



The Association of Geological Surveys of the European Union
(EuroGeoSurveys)
in their position as
custodians to their national natural resources
and
guardians of their terrestrial environment

present their contribution

INSPIRE OPINION

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Having taken notice off the following documents:

- Inspire vision
- Draft Environmental topic user needs Position Paper
- Draft Data policy and legal Issues Position Paper
- Draft Reference Data and Metadata Position Paper
- Draft Implementation Structures and Funding Position Paper
- Draft Architecture and Standards Position Paper
- Final Draft ESDI Organisation and E-ESDI Action Plan\$

Taking into account the following EuroGeoSurveys documents and opinions:

- eEurope
- other opinions

and referring to existing data and meta-data experience within EuroGeoSurveys and amongst its members, the National Geological Survey Organisations;

EuroGeoSurveys contributes the following observations:

- EuroGeoSurveys welcomes the initiative that will be beneficial to many more fields of technical, social and environmental information than enumerated in the above mentioned documents. The INSPIRE initiative will provide the strongest basis for standardisation and exchange of information, not only between geographical reference systems, but also between different fields of technical and Scientific expertise, thus forming one of the cornerstones of the European Research Area, as well as of the GMES, transport, sustainable land use, soil and sub soil and hydro geological reference system.

1. GEIXS (Geological Information Exchanges System): this is the European Geological Data Catalogue, where data sets are described through:

- ❖ The geographic coverage of the data
- ❖ A system of keywords from multilingual lexicons
- ❖ A string of free text.

2. EUSEASED, including separate metadata systems:

Eurocore (a registration of seabottom sedimentary samples and cores), Euroseismic (a catalogue of all marine seismic data lines including the many oil and gas related exploration data), EuMarsin (the catalogue of Marine sedimentary deposits and coverage).

EuroGeoSurveys has developed and is developing these data systems partly with participation and sponsoring of the European Commission (FP4 and FP5).

EuroGeoSurveys is financing the maintenance and continued development of these data systems (rapport TNO-BRGM).

Based on areas as part these data catalogues, EuroGeoSurveys is developing a number of thematic applications, where data have been combined and interpreted to provide.....? e.g

- The International Geological Map of Europe (1:5.000.000)

- The Geochemical Map of Europe
- The Multilingual Thesaurus: a product initiated and developed through the International Union of geological Sciences (IUGS) has been further extended by EuroGeoSurveys to form the multilingual, standardized lexicon for all its meta data systems.
- The Europe an Minerals yearbook, a compilation of mineral reserves and resources based on spatial an economic information.

The partners of EuroGeoSurveys Meta data product (see annex 1), based on their own experience, fully agree with the proposed development and technical implementation proposed in the INSPIRE Draft Position Papers. The newly proposed set-up for the GEIXS and EUSEASED systems (rapport NITG) is fully in, line with the proposed INSPIRE development. In fact, a large number of the INSPIRE objectives have already been achieved by EuroGeoSurveys. Therefore, EuroGeoSurveys suggests a link-up, or close cooperation between EuroGeoSurveys and INSIPRE.

As such, EuroGeoSurveys and its member National Geological Survey Organisations as horizontal thematic frame work in existence, is prepared to contribute, to the development of the initiative, both as national Data Information custodian and as users.

Environmental topic User needs
Draft Position Paper

1) INSPIRE Rationale

The Geological Information Exchange System (GEIXS), is operational (one hour of visitor in 2001), is filled with an extension amount data (ur estimate) and has a legal framework available that can easily be adapted to INSPIRE.

2.2) Spatial Data Producers and suppliers.

The members of EuroGeoSurveys the Geological Survey Organisations as National mapping agencies and theme specific agencies have the ability to step up the present INSPIRE initiative.

3.2) Why define environment topics and common geographic data lager.

The organisational set-up, where data will be loaded to INSPIRE in motional system to be used locally, will require an enormous reformatting and standardisation effort, especially in the thematic fields. Meeting gettary constraints will require an early definition of the level of standardisation needed e.g achievable.

3.3) The process of defining environmental topics

Geology and geological spatial data will form a sound basis to many topics of relevance to the needs defined in different kinds of legislations, conventions and policies.

e.g:

Legislation and Policies

- Water framework Directive
- Mining waste
- Soil Monitoring
- Land Use
- Sustainable development
- Natural Hazards

Cross cutting need

- Geochemistry and health
- Geodiversity
- Versus biodiversity
- Cultural heritage and building and decoration materials.

This will lead to a complexity of data and models yet unforeseen. Indeed, the spatial reference to a meandering is rather simple.

For geological purposes, as well as for some other thematic applications, models should allow for much more complex formulations in the sense of historical data and vertical stacking of data.

But the main complexity can be anticipated in the translation of data, meaning: the formulation for other users. Especially this issue makes the installation of user platforms of prime importance to success of the initiative. This issue will help solve of the inherent problems described in 3.6 High level geographic data topic classification.

As a recommendation, EuroGeoSurveys would strongly support the idea to link INSPIRE's work on a European Spatial Data Infrastructure to other initiatives on European and environmental data infrastructures in particular EuroGeoSurveys in parallel with EE 's and ERONET's report net0

Euro stresses the fact that the geological sciences contribute to a large number of Environmental Policies, conventions and the other Sectoral policies as listed in appendix 1:

Policies and legal instruments linked to environmental Topics; and more specifically in the areas of WATER (inland, marine), climate change, land soil (land use, soil and subsoil), Nature (biodiversity) and Hazard.

At the same time, and in line with the draft directive: Soil.....

EuroGeoSurveys suggests to consequently use the terminology "soil and subsoil".

Data Policy and legal Issues Working Group Draft Position paper

EuroGeoSurveys would like to point out that for future draft, documents and developments, the INSPIRE Policy and legal framework should be fully in line with the EU framework Directive: eEurope 2002 – Exploitation of Public sector Information.

Regulations of INSPIRE, established at a European and national level, and based on the application of subsidiary, may, if not properly orchestrated and executed, prove to be in conflict with the establishment of (simple) harmonised Licensing Frameworks.

1.1 INSPIRE context and Vision (General)

EuroGeoSurveys would like to attract the attention to the duality expressed in 1.1.1 where it is stated:

“The data are often of poor quality, of inconsistent standards.....This is often symptom of insufficient revenue and this paper is therefore mindful to ensure it does nothing to perpetuate unsustainable models”. Many of the data collected, are collected not for economic welfare, but rather in function of the social wellbeing and safety of the population and its habitat. Too many environmental, biological processes operate on a time scale too long to prove immediate worthiness and applicability a number of data systems and data models. The choice whether models are sustainable is not a point of consideration to INSPIRE. Many of the data collected are collected based on philosophies inherited and elaborated over many generations of accumulated problems, disasters and cataclysm. Data acquired in function of these accumulated experiences are collected as service of general interest and their functioning should not be evaluated or reconsidered based on such vague terminology as unsustainability (especially if, as is the case here, it means “not frequently used or not paid for.”

1.2 ?

EuroGeoSurveys knows from own experience that the aim to have a citizen in Europe follow on a day to day basis the state of the local living environment is overly ambitious. EuroGeoSurveys would therefore suggest a classification of data in function of their regular need of update (e.g: daily, monthly, yearly).

1.2.4

EuroGeoSurveys cannot but stress the need to establish a supportive / organisational environment able to comfort and stimulate participants and government and commercial stakeholders. A constant demand on financial and human resources as imposed upon participants will form a continuous threat both to the overall functioning and financial wellbeing of the stakeholder’s organisations.

2.2.2 ?

EuroGeoSurveys supports the idea of putting the burden installing and operating a national spatial data infrastructure on the shoulders each Member State. However, in view of the many existing differences in the level of development and maintenance of such spatial data infrastructure in Europe, this may become one of the major pit falls in the INSPIRE initiative, and result in large differences in implementing speed.

2.7 Thematic Data

2.7.1 In line with the EU framework directive soil, EuroGeoSurveys suggests to use the terminology “soil and sub soil” wherever “soil” is used in the draft document.

2.7.2 EuroGeoSurveys supports the idea of having small Work Groups specify and develop the process of defining themes and sub-topics, and as such is prepared to contribute to these Work groups.

3. Identification of producers and users of data

The national Geological Survey Organisations are at the same time Governmental Administrations (takes installed by law), research development organisations, but also commercial and Professional End Users. In fact, Geological Survey Organisations conduct a significant amount of business in the conventional sense with the private sector, or with the general public.

4.5 Primary data

4.5.2 EuroGeoSurveys strongly believes that the statement: "Public bodies must ensure that primary Data is made availablewhiteout any charge whatsoever" needs a very clear description of the terminology used primary data versus value added data and reference data.

8. Summary of the Policies Principles defining the scope of the INSPIRE legislation:

Policies Principle N° 6: Thematic Data will be compiled to agreed time scales and using common approaches.

EuroGeoSurveys has all too often in the past observed that time scales for data acquisition, collection and compilation may change either gradually in function of developing philosophies, or abruptly in function of sudden, often catastrophic events. It is therefore our strong conviction that policy Principle No 6 should allow for flexibility and non exclusive use of time scales. The more so as the speed of physical and chemical process active a soil and subsoil may vary widely across Europe.

Reference Data and Metadata Draft Position Paper

2. Executive Summary

The Executive Summary gives an extensive overview and identification of further research needed, EuroGeoSurveys would like to add to this list the following topics:

- Related to interoperability: TRANSLATION of data between different fields of technical expertise
- Related to resolution/scale: PROPAGATION of errors between scales.
- Standardization: the proposed ISO standards are not yet fully developed. The INSPIRE initiative is in fact pushing the further development of these standards.

- Issue language and culture: EuroGeoSurveys and culture: EuroGeoSurveys proposes to develop a number of thematic Multilingual thesauri.

4.3 Data quality

4.3.1 It is the strong belief of EuroGeoSurveys that in the past, product specification and development has not always reflected the needs of the users, not only as far as reference data are considered, but also in relation to thematic data.

4.3.4 EuroGeoSurveys is positively related to the introduction of quality flags. Any data provider should be aware that data are subject to liability disputes.

Therefore, a system of quality flagging may become laborious, and vague where historical data are involved.

Qualitative rather than quantities rankings may be needed (e.g for historical versus newly acquired data).

4.6 Language and culture

EuroGeoSurveys, together with IUGS and all the EuroGeoSurveys members, have long time ago decided that unambiguous definitions should and can be established across languages, in order to render the metadata system more useful and applicable across Europe. A multilingual thesaurus has been developed the basic technology of which could be translated to any other thematic field.

4.7 Resolution / scale and implementing priorities

4.7.3 The third INSPIRE funding principle: "It should be possible for information collected at one level to be shared between all the different levels" may generate large propagation problems interns of geological, spatial data.

Moving from small scale to large scale is not an evident operation, needing sometimes elaborate further data manipulation, changes in scale include changes in techniques of compilation and considerations of error propagation. EuroGeoSurveys suggest that this be a major research topic for the future.

6.3 Metadata implementation

EuroGeoSurveys recognises the need for a competent authority for co-ordinating the national producers of data, for collecting and managing the meta data.

However, as different thematic data pools will be included in the INSPIRE data system, the need for Several competent national authorities, co-ordinated through a centralised European thematic authority may rise.

These thematic coordination groups will also have the initiative of creating the thematic multilingual thesaurus.

7. Inter-relationships with other position papers

7.1 ETC – Environmental thematic co – ordination

EuroGeoSurveys stresses the point that a number of data layers are more complex than assumed in the draft document; indeed geographical data can have:

- 3D extensions: e.g drilling data and trajectories, hydro geological models
- 4D extensions: e.g changes in geochemistry, pollution clean up, groundwater levels.

These possible complex extension, even if not immediately included in the data model, will have to be considered up front.

EuroGeoSurveys proposes to include in the list of “ thematic zoning systems” the following layers:

- mining sites
- mining permits
- pollution sites

Implementation structures and funding Draft Position Paper
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In general, EuroGeoSurveys would propose to use throughout the document the terminology “ soil and subsoil” there where the term “soil” is used in the documents. This will bring the documents more inline with the draft soil directive.

EuroGeoSurveys stresses the need for the co-operation but point out that co- ordination will have to take into account that different thematic sectors will be included in the INSPIRE data system.

4.1 INSPIRE vision

“For each data a data custodian will be responsible of the quality of the information provided”.

The reality is that for each data, already a data custodian on the national/ regional level is responsible. In fact, in the case of the geological data, in most countries, the Geological Survey Organisations have that responsibility organised by law.

The INSPIRE concept and model will need to take these legal realities into account.