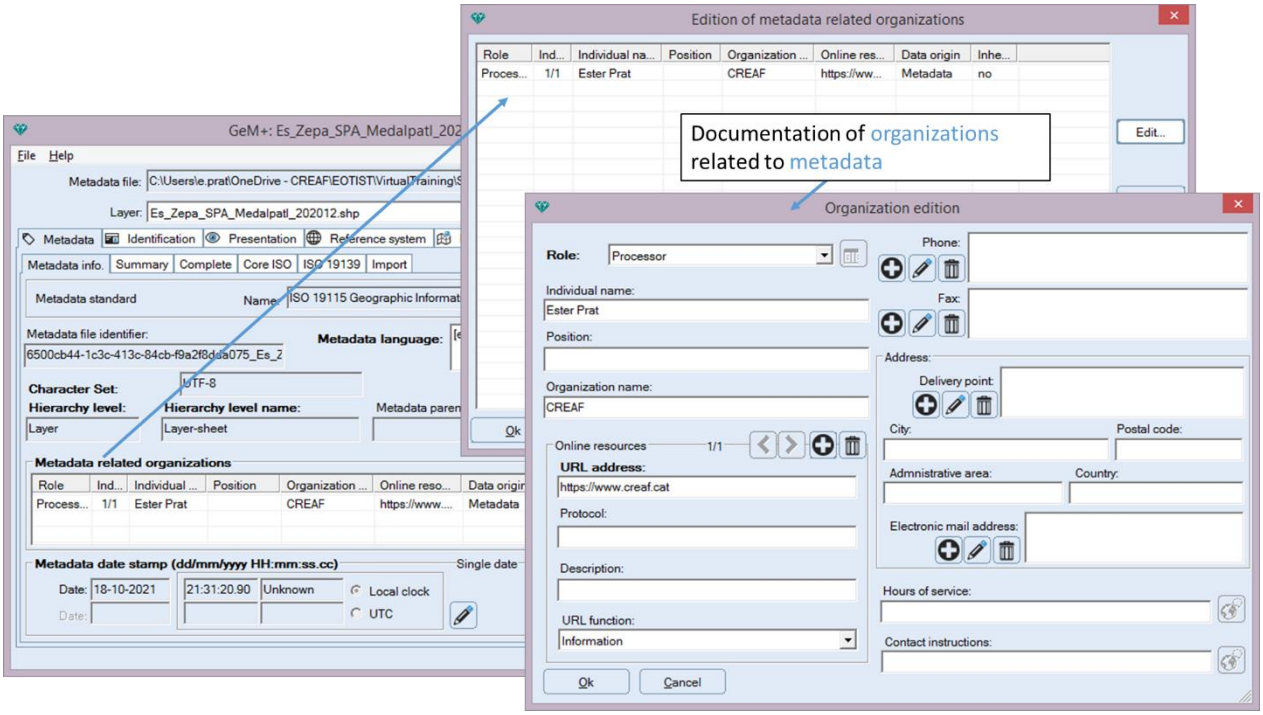


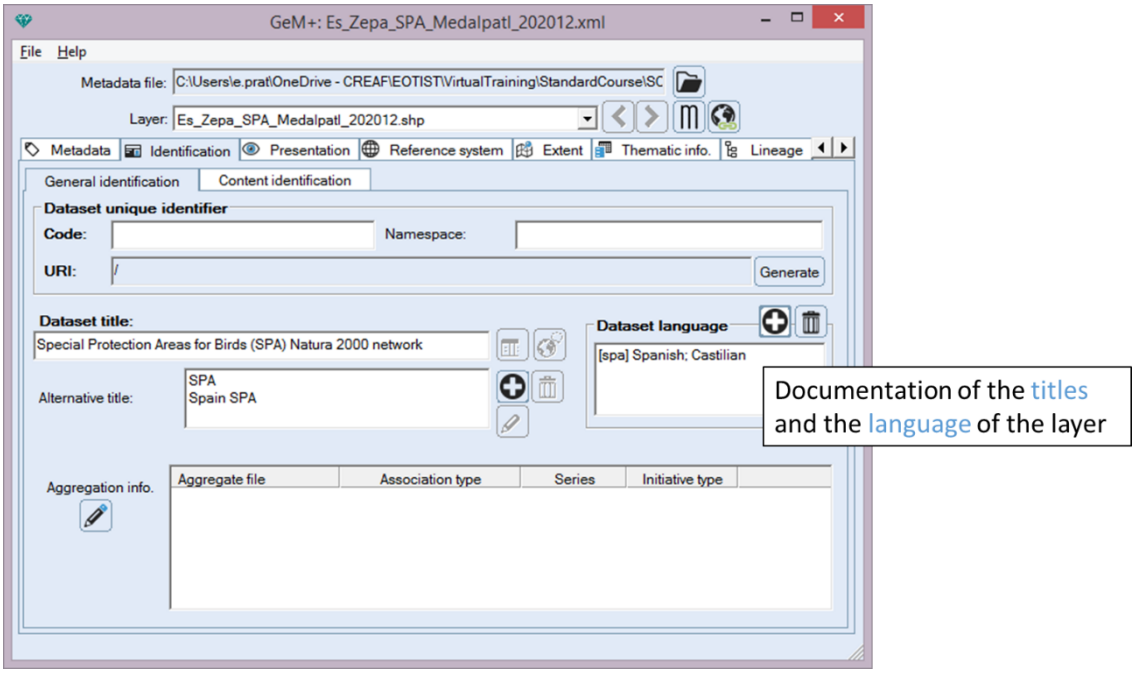
Automatic metadata documentation from the data extracted from the layer

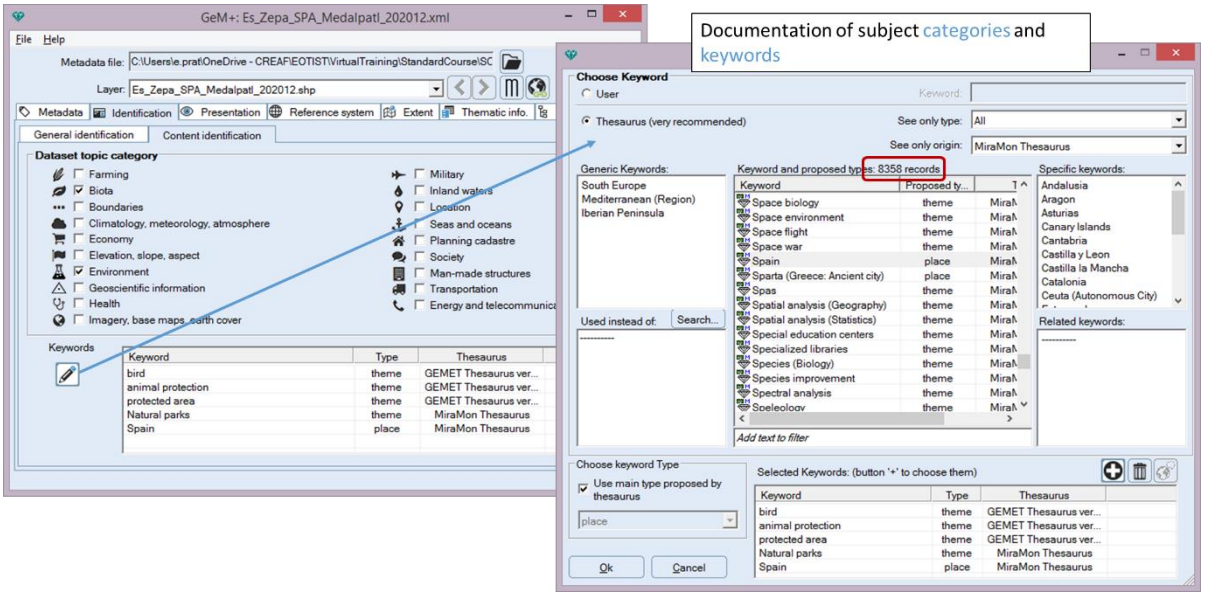
Now let's enrich the metadata:

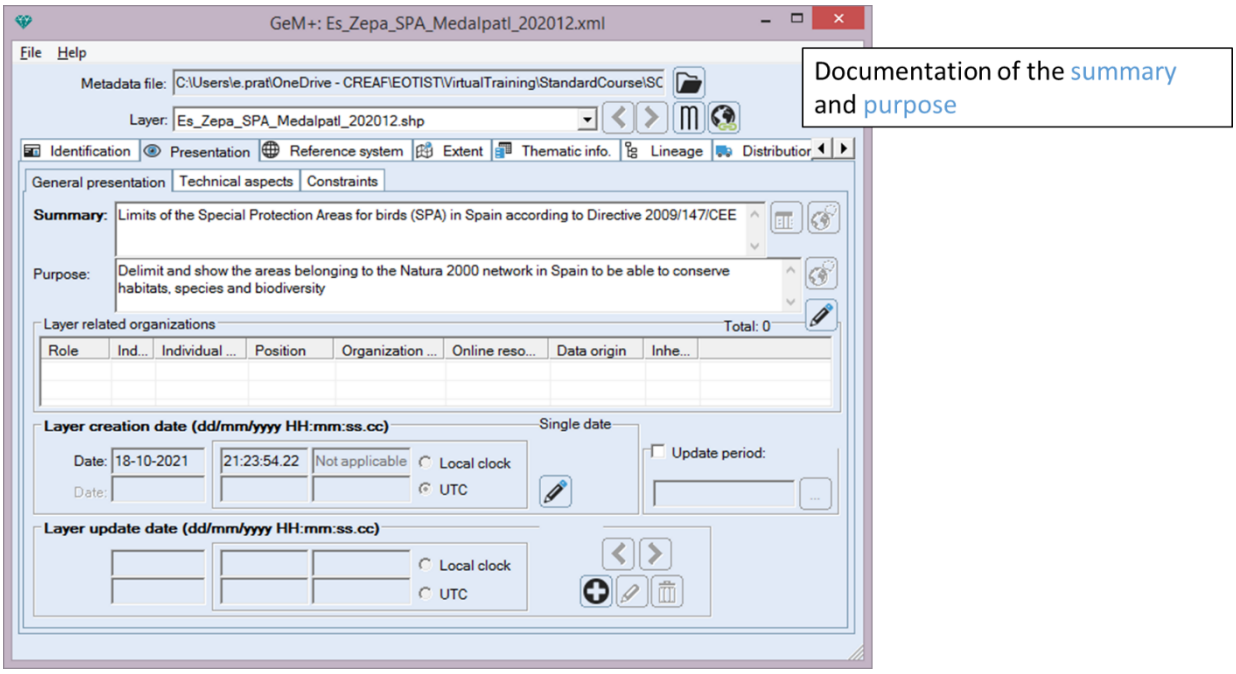
- Organizations related to metadata
- Layer Title and Alternate Titles
- Base Topic Categories and Keywords
- Summary, purpose, organisms related to the base
- Distribution
- Lineage

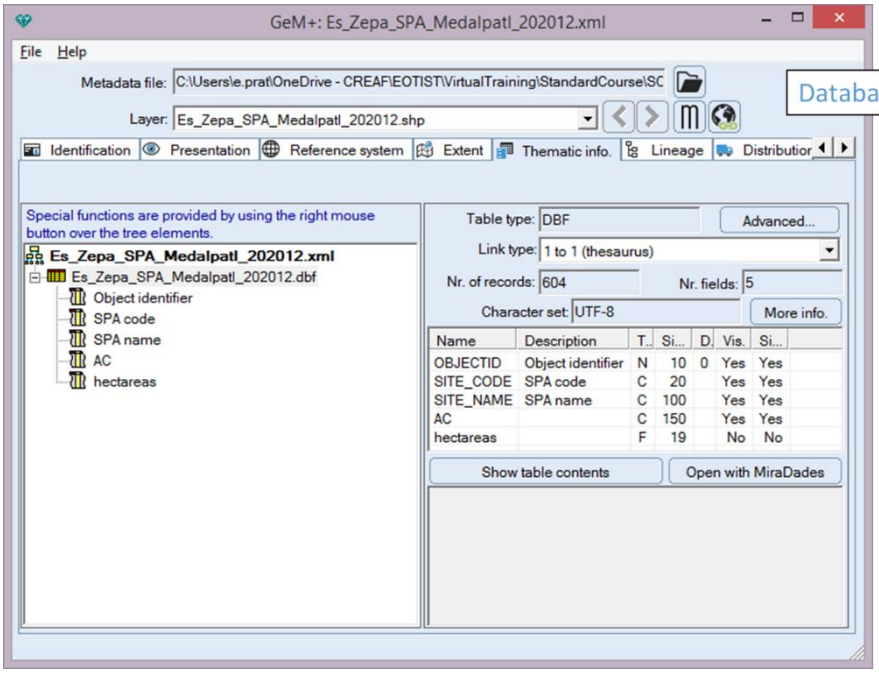
- ….


Edition of metadata related organizations
Documentation of organizations related to metadata
Organization edition
Metadata related organizations
Role:
Processor
Individual name:
Ester Prat
Organization name:
CREAF
Position:
Online resources
URL address:
https://www.creaf.cat
Protocol:
Description:
URL function:
Information
Phone:
Fax:
Address:
Delivery point:
City:
Postal code:
Admnistrative area:
Country:
Electronic mail address:
Hours of service:
Contact instructions:
Ok
Cancel


GeM+: Es_Zepa_SPA_Medalpatl_202012.xml
File Help
Metadata file: C:\Users\e.prat\OneDrive - CREAF\EOTIST\VirtualTraining\StandardCourse\SC
Layer: Es_Zepa_SPA_Medalpatl_202012.shp
Metadata
Identification
Presentation
Reference system
Extent
Thematic info.
Lineage
General identification
Content identification
Dataset unique identifier
Code:
Namespace:
URI:
Generate
Dataset title:
Special Protection Areas for Birds (SPA) Natura 2000 network
Alternative title:
SPA
Spain SPA
Dataset language
[spa] Spanish; Castilian
Aggregation info.
Aggregate file
Association type
Series
Initiative type
Documentation of the titles and the language of the layer


Documentation of subject categories and keywords
GeM+: Es_Zepa_SPA_Medalpatl_202012.xml
Choose Keyword
Thesaurus (very recommended)
Keyword and proposed types: 8358 records
Selected Keywords: (button '+' to choose them)
Ok
Cancel


GeM+: Es_Zepa_SPA_Medalpatl_202012.xml
Documentation of the summary and purpose
Summary: Limits of the Special Protection Areas for birds (SPA) in Spain according to Directive 2009/147/CEE
Purpose: Delimit and show the areas belonging to the Natura 2000 network in Spain to be able to conserve habitats, species and biodiversity
Layer related organizations
Layer creation date (dd/mm/yyyy HH:mm:ss.cc)
Layer update date (dd/mm/yyyy HH:mm:ss.cc)



Database documentation