B01.1

Data policy and legal issues relevant to the delivery of INSPIRE

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1 Introduction

1.1 The Expert Group of the INSPIRE Project (Infrastructure for SPatial InfoRmation in Europe) established a working group to address the policy and legal issues relevant to the realisation of the INSPIRE initiative.

1.2 The task of the Data Policy and Legal Issues (DPLI) Working Group is to consider all relevant aspects related to data policy and to develop proposals on the issues to be addressed in the INSPIRE framework legislation. During the first phase of the programme the following subjects were taken into consideration:

- Data policy initiatives at European level
- Open access for citizens to public sector information
- Coherence with the Aarhus Convention and the forthcoming EU Directive on access to environmental information
- Consequences of applying environmental INSPIRE to other sectors, such as transport
- Dissemination modes (cf. Standards & Architecture WG)
- Cost models for access to and re-use of data and information
- Existing experiences, including those of the US
- Intellectual Property Rights and copyright
- Freedom of information versus privacy issues
- Liability for data and information

1.3 The working group commissioned a review of the state of the art on data and information policy, with particular emphasis on the situation in Europe, though with some reference to other systems, such as the in the United States. The review highlighted several of the issues and challenges, which have been signalled by other programmes and projects which have preceded the present initiative. The policy issues thus highlighted include:

- Sharing information between administrations
- Awareness and use of geographic information
- Public sector involvement in commercial exploitation of spatial data
- Charging policies
- Delivery systems
- Data quality
- Client expectations

- Languages
- Standards and metadata
- High-level political support

1.4 The principal legal issues include:

- Copyright and licensing
- Data protection and privacy
- Freedom of Information and censorship
- Competition law
- Fitness for purpose
- Product and services liability

1.5 This paper summarises the outcome of the analysis of the data policy and legal issues, as set out in orientation and position papers prepared by the working group. It will propose a way forward towards establishing the legal and policy framework for the European commission to consider when drawing up the framework legislation by the end of 2002.

2 INSPIRE Vision

2.1 This paper presents proposals, which provide the data policy and legal frameworks for the introduction of an Infrastructure for Spatial Information in Europe known as INSPIRE.

2.2 The INSPIRE vision is illustrated in Figure 1.

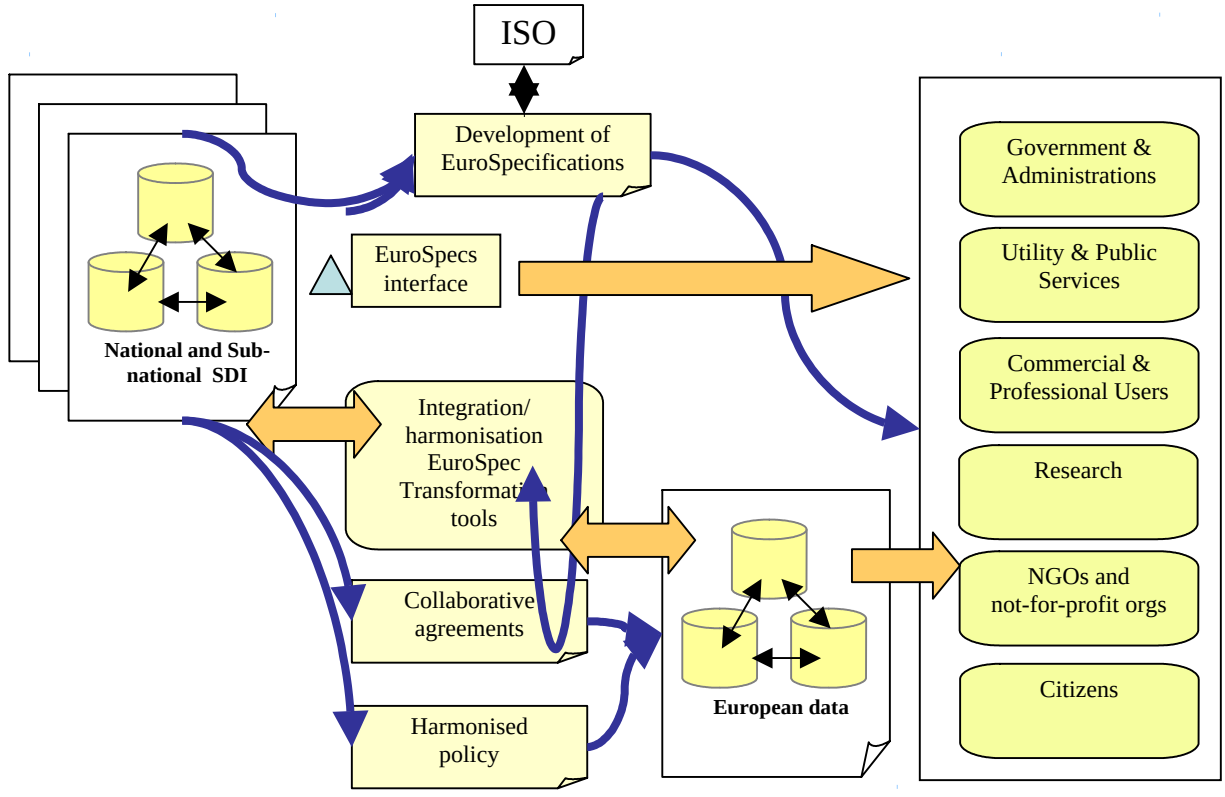

Figure 1: Diagrammatic View of the INSPIRE Vision

2.3 INSPIRE has the following overarching policy principles:

- Data should be collected once and maintained at the level where this can be done most effectively
- It must be possible to combine seamlessly spatial information from different sources across Europe and share it between many users and applications
- It must be possible for information collected at one level to be shared between all the different levels, e.g. detailed for detailed investigations, general for strategic purposes
- Geographic information needed for good governance at all levels should be abundant and widely available under conditions that do not inhibit its extensive use
- It must be easy to discover which geographic information is available, fits the needs for a particular use and under what conditions it can be acquired and used
- Geographic data must become easy to understand and interpret because it can be visualised within the appropriate context and selected in a user-friendly way.

3 Who are the Users of INSPIRE Data and Information?

3.1 Currently, most spatial data and information are either used internally by the public body which generates them, or are supplied to other public sector organisations under various types of agreement. A relatively small number of government departments or agencies trade data with the private sector, however, most share some data and information with the general public. The users of public sector information are illustrated in Figure 2.

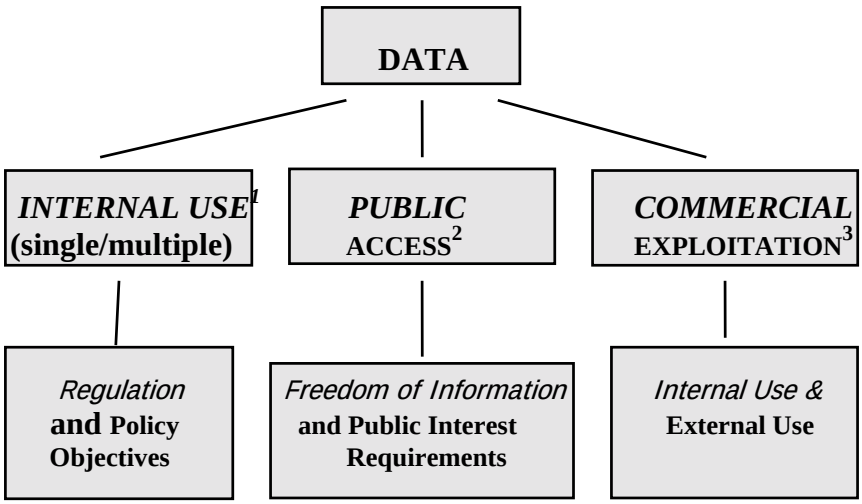

Figure 2: Users of Public Sector Information

[1] **Internal Use** means spatial information used exclusively within the originating public body, or shared among any public body at local, regional, national or international level.

[2] **Public access** means spatial information provided by public bodies free of charge or marginal cost of supply free of charge or marginal cost of supply for viewing or use by citizens of the European Union (including NGOs, academia, and research institutes).

[3] **Commercial exploitation** means the utilisation of public sector spatial information in commercial information products.

4 How Would INSPIRE Complement Related EU Legal Statutes?

4.1 The vast majority of the spatial information with which the INSPIRE programme is concerned is generated and held by public sector bodies at national, regional and local authority level. The DPLI Working Group has noted that two related detailed proposals for EU legal instruments are at an advanced stage of negotiation: on access to environmental information and on the commercial exploitation of public sector information. It is important that the eventual structure and content of the INSPIRE legislation will complement these statutes. This is illustrated in Figure 2 and discussed below.

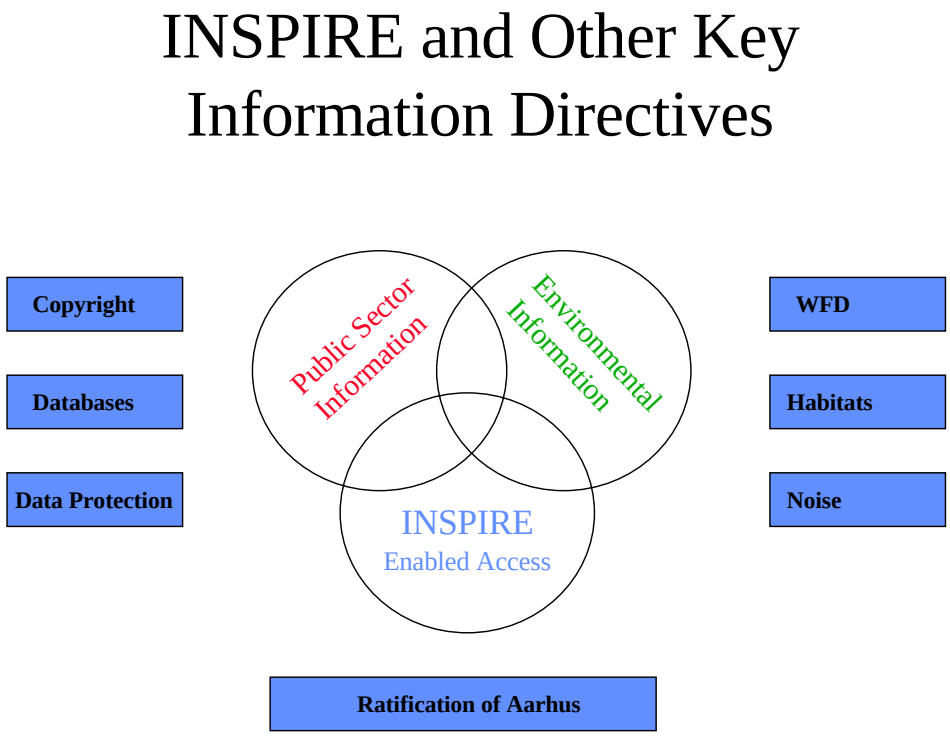

Figure 2: Complementary European Directives

4.2 Access to Environmental Information

4.2.1 This is a new Directive, which updates the position regarding public access to environmental information as specified in Directive 90/313/EEC and is expected to become law within the 12 months.

4.2.2 In addition to taking into account experience in applying the old Directive, it is also intended to reflect the terms of the Aarhus Convention.

4.2.3 For the purposes of INSPIRE, the most significant aspect of the process lies in the definition of Environmental Information which the Directive draws down from Aarhus:

Article 2: For the purposes of this Directive, "environmental information" shall mean any information in written, visual, aural, electronic or any other material form on:

a) The state of the elements of the environment, such as air and atmosphere, water, soil, land, landscape and natural sites including wetlands, coastal and marine areas, biological diversity and its components, including genetically modified organisms, and the interaction among these elements;

b) Factors, such as substances, energy, noise, radiation or waste, including radioactive waste, emissions, discharges and other releases into the environment, affecting or likely to affect the elements of the environment referred to in a);

c) Measures (including administrative measures), such as policies, legislation, plans, programmes, environmental agreements, and activities affecting or likely to affect the elements and factors referred to in a) and b) as well as measures or activities designed to protect those elements;

d) Cost-benefit and other economic analyses and assumptions used within the framework of the measures and activities referred to in c); and

e) The state of human health and safety, conditions of human life, cultural sites and built structures inasmuch as they are or may be affected by the state of the elements of the environment referred to in a) or, through those elements, by any of the matters referred to in b) and c).

The Council of the European Union, Brussels, 14 January 2002

4.2.4 There are a number of other issues where clarification or differentiation is required. They include, most importantly, the right of access to environmental information held by or for public authorities, and the public authorities' right to make a "reasonable" charge for supplying environmental information except in the case of access to any public registers, which shall be free of charge.

4.2.5 Reference data in its basic form is the means with which INSPIRE users display spatial data and information, i.e. it is the "glue" needed to display for spatial information. It is therefore so fundamental to enabling sharing of spatial information, that it should be treated separately from "environmental information" within the INSPIRE charging scheme.

4.2.6 If a public authority has set up an acceptable means of proactively disseminating that information (including the ability to obtain copies) it should not be obliged to provide it by other means without charge, and such alternative means of provision should be charged at no more than marginal cost.

4.3 The Exploitation of Public Sector Information

4.3.1 The scope and content of the recently adopted (5th June 2002) draft Directive on the exploitation of Public Sector Information is of considerable importance to the development and positioning of the INSPIRE proposals

The definition of the word "document" is of particular interest:

"Document" shall mean:

a) Any content whatever its medium (written on paper or stored in electronic form or as a sound, visual or audio-visual recording);

b) Any part of a document

European Commission Directorate-General Information Society

4.3.3 Two key principles in these proposals are that all documents held by public sector bodies that are generally accessible should, with certain exceptions, be re-usable for commercial or non-commercial purposes, and that charges for the re-use of documents shall be the same for all actors.

4.3.4 Member States are also given more freedom than was originally envisaged to decide what kind of information they are prepared to make available for re-use by the private sector. The latest draft also recognises that income from the sale of information is extremely important for some public bodies, which are now allowed a reasonable profit margin (the original proposal stated that tariffs should be based on costs alone).

4.3.6 The document states that the intellectual property rights of public sector bodies will not be affected, and allows for the re-use of information under licence. The draft Directive is addressed to national, regional and local authorities, public associations, but not state-owned enterprises. Though not the primary target, EU institutions will also observe the proposed rules.

5 INSPIRE Policy Framework

Several key aspects of legal and data policy can be identified that are relevant to the delivery of a common spatial information infrastructure for the open, i.e. unhindered, uninhibited and unrestricted, flow of spatial data and information within and among EU Member States. The policy principles making up this framework are set out below:

5.1 General

5.1.1 There are a number of basic data policies that can be identified as the basis for developing and implementing the INSPIRE vision, but at the centre is the concept of an information network. The European Spatial Data Infrastructure (ESDI) will represent the linking of data from many separately developed and maintained sources.

5.1.2 INSPIRE will therefore be built upon national spatial data infrastructures. It is the responsibility of each Member State to install and operate a national spatial data infrastructure.

Policy Principle No. 1: The European Spatial Data Infrastructure shall be built upon a network of national spatial data infrastructures. It shall be the responsibility of each Member State to install and operate a national spatial data infrastructure.

5.2 Architecture

5.2.1 The following summarises the main elements of the proposed INSPIRE architecture which are relevant to the legislative framework of INSPIRE:

5.2.2 The INSPIRE technical architecture comprises the models, standards, technologies, specifications, and procedures used to represent, transform and generally accommodate the integration, maintenance and use of thematic and reference data. All data models and architectural components shall be documented with the Unified Modelling Language (UML) [ISO/TS 19103].

5.2.3 Priorities should be given to the following five user needs, broadly described as the sequence of: find, view and access geographic information, translation of queries and/or results of queries, and e-commerce. To meet these user needs, a number of applications will form part of the architecture:

- Publisher application
- Search application
- Viewer/interest/analyst applications
- Data access application
- E-commerce application

Policy Principle No. 2: INSPIRE's technical architecture shall be designed to meet the needs of all actors as efficiently and effectively as possible in accordance with the original ESDI principles.

5.3 Data Standards

5.3.1 It will be necessary to harmonise some parts of detailed data specifications for appropriate pan-European data to maximise the potential and use of datasets. This will include:

- adoption of common data definitions and formats based on ETRS89, OGC and ISO standards;
- change management procedures for datasets;
- quality assurance to ensure fitness for purpose; and
- the adoption of other national and international data standards.

Policy Principle No. 3: All INSPIRE Datasets shall be provided to harmonised data specifications and to common standards

5.4 Data Quality and Certification

5.4.1 To facilitate sharing and trading of spatial information at local, regional, national and international level, procedures shall be put in place by EU Member States to ensure that spatial data and information are fit for purpose. Public sector spatial data and information shall be of a minimum quality by adopting common quality standards (typically ISO standards) and validation procedures, to ensure inter alia:

- accuracy
- spatial accuracy
- temporal accuracy
- thematic accuracy
- precision and resolution
- spatial resolution
- thematic resolution
- consistency
- completeness

Certification shall therefore be required for reference system transformation services at a European and national level as appropriate.

Policy Principle No. 4: Data Quality procedures shall be introduced in order to ensure fitness for purpose

5.5 Metadata

5.5.1 Metadata is the information and documentation, which makes data understandable and shareable for users over time. It can be distinguished as follows:

- Metadata for discovery, which is necessary for data users to search, locate and access the related data
- Metadata for inventory, which is internal to an organisation for being able to manage its information assets
- Metadata for use (exploitation), which is a fuller description of the information resource that enable users to assess the relevance and fitness for use for a certain type of application

5.5.2 Within the INSPIRE initiative it is proposed to use the forthcoming ISO 19115 standard for metadata.

5.5.3 Metadata will therefore be specified and assembled on the Internet to existing, international (ISO) standards. As a matter of routine, INSPIRE datasets will be documented to facilitate their identification, proper management and effective use across the Community, and to avoid collecting or purchasing the same data more than once. To provide an accurate list of datasets held by local, regional, national and EU institutions, metadata catalogues will be compiled. This will include discovery level metadata about content geographic extent, currency, and accessibility of the data, together with contact details for further information about the data.

Policy Principle No. 5: Discovery Metadata will be made available to help users identify and locate INSPIRE datasets at no charge

5.6 Reference Data

5.6.1 The term "reference data" is based on two main ideas: It is a series of datasets that everyone involved with geographic information uses to reference his/her own data as part of their work. It provides also a common link between applications and thereby provides a mechanism for the sharing of knowledge and information amongst people.

5.6.2 Reference data must fulfil three functional requirements:

- Provide an unambiguous location for a user's information
- Enable the merging of data from various sources
- Provide a context to allow others to better understand the information that is being presented

5.6.3 There are three levels of reference data:

- The European level where homogeneous pan-European data is necessary
- The cross-border level where homogeneous reference data for trans-borders is necessary
- The local level where entities in one country are required by users from another country

5.6.4 Reference data components for input to the implementing legislation include:

Components of reference data
Units of administration
Units of property rights
Addresses
Selected topographic themes
Ortho-imagery
Geodetic reference system
Geographical names

Policy Principle No. 6: Reference Data will provide the underpinning framework to which all other INSPIRE data will be referenced

5.7 Thematic data

5.7.1 Thematic data covered by the INSPIRE system will eventually cover spatial data from major sectors of government, such as agriculture, transport and health. In this first phase of INSPIRE development and implementation, however, the focus will be on environmental data. Nine environmental thematic areas have been identified in the thematic orientation paper where data is needed (water, air/climate change, land/soil, nature/biodiversity, noise, waste, utilities, natural and technological hazards and basic features/reference data). For these thematic areas 115 datasets, which should be developed under INSPIRE, have been identified and qualified at a very high level.

5.7.2 The Environmental Thematic Co-ordination (ETC) Working Group have recommended the following generic approach to defining the spatial data to be covered by INSPIRE, i.e.

- Specify and develop a process defining how a theme should be divided into sub-topics
- Agree upon selected data sets within each sub-topic that are to be treated further (priority environmental data sets)
- Establish and maintain specifications for selected environmental data sets using the general INSPIRE standards, templates and other tools for specifications and modelling. The specification should work on data set accuracies suitable for use at European, National, regional and local levels
- Make the defined data set available as a heading in a catalogue service
- Intake different data sets (possibly at different scales and different levels of accuracy) as they are made available from various countries or separate EU institutions.

5.7.3 For this to happen in a co-ordinated way, it will be necessary to set up a time schedule for when the EC member countries or partners of INSPIRE are to have transformed their data (high level data, medium, local data) to comply with the data set specifications.

Policy Principle No. 7: Thematic Data may be specified and required from time to time by INSPIRE and this will be made available to common standards

5.8 Charging

5.8.1 Taking into account issues such as sustainability of funding, the provisions of the proposed Exploitation of Public Sector Information Directive and the new Access to Environmental Information Directive, as well as user needs and supply mechanisms, it is suggested that the processes of acquiring and using metadata, reference data, and thematic data are based on the following steps:

- Access (view and query) to metadata information free of charge, using catalogue services via the Internet and other channels;
- View all INSPIRE thematic data, suitably geo-referenced, free of charge, using INSPIRE view services via the Internet;
- Delivery/Download of copies of reference and thematic data (consistent with PSI & EI Directives) to users under licences which clearly state the conditions under which the data is supplied, and any restrictions on its subsequent use, with reference data provided based on subsidiarity in the first phase of INSPIRE implementation;
- Third-party Re-use of reference and thematic data for commercial or non-commercial purposes (consistent with PSI & EI Directives) at a charge not exceeding the maximal marginal cost of distribution, possibly combined with licence income (royalties) based on a reasonable percentage of revenues.

5.8.2 Reference data will be made available by Member States in order to display thematic data where a geospatial dimension is required, in the short-term by applying the subsidiarity principle, which will allow

for different business models to co-exist in accordance with EU laws on access and competition. In the long-term, such reference data will be provided free of charge to end users.

Policy Principle No. 8: Sustainable funding, investment and charging mechanisms shall be put in place in accordance with user needs and in full compliance with the Access to Environmental Information, Public Sector Information & other relevant Directives

5.9 Licensing

5.9.1 The construction of a harmonised framework for sharing and trading spatial information must address issues of licensing and charging on the basis of intellectual property rights (copyright and sui generis) held in spatial and other data and information.

5.9.2 It is suggested that the interests of both sides of the supplier-user equation are served by a degree of harmonisation of the broad principles of licensing the use of data, although the detail should be left to reflect local differences.

5.9.3 It is important to recognise that licensing, as a method by which the rights and responsibilities of the parties are stated and understood, however, complicated or simple they might be, is a basic requirement of good order and an example of best practice in this context.

Policy Principle No. 9: Harmonised licensing frameworks will be introduced to facilitate and optimise the sharing and trading of spatial information

5.10 Implementation and Management Structures

5.10.1 The unimpeded flow of environmental data and information between the EC and Member States, between Member States themselves, and between the authorities and the public must be assured within any future Directive.

5.10.2 This interchange obviously needs to be managed and controlled in the best interests of all the stakeholders, which raises the question of which type of official body or organisation is best suited to such a task at both Community and Member State level.

5.10.3 This Paper proposes that, taking full account of the principle of subsidiarity, a dedicated specialist INSPIRE management unit be established within the EC, and that it shall be a requirement upon Member States to establish appropriate compliance and liaison organisations at national government level in accordance with the recommendations of the ISF Working Group Position Paper as follows:

- The Commission will define a Body (the platform) for European Spatial Data
- A European Spatial Data Committee (built according to comitology procedures) will be established by the Council and Parliament framework legal act
- The Member States must mandate one national authority with responsibility for relations with the Commission (included in the legislation)

Policy Principle No. 10: Bodies responsible for the management of INSPIRE throughout EU Member States shall be established at a European and national level, and shall be based on subsidiarity and proportionality

6 What will this policy framework deliver?

6.1 Noting the patchwork nature and inefficient practices currently prevalent in managing geospatial data and information across Europe at local, regional, national and international levels, it sets out a short-, medium- and long-term strategy for establishing:

- A coherent European Spatial Data Infrastructure
- Consistent Europe-wide reference and thematic data
- Consistent Europe-wide data quality
- Users have direct and free access to discovery level metadata and therefore all public sector data and information
- Uniform components of reference data, including: units of administration, property rights, addresses, topography, ortho-imagery, geodetic reference systems, & geographic names
- Access to and delivery of thematic data literally at a few clicks of a mouse button
- Efficient and effective data and information delivery of a range of user needs from citizens and academics to policy-makers and commercial users
- Harmonised use of INSPIRE data and information – across public and private sectors
- Efficient development and implementation of INSPIRE gives the initiative an appropriate level of legitimacy

6.2 It thereby creates a policy and legal framework for the establishment and operation of a spatial data infrastructure for Europe, for the purpose of formulation, implementation, monitoring and evaluation of Community policy making at local, regional, national and international level.

6.3 When implemented, the proposed policies will achieve a paradigm shift in the way European geospatial data and information is disseminated, shared, traded and managed.

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Data Protection: Directives 94/EC & 95/EC

8 Acknowledgements

8.1 There are many people and organisations who have contributed to or commented on this report, in particular Marc Vanderhaegan of DG Environment, the INSPIRE Project Leader, and the working group leaders

8.2 In addition, the following people contributed: Working Group Members: Konrad Zirm (Austria) Gerda Schennach (Austria) Bernhard Weichel (Germany) Stefan Bjorkhammar (Sweden) Antonio Lucio Gil (Spain)Mario Caetano (Portugal) Nick Land (Eurogeographics) Heinz Bennat (Germany) Angelica Zapatero Lourinho (Spain) Derek Earnshaw (UK Ordnance Survey) Adrian Nuttall (UK Environment Agency) Mike Clark (UK IGGI), and the following Shadow Members: Patrice Geiger (France) Jitske de Jong (Netherlands) Antti Kosonen (Finland) Laila Aslesen (Norway) Juraj Valis (Slovakia) Adriana Gheorge (EEA) Bas Kok (EUROGI)