The GEOPORTAL of S1 Unit research deliverables

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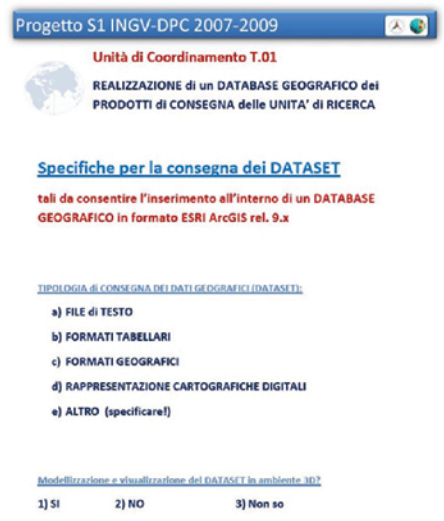
The **2007-2009 Agreement** between the **Dipartimento della Protezione Civile (DPC) and the Istituto Nazionale di Geofisica e Vulcanologia (INGV)** includes the execution of a series of Projects in Seismology funded by the DPC.
These are developed to achieve objectives of specific interest for the DPC in the field of Seismology, and they are carried out with the contribution of the national and international scientific community.

The study of seismicity needs a multidisciplinary approach. Therefore, the **S1 project (Analysis of the seismic potential in Italy for the evaluation of the seismic hazard)** integrates instrumental and historical seismology, earthquake geology, off-fault/marine paleoseismology, earthquake geodesy, neotectonic models, and earthquake probabilities.

One of the activities of S1 Project Coordination Unit is the organization within a geographic database of all unit research deliverables (about **40 UR** and more than **150 deliverables**).
The goal is to provide the Department of Civil Protection (DPC) a georeferenced dataset ready for applications and processing for the study of Italian seismic hazard.

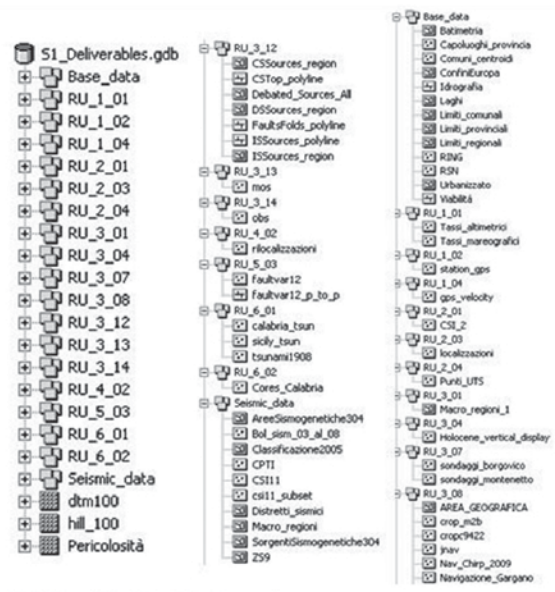
The wide variety of data produced by the research units has required the development of **Guidelines for the data delivery** to define four different types: text files, tabular formats, geographic formats (GIS), cartographic representations or digital maps.



Guidelines for the data delivery


Sheets about RU deliverables

For each research unit it has also been developed two **sheets about deliverables**: first sheet, called "general", is partly precompiled and focuses on the way each research unit will deliver geographic data (dataset); the second sheet is detailed for a single dataset and contains the relevant information such as the general description, the geographic coordinate system, the extension of dataset, the distribution an usability.

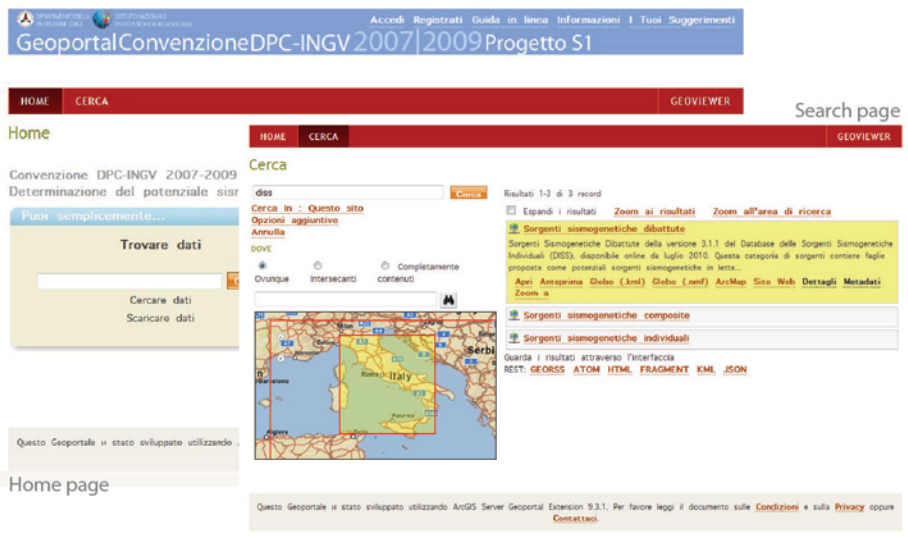


Si deliverables Geodatabase scheme

Datasets from all unit research deliverables were stored in a ESRI "**file system" GEODATABASE** of ArcGIS 9.3.1. version.

All data where organizaed in the Geodatbase in Feature Class, Feature Dataset, Raster Dataset: one Feature Dataset for each unit research and inside one Feature Class for each dataset.

A great effort by the various UR has been made to deliver with the dataset, the metadata file. This activity was carried out with the support of the Department of Civil Protection and ISPRA with the simplified form, for entering metadata information. The **metadata** dataset has been coded in accordance with the **Italian Technical Regulations of Repertorio Nazionale dei Dati Territoriali**, based on EN ISO 19115.



Search page

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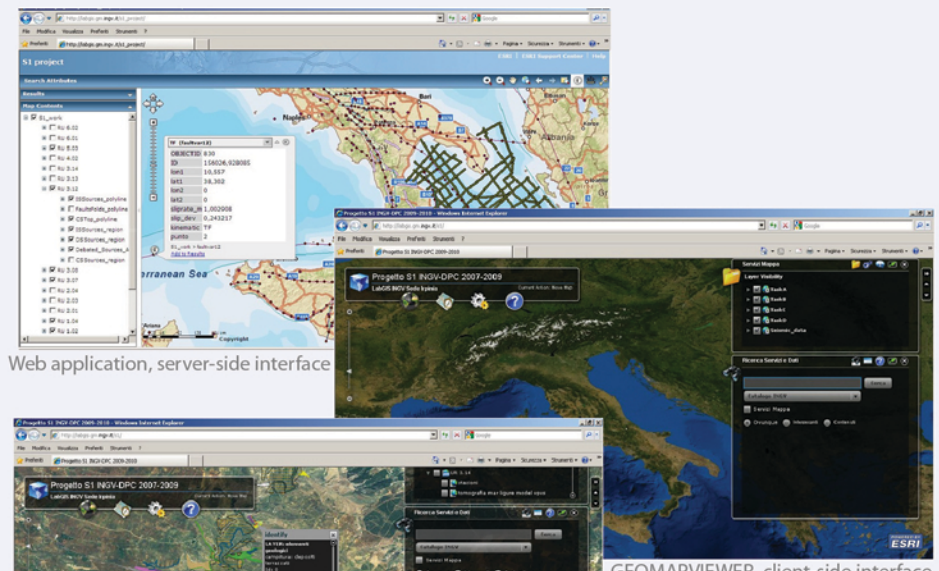
The Geoportal of S1 unit research deliverables

The application of metadata in the management of the S1 project deliverables allows all participants to insert information about their datasets and share information with a common language. The metadata detail provides general information about the: organization that produces and distributes the data, content, scale, reference system, quality.

Metadata details

Metadata xml format

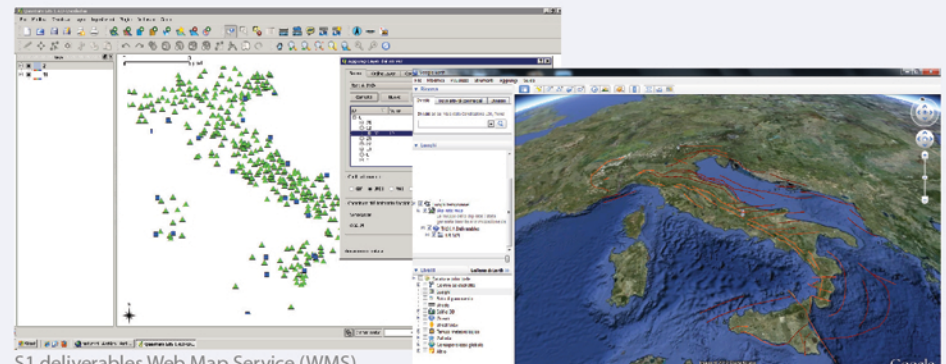
The GeoPortal of S1Project, for now available only for the internal users, was designed to S1 Project's deliverables discovery and viewing.
Have been developed with ArcGIS Server two **web application**: one simple server-side interface and another client-side interface (ArcGIS Viewer for Flex).



Web application, server-side interface

GEOMAPVIEWER, client-side interface

The Geoportal discovery section allows the data search by entering keywords, short texts, or through geographic search. To satisfy the different clients, the **WMS (Web Map Service)** services had been realsized in agreement with the INSPIRE Directive. The Geoportal MapViewer display a list of wms services identified on criteria set.


S1 deliverables Web Map Service (WMS) uploaded in Open Source GIS

S1 deliverables Keyhole Markup Language (KML) uploaded in Google Earth

Home page S1 Project website

S1 Project OGC WMS page