

Six Principles of the European Spatial Data Infrastructure

"ESDI Organisation and E-ESDI Action Plan" promotes six "Principles of E-ESDI" which are also INSPIRE's goals:

1) Data should be collected once and maintained at the level where this can be done most effectively."

A person who is a data steward can put data online using a Web server that enables anyone (with permission) to view the data and anyone (with permission) to update it. Few will want to copy it, because data stored away from its steward gets "stale." Note that this scenario only works if an open interface on the server communicates with diverse client applications implementing the same interface. (Search on "OpenGIS Web Map Server Specification" and "OpenGIS Simple Features Specification".)

2) It should be possible to combine seamlessly spatial information from different sources across Europe and share it between many users and applications."

Those sources and applications must communicate through common interfaces. The alternative is for all Europeans to buy their software from the same vendor! Of course, harmonizing feature dictionaries and metadata schemas is also important. But geographic information is collected differently for different purposes. So, wouldn't it be good to have standard methods for parsing spatial metadata using ordinary Web browsers' XML processors? See 5 below.

3) It should be possible for information collected at one level to be shared between at least different levels, detailed for detailed investigations, general for strategic purposes."

Data held as described in 1 and 2 above can be served in different resolutions or in different presentation formats for different users, at the discretion of the data steward. (Search on "OGC's Geography Markup Language - GML".)

4) Geographic information needed for good governance at all levels should be abundant under conditions that do not refrain its extensive use."

As described in 1 and 2, geographic information CAN be made abundant, freed from technical conditions that have prevented its extensive use. Note that the Web server in 1 might offer, in addition to data, services that free the user from needing to own expensive geoprocessing software. (Search on "OGC Web Services.") Where data providers can make money distributing data abundantly, the market will make it abundant. Where voters want it and are willing to pay for it, their governments will make it abundant.

5) It should be easy to discover which geographic information is available, fits the needs for a particular use and under which conditions it can be acquired and used."

Today, through standards implemented in search engines and Web sites, you can easily search out information about anything, such as OpenGIS Specifications. Search on "OpenGIS Catalog Services Specification" to learn about the infrastructure that will enable searches on region, location, thematic layer, etc. Services built on GML and XML will parse data sites' standards-conformant metadata to further refine searches.

6) Geographic data should become easy to understand and interpret because it can be visualised within the appropriate context selected in a user-friendly way."

The Web made the Internet user-friendly. Standards that geo-enable the Web will make digital spatial data user-friendly to that 99.99% of humanity for whom it was previously too complicated. INSPIRE ought to encourage use of standards based commercial products and encourage participation in standards development.(Search on "Open GIS Consortium").Responsible institutions will internally enforce standards-focused procurement reform and requirements engineering. Whether an institution's goal is to use more European software or to save money by letting their users buy only the geoprocessing components they need for specific tasks, this is the best way forward.[Editor's footnote: "INSPIRE" is now the official name for the European Spatial Data Infrastructure, replacing "ESDI" and "E-ESDI."