

# Croatian national metadata profile

Dr. sc. Željko Hećimović

State Geodetic Administration, Zagreb  
zeljko.hecimovic@dgu.hr



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## Terms and Definitions

- **metadata:** data about data
- **metadata element:** individual item of metadata relating to a data resource
- **dataset series:** collection of datasets sharing the same product specification



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Metadata are describing the data and they have to answer on questions related to data.

- Who created the data?
- What is the content of the data?
- When was the data created and updated?
- Where are the data in space?
- How was the data developed?
- Why was the data developed?
- What data are accessible?
- What is the quality of data?
- How is distribution of data made?
- ...



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## Croatian national metadata profile



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### ***PROJECT: Service Provision for the Support to the National Spatial Data Infrastructure Development***

- SGA project – World Bank.
- *Activity #3 – Croatian national metadata profile*
- Consultants: Dr. Andreas Wytzisk (*Con terra*), **Kristian Senkler (*Con terra*)** and Graham Vowles (Bloxstore) .
- Support of the Technical Standards Working Group of the NSDI.
- Two Metadata Workshops.



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### The referenced documents essential for the application of this document:

- **EN ISO 19115:2005**, Geographic information - Metadata 1
- **ISO 19115/Cor.1:2006**, Geographic information – Metadata, Technical Corrigendum 1
- **ISO 19119:2005**, Geographic information - Services
- **ISO 19119:2005/Amd 1:2008**, Extensions of the service metadata model
- **EN ISO 19108:2005**, Geographic information – Temporal Schema 2
- **ISO 639-2**, Codes for the representation of names of languages - Part 2: Alpha-3 coded a control
- **ISO 8601**, Data elements and interchange formats - Information interchange - Representation of dates and times
- **ISO/TS 19139:2007**, Geographic information - Metadata – XML Schema Implementation
- **CSW2 AP ISO**, OpenGIS Catalogue Services Specification 2.0.2 - ISO Metadata Application Profile, Version 1.0.0, OGC 07-045, 2007
- **Croatian Metadata Implementing Rules**, Decision on establishing the criteria and standards for data exchange, Ref.-No.: 5030120-10-1, August 2010.
- **INSPIRE Metadata Implementing Rules**: Technical Guidelines based on EN ISO 19115 and EN ISO 19119, Version 1.2
- **IETF RFC 1738**: Uniform Resource Locators (URL), December 1994



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## Elements of the Croatian national metadata profile



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Metadata are made for resource types:

- spatial data sets,
- spatial data set series,
- services.
- National metadata profile contains metadata that should be implemented in all data that will be included in NSDI.
- National metadata profile could be used as fundament by development of metadata profiles of other thematic data sets.
- Too many metadata could demand new data collections and additional costs.
- Too few metadata could lead to not sufficient data description and problems during data discovery and use.



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### Metadata elements definitions – part 1/2

Element name	Definition
<b>1. IDENTIFICATION</b>	
Resource title	This is a characteristic, and often unique, name by which the resource is known.
Resource abstract	This is a brief narrative summary of the content of the resource.
Resource type	This is the type of resource being described by the metadata.
Resource locator	The resource locator defines the link(s) to the resource and/or the link to additional information about the resource.
Unique resource identifier	A value uniquely identifying the resource.
Coupled resource	If the resource is a spatial data service, this metadata element identifies, where relevant, the target spatial data set(s) of the service through their unique resource identifiers (URI).
Resource language	The language(s) used within the resource.
<b>2. SPATIAL DATA AND SERVICES CLASSIFICATION</b>	
Topic category	The topic category is a high-level classification scheme to assist in the grouping and topic-based search of available spatial data resources.
Spatial data services	Services of spatial data.
<b>3. KEYWORDS</b>	
Keyword value	The keyword value is a commonly used word, formalized word or phrase used to describe the subject.
Originating controlled vocabulary	The name of a formally registered thesaurus or a similar authoritative source of keywords.
<b>4. GEOGRAPHIC BOUNDING BOX</b>	
Geographic bounding box	This is the extent of the resource in the geographic space. The extent shall be expressed by westbound and eastbound longitudes, and southbound and northbound latitudes in decimal degrees, with a precision of at least two decimals.
<b>5. TEMPORAL REFERENCE</b>	
Temporal extent	The temporal extent defines the time period covered by the content of the resource.
Reference date	A reference date for the resource being described.
Frequency of update	Frequency with which modifications are made to the resource
Date of creation	Date of creation of the source.



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## Metadata elements definitions – part 2/2

Element name	Definition
<b>6. QUALITY</b>	
Lineage	This is a statement on process history and/or overall quality of the spatial data set.
Spatial resolution	Spatial resolution refers to the level of detail of the data set.
<b>7. CONFORMITY</b>	
Conformity – specification	The degree of conformity with the product specification or user requirement against which the data is being evaluated.
Conformity – degree	The degree of conformity with the product specification or user requirement against which the data is being evaluated. The degree is the indication of the conformance result.
<b>8. CONDITIONS APPLYING TO ACCESS AND USE</b>	
Conditions applying to access and use	Defines the conditions for access and use of spatial data sets and services.
Limitations on public access	Provides information on the type and the reasons for limited public access to spatial data sets and spatial data services.
<b>9. RESPONSIBLE PARTY</b>	
Responsible party	This is the description of the organization responsible for the establishment, management, maintenance and distribution of the resource.
Responsible party role	This is the role of the responsible organization.
<b>10. METADATA ABOUT METADATA</b>	
Metadata point of contact	This is the description of the organization responsible for the creation and maintenance of the metadata.
Metadata date	The date which specifies when the metadata record was created or updated.
Metadata language	This is the language in which the metadata elements are expressed.



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## Spatial data services

SERVICE TYPE LIST	
Discovery	INSPIRE Discovery Service
View	INSPIRE View Service
Download	INSPIRE Download Service
Transformation	INSPIRE Transformation Service
Invoke	INSPIRE Invoke Spatial Data Service
Other services	Other Service



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## Elements of the Croatian national metadata profile

### Spatial data sets and series

Ime elementa (Element name)	Obligation	Cardinality
Ime izvora (Resource title)	M	1
Sažetak o izvoru (Resource abstract)	M	1
Vrsta izvora (Resource type)	M	1
Adresa izvora podataka (Resource locator)	C	N
Jedinstvena oznaka izvora (Unique resource identifier)	M	1
Prostorni referentni sustav (Spatial reference system)	M	1
Format podataka (Data format)	M	M
Učestalost ažuriranja (Frequency of update)	M	1
Jezik izvora (Resource language)	C	N
Tematska kategorija (Topic category)	M	N
Ključna riječ (Keyword)	M	N
Geografski granični pravokutnik – zapad (West bound longitude)	M	N
Geografski granični pravokutnik – istok (East bound longitude)	M	N
Geografski granični pravokutnik - jug (South bound latitude)	M	N
Geografski granični pravokutnik - sjever (North bound latitude)	M	N
Vremenski obuhvat (Temporal extent)	M	1
Datum objave (Reference date)	M	N
Podrijetlo (Lineage)	M	1
Prostorna rezolucija – udaljenost (Spatial Resolution – distance)	C	1
Prostorna rezolucija - ekvivalentno mjerilo (Spatial Resolution – equivalent scale)	C	1
Sukladnost (Conformity)	M	N
Uvjeti za pristup i korištenje (Conditions for access and use)	M	N
Ograničenja javnog pristupa (Limitations on public access)	M	N
Odgovorna organizacija (Responsible party)	M	N
Uloga odgovorne organizacije (Responsible party role)	M	N
Kontaktna točka za metapodatke (Metadata point of contact)	M	N
Datum metapodataka (Metadata date)	M	1
Jezik metapodataka (Metadata language)	M	1

### Spatial data services

Ime elementa (Element name)	Obligation	Cardinality
Ime izvora (Resource title)	M	1
Sažetak o izvoru (Resource abstract)	M	1
Vrsta izvora (Resource type)	M	1
Adresa izvora podataka (Resource locator)	C	N
Prostorni referentni sustav (Spatial reference system)	C	1
Ključna riječ (Keyword)	M	N
Geografski granični pravokutnik – zapad (West bound longitude)	M	N
Geografski granični pravokutnik – istok (East bound longitude)	M	N
Geografski granični pravokutnik - jug (South bound latitude)	M	N
Geografski granični pravokutnik - sjever (North bound latitude)	M	N
Vremenski obuhvat (Temporal extent)	C	1
Datum objave (Reference date)	M	N
Podrijetlo (Lineage)	M	1
Prostorna rezolucija – udaljenost (Spatial Resolution – distance)	C	1
Prostorna rezolucija - ekvivalentno mjerilo (Spatial Resolution – equivalent scale)	C	1
Sukladnost (Conformity)	M	N
Uvjeti za pristup i korištenje (Conditions for access and use)	M	N
Ograničenja javnog pristupa (Limitations on public access)	M	N
Odgovorna organizacija (Responsible party)	M	N
Kontaktna točka za metapodatke (Metadata point of contact)	M	N
Datum metapodataka (Metadata date)	M	1
Jezik metapodataka (Metadata language)	M	1
Vrsta usluga prostornih podataka (Spatial data service type)	M	1
Upareni (kombinirani) izvori (Coupled Resource)	C	N

## METADATA ELEMENT DETAILS

<b>Element number</b>	the consecutive number of the element
<b>Element name</b>	the name of the element
<b>Element definition</b>	a formal definition of the element
<b>INSPIRE equivalent</b>	if applicable the corresponding INSPIRE metadata element is named by number and name
<b>Comparison with INSPIRE</b>	indicates if elements are equal or different in comparison with INSPIRE
<b>ISO 19115/9 equivalent</b>	the corresponding ISO 19115 or ISO 19119 element is named
<b>Comparison with ISO</b>	indicates if elements are equal or different in comparison with ISO 19115/19
<b>XPath</b>	an XPath expression indicating the metadata element within the ISO 19115 / ISO 19119 UML model
<b>Obligation</b>	whether the element is mandatory or conditional
<b>Cardinality</b>	whether the element is single-valued or can have multiple values
<b>Data type</b>	the data type of the entry (character string, number, Boolean or other)
<b>Domain</b>	the allowable set of values
<b>Example</b>	a common example for the element value(s)
<b>Implementation instructions</b>	any comment or hint that shall be considered when implementing this element

### Example: "Resource title"

Element number	1
Element name	Resource title
Element definition	This a characteristic, and often unique, name by which the resource is known.
INSPIRE equivalent	Resource title
Comparison with INSPIRE	equivalent
ISO 19115/9 equivalent	[360] title
Comparison with ISO	equivalent
XPath	identificationInfo[1]/*/citation/*/title
Obligation	mandatory
Cardinality	single
Data type	Character String
Domain	Free text
Example	Topographic map of Croatia
Implementation instructions	None



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## Metadata comparison (ISO/INSPIRE/CRO/UK)



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## Metadata comparison ISO/INSPIRE/CRO/UK – part 1/2

Nr.	INSPIRE (ISO 19115 and ISO 19119)	ISO 19115 Core	Croatia			UK - GEMIN v.2.1		
	Element name	Element name	Element name	Obliga- tion	Cardina- lity	Element name	Obliga- tion	Cardina- lity
1	Resource Title	Dataset title	Resource title	M	1	Title	M	1
2	Temporal Reference	Dataset reference date	Reference date	M	N	Dataset reference date	M	N
3	Responsible organization	Dataset responsible party	Responsible party Responsible party role	M M	N N	Responsible organization	M	N
4	Geographic Bounding Box	Geographic location of the dataset	West bound longitude East bound longitude South bound latitude North bound latitude	M M M M	N N N N	West bound longitude East bound longitude South bound latitude North bound latitude	M M M M	1 1 1 1
5	Resource Language	Dataset language	Resource language	C	N	Dataset language	C	N
6	-	Dataset character set	-	-	-	-	-	-
7	Topic Category	Dataset topic category	Topic category	M	N	Topic category	M	N
8	Spatial Resolution	Spatial resolution of the dataset	Spatial Resolution – distance Spatial Resolution – equivalent scale	C C	1 1	Spatial Resolution – distance Spatial Resolution – equivalent scale	C O	1 1
9	Resource abstract	Abstract describing the dataset	Resource Abstract	M	1	Abstract	M	1
10	-	Distribution format	-	-	-	-	-	-
11	Temporal extent	Additional extent information for the dataset (vertical and temporal)	Temporal extent	M	1	Temporal extent	M	1
12	-	Spatial representation type	-	-	-	-	-	-
13	-	Reference system	Spatial reference system	M	1	Spatial reference system	M	1
14	Lineage	Lineage	Lineage	M	1	Lineage	M	1
15	Resource Locator	On-line resource	Resource locator	C	N	Resource locator	C	N

Nr.	INSPIRE (ISO 19115 and ISO 19119)	ISO 19115 Core	Croatia			UK - GEMIN v.2.1		
	Element name	Element name	Element name	Obliga- tion	Cardina- lity	Element name	Obliga- tion	Cardina- lity
16	-	Metadata file identifier	-	-	-	-	-	-
17	-	Metadata standard name	-	-	-	-	-	-
18	-	Metadata standard version	-	-	-	-	-	-
19	Metadata Language	Metadata language	Metadata language	M	1	Metadata language	C	1
20	-	Metadata character set	-	-	-	-	-	-
21	Metadata point of contact	Metadata point of contact	Metadata point of contact	M	N	Metadata point of contact	M	N
22	Metadata Date	Metadata date stamp	Metadata date	M	1	Metadata date	M	1
23	Resource Type	-	Resource type	M	1	Resource type	M	1
24	Unique Resource Identifier	-	Unique resource identifier	M	1	Unique resource identifier	M	1
25	Keyword	-	Keyword	M	N	Keyword	M	N
26	Conformity	-	Conformity	M	N	Conformity	C	N
27	Conditions for access and use	-	Conditions for access and use	M	N	Use constraints	M	N
28	Limitations on public access	-	Limitations on public access	M	N	Limitations on public access	M	N
33	-	-	-	-	-	Alternative title	O	N
34	-	-	-	-	-	Extent	O	N
35	-	-	-	-	-	Vertical extent information	O	1
36	-	-	Data format	M	N	Data format	O	N
37	-	-	Frequency of update	M	1	Frequency of update	M	1
38	-	-	-	-	-	Additional information source	O	1



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## Public presentation of the Croatian national metadata profile

- Croatian national metadata profile, draft v. 0,6.
- NSDI Internet page :

<http://www.nipp.hr> – NEWS AND EVENTS



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Suggestions, comments and remarks about Croatian national metadata profile could be sent to:

**e-mail:** [infonipp@dgu.hr](mailto:infonipp@dgu.hr)

or

“Contacts” on <http://www.nipp.hr>)

until **30. Sep. 2011.**



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## Most Common Metadata Errors



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## Most Common Metadata Errors

- Defining data set too finely or too broadly.
- Developing metadata at the end of the data development process. (Metadata should be planned and developed starting with planning of collecting the data.)
- Taking the minimalist approach (Limiting to the minimum metadata will reduce the value of your data.)
- Using incorrect State Plane Coordinate System.
- Misunderstanding resolution.
- Not developing metadata. (If the data do not have metadata, their value is significantly reduced.)



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### **Conclusions – next activities**

- Croatian national metadata profile is developed after ISO/INSPIRE/ Croatian Metadata Implementing Rules.
- Croatian national metadata profile is extension of INSPIRE core metadata set.
- Development of the Croatian national metadata profile is in final stage – public discussion – suggestions, comments and remarks could be sent to: e-mail: [infonipp@dgu.hr](mailto:infonipp@dgu.hr) or “Contacts” on <http://www.nipp.hr> until 30. Sep. 2011.
- Implementation of national metadata profile in metadata editor and validator – discovery and view services.



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**The more you know, the less you understand.**

Lao-Tse

**Thank you for your attention!**



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