

D.(6.1) The PEARL Metadata catalogue

*Platform overview and system
infrastructure*

© 2014 PEARL Consortium

Acknowledgement

The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under Grant agreement n° 603663 for the research project PEARL (Preparing for Extreme And Rare events in coastal regions).

Disclaimer

The deliverable D 6.1 reflects only the authors' views and the European Union is not liable for any use that may be made of the information contained herein.



Authors: TUHH

Contributors: CETAqua

Dissemination level :
PU = Public



Document Information

Project Number	603663	Acronym	PEARL
Full Title	Preparing for Extreme and Rare events in coastal regions		
Project URL	http://www.pearl-fp7.eu/		
Document URL			
EU Project Officer	Eleni Manoli		

Deliverable	Number	D. (6.1)	Title	The PEARL metadata catalogue
Work Package	Number	WP(6)	Title	Case Study Areas
Lead Author(s)	Dejan Antanaskovic, Natasa Manojlovic			
Contributing Author(s)	Jordi Moreton			

Date of Delivery	Contractual	07.01.2014	Actual	08.11.2014
Status	version 0.4		final	<input type="checkbox"/>
Nature	prototype <input type="checkbox"/> report (X) dissemination <input type="checkbox"/>			
Dissemination level	public (X) consortium <input type="checkbox"/>			

Abstract (for dissemination, 100 words)	<p>PEARL Metadata Catalogue (MDC) is a web portal, based on "ESRI Geoportal". A geoportal is a gateway to web-based geospatial resources, enabling users to discover, view and access geospatial information and services made available by their providing organizations.</p> <p>The MDC has been designed in order to provide the efficient support and overview of the available and required data throughout the project and in this way support the coordinated actions in the PEARL case study areas. This report reflects the state of the MDC as of M6 (June 2014), which is the delivery date of the MDC platform</p>
Keywords	PEARL, Metadata Catalogue, System Infrastructure

Version Log				
Issue Date	Rev. No.	Author	Change	Approved by

Executive Summary

This report describes the software implementation and architectural details of the “PEARL Metadata Catalogue (MDC)” (Task 6.1).

PEARL Metadata Catalogue is implemented as the web portal, based on “ESRI Geoportal”. A geoportal is a gateway to web-based geospatial resources, enabling users to discover, view and access geospatial information and services made available by their providing organizations. Data providers can use the geoportal to make their geo-spatial resources discoverable, viewable, and accessible to other PEARL project partners. The MDC has been designed in order to provide the efficient support and overview of the available and required data throughout the project and in this way support the coordinated actions in the PEARL case study areas. The catalogues is maintained and improved during the duration of PEARL and where required beyond the project lifetime. This report reflects the state of the MDC as of M6 (June 2014), which is the delivery date of the MDC platform.

Contents

	Executive Summary	2
	Contents	3
	List of figures	4
1	Introduction	5
2	Metadata online survey	6
3	Metadata catalogue platform development	8
4	Metadata catalogue establishment	9
4.1	Publishing Resources	10
4.2	Using resources	12
4.3	Host system requirements and installation details	14
4.4	Browser Support	14
4.5	Recommended system infrastructure	15
	References	16
	Annexes	17
	Annex A: Data availability survey results	
	Annex B: PEARL Geoportal publish features testing	
	Annex C: Geoportal basic tutorial	

List of figures

Figure 1: PEARL Data Availability Survey registration page	6
Figure 2: PEARL Data Availability Survey, data specification page.....	6
Figure 3: Live preview of Hamburg Web Map Service Layers	10
Figure 4: Dedicated editor for manual metadata creation.....	12
Figure 5: Spatial search of metadata catalogue on area of Spain	13
Figure 6 Suggested information system deployment structure.....	15

1 Introduction

As the models and methods to be developed in PEARL require high amount of different data types and formats such as geo data, time series or narratives which have to be exchanged between the models, efficient data management is the key to the timely delivery of the intermediate results and their efficient processing along the project workflow. However, very often the data issue is underestimated leading to the lack of coordination across different instances and models, lack of standardised formats for data exchange incompatible information and information systems or fragmented or redundant information available (e.g. Hiemcke, 2011).

The Meta Data Catalogues (MDC) has been developed and implemented in order to support the coordinated data management practice from the initial project phase. For its development we considered the existing EU initiatives and Directives for management of data infrastructure (e.g. 2007/2/EC- INSPIRE) as well as the experience and data infrastructure developed within previous projects, in particular the German national project KLIMZUG- Nord, where OGS standards complied data services and data management have been developed.

The main objective of the Meta Data Catalogue (MDC) is to enable coordinated activities in the PEARL case study areas by providing a transparent access to the information about the data availability and demand as well as to the data owners and providers for the PEARL case study areas. It creates the basis for the PEARL system infrastructure.

For its development the following steps have been undertaken:

- I. Metadata online survey
- II. Metadata platform development
- III. Establishment of the platform

Those steps are described in the following text.

2 Metadata online survey

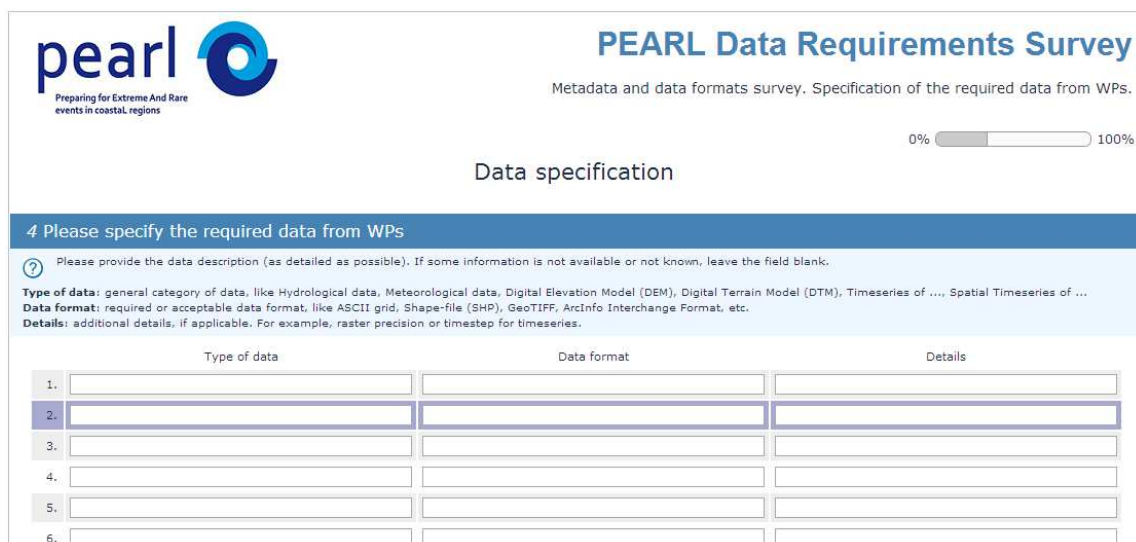
Before the metadata catalogue platform is developed and established, Metadata Online Survey website was developed in order to collect the initial information about the metadata catalogue content and structure. The website was created and published under <http://pearl.wb.tu-harburg.de/surveys> and all project partners were invited to participate. Two surveys were available:

- PEARL Data Requirements Survey - for partners that are developing or applying models within work packages 1 to 5. Basically, this is a metadata and data formats survey i.e. specification of the required data from work packages.
- PEARL Data Availability Survey - for the responsible case study partners. This survey is intended to create the specification of data availability within the case studies.

The intention of these surveys was to collect rough information about the data required for work packages i.e. available within the case study areas. Metadata catalogue platform offer more options for detailed data description.



Figure 1: PEARL Data Availability Survey registration page



	Type of data	Data format	Details
1.			
2.			
3.			
4.			
5.			
6.			

Figure 2: PEARL Data Availability Survey, data specification page

From the technical point of view, the web server platform used is Apache 2.2 (<http://httpd.apache.org>) with PHP scripting language extension (<http://php.net>). Data and survey results are stored in the database powered by MySQL database server (<http://www.mysql.com>). All components mentioned are open source, freely downloadable under GNU General Public License v2 terms.

Survey website was implemented by utilizing open-source platform LimeSurvey. The official website address is <http://www.limesurvey.org>.

Survey results are collected and analysed. Survey outcomes are presented in Appendix 1 of this document.

3 Metadata catalogue platform development

PEARL Metadata Catalogue (Geoportal) is the website where data producers can register their geospatial resources for other PEARL project partners to discover and consume. The portal does not duplicate these resources but stores the metadata of the resources as well as the information on how to access those resources.

It inventories all the metadata of the registered resources in the integrated catalogue service, which is an Open Geospatial Consortium (OGC) compliant CS-W 2.0.2 service.

4 Metadata catalogue establishment

Four different types of users (user roles) are accommodated by the platform:

- **Anonymous user**, user who can access the public functions of the portal: search, view results, and view resources. However, anonymous access can be restricted if necessary.
- **Registered user**, has access to the same functions as the anonymous user. In addition, a registered user can save searches for future use.
- **Publisher**, user who can register, upload, and create resources using the portal. Publishers are responsible for keeping their own resources up-to-date and accessible.
- **Administrator**, with the main role to review and approve posted resources, as well as to handle user accounts.

Publishers i.e. data producers publish their resources to the portal by registering the resource's metadata with the portal's catalogue service. Publishers can directly create metadata in the Web application, upload their existing metadata to the portal, or allow the portal to auto-generate metadata.

A resource - in metadata catalogue geoportal terms - is information, data, or a repository that hosts information or data. Resources can be metadata records, web services, online articles, videos, documents, RSS feeds, and more. There are a number of things that can be done with a resource using the platform. Users can discover resources through the portal and read metadata about the resource. Users can preview the resource if it is a live service through the Preview page. Users can share the resource with other users by sending its URL through an email, or social network posting. Providers of the resource can publish it to the portal so users can discover the resource.

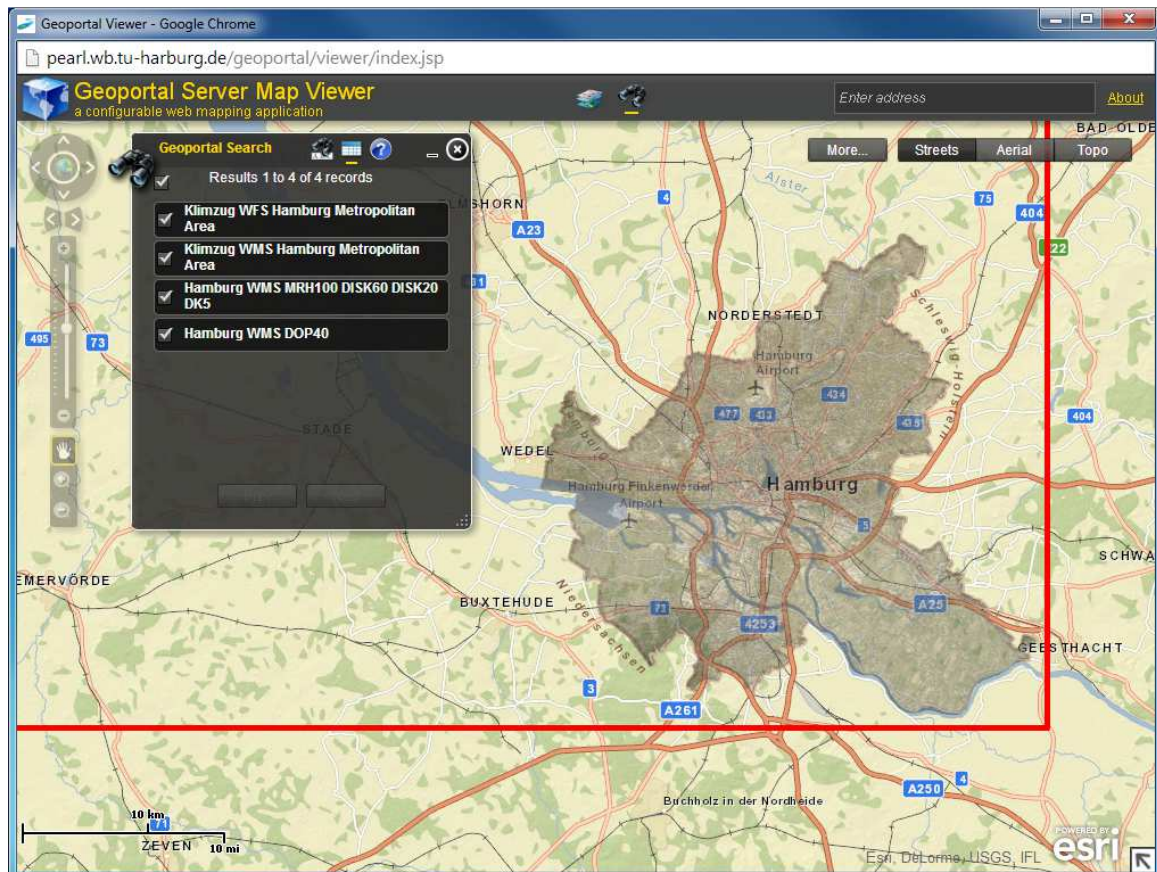


Figure 3: Live preview of Hamburg Web Map Service Layers

4.1 Publishing Resources

The success of a geoportal depends on the quality resources it hosts. There are several ways to publish a resource.

Register a resource on the network

By registering a resource on the network, one provides connection information to a resource that can be revisited by the geoportal catalogue for updates. This process is called synchronization. There are several types of resources that can be registered:

- URL
 - GetCapabilities URL to an OGC service (OWS, WMS, WCS, WFS, WPS, SOS, SPS, CSW, or KML)
 - REST URL formatted in GEORSS
 - OpenSearch description XML
 - URL to a metadata XML (such as FGDC, ISO-based profiles, Dublin Core, etc.)
- ArcGIS
 - URL to an ArcGIS Server which contains services
 - URL to one specific service, e.g., MapServer, GlobeServer, ImageServer, GeoDataServer, WMSServer, WFSServer, WCSServer.
- OAI: Open Archive Initiative service
- WAF: URL to a web-accessible folder (HTTP/FTP)

- CSW: the GetCapabilities URL to a Catalog Service for the Web endpoint.
- ATOM: ATOM Feeds compliant with ATOM 1.0 can be provided.

Register an endpoint for federated search

Federated search allows users to search a remote endpoint, such as a CSW endpoint, from the Geoportal search interface. The records returned from a federated search are not stored in the geoportal database, but at their respective endpoints.

Upload or validate metadata file from the local disk

Uploading a metadata XML file from your local machine or mapped network drive is a quick way to get one local metadata document published to the geoportal, or to check that a metadata record is valid. A valid document will have all the mandatory metadata elements populated, and will publish to the geoportal. An invalid document will fail to publish.

Use dedicated editor to create metadata manually

The geoportal supports creating standards-based metadata to describe your resource using the geoportal interface. Using the dedicated editor to create metadata manually is a good way to publish resource information when you don't have existing metadata to upload or the resource can't be registered as a resource on the network. The geoportal "Create Metadata" interface supports several metadata schemas out of the box, and can be configured to support additional standards or profiles.

The following metadata standards are supported:

- FGDC
- Dublin Core
- North American Profile (Data)
- North American Profile (Services)
- GEMINI (Data)
- GEMINI (Services)
- ISO 19115 (Data)
- ISO 19119 (Services)
- ISO 19115-2 (Imagery and Gridded Data)

Metadata Editor

Save as Draft **Save**

FGDC

Identification Quality Spatial Reference Entity and Attribute Distribution Metadata

Identification Information

Citation Description Time and Status **Extent** Keywords Constraints Contact Additional

Bounding Coordinates

West Bounding Longitude [Use Map](#)

East Bounding Longitude

North Bounding Latitude

South Bounding Latitude




Figure 4: Dedicated editor for manual metadata creation

Publishing Metadata directly from ArcGIS

The Geoportal extension Publishing Client is a metadata tool used to publish metadata documents to a Geoportal at the touch of a button.

The Geoportal extension Publishing Client will examine the folder in ArcCatalog that a user specifies, find the metadata documents in that folder, and publish those documents to the Geoportal that is indicated in the interface. It provides a quick way to publish metadata for data resources.

4.2 Using resources

After submitting search criteria on the Search page, a list of matching resources are returned. By double-click the resource to expand its information section, one will see a number of options available for each resource. These options, and other tools on the search results page, help users evaluate discovered resources, access them for use, and share them with other users.

The screenshot shows the PEARL Geoportal search interface. At the top, there is a header with the PEARL logo and the text "Preparing for Extreme And Rare events in coastal regions". To the right of the header are links for Login, Register, Help, About, and Feedback. Below the header is a navigation bar with tabs for HOME, SEARCH, and BROWSE, and a button for LAUNCH MAP VIEWER. The main content area is titled "Search" and contains a search bar with a "Search" button. Below the search bar is a section for "Records shown from: This Site" with a link to "Click here to select different site or configure search.". To the left of the search results is a map of Spain with a red rectangle indicating the search area. To the right of the map are three search results, each with a title, a description, and links for Open, Preview, Details, and Metadata. The first result is "Mapa de puntos de riesgo inundación costera afección ambiental T=100 años". The second result is "Superficies de Agua". The third result is "Estaciones de medida de oleaje en el litoral andaluz. Medidas de altura significativa y periodo de oleaje. 1961-1990. Consejería de Medio Ambiente, Junta de Andalucía.". At the bottom of the search results is a section for "See results through REST" with links for API: GEORSS, ATOM, HTML, FRAGMENT, KML, JSON, and CSV.

Figure 5: Spatial search of metadata catalogue on area of Spain

Open link: The Open link enables users to access a website that describes the resource itself. If the resource is downloadable and the downloadable data file (ftp, zip, or other downloadable format) is referenced in the resource's metadata, the Open link may give the option of downloading the file. The Open link will not appear if there is no website information in the resource's metadata.

Website link: This link enables users to access other website information, in addition to the Open link, associated with the resource. If no additional website is defined in the resource's metadata then this link will not appear.

Preview link: The Preview link enables users to preview a live service to determine if it meets their data needs. The Preview page also provides connection information so users can access the live service from other client applications.

Details link: The Details link enables users to easily read basic information about a resource by displaying the resource's title, publisher/originator, geographic extent, and abstract on a Details page. The Details page also allows users to view Reviews of the resource, view relationships the resource may have to other documents in the catalog, and preview live data resources.

Metadata link: The Metadata link enables users to see the resource's metadata XML.

Access through the REST API

Every resource in the PEARL metadata catalogue is accessible through the REST URL. This URL is visible at the bottom of the Details page, and is formatted similar to the example below. In the example below, you see that the URL references the document ID for the metadata document, shown below after the 'id=' parameter in the URL.

```
/geoportal/rest/document?f=html&id=%7BF6B6CCA6-9013-4018-9FFE-5F8163E27FBD%7D
```

By pasting the REST URL in a web browser, you can access the resource's details information. It is also possible to see search results as a list in different formats through the REST API Syntax.

4.3 Host system requirements and installation details

The geoportal host environment requires an operating system, a database, a full Java JDK, a web application server and servlet container, and (optionally) access to ArcGIS Server services.

The Geoportal Server stores all its data into the database. It supports the following database systems: Oracle (10g/11g), PostgreSQL, Microsoft SQL Server and MySQL. The database can be deployed on the same server as the geoportal web application, or a different server.

The geoportal connects to an organization's LDAP structure, and thus needs access to a directory server.

Furthermore, geoportal web application is based on Java Servlet technology and therefore requires the use of a Servlet container.

A Mail server is necessary for the following notification functionality:

- Feedback function to contact geoportal administrators.
- Data download notification functionality

For full functionality of user-based roles, an LDAP-enabled Directory Server is required for the authentication. When no LDAP Directory Server is available, the geoportal may be configured for a single administrative account. This is a quick option for an introductory setup, but it cannot be used in production environments with many different PEARL users, with different user access levels. The items in the catalogue can also be restricted from access by user groups.

PEARL geoportal runs on Apache 2.2 web server with Tomcat Servlet container 7.0. Java Runtime Environment, version 7, 64-bit. Data is stored in MySQL database (MySQL Server ver. 5.5) that is hosted on the same server platform. Server host platform is Linux Ubuntu 12.04 LTS.

For user access and authentication, geoserver uses LDAP functionality of ApacheDS. ApacheDS is an extensible and embeddable directory server entirely written in Java, which has been certified LDAPv3 (LDAP version 3) compatible by the Open Group. Besides LDAP it supports Kerberos 5. For user account management, Apache Directory Studio is used.

All software tools and solutions mentioned here are free and Open Source.

4.4 Browser Support

The PEARL Metadata Geoportal Server has been tested for use on the following browsers:

- Internet Explorer 7.0, 8.0
- Mozilla Firefox 3.0 and 3.5
- Google Chrome
- Apple Safari

4.5 Recommended system infrastructure

The developed MDC supports rather flexible data management as the 'metadata i.e. the data about data' is centrally stored, which 'points or create links to the data sources or data providers, which can be stored on any external server. It enables the partners to store data on their own servers and follow their own access policies and still enables the coordinated data management and case study activities through the centralised metadata repository (MDC).

During the project meeting in Hamburg in January 22-24, 2014 it has been agreed to follow the decentralised data management policy, where each responsible case study partner is in charge of the data for the study area of interest, but the links to the data and the type of their availability (full, with restrictions etc) are stored in the MDC and as such available to the modellers (WP1-5 partners). The recommended system infrastructure which is to be implemented for PEARL is illustrated in Figure 6.

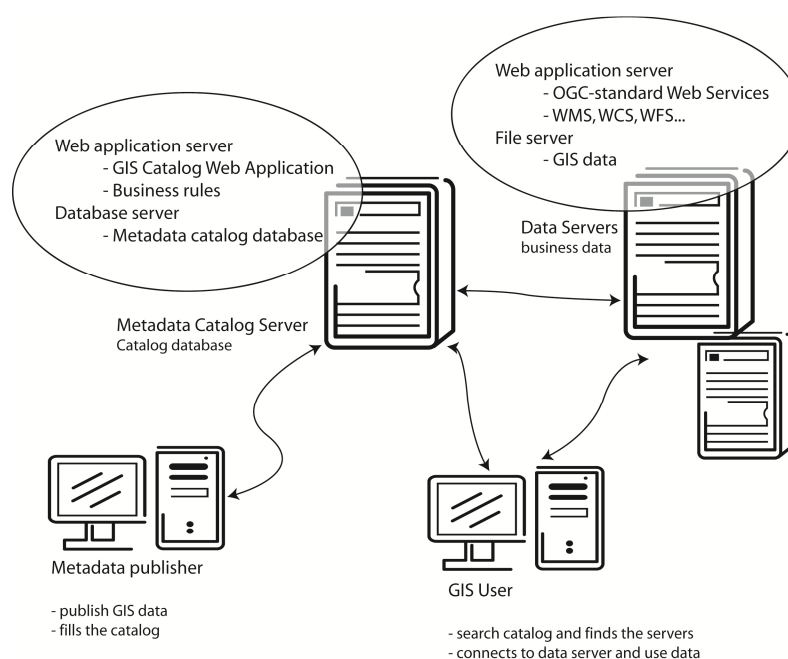


Figure 6 Suggested information system deployment structure

References

<http://www.esri.com/software/arcgis/geoportal>

<http://help.arcgis.com/>

<https://github.com/Esri/geoportal-server>

Annexes

Annex A: Data availability survey results

Annex B: PEARL Geoportal publish features testing

Annex C: Geoportal basic tutorial

Annex A Data availability survey results

Case study area: Greece- NTUA

Responsible person: Christos Makropoulos, cmakro@chi.civil.ntua.gr

<i>Type of data</i>	<i>Data format</i>	<i>Format details</i>	<i>Availability/Licensing</i>	<i>Data owner</i>	<i>Type of provision</i>	<i>Comments</i>
Census	PDF documents			Hellenic Statistical Authority	available on line from official site of the Hellenic Statistical Authority	Year 2011
Hydrometeorological data	txt and excel documents			National Observatory of Athens		from one hydrometeorological station, 9/2008 - 11/2010 still a lot of data to collect
Seismic design and organisation of Rethymno's Municipality	PDF document			Municipality of Rethymno		Geotechnical investigation
Seismic Vulnerability Study of Rethymno City	PDF document, PDF maps, DXF, SHP			National Technical University of Athens		
Preliminary Environmental Impact Assessment of Port	PDF document			Municipality of Rethymno		
Port infrastructure	PDF drawings, volumes, hardcopies			Municipal Port Authority of Rethymno, Regional Unit of Crete: Rethymno		Previous studies of port facilities, as it was constructed and it was/will be modified/expanded

Type of data	Data format	Format details	Availability/Licensing	Data owner	Type of provision	Comments
Bathymetric maps	PDF maps, hardcopy			Municipal Port Authority of Rethymno, Regional Unit of Crete: Rethymno		Past and present, evolution of bathymetry of the general area of port
Digital Elevation Model	Raster	5 m		National Cadastre & Mapping Agency S.A.		
Land use	PDF maps			Municipality of Rethymno	available on line from official site of Rethymno's Municipality	General urban planning
CS area photographs (present)	JPEG			National Technical University of Athens		Port, marina, old venetian harbour, coast, present flood damages on port facilities
CS area photographs (past)	PDF document			Dimitris Archontakis		Past flood damages
Coastal Study	PDF document			Municipality of Rethymno		
Environmental impact assessment study	PDF document, PDF maps			Municipality of Rethymno		
Flood control and stormwater network study	hardcopy			Municipal Water Supply and Sewerage Company of Rethymno		hardcopy documents (technical report and hydraulic calculations volume), drawings are unavailable
Books related to hydraulic infrastructure of Rethymno	hardcopy			Dimitris Archontakis, Municipal Water Supply and Sewerage Company of Rethymno		

Major issues/problems assessed:

Major parts of the water supply, stormwater and sewerage networks are unavailable. Additionally, the parts of the networks that are available are not in a digital format.

General comments:

Clearly this does not represent the whole set of data anticipated, for example we still miss Digital Surface Model, hydrometeorological data etc. We expect to update this list periodically by liaising with the local stakeholders and data owners. Even though study area data collection ends at M20 we will have collected a major part of data which is necessary for our model chain prior to the next project meeting.

Responsible person for further questions: Archontia Lykou, alykou@central.ntua.gr

Survey taken by: Archontia Lykou, alykou@central.ntua.gr

Case study area: St. Marten- UNESCO-IHE

Responsible person: Dr Zoran Vojinovic, z.vojinovic@unesco-ihe.org

Type of data	Data format	Format details	Availability/ Licensing	Data owner	Type of provision	Comments
DTM/Contour Map	ASCII grid					
Bathymetry	ASCII grid					
Road network	SHP					
Cadaster property map (buildings)	SHP					
Drainage network	SHP and cross-section					
Vulnerability map	SHP					this is only for critical buildings like schools, hospitals, banks, etc
Arial image	GeoTIFF					
Hurricane data	time series					only for major hurricanes like Lenny,Omar etc
flood depth and hazard maps	GIS files					
Flood related reports	PDF					

Major issues/problems assessed:

An approval is required to get the actual data. Please contact Dr Zoran Vojinovic for further details.

Actions needed to overcome them:

There must be an agreement with the local authorities and the case study coordinator to get the actual data.

Responsible person for further questions: Dr Zoran Vojinovic, z.vojinovic@unesco-ihe.org

Survey taken by: Yared Abebe, y.abebe@unesco-ihe.org

Case study area: Spain – CETaqua

Responsible person: Marc Velasco, mvelasco@cetaqua.com, tel. +34 93 312 48 24

Type of data	Data format	Format details	Availability/Licensing	Data owner	Type of provision	Comments
Drainage network	Access database *.mdb	Information about pipe characteristics and georeferencing. It can be imported and plotted in GIS	Not publicly available	Hidralia	Shipping on DVD	
Digital Elevation Model	ASCII grid	5x5 m	Publicly available	IGN	Direct download	
Meteorological data	Excel	daily precipitation	Publicly available	AEMET	Direct download	
Land-use	Shape file	Information at build scale	Publicly available	Catastro	Web-service/Direct download	

Major issues/problems assessed:

The main problem may be the resolution of the data. Precipitation will be only available at daily level and DEM is not detailed enough.

Actions needed to overcome them:

Some actions will have to be undertaken, such as downscaling the precipitation series or combining the DEM with other spatial information to obtain a better description of the area studied.

Responsible person for further questions: Marc Velasco, mvelasco@cetaqua.com

Survey taken by: Marc Velasco, mvelasco@cetaqua.com

Contents

1.	Executive summary	24
2.	Introduction	24
3.	Results	24
3.1.	Method: Upload metadata file from the local disk	24
3.2.	Method: Register resource on the network	25
3.3.	Method: Use dedicated editor to create metadata manually	25
3.4.	Method: Upload metadata file from ARCGIS Publish Client	25
4.	Conclusions	25

1.Executive summary

The following report briefly summarizes the testing of PEARL Geoportal metadata publishing system by using all the different ways available to the PEARL project consortia members.

2.Introduction

The PEARL Geoportal is a deployment of ESRI Geoportal Server, a free and open source solution for geospatial metadata management and publishing. This solution provides all validated PEARL members a platform to manage and publish respective test case metadata about their geospatial resources, so other users can discover and connect to the source resources. The principal benefits are:

- Reduce time and redundancy of data production by connecting geospatial data and service producers with consumers.
- Maintain data integrity by allowing organizations to easily share the authoritative version of data among its users.
- Enable easy search and discovery of existing geospatial data and services by allowing users to create and manage descriptions of their geospatial resources and supporting easy-to-use, sophisticated, data discovery technologies.

As a part of **Task 6.1: Development of a concept for an information system infrastructure for data and meta data management and basic implementation**, CETaqua, as a support role for TUHH, tested the PEARL Geoportal as a publisher user type, using TUHH testing instructions and validating the correct working of the different methodologies for metadata uploading available.

3.Results

The PEARL Geoportal is located in the following url:

<http://pearl.wb.tu-harburg.de/geoportal/catalog/main/home.page>

We have tested four ways of uploading or connecting metadata, and also used deliberately iso non-compliant ones in some cases, to test the correct working of the geoportal built-in validation system.

We have used Spanish catalogues and chosen Marbella area metadata resources as this city area is CETaqua's test case. All xml files are structured according to supported standards (we've tested iso 19115 –iso 19139 for XML schema implementation).

3.1. Method: Upload metadata file from the local disk

Resource: *Cartografía Urbana Vectorial Escala 1:1.000 (CUV_1000): Marbella zona 7 - Marbella (2006)*

http://www.ideandalucia.es/CDEA/srv/es/main.home?uuid={0C489A10-0422-4F88-A2FD-98DC887CCFE7}&100001_full237_es

The XML file was validated as an iso19115 compliant. The file was uploaded correctly.

3.2. Method: Register resource on the network

Resource: *Superficies de Agua*

http://www.ideandalucia.es/CDEA/?uuid={086DEA60-3BF1-4DC6-8ACA-8D54BD20FACE}_500008_es

The XML file was validated correctly as an iso19115 compliant. The online resource was registered correctly from the source url.

3.3. Method: Use dedicated editor to create metadata manually

Resource: *Estaciones de medida de oleaje en el litoral andaluz. Medidas de altura significativa y periodo de oleaje. 1961-1990. Consejería de Medio Ambiente, Junta de Andalucía.*

<http://www.ideandalucia.es/CDEA/srv/es/main.home?uuid=ESREDIAM20090302004429.xml>

The XML file wasn't validated correctly as an iso19115 compliant. The errors were the following:

- General Information - Organization: is required.
- /gmd:MD_Metadata/gmd:contact/gmd:CI_ResponsibleParty/gmd:organisationName/gco:CharacterString
- Identification Information - Scale 1: is invalid.
- /gmd:MD_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:spatialResolution/gmd:MD_Resolution/gmd:equivalentScale/gmd:MD_RepresentativeFraction/gmd:denominator/gco:Integer
- Data Theme - Theme Topics: is required.
- /gmd:MD_Metadata/gmd:identificationInfo/gmd:MD_DataIdentification/gmd:topicCategory/gmd:MD_TopicCategoryCode
- Data Quality Information - Data History: is required.
- /gmd:MD_Metadata/gmd:dataQualityInfo/gmd:DQ_DataQuality/gmd:lineage/gmd:LI_Lineage/gmd:statement/gco:CharacterString

However, as we used the dedicated online editor, we manually corrected the errors and added information where it was needed, according to iso19115.

3.4. Method: Upload metadata file from ARCGIS Publish Client

Resource: *Mapa de puntos de riesgo inundación costera afección ambiental T=100 años*

<http://www.magrama.gob.es/metadatos/srv/es/metadata.show?uuid=7a895abf-bd7d-4914-9842-34ca44d58d8c>

Test results: The XML file was validated correctly as an iso19115 compliant. The metadata was uploaded correctly. Probably, this will be the preferred and most used upload method for PEARL project

4. Conclusions

Different tests were performed according to TUHH instructions and the results show that PEARL Geoportal metadata upload, connect and online dedicated editor features work as expected.

Annex C PEARL Metadata Catalogue – Basic Tutorial

Pearl Metadata Catalogue is implemented as web-based ESRI Geoportal. A geoportal is a gateway to Web-based geospatial resources, enabling users to discover, view and access geospatial information and services made available by their providing organizations. Likewise, data providers can use the geoportal to make their geospatial resources discoverable, viewable, and accessible to others.

PEARL Geoportal is located at <http://pearl.wb.tu-harburg.de/geoportal>



Home

The PEARL Geoportal provides easy and convenient ways to share geospatial data. All it takes is just 3 simple steps.



PEARL Geoportal was built using the Geoportal Server. Please read the [Disclaimer](#) and [Privacy](#) or [Contact Us](#).

How to register and manage user account

To access user-specific functionality such as maintaining a profile, saving searches and publishing resources, you must first create your user account.

To create a user account, click Register from the upper right-hand corner of the geoportal's screen to access the user registration page. Fill out the information in the form to create a new account. Mandatory fields have bold and italic field labels.

After you create a user account, you can manage your profile. The profile page is accessed by clicking the My Profile link in the upper right corner of the geoportal interface after login.

How to Publish Resources

The success of a geoportal depends on the quality resources it hosts. A resource must be published to the geoportal and approved before it can be discovered through the geoportal search. There are several ways to publish a resource.

For more detailed description (with details on all options), see <https://github.com/Esri/geoportal-server/wiki/How-to-Publish-Resources>

Register a resource on the network

By registering a resource on the network, you provide connection information to a resource that can be revisited by the geoportal catalog for updates.

Protocol Type: ☒ URL ☐ ArcGIS ☐ Esri MS ☐ OAI ☐ WAF ☐ CSW ☐ THREDDS ☐ ATOM

Host Url:

Title:

Upload or validate metadata file from the local disk

Uploading a metadata XML file from your local machine or mapped network drive is a quick way to get one local metadata document published to the geoportal, or to check that a metadata record is valid. A valid document will have all the mandatory metadata elements populated, and will publish to the geoportal.

Local path: testMetadata.xml

Use dedicated editor to create metadata manually

The geoportal supports creating standards-based metadata to describe your resource using the geoportal interface. Using the dedicated editor to create metadata manually is a good way to publish resource information when you don't have existing metadata to upload or the resource can't be registered as a resource on the network. The geoportal Create Metadata interface supports several metadata schemas out of the box, and can be configured to support additional standards or profiles.

Identification Information

File Identifier:

{611E592C-B954-437B-BE34-3C56E4C449FD}

Title:

Abstract:

Service URL:

Resource Type:

Originator:

Dejan Antanasković

Publication Date:

2014-06-19

(yyyy-mm-dd)

Metadata Language:

English

For more information about metadata schemas supported by the Geoportal Server, see <https://github.com/Esri/geoportal-server/wiki/Customizations#Customize-Metadata>

How to Publish Metadata directly from ArcGIS

The Geoportal extension Publishing Client is a metadata tool used to publish metadata documents to a Geoportal at the touch of a button.

The Geoportal extension Publishing Client will examine the folder in ArcCatalog that a user specifies, find the metadata documents in that folder, and publish those documents to the Geoportal that is indicated in the interface. It provides a quick way to publish metadata for data resources.

Notice: It is important to make sure that your ArcGIS Desktop version and Publish Client version match, as a 9.3.1 Publish Client will not work on a version 10 ArcGIS Desktop environment, nor will a version 10 Publish Client work on a 9.3.1 ArcGIS Desktop environment.

Install the Publish Client

Please download Publish Client for your ArcGIS version from:

<http://sun4540.wb.tu-harburg.de/public/GeoportalPublishClient/>

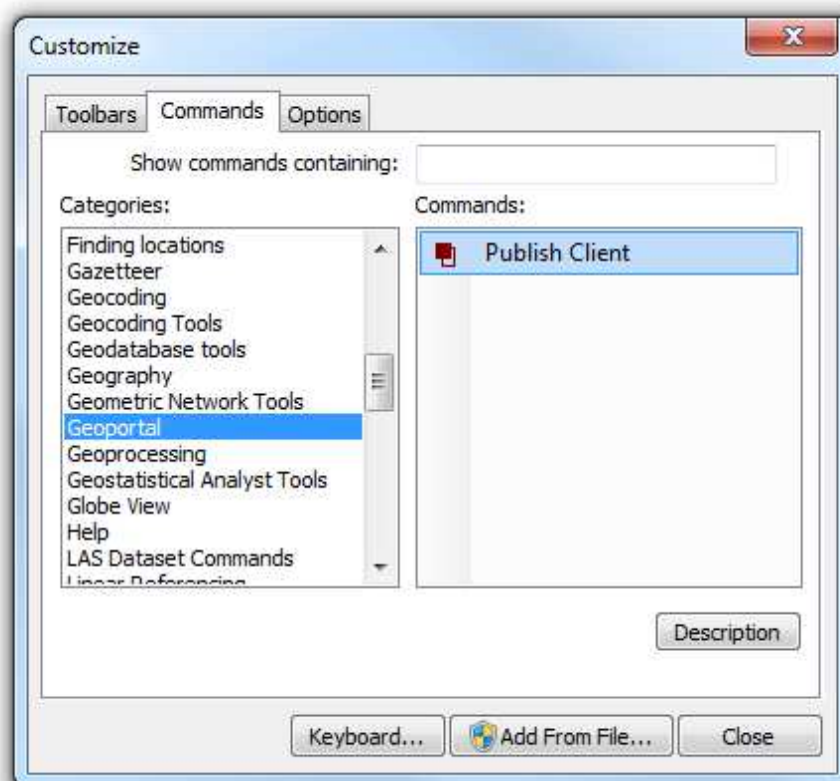
Install the Publish Client by running its setup file, and follow the instructions on screen.

Add the Publish Client to the ArcGIS Desktop Interface

Start ArcGIS Desktop. The Publish Client is used with the ArcCatalog component of ArcGIS Desktop.

1. Click Customize > Customize Mode. The Customize window appears.
2. In the Customize dialog, select the Commands tab.
3. Scroll down through the list of Commands and select Geoportal. Select the Publish Client icon under the Commands list on the right, and drag the icon to a

toolbar in ArcGIS Desktop.



Use the Publish Client

After you have installed the Publish Client and added it to your ArcGIS Desktop toolbar, it is ready to be used.

ArcGIS Metadata ►

Topics and Keywords ►

THEMES OR CATEGORIES OF THE RESOURCE

CONTENT TYPE Map Files

EXPORT TO FGDC CSDGM XML FORMAT

[Hide Topics and Keywords ▲](#)

Citation ►

TITLE Some title by Dejan

CREATION DATE 2014-06-03 00:00:00

PUBLICATION DATE 2014-06-04 00:00:00

[Hide Citation ▲](#)

Citation Contacts ►

RESPONSIBLE PARTY

INDIVIDUAL'S NAME Dejan Antanaskovic

ORGANIZATION'S NAME TUHH

CONTACT'S ROLE point of contact

CONTACT INFORMATION ►

PHONE

VOICE +49 40 42878 3900

ADDRESS

TYPE postal

DELIVERY POINT Denickestraß

CITY Hamburg

POSTAL CODE 21073

COUNTRY DE

ADMINISTRATIVE AREA Hamburg

[Hide Contact information ▲](#)

Esri Geoportal Server Publish Client

Connection Information

Server Url: UserName:

Metadata Service: Password:

☒ Display Execution Summary

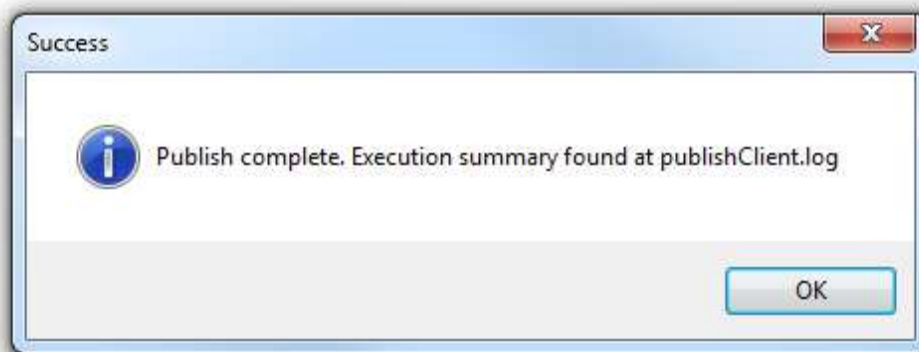
Process Execution Summary

The following steps explain how to use the Publish Client.

- ▲ In the ArcCatalog Catalog Tree, highlight the folder, branch, or resource from which you wish to publish metadata.
- ▲ Click the Publish Client button on your toolbar.
- ▲ An interface with input fields will appear. Enter information in the input fields as follows:
 - Server Url: the URL to the Geoportal endpoint to which you want to publish. In our case, it is <http://pearl.wb.tu-harburg.de/geoportal>
 - Metadata Service: the geoportal publish service used if the geoportal is a 9.3.x version with the MetadataServer component deployed. Leave as the default, GPT_Publish_Metadata.
 - UserName: your geoportal username.
 - Password: your geoportal password.
- ▲ Display Execution Summary: checking this option expands the Publish Client interface and will display results of the publish session in a Process Execution Summary window. It is recommended that you enable Display Execution Summary.
- ▲ Once you have entered all the information, click the Publish button. The Publish

Client traverses the resource you selected in the Catalog Tree, and attempts to publish any documents with file extension ".xml" to the geoportal. The metadata will be validated against the rules defined by the metadata standards supported in the geoportal.

- ▲ When the Publish Client has finished, a message will be written to the Process Execution Summary window displaying the results of the publish session. Also, if you have enabled Publish Client logging, a popup box will appear confirming that logfiles were written.
- ▲ Verify that your records were published. Login to the geoportal as a publisher and click the Administration tab to see the newly published resources.



Note: Resources published to a version 10 geoportal will have a Publication Method of Upload; when publishing to a version 9.3.x geoportal, the Publication Method will be Batch.

For more information about ArcGIS Geoportal Extension, see http://help.arcgis.com/en/geoportal_extension/10.0/help/