

Darja Lihteneger, 21 September 2015, Ljubljana

Examples of best practice from EEA INSPIRE pilots and prototypes

SLO INSPIRE Day 2015



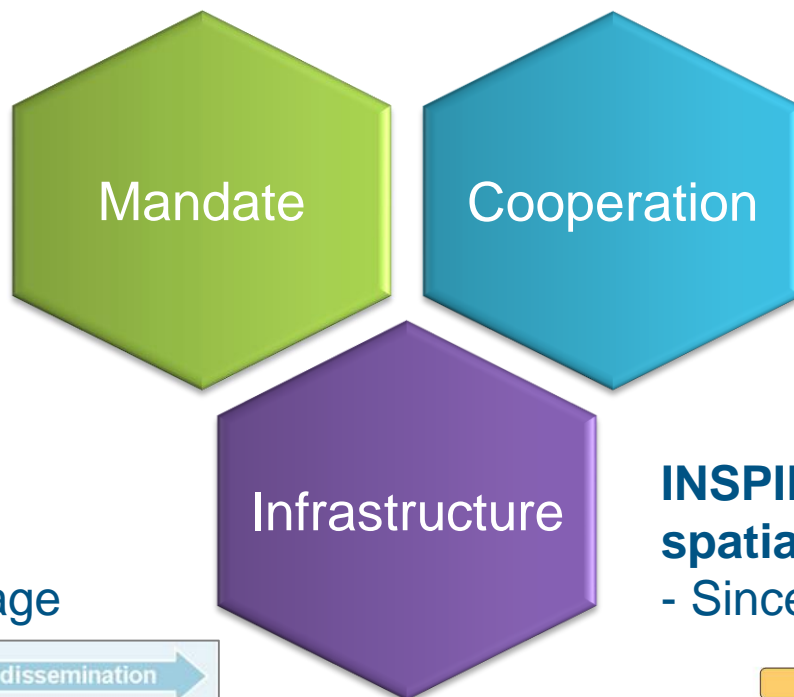
EEA – INSPIRE pilots and prototypes

Scope

- Environmental data flows
- INSPIRE synergies for reporting
- Pilots

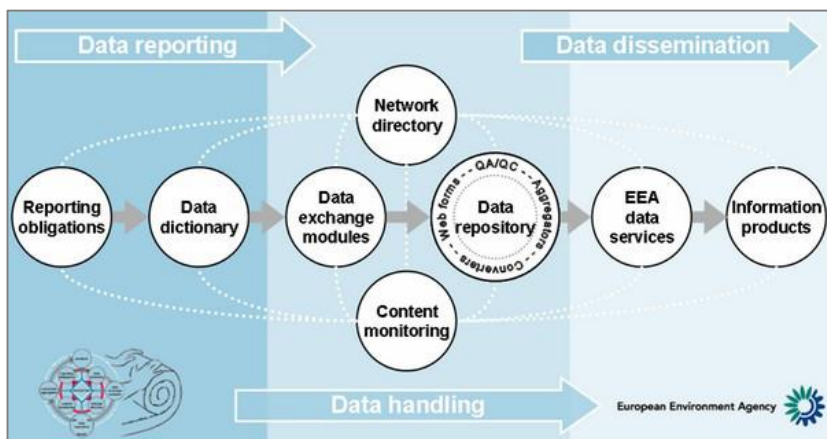
EEA and environmental data flows

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

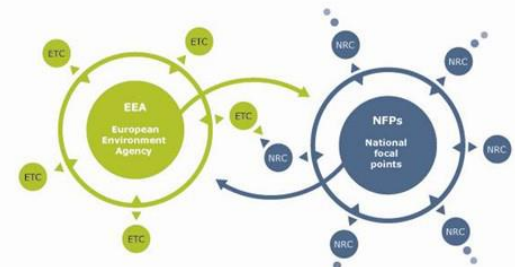


Reportnet

- Operational since 2002
- Delivery, validation, storage



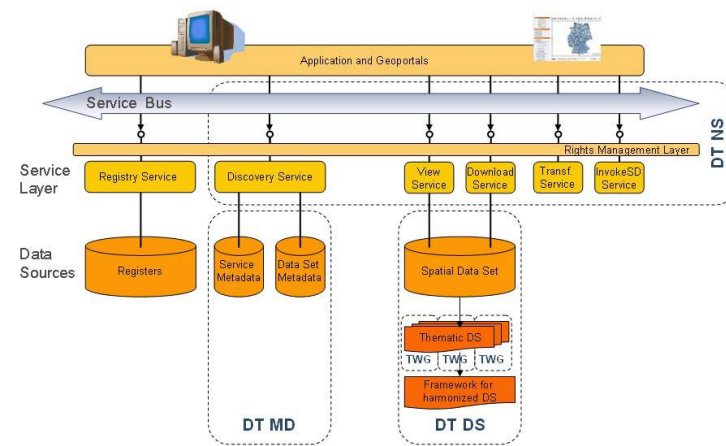
- Eionet (39 countries)



- EU institutions
- regional cooperation, international org.

INSPIRE: infrastructure for spatial information in Europe

- Since 2007



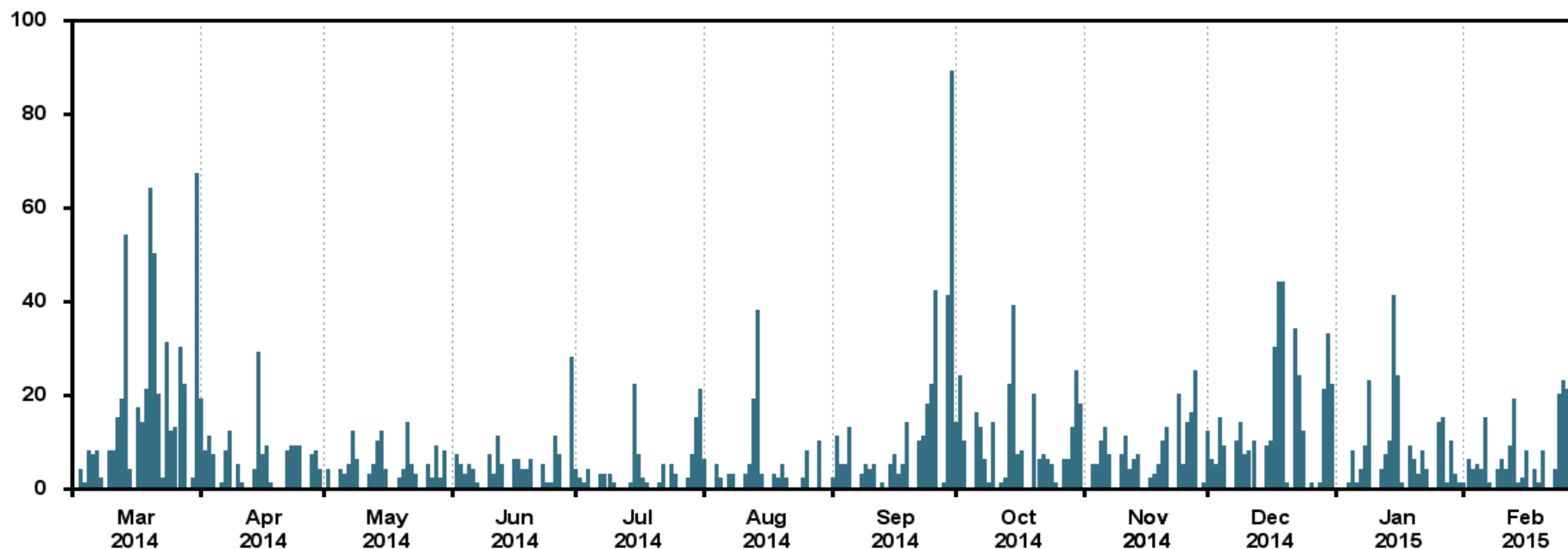
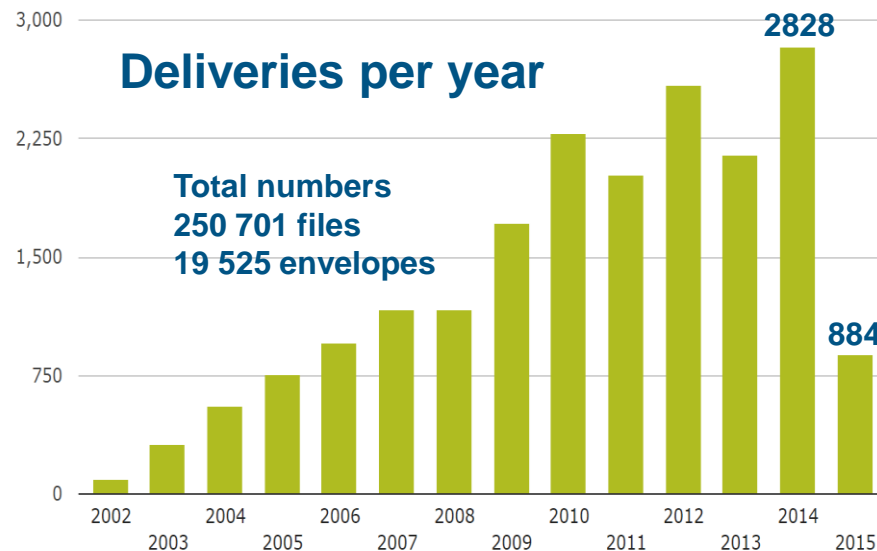
Reportnet – EEA view

Data collected in the period

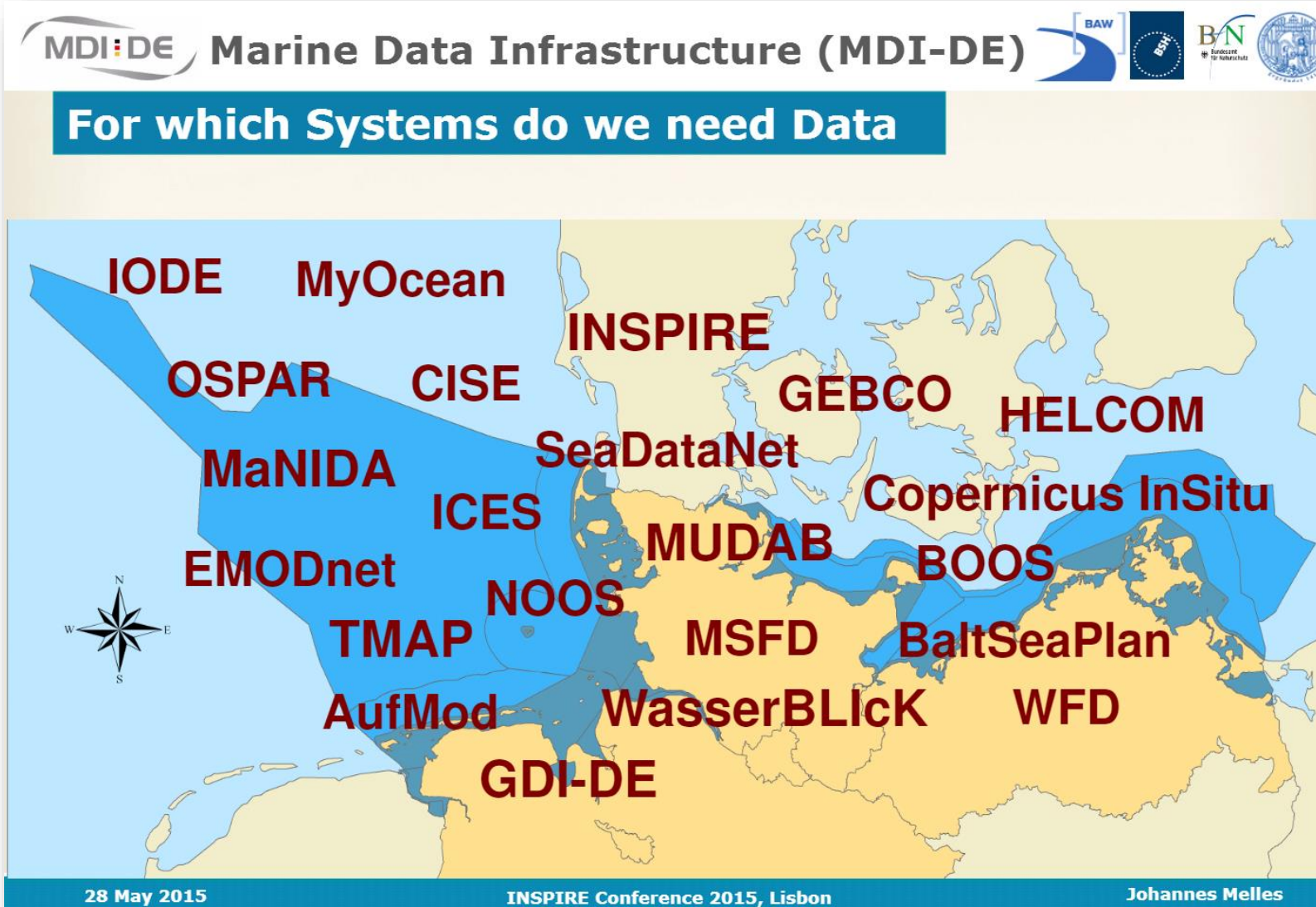
2002 – 2015

(by 23 April 2015)

Deliveries per day



Data reporting – Reporters view



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



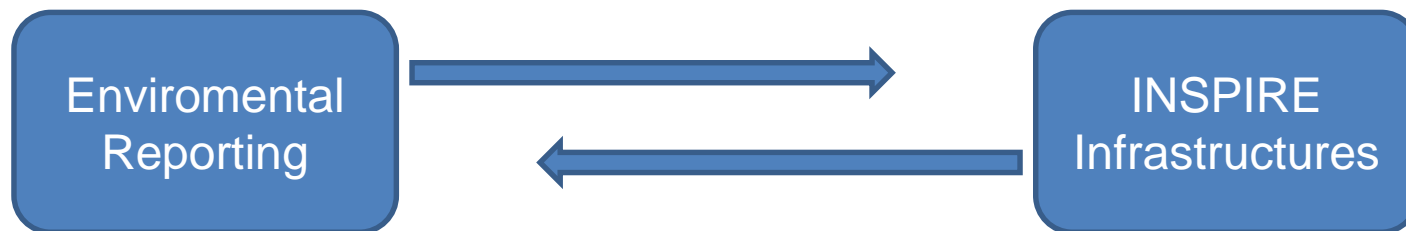
Reporting

- **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)

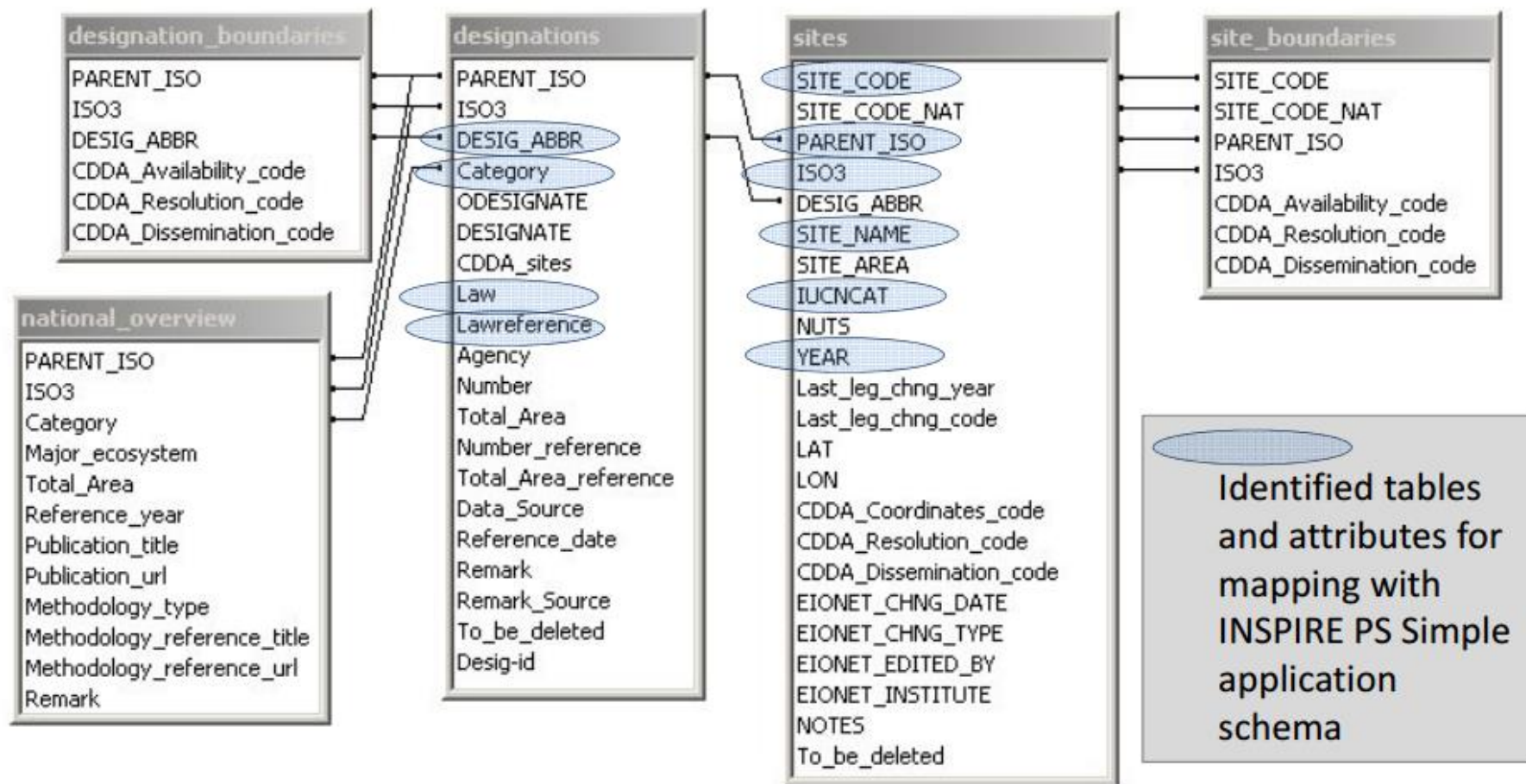
Future

Pilot #1: Data transformation

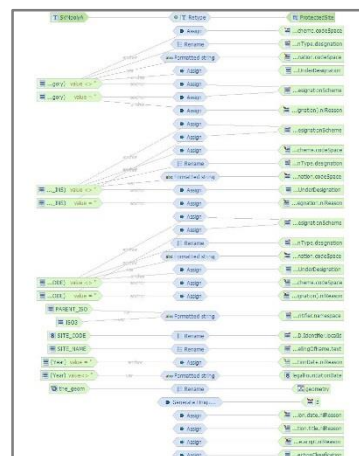
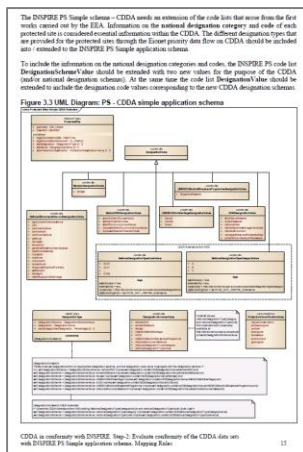
European CDDA: since 1995 (national – Europe – global)

Pilot: data transformation according to INSPIRE Protected sites

Common Database on Designated Areas: Data Model



Pilot #1: Transformation workflow and outcomes



Public
European
CDDA data set



Mapping rules
from CDDA to
INSPIRE
Protected sites



Transformation
rules and data
transformation
in HALE



GML files per
country with
INSPIRE PS
compliant set
of data

Potential guidelines
for data
transformation of
national CDDA into
INSPIRE PS data

HALE project
can be applied to
the new version
of the European
CDDA data set

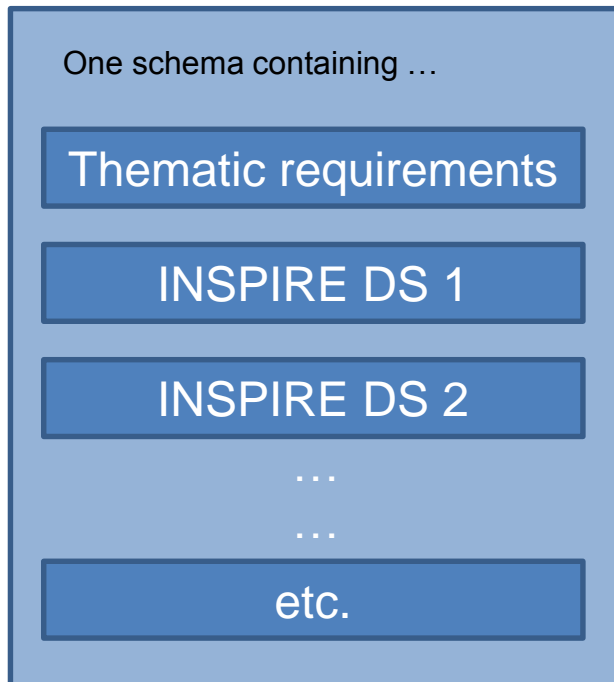
Capacity
building:
demonstration
of INSPIRE
GML encoding



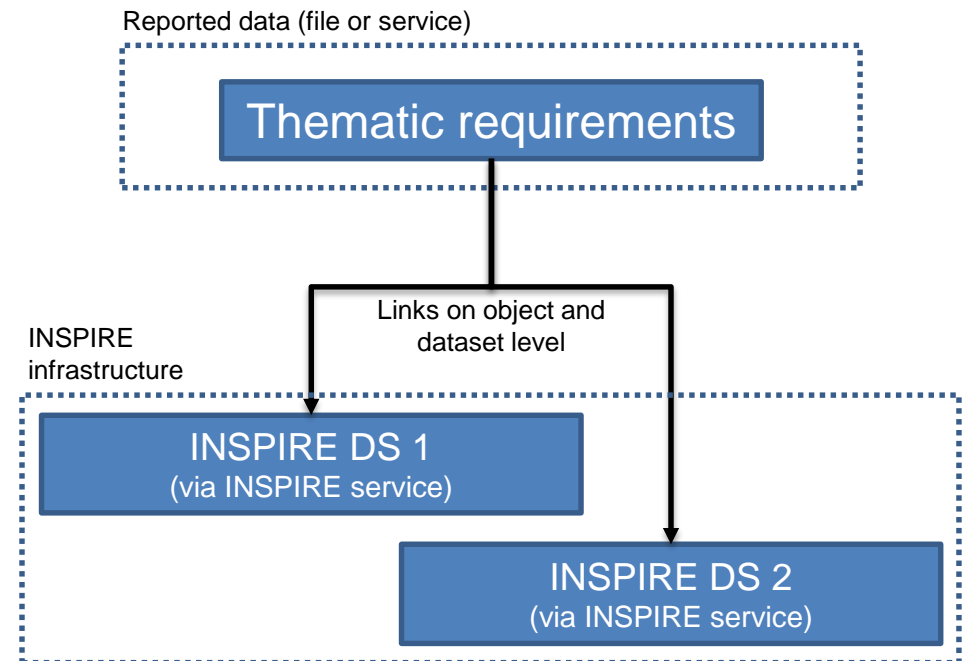
Pilot #2: Data modelling - extensions to INSPIRE

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

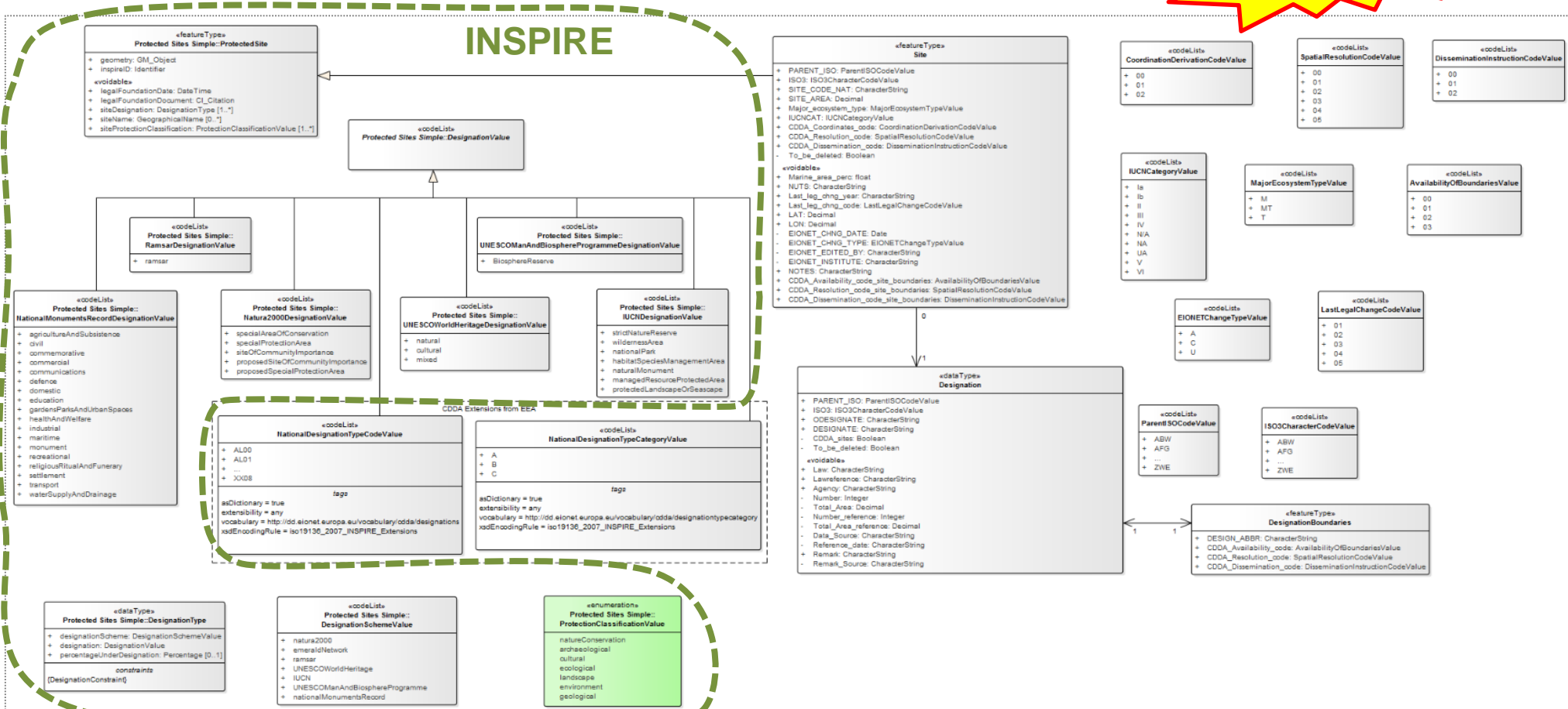
- Development and demonstration of INSPIRE web services
- Testing inclusion of services into reporting process

Pilot #2: CDDA data model: INSPIRE extended

Extensions: adding thematic content to INSPIRE PS data model

- Feature types and properties
- Data types
- Code lists

Working
copy

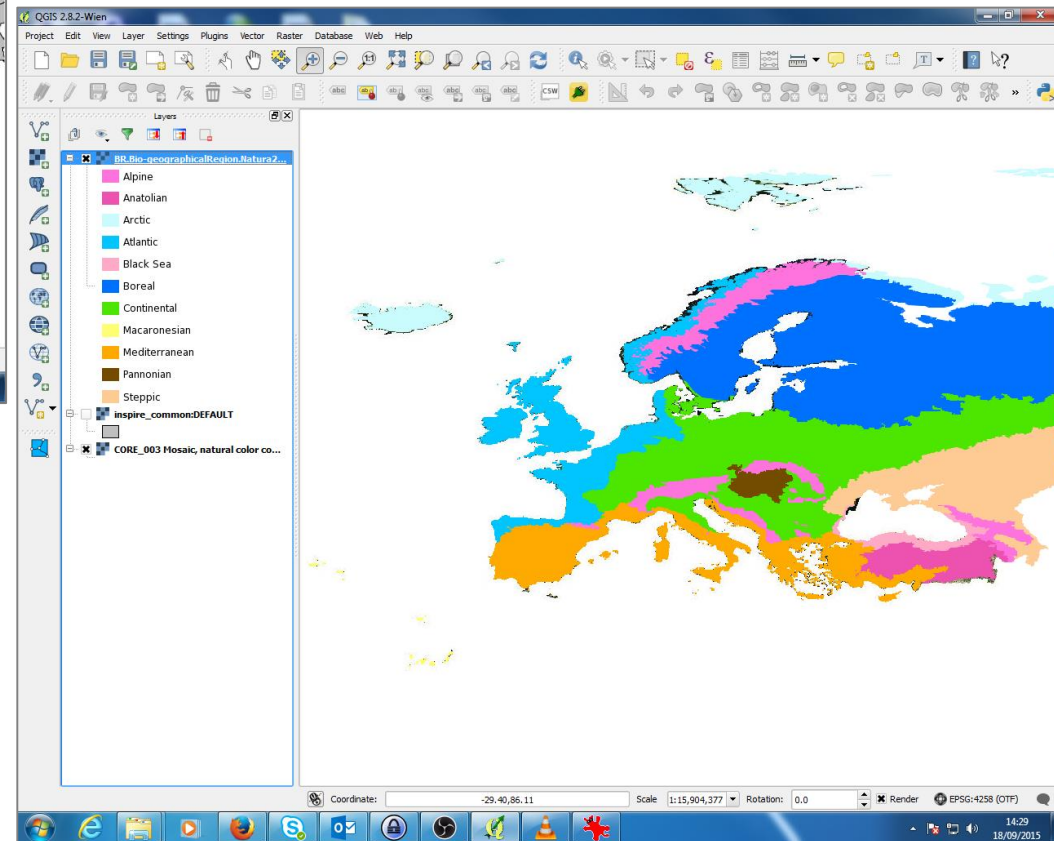
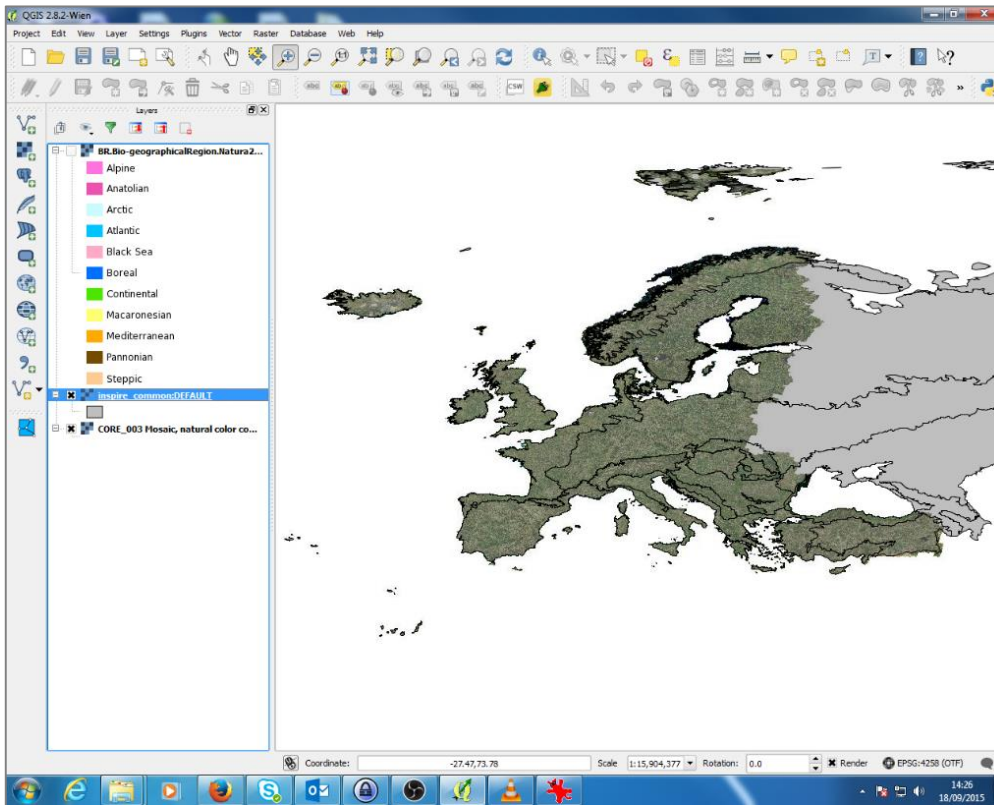


Pilot #3: INSPIRE view service

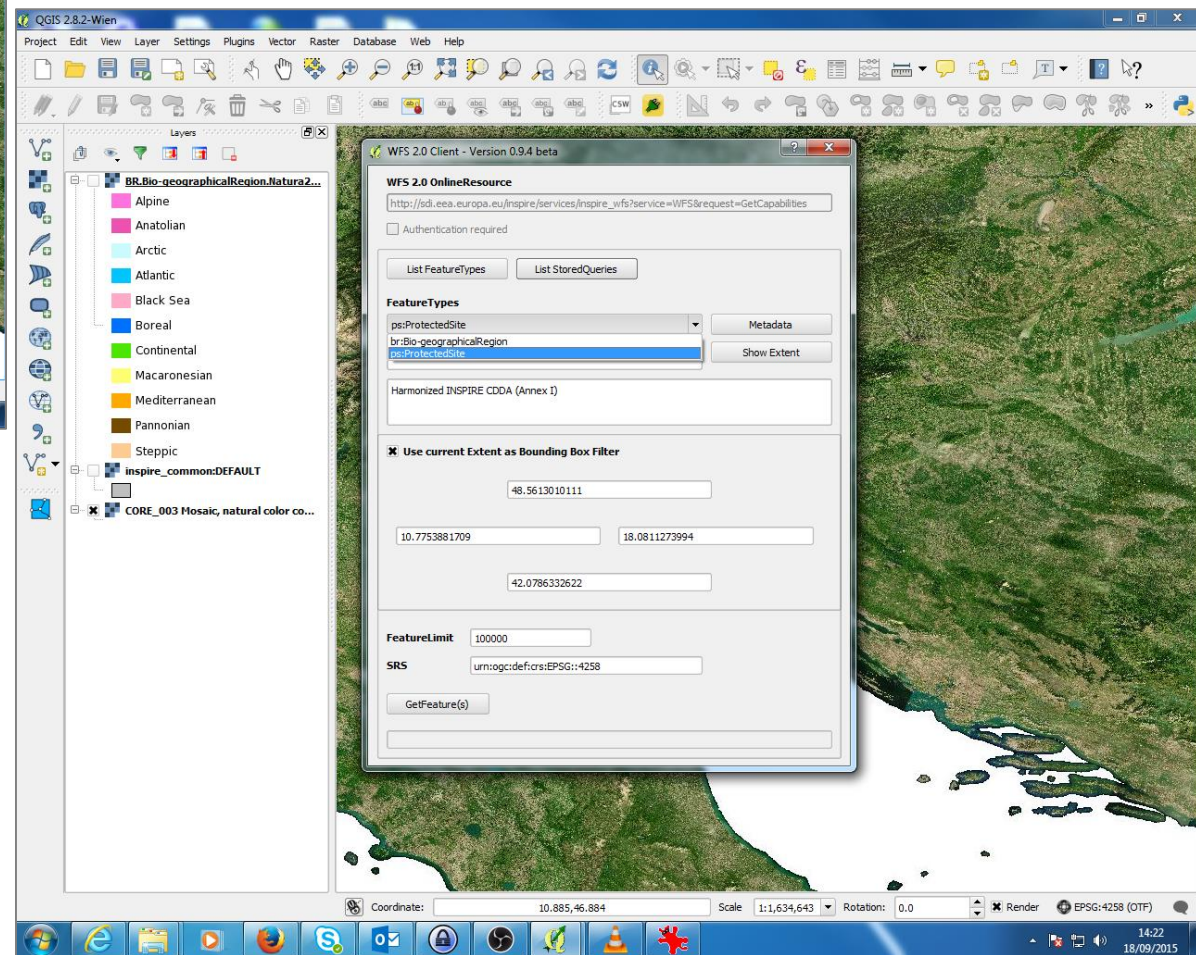
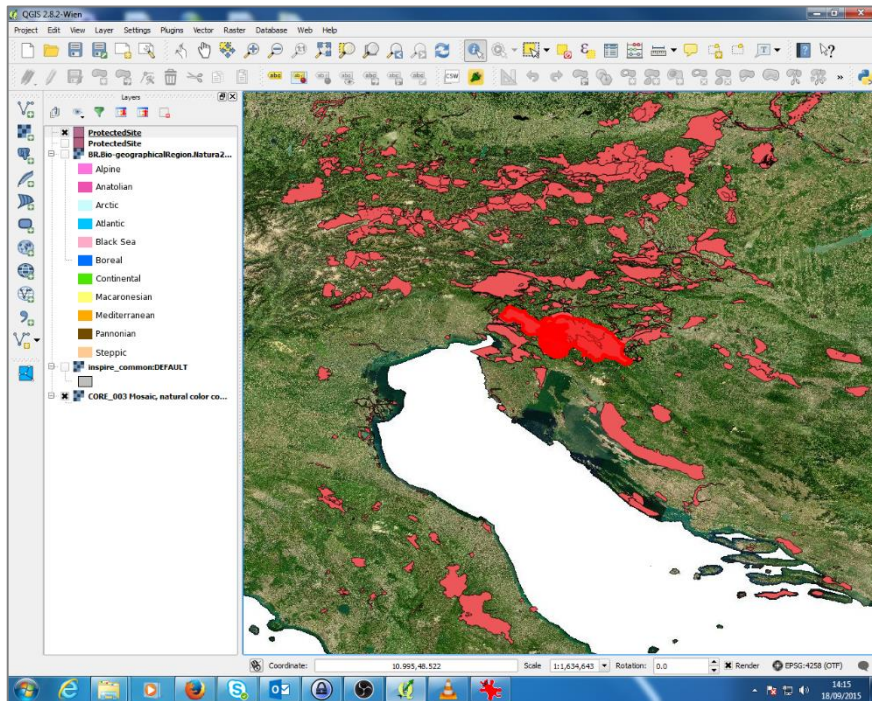
Demonstration service on:

- 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

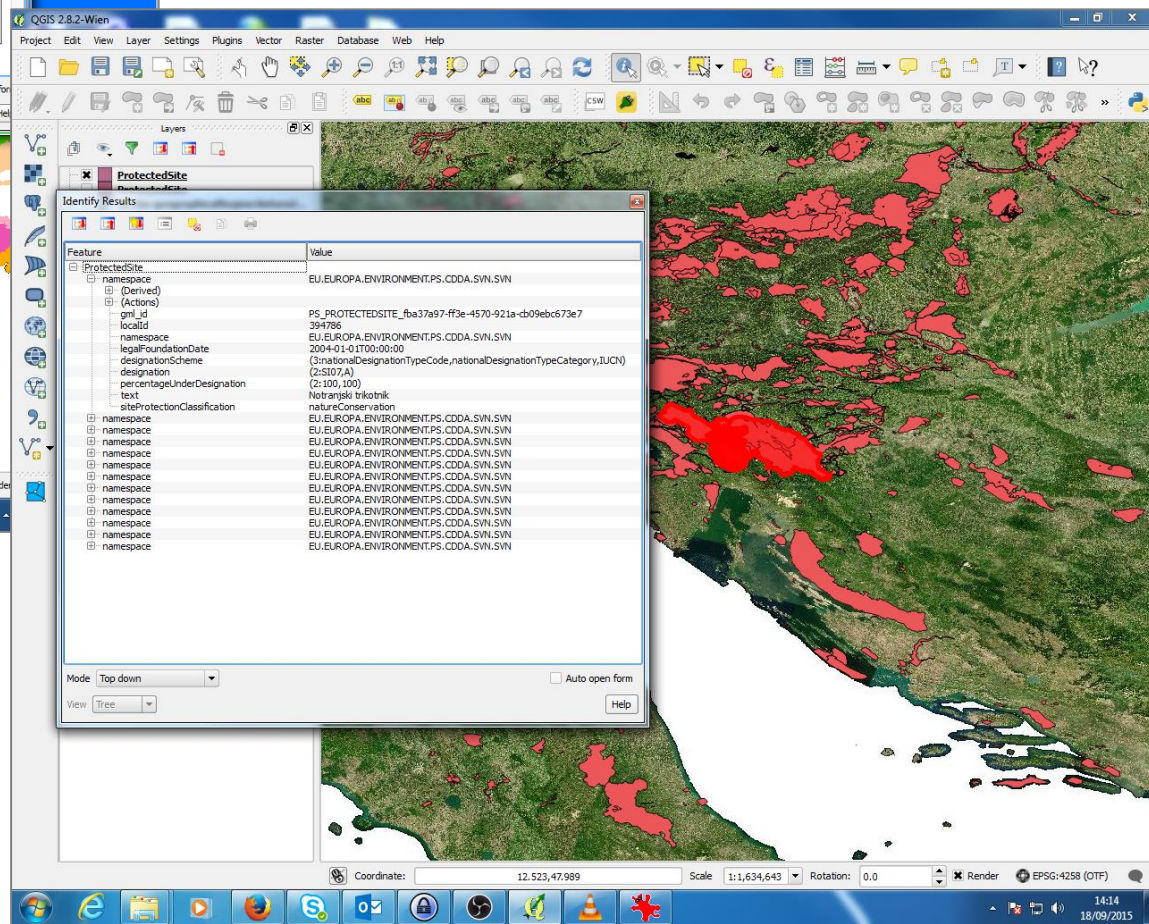
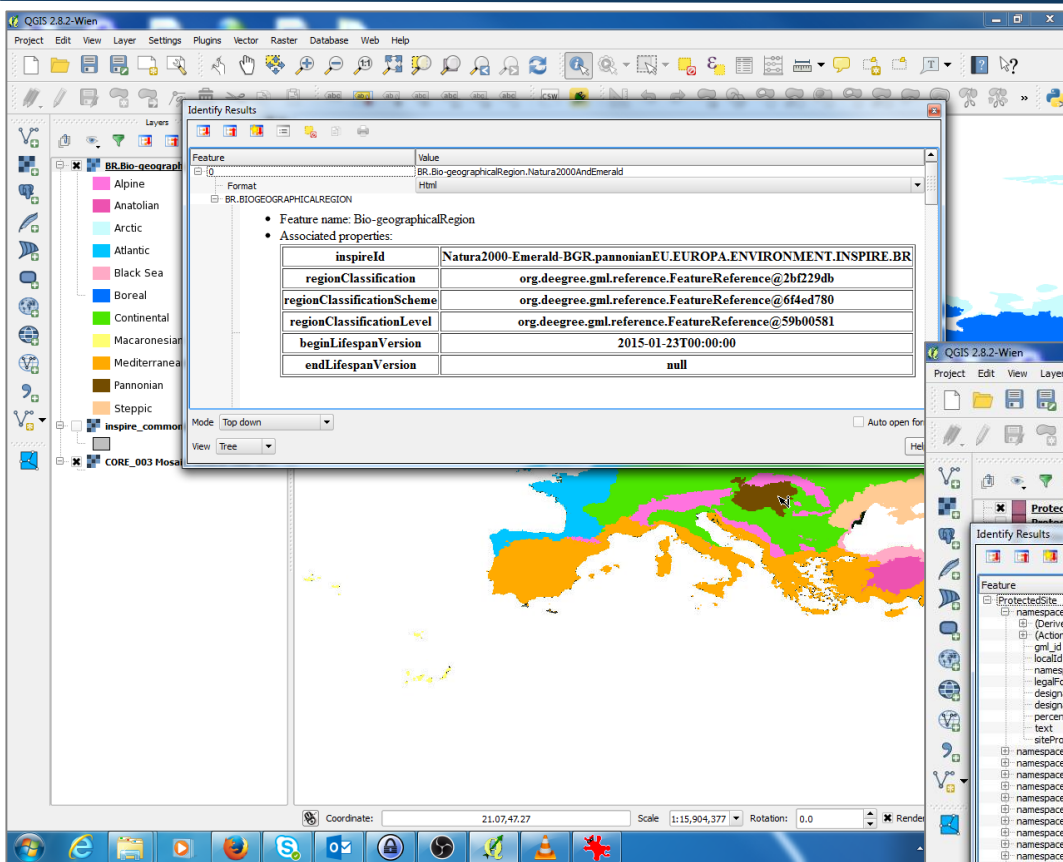


Demonstration service on:

- CDDA (INSPIRE PS)
- Features

Pilot #3: INSPIRE services: feature identification

View service



Download service
Feature identification

#4: Connecting vocabularies

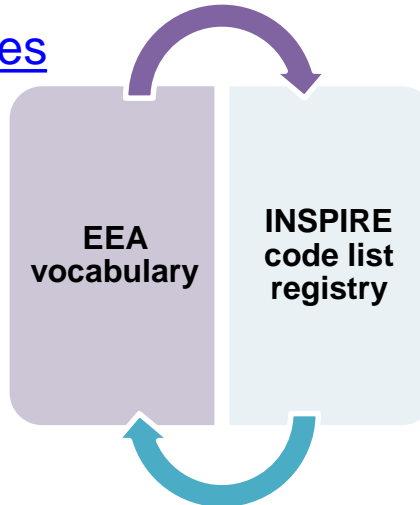
- EEA participation in INSPIRE MIG on registers (register federation, search, terms management)

<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 <input type="text" value="SI"/>		Status	<input checked="" type="checkbox"/> Accepted <input type="checkbox"/>	
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



Code list values		
Items per page: 50 <input type="button" value="v"/>		
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		
First Previous Next Last		

EEA vocabulary: code lists in reporting data flows

EEA

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)

luncat (IUCN protected area management categories)

regions (ISO3 codes for countries and regions)

common (Shared vocabularies)

eptr (European Pollutant Release and Transfer Register)

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

European Commission

INSPIRE REGISTRY

Enhancing access to European spatial data

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

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 (Registry)

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	Designation	Valid
Designation Scheme	Protected Sites	Protected Sites Simple	Designation	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)

[First](#) [Previous](#) [Next](#) [Last](#)

INSPIRE registry

Powered by: Registry v1.0

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

Darja Lihteneger

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