

The state of the art of the implementation of the INSPIRE Directive

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*Serving society
Stimulating innovation
Supporting legislation*



Key messages

- Under INSPIRE, the obligation to data sharing started in 2009
- By June 2012, ALL data under the scope of INSPIRE shall be shared through the INSPIRE network services
 - § irrespective of their compliance with the INSPIRE data models!

Outline

Joint Research Centre

What is INSPIRE?

Why is INSPIRE important for the ICZM community?

Where are we now, and what are *your* next steps?



The Mission of the Joint Research Centre

... is to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of EU policies.

As a service of the European Commission, the JRC functions as a reference centre of science and technology for the Union.

Close to the policy-making process, it serves the common interest of the Member States, while being independent of special interests, whether private or national.



What is INSPIRE?

Why INSPIRE - 2001?

Needs

Better information needed to support policies

Improvement of existing information flows

Differentiation across regions to be considered

Revision of approach to reporting and monitoring, moving to concept of sharing of information

Situation in Europe

Data policy restrictions

- pricing, copyright, access rights, licensing policy

Lack of co-ordination

- across borders and between levels of government

Lack of standards

- incompatible information and information systems

Existing data not re-usable

- fragmentation of information, redundancy, inability to integrate



EU has islands of data of different standards and quality...

Bringing data together - Spatial Data Infrastructure



Like a road infrastructure makes it possible to connect different sites, a spatial data infrastructure makes it possible to connect data located at different sources



Data easily discoverable and accessible to users



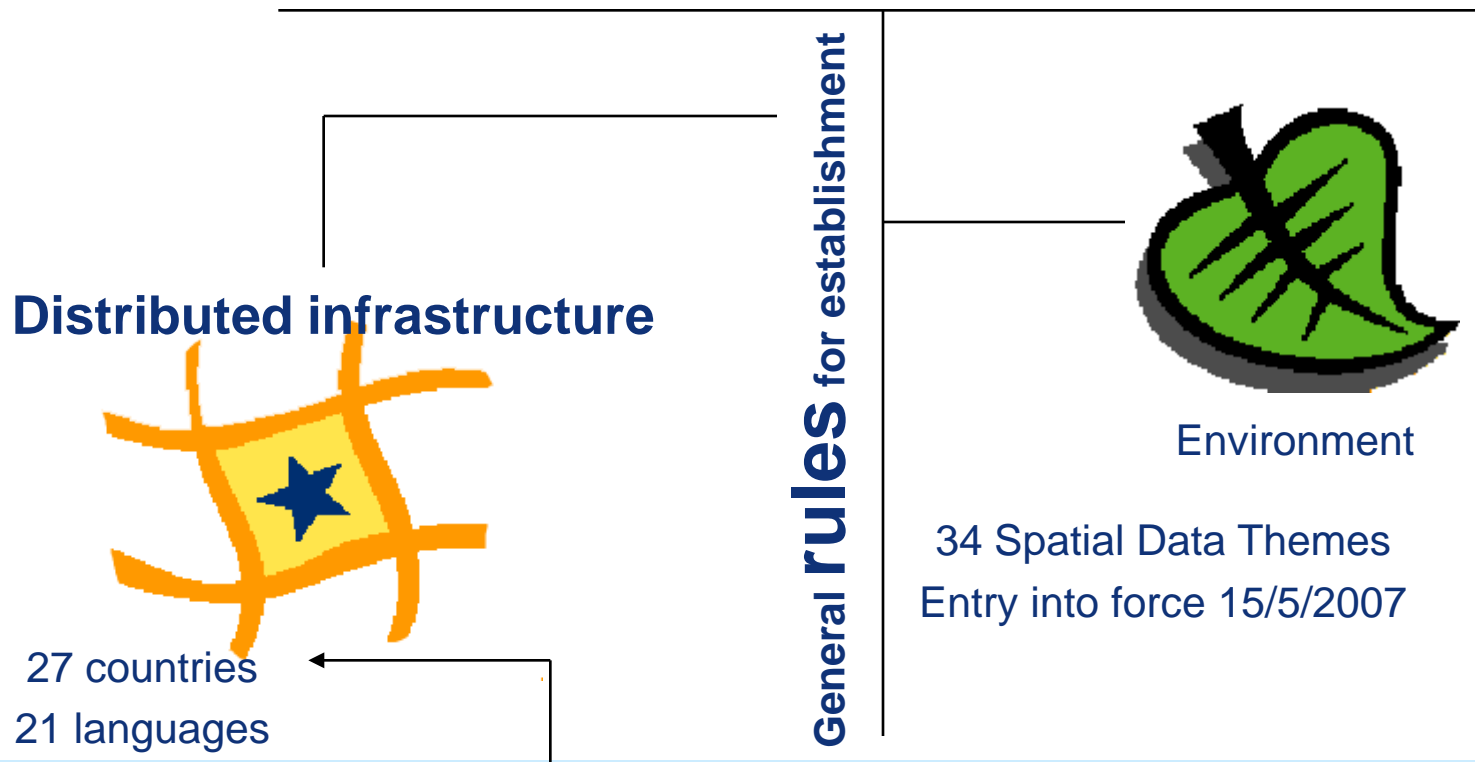
Easier development of new applications and services

Components

Institutional framework	Technical standards
Fundamental data sets	Data Services

What is INSPIRE?

“Infrastructure for Spatial Information in the European Community”



Set of European and national Legal Acts and their coordinated implementation

INSPIRE in a nutshell

- Comprehensive **Data inventory**
- Formal (standardised) documentation (Metadata Implementing Rule Legal Act)
- **Facilitate Data discovery** through standardised Discovery Services (Network Service IR Legal Act)
- **Data Sharing**
- **Facilitate Data Use** by allowing view, download and transformation (IR Network Service)
- **Promote long term Data Harmonisation and interoperability** by adopting common models to “expose” the data (IR data interoperability)
- **Leave to Member States** responsibility for addressing **cross-border issues**

INSPIRE Data Scope

Annex I

1. Coordinate reference systems
2. Geographical grid systems
3. Geographical names
4. Administrative units
5. Addresses
6. Cadastral parcels
7. Transport networks
8. Hydrography
9. Protected sites

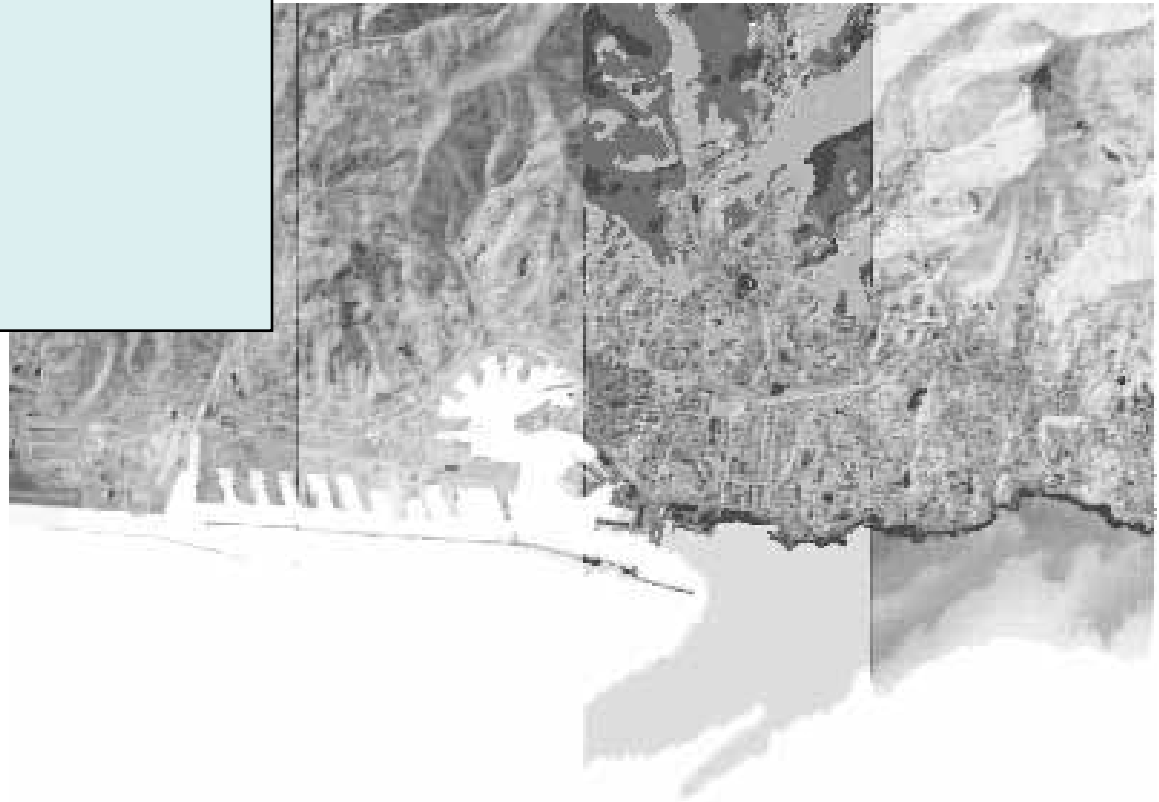
COMMISSION REGULATION
implementing Directive 2007/2/EC of
the European Parliament and of the
Council as regards **interoperability of
spatial data sets and services**
10.12.2010 (Annex I)



INSPIRE Data Scope

Annex II

1. Elevation
2. Land cover
3. Ortho-imagery
4. Geology



The image is a composition of image analysis results superimposed on 3 bands of a Landsat Multispectral Scanner System (MSS) data set of Genoa. The image covers about 40 km x 30 km. The grey area in the South represents troubled water expelled into the sea by the river Bisagno, mixed with the residue of the water purifying plant at the Foce.

INSPIRE Data Scope

Annex III

1. Statistical units
2. Buildings
3. Soil
4. Land use
5. Human health and safety
6. Utility and governmental services
7. Environmental monitoring facilities
8. Production and industrial facilities
9. Agricultural and aquaculture facilities
10. Population distribution – demography

11. Area management/restriction /regulation zones & reporting units
12. Natural risk zones
13. Atmospheric conditions
14. Meteorological geographical features
15. Oceanographic geographical features
16. Sea regions
17. Bio-geographical regions
18. Habitats and biotopes
19. Species distribution
20. Energy Resources
21. Mineral resources



INSPIRE Legal Acts published in the Official Journal of the EU

Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) *14.03.2007*

INSPIRE **Metadata** Regulation *03.12.2008*

Commission Decision regarding INSPIRE **monitoring and reporting** *05.06.2009*

Regulation on INSPIRE **Network Services** *19.10.2009 (View and discovery)*

Corrigendum to INSPIRE **Metadata** Regulation *15.12.2009*

Regulation on INSPIRE **Data and Service Sharing** *29.03.2010*

Commission Regulation amending Regulation (EC) No 976/2009 as regards **download services and transformation services** *10.12.2010*

COMMISSION REGULATION implementing Directive 2007/2/EC of the European Parliament and of the Council as regards **interoperability of spatial data sets and services** *10.12.2010 (Annex I)*

COMMISSION REGULATION amending Regulation 1089/2010 as regards interoperability of spatial data sets and services *05.02.2011 (code list)*

European law affecting 30+ countries, 21+ languages

Why is INSPIRE important for the ICZM community?



Quiz: how many INSPIRE data themes are NOT relevant for ICZM?



Answer: close to 0

ICZM is about the **interaction** of all **drivers**, **pressures**, stakeholders, economic **activities** and environmental components in the coastal areas, that have to be managed together to be able to cope with the **high complexity** of these areas (land-sea interface, fresh-salt water, transitional waters and related ecosystems, tourism, industrial and production activities, transports, ...)

Therefore almost all INSPIRE data themes are important for ICZM.

**Why is INSPIRE important for the
ICZM community?**

**Why is the ICZM community important
for INSPIRE?**

Importance of INSPIRE data specifications

Member States will make available data within the scope of INSPIRE using:

- the same spatial object types (and definitions)
- the same attributes (and definitions, types, code lists) and relationships to other types
- a common encoding (format)
- common portrayal rules (how data is displayed)

This facilitates:

- pan-European/cross-border aggregation and analysis
- application development (e.g. information systems, reporting systems, forecasting models)

Example of INSPIRE definitions

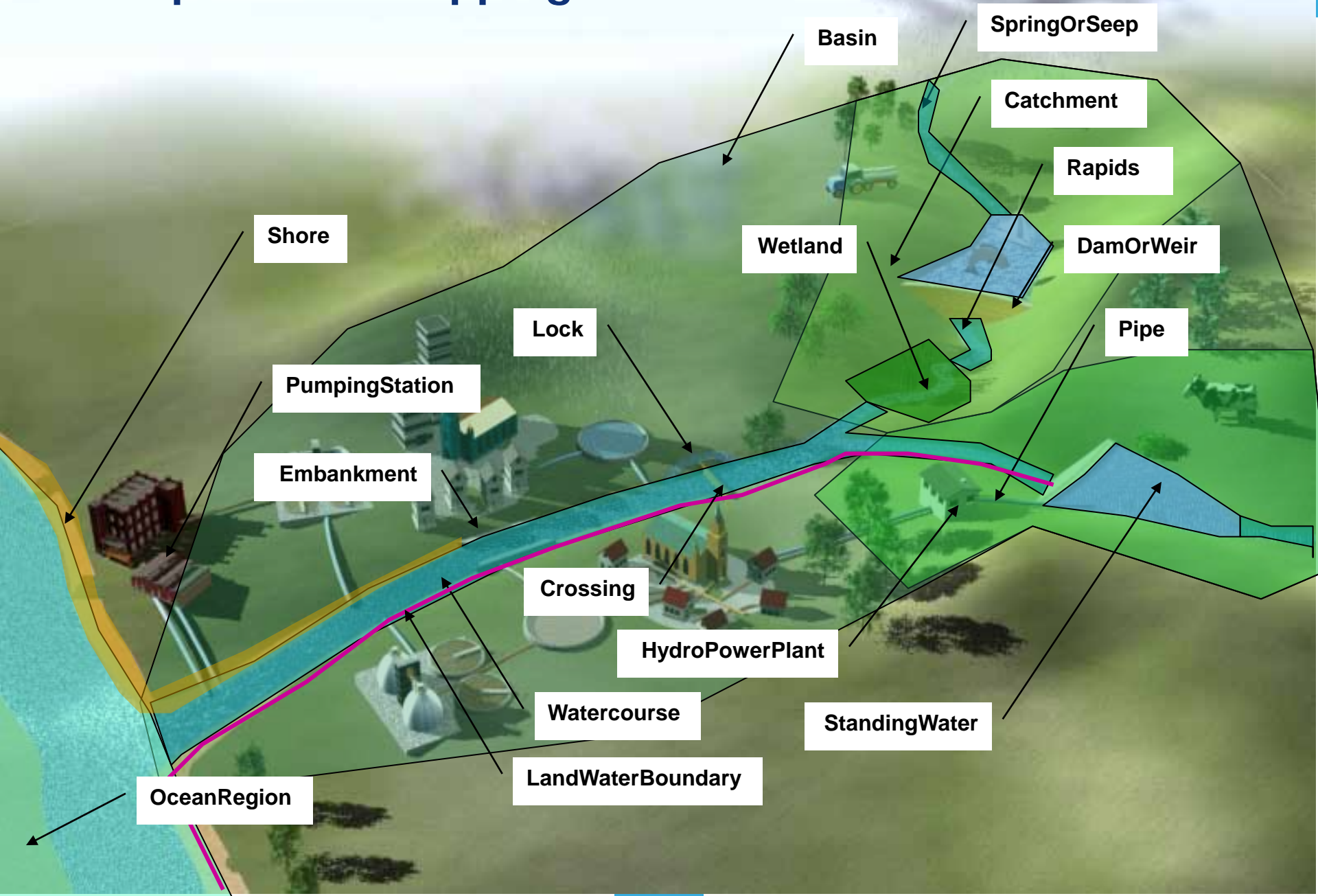
Hydrography

- Hydrographic elements, including marine areas and all other water bodies and items related to them, including river basins and sub-basins.
- Where appropriate, according to the definitions set out in Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (2) and in the form of networks.

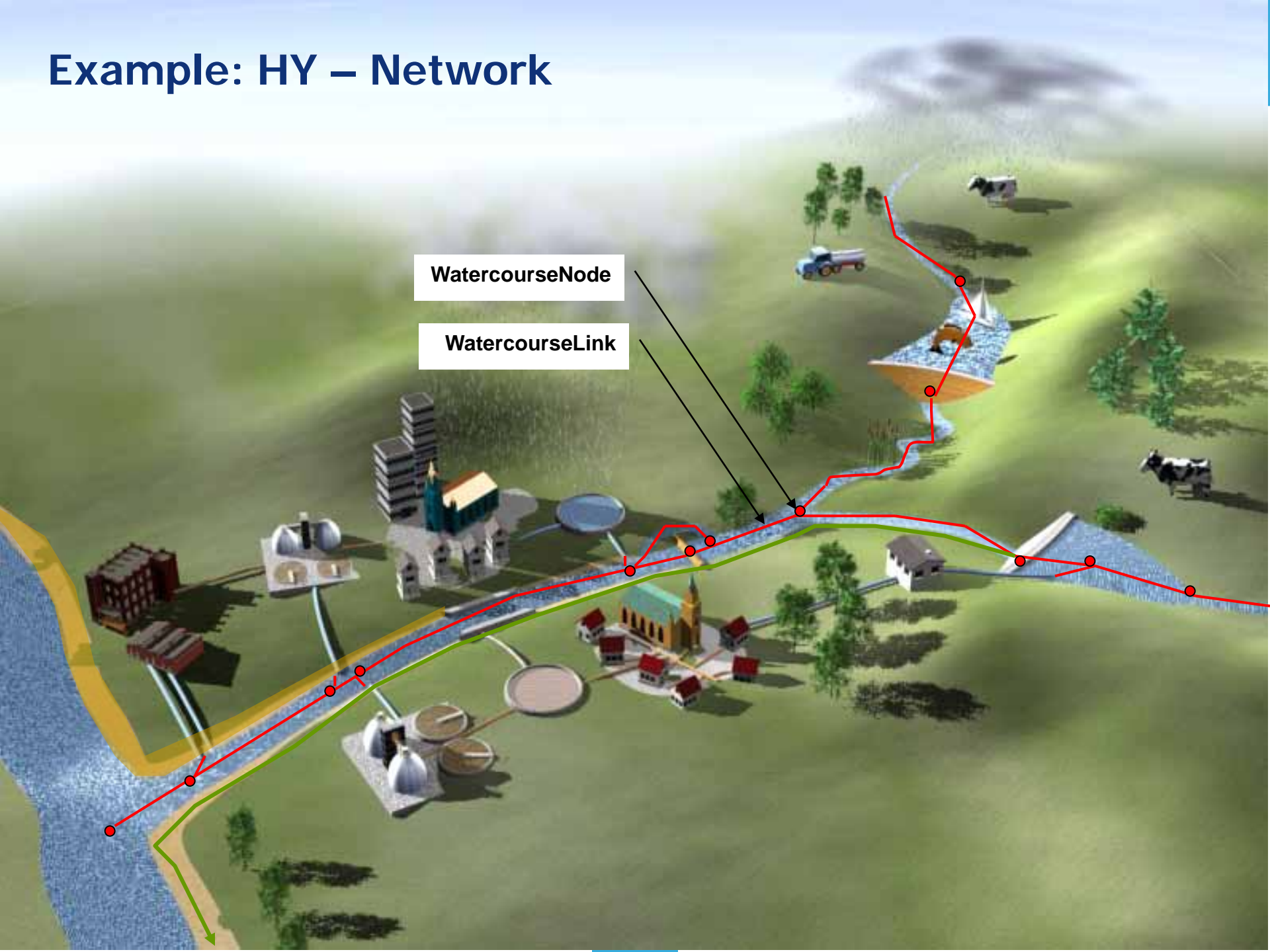
Example INSPIRE data specification: Hydrography (HY) – The World



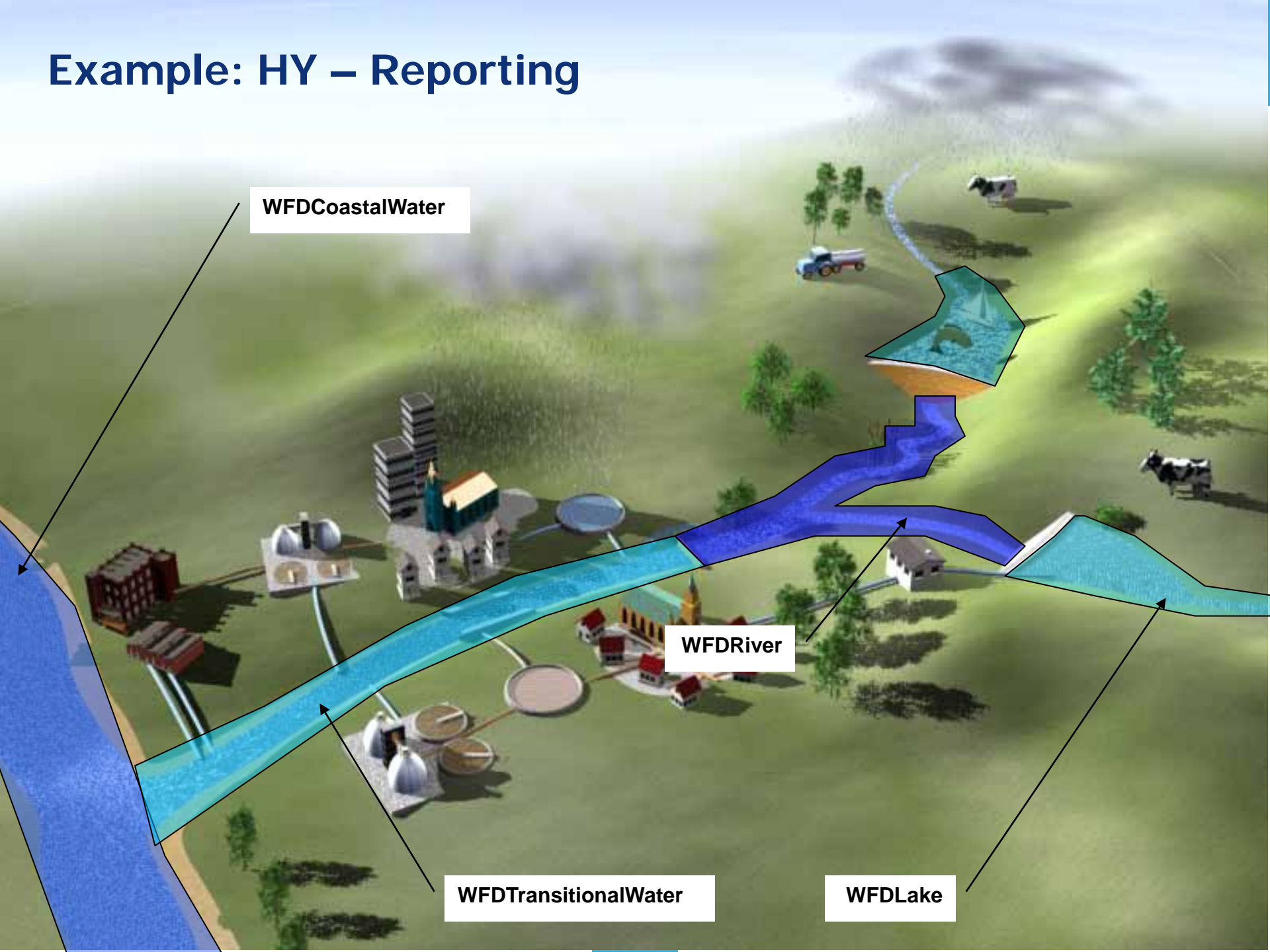
Example: HY – Mapping



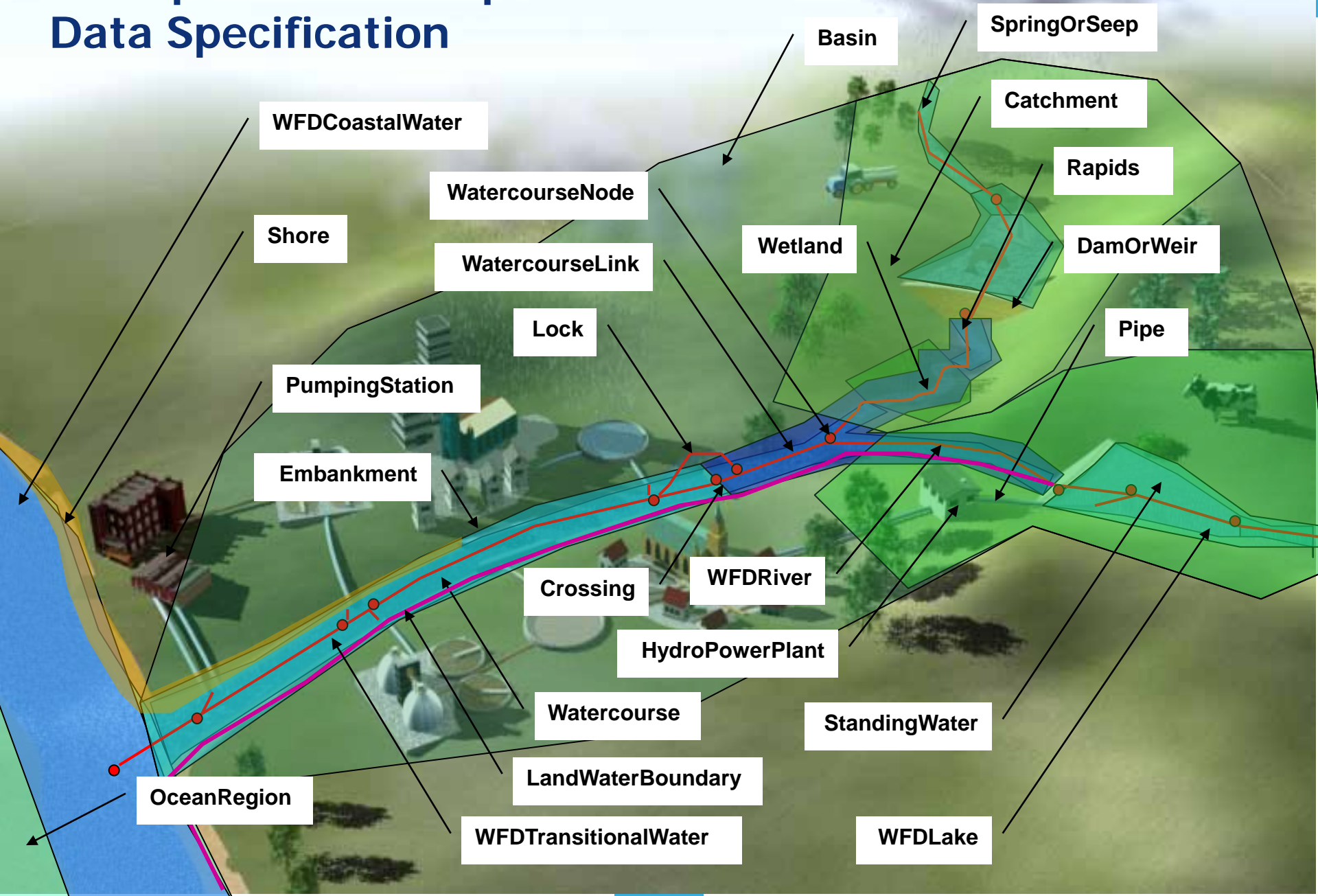
Example: HY – Network



Example: HY – Reporting



Example: HY – Complete Data Specification



WISE example: several Directives under WISE

- Water Framework Directive
 - Marine Strategy Framework Directive
 - Ground water Directive
 - Drinking water Directive
 - Floods Directive
 - Urban waste water Directive
 - E-PRTR
 - Nitrates Directive
 - Bathing water Directive
-
- **Several INSPIRE themes relate to each Directive**

Several themes related with WISE

- **Sea Regions, Elevation and Land cover:** for clarification of land-sea interface
 - Sea Regions contains concepts of **Shoreline** (as boundary around a sea area) and also **IntertidalArea**
 - Coastline special case of shoreline (shoreline at Mean High Water)
- Seabed cover in **Land cover**
- SeaUse in **Land use** (MSFD impact of human pressure on SeaBed)
- Seabed sediments in **Geology**, as well as GroundWaterBodies
- EEZ (Exclusive Economic Zones) to be moved to **Administrative Units** (Annex I)
- **Production and Industrial facilities**
- **Species Distribution/Habitats and Biotopes ...**

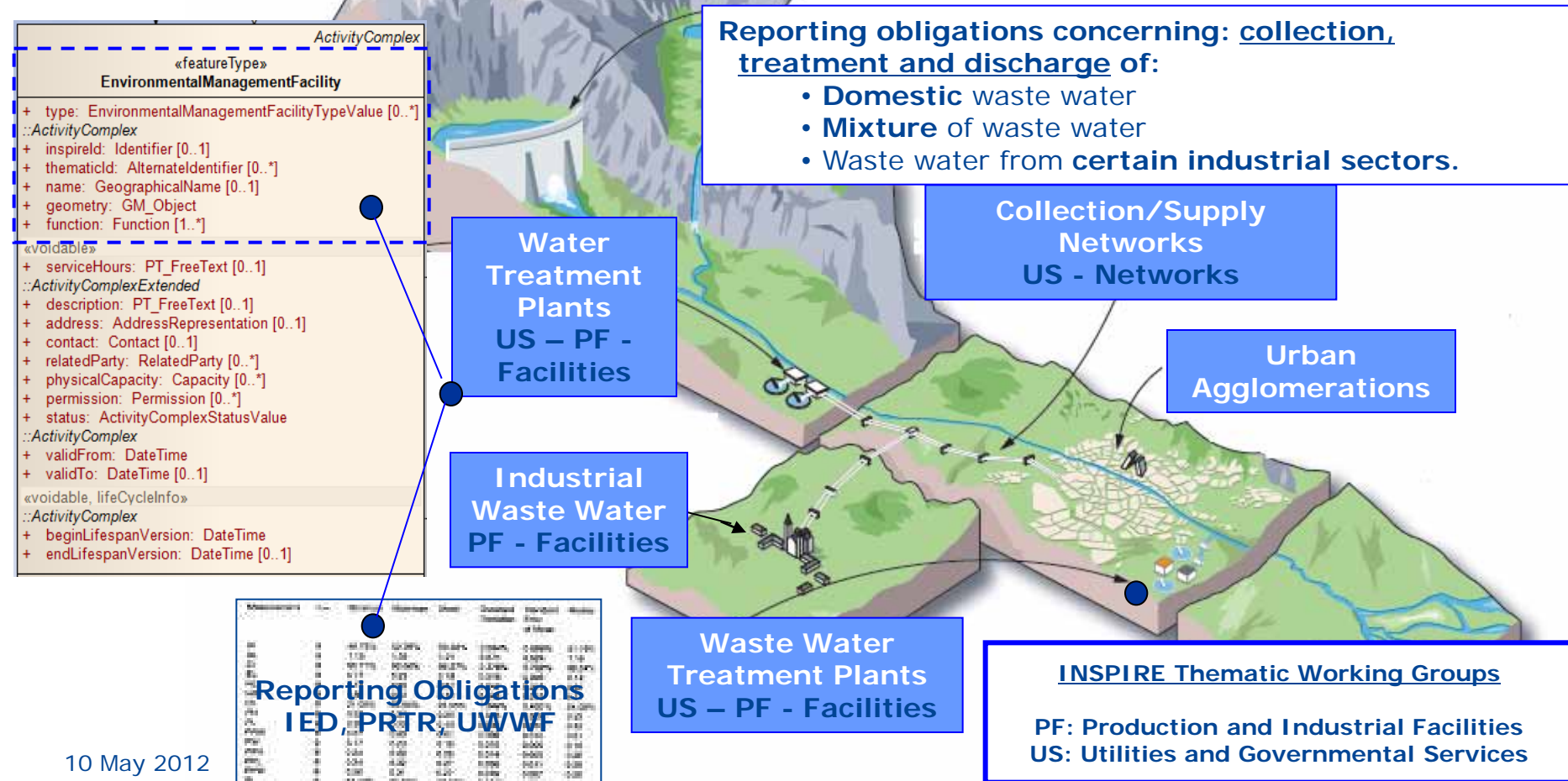
Waste Water Emissions

Directive (2010/75/EU) Emissions Directive (IED)

Regulation (166/2006) European Pollutant Release and Transfer Register (E-PRTR)

Water Treatment

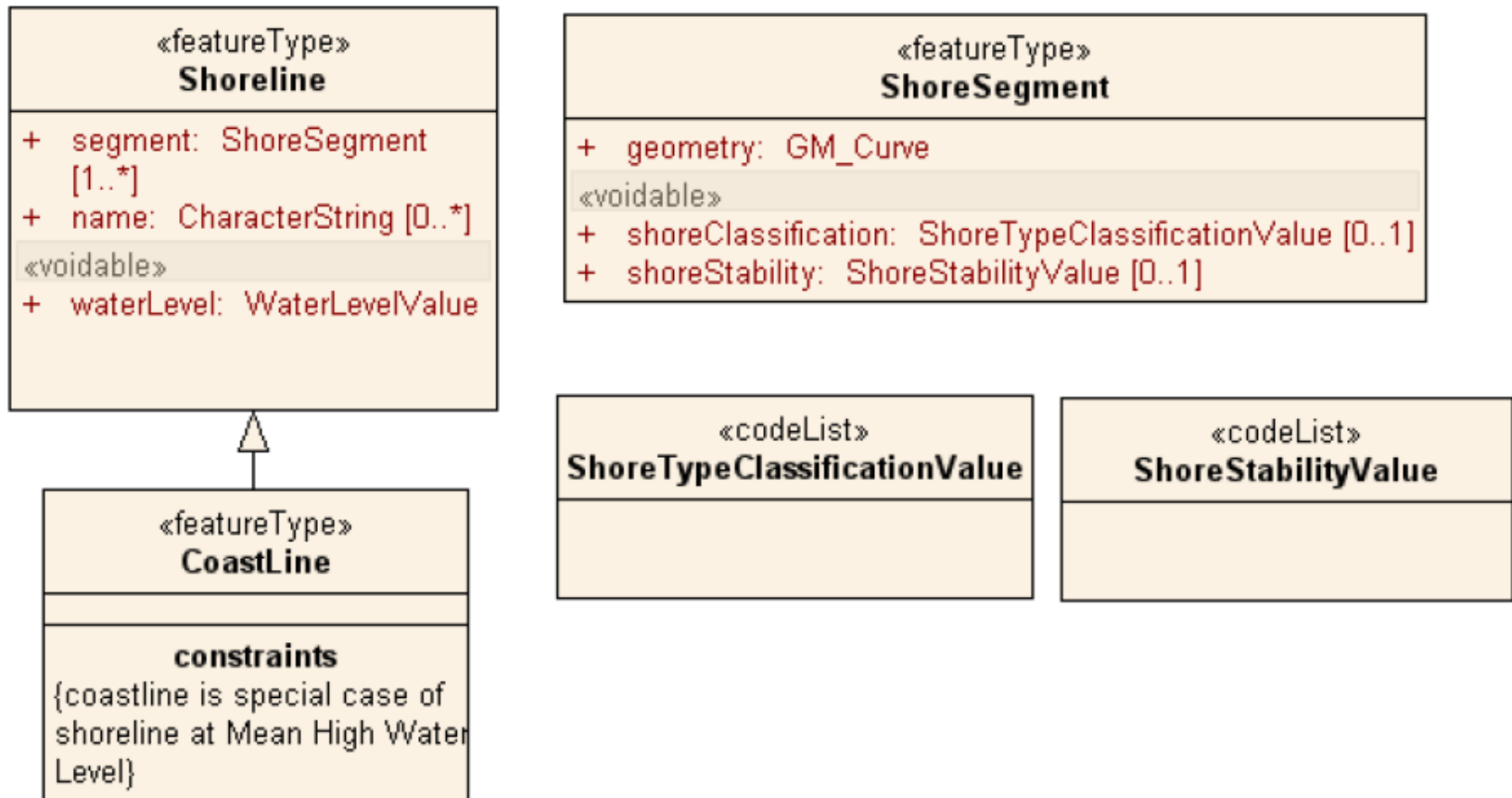
Directive 91/271/EEC - UWWT (urban waste-water treatment)



Examples of other “ICZM” data themes

- Agricultural and aquaculture facilities,
- Natural risk zones (for floods) ,
- Atmospheric conditions and Meteorological geographical features (for Climate Change, storms and tides related to winds and pressure ...),
-

Sea Regions: Shoreline and Coastline



Annex II/III Roadmap

Kick-off: 19-20.04 2010

Data Specification v1 (29.10.2010)

Data Specification v2 (06.2011)

Testing/Consultation (06-10.2011)

Data Specification v3

Draft IR (09.2012)

(04.2012)

II

III

IV

I

II

III

IV

I

II

III

2010

2011

2012

Where are we now, and what are *your* next steps?

Where are you now?

Data sharing (adopted and implemented)

Metadata (adopted) and implemented (...) for Annex
I and II data themes

Discovery and view services (adopted and
implemented...)

Geoportal (implemented)



INSPIRE Roadmap for finalization of Implementing Rules

October 2012	Submission for opinion of the INSPIRE committee of IRs for the interoperability of spatial data sets and services for Annex II and III spatial data themes
June 2013	Submission for opinion of the INSPIRE committee of IR for the services allowing spatial data services to be invoked
June 2013	Submission for opinion of the INSPIRE committee of IR for the spatial data services

INSPIRE Roadmap for implementation

28-Jun-2012	Member States shall provide the Download Services and Transformation Services (with initial operating capability)
23-Nov-2012	Implementation of 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 for Newly collected and extensively restructured Annex I spatial data sets available
28-Dec-2012	Download services and transformation services operational

INSPIRE Roadmap for implementation

19-Apr-2013	Implementation of Regulation as regards the access to spatial data sets and services of the Member States by Community institutions and bodies under harmonised conditions for existing arrangements
03-Dec-2013	Metadata available for spatial data sets and services corresponding to Annex III
October 2015	Newly collected and extensively restructured Annex II and III spatial data sets available
23-Nov-2017	IR as regards interoperability of spatial data sets and services for other Annex I spatial data sets still in use at the date of adoption

INSPIRE Roadmap for implementation

04-Feb-2018	IR interoperability of spatial data sets and services for other Annex I spatial data sets still in use at the date of adoption
October 2020	Other Annex II and III spatial data sets available in accordance with IRs for Annex II and III

Next steps

- Regional cooperation paramount for a coherent implementation of INSPIRE
- Financial crisis has greatly influenced Commission priorities
- Do not seek EU funding only for the sake of implementing INSPIRE
- Rather, seek synergies with new priorities and policies
 - Europe 2020 flagships, Innovation Union, Digital Agenda for Europe
 - E.g., Integrated maritime surveillance
- Think out of the box! And seek early feedback from peers and project officers
- Network!
- Keep up the excellent work!

Thank you for your attention!



Welcome to the INSPIRE Conference 2012!
Istanbul, 23-27 June 2012
Celebrating the European Year for Water

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