



Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT
AND OF THE COUNCIL**

**establishing an infrastructure for spatial
information in the Community**

INSPIRE

<http://inspire.jrc.it/>



Overall context

- Increasing calls for more information to support environmental policies
- Difficulties to manage existing information flows and obtain timely, accurate and policy-relevant information
- Need to take into account differentiation across regions with respect to the state of the environment
- Revision of approach to reporting and monitoring, moving to concept of sharing of information
- Spatial information plays a special role: early action needed



Objectives

- **Deal with obstacles** to use of spatial information to support environmental policy-making and management
- Support to **streamlining** spatial information flows and information collection
- Promote coordination of stakeholders **across sectors and across levels of government** with respect to spatial information provision

*Help providing the knowledge base for **policies affecting the environment** in order to contribute to sustainable development*



What is the problem?

- Problems with knowing what data exists
- Problems with getting access
- Problems with rights of use
- Problems with harmonisation



- The Process - Bottom-up Stakeholder Involvement

– Initial preparation and establishment of structures -----	2001
– Fact finding and consensus building ----- <ul style="list-style-type: none">• Orientation and Position papers of expert groups• Establishing the state-of-play	2002
– Preparing the proposal -> A Framework Directive ----- <ul style="list-style-type: none">• Scoping policy measures with expert advice• Assessing the political and socio-economic impact• A public review of the proposed measures	2003
– Adoption of Commission Proposal, start of co-decision -----	2004
– Co-decision and adoption of INSPIRE Directive -----	2004-6
– Transposing INSPIRE Directive -----	2007-8
– Implementing INSPIRE Directive -----	2009-13

INSPIRE

- Alternative options -

- 1) **Do nothing.**
- 2) **Voluntary cooperation** among Member States.
- 3) **A broad framework** – Framework Directive [1]. Obstacles addressed within a broad framework in a progressive manner.
- 4) **A focused framework** – Framework Directive [1]. Focusing on priority data for environmental policies in a context of progressive implementation of a multi-sectoral spatial information infrastructure.
- 5) **A comprehensive framework** – Framework Directive [1]. Addressing all obstacles in a comprehensive manner.
- 6) **EU Regulation** stipulating how Member States should implement INSPIRE specifications and infrastructure.

[1]based on the subsidiarity principle of management devolved to Member State level



Needed Investments EU 25

Blocks of INSPIRE policy measures	EU		National organisations		Regional/local	
	3	4	3	4	3	4
Harmonisation	2.7	0.6	1.9	1.2	0.8	0.5
Metadata	0.2	0.16	2.7-3	1.9-2.2	46	33
Data Policy Framework			0.47	0.37		
Coordination, implementation and outreach	2.2	2.2	12	9.6	57-115	44-88
Total investment per annum over 10 years (€m) (rounded)	5.1	3	17	13	104-161	77-122

INSPIRE would cost 1 to 2% of current investments or on average 3.5 to 7m € per MS depending on the option chosen



Qualitative Benefits to Environmental Policy Implementation

- 1. support of a wide range of activities related to environment policy implementation:**
 - environmental reporting,
 - environmental and other impact assessments,
 - establishment of management plans for specific sites or areas,
 - implementation of registration requirements related to territorial factors,
 - granting of permits that need to take into account territorial factors,
 - notification requirements and public information,
 - establishment of monitoring networks;
- 2. easier ex-ante evaluation of environmental policy,**
- 3. better monitoring and evaluation of environmental policies**
- 4. support for more integrated policy approaches and policy coordination**
- 5. more effective implementation of the policy on Trans European Networks**
- 6. better integration of environmental protection objectives into other policies**
- 7. easier participation by NGOs and members of the public in public debates and decision-making**



Wider Social and economic benefits - Public and Private Sector -

1. **management and provision of information on property ownership, tenure and mortgage,**
2. **monitoring and management of agriculture, such as crop planning and crop growth monitoring,**
3. **management of public utilities such as water, gas and electricity networks,**
4. **planning and management of transport and logistics,**
5. **operation of emergency services,**
6. **spatial planning,**
7. **savings for industries active in the utilities, oil and gas, communications, fishing, farming and forestry, mining, drilling, dredging and quarrying, tourism, property development; surveying, insurance, cable laying, architecture and engineering,**
8. **better and more accurate analysis of different European markets by commercial data users, leading to greater competition,**
9. **the creation of new products and services by commercial value added information providers.**



Quantified benefits of INSPIRE

- partial view -

Type of benefit	Quantitative estimates (€m/year/EU 25)	
	Option 3	Option 4
More efficient EIA and SEA	90-190	60-121
More efficient environmental monitoring and assessment	100	64
More cost-effective expenditure on environmental protection	300	192
More cost-effective implementation of the environmental <i>acquis</i>	50	32
More effective implementation of EC projects	4-13	3-8
Reduced duplication of spatial data collection	25-250	25-160
Improved delivery of risk prevention policies	120-400	77-256
Improved delivery of health and environment policies	350	224
Total	1 050–1 660	680-1060



Conclusion on Key Benefits

- 1) For options 3 and 4, **the economic benefits far outweigh the cost**
- 2) INSPIRE helps **eliminate chronic deficiencies in spatial data** from across the public sector in the EU and **help providing the knowledge base to support sustainable development;**
- 3) Given the persuasiveness of spatial data for many uses, INSPIRE would produce **significant wider social benefits** and
- 4) INSPIRE brings **major benefits to the commercial sector**, by making spatial data sets held by public sector organisations accessible and usable and by providing a **common platform for both public and private sector spatial data.**
- 5) Commission proposal is based on option 4: **focused framework**



Proposal INSPIRE Framework Directive - Internet consultation-

- **1000 organisations responded, evenly divided over local to national, public to private organisations from across a broad range of sectors and from across the EU**
- **strong agreement that identified obstacles are real and important:**
 - 97 % agrees with obstacles identified
- **very high support for INSPIRE and its measures, e.g.:**
 - > 90% agrees with measures on harmonisation
 - 94 % agrees with establishment of network of services
 - 85 % agrees with measures for sharing spatial data
 - 70 % agrees with initially proposed scope (this has been revised)



Proposal INSPIRE Framework Directive

- Overview -

- I. General provisions**
- II. Metadata**
- III. Interoperability of spatial data sets and services**
- IV. Network services**
- V. Data-sharing and re-use**
- VI. Coordination and complementary measures**
- VII. Final provisions**

This overview addresses the main issues only



Proposal INSPIRE Framework Directive

I - General Provisions-

- Establish an infrastructure for spatial information in the EU to support:
 - environmental policies and
 - policies that affect the environment,
- Based on infrastructures of the Member States that include
 - metadata, spatial data sets and services; network services; agreements on sharing, access and use; and coordination and monitoring mechanisms, processes and procedures.



Proposal INSPIRE Framework Directive I - General Provisions-

What is covered ?

- spatial data
 - related to EU territory, in electronic format, public sector data, covers themes in annex I, II and III.
 - provisions for third party data - but always subject to third party consent
- "spatial data services" for those spatial data



Thematic Scope

Annex I - II

Annex I

- Coordinate reference systems
- Geographical grid systems
- Geographical names
- Administrative units
- Transport networks
- Hydrography
- Protected sites

Annex II

- Identifiers of Properties
- Elevation (including terrestrial elevation, bathymetry and coastline)
- Land cover
- Cadastral parcels
- Ortho-imagery



Thematic Scope

Annex III

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- Statistical units
 - Buildings
 - Soil
 - Geology
 - Land use
 - Human health and safety
 - Government service and environmental monitoring facilities
 - Production and industrial facilities
 - Agricultural and aquaculture facilities
 - Population distribution - demography
 - Area management/restriction regulation zones & reporting units
 - Natural risk zones
 - Atmospheric conditions
 - Meteorological spatial features
 - Sea regions
 - Bio-geographical regions
 - Habitats and biotopes
 - Species distribution
 - Oceanic spatial features



Proposal INSPIRE Framework Directive

II – Metadata -

- Establishment of catalogues for spatial data and for services
- Progressive implementation until 6 years after entry into force of Directive
- Metadata is the “fuel” of the search engine to the spatial information



Proposal INSPIRE Framework Directive III – Interoperability of spatial data sets and services -

- **Harmonised spatial data specifications**
 - the key to solving problems with interoperability
 - adopted through comitology
 - more stringent for Annex I and II than for Annex III
 - earlier for Annex I than for Annex II and III
- **Two years after adoption: new or updated spatial data will become interoperable**



Proposal INSPIRE Framework Directive IV - Network services -

- **Upload services**
 - allow to make available spatial data
 - available to the public authorities
 - available to interested third parties, provided that certain conditions are met
- **Network services**
 - discovery services (free of charge);
 - view services (free of charge);
 - download services;
 - transformation services;
 - services to invoke “spatial data services”



Proposal INSPIRE Framework Directive IV - Network services -

- Network services are the window to INSPIRE
- Community Geo-portal, in addition to national access points
- Various derogations (security, justice, confidentiality, etc...)
- Services can run on top of existing systems: no need to replace them!



Proposal INSPIRE Framework Directive

V - Data-sharing and re-use -

- **For public authorities:**
 - barrier-free sharing of spatial data sets and services...
 - for public tasks that may have a direct or indirect impact on the environment.
 - access of institutions and bodies of the Community
- **For third parties:**
 - measures to reduce barriers to be adopted by comitology



Proposal INSPIRE Framework Directive

VI - Coordination and complementary measures -

- Coordination at Member State level: to be organised by the MS
- Coordination at EU level: by Commission with support of EEA
- Implementation of many measures supported by implementation rules adopted by Comitology



Conclusions – INSPIRE:

- 1) builds upon existing data and systems in the MS
- 2) will promote the vertical integration of local, regional and national data in a consistent EU framework
- 3) will be the foundation for a broader cross-sectoral tool that can be used by and extended other policy domains, promoting **integration**
- 4) will become an important tool for a new approach to monitoring and reporting, cutting down overlaps and redundancies and reducing administrative burden
- 5) has only limited cost implications for the MS as it builds upon existing investments in the MS
- 6) has the potential of huge benefits, for all policies with a spatial dimension