

# The eENVplus Harmonization and Validation toolkits

G. Martirano, F. Vinci, S. Morrone (EPSIT)

# Outline

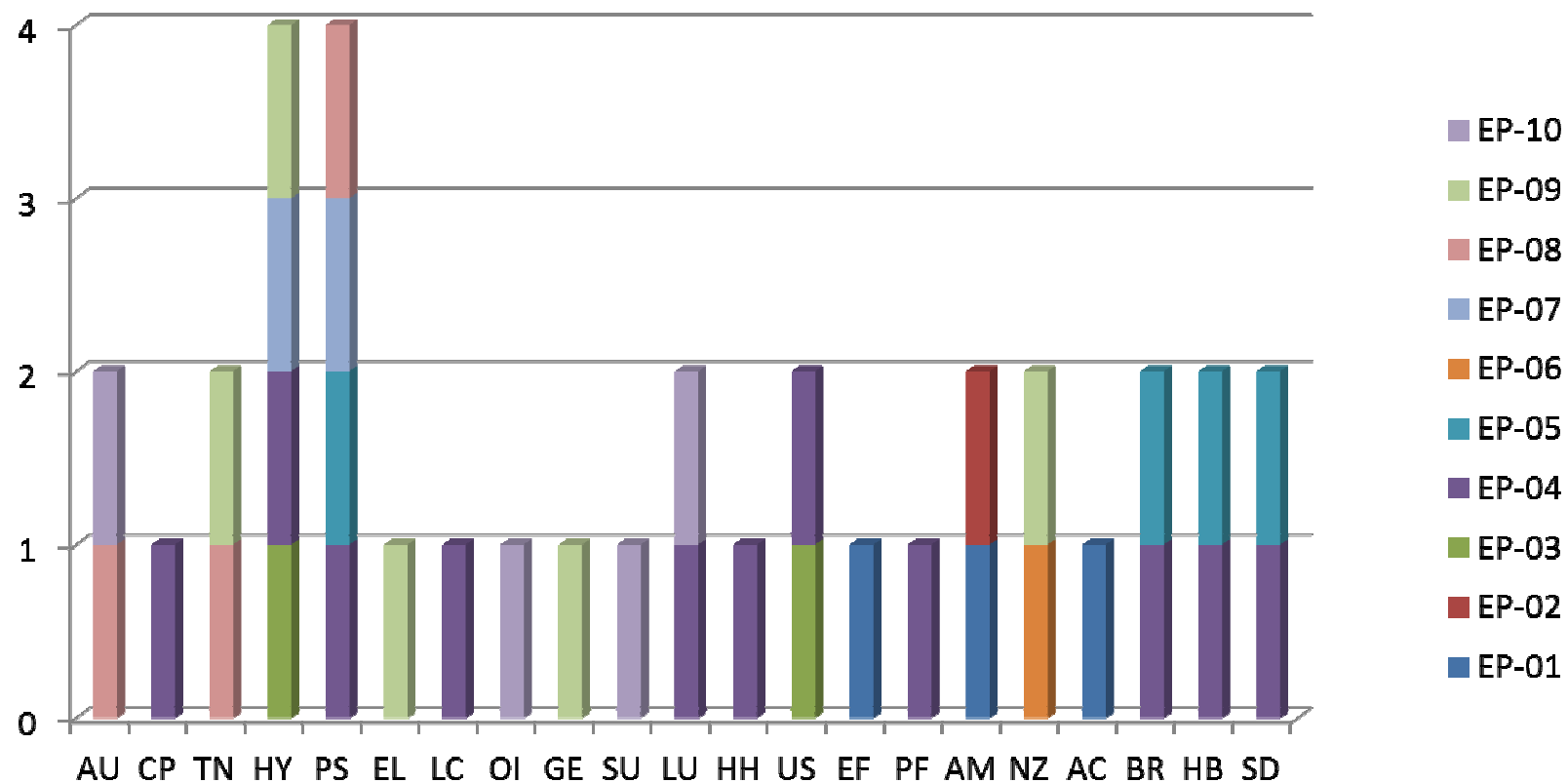
- Data requirements
- Harmonisation and validation toolkit
- Toolkit demonstration
- The Data Harmonization section in the collaborative platform forum

## Data modelling requirements

- Identified the target schemas to be used in the harmonisation process by each pilot:
  - the relevant gml application schema (xsd) of the relevant INSPIRE Data Specification (21 DS)
  - 3 additional target schemas:
    - AQD schema of EEA for Air Quality Reporting
    - AGIV - IMKL2.1 schema for cables and pipes in Flanders region (extending INSPIRE US DS v3.0rc3)
    - GeoSciML 3.2 schema for Geology in specific use case (extending INSPIRE GE v.3.0 as described in the Technical Guideline)

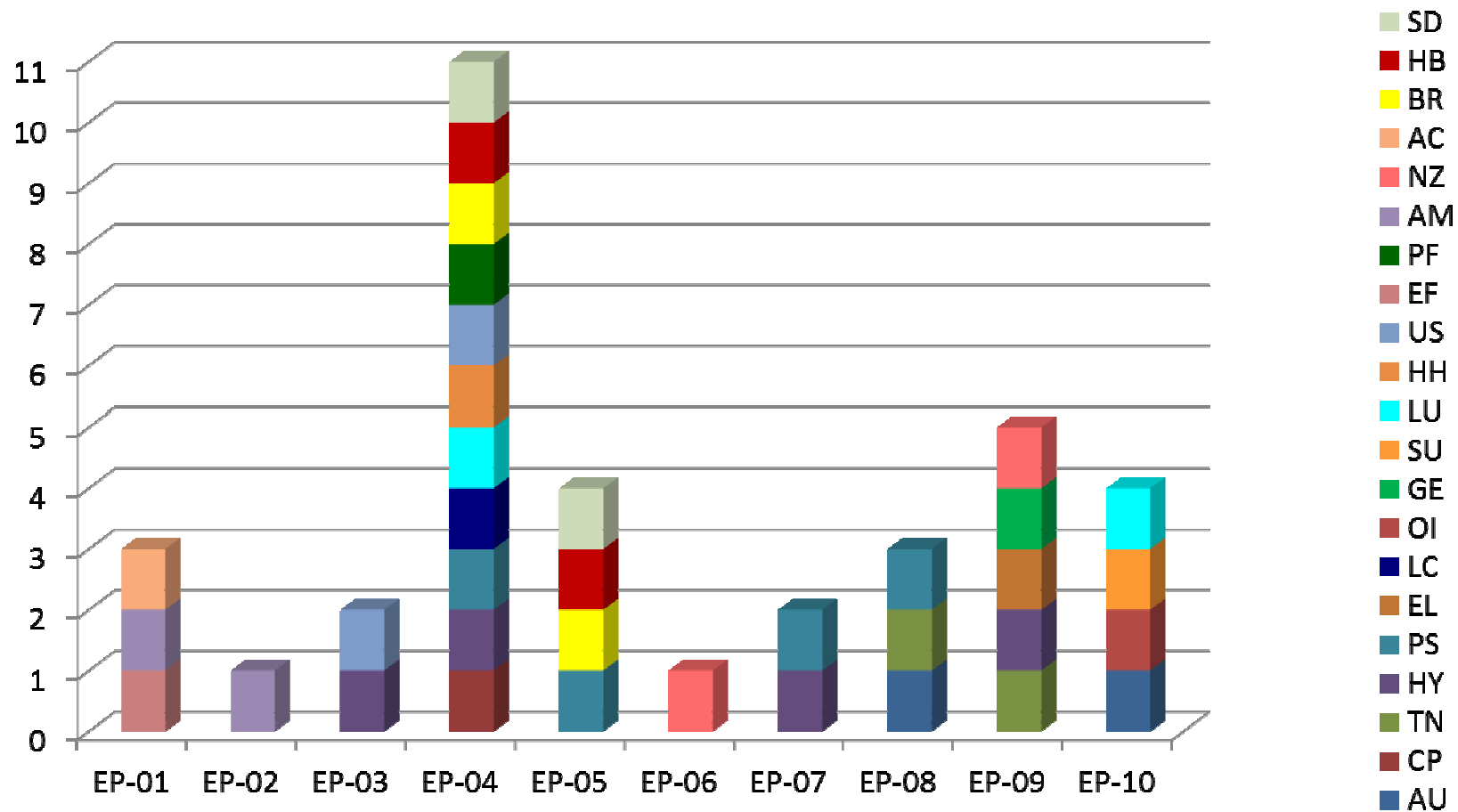
# *eENVplus* Data modelling requirements

## Distribution of the 21 INSPIRE data-themes per Pilot (1/2)



# eENVplus Data modelling requirements

## Distribution of the 21 INSPIRE data-themes per Pilot (2/2)



## Metadata modelling requirements

- Identified the INSPIRE profile as target schema for the metadata, with the possibility to extend the profile using additional ISO19115 metadata elements (if required by eventual additional national requirements and/or specific pilot requirements).

## D 3.1 – Datasets and metadata harmonization toolkit

Revision: 3.0

Author(s)/Organisation(s):

• Giacomo Martirano, Fabio Vinci and Stefania Morrone (EPRI)

Work package / Task:

WP3 – Harmonization and Validation  
T3.1 Harmonization toolkit

Project co-funded by the European Commission within the ICT Policy Support Programme		
Dissemination Level		
P	Public	X
C	Confidential, only for members of the consortium and the Commission Services	

## D 3.2 – Datasets and metadata validation toolkit

Revision: 1.0

Author(s)/Organisation(s):

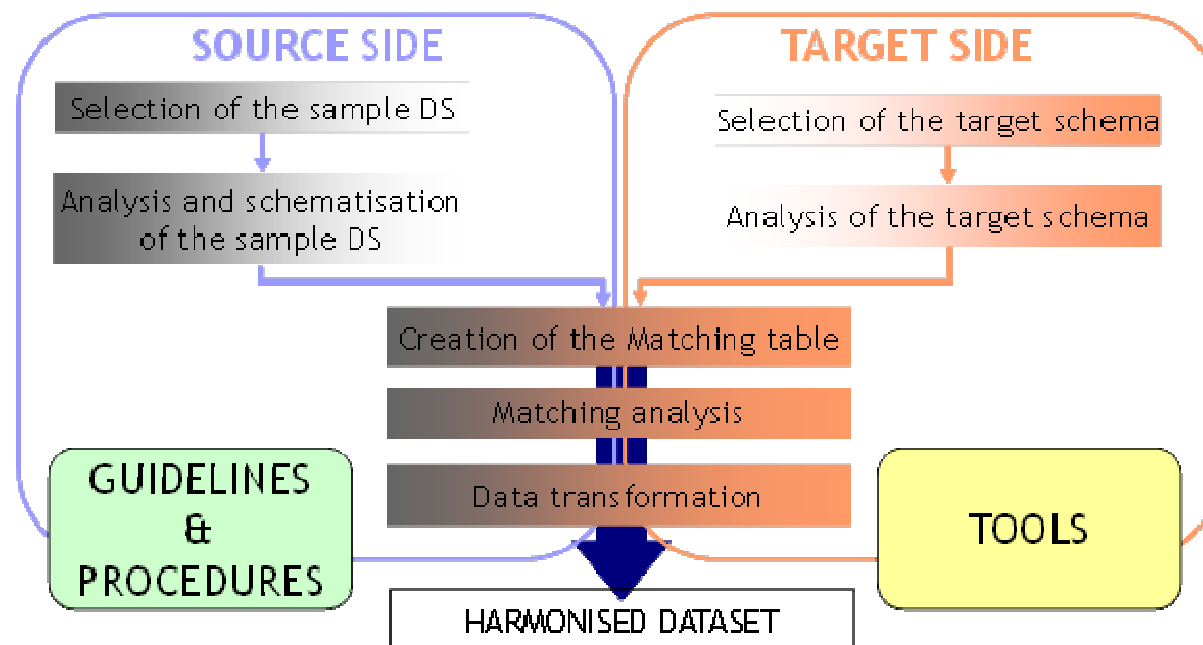
• Giacomo Martirano, Fabio Vinci and Stefania Morrone (EPRI)

Work package / Task:

WP3 – Harmonization and validation  
T3.2 Validation toolkit

Project co-funded by the European Commission within the ICT Policy Support Programme		
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P	Public	X
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## Steps of the data harmonization process






1. Analysis of the source dataset and its associated data model
2. Selection of the target schema best fitting for purpose with the source dataset and with the objective of the transformation
3. Analysis of corresponding Data Specification:
  - by means of the relevant INSPIRE Data Specification and of its UML representation, both available in the INSPIRE website;
  - by means of the available documentation when the target models does not correspond to a specific INSPIRE data theme.

4. Filling-in of the mapping (matching) table.
  - It's the most crucial harmonization step!
  - Performing very carefully this exercise, analysing and solving the eventual mapping problems, strongly facilitates the transformation.
5. Transformation of the source dataset by means of software transformation tools.
6. Validation of the transformed dataset

inspire.jrc.ec.europa.eu/index.cfm/pageid/2

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## INSPIRE

### Infrastructure for Spatial Information in the European Community

European Commission > INSPIRE > Data Specifications

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#### Legislation

- COMMISSION REGULATION (EU) No 1253/2013 of 21 October 2013 amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC as regards interoperability of spatial data sets and services 10.12.2013
- COMMISSION REGULATION amending Regulation 1089/2010 as regards interoperability of spatial data sets and services 05.02.2011
- COMMISSION REGULATION (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services 08.12.2010

#### Technical Guidelines Annex I

- INSPIRE Data Specification on Administrative Units - Guidelines v3.0.1 03.05.2010
- INSPIRE Data Specification on Cadastral Parcels - Guidelines v 3.0.1 03.05.2010
- INSPIRE Data Specification on Geographical Names - Guidelines v 3.0.1 03.05.2010
- INSPIRE Data Specification on Hydrography - Guidelines v 3.0.1 03.05.2010
- INSPIRE Data Specification on Protected Sites - Guidelines v 3.1.0 03.05.2010
- INSPIRE Data Specification on Transport Networks - Guidelines v 3.1 03.05.2010
- INSPIRE Data Specifications on Addresses - Guidelines v 3.0.1 03.05.2010
- INSPIRE Specification on Coordinate Reference Systems - Guidelines v 3.1 03.05.2010
- INSPIRE Specification on Geographical Grid Systems - Guidelines v 3.0.1 03.05.2010

#### Technical Guidelines Annex II & III

- INSPIRE Data Specifications - All v3.0 Technical Guidelines for Annexes II & III 13.12.2013
- INSPIRE Data Specification on Agricultural and Aquaculture Facilities - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Area Management/Restriction/Regulation Zones and Reporting Units - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Atmospheric Conditions and Meteorological Geographical Features - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Bio-geographical Regions - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Buildings - Technical Guidelines 10.12.2013
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- INSPIRE Data Specification on Geology - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Habitats and Biotopes - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Human Health and Safety - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Land Cover - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Land Use - Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Mineral Resources - Technical Guidelines 10.12.2013


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Website only

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#### HEADLINES

#### NEWS

- 07-Mar-14 INSPIRE Conference 2014:** Registration now open
- 06-Mar-14 INSPIRE Conference 2014 - Call for abstracts deadline**
- 17-Jan-14 INSPIRE Conference 2014:** Call for


INSPIRE\_DataSpecification\_AU\_v3.0.1.pdf - Adobe Acrobat Pro

File Modifica Vista Finestra ?

Crea

1 / 58 125%

Strumenti Commento Condividi

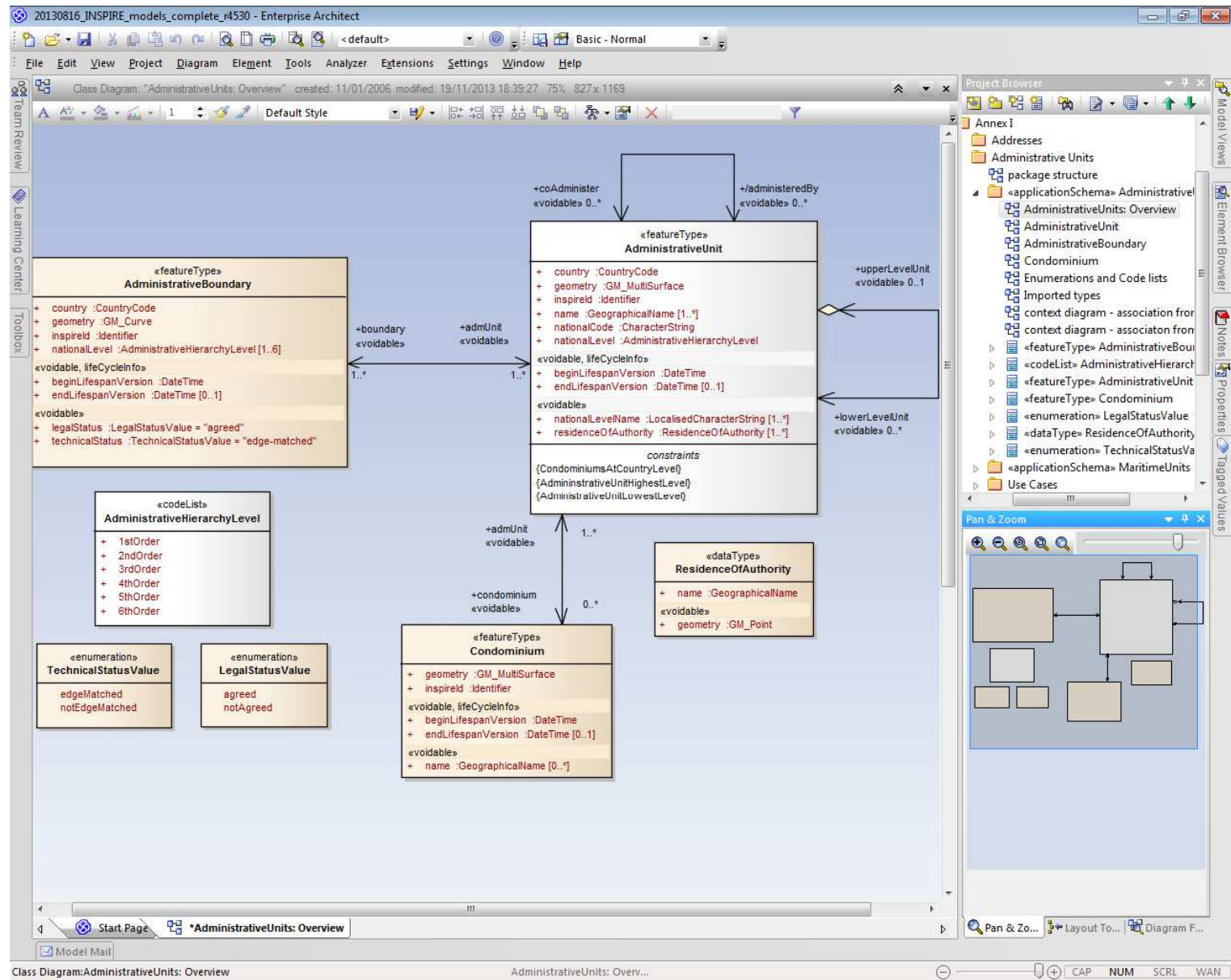


**INSPIRE**  
Infrastructure for Spatial Information in Europe

## D2.8.1.4 INSPIRE Data Specification on Administrative units – Guidelines

<b>Title</b>	D2.8.1.4 INSPIRE Data Specification on <i>Administrative units</i> – Guidelines
<b>Creator</b>	INSPIRE Thematic Working Group Administrative units
<b>Date</b>	2010-04-26
<b>Subject</b>	INSPIRE Data Specification for the spatial data theme <i>Administrative units</i>
<b>Publisher</b>	INSPIRE Thematic Working Group Administrative units
<b>Type</b>	Text
<b>Description</b>	This document describes the INSPIRE Data Specification for the theme <i>Administrative units</i>
<b>Contributor</b>	Members of the INSPIRE Thematic Working Group Administrative units
<b>Format</b>	Portable Document Format (pdf)
<b>Source</b>	
<b>Rights</b>	public
<b>Identifier</b>	INSPIRE_DataSpecification_AU_v3.0.1.pdf
<b>Language</b>	En
<b>Relation</b>	Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)
<b>Coverage</b>	Project duration





- In each mapping table there is a single row for each attribute of the feature types.
- Because some attributes have a complex data type with a tree structure, it may be useful to extend the JRC mapping tables in order to take into consideration the complex data types.
- each attribute of the source dataset has to be mapped to relevant attribute in the target schema.

Application Schema 'AdministrativeUnits' (version 3.0)							Application Schema <provide>						
Type	Documentation	Attribute Association	Attribute / Association role / Constraint	Values / Enumerations	Multiplicity	Voidable / Non-Voidable	Type	Documentation	Attribute Association	Attribute / Association role / Constraint	Value Enumerations		
AdministrativeBoundary	-- Name -- administrative boundary A line of demarcation between administrative units.	beginLifespanVersion	-- Name -- begin lifespan version	DateTime	1	voidable							
		country	-- Name -- country	CountryCode* BE*	1								
		endLifespanVersion	-- Name -- end lifespan version	DateTime	0..1	voidable							
		geometry	-- Name -- geometry	GM_Curve	1								
		inspireId	-- Name -- inspire id	Identifier	1								
		legalStatus	-- Name -- legal status	LegalStatusValue*	1	voidable							
		nationalLevel	-- Name -- national level	AdministrativeHierarchyLevel* firstOrder*	1..6								
		technicalStatus	-- Name -- technical status	TechnicalStatusValue*	1	voidable							
AdministrativeUnit	-- Name -- administrative unit Unit of administration where a Member State has and/or exercises jurisdictional rights, for local, regional and national governance.	admUnit	-- Name -- adm unit	AdministrativeUnit	1..*	voidable							
		beginLifespanVersion	-- Name -- begin lifespan version	DateTime	1	voidable							
		country	-- Name -- country	CountryCode* BE*	1								
		endLifespanVersion	-- Name -- end lifespan version	DateTime	0..1	voidable							
		geometry	-- Name -- geometry	GM_MultiSurface	1								
		inspireId	-- Name -- inspire id	Identifier	1								
		name	-- Name -- name	GeographicalName	1..*								
		nationalCode	-- Name -- national code	CharacterString	1								
		nationalLevel	-- Name -- national level	AdministrativeHierarchyLevel* firstOrder*	1								
		nationalLevelName	-- Name -- national level name	LocalisedCharacterString	1..*	voidable							
		residenceOfAuthority	-- Name -- residence of authority	ResidenceOfAuthority	1..*	voidable							
		condominium	-- Name -- condominium	Condominium	0..*	voidable							
		boundary	-- Name -- boundary	AdministrativeBoundary	1..*	voidable							
		lowerLevelUnit	-- Name -- lower level unit	AdministrativeUnit	0..*	voidable							
ResidenceOfAuthority	Data type representing the name and position of a residence of authority.	name	Name of the residence	GeographicalName	1								
		geometry	Position of the residence	GM_Point	1	voidable							
Condominium	-- Name -- condominium An administrative area established independently to any national administrative division of territory and administered by two or more countries. NOTE Condominium is not a part of any national	beginLifespanVersion	-- Name -- begin lifespan version	DateTime	1	voidable							
		endLifespanVersion	-- Name -- end lifespan version	DateTime	0..1	voidable							
		geometry	-- Name -- geometry	GM_MultiSurface	1								
		inspireId	-- Name -- inspire id	Identifier	1								
		name	-- Name -- name	GeographicalName	0..*	voidable							
		admUnit	-- Name -- adm unit	AdministrativeUnit	1..*	voidable							

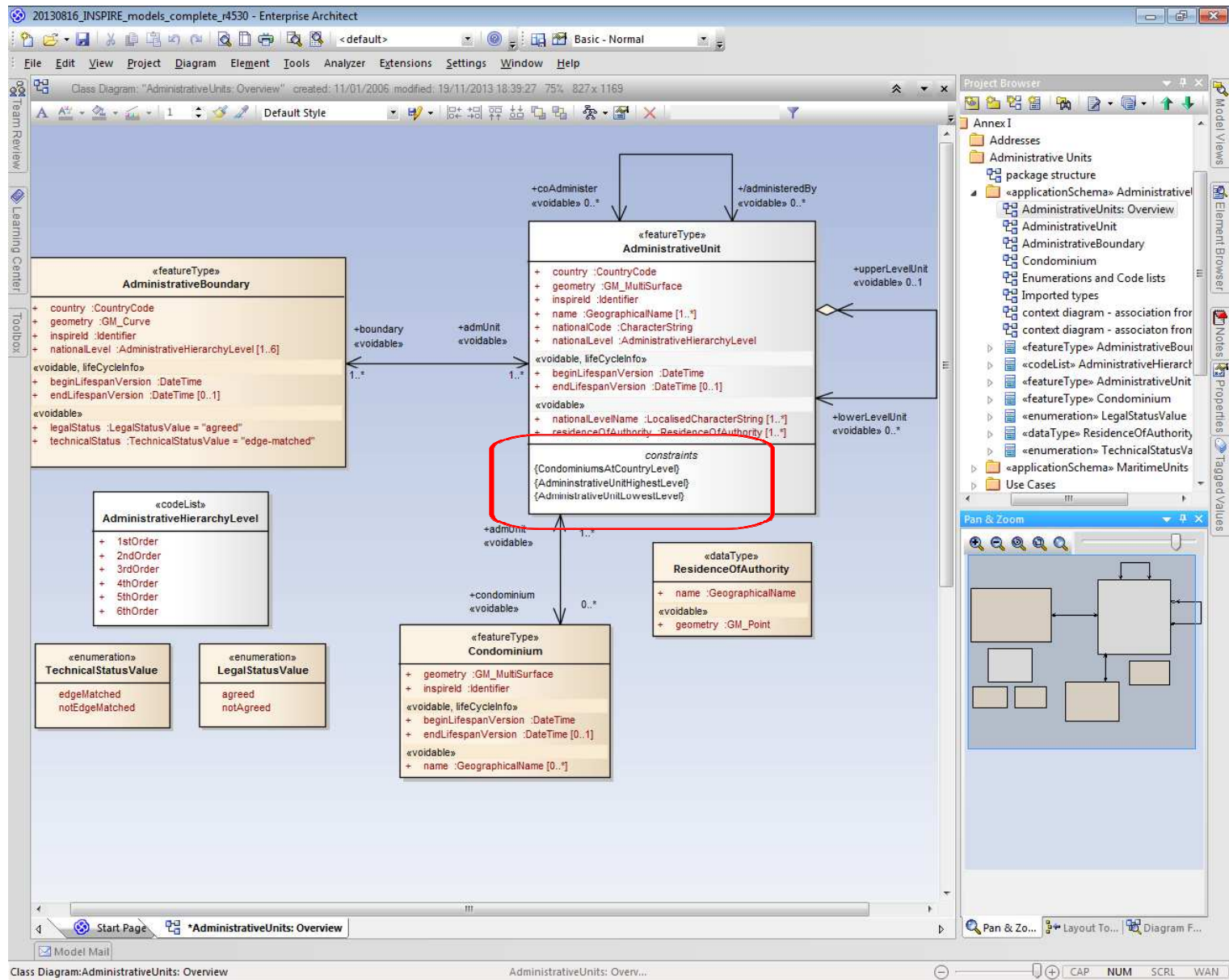
14	AdministrativeUnit	-- Name -- administrative unit Unit of administration where a Member State has and/or exercises jurisdictional rights, for local, regional and national governance.				
15			beginLifespanVersion	-- Name -- begin lifespan version Date and time	DateTime	1
16			country	-- Name -- country Two character country code	CountryCode* BE* BG* CZ* DK* DE* EE*	1
17			endLifespanVersion	-- Name -- end lifespan version Date and time	DateTime	0..1
18			geometry	-- Name -- geometry	GM_MultiSurface	1
19			inspireId	-- Name -- inspire id	Identifier	1
20			name	-- Name -- name Official name	GeographicalName	1..*

A	B	C	D	E	F	G
Application Schema 'Base Types' (version 3.3rc3)						
Type	Documentation	Attribute Association role Constraint	Attribute / Association role / Constraint	Values / Enumerations	Multiplicity	Voidable / Non-Voidable
SpatialDataSet	Identifiable collection of spatial data. NOTE The type SpatialDataSet is offered as a pre-defined type for spatial data sets	identifier	Identifier of the spatial data set	Identifier	1	
		metadata	Metadata of the spatial data set	MD_Metadata	1	voidable
Identifier	External unique object identifier published by the responsible body, which may be used by external applications to reference	localId	A local identifier, assigned by the data provider. The	CharacterString	1	
		namespace	Namespace uniquely identifying the data source	CharacterString	1	
		versionId	The identifier of the particular version of the	CharacterString	0..1	voidable



Application Schema 'AdministrativeUnits' (version 3.0)																	Source Location of information				
Feature Type / Data Type	Documentation	Attribute / Association role / Constraint	Association role / Association documentation	Data Type / Values / Code List - Enumeration	Multiplicity	Voidable / Non-Voidable	Data Type / Attribute	Data Type / Attribute documentation	Data Type / Values / Code Lists / Enumerations	Multiplicity	Voidable / Non-Voidable	"File name" or URL	Name of attribute	Example of one data source value	Example of one data target value	Void Reason	Remarks				
AdministrativeUnit	-- Name -- administrative unit. Unit of administration where a Member State has and/or exercises jurisdictional rights, for local, regional and national governance.	country	-- Name -- country	CountryCode* BE*	1	voidable															
		beginLifespanVersion	-- Name -- begin lifespan version	DateTime	1	voidable															
		endLifespanVersion	-- Name -- end lifespan version	DateTime	0..1	voidable															
		geometry	-- Name -- geometry	GM_MultiSurface	1																
		inspireId	-- Name -- inspireId External object identifier of the spatial object. NOTE: An external object.	Identifier	1			localId	A local identifier.	CharacterString	1										
		name	-- Name -- name	GeographicalName	1..*			namespaceVersionId	Namespaces within the namespace.	CharacterString	0..1	voidable									
		nationalCode	-- Name -- national code. The code.	CharacterString	1																
		nationalLevel	-- Name -- national level. Level in the national administrative hierarchy, at which the administrative unit is located.	AdministrativeHierarchyLevel* 1stOrder* 2ndOrder* 3rdOrder* 4thOrder* 5thOrder*	1																
		nationalLevelName	-- Name -- national level name. Name of the level.	LocalisedCharacterString	1..*	voidable															
		residenceOfAuthority	-- Name -- residence of authority. Code.	ResidenceOfAuthority	1..*	voidable															
		condominium	-- Name -- condominium.	Condominium	0..*	voidable															
		boundary	-- Name -- boundary. The administrative boundary between administrative units.	AdministrativeBoundary	1..*	voidable															
		lowerLevelUnit	-- Name -- lower level unit. Unit.	AdministrativeUnit	0..*	voidable															
		upperLevelUnit	-- Name -- upper level unit. Unit.	AdministrativeUnit	0..1	voidable															
		administeredBy	-- Name -- administered by.	AdministrativeUnit	0..*	voidable															
		coAdminister	-- Name -- co-administer.	AdministrativeUnit	0..*	voidable															
		condominiumsAtC	Association role																		
AdministrativeUnit	No unit at highest level																				
AdministrativeUnit	No unit at lowest level																				
AdministrativeBoundary	-- Name -- administrative boundary. A line of demarcation between administrative units.	beginLifespanVersion	-- Name -- begin lifespan version	DateTime	1	voidable															
		country	-- Name -- country	CountryCode* BE*	1	voidable															
		endLifespanVersion	-- Name -- end lifespan version	DateTime	0..1	voidable															
		geometry	-- Name -- geometry	GM_Curve	1																
		inspireId	-- Name -- inspireId External object identifier of the spatial object. NOTE: An external object.	Identifier	1			localId	A local identifier.	CharacterString	1										
		legalStatus	-- Name -- legal status. Legal status.	LegalStatusValue* 1stOrder* 2ndOrder* 3rdOrder* 4thOrder* 5thOrder*	1	voidable															
		nationalLevel	-- Name -- national level. Level in the national administrative hierarchy, at which the administrative unit is located.	AdministrativeHierarchyLevel* 1stOrder* 2ndOrder* 3rdOrder* 4thOrder* 5thOrder*	1..6																
technicalStatus	-- Name -- technical status. The technical status.	TechnicalStatusValue* 1stOrder* 2ndOrder* 3rdOrder* 4thOrder* 5thOrder*	1	voidable																	

Matching Table Data Type





Pronto Matching Table Data Type 80%

## Data Transformation tools

- The mapping between source and target properties defined in the matching tables can be used to set the encoding rules needed to obtain an harmonized dataset by means of a software transformation tool.

- Among the many software transformation tools available, focus has been given on:
  - open source sw: HUMBOLDT Alignment Editor (HALE) open source tool to define and evaluate conceptual schema mapping and to transform geodata based on these mapping.  
<http://hale.igd.fraunhofer.de/2.8.0/help/index.jsp>
  - proprietary sw: GO Publisher (distributed by Snowflake Software -  
<http://www.snowflakesoftware.com/products/gopublisher/>)

**HUMBOLDT Alignment Editor 2.8.0 - AdministrativeUnitProject - C:\Areashared\HALEMU\_Project.hale**

File Transformation Edit Window Help

**Schema Explorer**

Source

- type filter text
- com2011
- com2011\_morano\_boundary\_2 x7
- 2ndOrder (0..1) x7
- 3ndOrder (0..1) x7
- 4ndOrder (0..1) x7
- 8 COD\_PRO (0..1) x7
- 8 COD\_REG (0..1) x7
- filename x7
- NOME\_COM (0..1) x7
- NOME\_COM\_2 (0..1) x7
- NOME\_TED (0..1) x7
- PRO\_COM (0..1) x7
- 8 SHAPE\_Area (0..1) x7
- 8 SHAPE\_Leng (0..1) x7
- the\_geom (0..1) x7
- prov2011
- reg2011

Target

- type filter text
- AdministrativeBoundary
- location (0..1)
- admUnit (1..n)
- beginLifespanVersion
- boundedBy (0..1)
- country x7
- description (0..1)
- descriptionReference (0..1)
- endLifespanVersion (0..1)
- geometry x7
- id x7
- identifier (0..1)
- inspireId x7
- legalStatus
- metaDataProperty (0..n)
- name (0..n)
- nationalLevel (1..6) x7
- technicalStatus
- AdministrativeUnit
- Condominium
- ResidenceOfAuthority

**Alignment**

com2011\_morano\_boundary\_2 x7 Retype AdministrativeBoundary x7

...ano\_boundary\_2

- 4ndOrder
- Retype
- AdministrativeBoundary
- Rename
- Assign
- Formatted string
- Id.Identifier.localId
- NOME\_COM
- NOME\_COM\_2
- Formatted string
- Id
- the\_geom
- Rename
- CompositeCurve
- Assign
- country.Country
- Assign
- y.Country.codeList
- Assign
- ntry.codeListValue
- Assign
- ntifier.namespace
- Assign
- alLevel.codeSpace

**Error Log**

Workspace Log

type filter text

Message	Plug-in	Date
Instance transformation - Finished successfully	eu.esdihumboldt.hale.com...	22/11/2013 12:55
Instance transformation - Finished successfully	eu.esdihumboldt.hale.com...	22/11/2013 12:55
HALE project import	eu.esdihumboldt.hale.ui	22/11/2013 12:48
HALE alignment import	eu.esdihumboldt.hale.com...	22/11/2013 12:48
Styled Layer Descriptor import	eu.esdihumboldt.hale.com...	22/11/2013 12:48
XML schema import	eu.esdihumboldt.hale.ui	22/11/2013 12:48

**Type hier** **Function** **Report Li** **Mapping**

12:46 2013-11-22

- Instance validation 12:48.13
- Instance transformation 12:47.23
- Load data into database 12:46.54
- Shapefile import 12:46.54
- Load data into database 12:46.51
- Shapefile import 12:46.51
- Shapefile import 12:46.50
- Shapefile import 12:46.50
- Shapefile import 12:46.50
- Shapefile import 12:46.50
- Shapefile import 12:46.50

85M of 176M

CST

HUMBOLDT Alignment Editor 2.8.0 - AdministrativeUnitProject - C:\Areashared\HALE\EAU\_Project.hale

File Transformation Edit Window Help

Schema Explorer

Source

type filter text

- com2011\_morano
- com2011\_morano\_boundary\_2
- 2ndOrder (0..1) x7
- 3rdOrder (0..1) x7
- 4ndOrder (0..1) x7
- 8 COD\_PRO (0..1) x7
- 8 COD\_REG (0..1) x7
- filename x7
- NOME\_COM (0..1) x7
- NOME\_COM\_2 (0..1) x7
- NOME\_TED (0..1) x7
- PRO\_COM (0..1) x7
- SHAPE\_Area (0..1) x7
- SHAPE\_Leng (0..1) x7
- the\_geom (0..1) x7
- prov2011
- reg2011

Target

type filter text

- AdministrativeBoundary
- location (0..1)
- admUnit (1..n)
- beginLifespanVersion
- boundedBy (0..1)
- country x7
- description (0..1)
- descriptionReference (0..1)
- endLifespanVersion (0..1)
- geometry x7
- AbstractCurve (0..1) x7
- CompositeCurve
- aggregationType (0..1)
- axisLabels (0..1)
- curveMember (1..n)
- description (0..1)
- descriptionReference (0..1)
- id
- identifier (0..1)
- metaDataProperty (0..n)
- name (0..n)
- srsDimension (0..1)
- srsName (0..1)
- uomLabels (0..1)
- Curve
- LineString
- OrientableCurve

Alignment

com2011\_morano\_boundary\_2 x7

Retype

AdministrativeBoundary x7

...ano\_boundary\_2

4ndOrder

...inistrativeBoundary

nationalLevel

Assign

Formatted string

...Id.Identifier.localId

NOME\_COM

Formatted string

id

NOME\_COM\_2

the\_geom

Rename

...e.CompositeCurve

Assign

country.Country

...y.Country.codeList

Assign

...ntry.codeListValue

Assign

...ntifier.namespace

Assign

...alLevel.codeSpace

Error Log

Properties

the\_geom

General

Namespace:

Constraints

Local name:

the\_geom

ParentType

Location:

Open Location

file:C:\Areashared\HALE\com2011\_morano\_boundary\_2.shp

Type hier

fx Function

Report Li

Mapping

17:02:2013-11-22

Instance validation

Instance transformation

Load data into database

Shapefile import

Load data into database

Shapefile import

Shapefile import

Shapefile import

Shapefile import

Shapefile import

Shapefile import

XML schema import

17:03:46

17:03:03

17:02:32

17:02:32

17:02:28

17:02:28

17:02:27

17:02:27

17:02:27

17:02:27

17:02:25

132M of 181M

CST



HUMBOLDT Alignment Editor 2.8.0 - AdministrativeUnitProject - C:\Wreashared\HALEAU\_Project.hale

File Transformation Edit Window Help

Alignment

com2011\_morano\_boundary\_2 x7 Retype AdministrativeBoundary x7

Transformation Diagram:

```

graph LR
    T1[com2011_morano_boundary_2] --> R1[Retype]
    R1 --> A1[AdministrativeBoundary]
    A1 --> N1[nationalLevel]
    A1 --> F1[Formatted string]
    F1 --> I1[...Id.Identifier.localId]
    A1 --> F2[Formatted string]
    F2 --> I2[id]
    A1 --> R2[Rename]
    R2 --> C1[...e.CompositeCurve]
    A1 --> A1_1[Assign]
    A1_1 --> C2[country.Country]
    A1 --> A1_2[Assign]
    A1_2 --> C3[...y.Country.codeList]
    A1 --> A1_3[Assign]
    A1_3 --> C4[...ntry.codeListValue]
    A1 --> A1_4[Assign]
    A1_4 --> C5[...ntifier.namespace]
    A1 --> A1_5[Assign]
    A1_5 --> C6[...allLevel.codeSpace]
  
```

Source Data

com2011\_morano\_boundary\_2

com2011_morano_boundary_2	1
com2011_morano_boundary_2	+
2ndOrder	2ndOrder
3rdOrder	3rdOrder
4thOrder	4thOrder
COD_PRO	78
COD_REG	18
filename	com2011_morano_boundary_2
NOME_COM	Morano Calabro
NOME_COM_2	Chiaromonte
NOME_TED	
PRO_COM	78083
SHAPE_Area	1.16254331821E8
SHAPE_Leng	53967.4937264
the_geom	{CRS=ED50_UTM_zone_32N} MULTILINESTRING ((1113650.05
Metadata	+
Identifier	a18874d7-d84f-4987-a67b-29e41d67fdaa

Properties

Properties are not available.

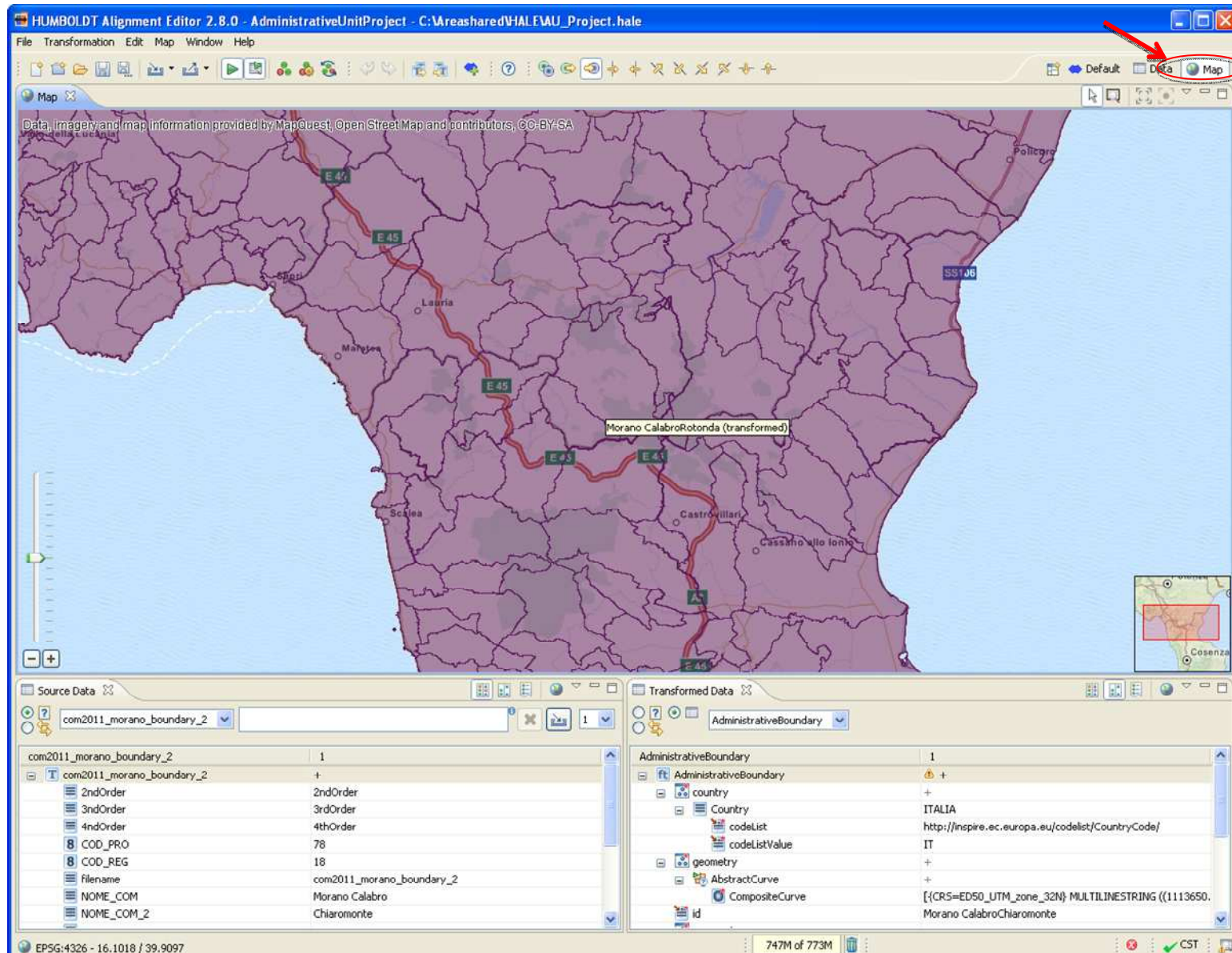
Transformed Data

AdministrativeBoundary

AdministrativeBoundary	1
AdministrativeBoundary	+
country	+
Country	ITALIA
codeList	http://inspire.ec.europa.eu/codeList/CountryCode/
codeListValue	IT
geometry	+
AbstractCurve	+
CompositeCurve	[{CRS=ED50_UTM_zone_32N} MULTILINESTRING ((1113650.05003146 4442936.0
id	Morano CalabroChiaromonte
inspireId	+
Identifier	+
localId	Morano CalabroChiaromonte
namespace	_limiticomunaliMormanno
nationalLevel	4thOrder
codeSpace	http://inspire.ec.europa.eu/codeList/AdministrativeHierarchyLevel/
Metadata	+
Identifier	3ff8e4e0-5d0d-4540-afcd-9c7bad547805
SourceID	a18874d7-d84f-4987-a67b-29e41d67fdaa

130M of 181M

CST



GO Publisher Desktop

File Edit Tools Help

Project Settings SQL filters Desktop settings WFS settings Agent settings

Project name: INSPIRE\_AU D:\reashared\limiti\_Ammministrati\INSPIRE\_AU.gpp Format: GML 3.2

Target namespace: Prefix:

Database to XML mapping

Name	Enabled	DB type or const value	XML path	Type in XML	Required
metadata	<input checked="" type="checkbox"/>	Unknown	base:metadata/@gml:nilReason	gml:nilReasonType	Yes
COM2011	<input checked="" type="checkbox"/>	Table	base:member/au:AdministrativeUnit	au:AdministrativeUnitType	No
id	<input checked="" type="checkbox"/>	Column group	@gml:id	xs:ID	Yes
geometry	<input checked="" type="checkbox"/>	Column group	au:geometry/gml:MultiSurface	gml:MultiSurfaceType	Yes
PRO_COM	<input checked="" type="checkbox"/>	NUMBER	au:nationalCode	xs:string	Yes
inspireId	<input checked="" type="checkbox"/>	Column group	au:inspireId/base:Identifier	base:IdentifierType	Yes
PRO_COM_2	<input checked="" type="checkbox"/>	NUMBER	base:localId	xs:string	Yes
namespace	<input checked="" type="checkbox"/>	AU.IT.ISTAT	base:namespace	xs:string	Yes
nationalCode	<input checked="" type="checkbox"/>	http://inspire.ec.europa.eu/co...	au:nationalLevel	gml:CodeType	Yes
nationalLevelName	<input checked="" type="checkbox"/>	Comune	au:nationalLevelName/gmd:LocalisedCharacterString	gmd:LocalisedCharacterString_Type	Yes
country	<input checked="" type="checkbox"/>	Column group	au:country/gmd:Code	gmd:CodeListValue_Type	Yes
name	<input checked="" type="checkbox"/>	Column group	au:name/gn:GeographicalName	gn:GeographicalNameType	Yes
language	<input checked="" type="checkbox"/>	ita	au:lowerLevelUnit/@xlink:title	gn:(anonymous)	Yes
nativeness	<input checked="" type="checkbox"/>	endonym	au:lowerLevelUnit/@xlink:type	gn:(anonymous)	Yes
nameStatus	<input checked="" type="checkbox"/>	official	au:name	gn:(anonymous)	Yes
sourceOfName	<input checked="" type="checkbox"/>	Column group	au:name/gn:GeographicalName	gn:(anonymous)	Yes
void_reason	<input checked="" type="checkbox"/>	Unknown	au:nationalCode	gml:nilReasonType	No
sourceOfName	<input checked="" type="checkbox"/>	OTHER	au:nationalLevel	gn:(anonymous)	No
pronunciation	<input checked="" type="checkbox"/>	Column group	au:nationalLevel/@gml:codeSpace	gn:PronunciationOfNameType	Yes
NOME_COM_1	<input checked="" type="checkbox"/>	VARCHAR2	au:nationalLevelName	gn:(anonymous)	No
spelling	<input checked="" type="checkbox"/>	Column group	gn:spelling/gn:SpellingOfName	gn:SpellingOfNameType	Yes
NOME_COM	<input checked="" type="checkbox"/>	VARCHAR2	gn:text	xs:string	Yes
script	<input checked="" type="checkbox"/>	Latn	gn:script	gn:(anonymous)	Yes
residenceOfAuthority	<input checked="" type="checkbox"/>	Column group	au:residenceOfAuthority	au:(anonymous)	Yes
beginLifespanVersion	<input checked="" type="checkbox"/>	2013-11-20T14:12:20	au:beginLifespanVersion	au:(anonymous)	Yes
NUTS	<input checked="" type="checkbox"/>	Unknown	au:NUTS/@gml:nilReason	gml:nilReasonType	Yes
upperLevelUnit	<input checked="" type="checkbox"/>	Column group	au:upperLevelUnit/@xlink:href	xs:anyURI	No
COM2011BOUNDARY	<input checked="" type="checkbox"/>	Table	au:boundary	gml:ReferenceType	Yes
boundary	<input checked="" type="checkbox"/>	Column group	@xlink:href	xs:anyURI	No
PROV_COM	<input checked="" type="checkbox"/>	NUMBER			No

Preview XML Preview Schema Execution View

```

<au:name>
  <gn:GeographicalName>
    <gn:language>ita</gn:language>
    <gn:nativeness>endonym</gn:nativeness>
    <gn:nameStatus>official</gn:nameStatus>
    <gn:sourceOfName nilReason="Unknown" xsi:nil="true"/>
    <gn:pronunciation>
      <gn:PronunciationOfName>
        <gn:pronunciationIPA>Morano Calabro</gn:pronunciationIPA>
      </gn:PronunciationOfName>
    </gn:pronunciation>
  </gn:GeographicalName>
</au:name>
  
```

Preview Sample Size: 1 Update Preview Validate Preview





Your Email Address

First Name

Last Name

Company name

Website

Subscribe



## BEST PRACTICE CATALOG

It is a public, searchable and structured repository of products, services, projects, tools, procedures, methods and experience of the Geo-ICT SMEs in Europe. It is a showcase enabling a Geo-ICT marketplace from both the offer and the demand sides.

Participants in [smeSpire database](#) can provide best practices in this catalogue after [login](#) to the system.

Help information about BPC functionalities can be found in the following video tutorials:

- Tutorial about functionalities of the catalog
- Tutorial about adding a new practice



## How to encode a raster dataset in accordance to INSPIRE "D2.8.II.2 Data Specification on Land Cover – Technical Guidelines"

Main Author: [EPSILON ITALIA SRL](#)

Co-Authors:

Description: Technical report containing operational instructions about how to encode a raster dataset in accordance to INSPIRE "D2.8.II.2 Data Specification on Land Cover – Technical Guidelines". Besides the technical report, also a full gml file harmonized according to the LandCoverRaster application schema and consisting of an output file of the ArcFUEL project is provided.

Keywords: raster encoding, LandCoverRaster

Number of Views: 69

Added on: 15/02/2014

### Files

Files can be viewed and downloaded only by registered users.

### Links

Links can be viewed only by registered users.

### Classification

#### Geospatial Activities

✓ Advising, educating, researching, communicating about processes, use of geo-information products

## Metadata harmonization tools

- There are two possible options for metadata harmonization:
  - to transform existing metadata
  - to edit new metadata (from scratch or from an existing xml file)

The screenshot shows the INSPIRE Geoportal Metadata Editor web application. The browser address bar displays `inspire-geoportal.ec.europa.eu/editor/`. The page header includes the European Commission logo and the text "INSPIRE GEOPORTAL Enhancing access to European spatial data". A breadcrumb trail reads "EUROPEAN COMMISSION > INSPIRE > INSPIRE GEOPORTAL > Metadata Editor".

The main interface features a top navigation bar with tabs: New, Open, Validate, Save, Save as template, Help, and About. Below this is a secondary navigation bar with tabs for various metadata categories: Metadata, Identification, Classification, Keyword, Geographic, Temporal, Quality&Validity, Conformity, Constraints, and Responsible party. The "Metadata" tab is currently selected.

The "Metadata on metadata" section contains several form fields:

- Metadata point of contact (\*)**: A dropdown menu showing "Point of contact 1".
  - Organisation name (\*)**: A text input field.
  - E-mail (\*)**: A text input field with a plus icon for adding more contacts.
- Metadata date**: A text input field containing "2014-02-14".
- Metadata language (\*)**: A dropdown menu set to "english".

A note at the bottom states: "(\*) This field is mandatory". On the right side of the form, there are tabs for "Basic" and "Refresh".

INSPIRE view

Reset Save Save and close Check Other actions Cancel Minor edit

No preview available

INSPIRE view  
 By Group  
 ISO  
 Minimum  
 ISO Core  
 ISO All  
 By Package  
 Metadata  
 Identification  
 Maintenance  
 Constraints  
 Spat. Info  
 Ref. system  
 Distribution  
 Data quality  
 App. schema  
 Catalog  
 Content Info  
 Ext. Info  
 XML view

## IDENTIFICATION INFO

Title \*

Date \*

Date type \*

Unique resource identifier \*

Codespace ☒  (Suggestions: )

Abstract \* 

ArcFuel project aims developing a generic methodology for creating forest fuel maps which can be used for supporting the operational use of fire simulation applications in context of forest fire management. ArcFuel uses the results of a recent effort of JRC Ispra, which aimed creating a standardized scheme of fuel types representative of the European forest regions and based on this it defines a methodology for producing forest fuel

---

Point of contact ☒ ☐

Organisation name ☒  Electronic mail address ☒

Role \*

Graphic overview ☐

---

Descriptive keywords ☒ ☐

Keyword \* ☒

Descriptive keywords ☒ ☐ ☐

Keyword \* ☒

Thesaurus name ☒

Title \*

Date \*

Date type \*

---

Descriptive keywords ☒ ☐ ☐ ☐

Keyword \* ☒

Descriptive keywords ☒ ☐ ☐ ☐ ☐

Keyword \* ☒

Thesaurus name ☒

Title \*

Date \*

Date type \*

In attesa di localhost...

D31\_Datasets and metadata harmonization toolkit V3 0.doc [Modalità di compatibilità] - Microsoft Word

File Home Inserisci Layout di pagina Riferimenti Lettere Revisione Visualizza Acrobat

Taglia Copia Copia formato Appunti

Arial 10

G C S abe x x<sup>2</sup> ab<sup>2</sup> AaBbCcD AaBbCcD AaBbC AaBbC AaBbCc AaBbCcDc

¶ 5H ¶ Didascalia ¶ eENVplu... ¶ eENVplu... ¶ eENVplu... Enfasi (cor...

Cambia stili

Trova Sostituisci Seleziona Modifica

eENVplus

## Annex I – Q & A

**Q1: [Use of recursive data types in the Mapping tables]**

I've carefully read the document. I think that is clear and easy to understand, but I have a question that could be used to improve the section 3.1, near the "very complex data type" paragraph (Fig7 of section 3.1) (trying to immerse myself in a pilot which has to harmonize their data): what happens, in one of the matching table, with recursive data-types? For example, using the "AU\_3.0rc3\_MT\_compiled.xls" file, if I want to specify the "lowerLevelUnit", do I have to create a second mapping table for the second AU in a separate file and specify the path in the first MT under "file name or URL" column, or there is another possibility?

**A1:**

In some themes, such as AU, the same feature type is used to map different datasets. In the AU theme, the feature type "AdministrativeUnit" can be used to map administrative units at different levels (1stOrder, 2ndOrder, 3rdOrder, 4thOrder, 5thOrder, 6thOrder), therefore there are two possibilities:

1. Copy and paste the relative rows (for instance, from row 3 to row 24 in the AU\_3.0rc3\_MT\_compiled.xls) in the same mapping table, for each different administrative unit level.

Pagina: 37 di 38 Parole: 5.316 Inglese (Regno Unito) 150%



- Commission Regulation (EC) No. 1205/2008 implementing the INSPIRE Directive as regards metadata (**Discovery metadata**)
- Commission Regulation (EU) No 1089/2010 implementing the INSPIRE Directive as regards interoperability of spatial data sets and services (**Metadata for interoperability**)

Metadata Regulation Section	Metadata element	Multiplicity	Condition
1.1	Resource title	1	
1.2	Resource abstract	1	
1.3	Resource type	1	
1.4	Resource locator	0..*	Mandatory if a URL is available to obtain more information on the resource, and/or access related services.
1.5	Unique resource identifier	1..*	
1.7	Resource language	0..*	Mandatory if the resource includes textual information.
2.1	Topic category	1..*	
3	Keyword	1..*	
4.1	Geographic bounding box	1..*	
5	Temporal reference	1..*	
6.1	Lineage	1	
6.2	Spatial resolution	0..*	Mandatory for data sets and data set series if an equivalent scale or a resolution distance can be specified.
7	Conformity	1..*	
8.1	Conditions for access and use	1..*	
8.2	Limitations on public access	1..*	
9	Responsible organisation	1..*	
10.1	Metadata point of contact	1..*	
10.2	Metadata date	1	
10.3	Metadata language	1	

## 8.2 Metadata elements for interoperability

### IR Requirement

Article 13

#### Metadata required for Interoperability

The metadata describing a spatial data set shall include the following metadata elements required for interoperability:

1. Coordinate Reference System: Description of the coordinate reference system(s) used in the data set.
2. Temporal Reference System: Description of the temporal reference system(s) used in the data set.

This element is mandatory only if the spatial data set contains temporal information that does not refer to the default temporal reference system.

3. Encoding: Description of the computer language construct(s) specifying the representation of data objects in a record, file, message, storage device or transmission channel.
4. Topological Consistency: Correctness of the explicitly encoded topological characteristics of the data set as described by the scope.

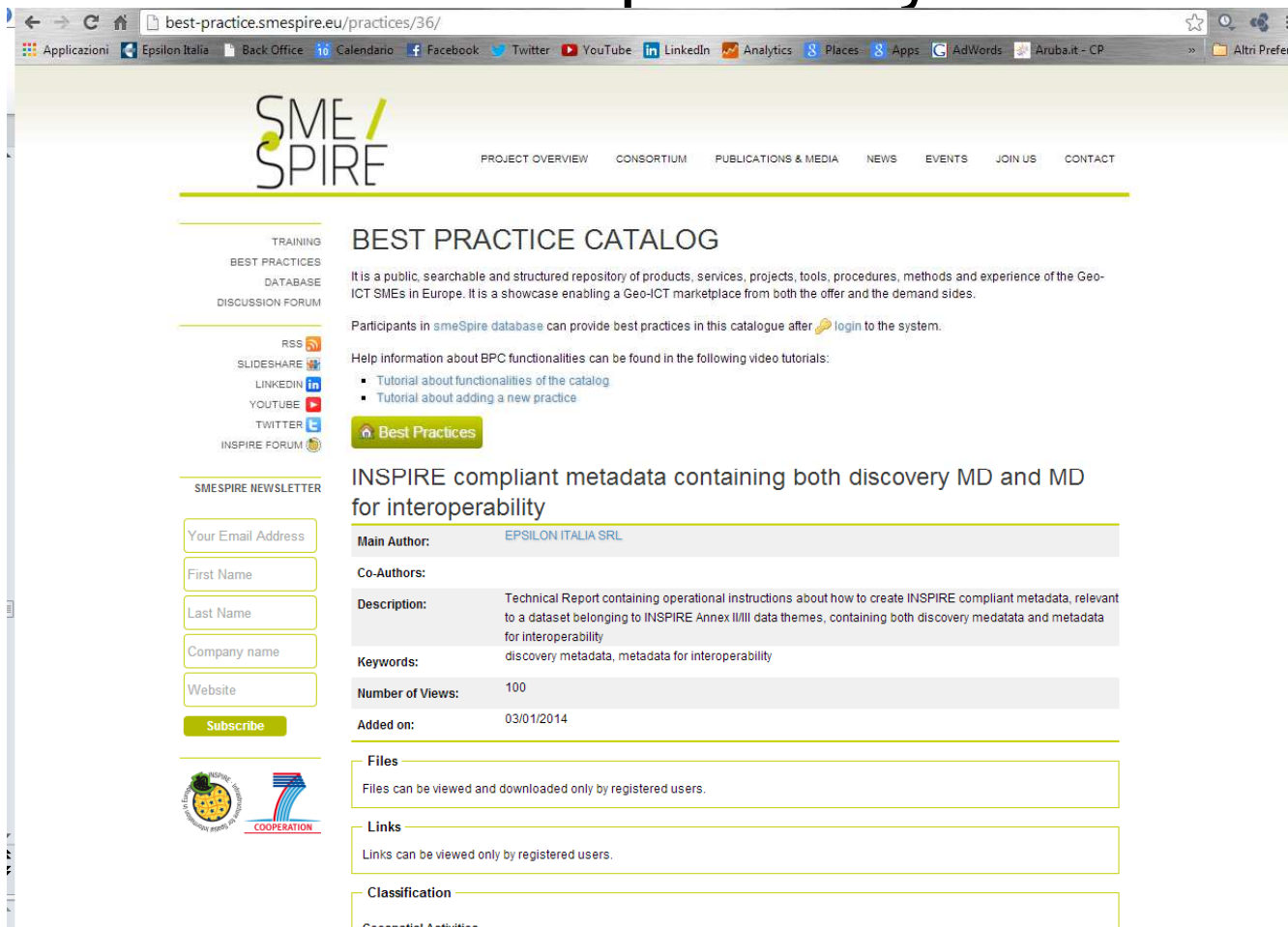
This element is mandatory only if the data set includes types from the Generic Network Model and does not assure centreline topology (connectivity of centrelines) for the network.

5. Character Encoding: The character encoding used in the data set.

This element is mandatory only if an encoding is used that is not based on UTF-8.

6. Spatial Representation Type: The method used to spatially represent geographic information.

## ■ How to create INSPIRE compliant metadata containing both discovery metadata and metadata for interoperability?



The screenshot shows the SME SPIRE Best Practice Catalog page. The main heading is "BEST PRACTICE CATALOG". Below it, there is a description: "It is a public, searchable and structured repository of products, services, projects, tools, procedures, methods and experience of the Geo-ICT SMEs in Europe. It is a showcase enabling a Geo-ICT marketplace from both the offer and the demand sides." A link to "login to the system" is provided for participants in the SME SPIRE database.

Help information about BPC functionalities can be found in the following video tutorials:

- Tutorial about functionalities of the catalog
- Tutorial about adding a new practice

A button labeled "Best Practices" is visible.

The main content area displays the title "INSPIRE compliant metadata containing both discovery MD and MD for interoperability". The metadata details are as follows:

Main Author:	EPSILON ITALIA SRL
Co-Authors:	
Description:	Technical Report containing operational instructions about how to create INSPIRE compliant metadata, relevant to a dataset belonging to INSPIRE Annex II/III data themes, containing both discovery metadata and metadata for interoperability
Keywords:	discovery metadata, metadata for interoperability
Number of Views:	100
Added on:	03/01/2014

Below the metadata, there are sections for "Files", "Links", and "Classification". The "Files" section states: "Files can be viewed and downloaded only by registered users." The "Links" section states: "Links can be viewed only by registered users." The "Classification" section is partially visible, showing "Geospatial Activities".

On the left side of the page, there is a sidebar with navigation links: TRAINING, BEST PRACTICES, DATABASE, DISCUSSION FORUM, RSS, SLIDESHARE, LINKEDIN, YOUTUBE, TWITTER, and INSPIRE FORUM. Below these is a "SME SPIRE NEWSLETTER" section with input fields for "Your Email Address", "First Name", "Last Name", "Company name", and "Website", followed by a "Subscribe" button. At the bottom left, there is a logo for "COOPERATION" featuring a stylized globe and the text "COOPERATION".

The screenshot displays the INSPIRE Geoportal Metadata Editor web application. The browser address bar shows the URL `inspire-geoportal.ec.europa.eu/editor/`. The page header includes the European Commission logo and the text "INSPIRE GEOPORTAL Enhancing access to European spatial data". The breadcrumb navigation path is "EUROPEAN COMMISSION > INSPIRE > INSPIRE GEOPORTAL > Metadata Editor".

The main interface features a menu bar with options: New, Open, **Validate** (highlighted with a red circle), Save, Save as template, Help, and About. Below the menu bar is a tabbed interface with tabs for Metadata, Identification, Classification, Keyword, Geographic, Temporal, Quality&Validity, Conformity, Constraints, and Responsible party. The "Basic" tab is currently selected, and a "Refresh" button is visible.

The "Metadata on metadata" section contains several input fields:
 

- Metadata point of contact (\*)**: A dropdown menu showing "Point of contact 1".
  - Organisation name (\*)**: An empty text input field.
  - E-mail (\*)**: An empty text input field with a help icon.
- Metadata date**: A date input field showing "2014-02-14" with a help icon.
- Metadata language (\*)**: A dropdown menu showing "english" with a help icon.

 A note at the bottom left states: "(\*) This field is mandatory".

A red-bordered box highlights the "INSPIRE validation errors: 10" section, which lists the following errors:
 

- The metadata element "Inspire Spatial Data Theme" is missing, empty or incomplete but it is required
- The metadata element "Conformity" is missing, empty or incomplete but it is required. Hint: "No Conformity declaration found"
- The metadata element "Conditions For Access And Use" is missing, empty or incomplete but it is required
- The metadata element "Limitations On Public Access" is missing, empty or incomplete but it is required
- The metadata element "Responsible Organisation" is missing, empty or incomplete but it is required. Hint: "No Responsible Organization specified"
- The metadata element "Metadata Point Of Contact" is missing, empty or incomplete but it is required
- The metadata element "Unique Resource Identifier" is missing, empty or incomplete but it is required
- The metadata element "Geographic Bounding Box" is missing, empty or incomplete but it is required
- The metadata element "Topic Category" is missing, empty or incomplete but it is required
- The metadata element "Lineage" is missing, empty or incomplete but it is required

 Below this list, it states "INSPIRE validation warnings: 0". A "Close" button is located at the bottom of the error box.

The screenshot shows a web browser window with the address bar displaying `inspire-geoportal.ec.europa.eu/validator2/`. The browser's toolbar includes various icons and a search bar. The website header features the European Commission logo and the text "INSPIRE GEOPORTAL Enhancing access to European spatial data". Below the header, a navigation bar shows the path "EUROPEAN COMMISSION > INSPIRE > INSPIRE GEOPORTAL > Validator". The main content area is titled "INSPIRE Geoportal Metadata Validator" and includes links for "(Change log)", "(Documentation)", and "(About)". The text explains that this validator replaces the former "schematron validator" and implements the same validation criteria. It also mentions that the validator can be used as a Web Service. A section titled "Paste your resource in the text field below" provides instructions on the types of metadata that can be pasted. Below this is a large text input field. Another section titled "You can also upload a file to test" includes a file selection button and a status message. A "Test Resource" button is also present, with a note about security restrictions. A disclaimer at the bottom states that the service is used for validation of metadata discovered through Member State Discovery Services and is not a full INSPIRE compliance test.

INSPIRE Geoportal Metadata Validator [\(Change log\)](#) [\(Documentation\)](#) [\(About\)](#)

This validator replaces the former [schematron validator](#) and implements the same validation criteria applied during the INSPIRE Geoportal discovery process.

It is possible to use this validator as a Web Service (instructions available [here](#)).

**Paste your resource in the text field below**  
(ISO 19139 Metadata or OGC Service Endpoint or CSW GetRecords or GetRecordById GET Request or URL to metadata)

**You can also upload a file to test**  
Select the file to be tested:  Nessun file selezionato

For security reasons, HTTP resources using ports other than 80 and 443 cannot be contacted.

**DISCLAIMER:** This service is used in the context of the INSPIRE Geoportal to perform validation of the metadata of resources discovered through the Member State Discovery Services. It is provided as is and it is not to be considered a full INSPIRE compliance test. While we have tried to ensure compliance with the INSPIRE Regulations and the relevant Technical Guidance documents we do recognise that there may still be issues that will need to be addressed. We would appreciate if you could [report to us](#) any issue you find with this validator so that we can improve it.

In order to insert the six additional metadata elements for interoperability defined by the regulation 1089/2010, namely:

- Coordinate reference system (**mandatory**)
  - Temporal reference system
  - Encoding (**mandatory**)
  - Character encoding
  - Spatial representation type (**mandatory**)
  - Data Quality - Logical consistency - Topological consistency
- you may use Geonetwork

**Default view**

INSPIRE view

By Group

ISO

Minimum

ISO Core

ISO All

By Package

Metadata

Identification

Maintenance

Constraints

Spat. Info

Ref. system

Distribution

Data quality

App. schema

Catalog

Content Info

Ext. Info

XML view

Reset Save Save and close **Check** Other actions Cancel Minor edit

No preview available

**Parent/child metadata:**

[Add or update parent metadata section](#)

**Related service metadata:**

[Link service metadata](#)

**Related feature catalogues:**

[Link feature catalogue](#)

---

**IDENTIFICATION INFO**

Title \*

Date \*

Date type \*

Unique resource identifier \*

Codespace ☒  (Suggestions: )

Abstract \* 

ArcFuel project aims developing a generic methodology for creating forest fuel maps which can be used for supporting the operational use of fire simulation applications in context of forest fire management. ArcFuel uses the results of a recent effort of JRC Ispra, which aimed creating a standardized scheme of fuel types representative of the European forest regions and based on this it defines a methodology for producing forest fuel

---

**Point of contact** ☒

Organisation name ☒  Electronic mail address ☒

Role \*

Graphic overview ☒

---

**Descriptive keywords** ☒

Keyword \* ☒

**Thesaurus name** ☒

Title \*

Date \*

Date type \*

---

**Descriptive keywords** ☒ ☒

Keyword \* ☒

---

**Descriptive keywords** ☒ ☒ ☒ ☒

Keyword \* ☒

**Thesaurus name** ☒

Title \*

Date \*

Date type \*

In attesa di localhost...



Firefox window: <http://inspire.ec...theme/it/it.xml>, <http://inspire.ec...t/codelist.en.xml>, Glossary:European Union (EU) - S..., My GeoNetwork catalogue, GeoNetworkUserManual.pdf

localhost:8080/geonetwork/srv/eng/metadata.edit?id=43

Validation report

☐ View errors only

Compliance to metadata standard (XML Schema) ✓

Compliance to metadata recommendations (Schematron)

GeoNetwork recommendations ✓

- ▶ [Language] - Metadata language is not defined and other language are declared and Main metadata language MUST NOT be defined in other language section.
  - ✓ Main metadata language is: "eng"
  - ✓ No duplicate languages found.

INSPIRE implementing rules ✓

- ▶ Identification
  - ✓ Resource type is: dataset
  - ✓ Resource abstract is: ArcFuel project aims developing a generic methodology for creating forest fuel maps which can be used for supporting the operational use of fire simulation applications in context of forest fire management. ArcFuel uses the results of a recent effort of JRC Ispra, which aimed creating a standardized scheme of fuel types representative of the European forest regions and based on this it defines a methodology for producing forest fuel maps compatible with the relevant scheme of JRC making use of available European spatial data sets and Landsat TM images. The proposed methodology of forest fuel map creation is applicable in all EU regions and is currently tested and validated in the ArcFuel project pilot areas in Greece, Portugal, Spain and Italy.
  - ✓ Resource title found: eu.Italy.Calabria.ArcFuel.Project\_FuelClassificationMap
  - ✓ Resource locator found: [http://www.epsilon-italia.it/public/ArcFuel/ArcFuel\\_forest\\_fuel\\_classes.pdf](http://www.epsilon-italia.it/public/ArcFuel/ArcFuel_forest_fuel_classes.pdf)
- ▶ Data Identification
  - ✓ Resource language is: eng
  - ✓ ISO topic category is: imageryBaseMapsEarthCover
  - ✓ Unique resource identifier is: eu.Italy.Calabria.ArcFuel\_FCM
  - ✓ Unique resource identifier codespace is: ArcFuel\_FCM
- ▶ Service Identification
- ▶ Keyword and INSPIRE themes
  - ✓ 1 INSPIRE theme(s) found.
  - ✓ Thesaurus: GEOSS - Earth Observation Vocabulary, version 1.0, 2011-05-01 2008-06-01 ()
- ▶ INSPIRE Service taxonomy
- ▶ Geographic location
  - ✓ WestBoundLongitude found: 15.5135409375
  - ✓ EastBoundLongitude found: 17.31529875
  - ✓ SouthBoundLongitude found: 37.65312
  - ✓ NorthBoundLongitude found: 39.762495
- ▶ Temporal reference
  - ✓ Date of creation of the resource found: 2013-11-05
- ▶ Quality and validity
  - ✓ Spatial resolution is set.
  - ✓ Lineage is set.
- ▶ Conformity
  - ✓ Specification: INSPIRE Data Specification on Land Cover – Draft Guidelines, (2013-02-04, publication)
  - ✓ Degree of conformity found: true
  - ✓ Specification: Commission Regulation (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services, (2010-12-08, publication)
  - ✓ Degree of conformity found: true
- ▶ Constraints related to access and use
  - ✓ 1 instance(s) of 'accessConstraints' found.
  - ✓ Limitation on public access (otherConstraints) found: no limitation
  - ✓ Limitation on public access (accessConstraints) found: otherRestrictions
- ▶ Responsible organisation
  - ✓ Responsible organisation for the resource found.
  - ✓ Organisation name and email found for: Epsilon Italia (pointOfContact)
- ▶ Metadata on metadata
  - ✓ Metadata date stamp is: 2014-01-03T13:01:52
  - ✓ Metadata language is: eng
  - ✓ Metadata point of contact found.

Date: 2008-06-01

Windows taskbar: start, Posta in arrivo - s.mo..., W geonetwork.validation..., My GeoNetwork catal..., Start server, IT, 13.32

**Validation report**

- ✓ Degree of conformity found: true
- ✓ Specification: Commission Regulation (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services, (2010-12-08, publication)
- ✓ Degree of conformity found: true
- Constraints related to access and use
  - ✓ 1 instance(s) of 'accessConstraints' found.
  - ✓ Limitation on public access (otherConstraints) found: no limitation
  - ✓ Limitation on public access (accessConstraints) found: otherRestrictions
- Responsible organisation
  - ✓ Responsible organisation for the resource found.
  - ✓ Organisation name and email found for : Epsilon Italia (pointOfContact)
- Metadata on metadata
  - ✓ Metadata date stamp is : 2014-01-03T13:01:52
  - ✓ Metadata language is : eng
  - ✓ Metadata point of contact found.
  - ✓ Organisation name and email found for : Epsilon Italia srl (pointOfContact)

**ISO 19115/19119 rules**

- ✓ CharacterString must have content or its parent must have a valid nilReason attribute.
- ✓ CRS attributes constraints
- ISOFTDS19139:2005-TableA1-Row24 - A name is required for contact:
  - ✓ One or more of individualName, organisationName or positionName found in contact: Epsilon Italia srl
  - ✓ One or more of individualName, organisationName or positionName found in contact: Epsilon Italia
- ISOFTDS19139:2005-TableA1-Row07 - OtherConstraints required if otherRestrictions
  - ✓ Other restrictions set to: no limitation
- ISOFTDS19139:2005-TableA1-Row16 - Units required for values
- ISOFTDS19139:2005-TableA1-Row13 - Description required if no sourceExtent
- ISOFTDS19139:2005-TableA1-Row10 - Content mandatory for dataset or series
  - ✓ Statement is documented.
- ISOFTDS19139:2005-TableA1-Row12 - Lineage
  - ✓ Source required if no statement or processStep.
  - ✓ Process step required if no statement or source.
- ISOFTDS19139:2005-TableA1-Row08 - Dataset must have report or lineage
  - ✓ Report or lineage is defined.
- ISOFTDS19139:2005-TableA1-Row09 - LevelDescription needed unless dataset or series
  - ✓ Level description set to:
- ISOFTDS19139:2005-TableA1-Row17 - Units required for density values
- ISOFTDS19139:2005-TableA1-Row18 - Distribution format required
  - ✓ 2 distributor format(s) found.
- ISOFTDS19139:2005-TableA1-Row23 - Extent element required
  - ✓ One description, geographicElement, temporalElement, verticalElement found.
- ISOFTDS19139:2005-TableA1-Row04 - Dataset must have extent
  - ✓ Extent defined for dataset.
- ISOFTDS19139:2005-TableA1-Row05 - Dataset or series must have a topic category
  - ✓ Topic category is: "ImageryBaseMapsEarthCover"
- ISOFTDS19139:2005-TableA1-Row06 - Either aggregateDataSetName or aggregateDataSetIdentifier must be documented
- ISOFTDS19139:2005-TableA1-Row02 - Character set indication
- ISOFTDS19139:2005-TableA1-Row19 - Detail required unless simple term
- ISOFTDS19139:2005-TableA1-Row20 - Condition
- ISOFTDS19139:2005-TableA1-Row21 - DomainCode
- ISOFTDS19139:2005-TableA1-Row22 - ShortName
- ISOFTDS19139:2005-TableA1-Row15 - Check point description required if available
- ISOFTDS19139:2005-TableA1 - HierarchyLevelName must be documented if hierarchyLevel does not contain "dataset"
  - ✓ Hierarchy level name is: "dataset"

Date: 2008-06-01

- Abstract Test Suite (ATS) included in Annex A to all the D2.8.II/III.x -Data Specifications on Annex II/III data themes - Technical Guidelines, v3.0, published the 10th of December 2013
  - Part 1 (normative) IR Requirements
  - Part 2 (informative) TG Requirements

Conformance Class	Tests
A.1 Application Schema Conformance Class	A.1.1 Schema element denomination test
	A.1.2 Value type test
	A.1.3 Value test
	A.1.4 Attributes/associations completeness test
	A.1.5 Abstract spatial object test
	A.1.6 Constraints test
	A.1.7 Geometry representation test
A.2 Reference Systems Conformance Class	A.2.1 Datum test
	A.2.2 Coordinate reference system test
	A.2.3 Grid test
	A.2.4 View service coordinate reference system test
	A.2.5 Temporal reference system test
	A.2.6 Units of measurements test
A.3 Data Consistency Conformance Class	A.3.1 Unique identifier persistency test
	A.3.2 Version consistency test
	A.3.3 Life cycle time sequence test
	A.3.4 Validity time sequence test
	A.3.5 Update frequency test
A.4 Data Quality Conformance Class	
A.5 Metadata IR Conformance Class	A.5.1 Metadata for interoperability test
A.6 Information Accessibility Conformance Class	A.6.1 Code list publication test
	A.6.2 CRS publication test
	A.6.3 CRS identification test
	A.6.4 Grid identification test
A.7 Data Delivery Conformance Class	A.7.1 Encoding compliance test
A.8 Portrayal Conformance Class	A.8.1 Layer designation test

## Part 1 (normative)

### Conformity with Commission Regulation No 1089/2010

#### A.1 Application Schema Conformance Class

**Conformance class:**

<http://inspire.ec.europa.eu/conformance-class/ir/ef/as/<application schema namespace prefix>>

##### A.1.1 Schema element denomination test

a) Purpose: Verification whether each element of the dataset under inspection carries a name specified in the target application schema(s).

b) Reference: Art. 3 and Art.4 of Commission Regulation No 1089/2010

c) Test Method: Examine whether the corresponding elements of the source schema (spatial object types, data types, attributes, association roles, code lists, and enumerations) are mapped to the target schema with the correct designation of mnemonic names.

NOTE Further technical information is in the Feature catalogue and UML diagram of the application schema(s) in section 5.2.

Conformance Class	Tests
A.1 Application Schema Conformance Class	A.1.1 Schema element denomination test
	A.1.2 Value type test
	A.1.3 Value test
	A.1.4 Attributes/associations completeness test
	A.1.5 Abstract spatial object test
	A.1.6 Constraints test
	A.1.7 Geometry representation test
A.2 Reference Systems Conformance Class	A.2.1 Datum test
	A.2.2 Coordinate reference system test
	A.2.3 Grid test
	A.2.4 View service coordinate reference system test
	A.2.5 Temporal reference system test
	A.2.6 Units of measurements test
A.3 Data Consistency Conformance Class	A.3.1 Unique identifier persistency test
	A.3.2 Version consistency test
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	A.3.4 Validity time sequence test
	A.3.5 Update frequency test
A.4 Data Quality Conformance Class	
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	A.6.2 CRS publication test
	A.6.3 CRS identification test
	A.6.4 Grid identification test
A.7 Data Delivery Conformance Class	A.7.1 Encoding compliance test
A.8 Portrayal Conformance Class	A.8.1 Layer designation test



The screenshot displays the GO Publisher Desktop application interface. At the top, the menu bar includes File, Edit, Tools, and Help. Below the menu is a toolbar with various icons for file operations and project management. The main window is divided into several sections:

- Project Settings:** The 'Project name' is 'INSPIRE\_AU' and the 'Format' is 'GML 3.2'.
- Database to XML mapping:** A table mapping database fields to XML types.
 

Name	Enabled	DB type or const value	XML path	Type in XML	Required
Database	<input checked="" type="checkbox"/>		base:SpatialDataSet	base:SpatialDataSetType	Yes
id	<input checked="" type="checkbox"/>	AU.IT	@gml:id	xs:ID	No
identifier	<input checked="" type="checkbox"/>	Column group	base:identifier	base:IdentifierPropertyType	No
metadata	<input checked="" type="checkbox"/>	Unknown	base:metadata/@gml:nilReason	gml:nilReasonType	No
COM2011_2	<input checked="" type="checkbox"/>	Table	base:member/au:AdministrativeUnit	au:AdministrativeUnitType	No
id	<input checked="" type="checkbox"/>	Column group	@gml:id	xs:ID	No
geometry	<input checked="" type="checkbox"/>	Column group	au:geometry/gml:MultiSurface	gml:MultiSurfaceType	Yes
PRO_COM	<input checked="" type="checkbox"/>	NUMBER	au:nationalCode	xs:string	No
inspireId	<input checked="" type="checkbox"/>	Column group	au:inspireId/base:Identifier	base:IdentifierType	Yes
PRO_COM_2	<input checked="" type="checkbox"/>	NUMBER	base:localId	xs:string	Yes
namespace	<input checked="" type="checkbox"/>	AU.IT.ISTAT.COMUNI	base:namespace	xs:string	Yes
nationalLevel	<input checked="" type="checkbox"/>	http://inspire.ec.europa.eu/co...	au:nationalLevel	gml:CodeType	Yes
nationalLevelName	<input checked="" type="checkbox"/>	Comune	au:nationalLevelName/gmd:LocalisedCharacterString	gmd:LocalisedCharacterString_Type	Yes
country	<input checked="" type="checkbox"/>	Column group	au:country/gmd:Country	gco:CodeListValue_Type	Yes
name	<input checked="" type="checkbox"/>	Column group	au:name/gn:GeographicalName	gn:GeographicalNameType	Yes
residenceOfAuthority	<input checked="" type="checkbox"/>	Column group	au:residenceOfAuthority	au:(anonymous)	Yes
beginLifespanVersion	<input checked="" type="checkbox"/>	2013-11-20T14:12:20	au:beginLifespanVersion	au:(anonymous)	Yes
NUTS	<input checked="" type="checkbox"/>	Unknown	au:NUTS/@gml:nilReason	gml:nilReasonType	Yes
upperLevelUnit	<input checked="" type="checkbox"/>	Column group	au:upperLevelUnit/@xlink:href	xs:anyURI	No
COM2011BOUNDARY	<input checked="" type="checkbox"/>	Table	au:boundary	gml:ReferenceType	No
name_ted	<input type="checkbox"/>	Column group	au:name/gn:GeographicalName	gn:GeographicalNameType	No
COD_REG	<input type="checkbox"/>	NUMBER		au:AdministrativeUnitType	No
SHAPE LENG	<input type="checkbox"/>	NUMBER		au:AdministrativeUnitType	No
SHAPE AREA	<input type="checkbox"/>	NUMBER		au:AdministrativeUnitType	No
PROV2011	<input type="checkbox"/>	Table	base:member/au:AdministrativeUnit	au:AdministrativeUnitType	No
- Preview XML:** Shows the generated XML code. The 'Preview Schema' tab is selected, showing the XML schema definition for the 'base:Identifier' element.
- Execution View:** Shows the resulting XML output. A red box highlights an error message: 'Error: [Line: 1, Column: 1243] cvc-elt.1: Cannot find the declaration of element 'base:SpatialDataSet'.'

HUMBOLDT Alignment Editor 2.8.0 - AdministrativeUnitProject - C:\Areashared\HVALEAU\_Project.hale

File Transformation Edit Window Help

Alignment: com2011\_morano\_boundary\_2 <7 Retype AdministrativeBoundary <7

Source Data: com2011\_morano\_boundary\_2

com2011_morano_boundary_2	1
com2011_morano_boundary_2	+
2ndOrder	2ndOrder
3rdOrder	3rdOrder
4thOrder	4thOrder
COD_PRO	78
COD_REG	18
filename	com2011_morano_boundary_2
NOME_COM	Morano Calabro
NOME_COM_2	Chiaromonte
NOME_TED	
PRO_COM	78083
SHAPE_Area	1.16254331821E8
SHAPE_Leng	53967.4937264
the_geom	{CRS=ED50_UTM_zone_32N} MULTILINESTRING ((1113650.05
Metadata	+
Identifier	a18874d7-d84f-4987-a67b-29e41d67daa

Properties: Instance validation

Report: Success: true

Warnings: Summary: Finished successfully, but with warnings

Time: Fri Nov 22 17:04:20 CET 2013

Duration: 33 seconds and 922 milliseconds

Transformed Data: Report List

- 17:02 2013-11-22
  - Instance validation
  - Instance transformation
  - Load data into database
  - Shapefile import
  - Load data into database
  - Shapefile import
  - Shapefile import
  - Shapefile import
  - Shapefile import
  - Shapefile import
  - XML schema import
- 16:50 2013-11-22
- 12:46 2013-11-22
- 12:13 2013-11-22

133M of 181M CST

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best-practices.smespire.eu/practices/58/how-to-assess-the-degree-of-conformity-to-the-requirements-specified-by-commission-regulation-eu-n

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Altri Preferiti

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## BEST PRACTICE CATALOG

It is a public, searchable and structured repository of products, services, projects, tools, procedures, methods and experience of the Geo-ICT SMEs in Europe. It is a showcase enabling a Geo-ICT marketplace from both the offer and the demand sides.

Participants in [smeSpire database](#) can provide best practices in this catalogue after [login](#) to the system.

Help information about BPC functionalities can be found in the following video tutorials:

- Tutorial about functionalities of the catalog
- Tutorial about adding a new practice

[Best Practices](#)

### How to assess the degree of conformity to the requirements specified by Commission Regulation (EU) No 1089/2010 relevant to a dataset belonging to INSPIRE Annex II/III data themes

Main Author:

EPSILON ITALIA SRL

Co-Authors:

Description:

The technical report contains operational instructions about how to assess the degree of conformity to the requirements specified by Commission Regulation (EU) No 1089/2010 relevant to a dataset belonging to INSPIRE Annex II/III data themes. The technical report contains also an Executable Test Suite for all the tests of the Conformance Class "A.1 Application Schema Conformance Class" contained in the Abstract Test Suite (ATS) provided in Annex A of the INSPIRE\_DataSpecification\_LC\_v3.0. Besides the technical report, also a full gml file harmonized according to the LandCoverRaster application schema and consisting of an output file of the ArcFUEL project is provided.

Keywords:

ATS, ETS, Conformance Class, conformity

Number of Views:

49

Added on:

15/02/2014

Files

Files can be viewed and downloaded only by registered users.



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www.eenvplus.eu/collaboration/projects/eenvplus2013/boards

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Data Harmonisation

➕ New message

★ Unwatch

Technical support and questions & answers on all eENVplus data Harmonisation aspects, especially those related to the use of the HALE tool.

Subject	Author	Created	Replies	Last message ▼
➔ HALE (HUMBOLDT Alignment Editor) basic info and resources	Roderic Molina	November 11, 2013 01:25 PM	0	
Data Harmonisation discussion for EP09 - Cross-border Pilot in Italy / Slovenia - Scenario: Geological Map Harmonization	Roderic Molina	February 21, 2014 02:38 PM	1	Added by Carlo Cipolloni 6 minutes ago RE: Data Harmonisation discussion for EP09 - Cross-border...
Data Harmonisation discussion for EP05 - Pilot in France - Scenario: Natural Areas INSPIRE Compliance Toolbox	Roderic Molina	February 21, 2014 02:36 PM	3	Added by Sophie Gras 24 minutes ago RE: Data Harmonisation discussion for EP05 - Pilot in Fra...
Code lists	Raquel Saraiva	March 06, 2014 04:39 PM	1	Added by stefania morrone 3 days ago RE: Code lists
Data Harmonisation discussion for EP07 - Cross-border Pilot in Hungary / Slovakia - Scenario: Window on the Protected Areas - Mobile Conservation Map	Veronika Koskova	March 04, 2014 02:38 PM	3	Added by Fabio Vinci 4 days ago RE: Data Harmonisation discussion for EP07 - Cross-border...
Status of First Exercise of Data Harmonization	stefania morrone	February 24, 2014 03:37 PM	1	Added by stefania morrone 4 days ago RE: Status of First Exercise of Data Harmonization
Data Harmonisation discussion for EP06 - Pilot in Greece - Scenario: Forest Fire Management	Roderic Molina	February 21, 2014 02:36 PM	2	Added by stefania morrone 4 days ago RE: Data Harmonisation discussion for EP06 - Pilot in Gre...
Data Harmonisation discussion for EP04 - Cross-border Pilot in Czech R. / Slovakia - Scenario: CSspire - Everyday Life Issues Connected to Environmental Aspects	Veronika Koskova	March 04, 2014 02:42 PM	0	
Data Harmonisation discussion for EP08 - Pilot in Iceland - Scenario: INSPIRE Geoportal	Roderic Molina	February 21, 2014 02:38 PM	1	Added by Fabio Vinci 13 days ago RE: Data Harmonisation discussion for EP08 - Pilot in Ice...
Data Harmonisation discussion for EP07 - Cross-border Pilot in Hungary / Slovakia - Scenario: Window on the Protected Areas - Mobile Conservation Map	Roderic Molina	February 21, 2014 02:37 PM	1	Added by Fabio Vinci 13 days ago RE: Data Harmonisation discussion for EP07 - Cross-border...
Data Harmonisation discussion for EP04 - Cross-border Pilot in Czech R. / Slovakia - Scenario: CSspire - Everyday Life Issues Connected to Environmental Aspects	Roderic Molina	February 21, 2014 02:34 PM	1	Added by Fabio Vinci 14 days ago RE: Data Harmonisation discussion for EP04 - Cross-border...
Data Harmonisation discussion for EP01 - Pilot in Belgium - Scenario: Implementation of a SEIS for air quality data	Roderic Molina	February 21, 2014 12:53 PM	1	Added by Fabio Vinci 14 days ago RE: Data Harmonisation discussion for EP01 - Pilot in Bel...
Data Harmonisation discussion for EP10 - Pilot in Portugal - Scenario: Urban Ecological Landuse Planning	Roderic Molina	February 21, 2014 02:39 PM	1	Added by Fabio Vinci 14 days ago RE: Data Harmonisation discussion for EP10 - Pilot in Por...
Data Harmonisation discussion for EP03 - Pilot in Belgium - Scenario: Providing INSPIRE-compliant access to utility services	Roderic Molina	February 21, 2014 02:33 PM	1	Added by Fabio Vinci 17 days ago RE: Data Harmonisation discussion for EP03 - Pilot in Bel...
Data Harmonisation discussion for EP02 - Pilot in Italy - Scenario: Implementation of a SEIS for air quality data	Roderic Molina	February 21, 2014 02:31 PM	0	

(1-15/15)

Also available in: Atom

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You have provided matching tables in the collaborative platform.

I have a few questions about them:

- Does the JRC version corresponds to the last DS specification version ? (it seems that yes, but just to be sure...)
- Are planning to provide eENVplus matching tables for all the themes used in the project ?

Thanks !

- Protected Sites Simple Mapping Table - SG.xls - Extended Protected Sites Simple Mapping Table (23 KB)
- SpeciesDistribution Mapping Table - Inverse - SG.xls - Extended SpeciesDistribution Mapping Table (Inverse) (72 KB)
- Species Distribution-3.0.xmind - Mind map of the Species distribution application schema (1.22 MB)

RE: Data Harmonisation discussion for EP05 - Pilot in France - Scenario: Natural Areas INSPIRE Compliance Toolbox - Added by Fabio Vinci 4 days ago

## Question:

I have a question regarding the matching table you have provided for EF thematic.

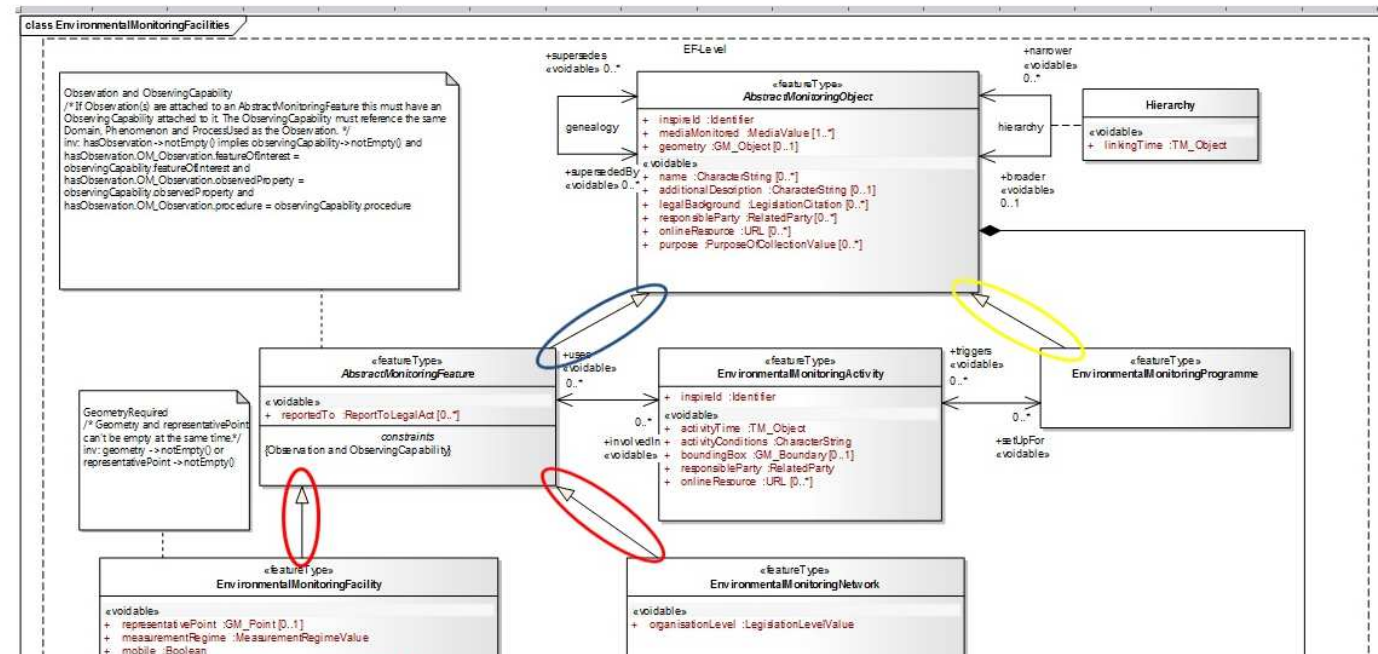
In the table the Feature Type EnvironmentalMonitoringNetwork has a lot of similar attributes that EnvironmentalMonitoringFacility and EnvironmentalMonitoringProgram. It is not something that I understand by looking at the diagrams in the data specification.

## Answer:

Regarding the similar attributes of the three feature type, as you can see in the UML schema of EF:

- the feature types EnvironmentalMonitoringNetwork and EnvironmentalMonitoringFacility inherit (red ellipses) the attributes/associations from the feature type AbstractMonitoringFeature, and this latter inherit (blue ellipse) the attributes/associations from the feature type AbstractMonitoringObject.
- the same for the feature type EnvironmentalMonitoringProgram (yellow ellipse).

Therefore, the three feature type (EnvironmentalMonitoringNetwork, EnvironmentalMonitoringFacility and EnvironmentalMonitoringProgram) will have common attributes/associations.



eENVplus

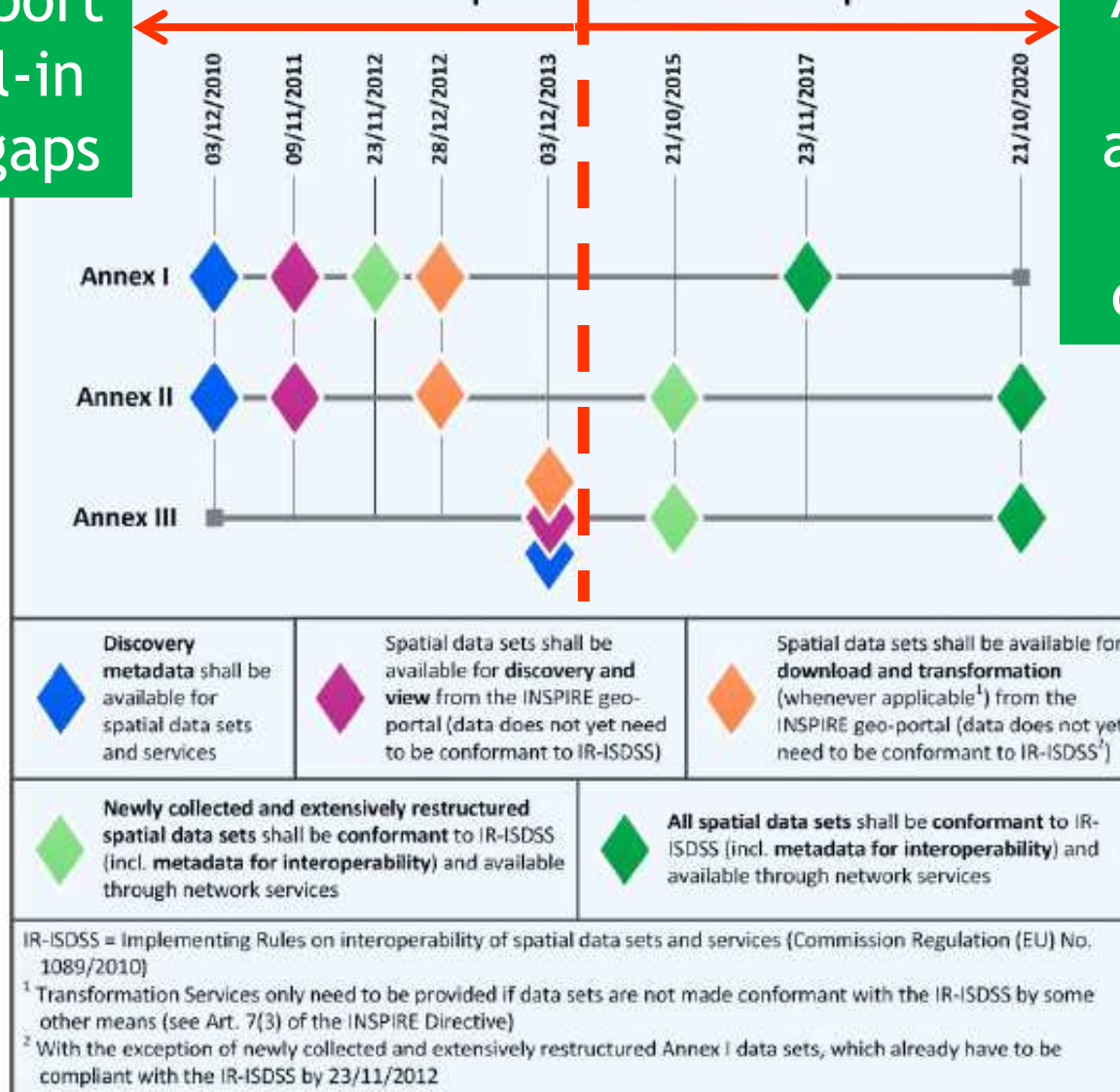
---

Why?



A support  
to fill-in  
past gaps

## INSPIRE Implementation Roadmap



A support  
to  
anticipate  
future  
deadlines

Thank you