

INSPIRE Directive Overview & Information Platform for Chemical Monitoring

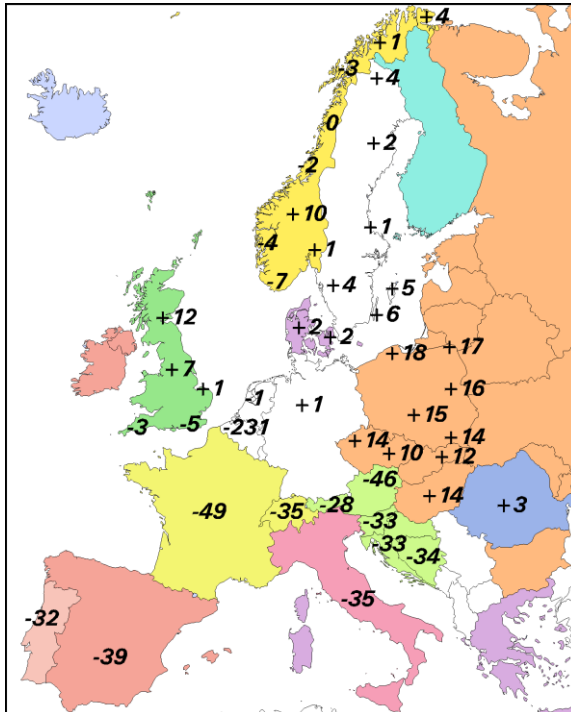
Vanda Nunes de Lima,
Meeting Experts Group on Health Information
Luxembourg, 20-21 May 2014

www.jrc.ec.europa.eu

*Serving society
Stimulating innovation
Supporting legislation*

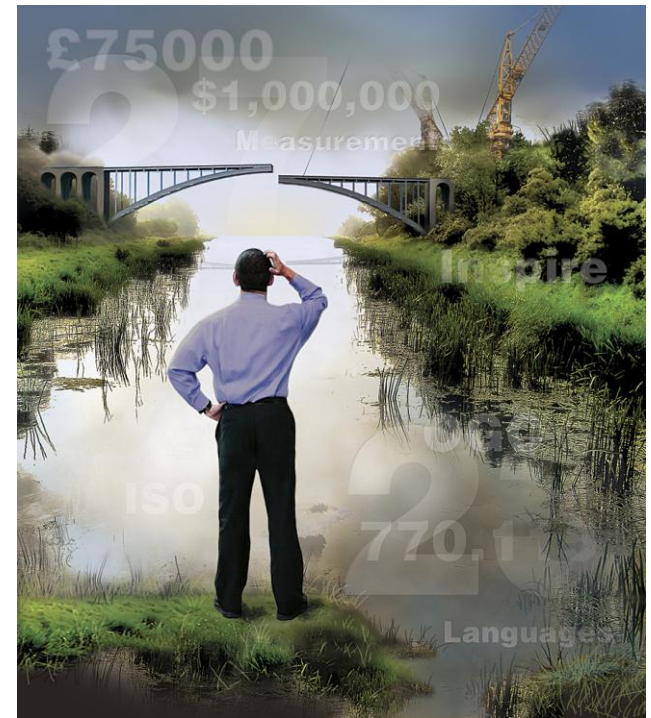


Building a European SDI is complex



- Europe is a patchwork of several countries with different traditions, cultures and socio-economic models

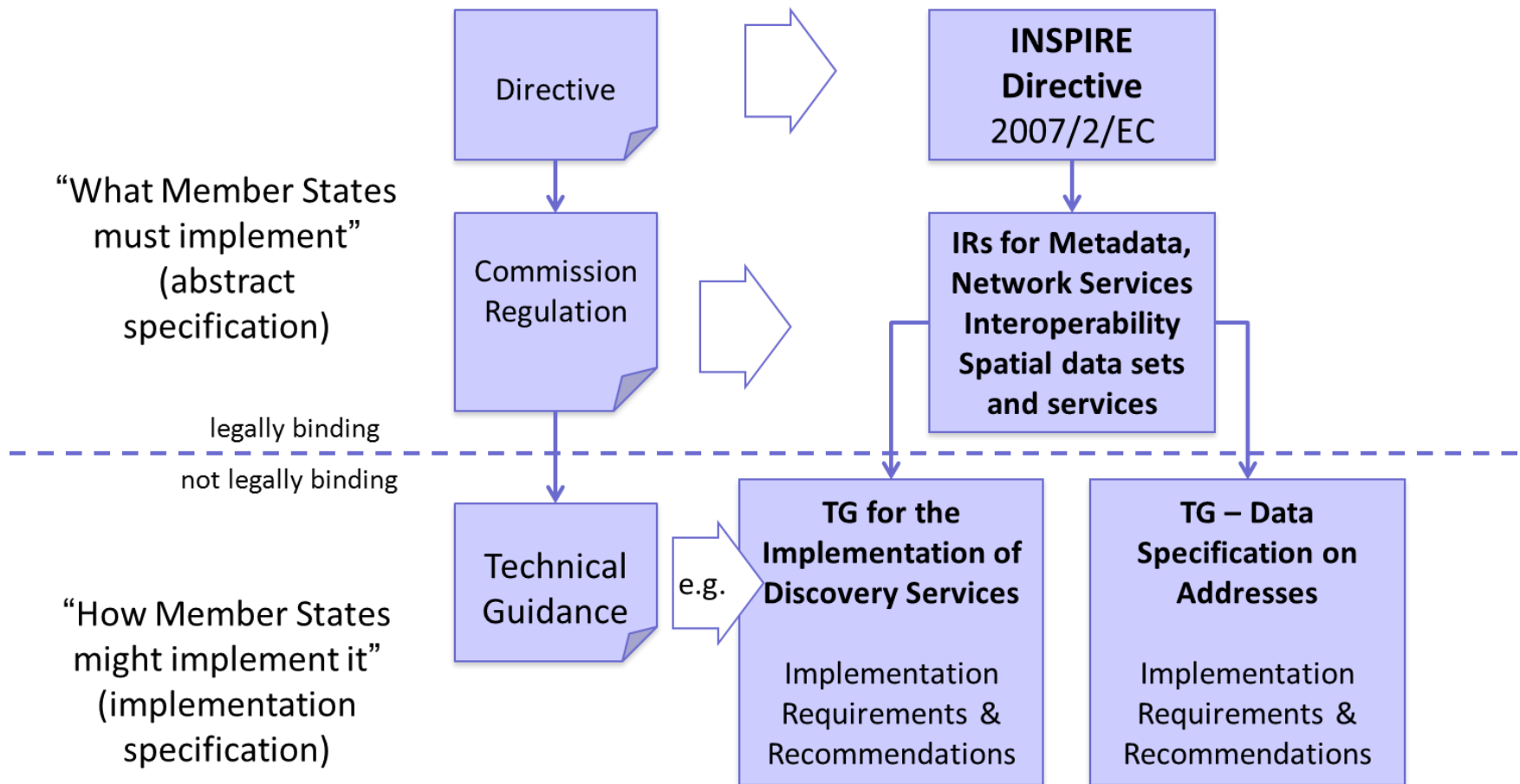
- This is reflected in the different ways in which geo-spatial data is managed



INSPIRE Directive & Implementing Rules

- The INSPIRE Directive lays down **general rules** to establish an **Infrastructure for Spatial Information in Europe** for the purposes of Community **environmental policies** and policies or activities which may have an impact on the environment
- INSPIRE is built on the **SDIs established and operated by the Member States**
- **JRC** is the **technical coordinator**
- **Implementing Rules (IR, Legal acts)**
 1. Metadata
 2. Interoperability of spatial data sets and services
 3. Services (discovery, view, download, transform, invoke)
 4. Data and Service sharing (policy)
 5. Monitoring & reporting

Implementing Rules vs. Technical Guidelines





A collaborative effort

- Transparency and inclusiveness
- Stakeholder consultations
- Support to Member States on the implementation
- Extend INSPIRE to and ensure consistency of different policy domains
- Promote INSPIRE in international standardisation



INSPIRE thematic 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

Annex II

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

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

Making data sets known

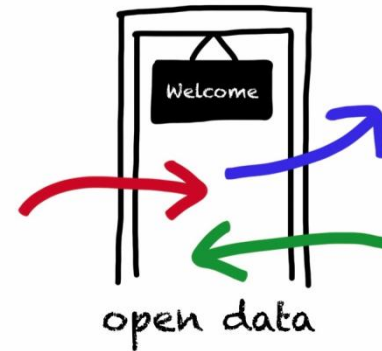
- Problem: Users may not know a specific data set exists at all
- Solution: Monitor and report data sets available in MS within the scope of INSPIRE (→ Art. 4(1)), i.e. data that
 - relate to an area where the MS has jurisdictional rights
 - are in electronic format
 - are held by (or on behalf of) a public authority
 - are related to one of the Annex themes (e.g. Addresses in Annex I)
- Reference: **INSPIRE Directive, Art. 21, Monitoring & Reporting IR- Decision**
- **Timing:** 15 May 2010, then every 3 years



- known
- not shared
- not documented
- not accessible
- not interoperable

Sharing data sets

- Problem: The owning authority may still not be willing to share the data set
- Solution: Requirement to adopt measures for the sharing of spatial data sets and services with public authorities and EU institutions and bodies for the purposes of public tasks that may have an impact on the environment
- Reference: INSPIRE Directive, Art. 17, **Data and Service Sharing IR**
- **Timing:** Since 15 May 2009



- known
- shared
- not documented
- not accessible
- not interoperable

Documenting data sets

- Problem: Users may not know who owns/manages the data set, where/how to access it, its thematic/geographic/temporal scope, its quality, if there are any limitations to use it,
- Solution: Standardised metadata & discovery service (query interface)
- Reference: INSPIRE Directive, Art. 5-6, Metadata IRs, (Discovery) Network Services IRs- Regulation
- **Timing:**
 - **Metadata:** Since Dec 2010 (Annex I+II), from Dec 2013 (Annex III)
 - **Discovery service:** Since Nov 2011



- known
- shared
- documented
- not accessible
- not interoperable

Making data sets accessible

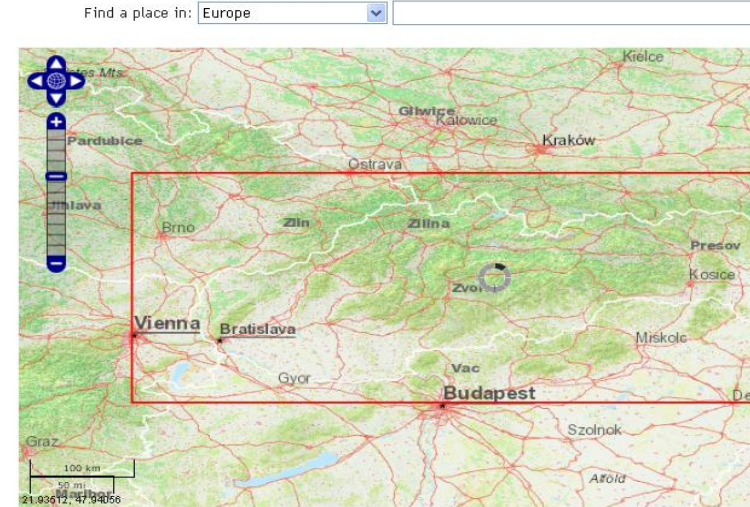
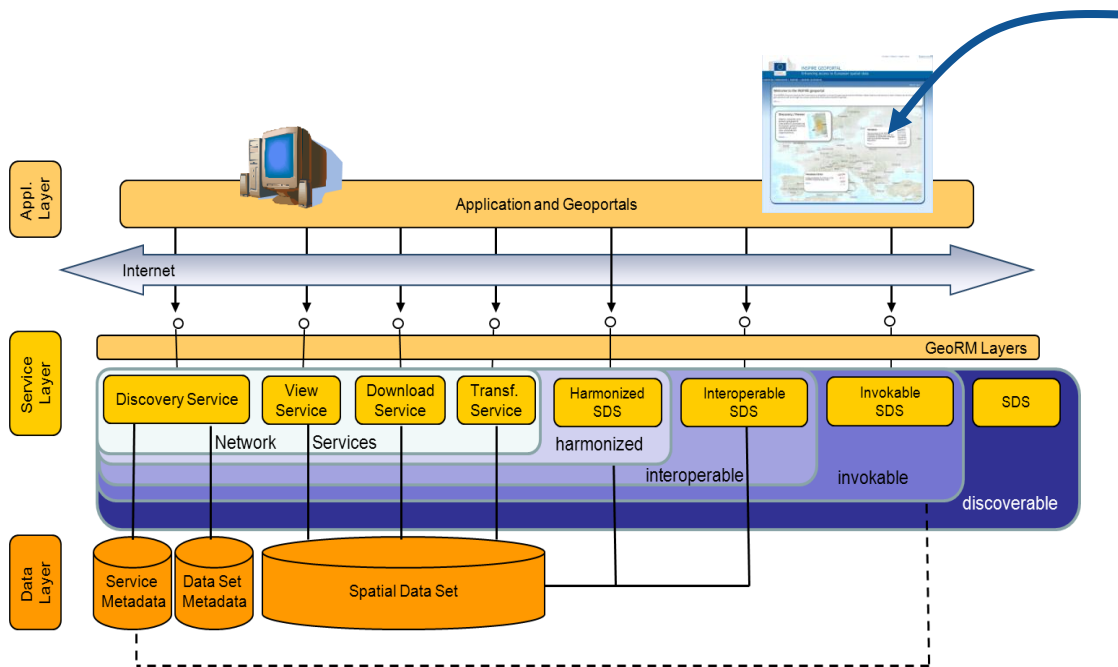
- Problem: Users may have problems in actually viewing or downloading the data set
- Solution:
 - Data is made accessible as-is through standardised view and download services (query interfaces)
 - Services are available through a central European geoportal
- Reference: INSPIRE Directive, Art. 11-16, **(View and Download) Network Services IRs**
- **Timing:** Since Nov 2011 (View), Dec 2012 (Download)



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INSPIRE Geoportal

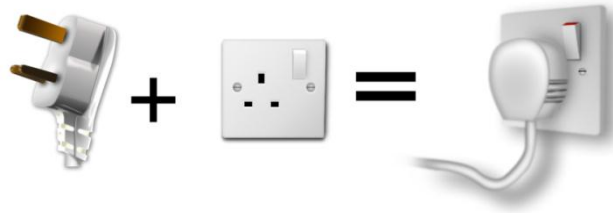
- Central access point to the INSPIRE infrastructure and resources (>250.000)
- ➔ **“The face” of INSPIRE**



- Connection to all MS network services
- ➔ **cross-border data discovery and visualisation**
- ➔ **support to European policy making**

Making data sets interoperable

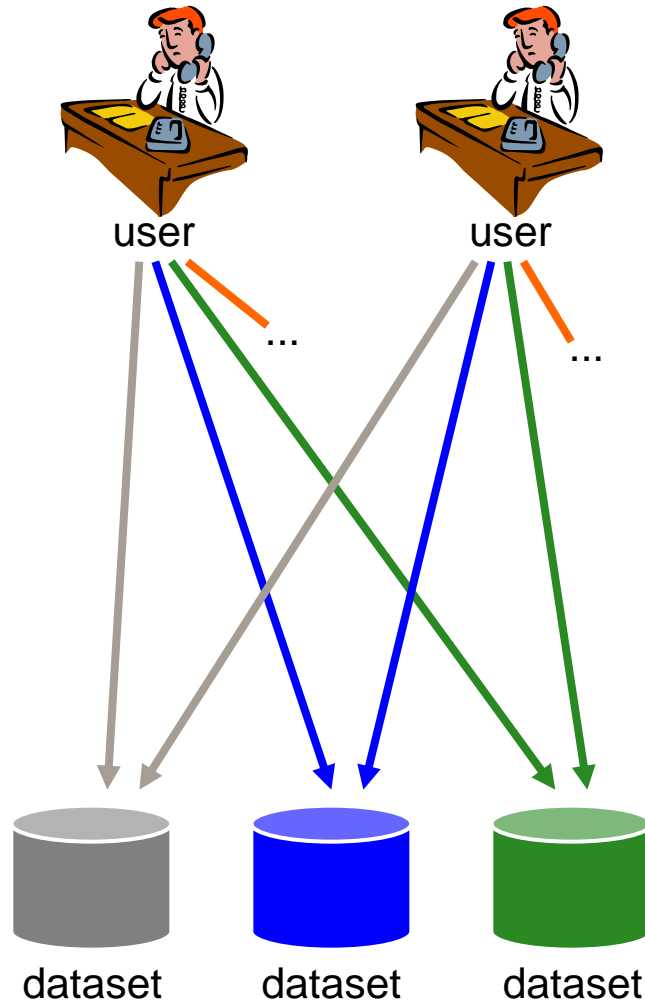
- Problem: Users may not be able to understand or correctly interpret the used data model, semantics
- Solution: Data is made available according to common interoperability specifications
 - Common (cross- domain) data models
 - Common encodings (formats)
 - Common symbologies



- Reference: INSPIRE Directive, Art. 7-10, IRs on **interoperability of spatial data sets and services** & INSPIRE data specifications
- **Timing:** Annex I since Dec 2012 (if newly collected), Dec 2017 (all other data), Annex II+III: Dec 2015/Dec 2020

- known
- shared
- documented
- accessible
- interoperable

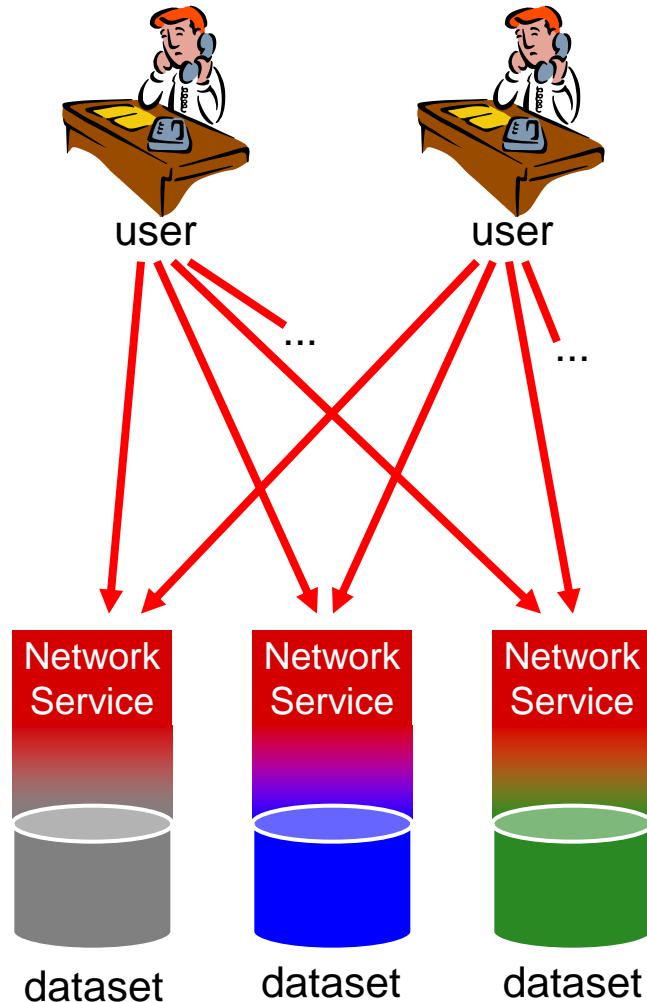
Data interoperability



The starting point ...

- Access to spatial data in various ways
- User has to deal with interpreting **heterogeneous data** in different formats, identify, extract and post-process the data he needs
→ **lack of interoperability**

Data interoperability



... and what INSPIRE is aiming at

- Provide access to spatial data via **network services** and according to a harmonised data specification to achieve **interoperability of data**
- ! Datasets used in Member States may stay as they are
- ! Data or service providers have to provide a transformation between their internal data model and the harmonised data specification

Key pillars of data interoperability

Conceptual data models

- objects types, properties & relationships
- cross-domain harmonization
- based on a common modelling framework
- managed in a common UML repository

Encoding

- conceptual models independent of concrete encodings
- standard encoding: GML, but also possible to derive other encodings (e.g. based on RDF)

Harmonised vocabularies

- to overcome interoperability issues caused by free-text and/or multi-lingual content
- allow additional terms from local vocabularies

Registers

- provide unique and persistent identifiers for reference to resources
- allow their consistent management and versioning

Key pillars of data interoperability

Conceptual data models

- objects types, relationships

Encoding

- conceptual independent

Harmonised vocabularies

- to overcome interoperability issues caused

Registers

- provide uniform persistent

described in INSPIRE Conceptual Framework documents



INSPIRE Generic Conceptual Model

Title	D2.5. Generic Conceptual Model, Version 3.0.ncd
Notes	Version for Annex III data specifications (3.0.ncd)
Creator	Drafting Team "Data Specifications"
Date	2010.06.15
Subject	Generic Conceptual Model of the INSPIRE data specifications
Publisher	Drafting Team "Data Specifications"
Type	Text
Description	Generic Conceptual Model of the INSPIRE data specifications
Contributor	Members of the INSPIRE Drafting Team "Data Specifications", INSPIRE Spatial Data Interoperability Committee, & Legally Mandated Organisations, INSPIRE Consultation Teams and other Drafting Teams
Format	MS Word docx
Source	Drafting Team "Data Specifications"
Rights	Public
Identifier	D2.5_L14143.docx
Language	En
Medium	Print
Coverage	Project duration

D2.5: Generic Conceptual Model



Drafting Team "Data Specifications" Methodology for the development of data specifications

Title	Drafting Team "Data Specifications" – deliverable D2.6: Methodology for the development of data specifications
Notes	Baseline version
Creator	INSPIRE Drafting Team "Data Specifications"
Date	2008.09.25
Subject	Methodology for the development of data specifications
Publisher	INSPIRE Drafting Team "Data Specifications"
Type	Text
Description	Proposed methodology for the development of INSPIRE data specifications for the spatial data themes as specified in the Annexes of the INSPIRE Directive
Contributor	Members of the INSPIRE Drafting Team "Data Specifications", INSPIRE Spatial Data Interoperability Committee, & Legally Mandated Organisations, INSPIRE Consultation Teams and other Drafting Teams
Format	MS Word docx.pdf
Source	Drafting Team "Data Specifications"
Rights	Public
Identifier	D2.6_L13184.doc, D2.6_L13184.pdf
Language	En
Medium	Print
Coverage	Project duration

D2.6: Methodology for Specification Development



Guidelines for the encoding of spatial data

Title	D2.7. Guidelines for the encoding of spatial data, Version 3.1
Creator	INSPIRE Drafting Team "Data Specifications"
Date	2009.04.11
Subject	Guidelines for the encoding of spatial data
Publisher	INSPIRE Drafting Team "Data Specifications"
Type	Text
Description	Baseline version of the guidelines for the encoding of spatial data
Contributor	Members of the INSPIRE Drafting Team "Data Specifications", INSPIRE Spatial Data Interoperability Committee, & Legally Mandated Organisations, INSPIRE Consultation Teams and other Drafting Teams
Format	MS Word docx
Source	INSPIRE Drafting Team "Data Specifications"
Rights	Public
Identifier	D2.7_L13184.doc
Language	En
Medium	Print
Coverage	Project duration

D2.7: Guidelines for Encoding



D2.9 Guidelines for the use of Observations & Measurements and Sensor Web Enablement related standards in INSPIRE Annex II and III data specification

Title	D2.9. Guidelines for the use of Observations & Measurements and Sensor Web Enablement related standards in INSPIRE Annex II and III data specification development
Creator	INSPIRE Core Thematic Working Group on Observations & Measurements
Date	2010.02.04
Subject	Use of Observations & Measurements and Sensor Web Enablement related standards in INSPIRE
Publisher	INSPIRE Core Thematic Working Group on Observations & Measurements
Type	Text
Description	This document describes the use of Observations & Measurements and Sensor Web Enablement related standards in INSPIRE data specification development
Contributor	INSPIRE Core Thematic Working Group on Observations & Measurements
Format	Portable Document Format (pdf)
Rights	Public
Identifier	D2.9_L13184.doc
Language	En
Medium	Print
Coverage	Project duration

D2.9: O&M Guidelines



INSPIRE Data Specifications – Base Models – Activity Complex

Title	D2.10.3. Generic Activity Complex
Notes	Baseline version
Creator	Drafting Team "Data Specifications", Data Specifications Team
Date	2010.06.28
Subject	INSPIRE Data Specifications – Base Models – Activity Complex
Publisher	Drafting Team "Data Specifications", Data Specifications Team
Type	Text
Description	Baseline version of Base Models of the INSPIRE data specifications
Contributor	Members of the INSPIRE Drafting Team "Data Specifications", INSPIRE Spatial Data Interoperability Committee, & Legally Mandated Organisations, INSPIRE Consultation Teams and other Drafting Teams
Format	MS Word docx
Source	Drafting Team "Data Specifications", Data Specifications Team
Rights	Public
Identifier	D2.10.3_ActivityComplex.doc
Language	En
Medium	Print
Coverage	Project duration

D2.10.3: Common data models

<p>Conceptual data models</p> <ul style="list-style-type: none"> • spatial objects and their properties and relationships for 34 data themes • cross-domain harmonization • based on a common modelling framework • managed in a common UML repository 	<p>Encoding</p> <ul style="list-style-type: none"> • GML application schemas as standard encoding • conceptual models independent of concrete encodings • also possible to derive other encodings (e.g. based on RDF) 	<p>Harmonised vocabularies</p> <ul style="list-style-type: none"> • to overcome interoperability issues caused by free-text and/or multi-lingual content • allow more specific terms from local vocabularies in addition to the harmonized terms 	<p>Registers</p> <ul style="list-style-type: none"> • provide unique and persistent identifiers for resources • allow their consistent management and versioning • items can be made unique and referred to unambiguously
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Registry

- **Browsing** and accessing register content
- **Multilingual** content (based on IR content)
- **Querying** and filtering facilities
- delivering an unique **Identifier**
- Open to external contributions

Representation in:

HTML, XML, Atom, JSON and {RDF/SKOS}**

future releases

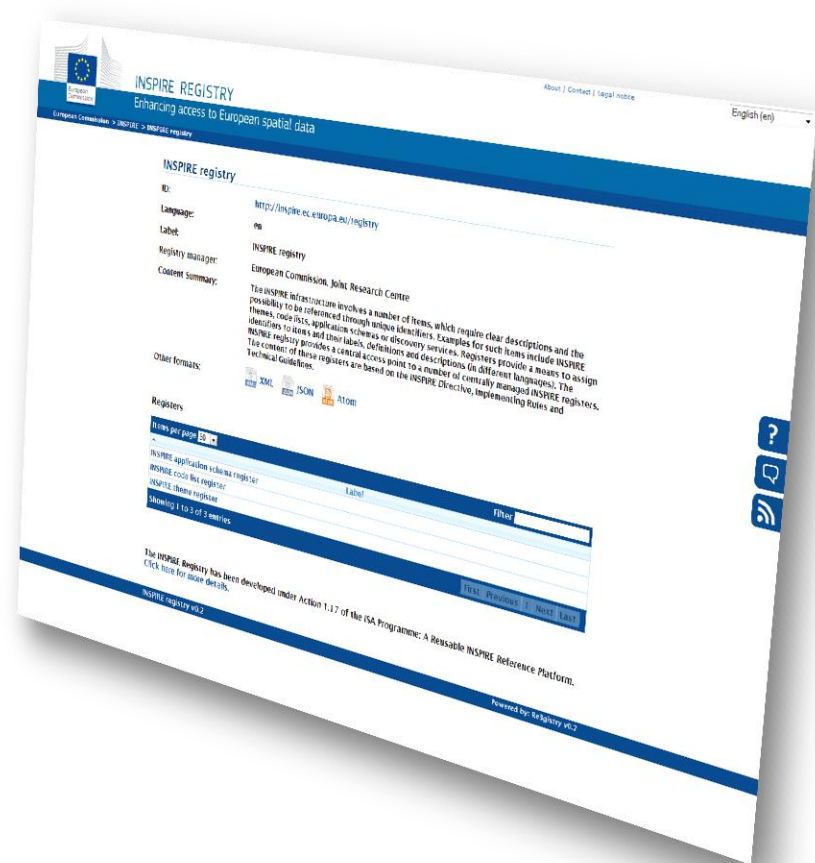
- additional registers (add a proper):

Feature Concept Dictionary,
Glossary

resources are maintained in ISO 19135

[Procedures for item registration] conformant registers

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



Conceptual data models

- spatial objects and their properties and relationships for 34 data themes
- cross-domain harmonization
- based on a common modelling framework
- managed in a common UML repository

Encoding

- GML application schemas as standard encoding
- conceptual models independent of concrete encodings
- also possible to derive other encodings (e.g. based on RDF)

Harmonised vocabularies

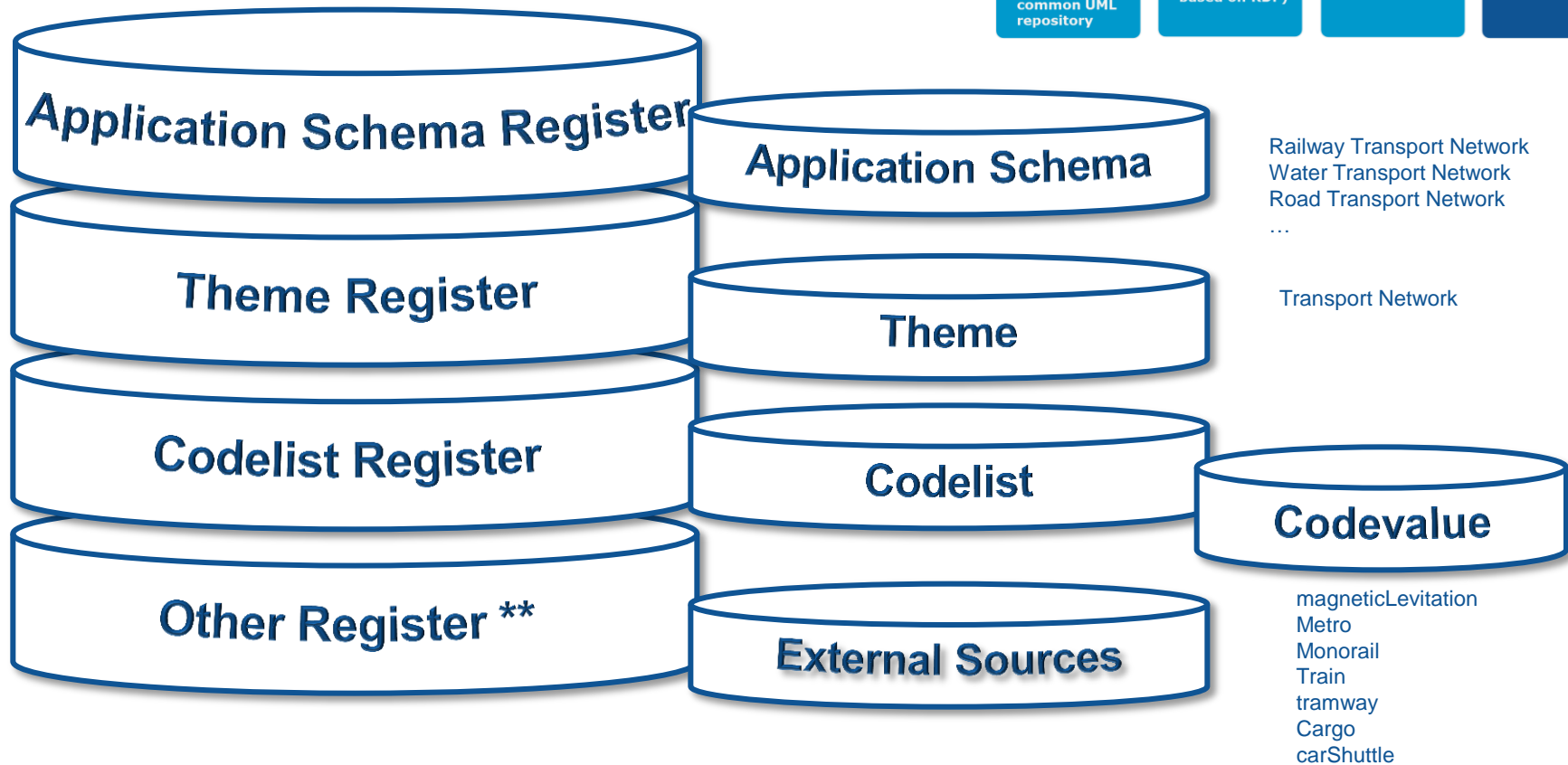
- to overcome interoperability issues caused by free-text and/or multi-lingual content
- allow more specific terms from local vocabularies in addition to the harmonized terms

Registers

- provide unique and persistent identifiers for resources
- allow their consistent management and versioning
- items can be made unique and referred to unambiguously

Registry Service

described an application which identify items in a register



Human Health and Safety

[Directive 2007/2/EC]

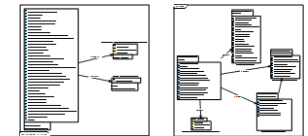
Geographical distribution of dominance of pathologies (allergies, cancers, respiratory diseases, etc.), information indicating the effect on health (biomarkers, decline of fertility, epidemics) or well-being of humans (fatigue, stress, etc.) linked directly (air pollution, chemicals, depletion of the ozone layer, noise, etc.) or indirectly (food, genetically modified organisms, etc.) to the quality of the environment.





[D2.3: Definition of Annex Themes and Scope]

A descriptive approach to human health and safety will focus on the

- ✓ ...
- ✓ safety issues, behaviour linked to safety
- ✓ health care services *(only statistical data)
-

UML Model

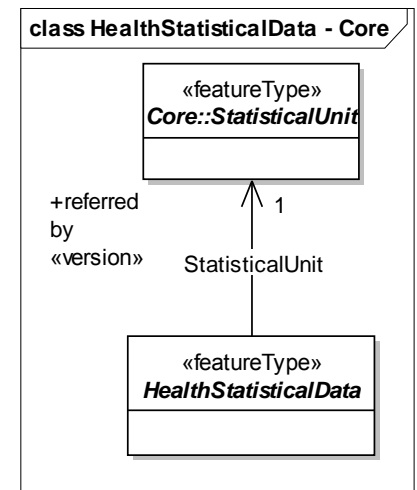
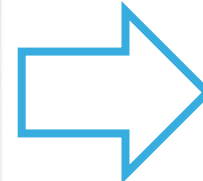
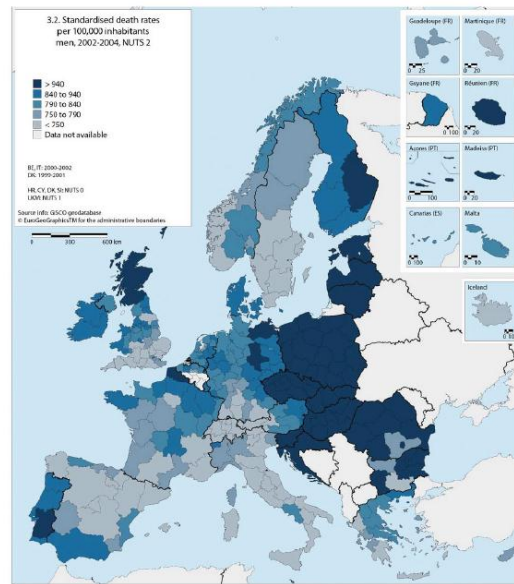


		HumanHealth -> Chap. 5.2
		Safety -> Chap. 5.3
		NonStataData -> Theme US

Pathologies and health services statistical data

- This domain addresses mainly various aspects of health conditions of individuals and populations and some characteristics of health services both expressed as statistical information (**HealthStatisticalData**).

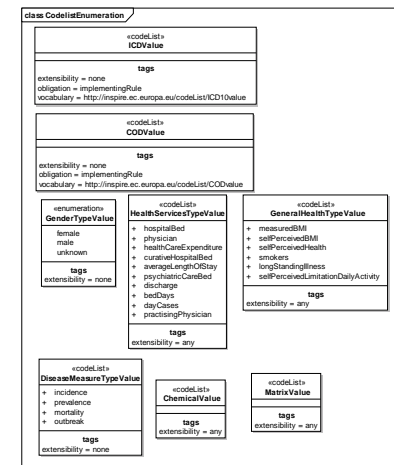
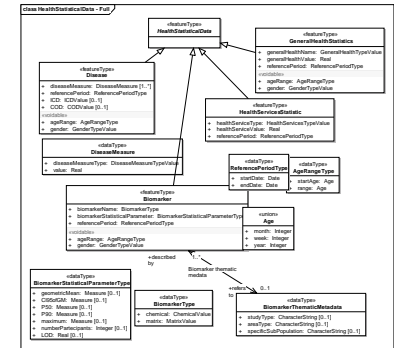
- **Spatial information**
All data are reported referring to a **statistical unit** (**Theme SU**)



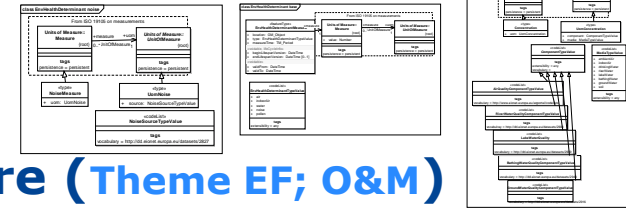
Source: Eurostat Atlas

Pathologies and health services statistical data

- ❑ **Disease** - diseases, injuries and accidents
- ❑ **Biomarkers** - chemicals or metabolites measured in human body in members of a population
- ❑ **General health information** - self-perceived health, smokers, body mass index (BMI) ...
- ❑ **Health services** - hospital discharges, physicians, dentists, nurses ...
- ❑ **Externally managed codelists for mortality, injury and illness data:**
 - ✓ ICD-10 from WHO
 - ✓ COD from ESTAT could also be used only for mortality data
- ❑ **INSPIRE codelists include only some items taken from ESTAT but they can be also extended by MS**



Well-being of human linked to the quality of the environment



Raw measurement data located somewhere (Theme EF; O&M)

- ✓ Spatial information- location and time of the measurement.
- ✓ Concentration
- ✓ Type - use of EIONET codelists

Coverage resulting from the data interpolation

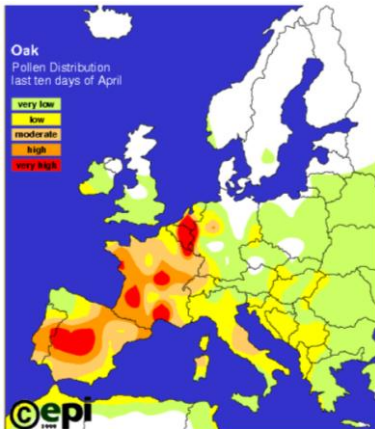
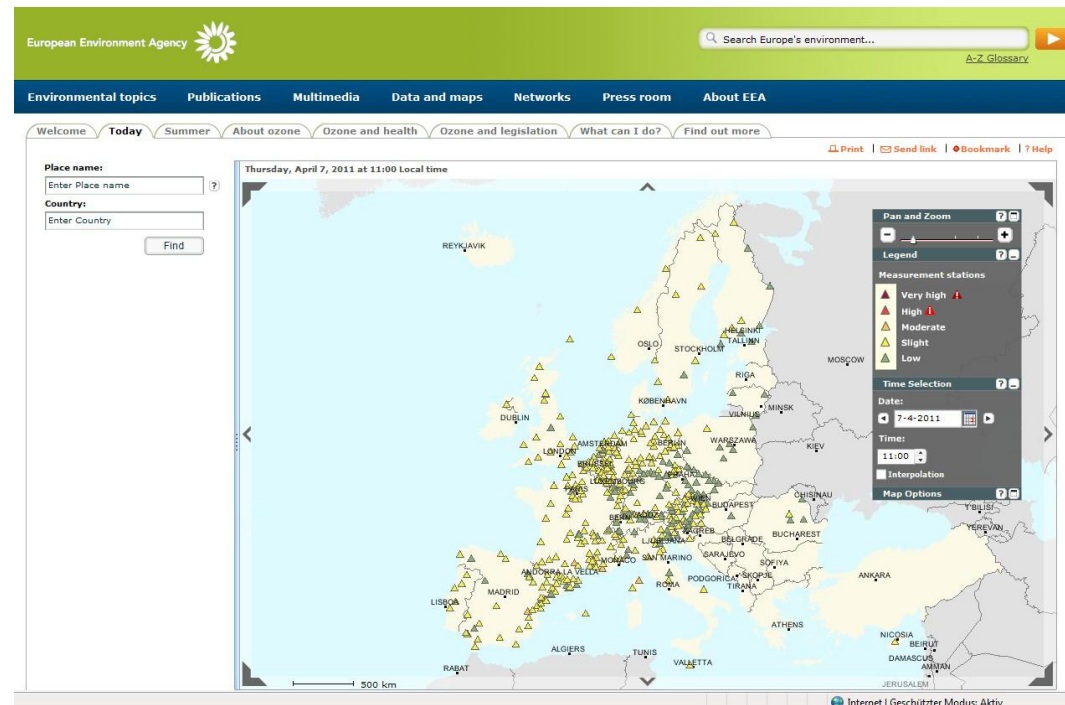


Figure 12: Oak pollen distribution coverage

<http://www.polleninfo.org>

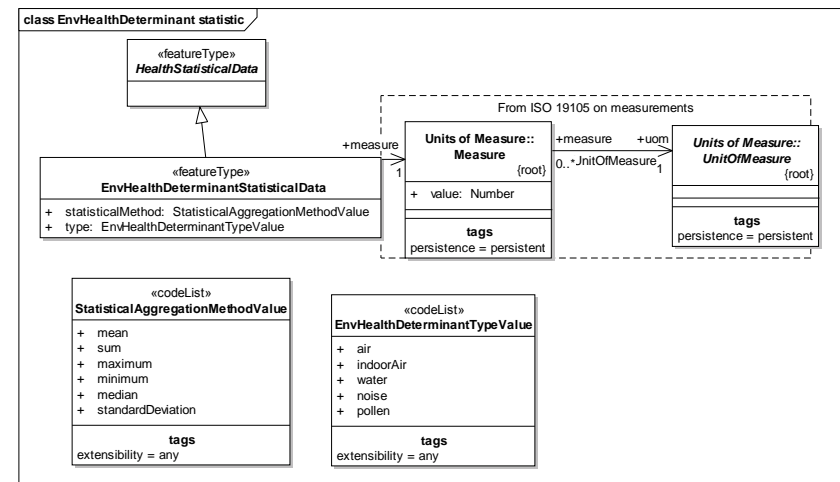


EEA – Ozone Concentration

Well-being of human linked to the quality of the environment

Statistical aggregation of environmental data (air quality, water quality ...) for analysis with human health statistical data.

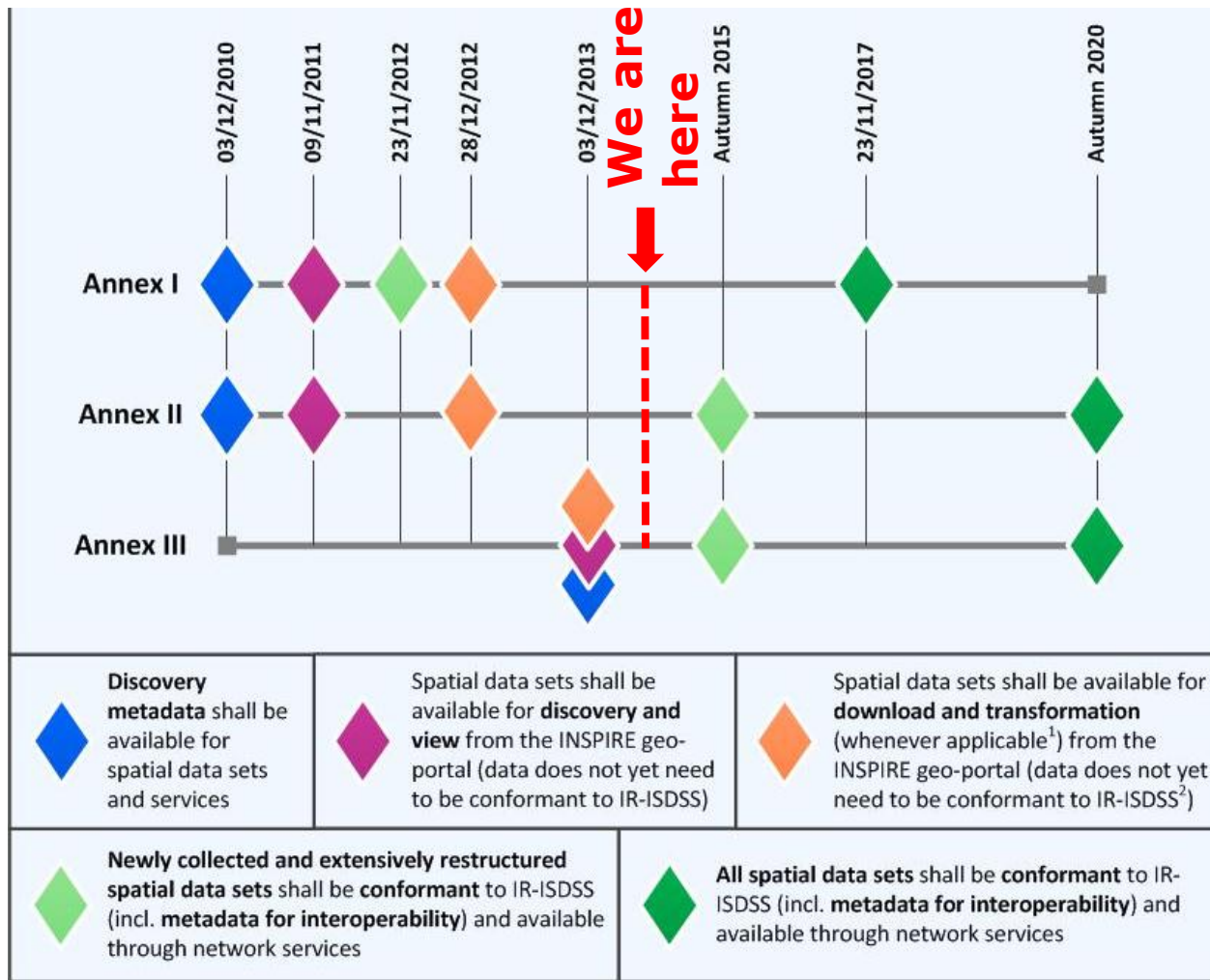
- ✓ Spatial information - Reference to a statistical unit (SU-DS)
- ✓ Type of aggregation
- ✓ Quantity
- ✓ Type



Last legal acts voted the 28th March 2014

- 1) Draft **COMMISSION REGULATION** amending Regulation (EU) No 976/2009 as regards **services allowing spatial data services to be invoked**, as part of the **implementing rules on network services** referred to in article 11.1(e) of 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),
 - 2) Draft **COMMISSION REGULATION** amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC as regards **interoperability of spatial data services**, as part of the **implementing rules on the interoperability of spatial data sets and services** referred to in Article 7(1) of 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)

INSPIRE Implementation Roadmap



INSPIRE maintenance & implementation framework

- Moving into the implementation phase
- Important to preserve the investment and the wealth of knowledge
- Main principles
 - Maintain participatory approach
 - Based on implementation experience
 - Cross-cutting coherence → **Commission Expert Group on INSPIRE Implementation and Maintenance (MIG)**
 - Continuity of expertise → **“pool of experts”**



Conclusions INSPIRE & Human Health mutual benefit

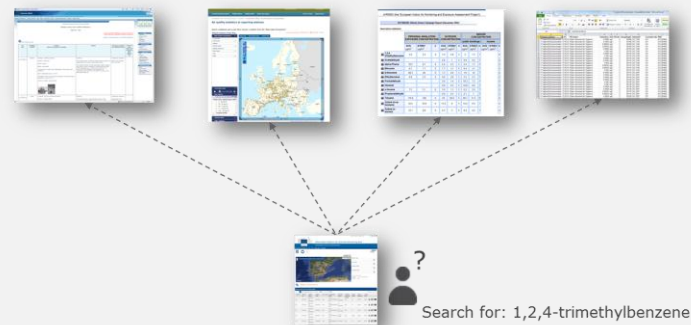
- Principles, Legal frame, Technical Guidelines, Infrastructure
- Underline data for indicators, analysis, research to support Health policies
 - Statistical, Administrative, Environmental, Governmental Services
- Spatial representation
- Interoperability (standardised data models and specifications)
- Decentralised services
- Integration between sectors & policies
 - Within the National and European Spatial Data Infrastructure
 - Cross-border addressed
 - Base for e-Reporting
- Sustainability
- Encouraging innovation in health community
 - Using INSPIRE implementation, new requirements may improve INSPIRE maintenance and implementation

IPChem is a single access point for discovering and retrieving chemical monitoring data

*EU Communication "The combination effects of chemicals – Chemical mixtures" (COM/2012/0252 final)**

IPChem is:

- a distributed infrastructure
- avoiding data duplication and information systems replication
- respecting any condition of data access and use defined by Data Providers
- strengthening collaboration between EC Services, Agencies, Research Centres, Member States, international and national bodies.
- facilitating links with info systems in the same domain



Objectives

Short term objectives are focused on data access, by implementing :

- searching facilities to discovery and access chemical monitoring data created for different purposes
- hosting facilities for data currently not easily accessible (e.g. outcomes of research projects, off-line stored monitoring data, etc. and including data on new, emerging and less-investigated chemicals)
- chemical monitoring documentation (metadata) of defined quality

The medium/long term ambition of the platform will be focused on data quality and usability as well as on facilitating assessment objectives.

Current and future users

- 1) **Policy makers*** involved in legislation definition and/or decision making
- 2) **Scientists*** working on the creation, collection, analysis and assessment of chemical monitoring data

* for the first phase of the project belonging to EC services

- 3) **Data providers**, who agree to be part of the IPChem project and to make their chemical monitoring data searchable and accessible through the IPChem. User requirements are the possibility to upload data, to promote/communicate data collection initiatives and make data usable for the conception, implementation and monitoring of EU policies and decisions.
- 4) **Public**. In the future IPChem may be opened to the general public, interested in understanding and discovering information and projects related to the occurrence of chemicals in the environment and human health.

Platform's structure

4 thematic matrices (modules)

1. FOOD AND FEED MONITORING DATA (EFSA-DG SANCO module coordinator)
2. ENVIROMENTAL MONITORING DATA (EEA module coordinator)
3. BIO-MONITORING DATA (EEA module coordinator)
4. PRODUCT AND INDOOR-AIR MONITORING DATA

GOVERNANCE

Chef de File
(DG ENV)

Policy Masters
(SANCO, RTD, ESTAT,...)




Module
coordinators

Technical
Coordinator (JRC)

Data providers (DGs,
EU Agencies, MS
Agencies, Consortia...)

IPChem allows to search and access data related to **4 Modules**



 <p>Human Biomonitoring Data</p>	 <p>Environmental Monitoring Data</p>	 <p>Food and Feed Monitoring Data</p>	 <p>Product and Indoor Air Data</p>
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IPChem architecture

First level of data: metadata

1. Information on data collection
2. Spatial and temporal coverage
3. Matrix/media
4. Chemicals and UoM
5. Data Providers Conditions of data access and use and IPR
6. Quality statements documentation

Unique search tool

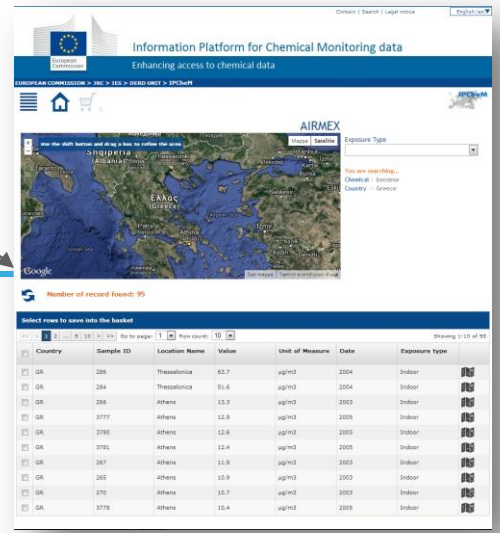
- Chemical name
- Module
- Media
- Spatial coverage

Second level: data values

- Presentation of search results
- Additional specific filters based on dataset's structure
- Sample site/station info
- Temporal trends



Information provided by DP or automatically extracted from DBs





IPChem current release



IPChem - the Information Platform for Chemical Monitoring is a single access point for discovering chemical monitoring data collections managed and available to European Commission bodies, Member States, international and national organisations and researchers.

The Platform aims to support a more coordinated approach for collecting, storing, accessing and assessing data related to the occurrence of chemicals and chemical mixtures, in relation to humans and the environment. "This would help identify links between exposure and epidemiological data in order to explore potential biological effects and lead to improved health outcomes" [EC Communication "The combination effects of chemicals - Chemical mixtures" (COM/2012/0252 final)].

IPChem is designed and implemented as de-centralised system, providing remote access to existing information systems and data providers.

Show more >>

Search Chemical Monitoring Data

4 Modules



- ### Who is participating?
- These are the institutions and related databases that currently participate in IPChem, the list is continuously updated:
- Directorate-General for the Environment (DG ENV)
 - Directorate General for Health and Consumers (DG SANCO)
 - Joint Research Centre (JRC)
 - European Food Security Authority (EFSA)
 - European Chemicals Agency (ECHA)
 - European Environmental Agency (EEA)

- ### Related Information Systems
- Indoor Air Quality (JRC)
 - eChemPortal (OECD)
 - EMODnet (DG MARE)
 - Eionet

Treaty to cut mercury pollution signed by 92 countries

10/23/2013 - 14:56

But despite the funding needed to improve global mercury monitoring

Stay up to date with the latest news from the Global Environment Facility

Treaty to cut mercury pollution signed by 92 countries
10/23/2013 - 14:56

Mercury pollution is a global environmental problem. It is a toxic substance that can be released for a long time into the environment (mercury).
10/23/2013 - 15:49

5 foods you should eat this fall (potassium)
10/23/2013 - 15:5

5 foods you should eat this fall (potassium)
10/23/2013 - 14:56

Court: Studies understated Samsung health hazards (benzene)
10/23/2013 - 14:3

Hope to secure clearance by December for Malankhand expansion: HCL (copper)
10/23/2013 - 13:56

Click for more >>

IPChem home page Data & News access

SciDev Net: Bringing science and development together through news and analysis

Search articles in SciDev.Net

Home | Agriculture | Environment | Health | Governance | Enterprise | Communication | More

23/10/13

Treaty to cut mercury pollution signed by 92 countries

Global Environment Facility

Speed read

- It is hoped that the convention will come into force within three years
- Work remains to provide the funding and advice needed to implement the treaty
- Efforts are also needed to improve global mercury monitoring

News: 05/03/13

Report sheds light on benefits of small-scale mining

Artisanal mining has a bad press, but with stronger, evidence-based policies, it could be greener and fairer, says ...

News: 22/01/13

Nations agree first global treaty to ban mercury emissions



European Commission

Contact | Search | Legal notice

English (en)

IPChem search tool & metadata page

Contact | Search | Legal notice

English (en)



Information Platform for Chemical Monitoring data

Enhancing access to chemical data

EUROPEAN COMMISSION > JRC > IES > DERD UNIT > IPChem



Search Chemical:

by name (mandatory)

Refine by module and media (optional)



by media (optional)

You are searching...

Country:



displaying 1 to 5 out of 5 results

< 1 >



Information Platform for Chemical Monitoring data

Enhancing access to chemical data

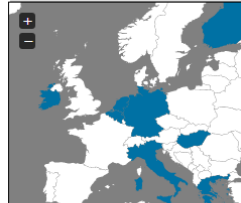
EUROPEAN COMMISSION > JRC > IES > DERD UNIT > IPChem



Links



Country Coverage



(show country names)

Data collection starting date

Oct 2003

Data collection end date

Apr 2007

Responsible

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(show other contacts)

Access and use

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AIRMEX - European Indoor Air Monitoring and Exposure Assessment Project

The AIRMEX project's aim was to systematically evaluate the relationship between indoor air pollution and human (chronic) exposure to pollutants with the focus on public buildings, including indoor environments where children frequently stay like schools and kindergartens, and to evaluate to what extent exposure to these pollutants affected occupants in these areas. The experimental approach consisted of...

Monitoring Reasons

Evaluate the relationship between indoor air pollution and human (chronic) exposure to pollutants in public buildings, schools, kindergartens and private dwellings

Sampling Methods

All measurements were carried out by means of radial type diffusion passive samplers (Radiello, charcoal type for VOCs and DNPH-covered fluorisil cartridges for selective sampling of carbonyl compounds).

Chemicals Hide

Chemical name	CAS	media	unit of measure
benzene	71-43-2	air	ug/m3
acetaldehyde	75-07-0	air	ug/m3
hexanal	66-25-1	air	ug/m3
1,2,4-trimethylbenzene	95-63-6	air	ug/m3
formaldehyde	50-00-0	air	ug/m3
xylene (m-/p-isomers)	106-42-3/5	air	ug/m3
xylene (o-isomer)	95-47-6	air	ug/m3
1-butanol	71-36-3	air	ug/m3
dodecane	112-40-3	air	ug/m3
propionaldehyde	123-38-6	air	ug/m3
monochlorobenzene	108-90-7	air	ug/m3
octane	124-18-5	air	ug/m3
n-hexane	110-54-3	air	ug/m3
decane	124-18-5	air	ug/m3
alpha-pinene	80-56-8	air	ug/m3
methylcyclohexane	108-87-2	air	ug/m3
styrene	100-42-5	air	ug/m3
n-undecane	1120-21-4	air	ug/m3
methylpentylcyclohexane	61142-20-9	air	ug/m3
d-limonene	5989-27-5	air	ug/m3
acetone	67-64-1	air	ug/m3
ethylbenzene	100-41-4	air	ug/m3
1-butanol-2-propanol	5121-66-8	air	ug/m3

AIRBASE - European air quality database

AirBase is the air quality information system maintained by the EEA through the European topic centre on Air pollution and Climate Change...

AIRMEX - European Indoor Air Monitoring and Exposure Assessment Project

The AIRMEX project's aim was to systematically evaluate the relationship between indoor air pollution and human (chronic) exposure to pollutants...

LUCAS - Land Use/Cover Area frame statistical Survey

To test the integration of land use and land cover data at European level through harmonisation of nomenclatures and collection methods...

BIOSOIL - Biosoil Data

The BioSoil demonstration Project aimed to broaden the scope of previous forest monitoring activities (on atmospheric pollution and forest characteristics and biodiversity indicators).

WFD - Database of revised priority substances under the Water Framework Directive

As required by Article 16(4) of the Water Framework directive (WFD), the European Commission has to review the adopted list of priority substances every four years...



European Commission

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Information Platform for Chemical Monitoring data

Enhancing access to chemical data

EUROPEAN COMMISSION > JRC > IES > DERC UNIT > IPChem



WFD



Body Category:

Sample Matrix:

Analysed Fraction:

You are searching...
Chemical : benzene
Country : germany

Number of record found: 56

Select rows to save into the basket

Go to page: 1 | Row count: 10 | Showing 1-10 of 56

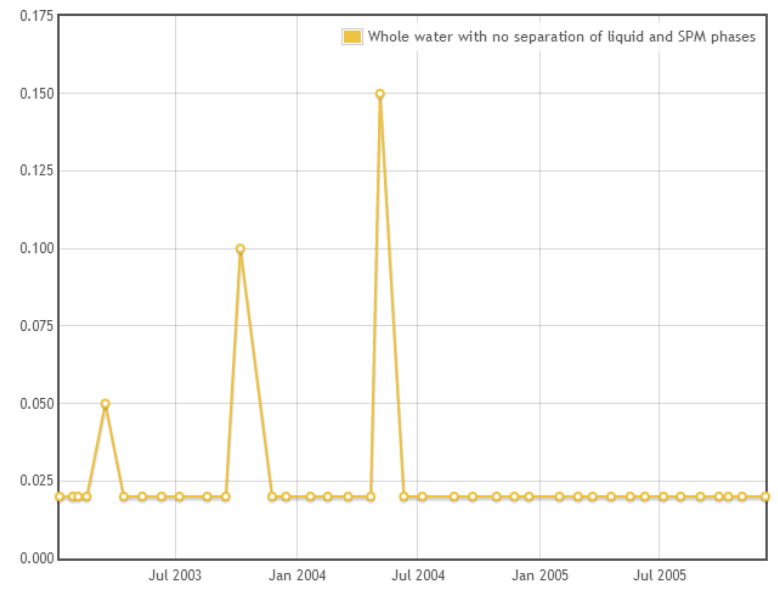
Station ID	Station Name	Location Name	Body Category	Basin Name
DE_NW394	Arnsberg	Bergheim	River	Rhine
DE_NW341	Bad Berleburg	Beddelhausen	River	Weser
DE_SN08	Bad Dübener See	Bad Dübener See	River	Elbe

Station DE_SN08 Analysis

Sample ID	Sampling Date	Analysis ID	Analysis Date	Value	Unit of Measure	Limit of Detection	Limit of Quantification	Analysed Fraction	Analytical Method
64978	2003/01/07	1861880	2003/01/07	0.02	ug/L	0.04	0.04	Whole water with no separation of liquid and SPM phases	
64979	2003/01/27	1862078	2003/01/27	0.02	ug/L	0.04	0.04	Whole water with no separation of liquid and SPM phases	

IPChem results page

Trend of BENZENE on Station DE_SN08



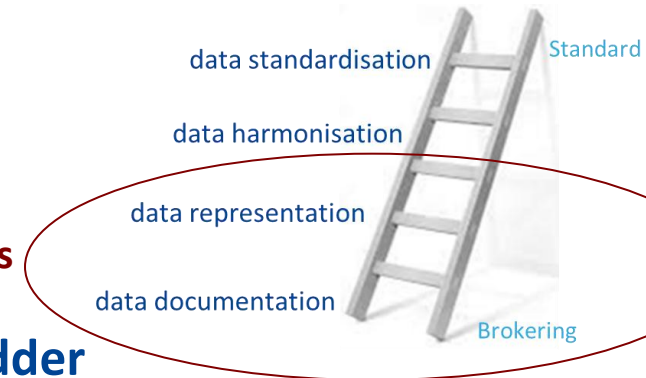
Benefits for Health, Food, and Consumer Protection domain

- evaluate the simultaneous occurrence of chemical thus addressing the issue of different chemicals acting on the same toxic end point (e.g. endocrine disturbing substances in important exposure media such as drinking water, products and food and feed)
- identify and assess the relationship between exposure and effects and/or uptake for the human population in Europe
- correlate increasing levels of emerging substances in humans with the occurrence in food and feed, products and the environment.

HOW?

IPChem is oriented to climb the “data comparability” ladder

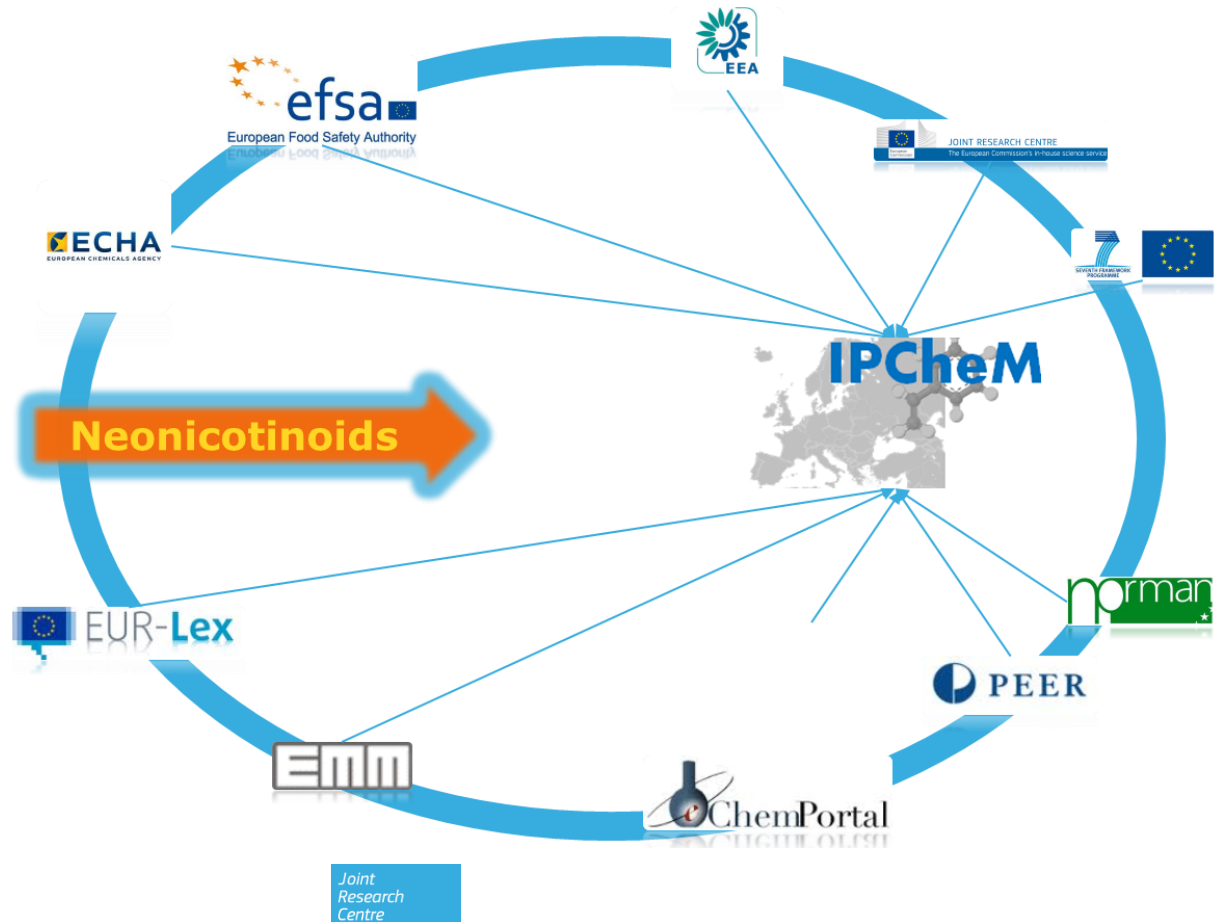
Current status



Benefits for Health, Food, and Consumer Protection domain

Climbing the *data comparability ladder* will allow to interconnect multi-source data about concentrations and:

- Exposures
- Proprieties
- effects



Possible applications of IPChem for Health, Food, and Consumer Protection

Support for risk assessment

- Access to observed concentrations and exposures for existing and **emerging substances** (including national datasets)
- **link to chem. effects** using chemical structures and sub-structures
- Cross-check with national data

Mixtures of chemicals

- Multivariate analyses to reveal “hidden” correlations
- EU wide exposure scenarios
- Link to research projects

Support to Impact Assessments of future regulation

- Maps of exposure data
- Identification of link to existing EU legislation dealing with related substances
- European Media Monitoring

Main issues met so far

data formats/data models

Some harmonised data templates are available and use

Chemical IDs and nomenclatures

different type of identifiers, use of trivial names, use of national name, use of acronyms.

Poor use of common vocabularies, but some practices/items already re-usable

Heterogeneity

Level of data documentation, lack of QA/QC info

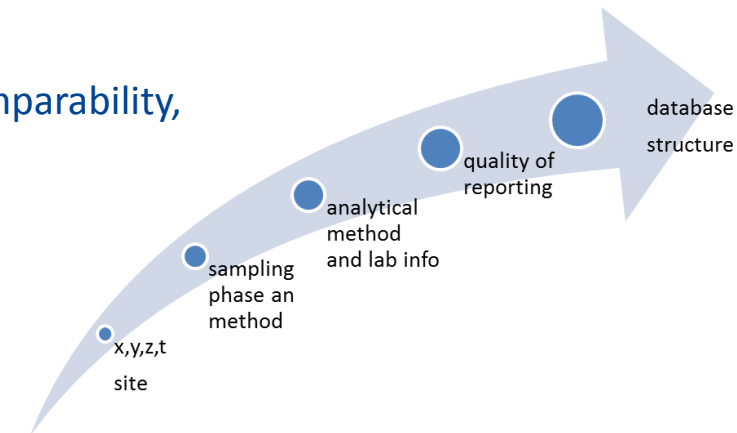
(Sometimes) lack in data documentation and data traceability, lack of QA/QC info

Policies in data access/use/preservation

Some Policies are well-defined, some are very restricted, some under definition

and challenges

- Taking into account important aspects of the data policies for federated data collections data sensitiveness, respect of the privacy, ethical considerations → human biomonitoring data
- Working on **metadata and data traceability** ensuring the connection, alignment and integrity with connected data
- Because IPChem promotes QA/QC statements and data comparability, metadata must describe **different phases**

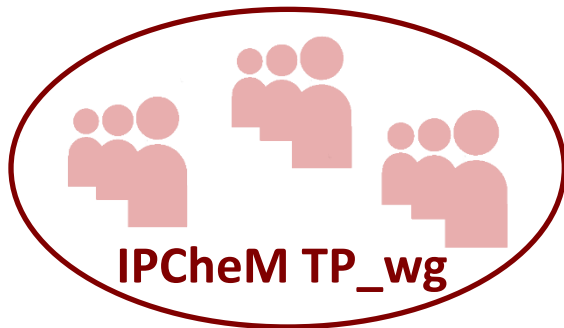


different entities (e.g. station, sample, laboratory, etc.) and **“module items”** (food&feed, environment, product&indoor air, human biomonitoring) complementing chemical monitoring data collections

Ongoing activities

IPChem as Community of Practices and a formal mechanism to discuss and agree on cross modules instances

2 working groups representative of all possible IPChem stakeholders (users+governance)



- Preparation and revision of a Concept Paper for “IPChem terms and data policy”
- Contribution to the formulation and adoption of “IPChem terms and data policy”
- Contribution to the development of implementation guidelines for IPChem terms and data policy



- Support the JRC team in the **case studies implementing policy questions**
- Contribution to the formulation of IPChem Interoperability Framework
- Finalisation of IPChem metadata V2

DG SANCO contribution in IPChem

1. DG SANCO is **IPChem Policy Master** and is supporting JRC and DG ENV to coordinate **the activities of the 2 working groups** (*in particular the case studies*)
2. DG SANCO and EFSA are the **Food and Feed monitoring data Module Coordinator**
3. DG SANCO is a key **Data Provider** for «Food & Feed monitoring data» and «Product and indoor air monitoring data» (e.g. **RAPEX** the rapid alert system for non-food dangerous products , **RASFF** the rapid alert system for food and feed produced in or imported to the EU)
4. DG SANCO is the main point of contact for FP6 – FP7 Project to involve/integrate in IPChem (e.g. Sinfonie)



<http://ipchem.jrc.it>
Only for EC services

For more info please contact the IPChem JRC team:

ipchem-support@jrc.ec.europa.eu

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

The 8th INSPIRE Conference will take place in
Aalborg Denmark, 16-20 June 2014

Workshop 17 June 2014: “Expanding horizons: INSPIRE in the health and the environment domain”