

# Assessing the impact of Public Sector Geographic Information

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## Horizontal Community legal frameworks

### **to maintain and improve the quality and availability of information required for environmental policy**

- “Data/Information specific” acts
  - DIRECTIVE 2003/98/EC on the re-use of public sector information - (PSI Directive)
  - DIRECTIVE 2003/4/EC on public access to environmental information (Aarhus Directive) and REGULATION 1367/2006 on the application of the provisions of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters to Community institutions and bodies (CIB)
  - DIRECTIVE 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE Directive)
  - REGULATION (EC) No 401/2009 on the European Environment Agency and the European Environment Information and Observation Network

## PSI and Geographic Information

PSI: Geographic, Meteorological, Legal and Administrative

Recent study by MICUS indicates positive effect of PSI Directive for across all three sectors, but particularly for geographic which has been helped by the INSPIRE Directive which sets more stringent rules than the PSI Directive on policy, and technical infrastructure.

Still most users complain about licensing conditions and cost of GI (so more work to do!)



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**Assessment of the Re-use of  
Public Sector Information (PSI)**  
in the Geographical Information, Meteorological  
Information and Legal Information Sectors



*The opinions expressed in this study are those of the authors and do not necessarily reflect the views of the European Commission.*

**MICUS**  
Management Consulting GmbH

## 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.

INSPIRE to be based on the infrastructures for spatial information established and operated by the Member States.

INSPIRE does not require collection of new spatial data

INSPIRE does not affect existing Intellectual Property Rights

# INSPIRE Components

Metadata

Interoperability of spatial data sets and services

Network services (discovery, view, download, invoke)

Data and Service sharing (policy )

Coordination and measures for Monitoring & Reporting

*INSPIRE is a Framework Directive*

*Detailed technical provisions for the issues above will be laid down in Implementing Rules (IR)*

JRC is responsible for overall technical coordination of INSPIRE

## INSPIRE Spatial Data Scope

### Annex I

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

### Annex II

- Elevation
- Land cover
- Ortho-imagery
- Geology

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

## Annex III

Statistical units  
Buildings  
Soil  
Land use  
Human health and safety  
Utility and governmental services  
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 geographical features  
Oceanographic geographical features  
Sea regions  
Bio-geographical regions  
Habitats and biotopes  
Species distribution  
Energy Resources  
Mineral resources

## Summary costs/investment (rounded figures) (€ m. p.a.)

**Table 4: Summary of investments for the reduced scope of INSPIRE, including the revised basic assumptions**

<b>Blocks of INSPIRE policy measures</b>	<b>EU-level</b>	<b>National Organisations</b>	<b>Regional/local</b>
Harmonisation	0,6	1,2	0,5
Metadata	0,2	1,9-2,2	33
Data Policy Framework		0,4	
Coordination and implementation including outreach	1,1	9,6	44-88
<b>Total investment per annum over 10 years (€m) (rounded)</b>	<b>1,9</b>	<b>13</b>	<b>77-122</b>



## Assumed benefits (after revisions in 2004)

**Table 6: Summary of benefits when reducing the scope of INSPIRE**

Type of benefit	Quantitative estimates
More efficient EIA's and SEA's	60-121
More efficient environmental monitoring and assessment	64
More cost-effective expenditure on environmental protection	192
More cost-effective implementation of the environmental acquis	32
More effective implementation of EC projects	3-8
More effective expenditure on Trans European Networks	90
Reduced duplication of spatial data collection	25-160
Improved delivery of risk prevention policies	77-256
Improved delivery of health and environment policies	224
<b>Total (in m€ per annum)</b>	<b>770-1150</b>

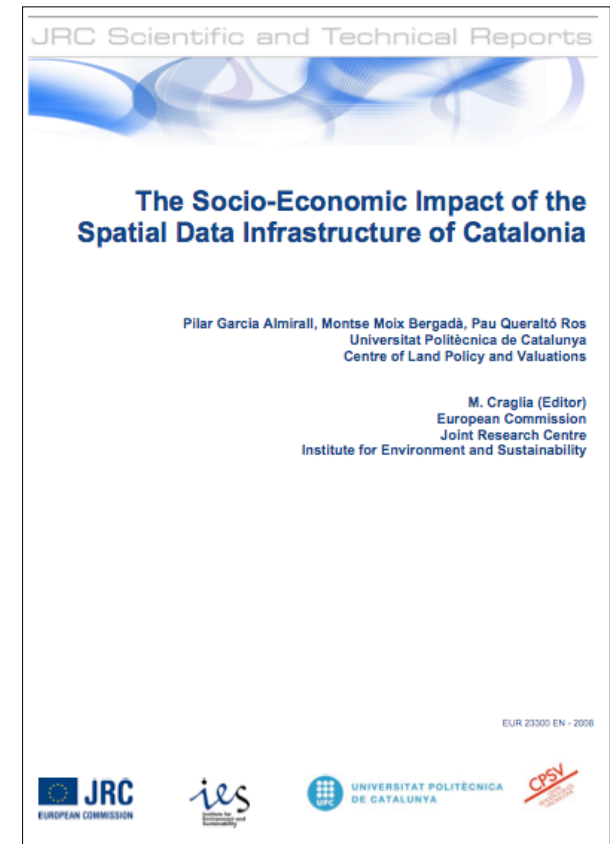
Still benefits assumed to be 6-7 times greater than costs

So what do we know 5 years on ?

## Catalonia Study: Key findings

Costs: €1.5 million over 4 years (2002-06)

- Human resources account for 76% of total cost during launch period (2002-03) and 91% during operational period (2004-05)
  - Benefits: assessed for 2006 with a focus on local government level
  - Efficiency savings account for 500 hours per month = € 2.6 m
  - Effectiveness savings account for another 480 hours per month
  - Wider social benefits are not quantifiable but clear narrowing of digital divide between small local authorities and larger ones
- ⌘ Four years of investment recovered in 6 months



## Lombardia regional SDI: key findings

COSTS ~ 4 m. € for 2006-2008 (including technology set-up and maintenance, training)

BENEFITS: focus on external users. Repetition of 2002 European survey on EIA/SEA. 350 EIAs/SEA per annum in Lombardy

Survey of 60 companies: 27 responded, average size dedicated to EIAs/SEAs = 7.6FTE, average turnover 700k per annum

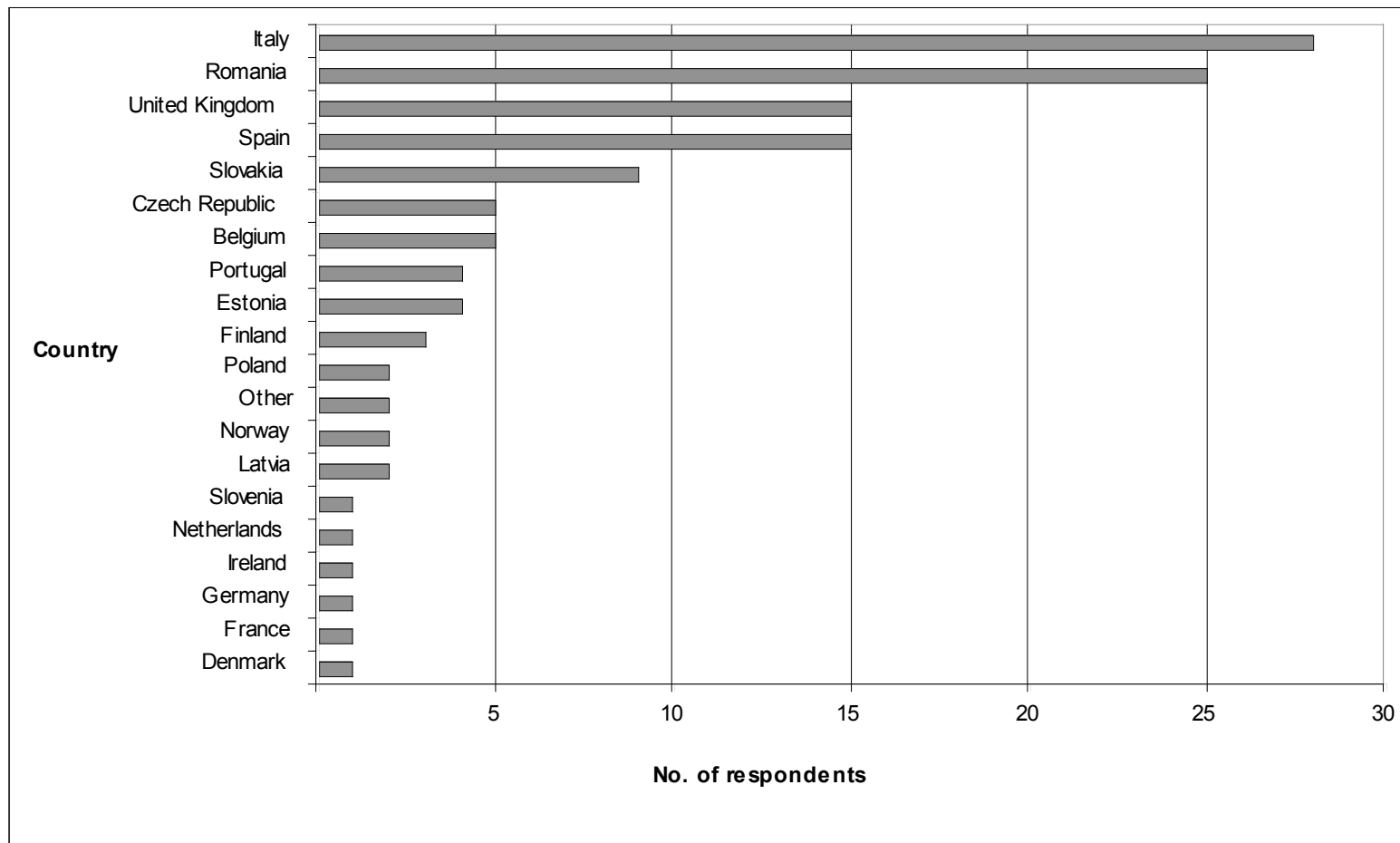
Average cost: 60-90 k each study (75k for 2002 study)

Average time: 3 months (6 months in 2002)

Average saving due to SDI: 11% cost, and 17% on time (5% and 10%)

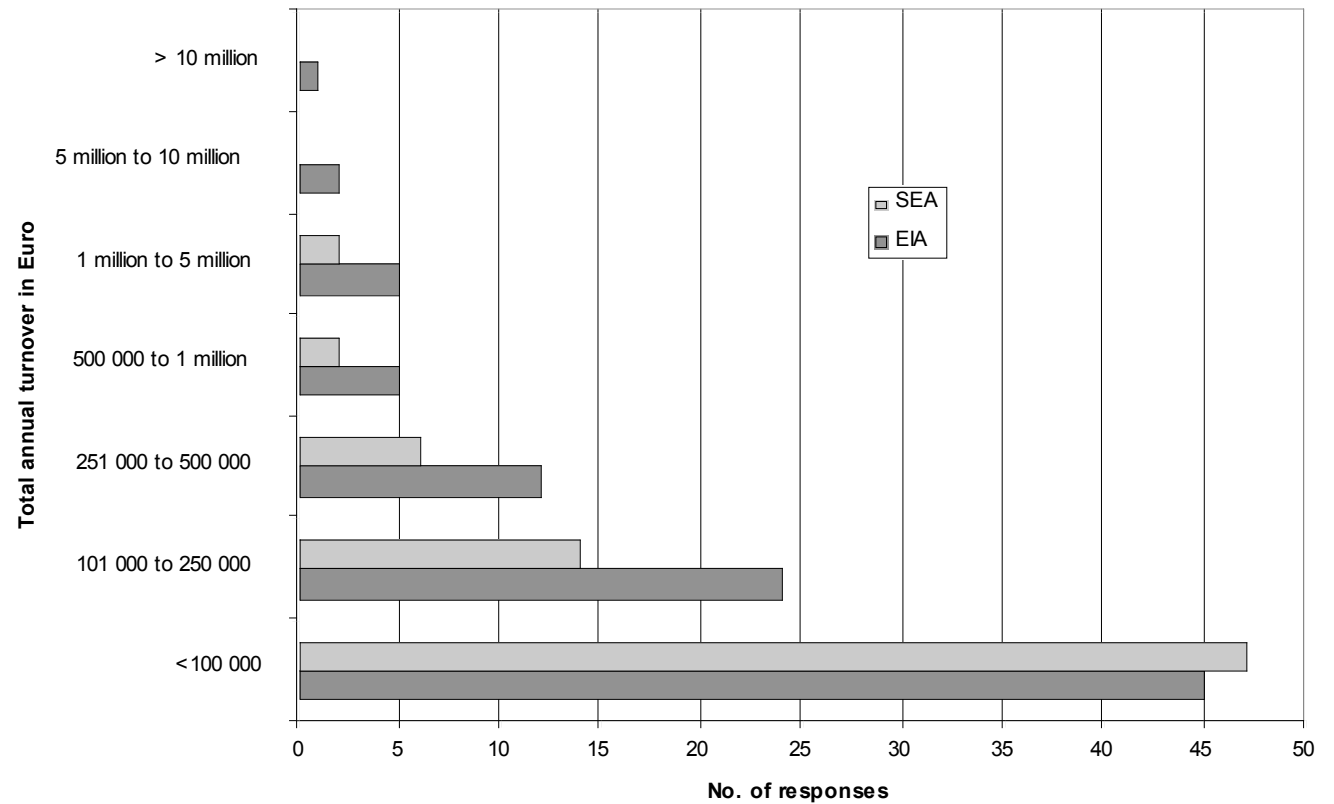
Benefits ~3 Mio. €/year savings on EIA/SEA only

**Total respondents: 127 in 2009, covering 21 countries (18 Member States).  
50 respondents in 2002, covering 9 countries.**



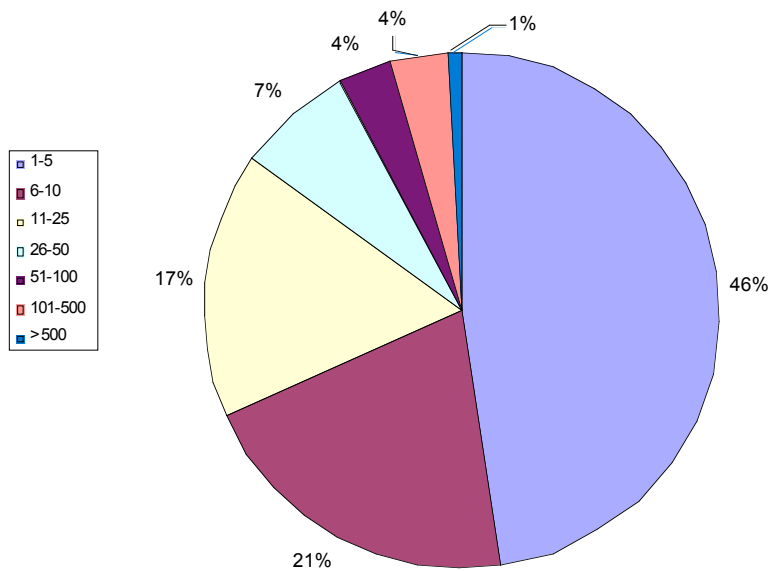
## Size and turnover of the organisations involved

Number of staff <sup>a</sup>	Number of Participants <sup>a</sup>
1-5 <sup>a</sup>	76 <sup>a</sup>
6-10 <sup>a</sup>	16 <sup>a</sup>
11-20 <sup>a</sup>	19 <sup>a</sup>
21-50 <sup>a</sup>	8 <sup>a</sup>
>50 <sup>a</sup>	9 <sup>a</sup>

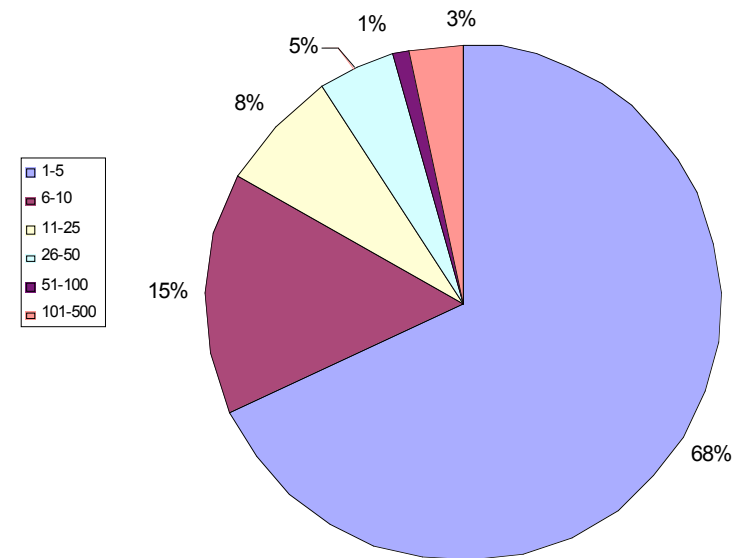


# Number of EIA and SEA studies carried out per year

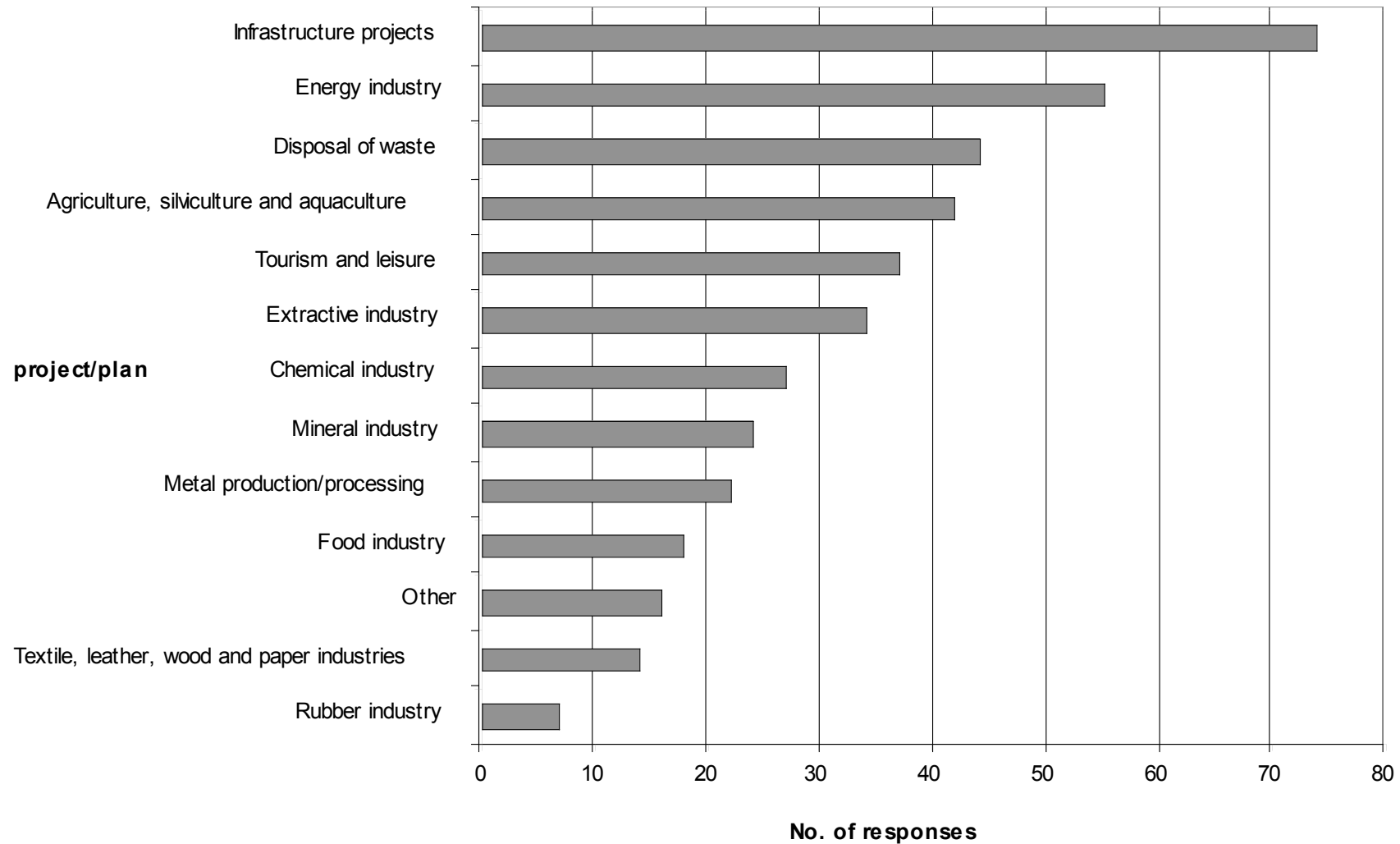
Number of EIAs per year



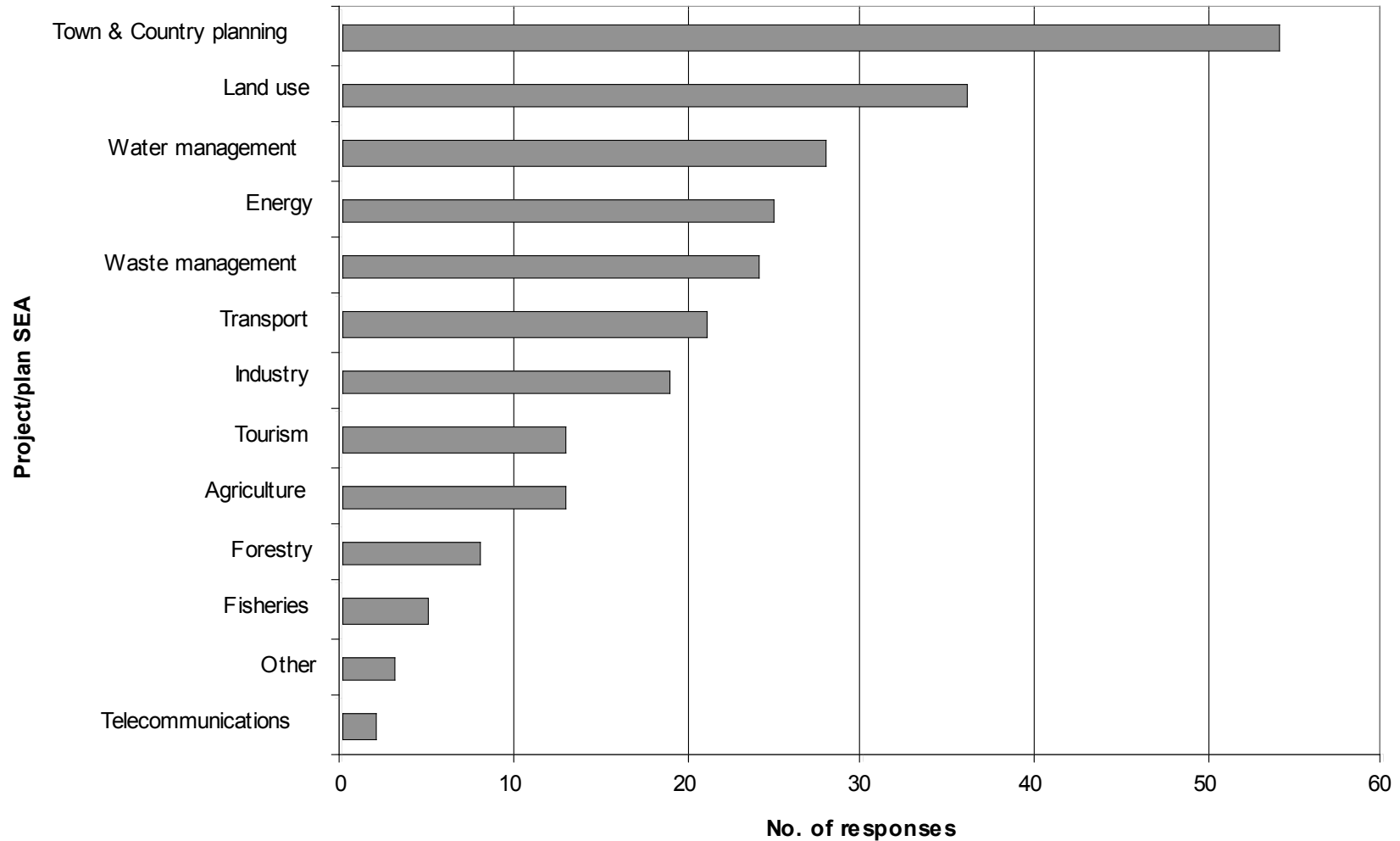
Number of SEAs per year



# Projects/plans for which EIA is carried out

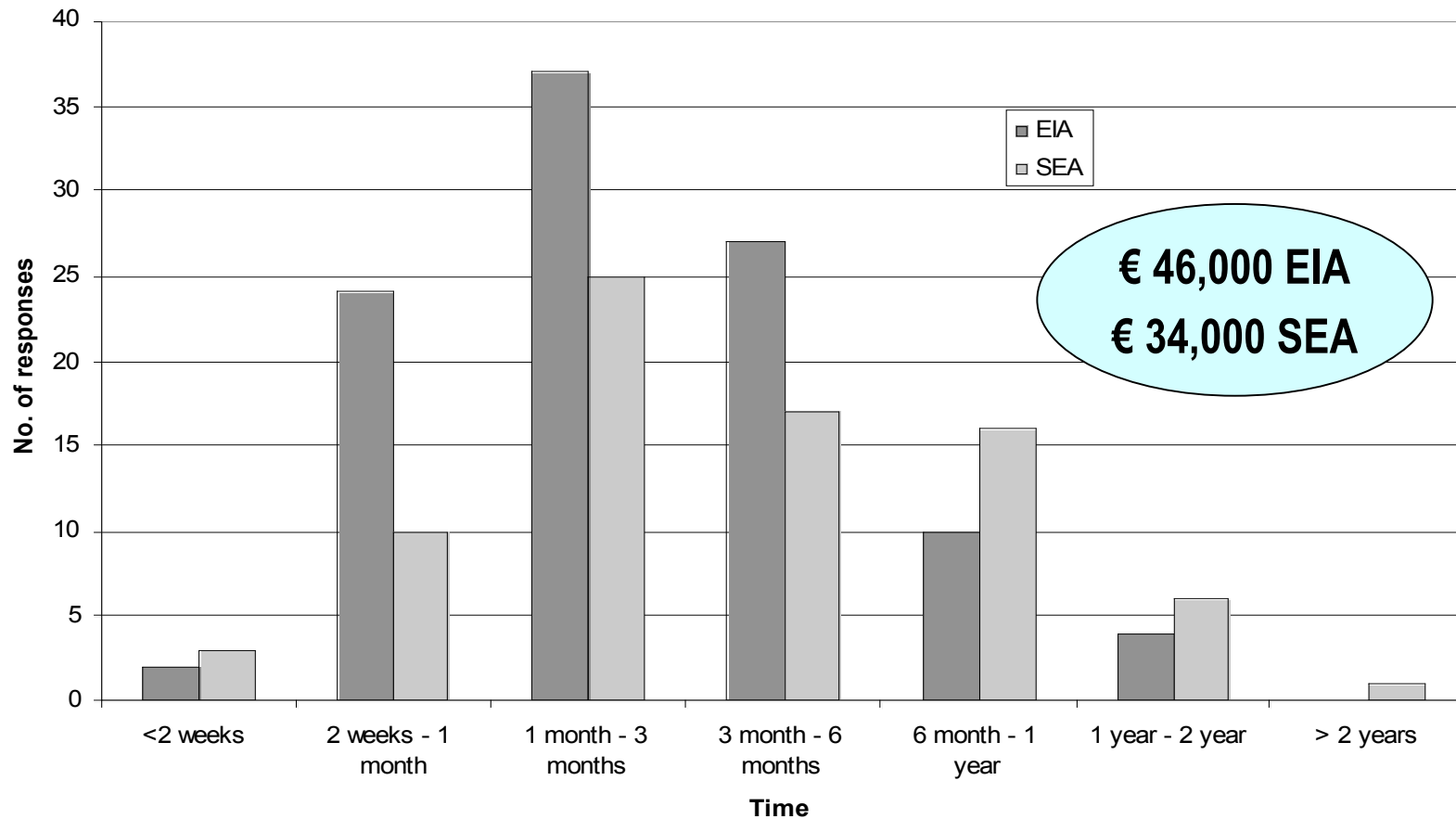


# Projects/plans for which SEA is carried out

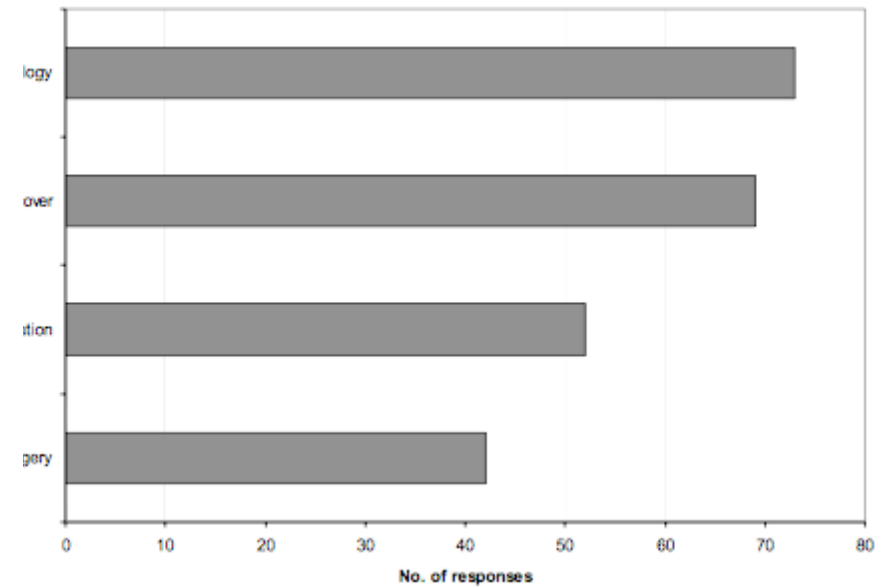
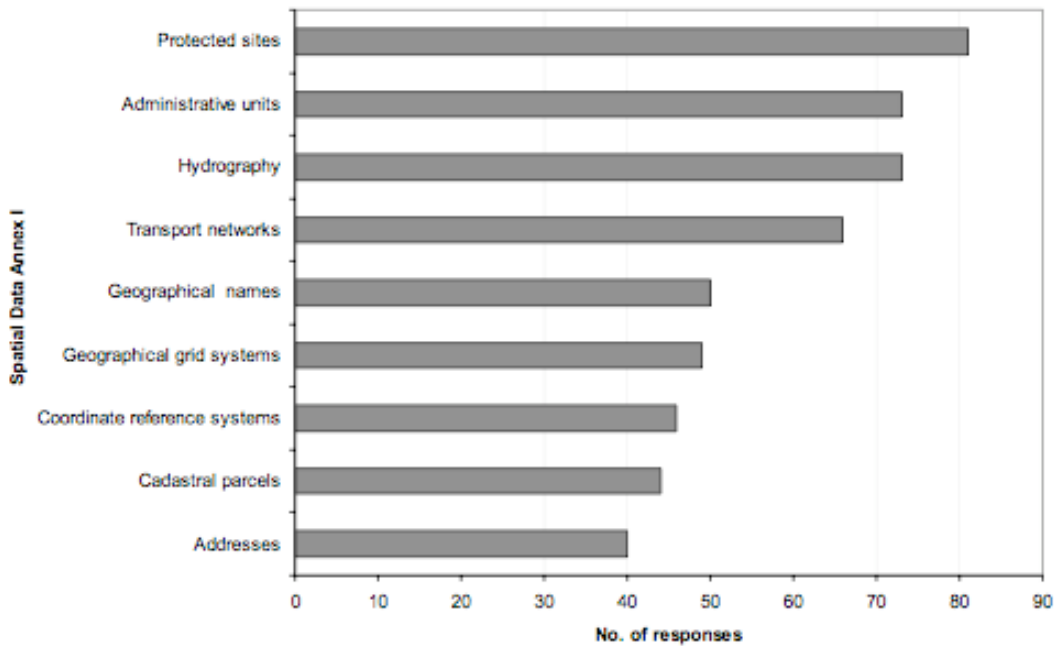




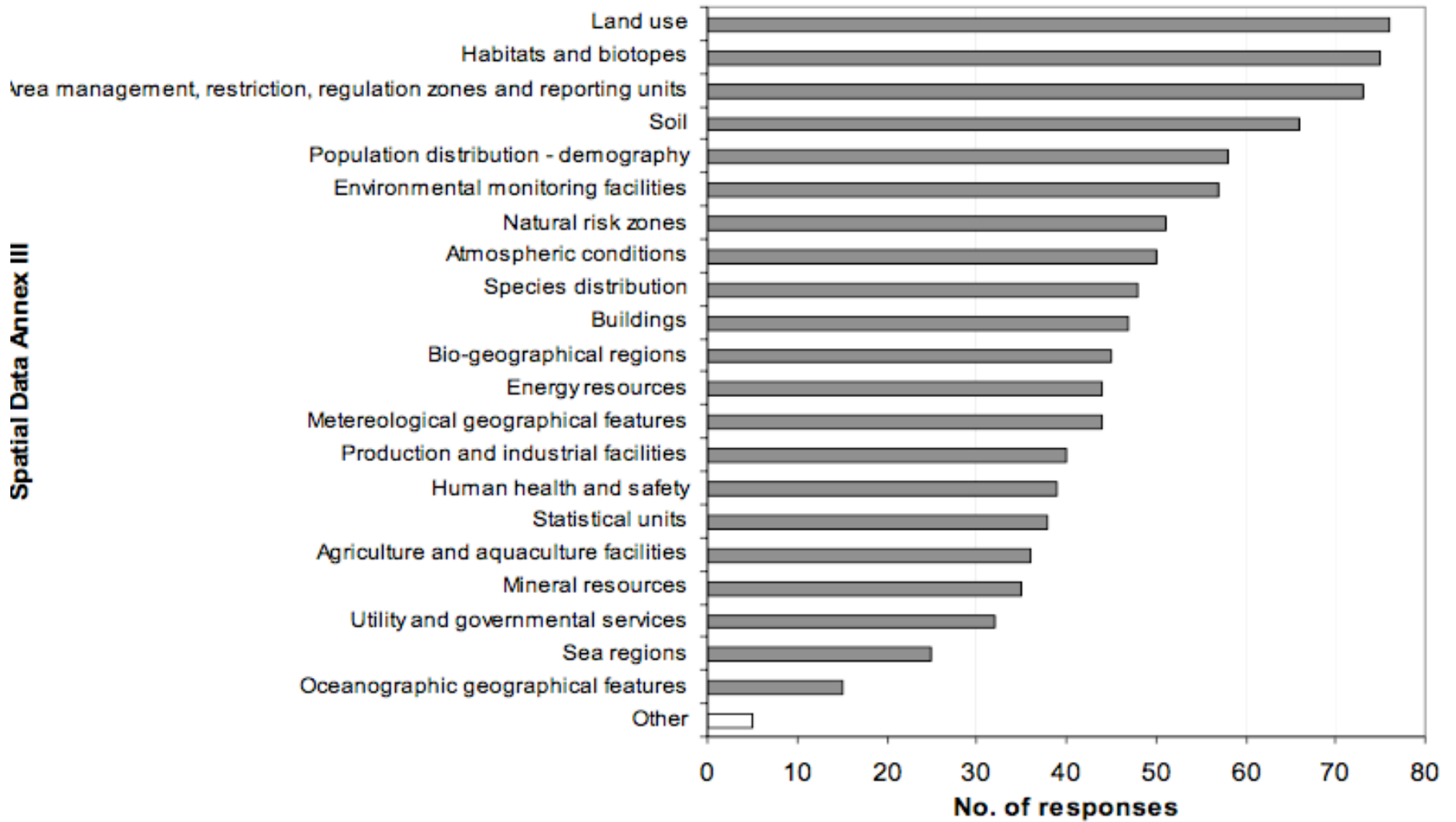
Average time to complete EIA/SEA report is 1-3 months  
(6 months– 1 year in 2002)



# What Data is Used EIA/SEA: Annex I and II

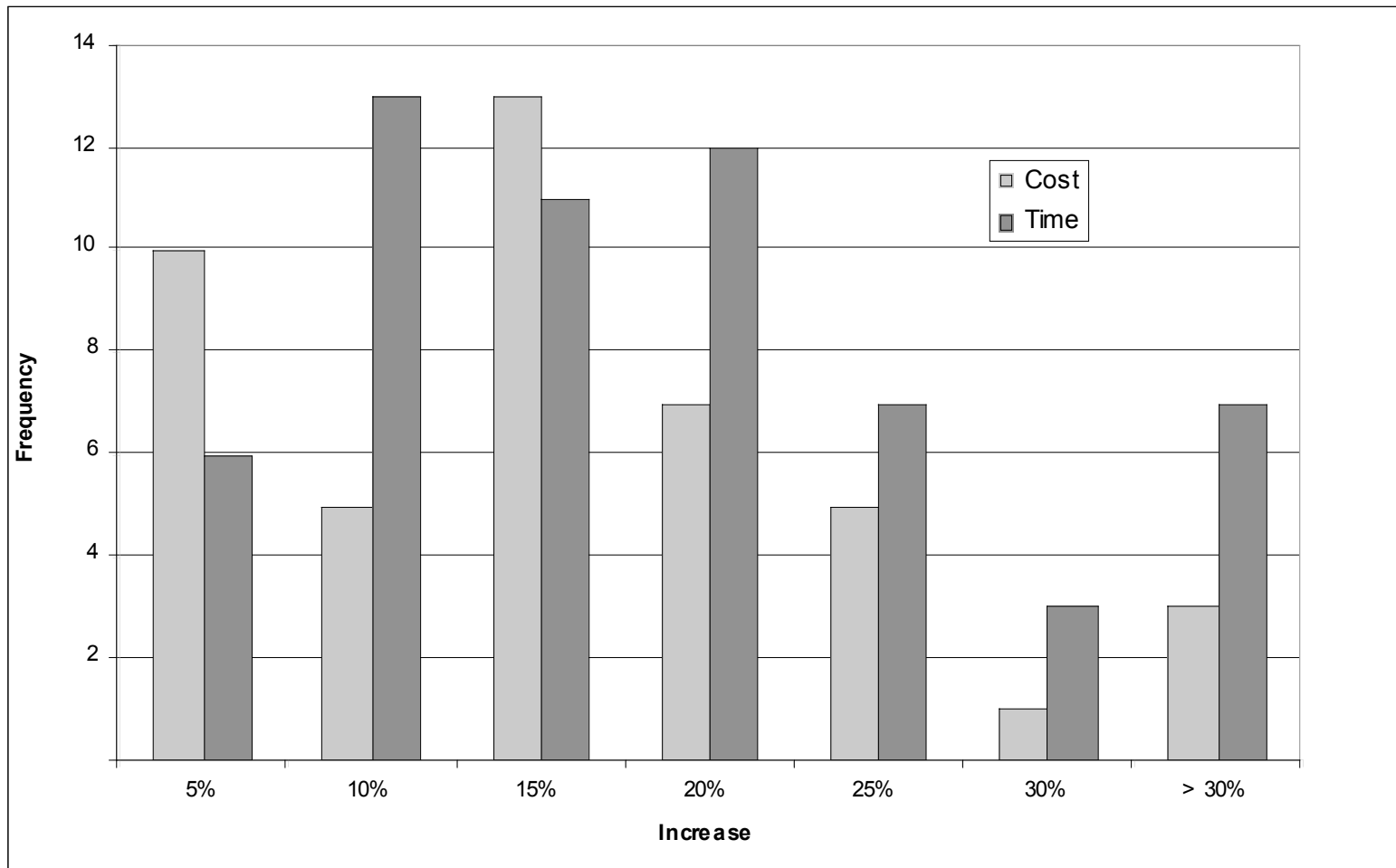


Spatial Data Annex III



- In 2002, the most frequent problem was accessing data
- Over half the respondents in 2009 also had access problems; alongside finding and integrating data, and information on its quality
- For more than half of the respondents this means that, as in 2002, reports take more time and have more costs

**Increase in time of around 16% of the project's duration and 14% for the total costs (not including outliers)**



- EIA/SEA practitioners still face problems connected with accessing and using environmental data
- For 2006, COWI estimated the total number of EIA/SEA studies to be 24,000 x an average cost of € 40,000  
≈ € 1 billion for the sector
- If the 15% increase in cost (associated with data access/quality problems) were tackled, annual savings could be €150-200 million, given increases in demand for SEA, inclusion of more local 'screening' activities and EU membership.
- Assumptions made during assessment of INSPIRE verified.

**Thank you for your attention !**



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