



**SeaDataNet**

*PAN-EUROPEAN INFRASTRUCTURE  
FOR OCEAN & MARINE DATA  
MANAGEMENT*

***INSPIRE compliant ISO19139 XML schemas for  
CDI and CSR***

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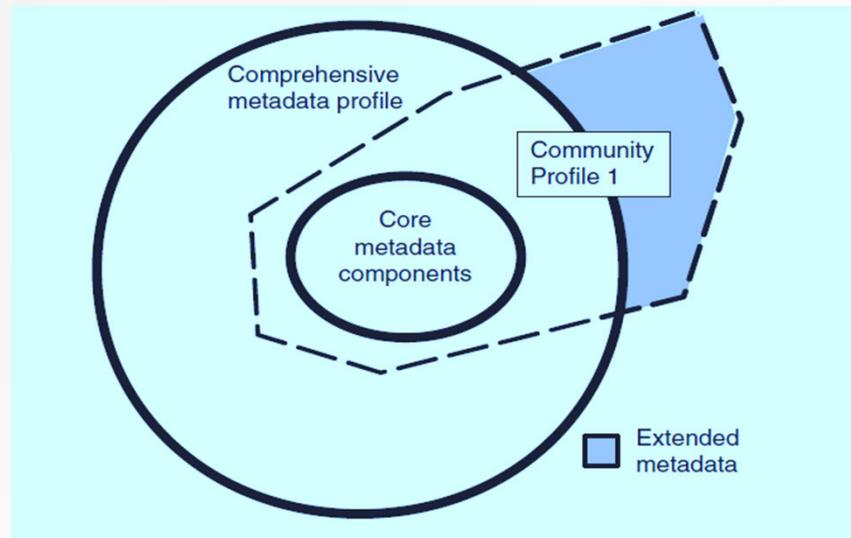


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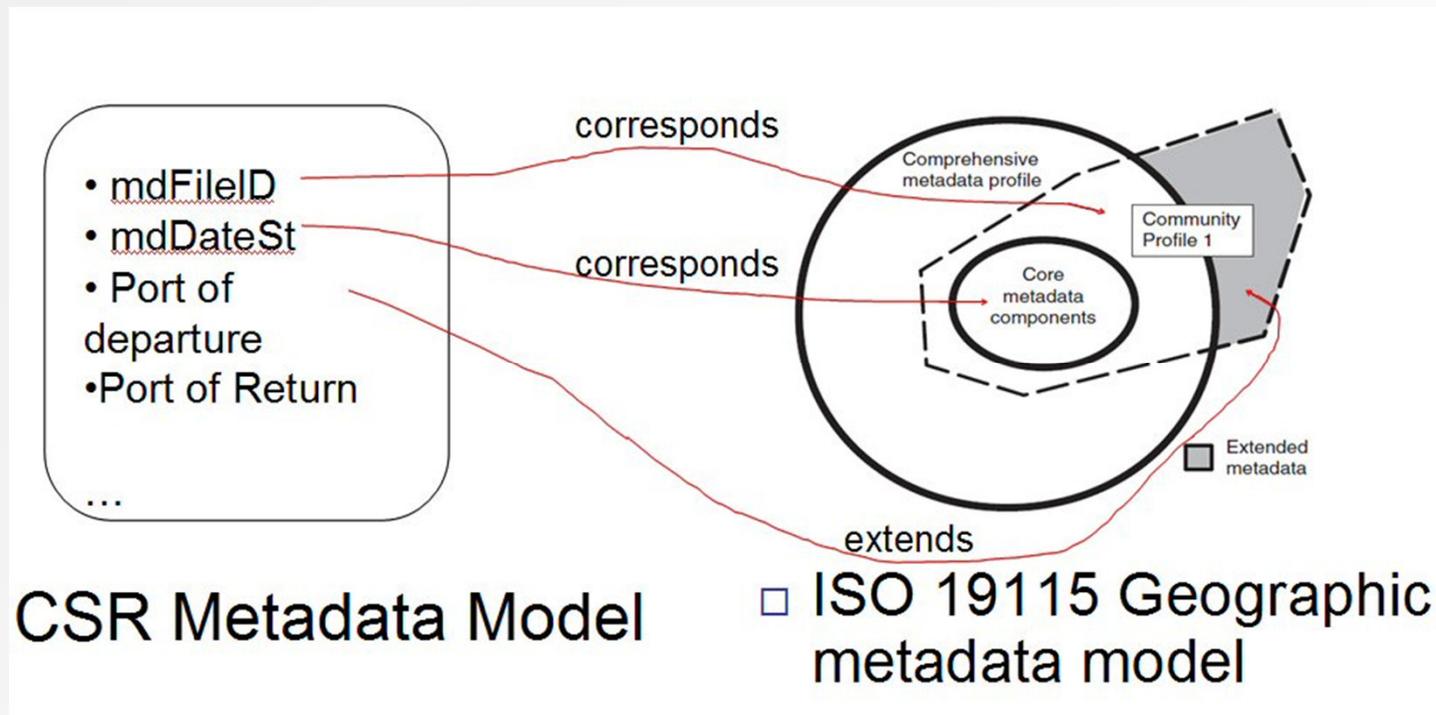
## ISO Community Profile – ISO19115 – 19115-2 - 19139

- A subset of the ISO metadata elements (mandatory elements must be included)
- Extended metadata elements (e.g. community codelists)
- Additional constraints amongst elements (e.g. for INSPIRE)



## Applied approach – CSR example

- All original CSR elements must fit in the ISO 19115 metadata model!





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## Deliverables



Common Data Index  
✓ v.10 Stable, in use



Cruise Summary Report  
✓ v. 3 Available for comments

## Deliverables



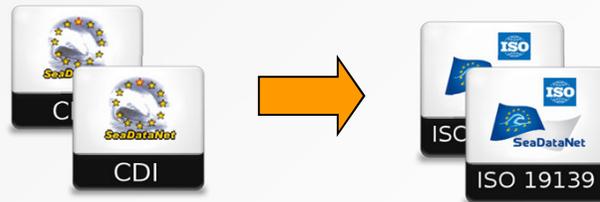
Abstract metadata model specification:

- ✓ SeaDataNet metadata profile of ISO 19115 documentation



XML encoding implementation:

- ✓ Schema definition
- ✓ Schematron rules
- ✓ Sample metadata
- ✓ XML implementation documentation



[www.seadatanet.org/Standards-Software/Metadata-formats](http://www.seadatanet.org/Standards-Software/Metadata-formats)

[sdn-userdesk@seadatanet.org](mailto:sdn-userdesk@seadatanet.org) – [www.seadatanet.org](http://www.seadatanet.org)



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## Example encoding

Legacy CDI encoding  
(ISO19115 DTD based)

```
<?xml version="1.0" encoding="UTF-8"?>
<Metadata>
  <mdFileID>SDN:CDI:LOCAL:MARIS-TEST</mdFileID>
  <mdLang>
    <languageCode value="en" />
  </mdLang>
  <mdChar>
    <CharSetCd value="utf8" />
  </mdChar>
  <mdHrLv>
    <ScopeCd value="dataset" />
  </mdHrLv>
  <mdHrLvName SDNIdent="SDN:L231:3:CDI" >Common Data
Index record</mdHrLvName>
  <mdContact>
    <rpOrgName SDNIdent="SDN:EDMO:1" >University of
Birmingham, Department of Geological Sciences</rpOrgName>
    <rpCntInfo>
      <cntPhone>
        <voiceNum></voiceNum>
        <faxNum></faxNum>
      </cntPhone>
      <cntAddress>
        <delPoint>School of Earth Sciences Edgbaston
</delPoint>
        <city>Birmingham</city>
    </cntAddress>
  </rpCntInfo>
  </mdContact>
</delPoint>
```

CDI encoding  
(ISO19139 based)

```
<?xml version="1.0" encoding="UTF-8"?>
<gmd:MD_Metadata
xmlns:gmd="http://www.isotc211.org/2005/gmd"
xmlns:gco="http://www.isotc211.org/2005/gco"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <gmd:fileIdentifier>
    <gco:CharacterString>SDN:CDI:LOCAL:MARIS-
TEST</gco:CharacterString>
  </gmd:fileIdentifier>
  <gmd:language>
    <gmd:LanguageCode
codelist=" ../schema/resources/Codelist/ML_gmxCodelists.xml
#LanguageCode"
codelistValue="eng">English</gmd:LanguageCode>
  </gmd:language>
  <gmd:characterSet>
    <gmd:MD_CharacterSetCode
codelist=" ../schema/resources/Codelist/gmxCodelists.xml#MD
_CharacterSetCode" codelistValue="utf8"
codeSpace="ISOTC211/19115">utf8</gmd:MD_CharacterSetCode>
  </gmd:characterSet>
  <gmd:hierarchyLevel>
    ...
</gmd:hierarchyLevel>
```



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## ***CDI format specifics***

- Extra tags for:
  - EDMED references
  - CSR references
  - Bibliographic references
  - Quality Info
- Next to: EDMERP references
- INSPIRE mandatory info tags
- Supported by ISO XML lists (via web services)
  - EDMERP; EDMO; CSR; Vocabs; ISO; Bibliographic\_Refs
- SeaDataNet name space

## ***Validation - change:***

- In existing V1 use is made of online validation service, but issues with maintenance
- New: CDI and CSR ISO19139 XML Schemas are dynamically supported by ISO XML lists for EDMED, EDMO, EDMERP, CSR, Vocabs, ISO through Schematron => this allows to validate CDI and CSR XML entries using XML Spy or Oxygen or other XML editors
- To come: EDMED, EDMERP and EDIOS XML Schemas will be upgraded (Schematron) in a comparable way allowing to validate these also with XML editors