

INSPIRE metadata and DCAT-AP: Mapping summary

(Version 0.1, 12 June 2014)

1 Status of this document

This is the preliminary result of an exercise carried out at the Joint Research Centre of the European Commission (Unit H.6 - Digital Earth and Reference Data) concerning the alignment of INSPIRE metadata with DCAT-AP (DCAT application profile for data portals in Europe) [DCAT-AP]. The mapping summary included here is unstable, and can change also dramatically, before the release of the final version of the study.

Public comments should be submitted to the INSPIRE Forum:

<http://inspire-forum.jrc.ec.europa.eu/pg/forum/topic/29902>

2 Disclaimer

This exercise is carried out outside the official framework of INSPIRE, and it must not be regarded as stating an official position of the European Commission and/or of INSPIRE.

3 Reference vocabularies & code lists / thesauri

Used namespaces

Prefix	Namespace URI	Schema & documentation URL
adms	http://www.w3.org/ns/adms#	Asset Description Metadata Schema (ADMS) http://www.w3.org/TR/2013/NOTE-vocab-adms-20130801/
cnt	http://www.w3.org/2011/content#	Representing Content in RDF 1.0 http://www.w3.org/TR/2011/WD-Content-in-RDF10-20110510/
dc	http://purl.org/dc/elements/1.1/	Dublin Core Metadata Element Set, Version 1.1 http://dublincore.org/documents/2012/06/14/dces/
dcat	http://www.w3.org/ns/dcat#	Data Catalog Vocabulary (DCAT) http://www.w3.org/TR/2014/REC-vocab-dcat-20140116/
dct	http://purl.org/dc/terms/	DCMI Metadata Terms http://dublincore.org/documents/2012/06/14/dcmi-terms/
earl	http://www.w3.org/ns/earl#	Evaluation and Report Language (EARL) 1.0 http://www.w3.org/TR/2011/WD-EARL10-Schema-20110510/
foaf	http://xmlns.com/foaf/0.1/	FOAF Vocabulary http://xmlns.com/foaf/spec/20140114.html
locn	http://www.w3.org/ns/locn#	ISA Programme Core Location Vocabulary http://www.w3.org/ns/locn

Used namespaces

Prefix	Namespace URI	Schema & documentation URL
prov	http://www.w3.org/ns/prov#	PROV-O: The PROV Ontology http://www.w3.org/TR/2013/REC-prov-o-20130430/
rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#	Resource Description Framework (RDF): Concepts and Abstract Syntax http://www.w3.org/TR/2004/REC-rdf-concepts-20040210/
rdfs	http://www.w3.org/2000/01/rdf-schema#	RDF Vocabulary Description Language 1.0: RDF Schema http://www.w3.org/TR/2004/REC-rdf-schema-20040210/
schema	http://schema.org/	schema.org http://schema.org/
skos	http://www.w3.org/2004/02/skos/core#	SKOS Simple Knowledge Organization System - Reference http://www.w3.org/TR/2009/REC-skos-reference-20090818/
vcard	http://www.w3.org/2006/vcard/ns#	vCard Ontology http://www.w3.org/TR/2013/WD-vcard-rdf-20130924/
xsd	http://www.w3.org/2001/XMLSchema#	XML Schema Part 2: Datatypes Second Edition http://www.w3.org/TR/2004/REC-xsd-20041028/

Reference code lists for metadata elements

Legenda: Column “Reference” specifies the part and section of the Annex to [INSPIRE-MD-REG] where such elements are defined. The two only exceptions concern metadata elements “Keyword denoting one of the INSPIRE spatial data themes” and “Encoding”, which are defined in [INSPIRE-D&S-REG].

Reference	Metadata elements	Code list URI	Code lists	Status
Part B §10.3	Metadata language	http://publications.europa.eu/resource/authority/language	Language register operated by the Metadata Registry of the Publications Office of the EU [MDR-LANG]	testing
Part B §1.7	Resource language			
Part D §1	Resource type	http://inspire.ec.europa.eu/codelist/ResourceType	Register operated by the INSPIRE Registry for resource types defined in ISO 19139	stable
Part D §3	Service type	http://inspire.ec.europa.eu/codelist/SpatialDataServiceType	Register operated by the INSPIRE Registry for service types, as defined in [INSPIRE-MD-REG]	stable
Part D §2	Topic category	http://inspire.ec.europa.eu/codelist/TopicCategory	Register operated by the INSPIRE Registry for topic categories defined in ISO 19115	stable
Annex I, II, III to [INSPIRE-D&S-REG]	Keyword denoting one of the INSPIRE spatial data themes	http://inspire.ec.europa.eu/theme	INSPIRE spatial data theme register operated by the INSPIRE Registry	stable

Reference code lists for metadata elements

Legenda: Column “Reference” specifies the part and section of the Annex to [INSPIRE-MD-REG] where such elements are defined. The two only exceptions concern metadata elements “Keyword denoting one of the INSPIRE spatial data themes” and “Encoding”, which are defined in [INSPIRE-D&S-REG].

Reference	Metadata elements	Code list URI	Code lists	Status
Part D §4	Keyword denoting one of the spatial data service categories	http://inspire.ec.europa.eu/codelist/SpatialDataServiceCategory	Register operated by the INSPIRE Registry for spatial data service categories defined in ISO 19119	stable
Part D §5	Degree of conformity	http://inspire.ec.europa.eu/codelist/DegreeOfConformity	Register operated by the INSPIRE Registry for degrees of conformity, as defined in [INSPIRE-MD-REG]	stable
Part D §6	Responsible party role	http://inspire.ec.europa.eu/codelist/ResponsiblePartyRole	Register operated by the INSPIRE Registry for responsible party roles, as defined in [INSPIRE-MD-REG]	stable
Article 13 of [INSPIRE-D&S-REG]	Encoding	http://inspire.ec.europa.eu/media-types	Register of media types used for datasets in INSPIRE download services	stable
		http://publications.europa.eu/resource/authority/file-type	File type register operated by the Metadata Registry of the Publications Office of the EU [MDR-FT]	testing

4 Mapping summary

Metadata on metadata for INSPIRE data sets, data set series, and services

Metadata elements	Proposed mappings		Mapping status
	Property and/or attribute	Range	
Metadata point of contact	dcat:contactPoint	vcard:kind	Stable
Metadata date	dct:modified	xsd:date	testing
Metadata language	dct:language	dct:LinguisticSystem	stable

Elements and mappings common to INSPIRE metadata for data sets, data set series, and services

Legenda: As a rule, the domain of the proposed mappings is either `dcat:Dataset` (when the element is used for datasets and series) or `dcat:Catalog` (when the element is used for services). However, “starred” elements – i.e., elements whose name is preceded by an asterisk (“*”) – are those having as domain either `dcat:Distribution` (when the element is used for datasets and series) or `dcat:Catalog` (when the element is used for services).

Metadata elements		Proposed mappings		Mapping status
		Property and/or attribute	Range	
Resource title		<code>dct:title</code>	<code>rdf:PlainLiteral</code>	stable
Resource abstract		<code>dct:description</code>	<code>rdf:PlainLiteral</code>	stable
Resource type	Data set	<code>rdf:type</code>	<code>dcat:Dataset</code>	stable
		<code>dct:type</code>	<code>skos:Concept</code>	
	Data set series	<code>rdf:type</code>	<code>dcat:Dataset</code>	
		<code>dct:type</code>	<code>skos:Concept</code>	
	Service	<code>rdf:type</code>	<code>dcat:Catalog</code>	
		<code>dct:type</code>	<code>skos:Concept</code>	
Geographic bounding box		<code>dct:spatial</code>	<code>dct:Location</code>	stable
Temporal reference	Temporal extent	<code>dct:temporal</code>	<code>dct:PeriodOfTime</code>	stable
	Date of publication	<code>dct:issued</code>	<code>xsd:date</code>	stable
	Date of last revision	<code>dct:modified</code>	<code>xsd:date</code>	stable
	Date of creation	<code>dct:created</code>	<code>xsd:date</code>	stable
*Spatial resolution		<i>No candidate available</i>	<i>No candidate available</i>	pending
Conformity	Conformant	<code>dct:conformsTo</code>	<code>dct:Standard</code>	stable
	Not conformant	<code>wdrs:describedby</code>	<code>earl:Assertion</code>	testing
	Not evaluated			
*Conditions for access and use		<code>dct:rights</code>	<code>dct:RightsStatement</code>	testing
*Limitations on public access		<code>dct:accessRights</code>	<code>dct:RightsStatement</code>	testing

Elements and mappings common to INSPIRE metadata for data sets, data set series, and services

Legenda: As a rule, the domain of the proposed mappings is either `dcat:Dataset` (when the element is used for datasets and series) or `dcat:Catalog` (when the element is used for services). However, “starred” elements – i.e., elements whose name is preceded by an asterisk (“*”) – are those having as domain either `dcat:Distribution` (when the element is used for datasets and series) or `dcat:Catalog` (when the element is used for services).

Metadata elements		Proposed mappings		Mapping status
		Property and/or attribute	Range	
Responsible organisation	<i>Any role</i>	<code>prov:qualifiedAttribution</code>	<code>prov:Attribution</code>	testing
	Resource provider			
	Custodian			
	Owner	<code>dct:rightsHolder</code>	<code>foaf:Agent</code>	stable
	User			
	Distributor			
	Originator	<code>dct:creator</code>	<code>foaf:Agent</code>	stable
	Point of contact	<code>dcat:contactPoint</code>	<code>vcard:Kind</code>	stable
	Principal investigator			
	Processor			
	Publisher	<code>dct:publisher</code>	<code>foaf:Agent</code>	stable
	Author			

Elements and mapping specific to INSPIRE metadata for data sets and data set series

Legenda: As a rule, the domain of the proposed mappings is `dcat:Dataset`. However, “starred” elements – i.e., elements whose name is preceded by an asterisk (“*”) – are those having as domain `dcat:Distribution`.

Metadata elements		Proposed mappings		Mapping status
		Property and/or attribute	Range	
Resource locator	<code>dcat:landingPage</code>	<code>foaf:Document</code>	stable	
Unique resource identifier	<code>dct:identifier</code>	<code>rdfs:Literal</code>	testing	
Resource language	<code>dct:language</code>	<code>dct:LinguisticSystem</code>	stable	
Topic category	<code>dct:subject</code>	<code>skos:Concept</code>	unstable	
Keyword	<code>dcat:theme</code>	<code>skos:Concept</code>	stable	
	<code>dcat:keyword</code>	<code>rdfs:Literal</code>	stable	
Lineage	<code>dct:provenance</code>	<code>dct:ProvenanceStatement</code>	unstable	
*Coordinate reference system	<i>No candidate available</i>	<i>No candidate available</i>	pending	
*Temporal reference system	<i>No candidate available</i>	<i>No candidate available</i>	pending	

Elements and mapping specific to INSPIRE metadata for data sets and data set series

Legenda: As a rule, the domain of the proposed mappings is `dc:Dataset`. However, “starred” elements - i.e., elements whose name is preceded by an asterisk (“*”) - are those having as domain `dc:Distribution`.

Metadata elements	Proposed mappings		Mapping status
	Property and/or attribute	Range	
*Encoding	<code>dc:mediaType</code>	<code>dct:MediaTypeOrExtent</code>	testing
	<code>dct:format</code>		testing
*Character encoding	<code>cnt:characterEncoding</code>	<code>rdfs:Literal</code>	
*Spatial representation type	<i>No candidate available</i>	<i>No candidate available</i>	pending
*Data quality - Logical consistency - Topological consistency	<i>No candidate available</i>	<i>No candidate available</i>	pending

Metadata elements and mappings specific to INSPIRE services

Legenda: The domain of the proposed mappings is always `dc:Catalog`.

Metadata elements	Proposed mappings		Mapping status
	Property and/or attribute	Range	
Resource locator	<code>foaf:homepage</code>	<code>foaf:Document</code>	testing
Coupled resource	<code>dc:dataset</code>	<code>dc:Dataset</code>	stable
Spatial data service type	<code>dct:type</code>	<code>skos:Concept</code>	testing
Keyword	<code>dct:type</code>	<code>skos:Concept</code>	testing
	<code>dct:subject</code>	<code>skos:Concept</code>	testing
	<code>dc:subject</code>	<code>rdfs:Literal</code>	testing
Spatial data service category	<code>dct:type</code>	<code>skos:Concept</code>	testing

5 Example of INSPIRE metadata transformed according to the proposed mappings

Example of a Turtle representation of an INSPIRE metadata record (series)

```

@prefix cnt: <http://www.w3.org/2011/content#> .
@prefix dc: <http://purl.org/dc/elements/1.1/> .
@prefix dcat: <http://www.w3.org/ns/dcat#> .
@prefix dct: <http://purl.org/dc/terms/> .
@prefix dcterms: <http://purl.org/dc/terms/> .
@prefix earl: <http://www.w3.org/ns/earl#> .
@prefix foaf: <http://xmlns.com/foaf/0.1/> .
@prefix locn: <http://w3.org/ns/locn#> .
@prefix ogc: <http://www.opengis.net/rdf#> .
@prefix prov: <http://www.w3.org/ns/prov#> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix schema: <http://schema.org/> .
@prefix skos: <http://www.w3.org/2004/02/skos/core#> .

```

Example of a Turtle representation of an INSPIRE metadata record (series)

```
@prefix vcard: <http://www.w3.org/2006/vcard/ns#> .
@prefix wdrs: <http://www.w3.org/2007/05/powder-s#> .
@prefix wdsr: <http://www.w3.org/2007/05/powder-s#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

[] a dcat:Dataset ;
  dct:conformsTo <http://inspire.ec.europa.eu/codelist/DegreeOfConformity/conformant>
  ;
  dct:created "2010-03-01"^^xsd:date ;
  dct:description "Pan-European Forest / Non Forest Map with target year 2006, Data
Source: Landsat ETM+ and Corine Land Cover 2006, Classes: forest, non-forest,
clouds/snow, no data; Method: automatic classification performed with an in-house
algorithm; spatial resolution: 25m. In addition, the forest map 2006 is extended to
FTYPE2006 to include forest types (broadleaf, coniferous forest) that are mapped using
MODIS composites."@en ;
  dct:identifier "http://efdac.jrc.ec.europa.eu//947e5a55-e548-11e1-9105-
0017085a97ab"^^xsd:string ;
  dct:issued "2010-10-05"^^xsd:date ;
  dct:keyword "CHM"@en,
  "RDSI"@en ;
  dct:language <http://publications.europa.eu/resource/authority/language/ENG> ;
  dct:modified "2011-09-01"^^xsd:date ;
  dct:provenance [ a dct:ProvenanceStatement ;
  rdfs:label "Forest Map 2006 is derived from the IMAGE2006 (SPOT/LISS scenes)
and CORINE2006 landcover dataset. In addition, MODIS composites are used for the Forest
type classification."@en ] ;
  dct:rightsHolder [ a foaf:Organization ;
  foaf:mbox <mailto:efdac@jrc.ec.europa.eu> ;
  foaf:name "European Union"@en ] ;
  dct:spatial [ a dct:Location ;
  locn:geometry "<gml:Envelope
srsName=\"http://www.opengis.net/def/EPSG/0/4326\"><gml:lowerCorner>-10.58
34.56</gml:lowerCorner><gml:upperCorner>34.59
70.09</gml:upperCorner></gml:Envelope>"^^ogc:GMLLiteral ] ;
  dct:subject
<http://inspire.ec.europa.eu/codelist/TopicCategory/geoscientificInformation> ;
  dct:temporal [ a dct:PeriodOfTime ;
  schema:endDate "2006-12-31"^^xsd:date ;
  schema:startDate "2006-01-01"^^xsd:date ] ;
  dct:title "Forest / Non-Forest Map 2006"@en ;
  dct:type <http://inspire.ec.europa.eu/codelist/ResourceType/series> ;
  wdrs:describedby [ a earl:Assertion ;
  earl:result [ a earl:TestResult ;
  earl:outcome
<http://inspire.ec.europa.eu/codelist/DegreeOfConformity/conformant> ] ;
  earl:test [ dct:issued "2010-12-08"^^xsd:date ;
  dct:title "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"@en ] ] ;
  dcat:distribution [ a dcat:Distribution ;
  dct:accessRights [ a dct:RightsStatement ;
  rdfs:label "no limitation"@en ] ;
  dct:rights [ a dct:RightsStatement ;
  rdfs:label "Reuse is authorised according to the European Commission
legal notice at http://ec.europa.eu/geninfo/legal_notices_en.htm"@en ] ;
  cnt:characterEncoding "UTF-8"^^xsd:string ;
  dcat:mediaType <http://publications.europa.eu/resource/authority/file-
type/TIFF> ] ;
  dcat:landingPage <http://forest.jrc.ec.europa.eu/forestmap-download>,
<http://geohub.jrc.ec.europa.eu/forest/efdac/efdac_core?request=GetCapabilities&service=
wms> ;
  dcat:theme [ a skos:Concept ;
  skos:inScheme [ a skos:ConceptScheme ;
  rdfs:label "GEMET - Concepts, version 2.4"@en ;
  dct:issued "2010-01-13"^^xsd:date ] ;
  skos:prefLabel "coniferous forest"@en ],
  [ a skos:Concept ;
  skos:inScheme [ a skos:ConceptScheme ;
  rdfs:label "GEMET - Concepts, version 2.4"@en ;
  dct:issued "2010-01-13"^^xsd:date ] ;
  skos:prefLabel "scientific research"@en ],
  [ a skos:Concept ;
  skos:inScheme [ a skos:ConceptScheme ;
  rdfs:label "GEMET - Concepts, version 2.4"@en ;
  dct:issued "2010-01-13"^^xsd:date ] ;
  skos:prefLabel "forest resource"@en ],
```

Example of a Turtle representation of an INSPIRE metadata record (series)

```
[ a skos:Concept ;
  skos:inScheme [ a skos:ConceptScheme ;
    rdfs:label "GEMET - Concepts, version 2.4"@en ;
    dct:issued "2010-01-13"^^xsd:date ] ;
  skos:prefLabel "forest"@en ],
[ a skos:Concept ;
  skos:inScheme [ a skos:ConceptScheme ;
    rdfs:label "EFDAC"@en ;
    dct:created "2010-02-17"^^xsd:date ] ;
  skos:prefLabel "EFDAC"@en ],
[ a skos:Concept ;
  skos:inScheme [ a skos:ConceptScheme ;
    rdfs:label "GEMET - Concepts, version 2.4"@en ;
    dct:issued "2010-01-13"^^xsd:date ] ;
  skos:prefLabel "Europe"@en ],
[ a skos:Concept ;
  skos:inScheme [ a skos:ConceptScheme ;
    rdfs:label "ReRES-INSPIRE"@en ;
    dct:created "2010-02-17"^^xsd:date ] ;
  skos:prefLabel "ReRES-INSPIRE v0.0.1"@en ],
<http://inspire.ec.europa.eu/theme/lc> ;
prov:qualifiedAttribution [ a prov:Attribution ;
  dct:type <http://inspire.ec.europa.eu/codelist/ResponsiblePartyRole/author> ;
  prov:agent [ a vcard:Kind ;
    vcard:hasEmail <mailto:efdac@jrc.ec.europa.eu> ;
    vcard:organization-name "European Commission, Joint Research
"@en ] ],
[ a prov:Attribution ;
  dct:type <http://inspire.ec.europa.eu/codelist/ResponsiblePartyRole/owner> ;
  prov:agent [ a vcard:Kind ;
    vcard:hasEmail <mailto:efdac@jrc.ec.europa.eu> ;
    vcard:organization-name "European Union"@en ] ],
[ a prov:Attribution ;
  dct:type
<http://inspire.ec.europa.eu/codelist/ResponsiblePartyRole/resourceProvider> ;
  prov:agent [ a vcard:Kind ;
    vcard:hasEmail <mailto:efdac@jrc.ec.europa.eu> ;
    vcard:organization-name "European Commission, Joint Research
Centre"@en ] ] ;
foaf:isPrimaryTopicOf [ dct:issued "2012-08-13"^^xsd:date ;
  dct:language <http://publications.europa.eu/resource/authority/language/ENG> ;
  ;
  dcat:contactPoint [ a vcard:Kind ;
    vcard:hasEmail <mailto:efdac@jrc.ec.europa.eu> ;
    vcard:organization-name "European Commission, Joint Research
Centre"@en ] ;
  prov:qualifiedAttribution [ a prov:Attribution ;
    dct:type
<http://inspire.ec.europa.eu/codelist/ResponsiblePartyRole/pointOfContact> ;
    prov:agent [ a vcard:Kind ;
      vcard:hasEmail <mailto:efdac@jrc.ec.europa.eu> ;
      vcard:organization-name "European Commission, Joint Research
Centre"@en ] ] ] ] .
```

Example of a Turtle representation of an INSPIRE metadata record (service)

```
@prefix cnt: <http://www.w3.org/2011/content#> .
@prefix dc: <http://purl.org/dc/elements/1.1/> .
@prefix dcat: <http://www.w3.org/ns/dcat#> .
@prefix dct: <http://purl.org/dc/terms/> .
@prefix dcterms: <http://purl.org/dc/terms/> .
@prefix earl: <http://www.w3.org/ns/earl#> .
@prefix foaf: <http://xmlns.com/foaf/0.1/> .
@prefix locn: <http://w3.org/ns/locn#> .
@prefix ogc: <http://www.opengis.net/rdf#> .
@prefix prov: <http://www.w3.org/ns/prov#> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix schema: <http://schema.org/> .
@prefix skos: <http://www.w3.org/2004/02/skos/core#> .
@prefix vcard: <http://www.w3.org/2006/vcard/ns#> .
@prefix wdrs: <http://www.w3.org/2007/05/powder-s#> .
@prefix wdsr: <http://www.w3.org/2007/05/powder-s#> .
@prefix xml: <http://www.w3.org/XML/1998/namespace> .
```


Example of a Turtle representation of an INSPIRE metadata record (service)

```
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

[] a dcat:Catalog ;
  dc:subject "hydrography"@en ;
  dcterms:conformsTo [ dcterms:issued "2009-10-20"^^xsd:date ;
    dcterms:title "COMMISSION REGULATION (EC) No 976/2009 of 19 October 2009
implementing Directive 2007/2/EC of the European Parliament and of the Council as
regards the Network Services"@en ] ;
  dcterms:description "EFAS JRC Wep Map Service for the climate change applied to
floods in Europe"@en ;
  dcterms:language <http://publications.europa.eu/resource/authority/language/ENG> ;
  dcterms:modified "2013-02-14"^^xsd:date ;
  dcterms:spatial [ a dcterms:Location ;
    locn:geometry "<gml:Envelope
srsName=\"http://www.opengis.net/def/EPSSG/0/4326\"><gml:lowerCorner>-30.6125
12.9936</gml:lowerCorner><gml:upperCorner>50.7394
71.885</gml:upperCorner></gml:Envelope>"^^ogc:GMLLiteral ] ;
  dcterms:title "JRC EFAS Climate Change - INSPIRE view service"@en ;
  dcterms:type <http://inspire.ec.europa.eu/codelist/ResourceType/service>,
<http://inspire.ec.europa.eu/codelist/SpatialDataServiceCategory/humanGeographicViewer/>
,
  <http://inspire.ec.europa.eu/codelist/SpatialDataServiceType/view> ;
  wdsr:describedby [ a earl:Assertion ;
    earl:result [ a earl:TestResult ;
      earl:outcome
<http://inspire.ec.europa.eu/codelist/DegreeOfConformity/conformant> ] ;
    earl:test [ dcterms:issued "2009-10-20"^^xsd:date ;
      dcterms:title "COMMISSION REGULATION (EC) No 976/2009 of 19 October
2009 implementing Directive 2007/2/EC of the European Parliament and of the Council as
regards the Network Services"@en ] ] ;
  dcat:contactPoint [ a vcard:Kind ;
    vcard:hasEmail <mailto:info@efas.eu> ;
    vcard:organization-name "European Commission, Joint Research Centre"@en ] ;
  dcat:dataset <http://rdsi-
portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=14fda267-6da4-4024-bc6f-
8bad1c0bf249>,
  <http://rdsi-portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=489e972e-
560f-4faf-b40f-ce4ae554b46e>,
  <http://rdsi-portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=51db193b-
39fa-46b1-810d-510b7653e992>,
  <http://rdsi-portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=73b4c188-
be32-4a2e-949a-f6b186b5eedd>,
  <http://rdsi-portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=74d58a19-
d494-48f0-953c-e1ba47c6af55>,
  <http://rdsi-portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=9060b16a-
9772-43a1-bfac-1095da67119c>,
  <http://rdsi-portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=cbf13b10-
9f28-4e74-ace1-4e162a0f6307>,
  <http://rdsi-portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=e81e7e5d-
488f-4468-b7c0-fc263fc2c4be>,
  <http://rdsi-portal.jrc.it:8080/geonetwork/srv/eng/xml_iso19139?uid=f3430932-
cc3f-44f1-853d-2492a8368ed7> ;
  dcat:distribution [ a dcat:Distribution ;
    dcterms:accessRights [ a dcterms:RightsStatement ;
      rdfs:label "no limitations"@en ] ;
    dcterms:rights [ a dcterms:RightsStatement ;
      rdfs:label "No conditions apply"@en ] ] ;
  dcat:theme [ a skos:Concept ;
    skos:inScheme [ a skos:ConceptScheme ;
      rdfs:label "GEOSS - Societal Benefit Areas, version 1.0"@en ;
      dcterms:issued "2010-08-25"^^xsd:date ] ;
    skos:prefLabel "Floods"@en ],
  [ a skos:Concept ;
    skos:inScheme [ a skos:ConceptScheme ;
      rdfs:label "GEMET - Concepts, version 2.4"@en ;
      dcterms:issued "2010-01-13"^^xsd:date ] ;
    skos:prefLabel "climate"@en ],
  <http://inspire.ec.europa.eu/theme/hy> ;
  prov:qualifiedAttribution [ a prov:Attribution ;
    dcterms:type
<http://inspire.ec.europa.eu/codelist/ResponsiblePartyRole/pointOfContact> ;
    prov:agent [ a vcard:Kind ;
      vcard:hasEmail <mailto:info@efas.eu> ;
      vcard:organization-name "European Commission, Joint Research
Centre"@en ] ] ;
  foaf:homepage
<http://geohub.jrc.ec.europa.eu/efas_cc?service=WMS&request=GetCapabilities> ;
```

Example of a Turtle representation of an INSPIRE metadata record (service)

```
foaf:isPrimaryTopicOf [ dcterms:issued "2013-02-15"^^xsd:date ;
  dcterms:language
<http://publications.europa.eu/resource/authority/language/ENG> ;
  dcat:contactPoint [ a vcard:Kind ;
    vcard:hasEmail <mailto:info@efas.eu> ;
    vcard:organization-name "European Commission, Joint Research
Centre"@en ] ;
  prov:qualifiedAttribution [ a prov:Attribution ;
    dcterms:type
<http://inspire.ec.europa.eu/codeList/ResponsiblePartyRole/pointOfContact> ;
    prov:agent [ a vcard:Kind ;
      vcard:hasEmail <mailto:info@efas.eu> ;
      vcard:organization-name "European Commission, Joint Research
Centre"@en ] ] ] .
```

6 References

DCAT-AP

DCAT Application Profile for Data Portals in Europe – Final Draft. EU ISA Programme, 13 May 2013. Available online: <https://joinup.ec.europa.eu/node/66194>

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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. OJ L 323, 8.12.2010, p. 11-102. Available online: <http://eur-lex.europa.eu/eli/reg/com/2010/1089>

INSPIRE-MD-REG

Commission Regulation (EC) No 1205/2008 of 3 December 2008 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards metadata (Text with EEA relevance). OJ L 326, 4.12.2008, p. 12-30. Available online: <http://eur-lex.europa.eu/eli/reg/com/2008/1205>