

Clustering Workshop
**“A clustering approach to
eENVironmental Services for
advanced applications and capacity
building within INSPIRE and SEIS”**

**Data transformation and
validation**

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

Outline

- Objectives
- Data requirements
- Harmonisation and validation toolkit
- Data harmonisation steps
- Metadata validation
- Datasets validation

Objectives

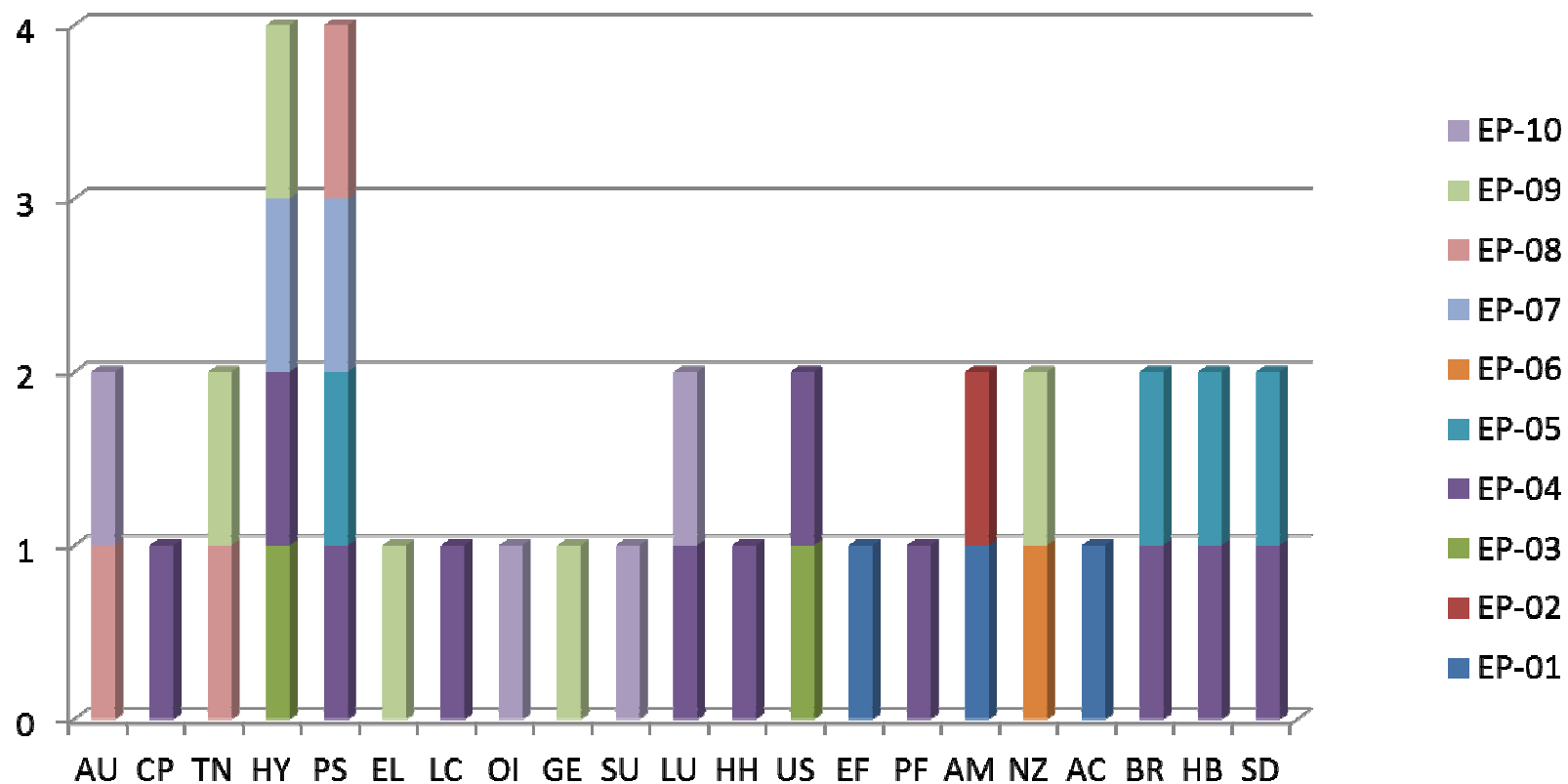
- To deliver an harmonization toolkit and a validation toolkit aiming at supporting the eENVplus, GeoSmartCity and LIFE+IMAGINE stakeholders to transform and validate datasets and metadata
- To make datasets and metadata used by 20+ Pilots and in 30+ Use Cases conformant to requirements set in the selected target models

Data modelling requirements (eENVplus)

- 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 v3.0)
 - GeoSciML 3.2 schema for Geology in specific use case (extending INSPIRE GE v.3.0 as described in the Technical Guidelines)

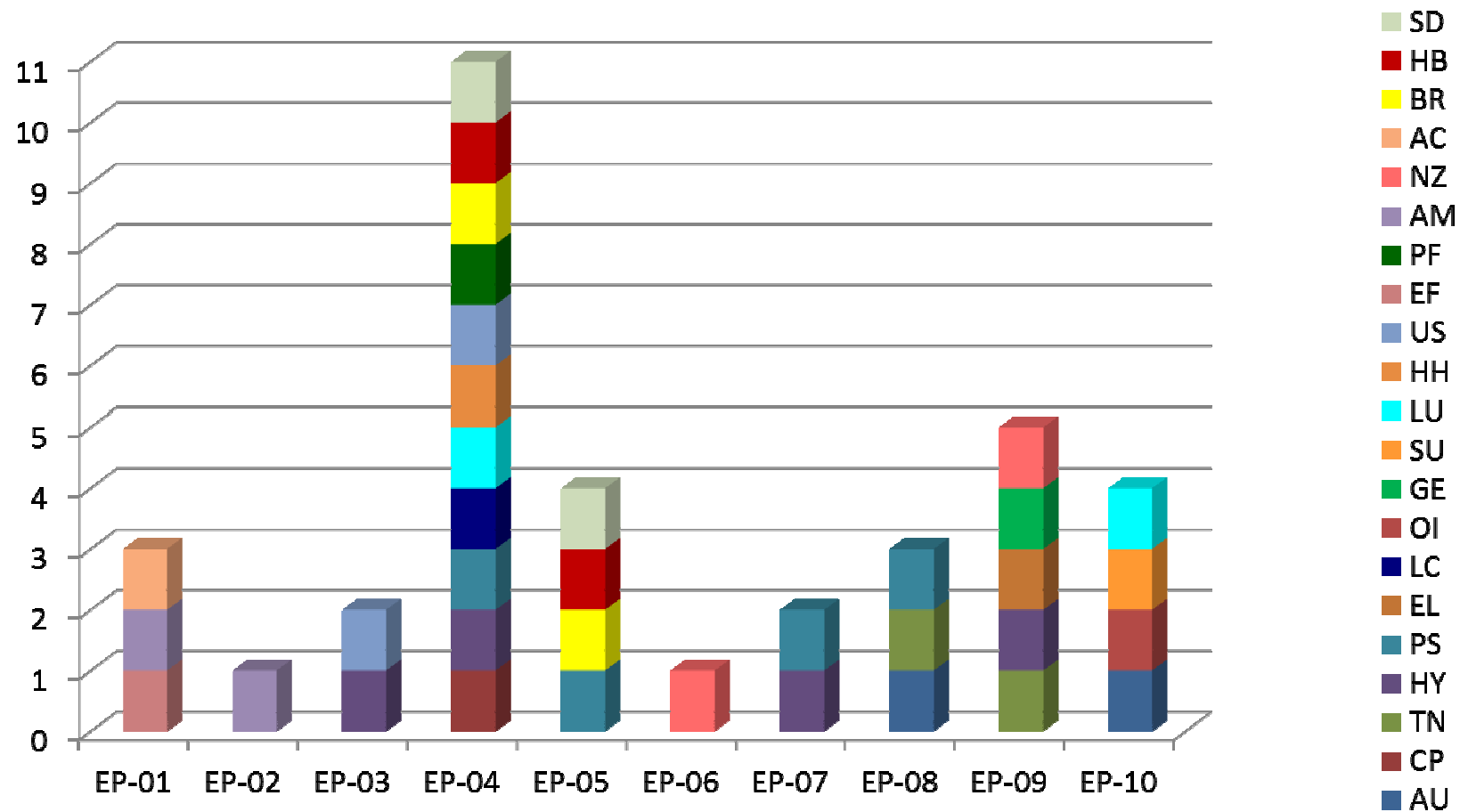
eENVplus Data modelling requirements

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)



D 3.1 – Datasets and metadata harmonization toolkit

Revision: 3.0

Author(s)/Organisation(s):

• Giacomo Martirano, Fabio Vinci and Stefania Morione (EPST)

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):

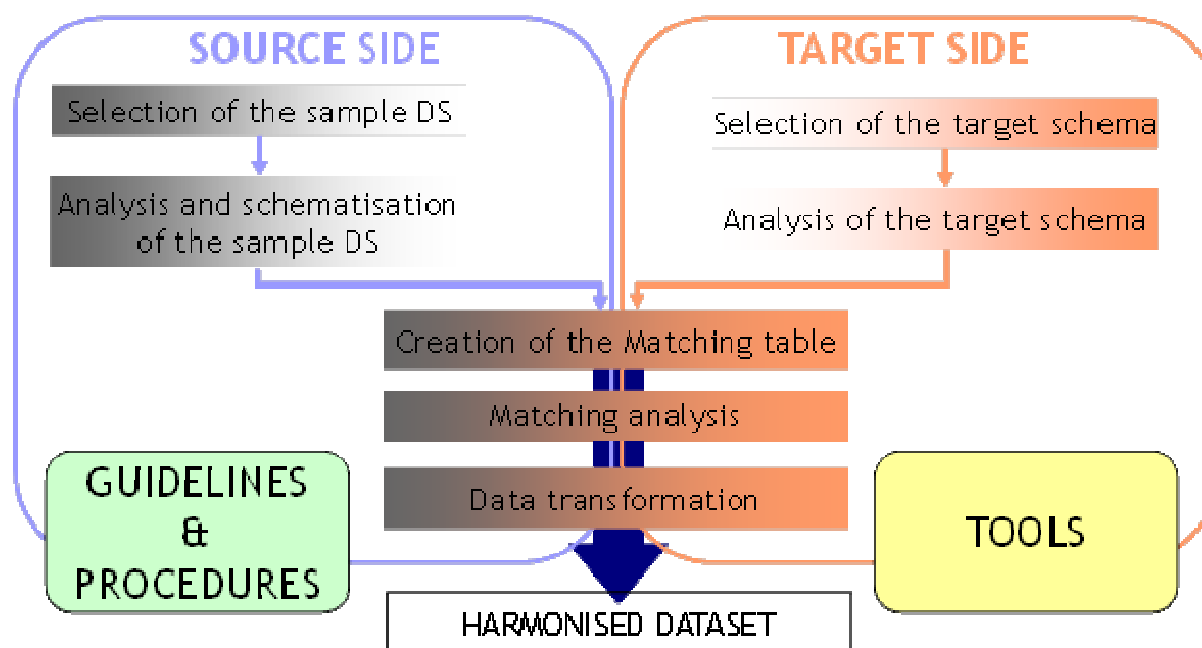
• Giacomo Martirano, Fabio Vinci and Stefania Morione (EPST)

Work package / Task:

WP3 – Harmonization and validation
T3.2 Validation 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	

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_DataSpecification_AU_v3.0.1.pdf - Adobe Acrobat Pro

File Modifica Vista Finestra ?

Crea

1 / 58 125%

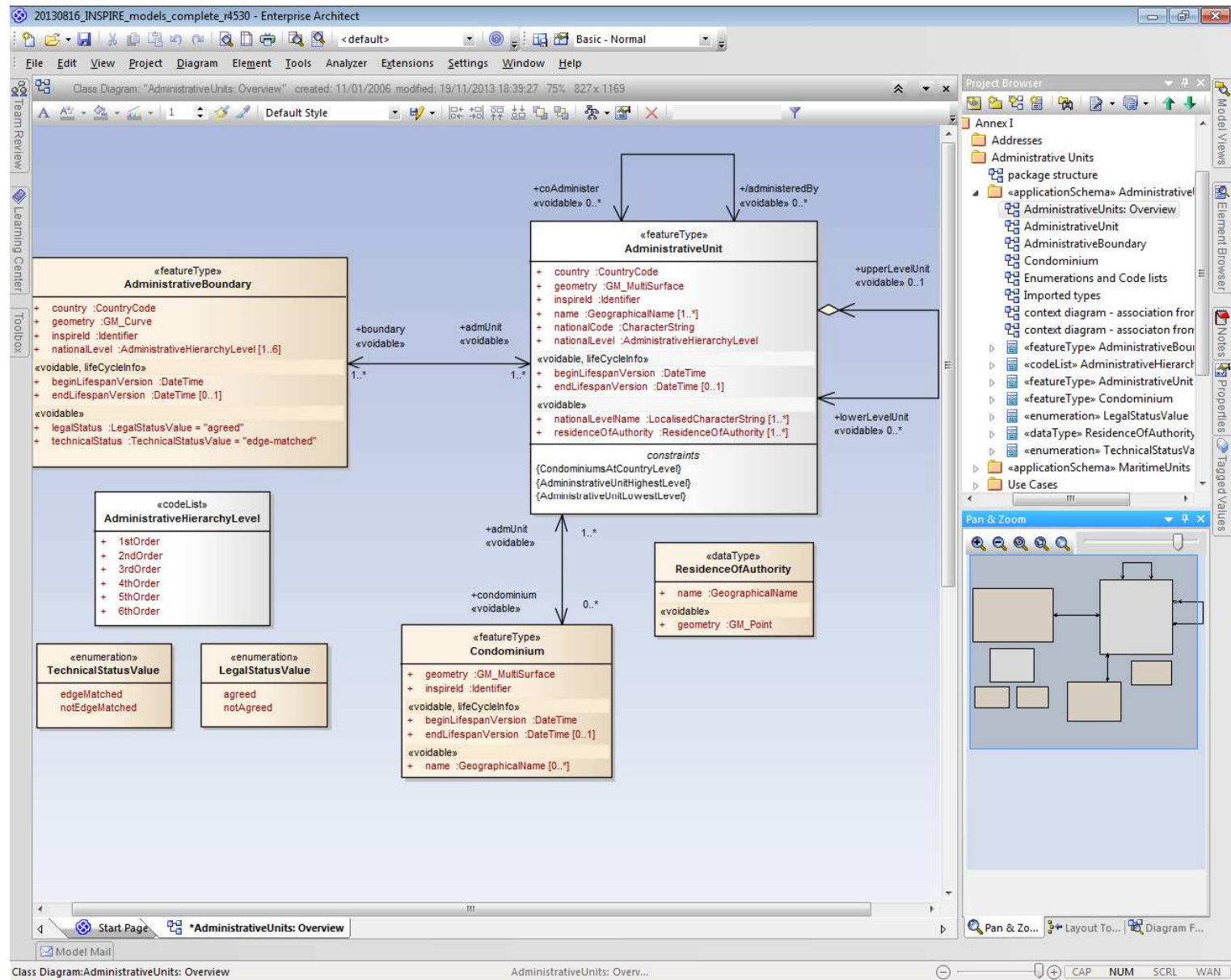
Strumenti Commento Condividi



INSPIRE
Infrastructure for Spatial Information in Europe

D2.8.1.4 INSPIRE Data Specification on Administrative units – Guidelines

Title	D2.8.1.4 INSPIRE Data Specification on <i>Administrative units</i> – Guidelines
Creator	INSPIRE Thematic Working Group Administrative units
Date	2010-04-26
Subject	INSPIRE Data Specification for the spatial data theme <i>Administrative units</i>
Publisher	INSPIRE Thematic Working Group Administrative units
Type	Text
Description	This document describes the INSPIRE Data Specification for the theme <i>Administrative units</i>
Contributor	Members of the INSPIRE Thematic Working Group Administrative units
Format	Portable Document Format (pdf)
Source	
Rights	public
Identifier	INSPIRE_DataSpecification_AU_v3.0.1.pdf
Language	En
Relation	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)
Coverage	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							
		condominiumBoundary	-- Name -- condominium boundary	AdministrativeBoundary	0..*	voidable							
		lowerLevelUnit	-- Name -- lower level unit	AdministrativeUnit	0..*	voidable							
		upperLevelUnit	-- Name -- upper level unit	AdministrativeUnit	0..1	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	voidable
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	voidable
18			geometry	-- Name -- geometry	GM_MultiSurface	1	
19			inspireId	-- Name -- inspire id	Identifier	1	
20			name	-- Name -- name Official language	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

AU_3.0rc3_MT.xls [modalità compatibilità] - Microsoft Excel

File Home Inserisci Layout di pagina Formule Dati Revisione Visualizza Acrobat

Generale Formattazione condizionale Formatta come tabella Stili cella Inserisci Elimina Formato Ordina e filtra Modifica

136

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							
								namespace	Namespaces.	CharacterString	1							
								versionId	The identifier of the version.	CharacterString	0..1	voidable						
		name	-- Name -- name	GeographicalName	1..*				See Geographical name data type									
		nationalCode	-- Name -- national code. The code.	CharacterString	1													
		nationalLevel	-- Name -- national level. Level in the national administrative hierarchy, at which the Member State 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			See ResidenceOfAuthority data type									
		condominium	-- Name -- condominium.	Condominium	0..*	voidable			See condominium feature type									
		boundary	-- Name -- boundary. The administrative boundary between administrative units.	AdministrativeBoundary	1..*	voidable			See Administrativeboundary feature type									
		lowerLevelUnit	-- Name -- lower level unit. Unit.	AdministrativeUnit	0..*	voidable			See AdministrativeUnit feature type									
		upperLevelUnit	-- Name -- upper level unit. Unit.	AdministrativeUnit	0..1	voidable			See AdministrativeUnit feature type									
administeredBy	-- Name -- administered by.	AdministrativeUnit	0..*	voidable			See AdministrativeUnit feature type											
coAdminister	-- Name -- co-administer.	AdministrativeUnit	0..*	voidable			See AdministrativeUnit feature type											
CondominiumsAtC	Association role																	
AdministrativeUnit	No unit at highest level																	
AdministrativeUnitL	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							
								namespace	Namespaces.	CharacterString	1							
						versionId	The identifier of the version.	CharacterString	0..1	voidable								
legalStatus	-- Name -- legal status. Legal status.	LegalStatusValue*	1	voidable														
nationalLevel	-- Name -- national level. The level in the administrative hierarchy.	AdministrativeHierarchyLevel* 1stOrder* 2ndOrder* 3rdOrder* 4thOrder* 5thOrder*	1..6															
technicalStatus	-- Name -- technical status. The technical status.	TechnicalStatusValue*	1	voidable														

Matching Table Data Type

Pronto

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/>)

- 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.

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 "Nessun file selezionato". 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.

eENVplus Metadata harmonization tools

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 *
eu.Italy.Calabria.ArcFuel.Project_FuelClassif

Date *
Date type *
Creation

Unique resource identifier *
Codespace *
eu.Italy.Calabria.ArcFuel_FCM
ArcFuel_FCM (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 *
Epsilon Italia

Electronic mail address *
info@epsilon-italia.it

Role *
Point of contact

Graphic overview

Descriptive keywords

Keyword *
Fuel Load/Characteristic

Thesaurus name *
Title *
GEOSS - Earth Observation Vocabulary, ver

Date *
Date type *
Publication

Descriptive keywords

Keyword *
Land Cover Fuel Classification Map

Descriptive keywords

Keyword *
Land cover

Thesaurus name *
Title *
GEMET - INSPIRE themes, version 1.0

Date *
Date type *
Publication

In attesa di localhost...

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

• 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)

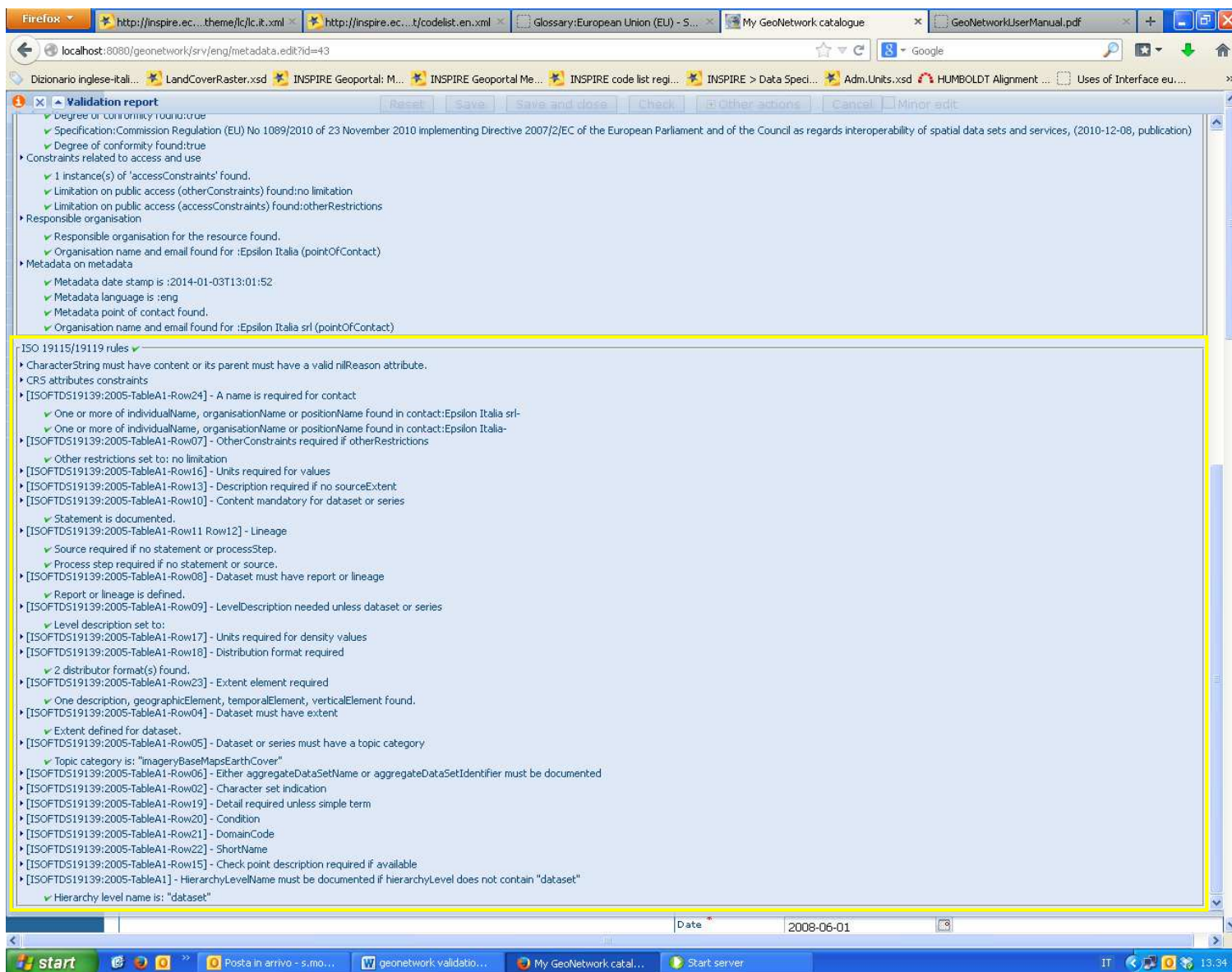
• Metadata on metadata

✓ Metadata date stamp is : 2014-01-03T13:01:52

✓ Metadata language is : eng

✓ Metadata point of contact found.

Date: 2008-06-01



The screenshot displays a web browser window with multiple tabs. The active tab shows a 'Validation report' for a metadata record. The report is structured as follows:

- 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"

The bottom of the browser window shows a taskbar with the Windows Start button and several open applications, including 'Posta in arrivo - s.mo...', 'geonetwork validation...', 'My GeoNetwork catal...', and 'Start server'. The system clock in the bottom right corner indicates the date '2008-06-01' and time '13:34'.

- 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.4.1 Data quality target results test
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.

GO Publisher Desktop

File Edit Tools Help

Project Settings SQL filters Desktop settings WFS settings

Project name: INSPIRE_AU D:\Areashared\Limiti_Ammministrati\INSPIRE_AU.gpp Format: GML 3.2

Database to XML mapping

Name	Enabled	DB type or const value	XML path	Type in XML	Required
Database	☒		base:SpatialDataSet	base:SpatialDataSetType	Yes
id	☒	AU.IT	@gml:id	xs:ID	No
identifier	☒	Column group	base:identifier	base:IdentifierPropertyType	No
metadata	☒	Unknown	base:metadata/@gml:nilReason	gml:nilReasonType	No
COM2011_2	☒	Table	base:member/au:AdministrativeUnit	au:AdministrativeUnitType	No
id	☒	Column group	@gml:id	xs:ID	No
geometry	☒	Column group	au:geometry/gml:MultiSurface	gml:MultiSurfaceType	No
PRO_COM	☒	NUMBER	au:nationalCode	xs:string	Yes
inspireId	☒	Column group	au:inspireId/base:Identifier	base:IdentifierType	Yes
PRO_COM_2	☒	NUMBER	base:localId	xs:string	Yes
namespace	☒	AU.IT.ISTAT.COMUNI	base:namespace	xs:string	Yes
nationalLevel	☒	http://inspire.ec.europa.eu/co...	au:nationalLevel	gml:CodeType	Yes
nationalLevelName	☒	Comune	au:nationalLevelName/gmd:LocalisedCharacterString	gmd:LocalisedCharacterString_Type	Yes
country	☒	Column group	au:country/gmd:Country	gco:CodeListValue_Type	Yes
name	☒	Column group	au:name/gn:GeographicalName	gn:GeographicalNameType	Yes
residenceOfAuthority	☒	Column group	au:residenceOfAuthority	au:(anonymous)	Yes
beginLifespanVersion	☒	2013-11-20T14:12:20	au:beginLifespanVersion	au:(anonymous)	Yes
NUTS	☒	Unknown	au:NUTS/@gml:nilReason	gml:nilReasonType	Yes
upperLevelUnit	☒	Column group	au:upperLevelUnit/@xlink:href	xs:anyURI	No
COM2011BOUNDARY	☒	Table	au:boundary	gml:ReferenceType	No
name_ted	☐	Column group	au:name/gn:GeographicalName	gn:GeographicalNameType	No
COD_REG	☐	NUMBER	-	au:AdministrativeUnitType	No
SHAPE LENG	☐	NUMBER	-	au:AdministrativeUnitType	No
SHAPE AREA	☐	NUMBER	-	au:AdministrativeUnitType	No
PROV2011	☐	Table	base:member/au:AdministrativeUnit	au:AdministrativeUnitType	No

Preview XML Preview Schema Execution View

```
<?xml version="1.0" encoding="UTF-8"?><!--Created by GO Publisher Desktop 3.0.0-->
<base:identifier>
  <base:Identifier>
    <base:localId>ISTAT</base:localId>
    <base:namespace>AU.IT</base:namespace>
  </base:Identifier>
</base:identifier>
<base:metadata nilReason="Unknown" xsi:nil="true"/>
<base:member>
  <au:AdministrativeUnit gml:id="Comune_22002">
    <au:geometry>
      <gml:MultiSurface srsName="urn:ogc:def:crs:EPSG::3044">MS_22002<gml:su
      <gml:Polygon gml:id="LOCAL_ID_0">
        <gml:exterior>
          <gml:LinearRing>
            <gml:posList srsDimension="2" count="233">670451.57233 51137
```

Error [Line: 1, Column: 1243]cvc-elt.1: Cannot find the declaration of element 'base:SpatialDataSet'.

Error [Line: 12, Column: 64]cvc-complex-type.4: Attribute 'id' must appear on element 'gml:MultiSurface'.

Error [Line: 21, Column: 28]cvc-complex-type.2.3: Element 'gml:MultiSurface' cannot have character [childr

Error [Line: 60, Column: 29]cvc-complex-type.2.4.b: The content of element 'au:AdministrativeUnit' is not co

Preview Sample Size: 3 Update Preview Validate Preview Rete 4 Accesso a Internet

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

Thank you

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