



## FIG Commission 3 Workshop

The Empowerment of Local Authorities:  
Spatial Information and Spatial Planning Tools

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# The Process of Spatial Data Harmonization in Italy

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FIG



Consiglio Nazionale  
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# ISSUES

- Geospatial Information in Europe:
  - lack of data harmonization
  - the lack of data
  - duplication of data

# CHALLENGES

- Challenge of INSPIRE:
  - European Union (EU) Spatial Data Infrastructure



- sharing of environmental spatial information among organizations of the public sector;
- easy public access to spatial information across Europe.

# CONSEQUENCES

- European projects have born to make geo-spatial information:
  - More accessible
  - Usable
  - Exploitable

by potential users by providing digital databases

- ❖ consistent
- ❖ aggregated
- ❖ always updated

# European Project: GIS4EU

<http://www.gis4eu.eu>

## Objectives

- To increase communication and networking relationships among the project partners addressing cross scale, cross language and cross border interoperability and accessibility issues.
- To define a common data model in order to enable access to consistent and homogenous reference data provided by cartographic authorities of different countries and at different levels (national, regional and local)
- To identify the rules to aggregate data by solving problems related to the adjacency of different databases, data generalization and multilingualism.

# European Project: GIS4EU

<http://www.gis4eu.eu>

The different geo-spatial and cartographic data provided by 10 data-providers:

- Made available and harmonized into a single data model
- Accessible through the web
- Interoperable as if they were put into a single centralized database.
- The cartographic data continues to be maintained and published by individual data providers
- Integrated and aggregated to other available data, creating a single virtual geographic database.

# INSPIRE Directive in Italy

## Legislative Decree

"Implementation of Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)".

## Aims

- creating a national infrastructure for spatial information and environmental monitoring
- allowing the Italian State to participate in the infrastructure for spatial information in the European Community (INSPIRE).

# INSPIRE Directive in Italy

## The decree:

- defines general rules for the data exchange, sharing, access and utilization
- applicable to all spatial data available in electronic format and held by any public administration



# INSPIRE Directive in Italy

## The Ministry of Environment:

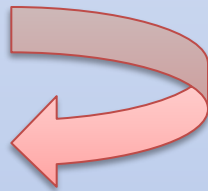
- has authority and responsibility for the implementation of the decree
- it commits to public authorities the provision of metadata.

## The public authorities:

- responsible for the production, management, updating and distribution of spatial data and the related services
- allow the public to access spatial data through research services, consulting services, services for downloading data, spatial data conversion services.

# The National Geoportal

- Main Spatial Data Infrastructure in Italy
- Driving force for all public administrations



- adoption of the terms of the INSPIRE Directive
- sharing of free geospatial data through interoperable services according to the Open Geospatial Consortium Standards (OGC): WMS, WFS, WCS, SWE

# Spatial Data Infrastructure

Necessary for the implementation of an SDI:

- technologies
- and the political cooperation agreements



- understandings on the production, management, updating and dissemination of data to make available.

# Spatial Data Infrastructure

The SDI should ensure the following functions:

**Consultation** which allows the visualization of spatial data

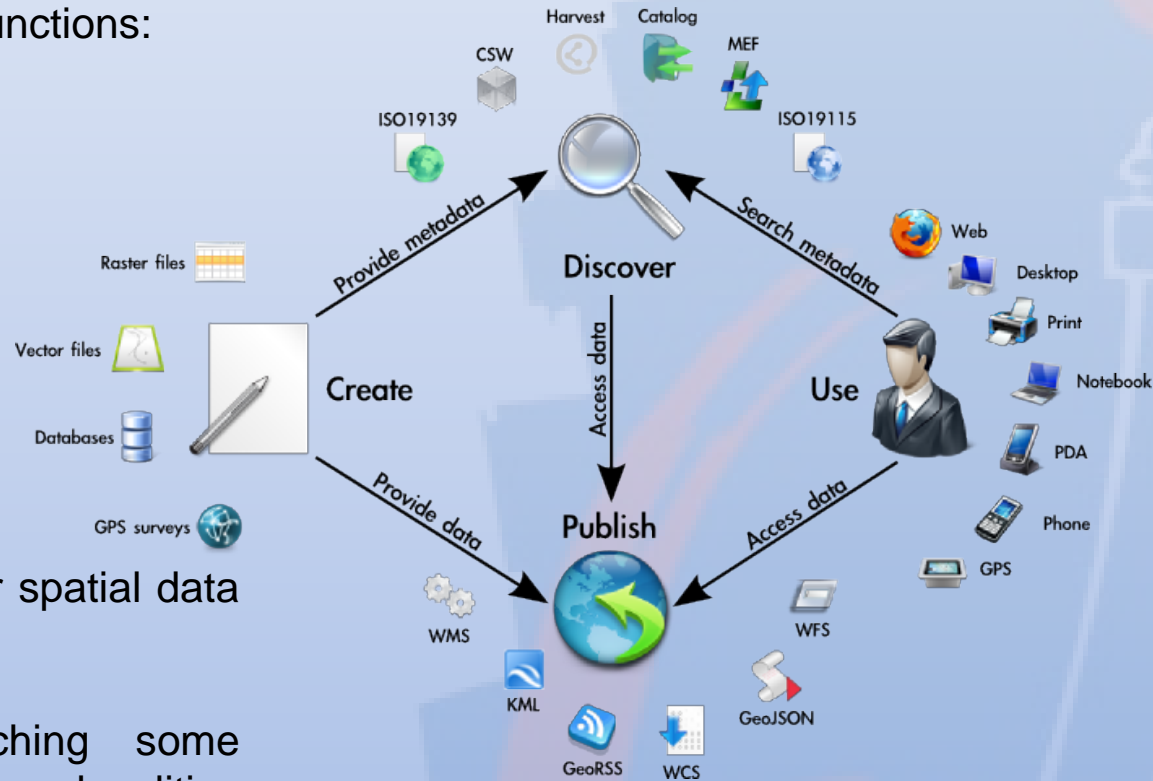
**Library** to provide access to spatial data and meta-information

**Download** a complete copy of the spatial data sets or part of them.

**Research** which allows the search for spatial data sets and spatial data services.

**Geocoding**, which enables searching some significant features such as cities, towns, localities and display geographically on a map, specifying the name;

**Transformation** in other coordinates systems.



# Geoportals at regional level

The majority of Italian regions are provided with a Spatial Data Infrastructure from which it is possible to retrieve local spatial information, either by downloading them or through the interoperability services defined by OGC standards.

- [Portale Open Data Regione Piemonte](#)
- [Geoportale Regione Piemonte](#)
- [Geoportale Regione Lombardia](#)
- [Portale dati cartografico Regione Liguria](#)
- [Geoportale Provincia Autonoma Trento](#)
- [Portale dati cartografico Provincia Autonoma di Bolzano](#)
- [Geoportale Regione Veneto](#)
- [Portale dati cartografico Regione Friuli Venezia Giulia](#)
- [Geoportale Regione Emilia Romagna](#)
- [Portale Open Data Regione Emilia Romagna](#)
- [Portale dati cartografico Regione Emilia Romagna](#)
- [Portale dati cartografico Regione Toscana](#)
- [Portale dati cartografico Regione Lazio](#)
- [Geoportale Regione Sardegna](#)
- [Geoportale Regione Abruzzo](#)
- [Geoportale Regione Campania](#)
- [Geoportale Regione Puglia](#)
- [Geoportale Regione Calabria](#)
- [Geoportale Regione Sicilia](#)

# Geoportals at regional level

## Regione Puglia

provides areas accessible to businesses, professionals, organizations and citizens

conoscenza condivisa per il governo del territorio

puglia.con

Unione Europea FESR

Ministero per l'Innovazione e le Tecnologie

Piano Nazionale di e-Government

Regione Puglia POR 2000-2006

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**Newsletter**

ottobre 2011

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**Consultazione**

Navigazione e Consultazione dei dati pubblici del Sistema Informativo Territoriale della Regione Puglia: Carta tecnica regionale, DTM, ortofoto, uso del suolo, carta geomorfologica resi disponibili per aziende, professionisti e cittadini. La registrazione al portale ne consente anche il download.

**Consultazione avanzata**

Strumenti webgis che consentono di creare servizi di mappa personalizzabili direttamente da web, mediante la scelta dei layers (con possibilità o meno di editarlo), della tematizzazione, (dal riempimento pieno fino alle simbologie più complesse, di cui si può decidere spaziatura, rotazione, spessori, tipologie di linee), del layout di stampa, ecc. **Area riservata agli Utenti Istituzionali.**

**Protezione Civile**

Una gestione informatizzata del "metodo Augustus" per una più immediata modalità di gestione delle schede di censimento delle risorse di interesse della Protezione Civile, nonché una ricerca più efficace nei momenti di necessità. L' integrazione con il database territoriale e la disponibilità di semplici funzionalità webgis facilitano l'inserimento dei dati e ne consentono l'uso da parte di personale non necessariamente esperto in sistemi informativi territoriali. **Area riservata agli Utenti Istituzionali.**

**Agricoltura**

**Area riservata agli utenti istituzionali regionali.** Consente la gestione integrata delle pratiche istituzionali dell'Assessorato all'Agricoltura con il database territoriale del SIT, tra cui di particolare interesse la componente catastale, l'uso attuale del suolo e i piani urbanistici, mettendo a disposizione dell'utente un insieme di strumenti webGIS personalizzati.

**adesso.sit | news**

- **Pubblicata la Carta Idrogeomorfologica** Aggiornamento a cura dell'Autorità di Bacino della Puglia ...
- **Pubblicata la Carta Giacimentologica** Il servizio Attività Estrattive pubblica la Carta Giacimentologica (bozza) ...
- **Pubblicate tutte le specifiche per l'informatizzazione dei PUG** La Regione Puglia ha introdotto le Istruzioni Tecniche per la Informatizzazione dei PUG (Piani Urbanistici Generali). E' possibile scaricare la documentazione completa e gli shape file strutturati ...
- **Pubblicato il servizio WMS dei dati del SIT Puglia**

# Geoportals at regional level

## Regione Puglia

### Regional Spatial Data Repository

- is a catalog of metadata based on ISO19115, 19119 and 19139 compliant with the INSPIRE directive and the European Regulation on the metadata
- public registry which allows:
  - Consultation of the metadata of spatial data;
  - Extended mode consultation through the use of a geographic browser;
  - Management of metadata reserved to public administration offices.

The screenshot shows the search interface of the Puglia Regional Spatial Data Repository. At the top, the logo for 'puglia.con' is displayed with the tagline 'conoscenza condivisa per il governo del territorio'. Below this is a search bar labeled 'Ricerca'. The search criteria are organized into sections: 'Area Amministrativa' with dropdowns for 'Puglia', 'Scegliere una provincia', 'Scegliere un comune', and 'Scegliere un paese'; 'Toponimi' with a dropdown for 'Apulia' and a search input field; and 'Descrittore tecnico', 'Cosa', and 'Quando'. At the bottom, there is a field for 'Amministrazione Titolare' and two buttons: 'Avvia Ricerca' and 'Reset ricerca'.

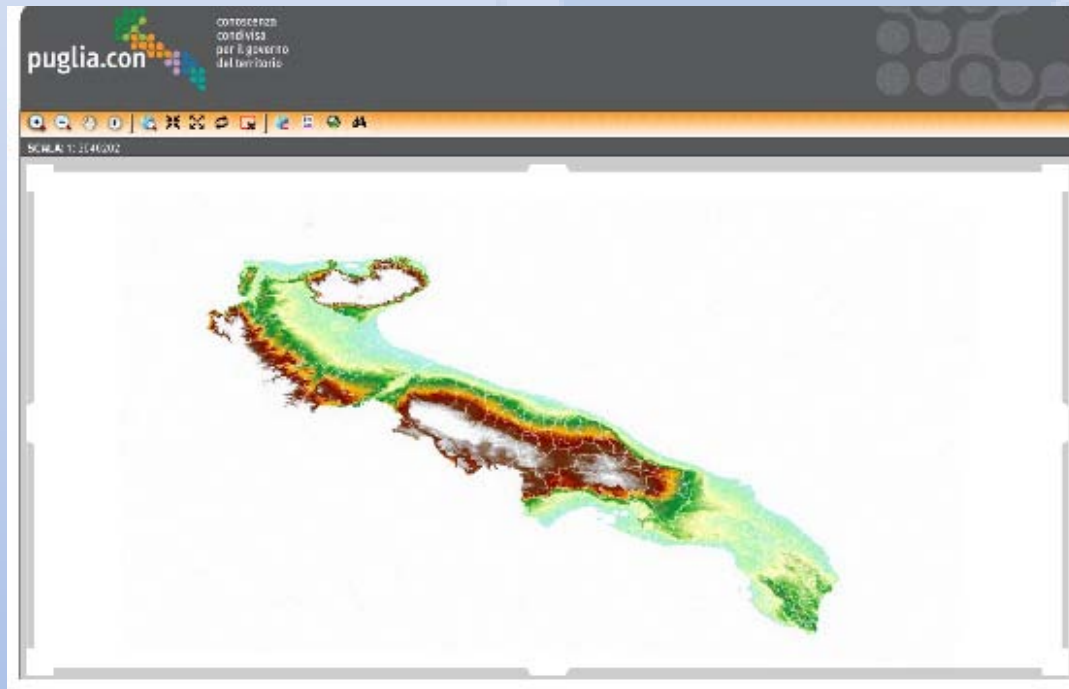
# Geoportals at regional level

## Regione Puglia

The catalog contains also metadata for local services made available by the Regional Territorial Information System-SIT (service planning, urban planning, civil protection, etc..).

The RRDT allows the management and publishing of:

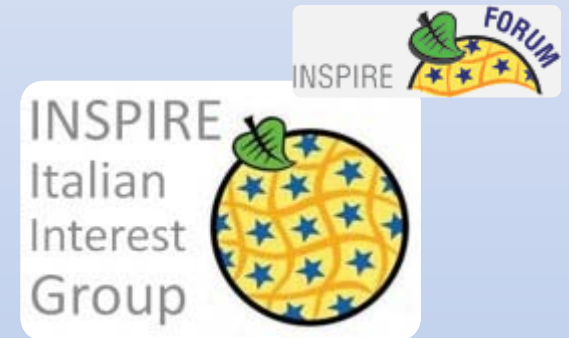
- Metadata for spatial data (maps technical issues etc.);
- Metadata about local services
- Metadata for new recorded spatial data.





# INTEREST GROUP FOR INSPIRE

- increasing number of associations and interest groups that work together and share their point of view through the web.
- AMFM GIS Italy



# AMFM GIS Italy

## The Association promotes

- the methodologies and processes of standardization,
- communication and sharing of geographical data
- promotes legislative and regulatory adjustments necessary to ensure the development of National Spatial Data Infrastructure (IDT).

## This portal includes participation in discussion groups on:

- 3D GIS
- Cadastre
- GIS and Technological Networks
- Security and Defense
- European Union
- Standards.

# CONCLUSIONS

- The social effect of the regulations has created a wide awareness between local authorities and the Italian professionals which adhere to associations and interest groups for INSPIRE.
- Increase of geoportals at national and regional level and the rise of interest groups and blogs with interest on interoperability and standardization of spatial data:
  - promote the exchange of knowledge and experience between public and private stakeholders
  - reflects a growing awareness by local authorities and governments, on issues dictated by the European directive INSPIRE
- SDI is an important support for the Central and Local Public Administration :
  - rational management of the territory
  - accurate monitoring of its critical factors
  - localization and monitoring of public structure and cultural heritage.

Thank you for your kind attention

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