INSPIRE Directive
– Infrastructure for Spatial Information in Europe -
Status and Outlook

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

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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

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

Seven Thematic Strategies

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

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

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

- Eurostat -
**Example:** Management of natural resources

<table>
<thead>
<tr>
<th>Level I</th>
<th>Sub-themes</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THEME 7: MANAGEMENT OF NATURAL RESOURCES</strong></td>
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<tr>
<td></td>
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<td>2. Fish catches outside safe biological limits</td>
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<tr>
<td></td>
<td><strong>FRESH WATER RESOURCES</strong></td>
<td>3. Groundwater abstraction as % of available groundwater resources</td>
</tr>
<tr>
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<td>4. Population connected to wastewater treatment systems</td>
</tr>
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<td></td>
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<td>5. Emissions of organic matter as biochemical oxygen demand to rivers</td>
</tr>
<tr>
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<td>6. Index of toxic chemical risk to aquatic environment</td>
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<tr>
<td></td>
<td><strong>LAND USE</strong></td>
<td>4. Land use change, by category</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4a. Built-up area as a % of total land area</td>
</tr>
<tr>
<td></td>
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<td>5. Exceedance of critical loads of acidifying substances and nitrogen in sensitive natural areas</td>
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<td></td>
<td></td>
<td>7. Percentage of total land area at risk of soil erosion</td>
</tr>
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<td></td>
<td></td>
<td>8. Percentage of total land area at risk of soil contamination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Percentage of forest trees damaged by deforestation</td>
</tr>
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<td></td>
<td></td>
<td>10. Fragmentation of habitats due to transport</td>
</tr>
</tbody>
</table>

*Population Index (1995 = 100)*

- Farmland birds

*Years: 1991-2002*
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:
    - Driving Forces
    - Pressures
    - State
    - Impact
    - Response

- 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**

<table>
<thead>
<tr>
<th><strong>Air pollution and ozone depletion</strong></th>
<th><strong>Water</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Emissions of acidifying substances</td>
<td>18 Use of freshwater resources</td>
</tr>
<tr>
<td>2 Emissions of ozone precursors</td>
<td>19 Oxygen-consuming substances in rivers</td>
</tr>
<tr>
<td>3 Emissions of primary particulates and secondary particulate precursors</td>
<td>20 Nutrients in freshwater</td>
</tr>
<tr>
<td>4 Exceedance of air quality limit values in urban areas</td>
<td>21 Nutrients in transitional, coastal and marine waters</td>
</tr>
<tr>
<td>5 Exposure of ecosystems to acidification, eutrophication and ozone</td>
<td>22 Bathing water quality</td>
</tr>
<tr>
<td>6 Consumption of ozone-depleting substances</td>
<td>23 Chlorophyll in transitional, coastal and marine waters</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Biodiversity</strong></th>
<th><strong>Agriculture</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>7 Threatened and protected species</td>
<td>25 Gross nutrient balance</td>
</tr>
<tr>
<td>8 Designated areas</td>
<td>26 Area under organic farming</td>
</tr>
<tr>
<td>9 Species diversity</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Climate change</strong></th>
<th><strong>Energy</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Greenhouse gas emissions and removals</td>
<td>27 Final energy consumption</td>
</tr>
<tr>
<td>11 Projections of greenhouse gas emissions and removals and policies and measures</td>
<td>28 Total energy intensity</td>
</tr>
<tr>
<td>12 Global and European temperature</td>
<td>29 Total energy consumption</td>
</tr>
<tr>
<td>13 Atmospheric greenhouse gas concentrations</td>
<td>30 Renewable energy consumption</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Terrestrial</strong></th>
<th><strong>Fisheries</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>14 Land take</td>
<td>32 Status of marine fish stocks</td>
</tr>
<tr>
<td>15 Progress in management of contaminated sites</td>
<td>33 Aquaculture production</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Waste</strong></th>
<th><strong>Transport</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>16 Municipal waste generation</td>
<td>35 Passenger transport demand</td>
</tr>
<tr>
<td>17 Generation and recycling of packaging waste</td>
<td>36 Freight transport demand</td>
</tr>
<tr>
<td>37 Use of cleaner and alternative fuels</td>
<td></td>
</tr>
</tbody>
</table>
• 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.
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

Timely,

Such requires: 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)

- Wind storm: 765, 4,053, 2,284,342 (Killed, Affected x1000, Damage x10M$)
- Wild fire: 115, 24, 97,600
- Volcano: 0
- Slide: 288, 21, 120,000
- Flood: 758, 1,687, 2,966,577
- Earthquake: 4,980, 950, 2,776,640
- Drought: 6,000, 1,104,670

INSPRIRE Dec 2006 – slide 14
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.
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 -

\[
\text{RISK} = \text{HAZARD} \times \text{Elements at RISK} \times \text{VULNERABILITY}
\]

Risk Assessment (objective, science, technical) \rightarrow Risk Evaluation (subjective, social, political)

- Observations
  - History of Events and Consequences

Elements at Risk & Vulnerability

Probability & Process Models

Hazards Identification

Risk Communication

Risk Scenarios & Maps

Early Warnings & Forecasts

Risk Mitigation strategies & response options

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 boarders 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...


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**

<table>
<thead>
<tr>
<th>Institutional framework</th>
<th>Technical standards</th>
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<tbody>
<tr>
<td>Fundamental data sets</td>
<td>Information Services</td>
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</tbody>
</table>
Why INSPIRE?
The NATURA 2000 network

  - SCI (Sites of Community importance)
  - SAC (Special Areas of Conservation)
- 78/409/EEC on the conservation of wild birds
  - SPA (Special Protection Areas)

Natura 2000
22,500 sites, 12-15% area
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

Area = 67 ha
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....
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

<table>
<thead>
<tr>
<th>SABE (NMAs)</th>
<th>EUROSTAT (NSOs)</th>
</tr>
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<tbody>
<tr>
<td>SHN code</td>
<td>LAU code</td>
</tr>
<tr>
<td>name</td>
<td>name</td>
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<td>...</td>
<td>...</td>
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<tr>
<td>27013</td>
<td>042</td>
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<tr>
<td>Belturbet</td>
<td>Belturbet Urban</td>
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<tr>
<td>14006</td>
<td>720600</td>
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<td>Topiros</td>
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→ 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?

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

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

European platform moving ~3cm/year

GI Standardisation
CEN/TC287, ISO/TC211, OGC

Die neue Brücke bei Laufenburg
standards are not enough...
Example of problems on cross-border areas

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 ....

Creation of SDI to assist in the analysis of health impacts
- Exposure Data
- Health Data
- Socio-economic data
- Geographical data
- Environmental data

Air Pollution and Cancer

Air Pollution

Cancer Cases
INSPRIRE 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*
### 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

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
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)

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Milestone</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>X</td>
<td>Entry into force of INSPIRE Directive</td>
</tr>
<tr>
<td>2007</td>
<td>X+3m</td>
<td>Establishment of the INSPIRE Committee</td>
</tr>
<tr>
<td>2007</td>
<td>X +1y at latest</td>
<td>Adoption of Implementing Rules for the creation and up-dating of the metadata</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adoption of Implementing Rules for network services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adoption of Implementing Rules for monitoring and reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adoption of Implementing Rules governing access and rights of use to spatial data sets and services for Community institutions and bodies</td>
</tr>
<tr>
<td>2009</td>
<td>X + 2y</td>
<td>Adoption of Implementing Rules for harmonised spatial data specifications and for the exchange of Annex I spatial data</td>
</tr>
<tr>
<td>Milestone</td>
<td>Milestone</td>
<td>Provisions of Directive are brought into force in MS (transposition date)</td>
</tr>
<tr>
<td>-----------</td>
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<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2009</td>
<td>X + 2y</td>
<td>Designation of <strong>responsible public authorities</strong> for spatial data sets and services</td>
</tr>
<tr>
<td>2009</td>
<td>X + 2y</td>
<td>Implementation of <strong>data sharing framework</strong> of spatial data sets and services between public bodies</td>
</tr>
<tr>
<td>2009</td>
<td>X + 2y</td>
<td>Implementation of provisions on <strong>monitoring</strong></td>
</tr>
<tr>
<td>2009</td>
<td>X + 2y</td>
<td><strong>Network services</strong> are operational</td>
</tr>
<tr>
<td>2010</td>
<td>X + 2y</td>
<td><strong>Metadata</strong> available for spatial data corresponding to <strong>Annex I</strong> and <strong>Annex II</strong> spatial data</td>
</tr>
<tr>
<td>2010</td>
<td>X + 3y</td>
<td>Member States’ <strong>First Report</strong> to the Commission. From then onwards MS have to present reports every 3 years</td>
</tr>
<tr>
<td>Milestone</td>
<td>Milestone</td>
<td>Provisions of Directive are brought into force in MS (transposition date)</td>
</tr>
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<td>-----------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>2011</td>
<td>X + 4y</td>
<td><strong>New or updated spatial data</strong> sets available in accordance with Implementing Rules for <strong>harmonised spatial data specifications</strong> and <strong>exchange for Annex I</strong> spatial data</td>
</tr>
<tr>
<td>2012</td>
<td>X + 5y</td>
<td>Adoption of Implementing Rules for <strong>harmonised spatial data specifications</strong> and for the <strong>exchange of Annex II and Annex III</strong> spatial data</td>
</tr>
<tr>
<td>2013</td>
<td>X + 6y</td>
<td><strong>Metadata</strong> available for <strong>Annex III</strong> spatial data</td>
</tr>
<tr>
<td>2014</td>
<td>X + 7y</td>
<td>All spatial data sets available in accordance with Implementing Rules for <strong>harmonised spatial data specifications</strong> and <strong>exchange for Annex II and Annex III</strong> spatial data</td>
</tr>
<tr>
<td>2014</td>
<td>X + 7y</td>
<td>Commission's <strong>report to the EP and the Council</strong>. From then onwards the Commission has to present reports every 6 years</td>
</tr>
</tbody>
</table>

• 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*.

*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
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

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatial Data Interest Communities (SDICs)</td>
<td>139</td>
</tr>
<tr>
<td>Legally Mandate Organisations (LMOs)</td>
<td>89</td>
</tr>
<tr>
<td>Proposed Experts</td>
<td>193</td>
</tr>
<tr>
<td>Referenced Materials</td>
<td>96</td>
</tr>
<tr>
<td>Identified Projects</td>
<td>94</td>
</tr>
</tbody>
</table>

22-06-2005
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 -

EC, MS

Consolidation Team

Drafting Team

ISO, CEN, ...

Ensure use of relevant standards and feedback to standardisation bodies

Turn specs into rules
Facilitate linkages
Guidelines

SDICs provide the input to the DTs based on user's needs.

Scenario 1: Draft Specifications available

Scenario 2: Only raw material available Draft Specifications need to be developed within a SDIC

Scenario 3: Draft Specifications to be developed through a specific funded project

New working group

Users determine priorities (key policy areas)

SDICs

Project

WG 1

WG 2

WG 3

Project

WG 1

WG 2

WG 3

Project

Users

Users

Users

Users

Users
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