

Christian Ansorge, 17 November 2015, Wien

Nutzung von INSPIRE durch die EU

(Slides in English)

Austrian INSPIRE Day 2015



Nutzung von INSPIRE durch die EU

Scope

- Data and knowledge in the environmental acquis
- Environmental data flows
- INSPIRE synergies for reporting
- Pilots



INSPIRE and the enviornmental acquis



Data and knowledge in the environmental acquis

Generic policy requirements (e.g.):

- Effectiveness
- Efficiency
- Relevance
 - E.g. Pertinent to it's objectives
- Coherence
 - E.g. Relation to other policies
- Consistency
 - E.g. Positive/negative spill-over effects
- Sustainability
- Acceptability

** accumulated legislation, legal acts, and court decisions*



Better results for environmental legislation

Success factors for improving compliance and implementation across all (environment) legislation are:

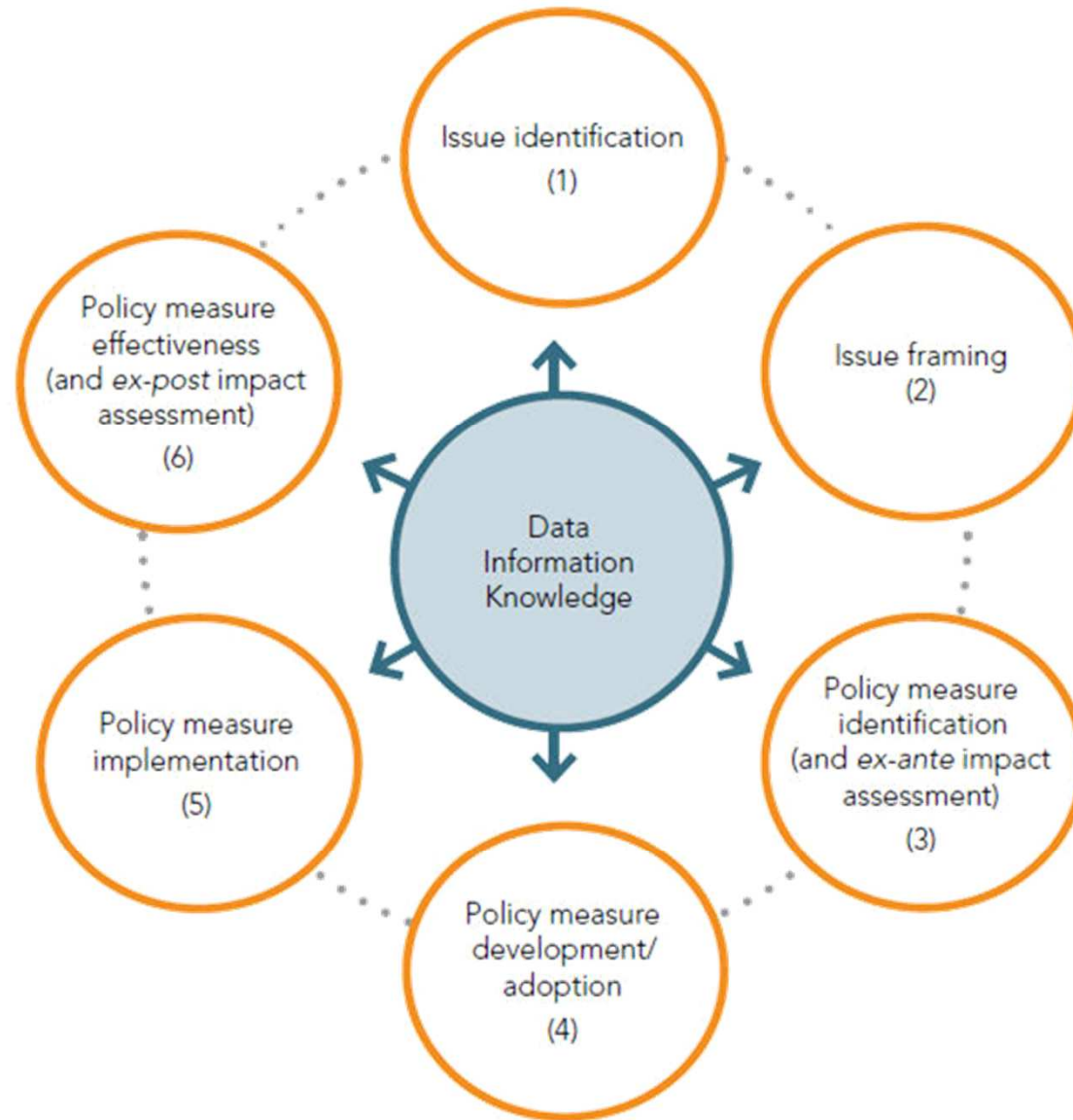
- Clear legislation
- Strong political will / support
- Sufficient financing of actions
- Excellent technical know how
- **Good evidence base**
- **Good governance and administrative efficiency**



• 13



Data and knowledge in the environmental acquis



Main stages in the policy cycle, supported by data, information and knowledge.
In this report, the policy process is taken to include all 6 stages of this policy cycle (Source: EEA).



Data and knowledge in the environmental acquis

Characteristic of information needed

- Up to date
- Extremely diverse
- Cutting across policy domains, economic sectors, environmental media and themes
- Depends upon diverse technologies and data sources, many of which are not environment specific
- Managed by a wide variety of data holders from local to European level

*Motivation for better data about our environment and a more efficient way to access them
(e.g. INSPIRE & Copernicus)*

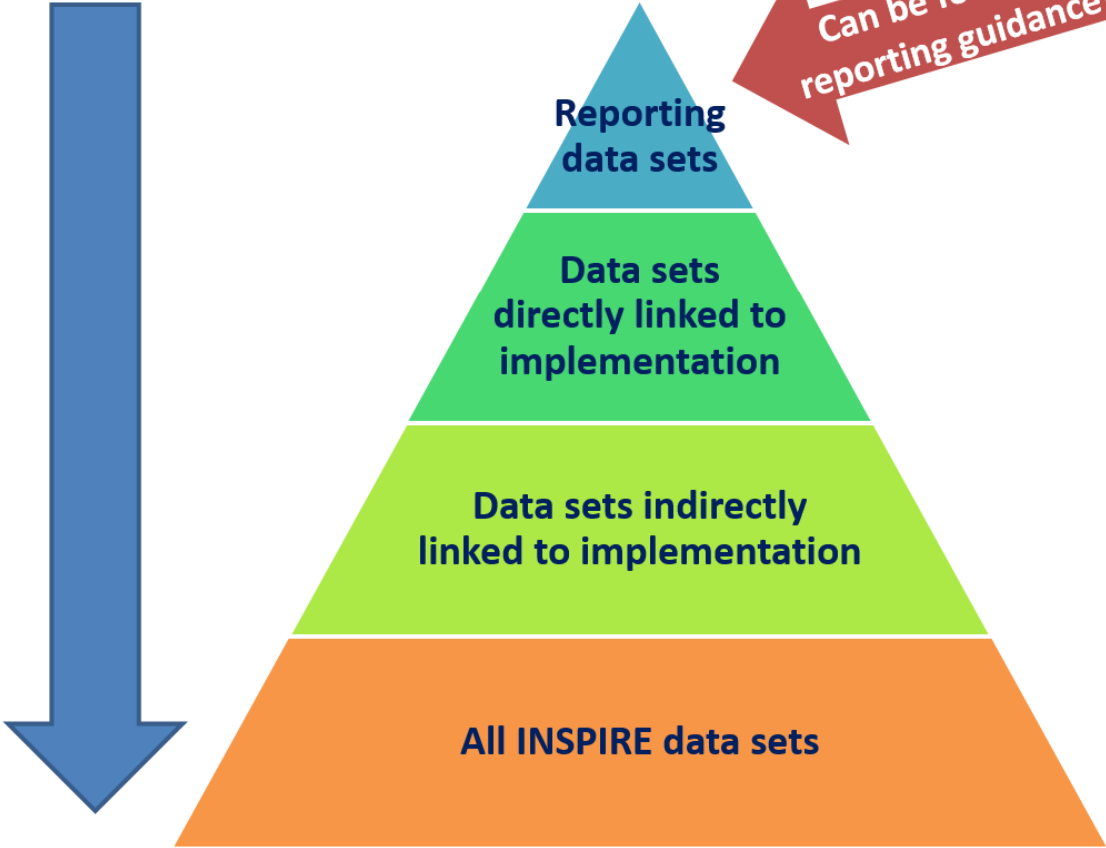


Data and knowledge in the environmental acquis

Focus reporting – Example UWWTD



Priority setting from now to 2020



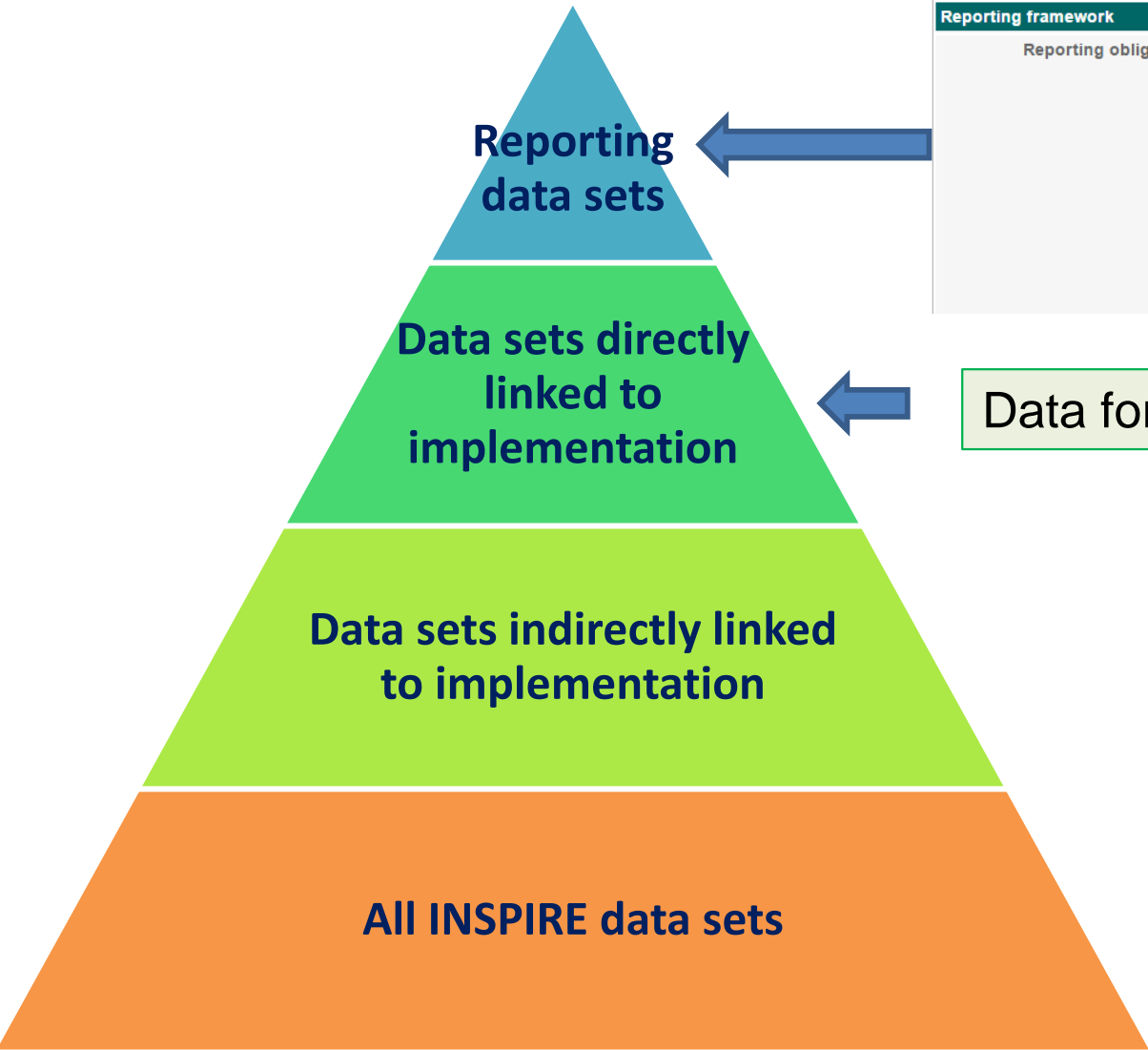
Examples

- Location of UWWT plants, agglomerations, ...
- Emissions, permits
- Sewage sludge disposal of plant
- Road network to UWWT plant

* from DG Env presentation on INSPIRE prioritisation, Oct. 2015

Data and knowledge in the environmental acquis

Example NOISE DIRECTIVE - 2002/49/EC



Reporting framework	
Reporting obligations	Limit values in force report (DF 3) [Article 5-4] Report on major roads, railways, airports and agglomerations (DF1) [terminated] [Article 7-1] Report on all major roads, railways, airports and agglomerations (DF1 and DF5) [Article 7-1 and 7-2] Strategic noise maps report 1 (DF4) [terminated] [Article 10-2 Annex VI] Strategic noise maps (DF 4 and DF 8) [Article 7 and 10 Annex VI] Action plan summaries 1 (DF 7) [terminated] [Article 10-2 Annex VI + Article 8-3] Action plan summaries (DF 7 and DF 10) [Article 10-2 Annex VI + Article 8-3] Noise control programmes 1 (DF 6) [terminated] [Article 10-2 Annex VI 1.3 & 2.3] Noise control programmes (DF 6 and DF 9) [Article 10-2 Annex VI 1.3 & 2.3] Competent bodies (DF 2) [Article 4-2] Definition of reporting structure (DF 0)

Data for implementation > Data for reporting !!

HAVE ADOPTED THIS DIRECTIVE:

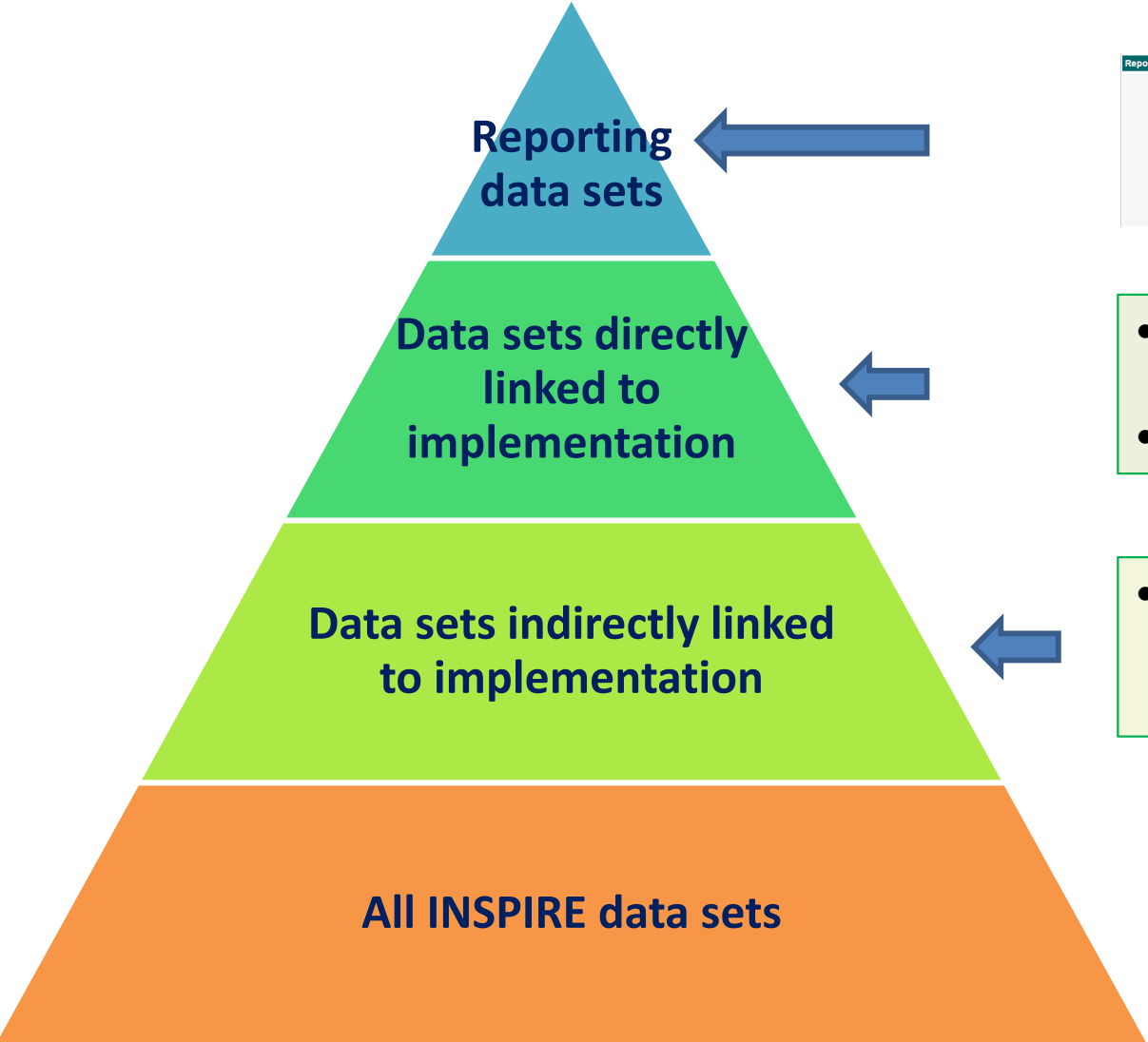
Article 1

Objectives

1. The aim of this Directive shall be to define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure

Data and knowledge in the environmental acquis

Example NOISE DIRECTIVE - 2002/49/EC



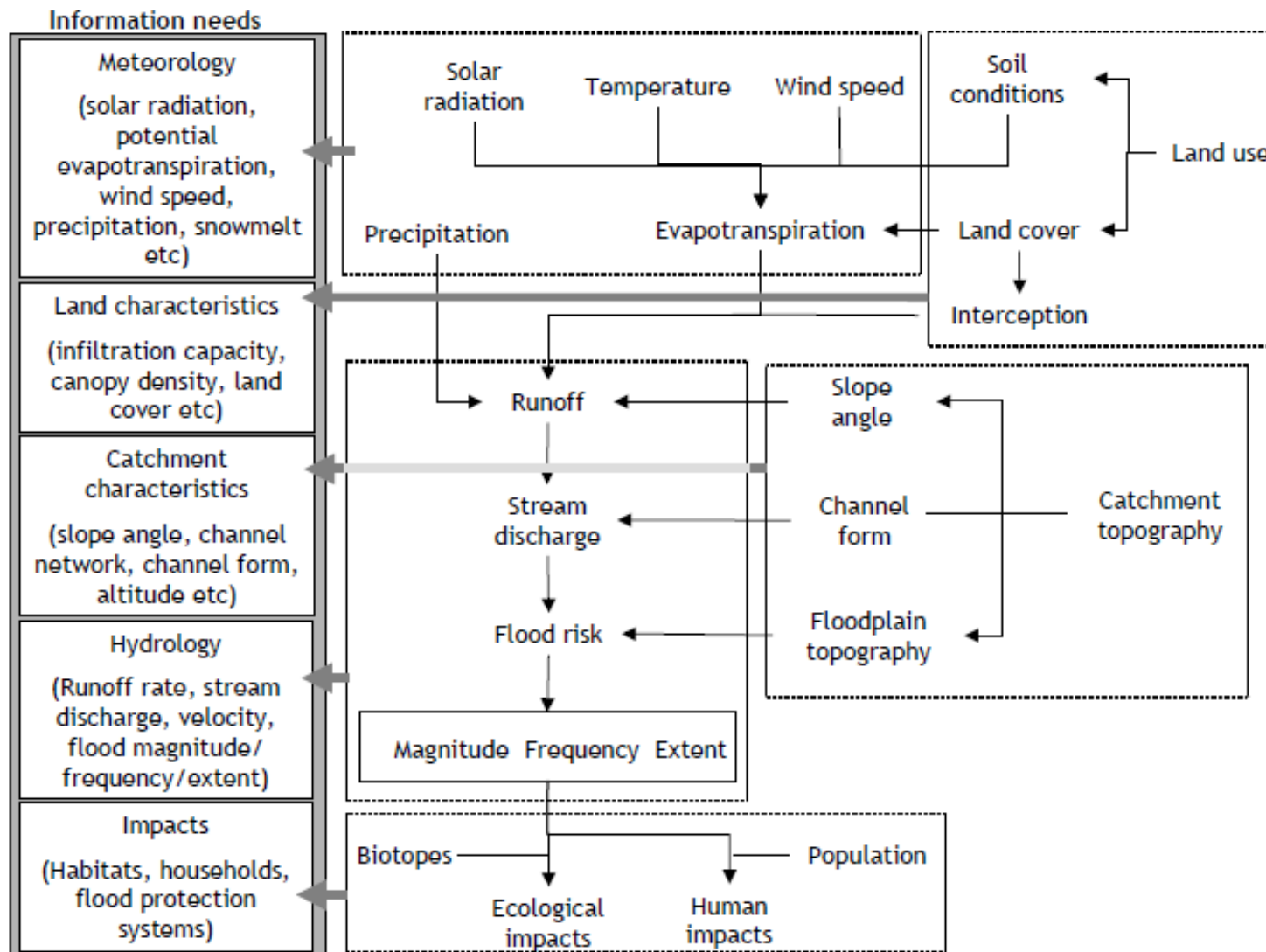
Reporting framework	
Reporting obligations	Limit values in force report (DF 3) , [Article 5-4] Report on major roads, railways, airports and agglomerations (DF 1) [terminated], [Article 7-1 and 7-2] Report on all major roads, railways, airports and agglomerations (DF 1 and DF 5) , [Article 7-1 and 7-2] Strategic noise maps report 1 (DF 4) [terminated], [Article 10-2 Annex VI] Strategic noise maps (DF 4 and DF 3) , [Article 7 and 10 Annex VI] Action plan summaries 1 (DF 7) [terminated], [Article 10-2 Annex VI + Article 8-3] Action plan summaries (DF 7 and DF 10) , [Article 10-2 Annex VI + Article 8-3] Noise control programmes 1 (DF 6) [terminated], [Article 10-2 Annex VI 1.3 & 2.3] Noise control programmes (DF 6 and DF 9) , [Article 10-2 Annex VI 1.3 & 2.3] Competent bodies (DF 2) , [Article 4-2] Definition of reporting structure (DF 0)

- e.g. roadnetwork, traffic load, population
- Health statistics

- e.g. data needed for noise models (Landuse, elevation, statistical meteorological data)

Data and knowledge in the environmental acquis

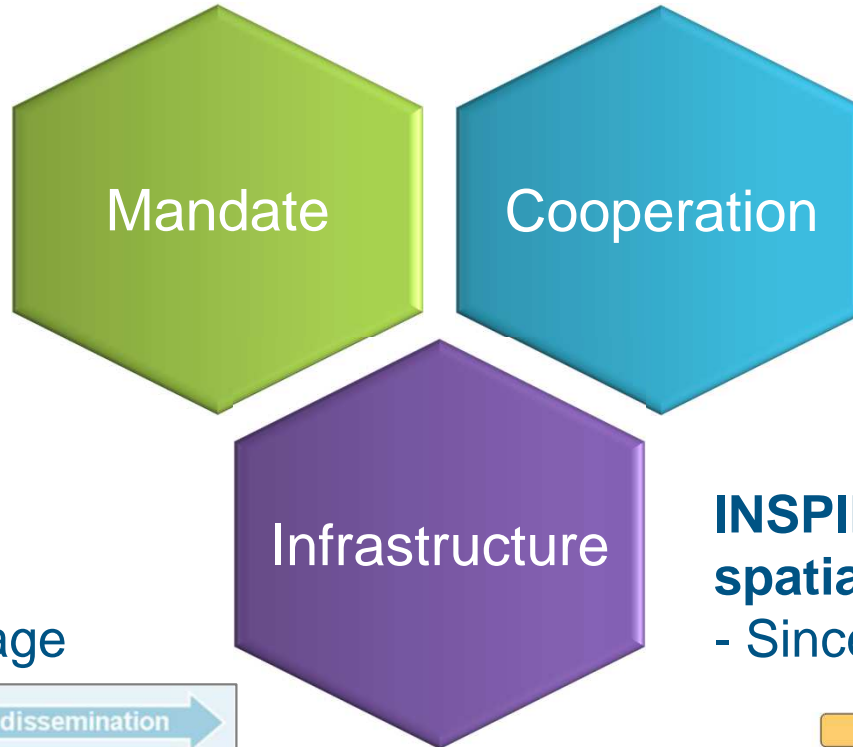
Information Requirements in Relation to Flooding



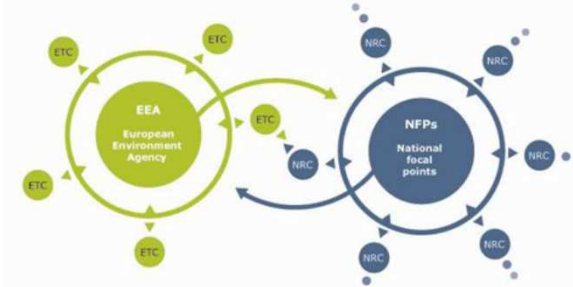
INSPIRE @ EEA

EEA and environmental data flows

- record, collate and assess data on the state of the environment
- provide objective information for environmental policies



- Eionet (39 countries)



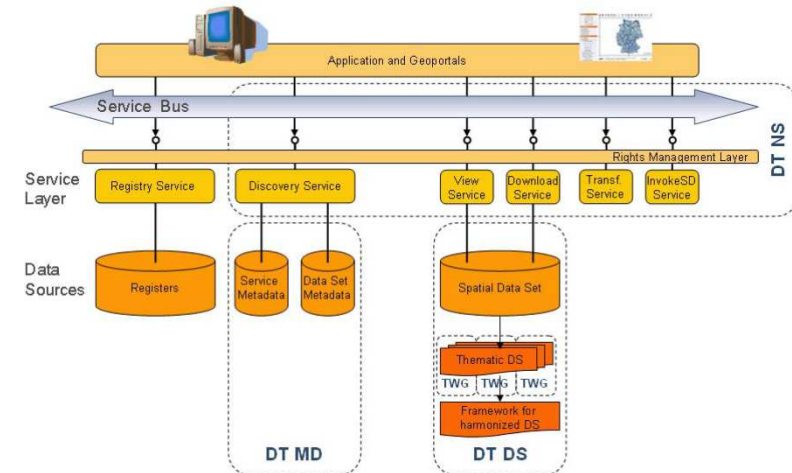
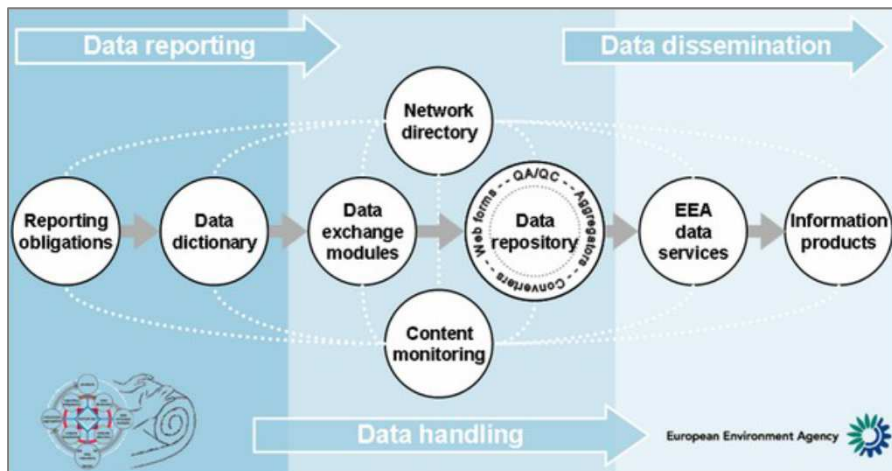
- EU institutions
- regional cooperation, international org.

Reportnet

- Operational since 2002
- Delivery, validation, storage

INSPIRE: infrastructure for spatial information in Europe

- Since 2007

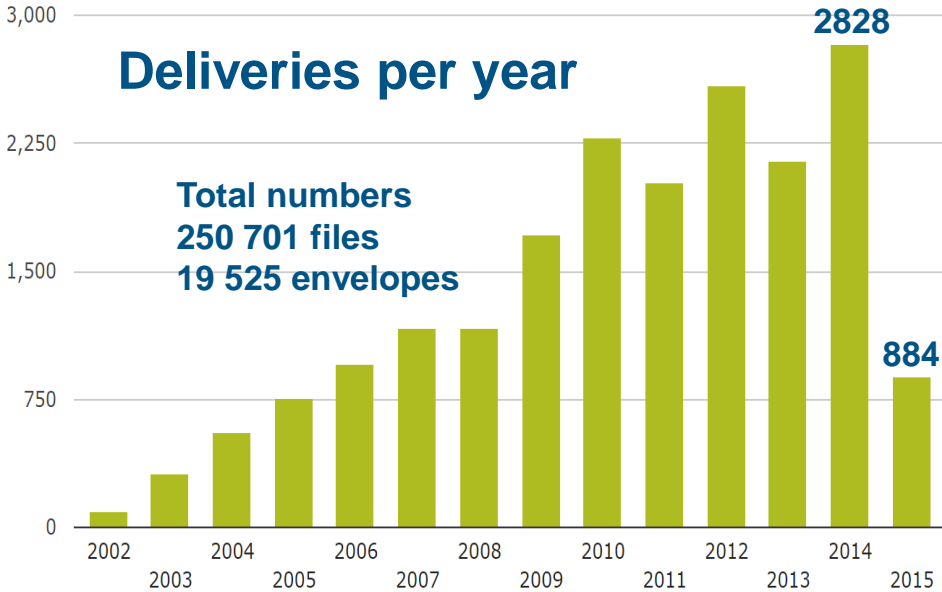


Reportnet – EEA view

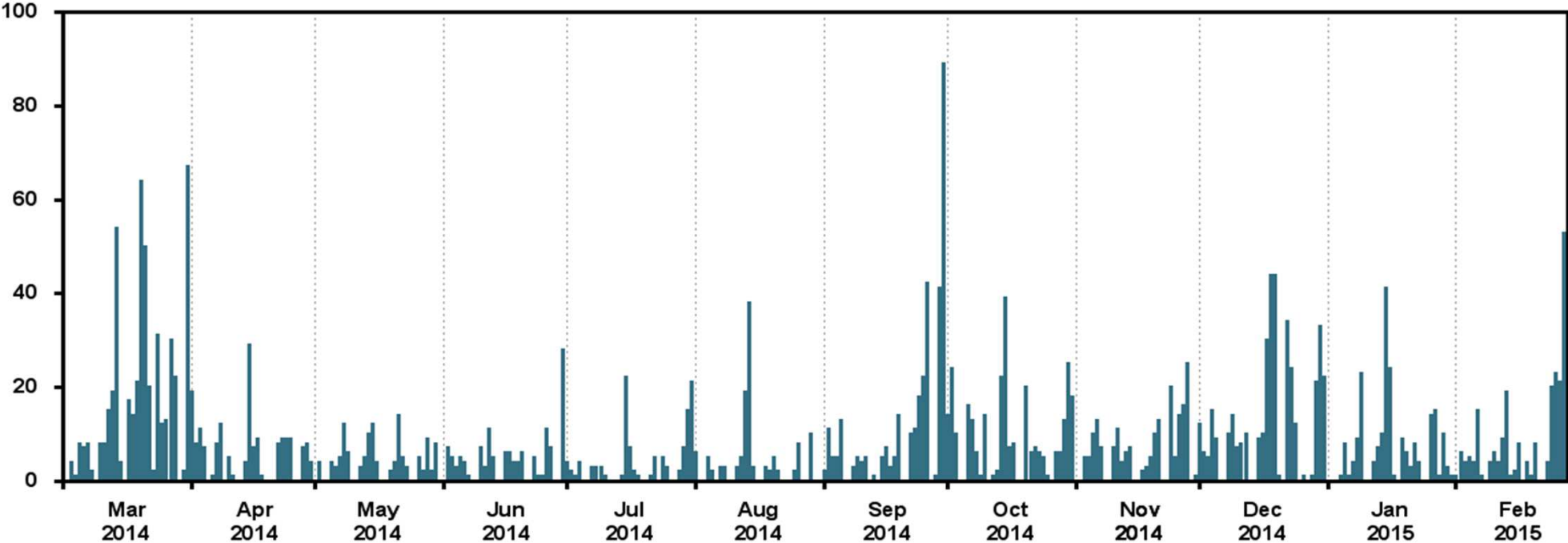
Data collected in the period

2002 – 2015

(by 23 April 2015)



Deliveries per day



Data reporting – Reporters view



Marine Data Infrastructure (MDI-DE)



For which Systems do we need Data



28 May 2015

INSPIRE Conference 2015, Lisbon

Johannes Melles

[Link to presentation by J. Melles](#)

European Environment Agency



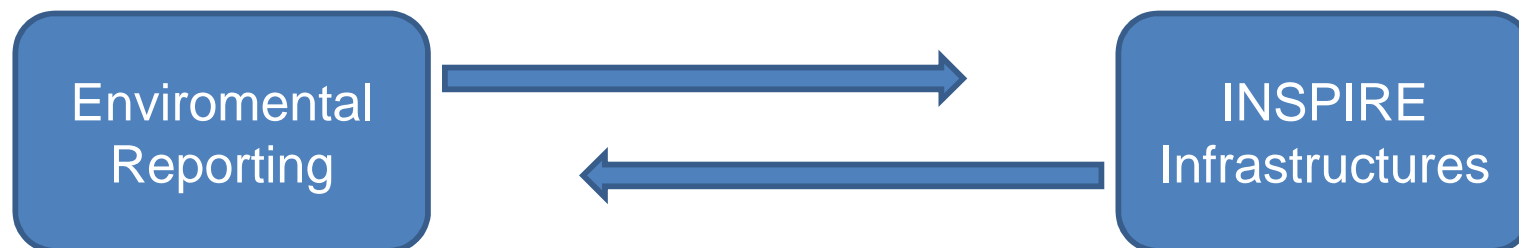
Reporting

- **Several reporting data flows are already established**
- **Requested geographic coverage: EU MS, Eionet 39, regional geographic areas**
- **Some points for improvements:**
 - Reporting process is closed (not known outside of reporting), specific tools are used for individual reporting data flows (**silos**)
 - **Low re-use** of data between thematic domains
 - Data are updated for the reporting deadline and accessible at deadline (**no updates in between**)
 - **Spatial data might not be clearly defined**



Synergies: INSPIRE and reporting

- **Why is INSPIRE a driver for future reporting (eReporting)?**
 - INSPIRE is the infrastructure for sharing of spatial data
 - Around 90% of environmental data have a spatial component
 - Higher re-use of INSPIRE components (defined once & re-used in different domains): code lists, services, licences,...
 - Adjacent data – edge-matching
 - Potential to provide common services/data used across reporting



EEA is building INSPIRE implementation practice for eReporting

- **Main needed components:**

- Practice in implementing INSPIRE conformant data (#1)
- Consistent approach for data modelling and harmonisation in reporting data flows (#2)
- Use of web services (#3)
- Connecting INSPIRE & thematic vocabulary (#4)

Future



EEA INSPIRE projects

Analysis of source data and harmonisation of data (in some cases adoption and extension of data models):

EEA internal projects:

- CDDA
- WISE SOE
- Corine Land Cover
- Urban Atlas

INSPIRE eReporting pilot under JRC lead:

- Marine Strategy Framework Directive

Technology related together with JRC:

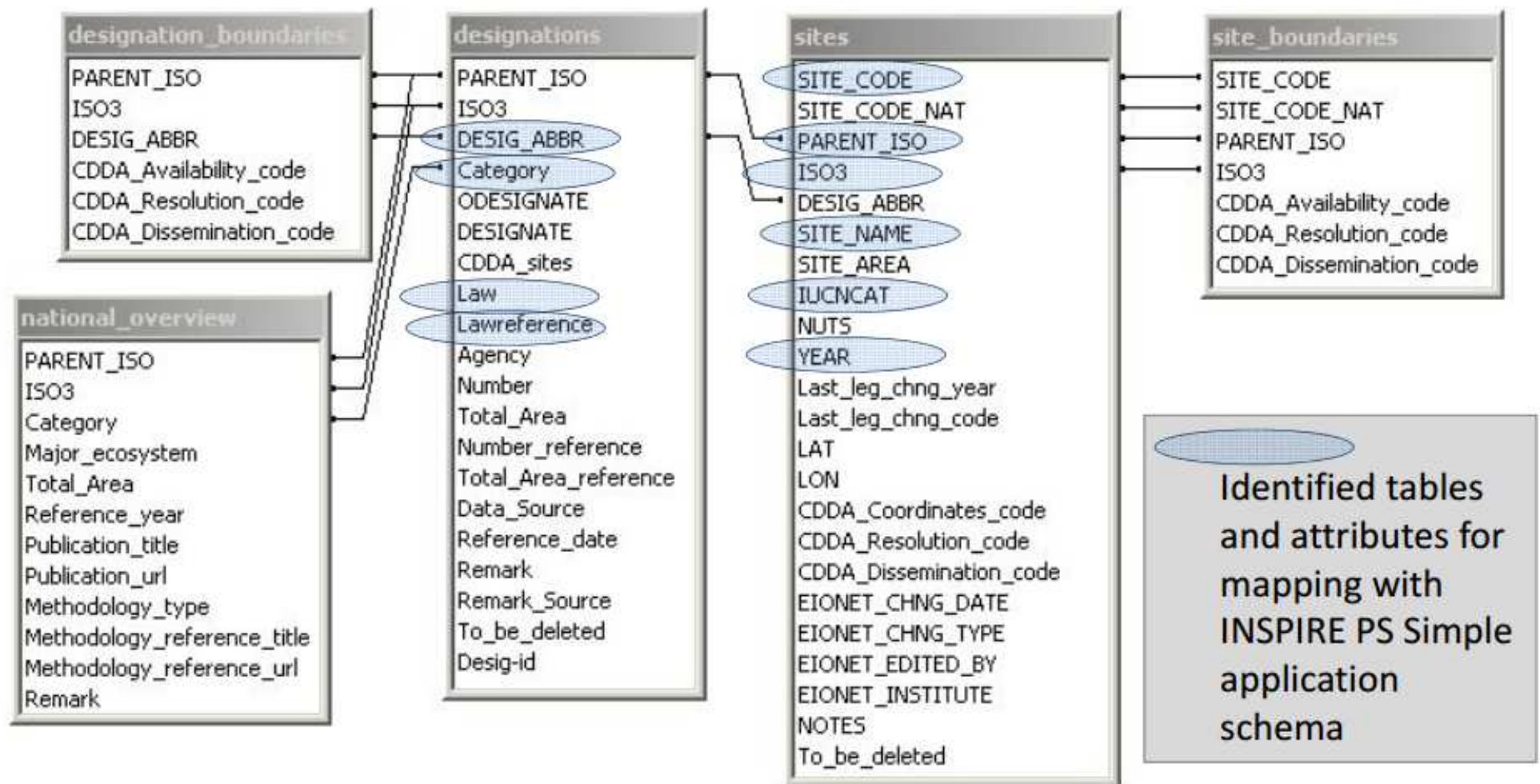
- Registry federation (MIWP-6)

Pilot #1: Data transformation

European CDDA: since 1995 (national – Europe – global)

Pilot: data transformation according to INSPIRE Protected sites

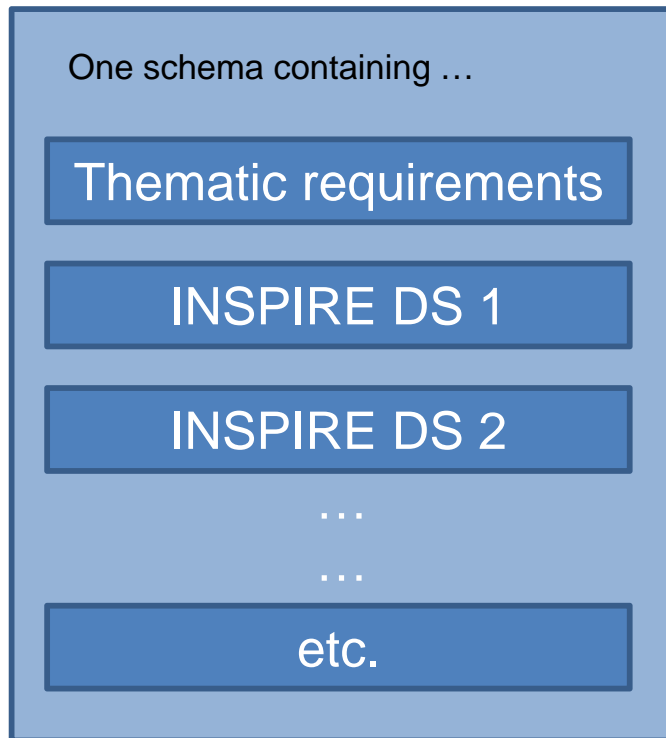
Common Database on Designated Areas: Data Model



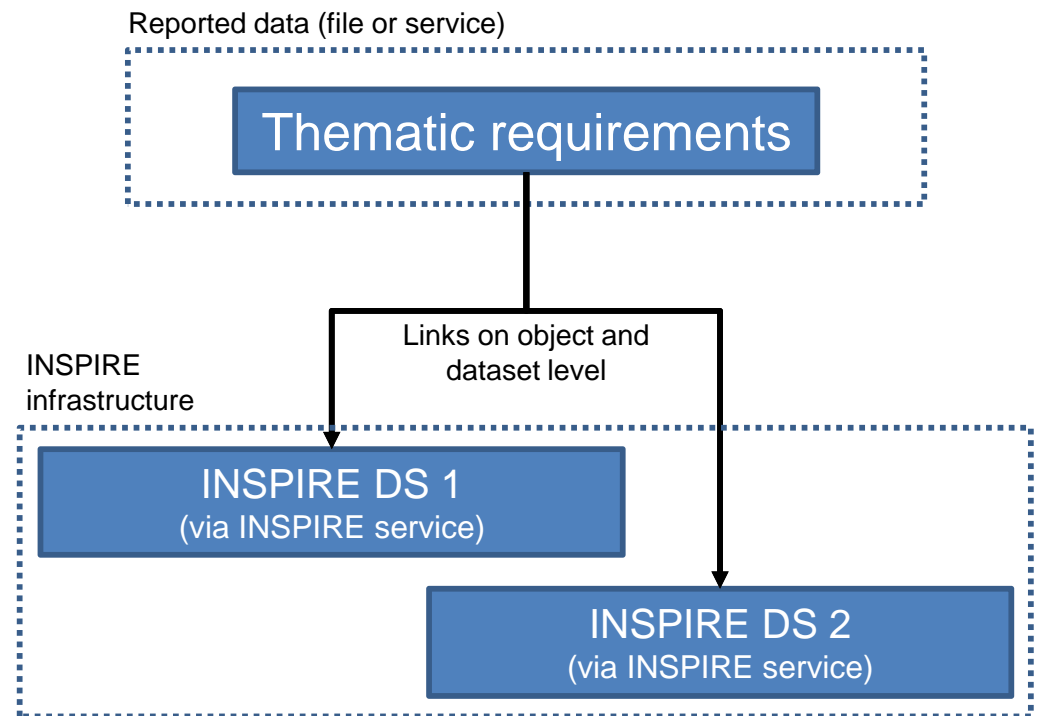
Pilot #2: Data modelling - extensions to INSPIRE

Consistent design approaches (both embedded in SDI) to combine / integrate thematic and INSPIRE requirements

Integrated approach



Linked approach



Pilot #2: CDDA data model for reporting

- **Pilot started in 2015**

Part 1: 2015 - 2016

- Developing CDDA data model according to INSPIRE Protected sites Simple application schema with thematic extensions
- **Starting approach = integrated data model**
- Planned outcomes:
 - Conceptual data model in UML (optimized)
 - GML application schema
 - Test GML data

Part 2: 2016

- Development and demonstration of INSPIRE web services
- Testing inclusion of services into reporting process

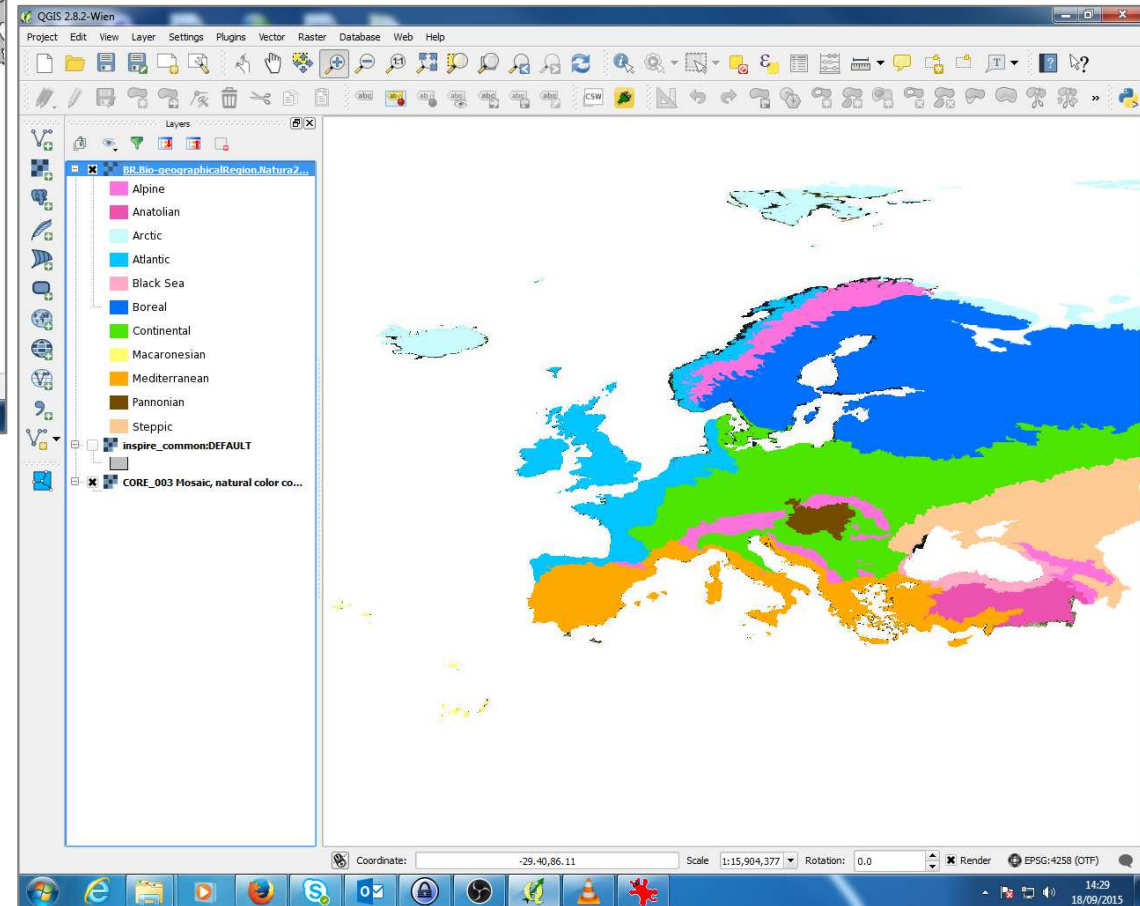
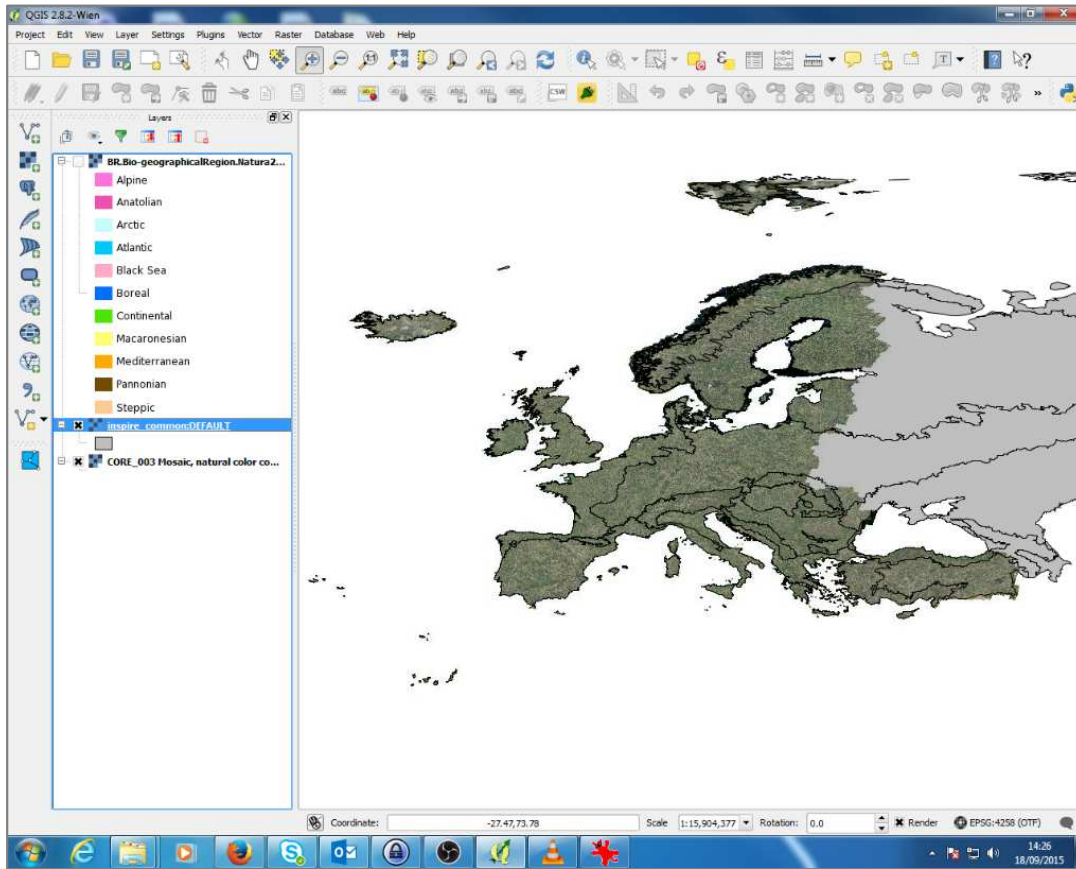


Pilot #3: INSPIRE view service

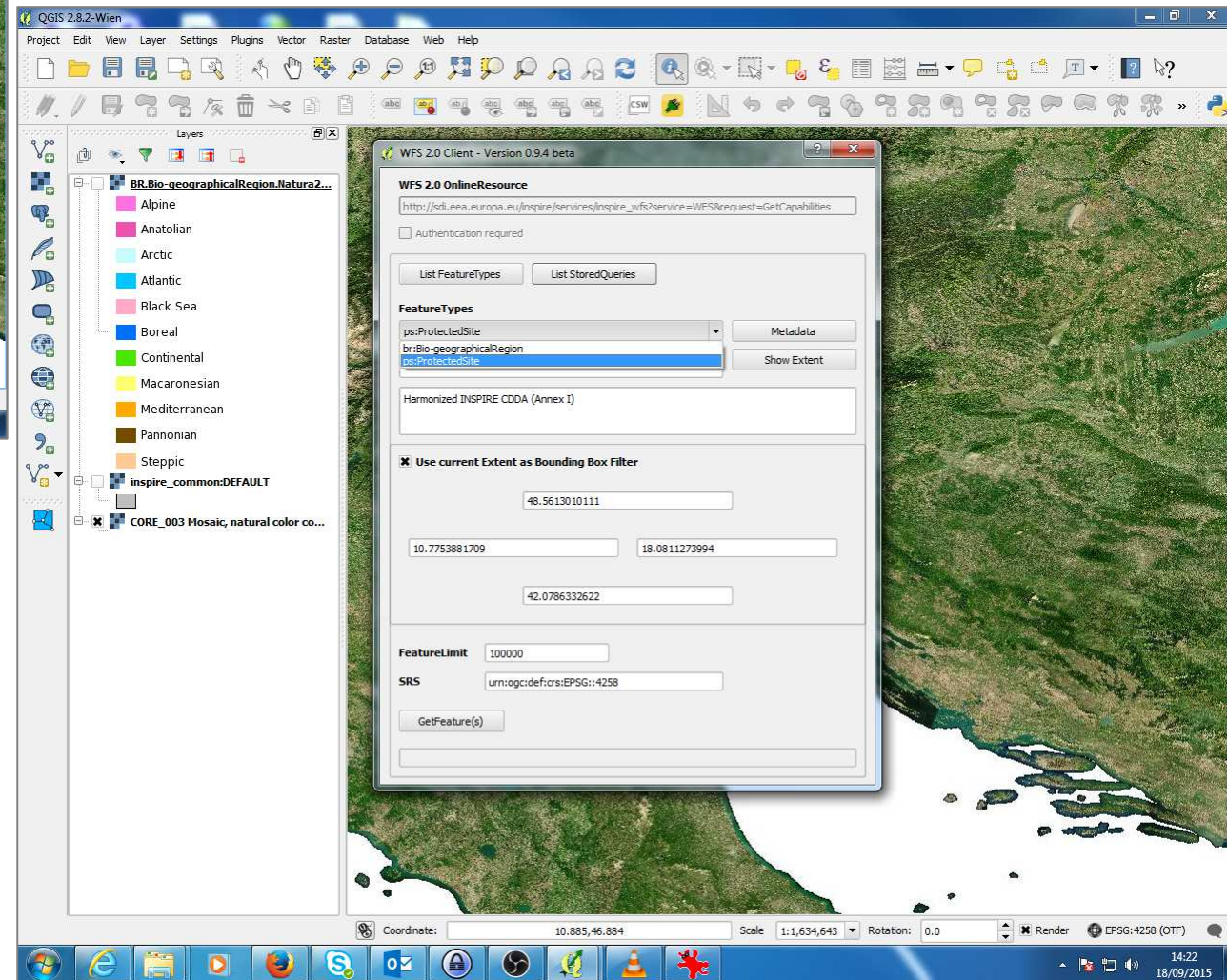
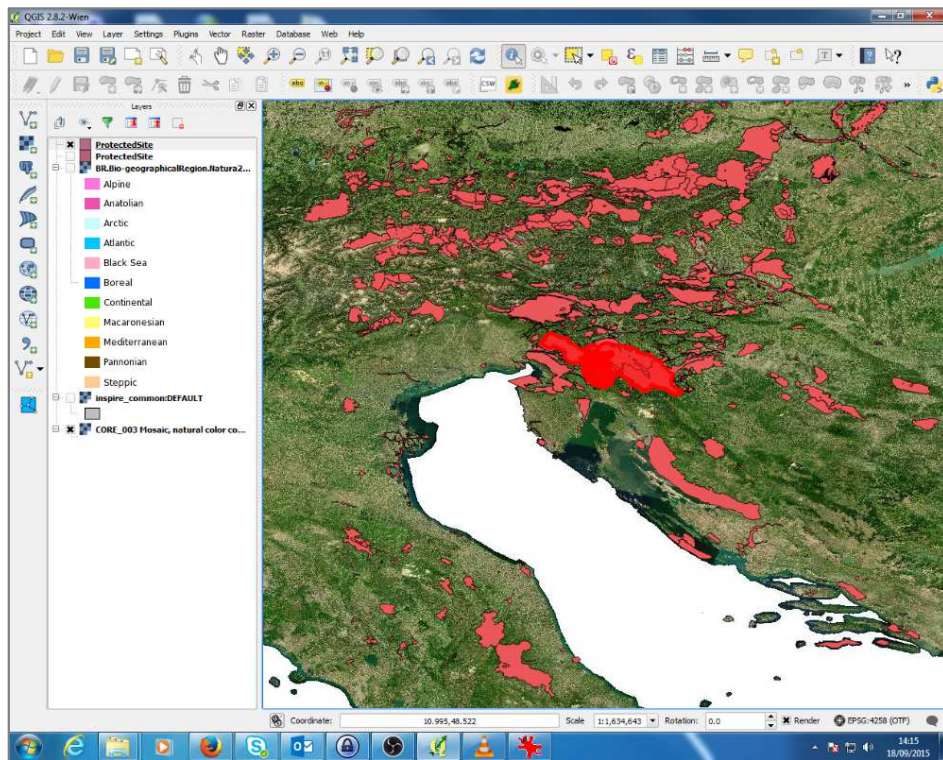
Demonstration service on:

- Bio-geographical regions transformed according to INSPIRE BR:
- INSPIRE default portrayal
- Thematic portrayal

http://sdi.eea.europa.eu/inspire/services/inspire_wms?service=WMS&request=GetCapabilities



Pilot #3: INSPIRE download (feature) service

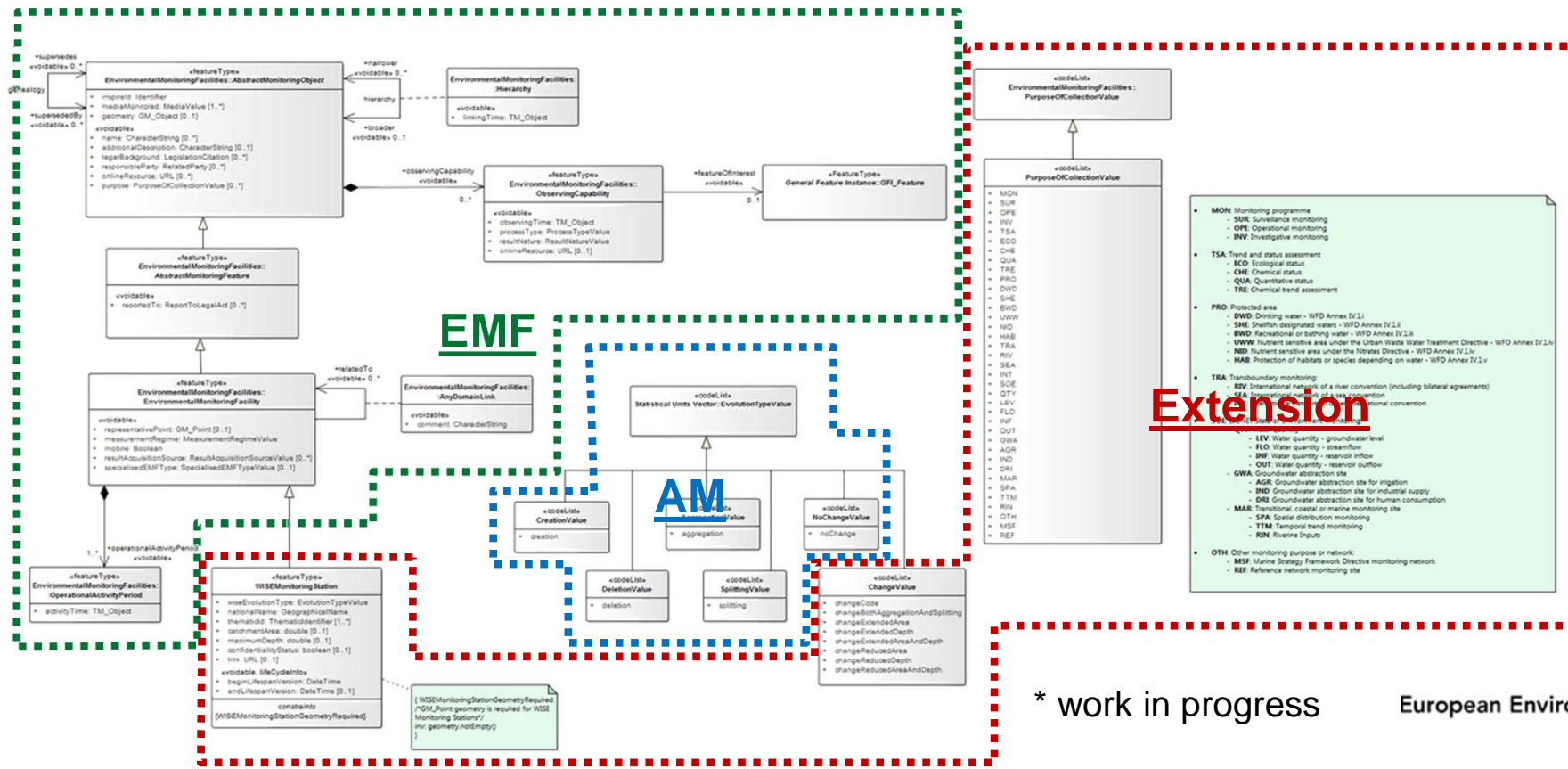


Demonstration service on:

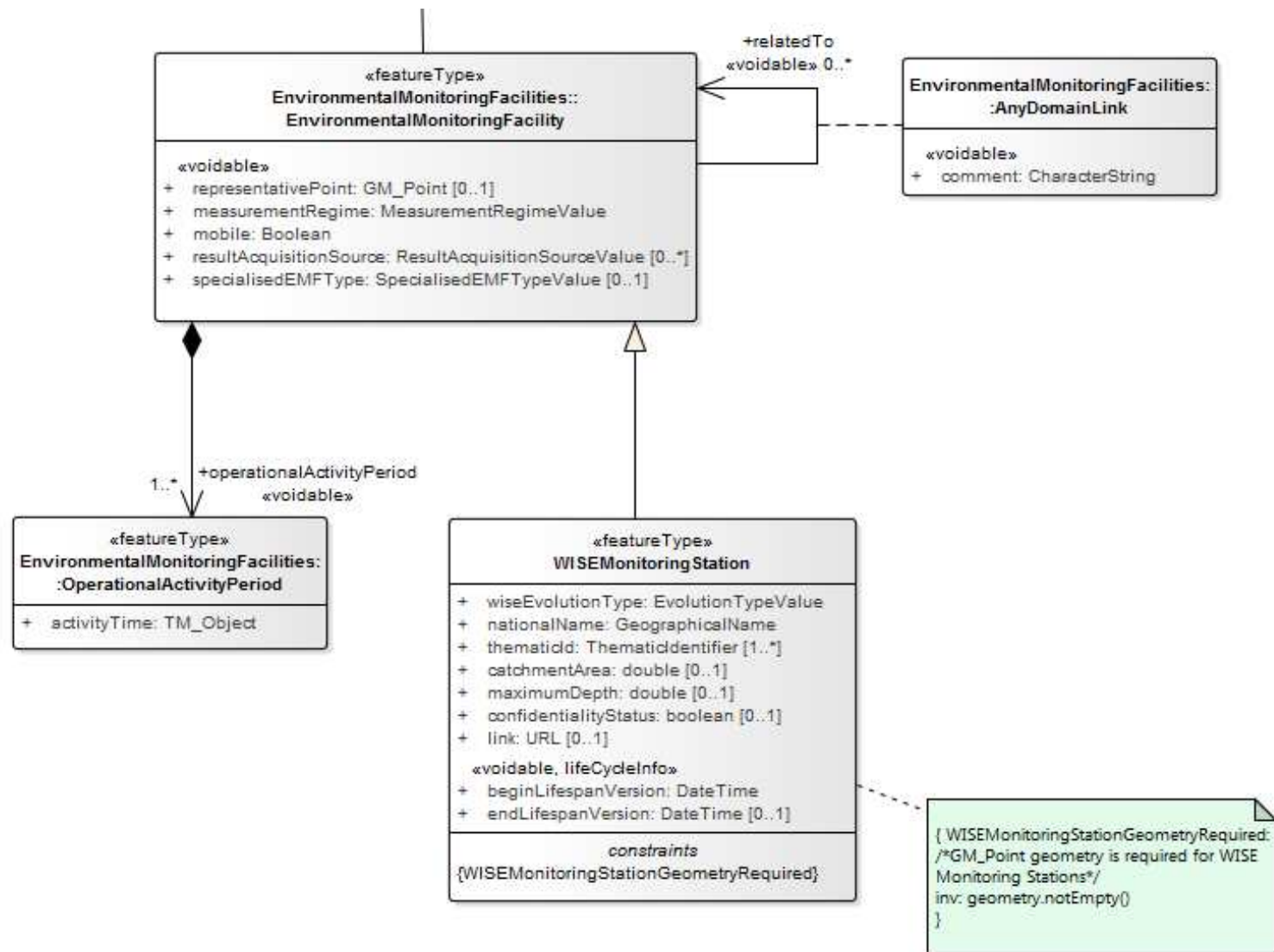
- CDDA (INSPIRE PS)
- Features

#4 WISE SOE

- Evaluate the current data models of monitoring stations in WISE SOE, WFD, INSPIRE
- Develop the new data model for monitoring stations in WISE SoE (UML diagram; GML/XML schemas)
- Transform the data into GML format (test data with simple validation)



#4 WISE SOE



#4: Connecting vocabularies

- EEA participation in INSPIRE MIG on registers (register federation, search, terms management)

<http://dd.eionet.europa.eu/vocabularies>

<http://inspire.ec.europa.eu/registry/>

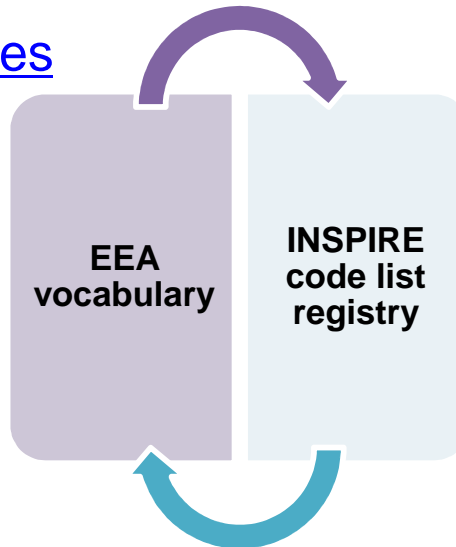
Folder: cdda (CDDA)
 Identifier: designations
 Label: National CDDA designations
 Base URI: http://dd.eionet.europa.eu/vocabulary/cdda/designations/
 Registration status: Released 05 Mar 2014 14:35:02
 Type: Common
 Version: Version 11

Vocabulary concepts

Filtering text: [SI] Status: Accepted

614 concepts found, displaying 561 to 580 (First/Prev) 24, 25, 26, 27, 28, 29, 30, 31 (Next/Last)

Id	Preferred label	Status	Status Modified	Notation
SE04	Habitat Protection Area	Valid	16.01.2014	SE04
SE06	Wildlife and Plant Sanctuary	Valid	16.01.2014	SE06
SE98	Natural Monument	Valid	16.01.2014	SE98
SE99	Others	Valid	16.01.2014	SE99
SI00	Unprotected	Valid	16.01.2014	SI00
SI01	Strict Nature Reserve	Valid	16.01.2014	SI01
SI02	Nature Reserve	Valid	16.01.2014	SI02
SI03	Natural Monument	Valid	16.01.2014	SI03
SI04	National Park	Valid	16.01.2014	SI04
SI05	Regional Park	Valid	16.01.2014	SI05



EEA vocabulary: code lists in reporting data flows

Id	Preferred label	Status	Status Modified	Notation
II	National Park	Valid	16.01.2014	II
III	Natural Monument or Feature	Valid	16.01.2014	III
IV	Habitat/Species Management Area	Valid	16.01.2014	IV
Ia	Strict Nature Reserve	Valid	16.01.2014	Ia
Ib	Wilderness Area	Valid	16.01.2014	Ib
NA	IUCN category is not available	Valid	16.01.2014	NA
UA	Unassigned	Valid	16.01.2014	UA
V	Protected Landscape/Seascape	Valid	16.01.2014	V
VI	Protected area with sustainable use of ...	Valid	16.01.2014	VI

Code list values

Items per page: 50

Label	Status	Governance level
emerald network	Valid	Legal (EU)
IUCN	Valid	Legal (EU)
national monuments record	Valid	Legal (EU)
natura2000	Valid	Legal (EU)
ramsar	Valid	Legal (EU)
UNESCO man and biosphere programme	Valid	Legal (EU)
UNESCO world heritage	Valid	Legal (EU)

Showing 1 to 7 of 7 entries

INSPIRE REGISTRY
 Enhancing access to European spatial data

European Commission > INSPIRE > INSPIRE registry > INSPIRE code list registry

Register manager: European Commission, Joint Research Centre
 Control body: INSPIRE Maintenance and Implementation Group (MIG)
 Submitter: Members of INSPIRE Maintenance and Implementation Group (MIG)
 Contact point: JRC INSPIRE Registry Team
 Licence: Europa Legal Notice

Other formats: XML (beta), XML_beta (ISO 19135), RDF/XML_beta, JSON, Atom, CSV_beta

Code list

Items per page: 50

Label	protected sites	Application schema	Parent	Status
Designation	Protected Sites	Protected Sites Simple		Valid
IUCN Designation	Protected Sites	Protected Sites Simple	Designation	Valid
National Monuments Record Designation	Protected Sites	Protected Sites Simple	Designation	Valid
Natura2000 Designation	Protected Sites	Protected Sites Simple	Designation	Valid
Ramsar Designation	Protected Sites	Protected Sites Simple	Designation	Valid
UNESCO Man And Biosphere Programme Designation	Protected Sites	Protected Sites Simple	Designation	Valid
UNESCO World Heritage Designation	Protected Sites	Protected Sites Simple	Designation	Valid

Showing 1 to 8 of 8 entries (filtered from 313 total entries)

EIONET Data Dictionary

SERVICES REPORTNET TOOLS TOPICS (ETCS)

You are here: Eionet > Data Dictionary > Vocabularies

Browse vocabularies

Note: Unauthenticated users can only see vocabularies in Released and Public Draft statuses.

- aq (Air Quality Directive e-Reporting)
- art12_2012 (Birds directive Art. 12 reporting)
- art17_2006 (Habitats directive Art. 17 reporting in year 2006)
- art17_2012 (Habitats directive Art. 17 reporting in year 2012-2017)
- biodiversity (Biodiversity)
- cdda (CDDA)
 - cddasites (CDDA site codes with site assignments)
 - designations (National CDDA designations)
 - designationtypecategory (National designation type category)
 - iucnca (IUCN protected area management categories)
 - regions (ISO3 codes for countries and regions)
- common (Shared vocabularies)
- eptr (European Pollutant Release and Transfer Register)

Conclusions

- Better coordination across reporting initiatives (incl. beyond EU)
- Environmental reporting can and must benefit from better harmonisation and availability of spatial data
- Discussions on different design approaches (data models) and expected benefits:
 - Flexible but interoperable
 - Learning from best practices
- Testing of service based reporting needed for true implementation



Thanks

Christian Ansorge

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Paul Hasenohr

European Environment Agency

