



INSPIRE Directive

– Infrastructure for Spatial Information in Europe - Status and Outlook

European Commission
Directorate-General Environment
Research, Science and Innovation Unit

Rue de la Loi, 200
1049 Brussels BELGIUM
Hugo.De-Groof@ec.europa.eu



Outline

- Background
 - The broader picture
 - Why INSPIRE?
- INSPIRE Proposal for Directive
 - Key objectives
 - Requirements
- INSPIRE Roadmap
 - Work Programme
 - Processes and Organisational framework

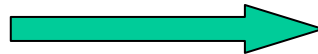


Policies Support

To Monitor .. To Implement ... To Develop

- Agenda 21, the [Rio Declaration on Environment and Development](#) , WSSD Johannesburg 2002
- [The Treaty on European Union](#)
- [The EU Sustainable Development Strategy](#)
- [The EU 6th Environmental Action Programme](#)

Four Priorities



Seven Thematic Strategies

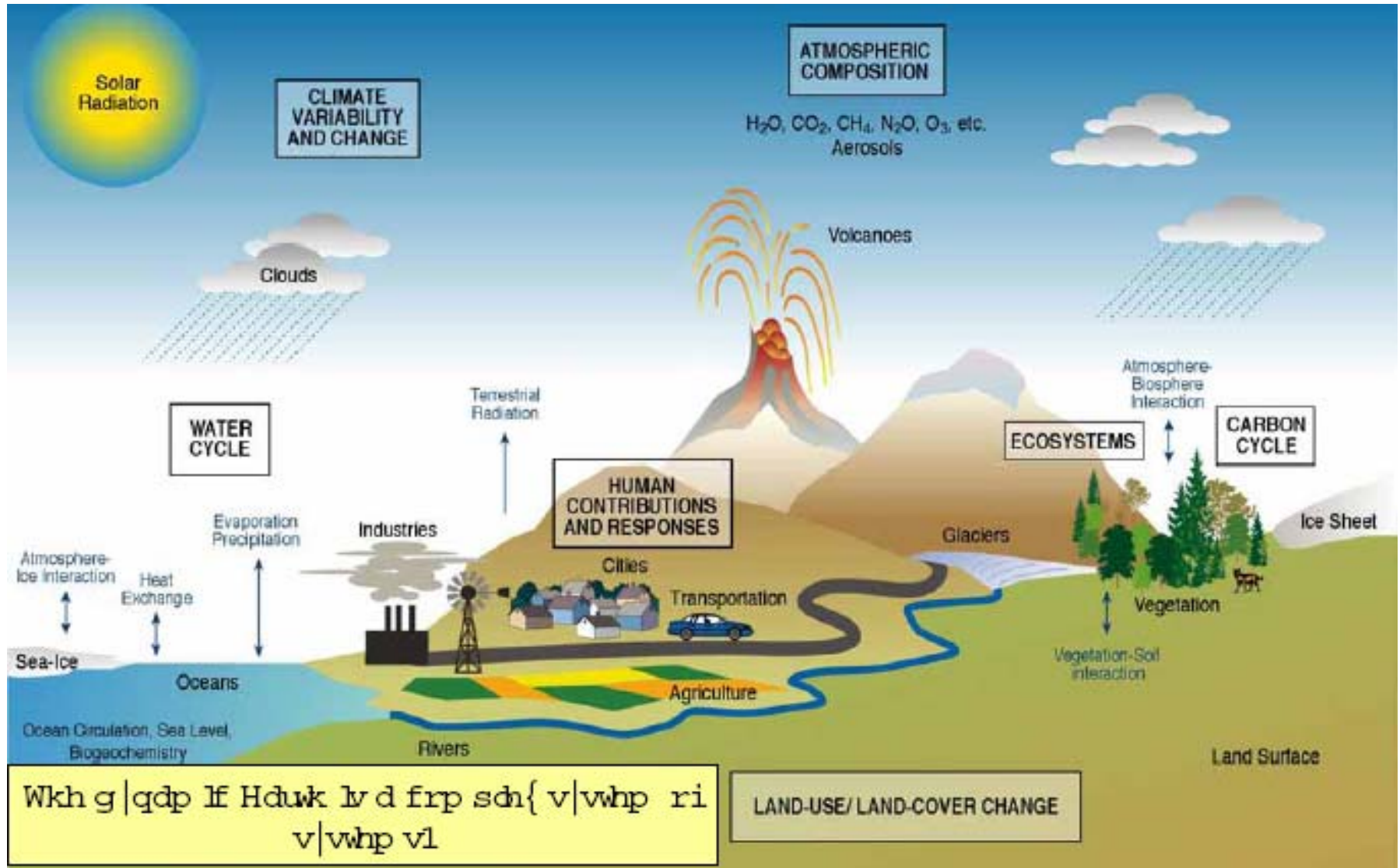
1. Climate Change
2. Nature and Biodiversity
3. Environment and Health
4. Natural resources and waste

1. [Clean Air For Europe \(CAFE\)](#)
2. [Soil protection](#)
3. [Sustainable use of pesticides](#)
4. [Marine environment](#)
5. [Waste prevention and recycling](#)
6. [Sustainable use of natural resources](#)
7. [Urban environment](#)

- [Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters](#)



Information About ?

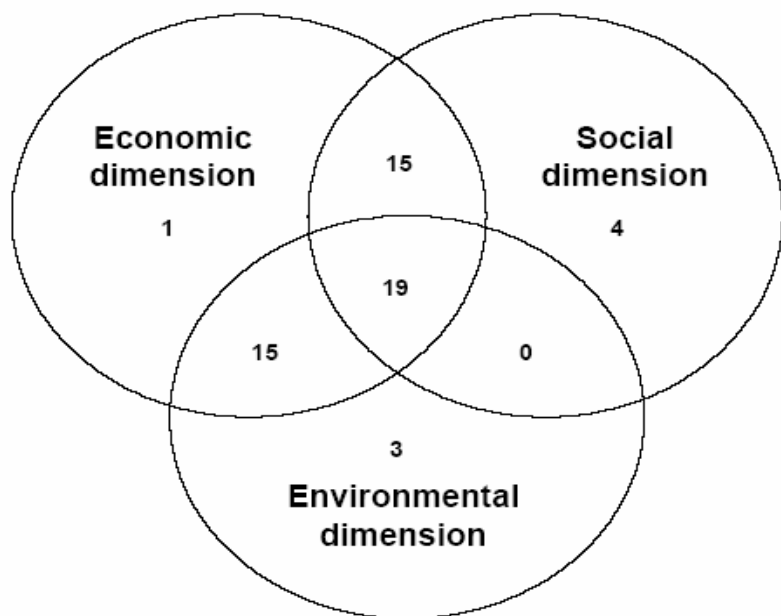




Monitor for Measuring Progress...

Sustainable Development Indicators

EU level long-term SD indicators to monitor our economic development while protecting the environment and meeting our social goals



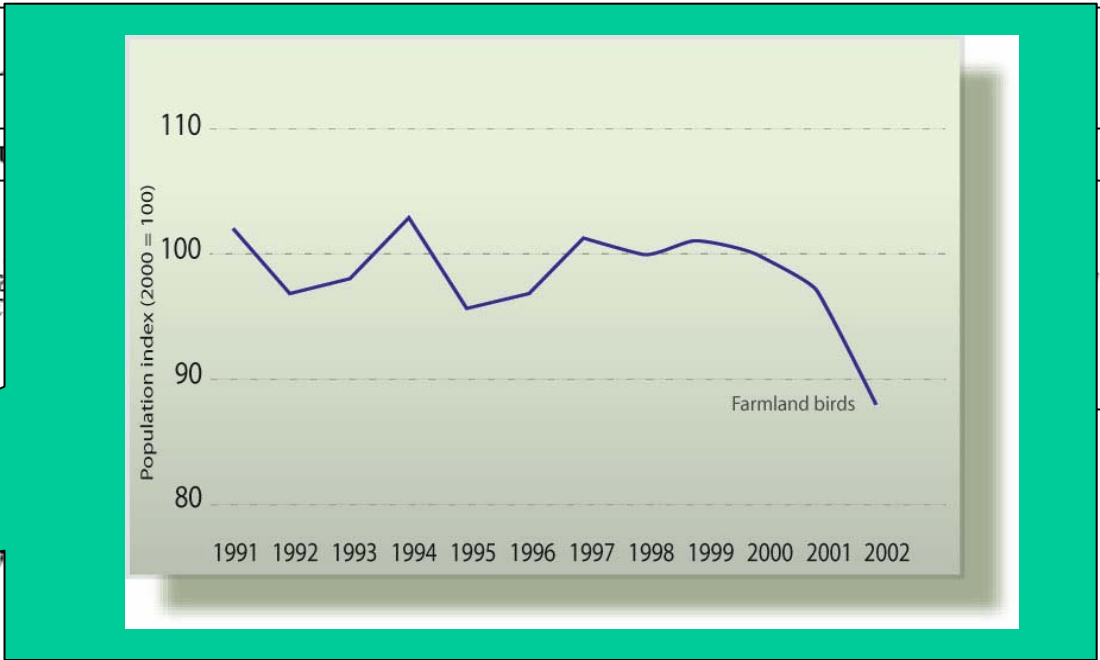
- Eurostat -

1. [Economic development](#)
2. [Poverty and social exclusion](#)
3. [Ageing society](#)
4. [Public Health](#)
5. [Climate change and energy](#)
6. [Production and consumption patterns](#)
7. [Management of natural resources](#)
8. [Transport](#)
9. [Good governance](#)
10. [Global partnership](#)



Example: Management of natural resources

Level I	Sub-themes	Level II	Level III
THEME 7: MANAGEMENT OF NATURAL RESOURCES			
1. <i>Biodiversity Index</i> 1a. Population trends of farmland birds 2. Fish catches outside safe biological limits	BIODIVERSITY	1. <i>Sufficiency of proposals for farmland birds under the Birds Directive</i>	
	MARINE ECOSYSTEMS		
	FRESH WATER RESOURCES	3. Groundwater abstraction as % of available groundwater resources	4. Population connected to wastewater treatment systems 5. <i>Emissions of organic matter as biochemical oxygen demand to rivers</i> 6. <i>Index of toxic chemical risk to aquatic environment</i>
	LAND USE	4. <i>Land use change, by category</i> 4a. Built-up area as a % of total land area 5. <i>Exceedance of critical loads of acidifying substances and nitrogen in sensitive natural areas</i>	7. <i>Percentage of total land area at risk of soil erosion</i> 8. <i>Percentage of total land area at risk of soil contamination</i> 9. Percentage of forest trees damaged by defoliation 10. <i>Fragmentation of habitats due to transport</i>



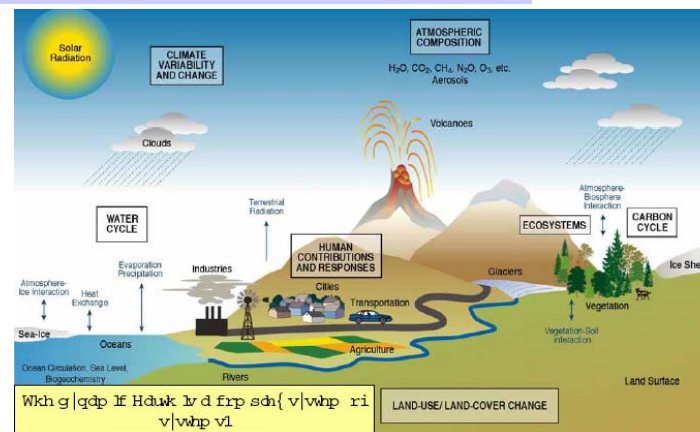
Collection of data for Sustainable Development Indicators development

- Eurostat approach maximum use of existing indicator initiatives; OECD etc... for environment cross-feeding with European Environment Agency indicators

- European Environment Agency core set of 37 indicators

categorised according to DPSIR:

- **D**iving Forces
- **P**ressures
- **S**tate
- **I**mpact
- **R**esponse



- However ... several priority areas on which no information or only partial information is available

- data and/or methodology do not exist yet;
- data exist, but the quality is poor or unknown or does not allow publication;
- data exist, but the breakdowns needed are not yet available.




European Environment Agency core set of 37 indicators

Air pollution and ozone depletion	1	Emissions of acidifying substances	Water	18	Use of freshwater resources
	2	Emissions of ozone precursors		19	Oxygen-consuming substances in rivers
	3	Emissions of primary particulates and secondary particulate precursors		20	Nutrients in freshwater
	4	Exceedance of air quality limit values in urban areas		21	Nutrients in transitional, coastal and marine waters
	5	Exposure of ecosystems to acidification, eutrophication and ozone		22	Bathing water quality
	6	Consumption of ozone-depleting substances		23	Chlorophyll in transitional, coastal and marine waters
Biodiversity	7	Threatened and protected species	Agriculture	24	Urban wastewater treatment
	8	Designated areas		25	Gross nutrient balance
	9	Species diversity	Energy	26	Area under organic farming
Climate change	10	Greenhouse gas emissions and removals		27	Final energy consumption
	11	Projections of greenhouse gas emissions and removals and policies and measures		28	Total energy intensity
	12	Global and European temperature		29	Total energy consumption
	13	Atmospheric greenhouse gas concentrations		30	Renewable energy consumption
Terrestrial	14	Land take	Fisheries	31	Renewable electricity
		Progress in management of contaminated sites		32	Status of marine fish stocks
Waste	16	Municipal waste generation		33	Aquaculture production
	17	Generation and recycling of packaging waste		34	Fishing fleet capacity
			Transport	35	Passenger transport demand
				36	Freight transport demand
				37	Use of cleaner and alternative fuels



- Environmental legislation -> obligation-based reporting — on the state of the environment, compliance or policy effectiveness => input to indicators
- But ... but in some cases it can be outdated because the nature of problems have changed since the legislation was adopted.
- Therefore ...complemented by collection of data through other channels leading to more relevant and demand-driven environmental information
- Monitoring and reviewing is not enough
- The EU Shared Environmental Information System is to support policy implementation at local, regional to global levels



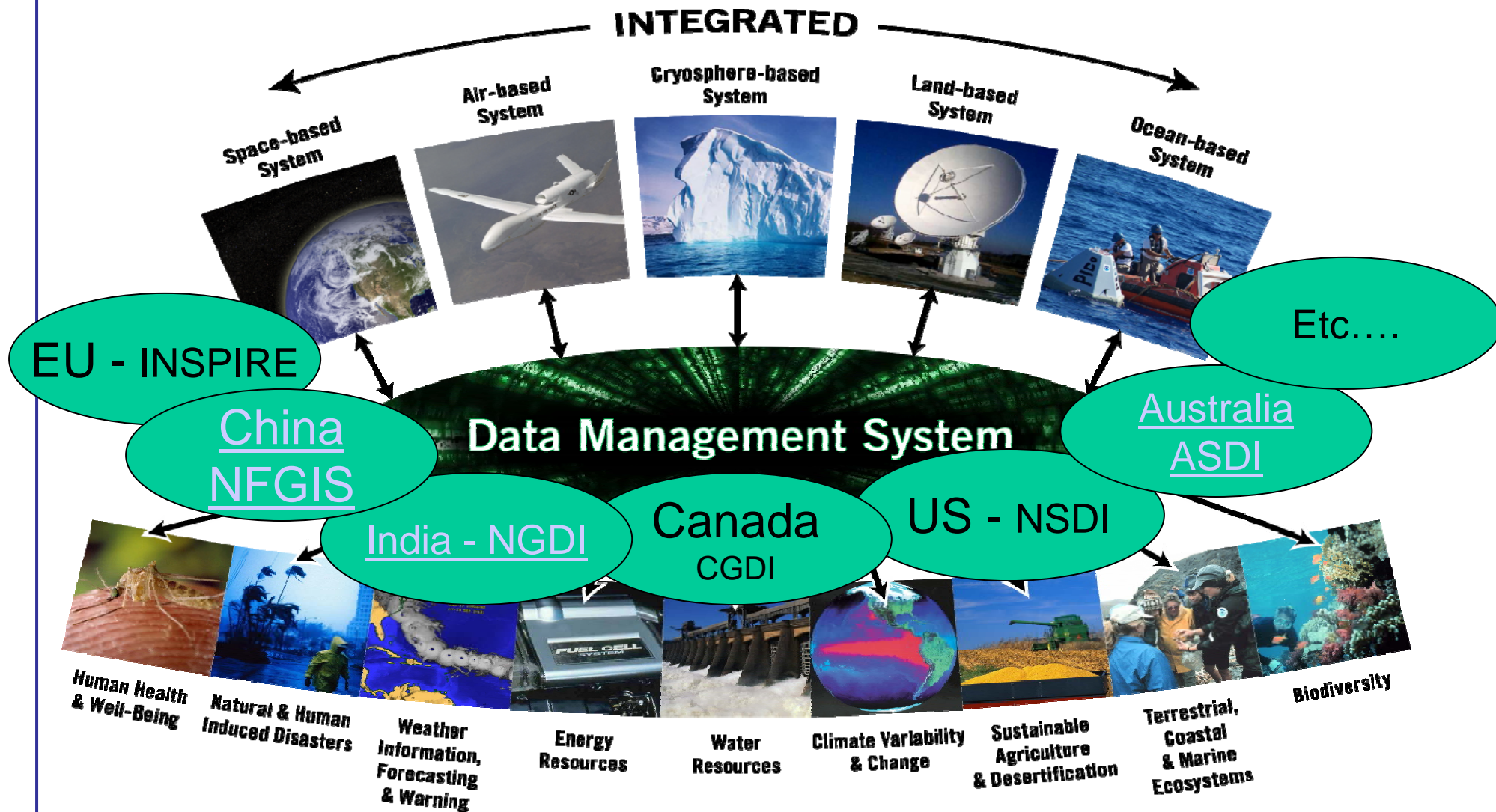
Shortcomings of Current Observation Systems

Source: GEOSS 10 Year Plan Reference Document

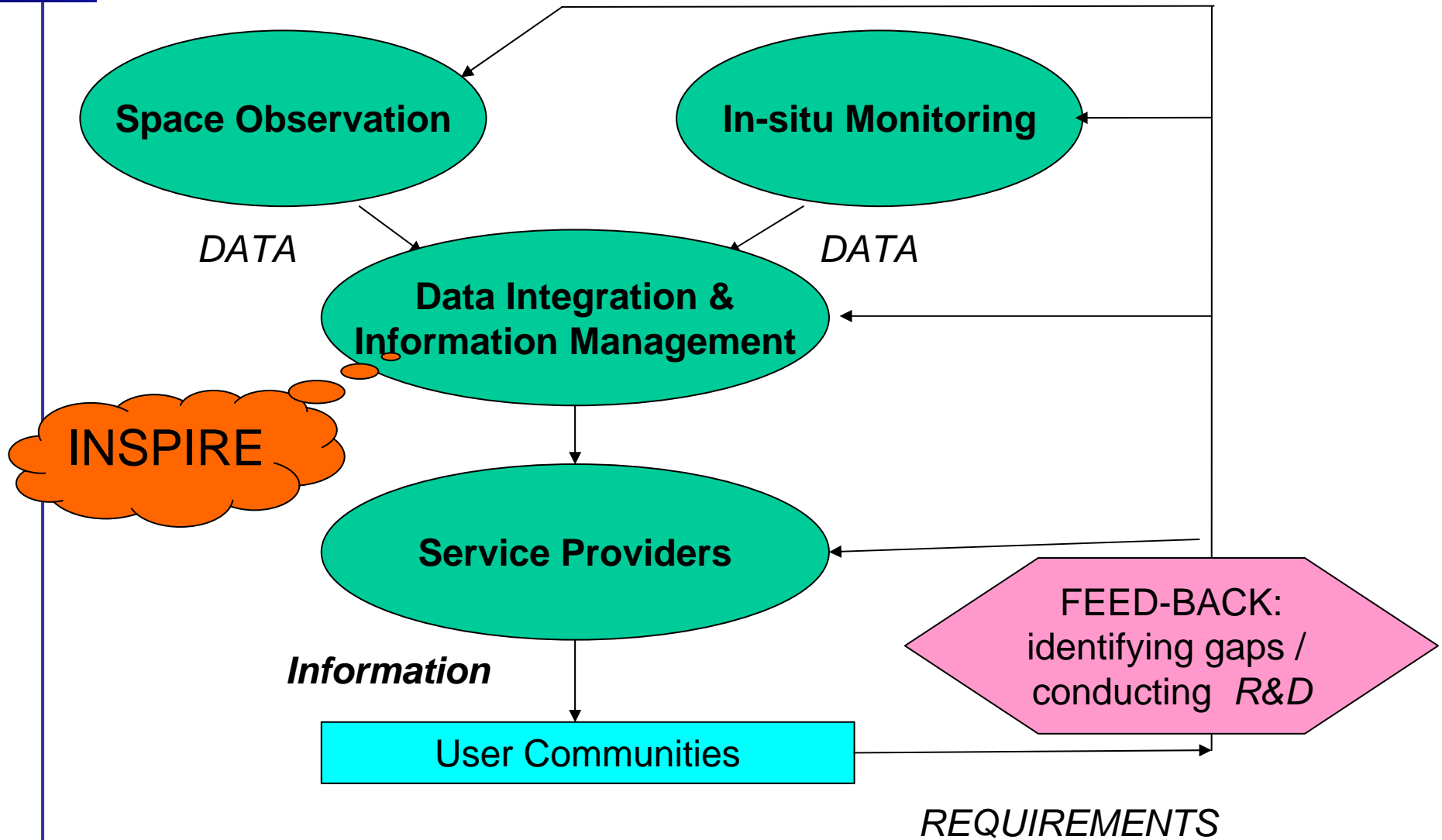
- a lack of access to data and associated benefits,
- eroding technical infrastructure,
- large spatial and temporal gaps in specific data sets,
- inadequate data integration and interoperability,
- uncertainty over continuity of observations,
- Inadequate user involvement,
- a lack of relevant processing systems to transform data into useful information,
- insufficient long-term data archiving.



GEOSS



GMES - Global Monitoring for Environment and Security





Aims of a knowledge based European Environment Policy

To better prevent, to be better prepared and to respond and recover more efficiently
from environmental degradation and man-made and natural hazards

Such requires:

Timely,

Accurate,

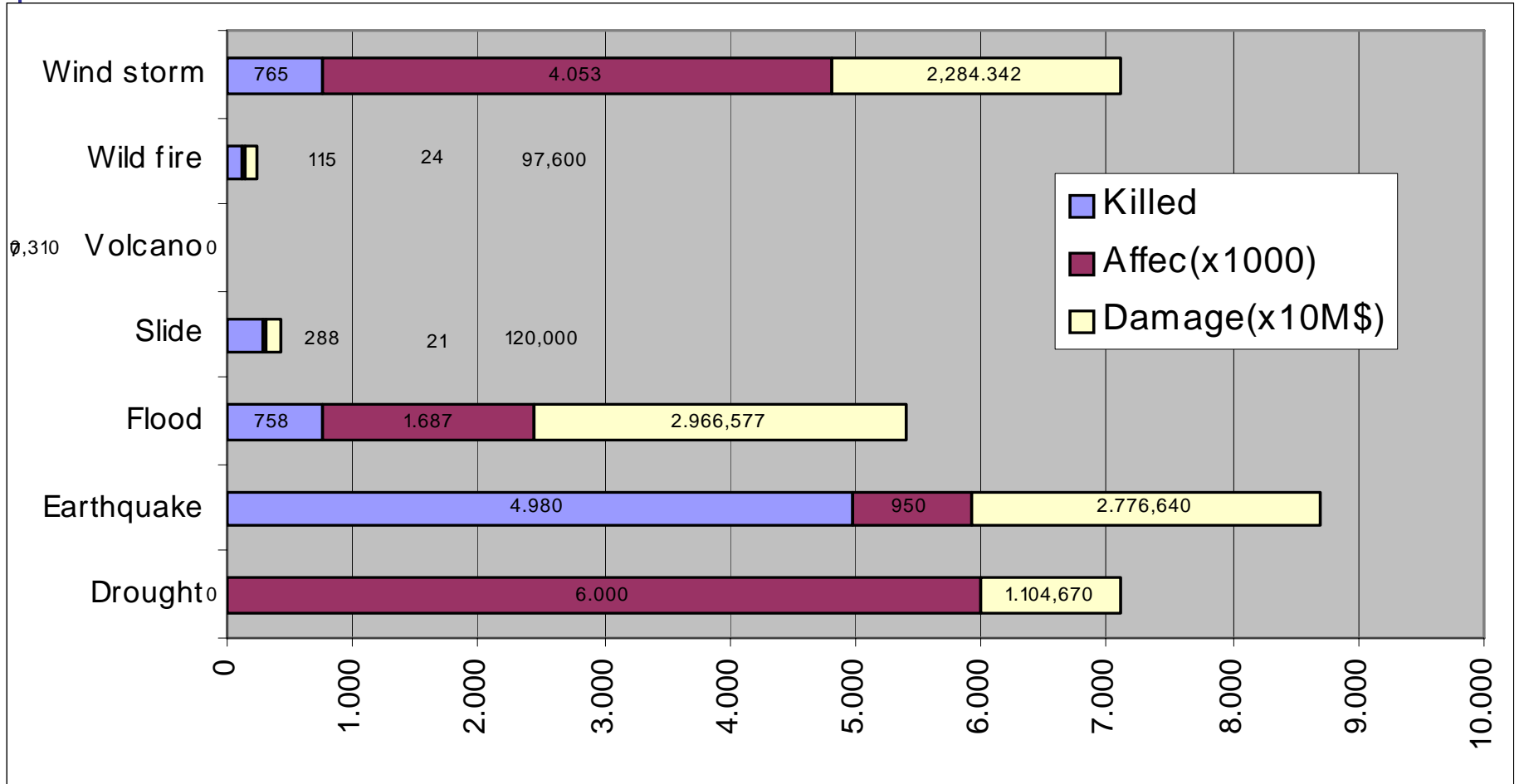
Easily Accessed,

Geo-spatial and Environmental Information

capable of being shared across European, national, regional and
local political jurisdictions



Relative Impact of Natural Hazards in EU 15 - 1980-2001 (OFDA/CRED)





Man-Made Risk Management GEOSPATIAL INFORMATION Requirements

Facilities and operations susceptible to hazards or to attack

Critical infrastructure including telecommunications; electrical power systems; gas and oil production, storage and distribution; banking and finance; water supply systems; emergency services; etc.

Accurate residence and employment data tied to specific locations; schools, government facilities, hospitals; etc.

Detailed and current "framework" data, including orthoimagery, transportation, elevation, political boundaries, property ownership, hydrography and geodetic control; etc.



Potential of GEOSPATIAL INFORMATION and Geographic Information Technologies

Detection of threats: linking and analysing temporally and spatially associated information to timely identify targets.

Preparedness: Emergency planners and responders need geospatial information ensuring the readiness of teams to respond.

Prevention: Detect and analyse patterns and scenarios regarding threats coupled with information about borders, waters, airspace, etc.

Protection: Analyse critical infrastructure vulnerabilities through visualisation and simulation to anticipate and protect against cascading effects - impact assessment

Response: Geospatial information accessible through information services allow more timely interventions of teams and more efficient operation on site

Recovery: Restoration is facilitated by availability of pre-hazard information

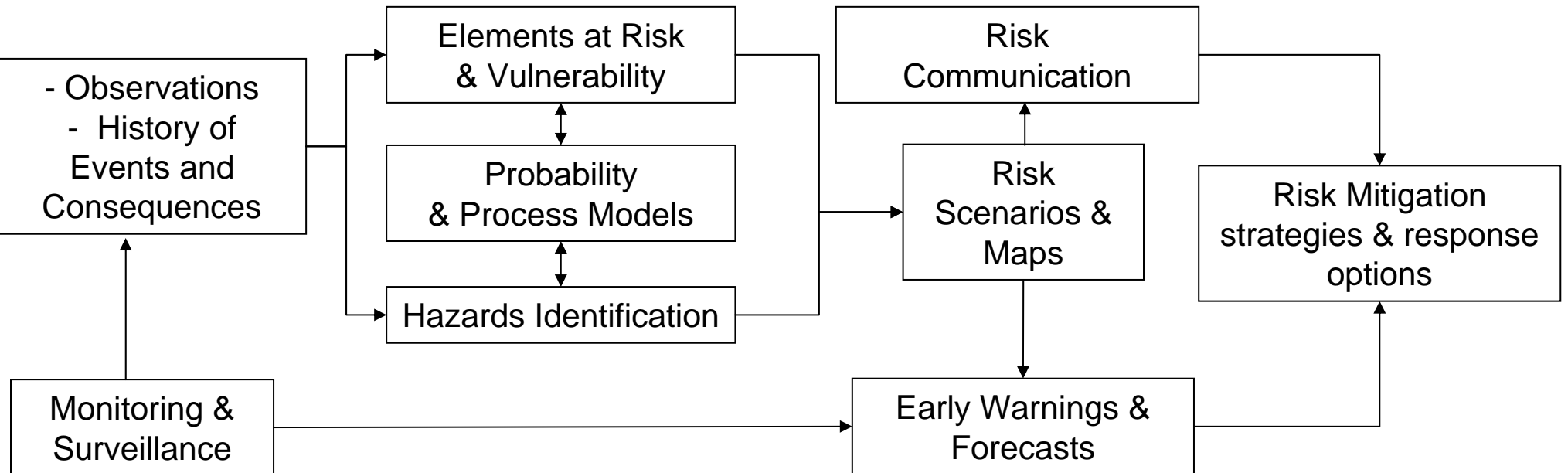
Risk Management

- A framework for GMES and INSPIRE -

RISK = HAZARD * Elements at RISK * VULNERABILITY

Risk Assessment (objective, science, technical)

Risk Evaluation (subjective, social, political)



Information, relationships and processes are spatial in nature :
MAPPING of Hazard zones and Risk probability & Vulnerability Profiles



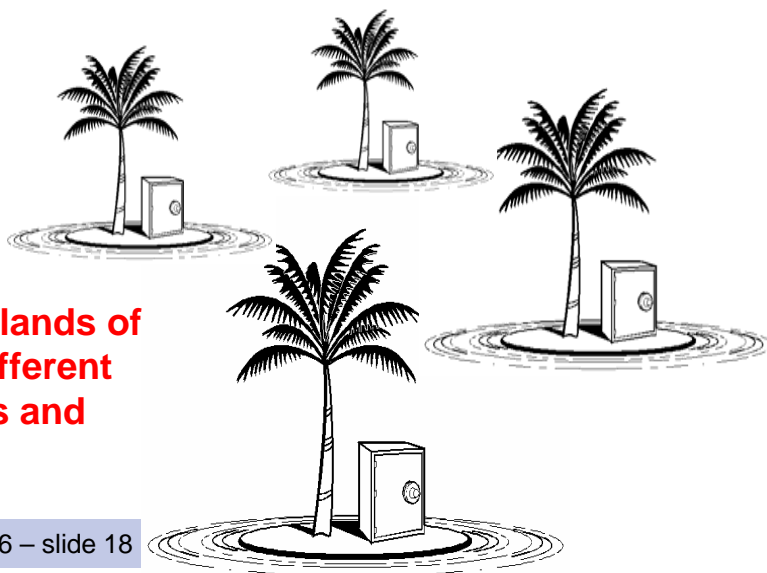
INSPIRE is needed....

Needs

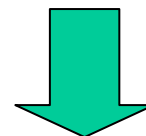
- Better information needed to support policies
- Improvement of existing information flows
- Differentiation across regions to be considered
- Revision of approach to reporting and monitoring, moving to concept of sharing of information

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...



July 2004 - EC Proposal COM(2004) 516 for a Directive establishing an infrastructure for spatial information in the Community – INSPIRE
Political Agreement 21 November 2006



What is a 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	Information Services



Why INSPIRE?

The NATURA 2000 network



Natura 2000
22.500 sites, 12-15% area

- Directive 92/43/EEC and 97/62/EEC on the conservation of natural **habitats** and of wild fauna and flora
 - SCI (Sites of Community importance)
 - SAC (Special Areas of Conservation)
- 78/409/EEC on the conservation of wild **birds**
 - SPA (Special Protection Areas)





What is the problem?

Natura2000 data: Different quality and different types of attribute information

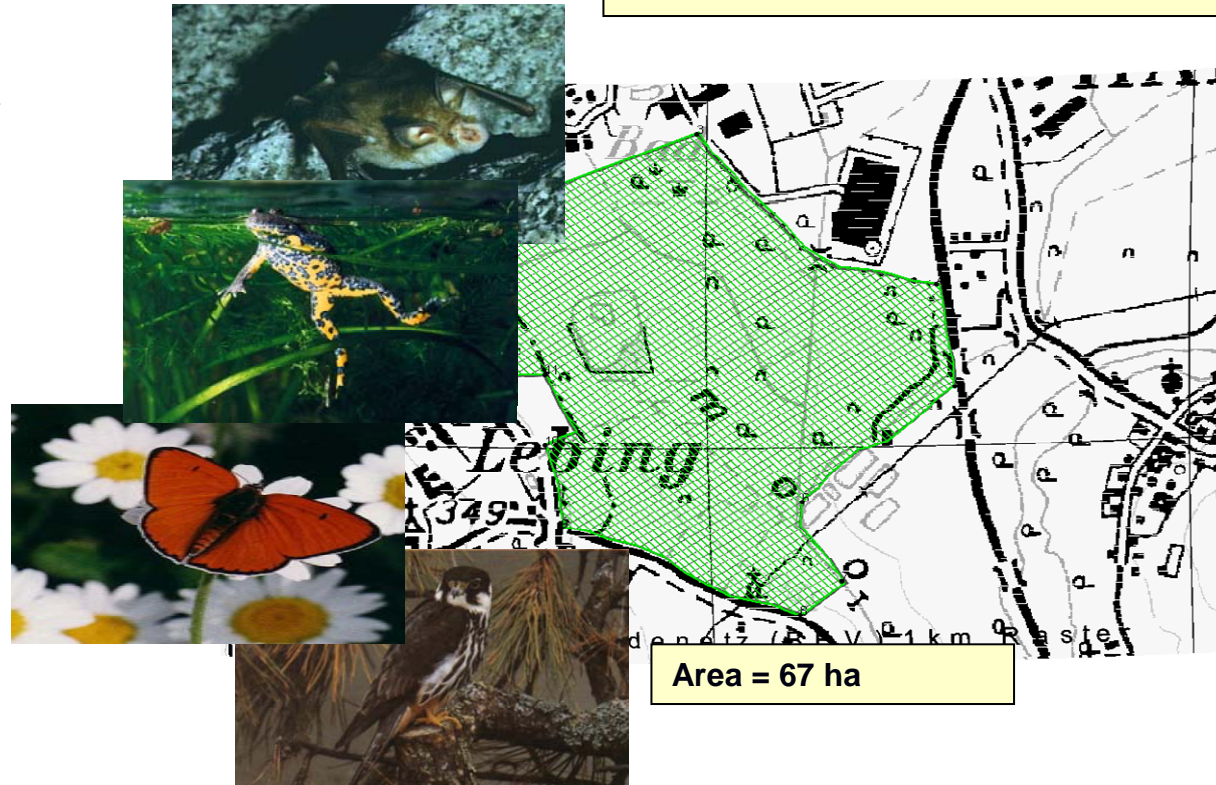
- Data compiled by Member States:
 - Paper map / site
 - Descriptive database
 - Digital Spatial data
- Data are validated and integrated by DG ENV
- Data sources:
 - In general 1/100.000, on topographic maps
 - Exceptionally 1/250.000 (very large sites)
 - Often 1/25.000 – 1/1.500 (cadastre)

Species

- Falco Subbuteo
- Rhinolophus Hipposideros
- Lycaena Dispar
- Bombina Variegata

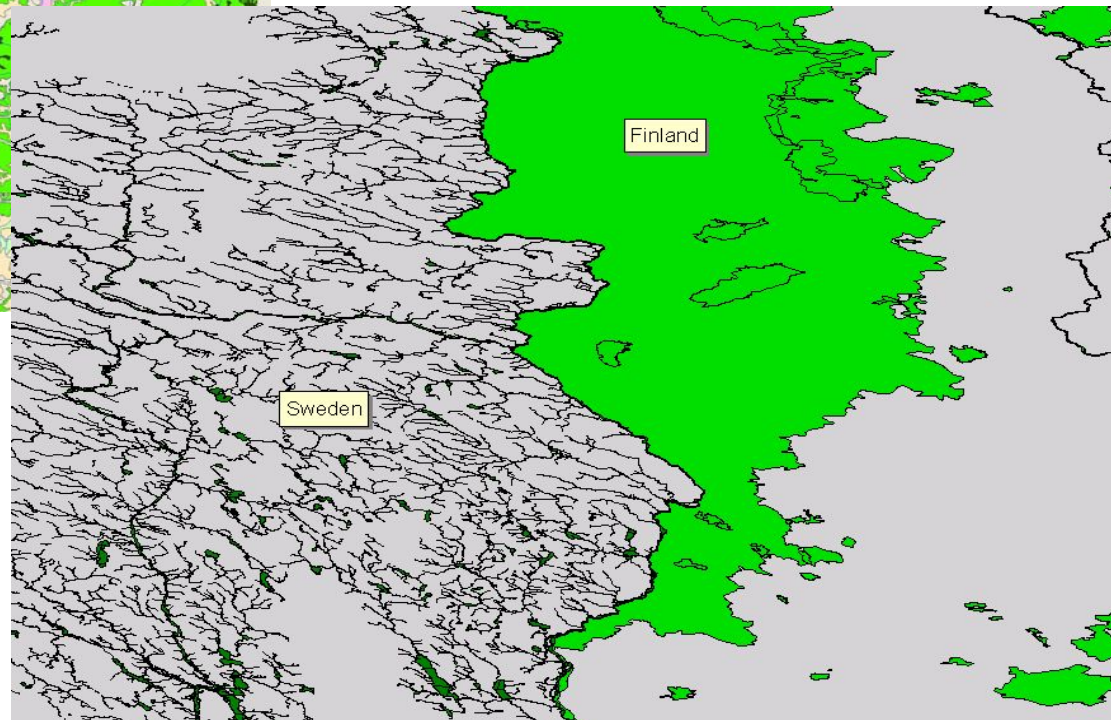
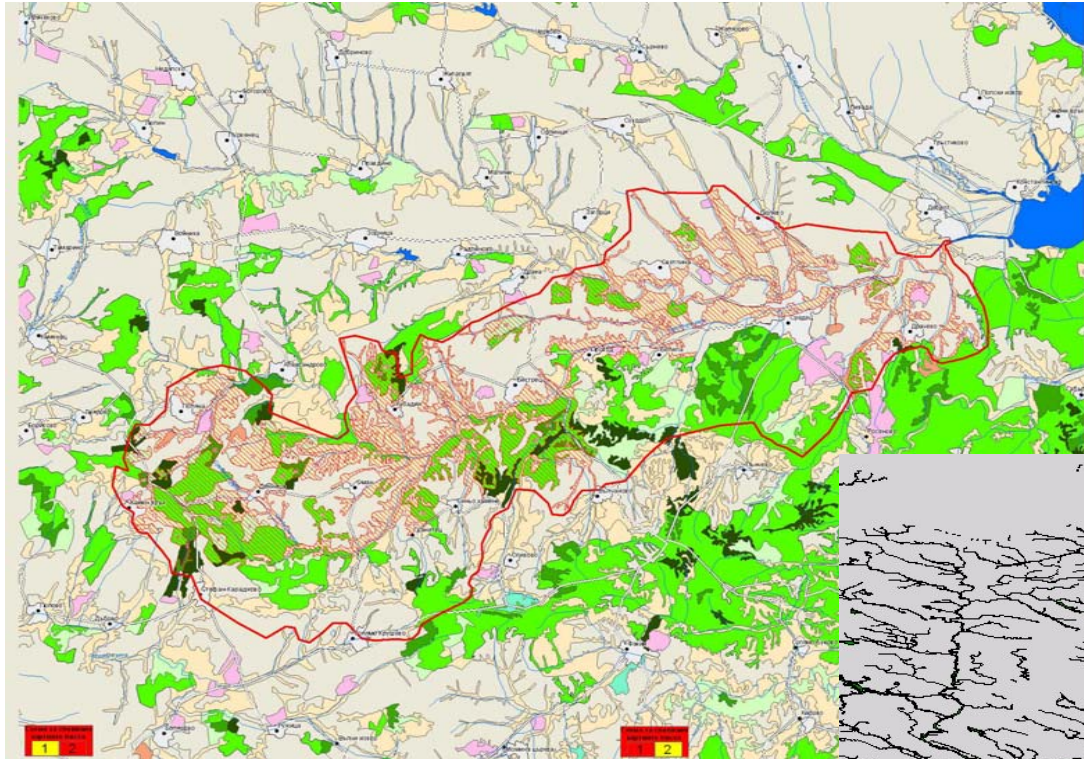
Activities

- Agricultural structures
- Landfill, land reclamation and drying out
- Professional fishing
- Modification of cultivation practices
- Continuous urbanisation





Natura2000 Data harmonisation problems

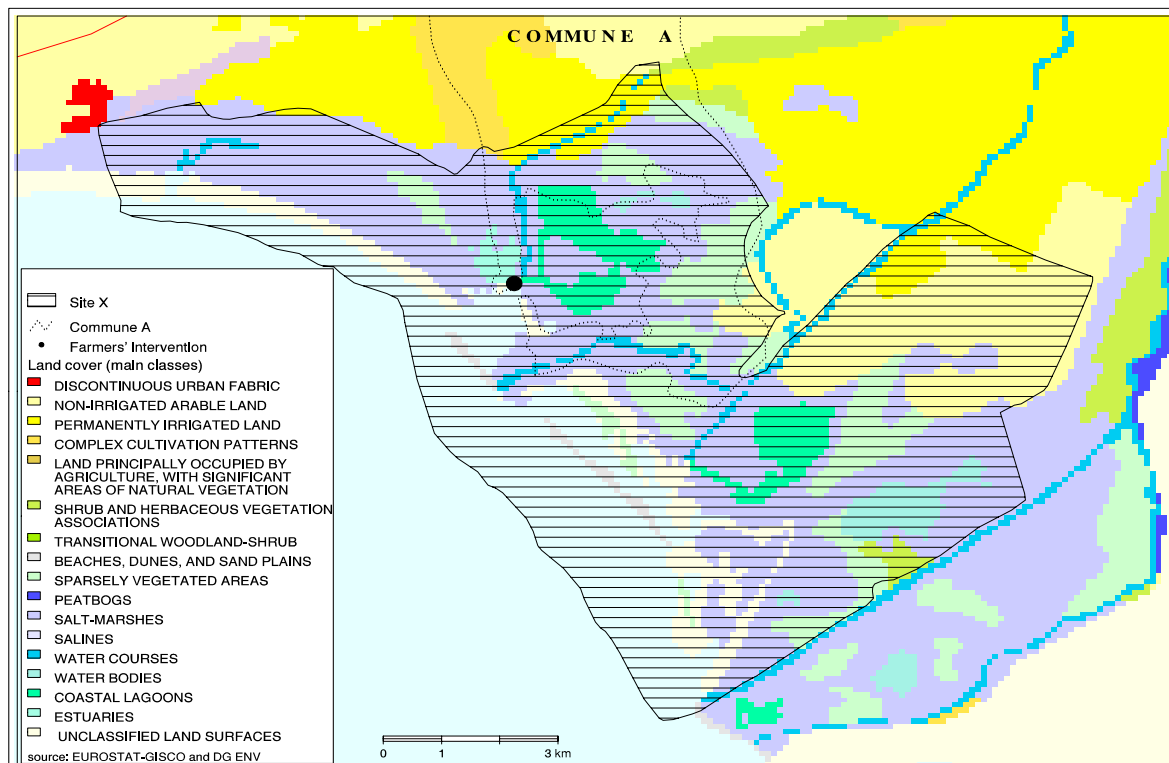




What is the problem?

Natura2000 - Use of the data

- In which administrative region is the site?
- Major roads running through the area?
- Variation of altitude and slope?
- Location of nearest villages and cities?
- How are the land cover and land use distributed?
- Where are potentially polluting sources situated?
- Is there an area eligible for Community which administrative funding?



Only data of poor quality are available to answer those questions....

Evropsky významné lokality v České republice - Microsoft Internet Explorer

File Edit View Favorites Tools Help

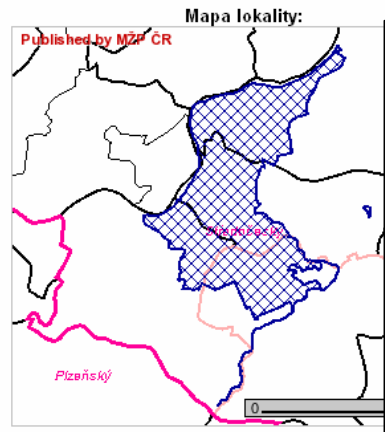
NATURA 2000

Evropsky významné lokality v České republice

Stanoviště z přílohy I Druhy z přílohy II Přehled lokalit Odborné podklady Vyhledávání

Popis lokality

Název: Týřov - Oupoňský potok
 Kód lokality: CZ0214011
 Kraj: Středočeský kraj
 Status: Navrženo
 Rozloha: 1.341,22 ha
 Biogeografické oblasti: Kontinentální
 Kategorie chráněného území: Chráněná krajinná oblast
 Správce území:



http://xeon.env.cz - Návrh evropsky významných lokalit (pSCI) v ČR - Microsoft Internet Explorer

ZPĚT 2010 Označit objekty v mapě Info ze všech vrstev Rastrový podklad: Automapa + PREKRESLIT

Zvláště chráněná území

- Národní parky
- CHKO
- Národní přírodní rezervace
- Přírodní rezervace
- Národní přírodní památky
- Přírodní památky
- Evropsky významné lokality (pSCI)
- Evropsky významné lokality (pSCI)

Biogeografické členění

- Panonikum

Správní celky

- Kraje
- Okresy
- Obce
- Katastrální území

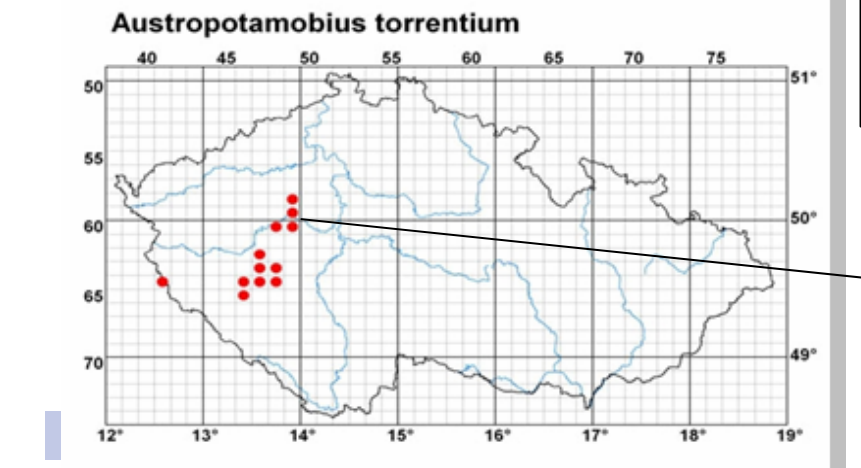
EVROPSKY VÝZNAMNÉ LOKALITY (PSCI)

	Kód lokality	Název lokality	Region	Rozloha (ha)	Návrh ZCHÚ
v mapě	detailní výpis	návrh přílohy nařízení vlády	CZ0214011	Týřov - Oupoňský potok	c 1341,221 CHKO

Dokumenty ke stažení:
 Příloha nařízení vlády

Popis:
 Poloha
 Rozsáhlé území vzniklé propojením 2 stávajících NPR (Velká Pleš a Týřov), ležící na pravém břehu středního toku řeky v obcích Skryje, Broumy a Branov. Lesní komplex v centrální části CHKO Křivoklátsko.

Ekoton

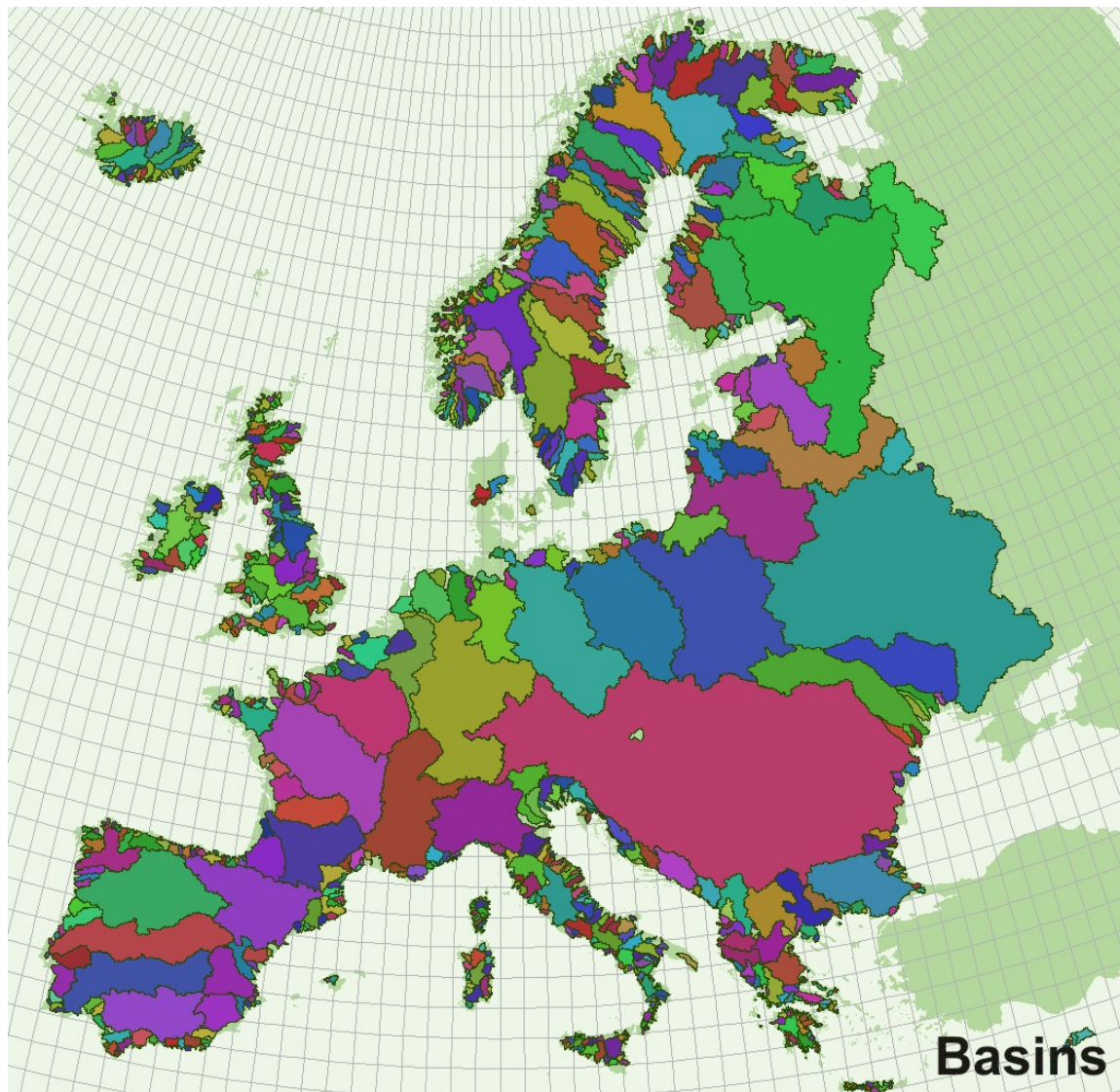


But good local data may exist and are potentially accessible



Water Framework Directive

Reporting is needed but ...



**Catchments
and floods
don't follow
administrative
boundaries**

WISE (Water Information
System for Europe)



Why INSPIRE?



Different Coding Systems and Different Number of Units

SABE (NMAs)		EUROSTAT (NSOs)	
SHN code	name	LAU code	name
...
27013	Belturbet	042	Belturbet Urban
14006	D. Topeiroy	720600	Topiouis

- Additional conversion tables for different coding systems are needed
- To check if data refers really to the same reference dates
- Other reasons for different number of lowest units ?

National Mapping Agencies

National Statistical Institutes

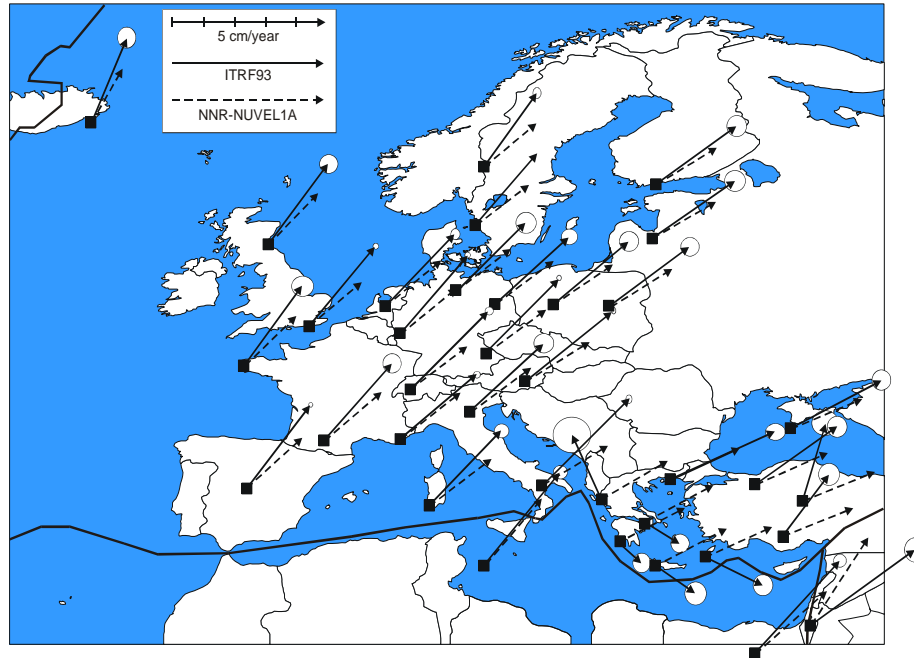
Number of lowest units (NMAs)	Number of LAU2 units (NSOs)
...	...
2358	2358
613	614
446	446
36587	36678
8124	8100
559	515
118	118
68	62
2488	2478
289	290
...	...

A closer cooperation between the National Statistical Offices, NSO and the National Mapping Agencies, NMA is absolutely necessary



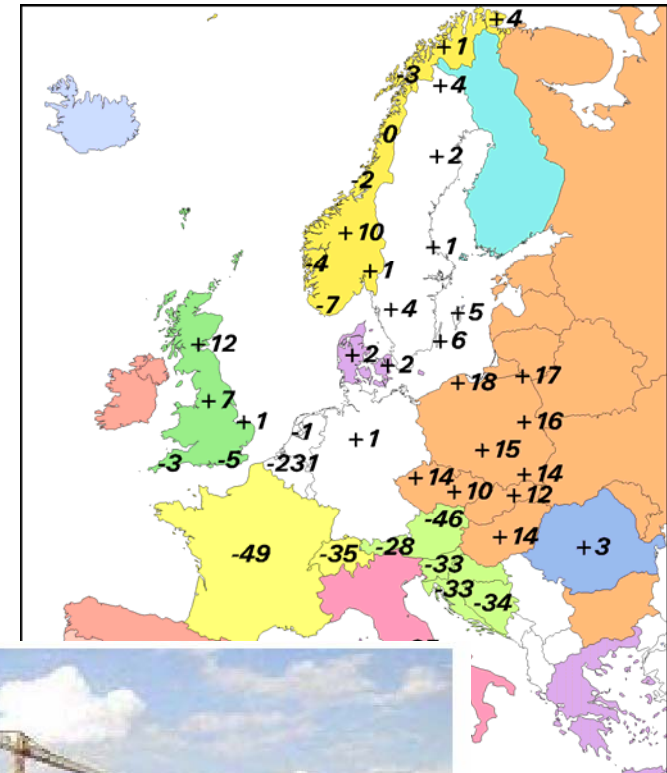
Several ongoing standardisation initiatives

European Reference System



European platform moving ~3cm /year

Differences in sea-level across Europe and within a country (in cm)



ISO **cen** Open GIS Consortium
Spatial connectivity
for a changing world.

GI Standardisation
CEN/TC287, ISO/TC211, OGC



Die neue Brücke bei Laufenburg



standards are not enough...

Example of problems on cross-border areas

The screenshot shows the XtraServer Client V1.00 interface. The main map area displays a road network with various colors (green, blue, red, magenta) representing different road types or administrative boundaries. The interface includes several panels:

- Ebenenauswahl** (Layer Selection): A list of layers including "Neuer Server", "XtraWMS - GDI Testbed I", "IfGI Map Server", "AED MapServer, Projekt", "Geodan's SCL OGC Web", "Intergraph World Map", "AED MapServer, Projekt", "Demo", and "Geodan's SCL OGC Web".
- Stichtag** (Snapshot Date): A text input field.
- Kartenausschnitt** (Map Section): Coordinates for "Links/unten" (5.82250095, 51.6232431) and "Rechts/oben" (6.31660515, 52.0114678).
- Raumbezugssystem** (Spatial Reference System): A dropdown menu set to "EPSG:4326".
- Interaktionen** (Interactions): Radio buttons for "Vergrößern", "Verkleinern", "Neue Bildmitte", and "Objektinformation".
- Ausgewählte Bildebenen** (Selected Image Layers): A list showing "XtraWMS - GDI Testbed II — Strassen — Standarddarstellung", "Geodan's SCL OGC Web Map Service and Web Feature Service — roads — Standarddarstellung", and "Geodan's SCL OGC Web Map Service and Web Feature Service — nuts3 — Standarddarstellung".
- Ansicht** (View): Radio buttons for "Ebenenauswahl", "Objektinformation", "Alle Fähigkeiten", and "Fähigkeiten als XML-Text".

Road network between Germany and Netherland—semantic inconsistencies



INSPIRE Directive

General Provisions

- INSPIRE 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.
 - This infrastructure shall build upon infrastructures for spatial information established and operated by the Member States.
- INSPIRE does not require collection of new spatial data – electronic format
- INSPIRE does not affect Intellectual Property Rights



INSPIRE ELEMENTS

- METADATA
- INTEROPERABILITY OF SPATIAL DATA SETS AND SERVICES
- NETWORK SERVICES
- DATA SHARING (policy)
- COORDINATION AND COMPLEMENTARY MEASURES – Monitoring & Reporting

*INSPIRE requires also specific **implementing rules** to be adopted through a Commitology procedure*

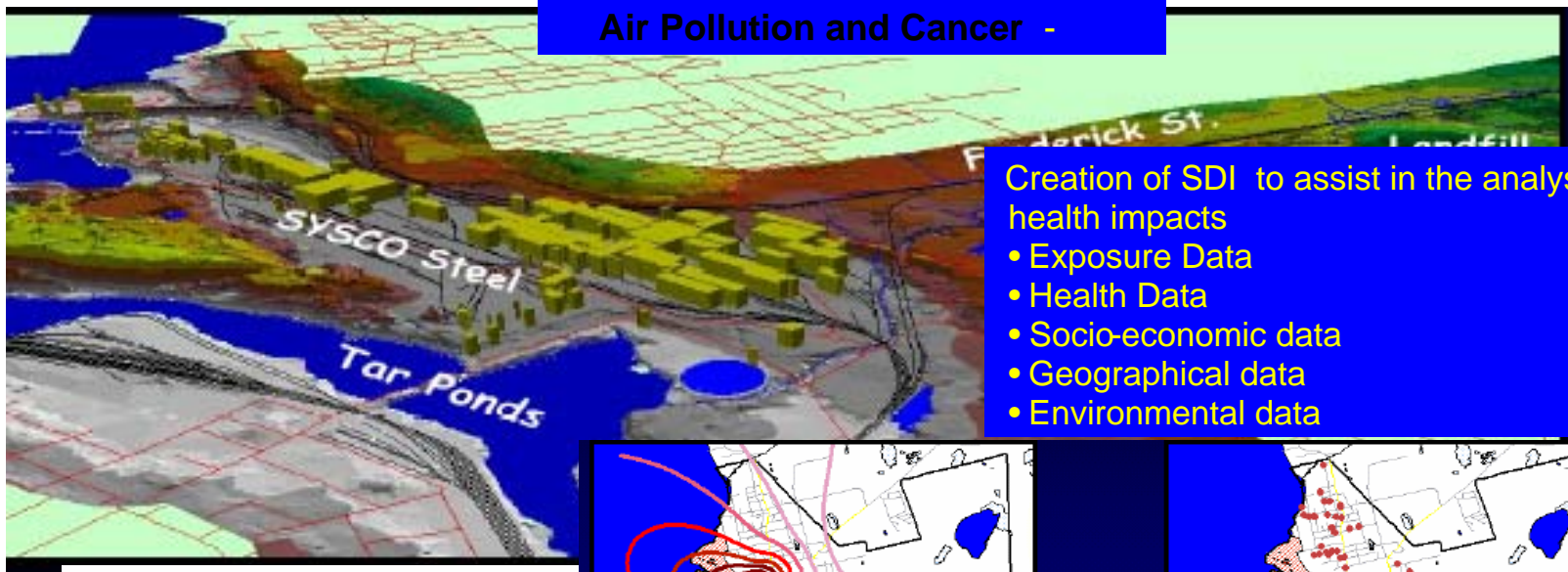


What and Whose Spatial Data ?

- Who ? - Spatial data held by or on behalf of a public authority operating down to the lowest level of government when laws or regulations require their collection or dissemination
- What ? - INSPIRE covers 35 Spatial Data Themes laid down in 3 Annexes – (*required to successfully build environmental information systems*)

Why are all these themes needed ?

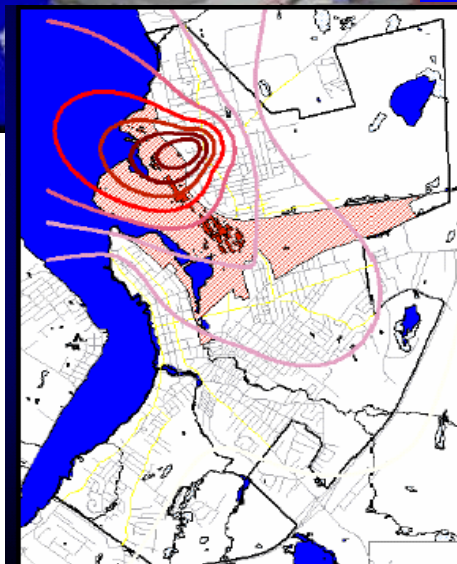
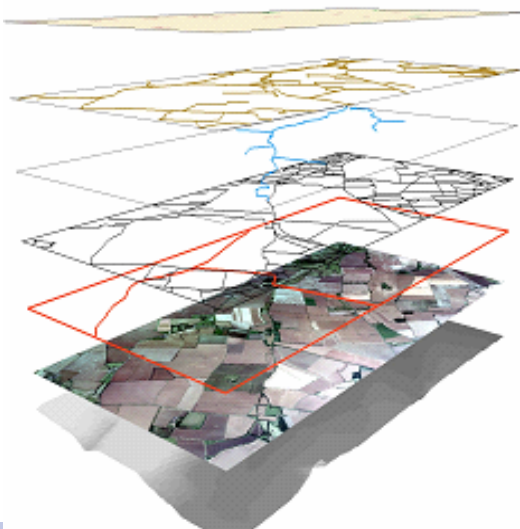
- Just one example



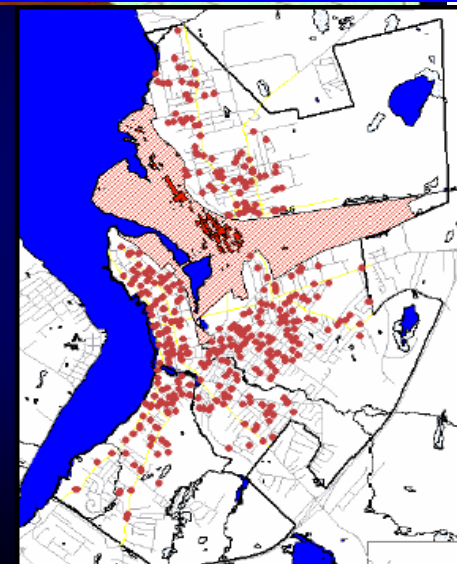
Air Pollution and Cancer -

Creation of SDI to assist in the analysis of health impacts

- Exposure Data
- Health Data
- Socio-economic data
- Geographical data
- Environmental data



Air Pollution



Cancer Cases



INSPIRE Spatial 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

Annex II

1. Elevation
2. Land cover
3. Identifiers of properties
4. Ortho-imagery
5. Geology

Harmonised spatial data specifications more stringent for Annex I and II than for Annex III



INSPIRE Thematic 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 Data Sharing Policy

- Member States shall adopt measures for the sharing of data and services between public authorities for public tasks relating to the environment without restrictions occurring at the point of use.
- Public authorities may charge, license each other and Community institutions provided this does not create an obstacle to sharing.
- When spatial data or services are provided to Community institutions for reporting obligations under Community law relating to the environment then this will not be subject to charging.



From Commission proposal to Community Directive implementation

- Preparatory phase (2004-2006)
 - *Co-decision procedure*
 - **Preparation of Implementing Rules**
- Transposition phase (2007-2008)
 - Directive enters into force
 - Transposition into national legislation
 - INSPIRE Committee starts its activities
 - Adoption of Implementation Rules by Committology
- Implementation phase (2009-2013)
 - implementation and monitoring of measures



Implementing Rules

- metadata
- Interoperability of spatial data sets and spatial data services
- network services
 - EU geo-portal
- data sharing - access and rights of use for Community institutions and bodies
- monitoring and reporting





Metadata

Member States shall create metadata and keep them up to date

- Metadata shall include:
 - Conditions for access and use
 - Quality and validity
 - The public authorities responsible
 - Limitations on public access
- Once Implementing Rules adopted:
 - Created within two years for Annex I, II
 - Created within 5 years for Annex II



Interoperability of spatial data sets and services

Implementing Rules, IR shall be adopted for interoperability and ,where practical, for harmonisation of spatial data sets and services

- Based on relevant user requirements
- Integrate existing international standards, if appropriate
- Feasible, proportionate, cost-benefit into account (Member States shall provide on request information)
- Member States shall once IR adopted:
 - Make services and new data conform within 2 years
 - Make existing data conform (can be done through transformation service) within 7 years
- Stakeholders shall be given opportunity to participate in development of this Implementing Rule



Interoperability of spatial data sets and services (2)

- Harmonised data specifications
 - Annex I, II, III:
 - definition and classification of spatial objects
 - geo-referencing
 - Annex I, II:
 - common framework of unique identifiers for spatial objects;
 - relationship between spatial objects;
 - key attributes and corresponding multilingual thesauri;
 - Information on the temporal dimension of the data;
 - how to exchange updates of the data.
- 3rd parties shall have access to these specifications at conditions not restricting its use
- Cross-border issues shall be agreed on



Network Services

Member States shall operate a network of the following services available to the public for data sets and services for which metadata has been created:

- Discovery services; No charge
- View services; No charge (exceptions)
- Download services;
- Transformation services,
- Services allowing spatial data services to be invoked
 - *Access to services may be restricted*
 - *Services shall be available on request to 3rd parties under conditions*
 - *Implementing Rules will be adopted (cost-benefit considerations)*
 - *INSPIRE GEO portal shall be established – Member States geo-portals*



INSPIRE Roadmap (1/3)

Mile-stone	Mile-stone	Description
2007	X	Entry into force of INSPIRE Directive
2007	X+3m	Establishment of the INSPIRE Committee
2007	X +1y at latest	Adoption of Implementing Rules for the creation and up-dating of the metadata Adoption of Implementing Rules for network services Adoption of Implementing Rules for monitoring and reporting Adoption of Implementing Rules governing access and rights of use to spatial data sets and services for Community institutions and bodies
2009	X + 2y	Adoption of Implementing Rules for harmonised spatial data specifications and for the exchange of Annex I spatial data



Mile-stone	Mile-stone	Provisions of Directive are brought into force in MS (transposition date)
2009	X + 2y	Designation of responsible public authorities for spatial data sets and services
2009	X + 2y	Implementation of data sharing framework of spatial data sets and services between public bodies
2009	X + 2y	Implementation of provisions on monitoring
2009	X + 2y	Network services are operational
2010	X + 2y	Metadata available for spatial data corresponding to Annex I and Annex II spatial data
2010	X + 3y	Member States' First Report to the Commission. From then onwards MS have to present reports every 3 years



Roadmap (3/3)

Mile-stone	Mile-stone	Provisions of Directive are brought into force in MS (transposition date)
2011	X + 4y	New or updated spatial data sets available in accordance with Implementing Rules for harmonised spatial data specifications and exchange for Annex I spatial data
2012	X + 5y	Adoption of Implementing Rules for harmonised spatial data specifications and for the exchange of Annex II and Annex III spatial data
2013	X + 6y	Metadata available for Annex III spatial data
2014	X + 7y	All spatial data sets available in accordance with Implementing Rules for harmonised spatial data specifications and exchange for Annex II and Annex III spatial data
2014	X + 7y	Commission's report to the EP and the Council . From then onwards the Commission has to present reports every 6 years



Implementing INSPIRE

Action Plans 2005-2006, 2007 – 2009

- On the basis of the **INSPIRE Roadmap**
 - priority actions with regard to the deliverables at the 2007 milestone
 - in second priority actions are linked to milestone deliverables in 2008-2009, but for which more time is required to develop them (e.g. harmonised data specifications)



Prepare for Implementing INSPIRE

- The implementation of INSPIRE needs to consider the broader context of existing initiatives which could contribute
- The INSPIRE Work Implementation Programme should interface with those partnerships and initiatives where relevant and establish synergy*

concept of Spatial Data Interest Communities (SDIC)

**e.g. GEOSS, GMES, GALILEO, GSDI,...*

- SDIC bundle the human expertise of **users**, **producers** and **transformers** of spatial information, technical competence, financial resources and policies. Many SDIC exist today, generally organised by region, thematic issue or sector (industry).

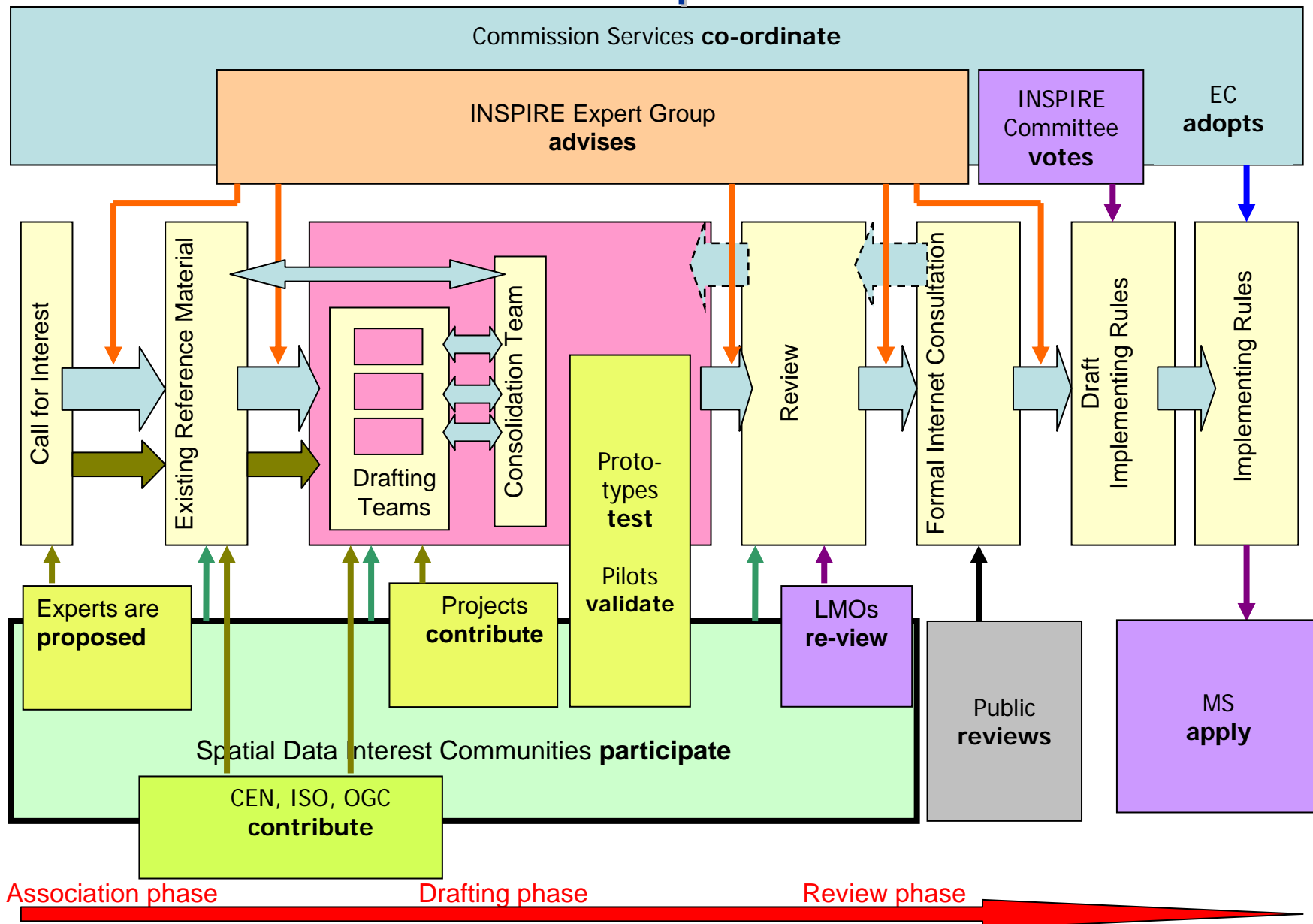


The role of Spatial Data Interest Communities (SDIC)

- collect and describe user requirements,
- submit/develop reference materials
- allocate experts to the drafting teams,
- participate in the review process,
- implement pilot projects
 - to test/revise/develop the draft Implementing Rules,
- contribute to cost/benefit analysis
 - to assess costs of the draft Implementing Rules,
- contribute to awareness raising and training



INSPIRE process





The role of Legally Mandated Organisations (LMO)

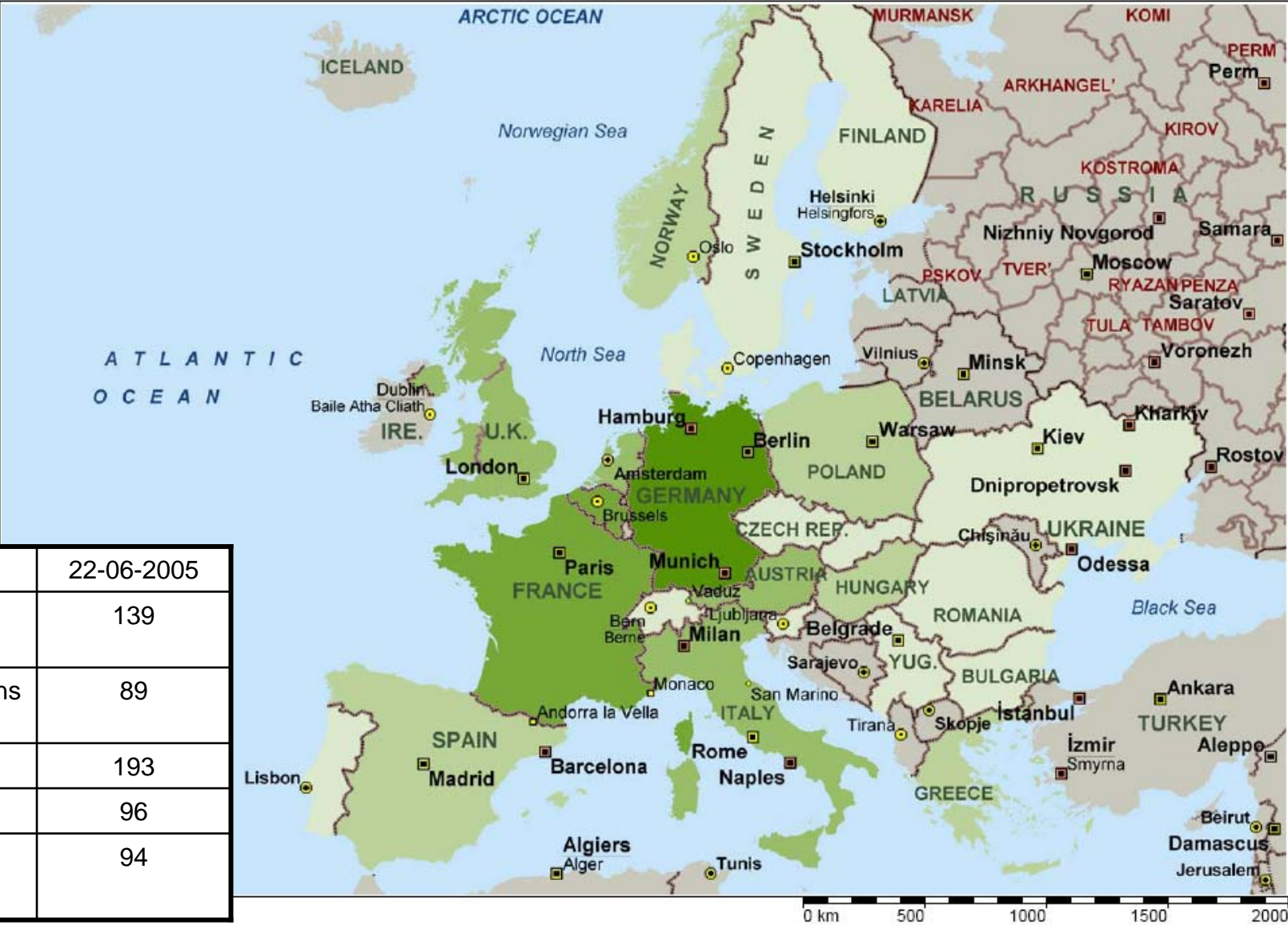
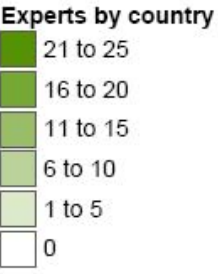
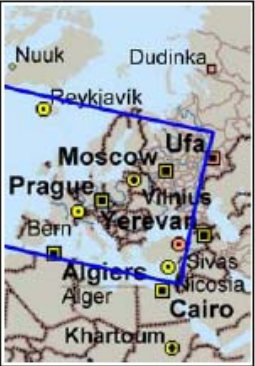
- To collaborate within the SDICs, or autonomously in providing technical specifications
- To help identify user needs
- To contribute to the analysis of the technical and operational feasibility of implementation of proposed draft Implementing Rules
- To provide feedback on the cost/benefit consequences of Implementing Rules at Member State level.



Results of the call for Experts

Opened on 1 March 2005

Experts registered per country



	22-06-2005
Spatial Data Interest Communities (SDICs)	139
Legally Mandate Organisations (LMOs)	89
Proposed Experts	193
Referenced Materials	96
Identified Projects	94

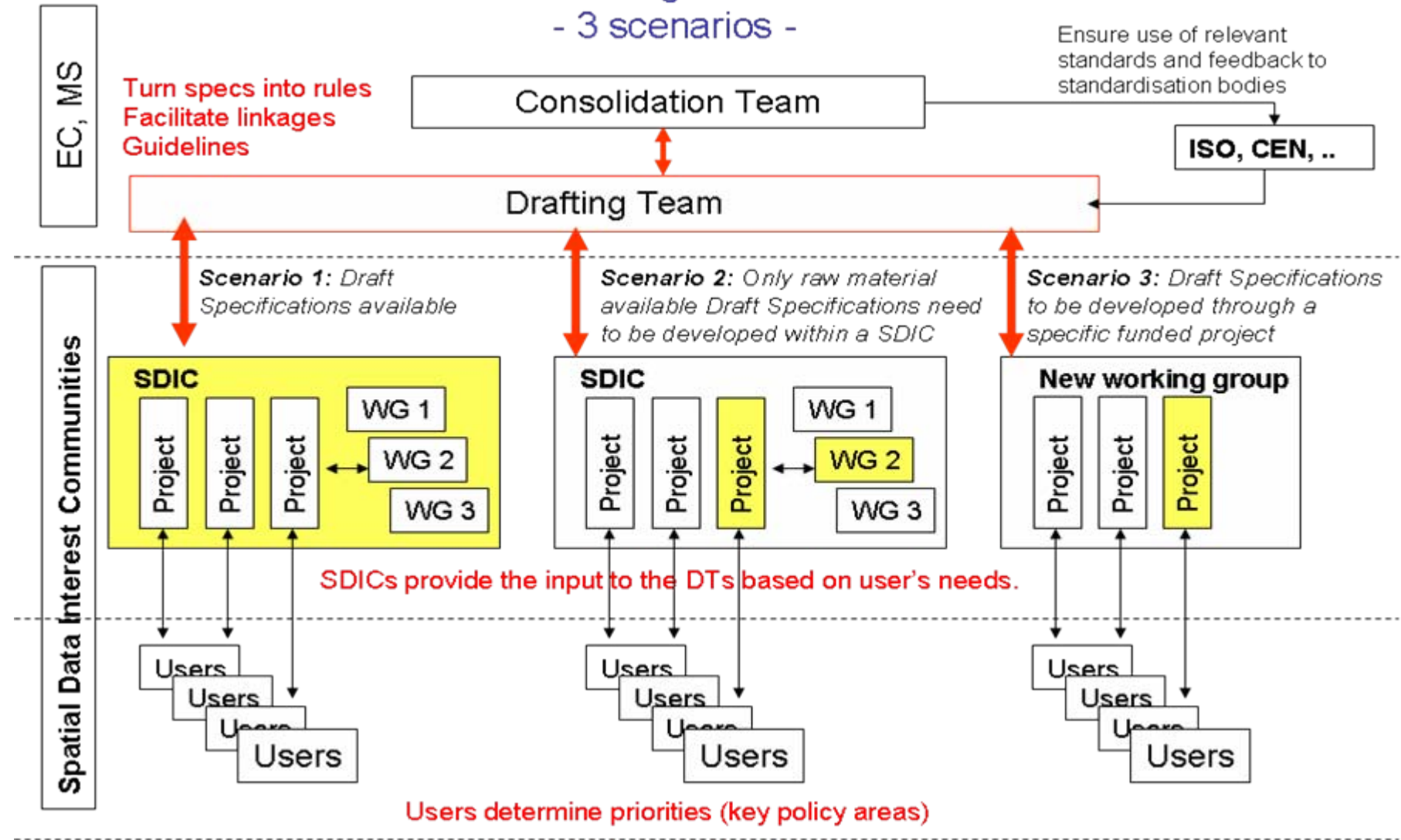


The role of Drafting Teams (DT)

- to analyse and review the reference material
- to write draft INSPIRE Implementing Rules
- to provide recommendations to the Consolidation Team, CT (EC) - in case of conflicting technical specifications
- to provide suggestions to the CT for testing any proposed specification



Drafting Phase - 3 scenarios -





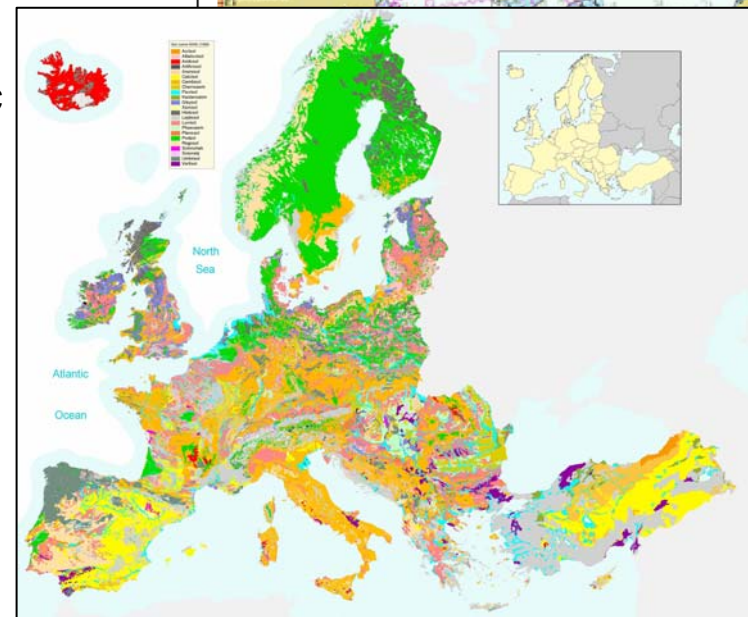
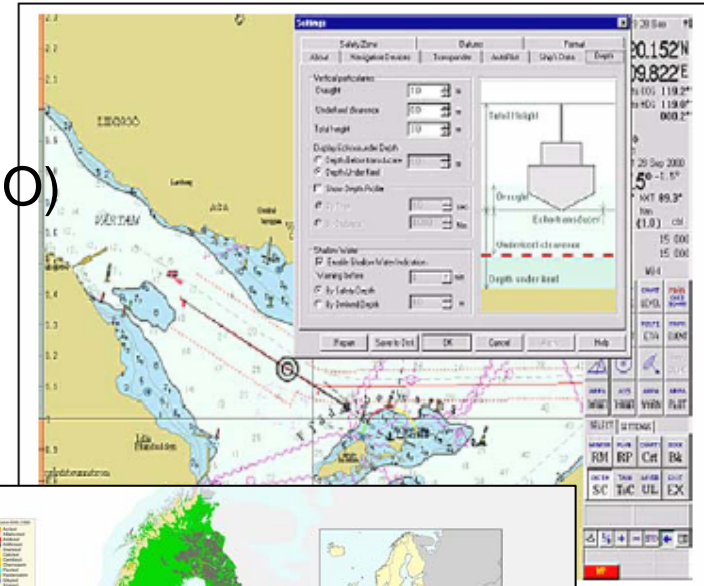
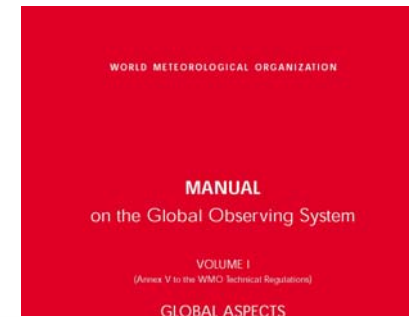
The role of projects, pilots and prototypes

- develop representative use-case scenarios
- develop/test specifications for IR development
- demonstrate the feasibility and advantages of interoperability-based solutions
- acquire experience in implementing interoperability-based solutions
- determine cost and benefit of interoperability based solutions on the basis of real cases



Is INSPIRE feasible?

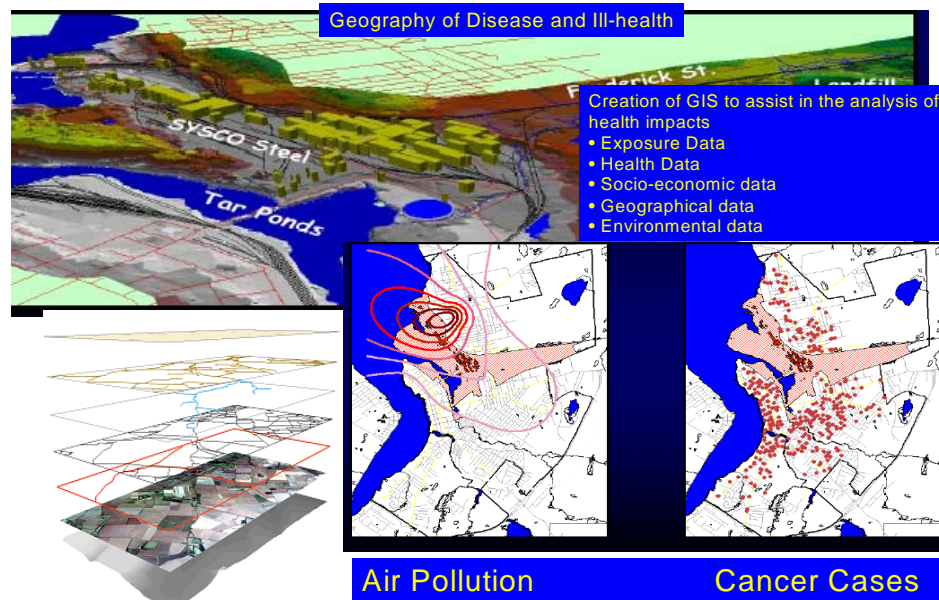
- Several Communities with running standards & infrastructures already exist
 - WMO and Eumetnet
 - International Hydrographic Organisation (IHO)
 - Eurogeosurveys
 - GEIXS- European Geological Data Resource
 - European Soil Bureau
 - European Soil Information System
 - Eurogeographics
 - SABE, GlobalMap, RegioMap, Eurospec
 - EEA & EIONET
 - EPER
 - EUROSTAT & NSIs
 -





The benefits - INSPIRE will...

- make European public data more accessible and compatible
- create the right conditions to use geo-technologies in addressing critical issues
- save money, protect investments and create new jobs
- facilitate the private and public sector in developing new e-services
- help in improving the quality of life and protect the environment





Conclusions

- INSPIRE is a framework Directive with implementing rules to be defined in the coming years
- Initial focus on environmental policies will be enlarged to other sectors in future
- Highest involvement of key stakeholders through the “Spatial Data Interest Community” concept is needed for proper development
- Openness and transparency in drafting implementing measures will be followed
- Pilots and Projects could play a key role to define and validate the implementing rules
- Link and interface with international initiatives must be strengthened – GEO/GEOSS



Thank you for your attention

European Geo-Portal - Microsoft Internet Explorer

Address <http://eu-geoportal.jrc.it>

INSPIRE
European Geo-Portal

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- Login

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- Search for Data
- Search for Services
- National Portals
- Thematic Portals

Geo-Portal at a Glance

- What is the Geo-Portal
- Guided Tour
- FAQ
- Geo-Portal partners

INSPIRE Initiative

- INSPIRE Background
- INSPIRE Guidelines
- INSPIRE Home

SDI Toolbox

- Standards
- Resources
- SDI Initiatives
- Useful Links

Application Areas

- Learn more about our Applications

INSPIRE (Infrastructure for Spatial Information in Europe) is an initiative launched by the European Commission and developed in collaboration with Member States and accession countries. It aims at making available relevant, harmonised and quality geographic information to support formulation, implementation, monitoring and evaluation of Community policies with a territorial dimension or impact. INSPIRE intends to trigger the creation of a European spatial data infrastructure that delivers to the users integrated spatial information services linked by common standards and protocols.

The INSPIRE Geo-Portal is Europe's Internet access point for Spatial Data and Services. From here, you can search for spatial data, services, and organisations.

Start Making Maps

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