



GS Soil

GS SOIL METADATA

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- Aspects of soil metadata
- Review on WP3 actions in 2010
 - Soil metadata profile
- Recent WP3 actions
 - Best practice guidelines

SOIL PROFILE

INSPIRE

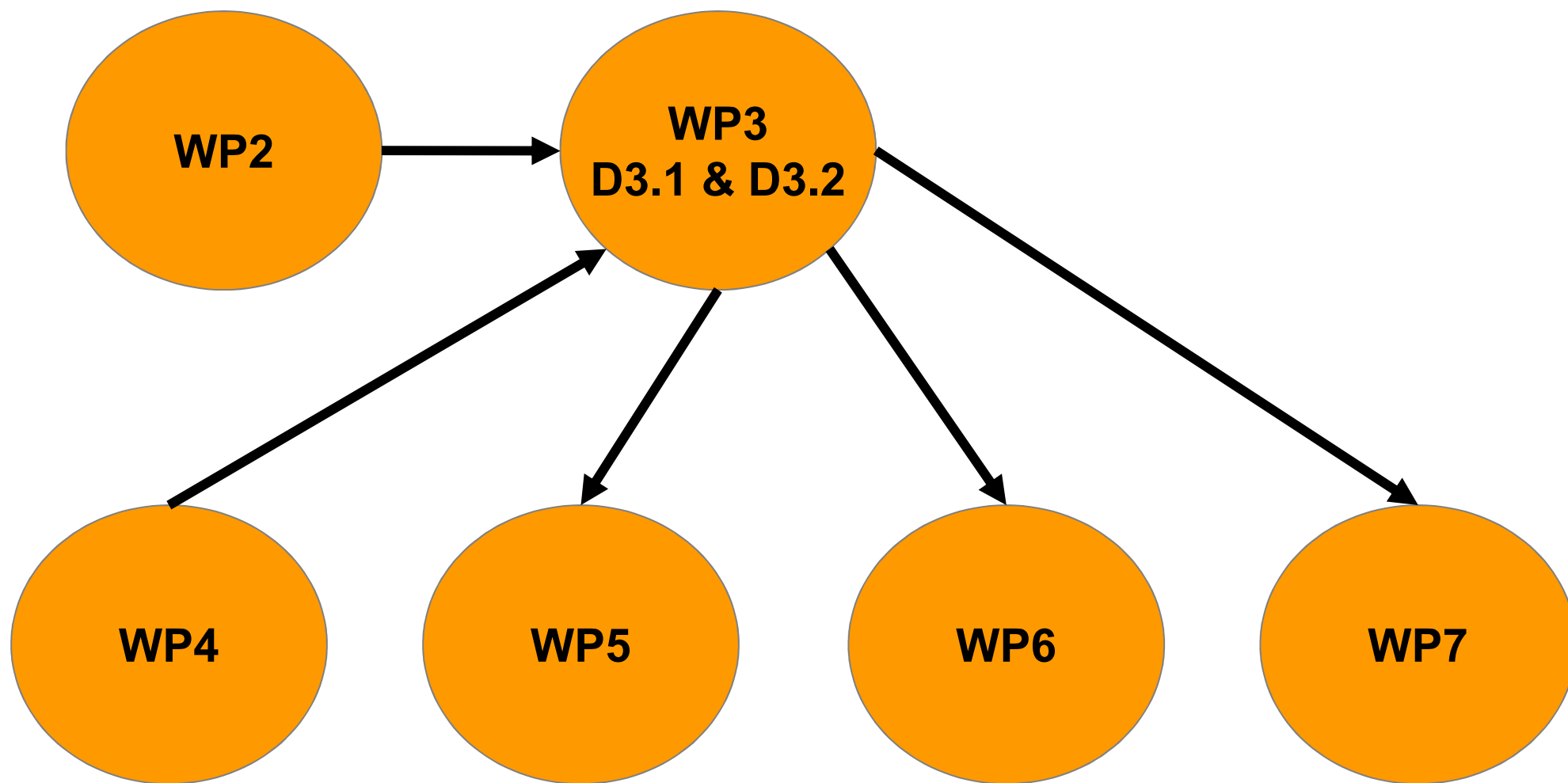
ISO CORE

Mandatory

ISO 19115

ISO 19119

ISO 19139



Development of soil metadata profile

Deliverable 3.1

INSPIRE compatible metadata profile for soil geographic datasets and dataset series

Deliverable 3.2

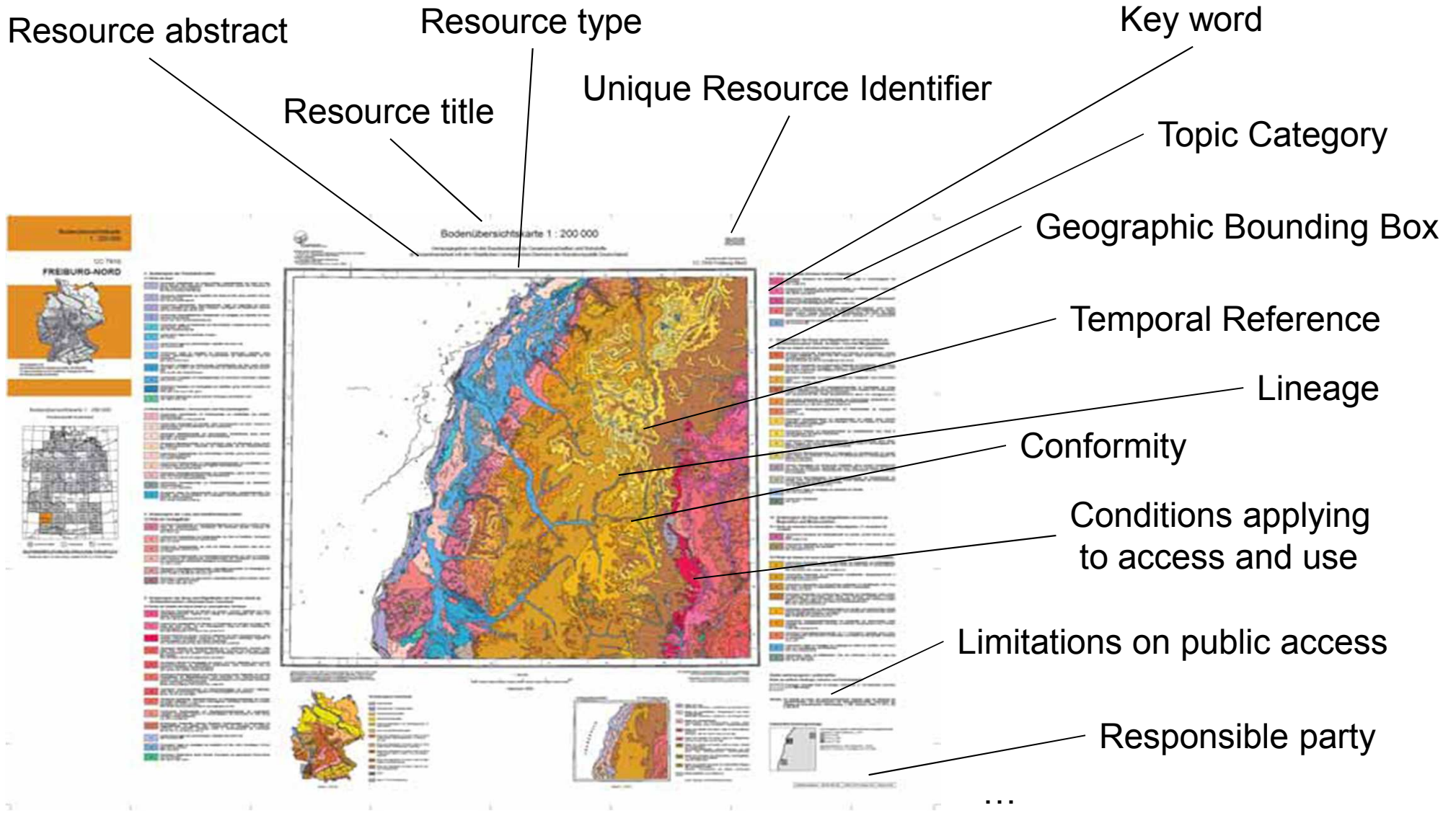
INSPIRE compatible metadata profile for soil geographic data services

Deliverable 3.3

Preliminary best Practice Guidelines for creating and maintaining metadata for soil database

- Primary requirement – INSPIRE compliant metadata profiles – therefore Commission Regulation No. 1205/2008 (including Corrigenda 1) and their Technical Guidelines as well as Commission Regulation No 976/2009 as basic stones.
- Therefore inspired by:
 - drafts of INSPIRE Annex I data specifications (especially TN, HY, PS)
 - INSPIRE methodologies (generic conceptual model, data specification development)
 - ISO, OGC and W3C standards to properly express soil-specific issues within their standardization framework

INSPIRE metadata (Commission Regulation No 1205/2008)



Example of the printed map Sheet Freiburg-North
(map representation acc. to the German topographic map 1:200.000)

- Two metadata profiles:
 - for datasets and dataset series
 - for services
- Compliant to the Commission Regulation No. 1205/2008
- Added soil theme-specific metadata elements
- Well-described structure according to the ISO 19100 series standards
- Within ISO 19115 framework
- Examples of the XML encoding
- Registered as the INSPIRE Reference Material

Added soil theme-specific metadata – – mandatory and conditional elements

- **Coordinate Reference System [1]**
- **Encoding [1..*]**
- **Character Encoding [0..*]**
- **Source title [0..1]**
- **Source date of mapping [0..*]**
- **Spatial Representation Type [0..*]**
- **Online digital transfer options [0..1]**
- **Topology level [0..*]**
- **Source mapping scale [0..1]**
- **Completeness – Ommission [0..*]**
- **Positional Accuracy – Absolute or external accuracy [0..*]**
- **Thematic Accuracy – Classification Correctness – Misclassification rate [0..*]**
- **Contains operations [0..*]**
- **Service version [0..*]**

Development of soil metadata best practice guidelines

Deliverable 3.4

Final best Practice Guidelines for creating and maintaining metadata for soil database

Best practice in general

- Generally accepted
- Informally standardized techniques
- methods or processes that have proven themselves over time to accomplish given tasks
- maintain quality
- an extension or alternative to mandatory legislated standards

- Soil data providers are unfamiliar with SDI
 - Support and guide soil data providers to fulfill their obligations regarding the INSPIRE directive
 - Ensure a common understanding and a high quality of metadata and their specific elements
- Therefore INSPIREd by:
 - INSPIRE Metadata Implementing Rules: Technical Guidelines based on EN ISO 19115 and EN ISO 19119
 - INSPIRE methodologies (generic conceptual model, data specification development)

- D 3.4 Best Practice Guidelines for creating and maintaining metadata for soil database
 - Cook-book for metadata
 - Definition of metadata profiles
 - For dataset and dataset series
 - For spatial data services
 - Including examples on conceptual (table) and implementation (XML source-code) levels
 - Data quality measures and recommendations
 - Thesaurus information (very brief, link to D 3.5)
 - Multilinguality issues
 - Related SDI aspects (feature catalogue, catalogue services, metadata connections from different levels)

- Changes with respects to INSPIRE development
 - Technical guidelines on INSPIRE metadata v1.2
 - Commission Regulation No 1089/2010
 - Commission Regulation No 976/2009
 - Technical Guidelines to INSPIRE Discovery services
 - Added *Coordinate reference system, Encoding, ...*
- Changes of GS Soil consortium opinions:
 - Added *File identifier*
 - Added *Geometric object type metadata elements*

Example of metadata element structure

Metadata element name	Resource locator
Definition	Location (address) for on-line access using a Uniform Resource Locator address or similar addressing scheme.
ISO 19115 number and name	397. linkage
INSPIRE obligation / condition	Mandatory if a URL is available to obtain more information on the resources and/or access related services.
INSPIRE multiplicity	0..*
Data type (and ISO 19115 no.)	URL
Domain	URL (IETF RFC1738 and IETF RFC 2056)
Implementing guidelines	<p>Specify Resource locator in all possible ways according to the following guidelines - see [19] and [29]:</p> <ul style="list-style-type: none"> • If View and/or Download service is available for accessing the resource, specify link to the View and/or Download service and to the View and/or Download service metadata. See section 10.4 for further information. • If direct link to the resource is available, specify it. • Otherwise specify link to a contact point where more information about the resource is available.
Example	http://www.afbini.gov.uk/index/services/services-specialist-advice/soils-environment.htm
Example XML encoding	<pre> <gmd:MD_Metadata <gmd:distributionInfo> <gmd:MD_Distribution> ... <gmd:transferOptions> <gmd:MD_DigitalTransferOptions> <gmd:onLine> <gmd:CI_OnlineResource> <gmd:linkage> <gmd:URL>http://www.afbini.gov.uk/index/s ervices/services-specialist-advice/soils- environment.htm</gmd:URL> </gmd:linkage> </gmd:CI_OnlineResource> </gmd:onLine> </gmd:MD_DigitalTransferOptions> </gmd:transferOptions> </gmd:MD_Distribution> </gmd:distributionInfo> ... </gmd:MD_Metadata> </pre>


```
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      <gmd:CI_Citation>
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          <gmd:PT_FreeText>
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  </gmd:MD_DataIdentification>
</gmd:identificationInfo>
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- D3.4 were developed for and with soil data providers
- Specific requirements as important part of metadata profile and best practice document
- Benefits for data provider
 - Best practice document shall lead support them in fulfilling their INSPIRE obligations
 - Soil specific requirements are considered
 - Tools for creating and managing metadata were developed and provided to the data providers
- Benefits for INSPIRE and SDI
 - Metadata will be available in time
 - High quality of data is ensured through a common understanding of metadata and data

- **Special thanks to Tomáš Řezník**
- Looking forward talking with you about our soil metadata profile

