

**Geoindex: a  
public data  
dissemination  
service from  
the IGC**

Geoindex IGC Team  
Reporter: Carme Puig



## Brief IGC introduction

- § The IGC was created through the Law 19/2005 of the Catalan Parliament.
- § The IGC is an instrument to contribute to the availability of basic and updated geological, soil and geothematic information.

The new IGC takes over the previous existing Geological Survey created in 1979. Later, in 1997, the Geological Survey was integrated on the Cartographical Institute of Catalonia.

## The IGC mission

- Ø Assessing Catalan Government.
- Ø Obtaining, processing and housing geoscientific information.
- Ø Providing and making accessible all geoscientific information.

## IGC activities

The Law relates the activity of the Geological Institute to:

- § **Elaborate** and **promote** studies that contribute to improving the geological knowledge of Catalonia.
- § **Advise** and **provide** technical assistance to the Catalan Government and *cooperate* with other Administrations,
- § **Produce** the mandatory reports established by current regulations;
- § **Perform** geological, geophysics, geotechnical, soil and geological hazards mapping.
- § **Study** and **evaluate** geological hazards (including risk of avalanches)
- § **Propose** measures for forecasting, prevention and risk mitigation.
- § **Support** competent authorities in land and urban planning and emergency management.
- § **Conduct** in collaboration with competent authorities geological studies for the exploration and management of natural resources.

## IGC legal instruments

- § The Decree 168/2009 passed by Catalan Government implemented various aspects of the creational Law of the IGC.
  
- § The Decree creates some legal instruments to help the IGC in carrying out its duties:
  - Ø Geological Map of Catalonia (Geoworks)
  - Ø Documentation Center and Geologic Archive (CEDAG)
    - Ø Geoteca
    - Ø Geoíndex
  
  - Ø Geological and Geothematic Information System of Catalonia (SIGEC)

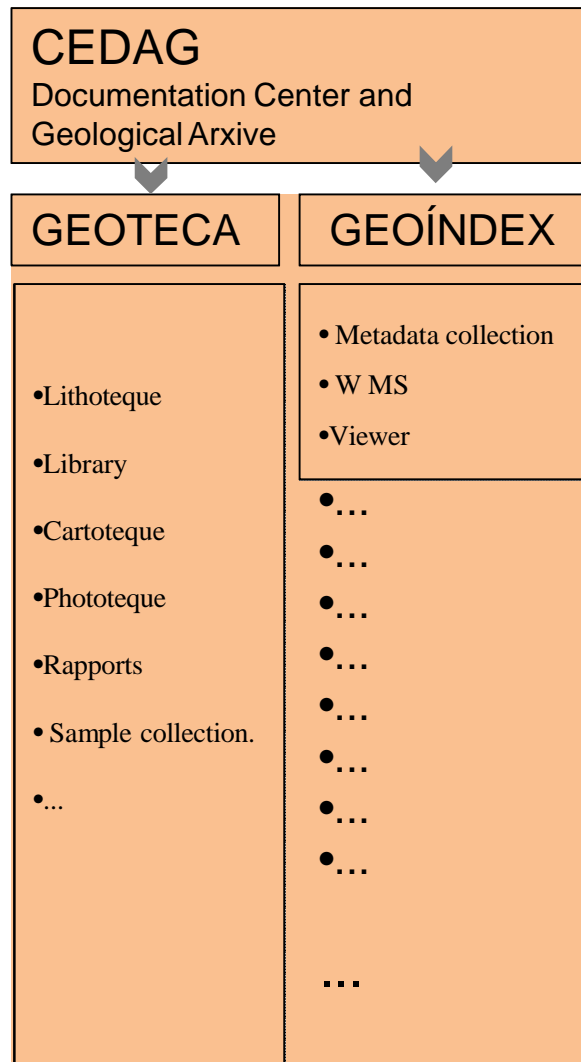
New  
IGC public services:  
Geoteca and Geoíndex

Documentation Center and Geologic Archive (**CEDAG**) is formed by:

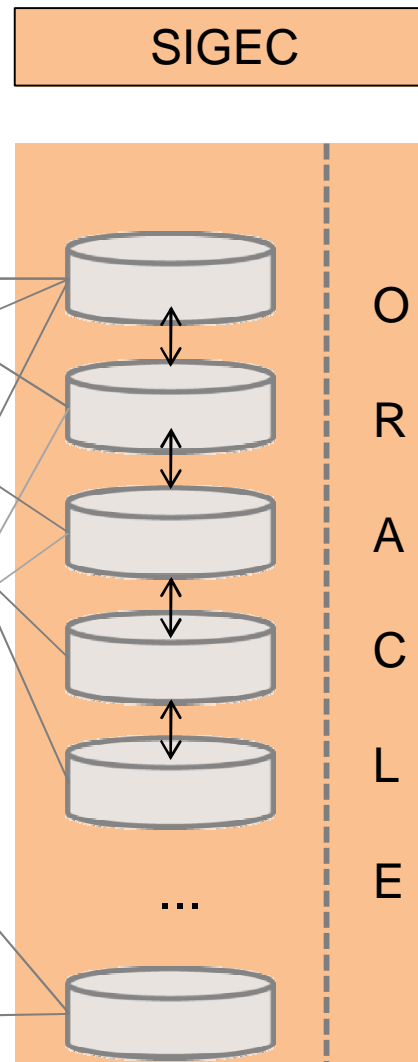
The **Geoteca** functions are compiling, cataloging and working in custody, conservation and preservation of documents (books, maps, ...) coming from daily work of IGC or from other sources, and geologic and pedologic samples (soil, drilling cores, water, ...)

The **Geoíndex** is created as a public service to collecting and disseminating information and geothematic data that has been previously incorporated into the IGC databases and they are available in digital format.

### Public IGC instruments



### Coorporative instrument



← Open public Information System →

← Coorporative Information System →

## WHAT DOES GEOÍNDEx OFFER?

- **Geoíndex** is accessible from the IGC website.
- **Geoíndex** has been conceived as a friendly interface and offers thematic viewers to query information from implemented WMS.
- **Geoíndex** allows users to search, view, and request for information about groups of data sets through available WMS.
- **Geoíndex** viewers are built using Java, JavaScript and HTML technology and they are based on OpenLayers, JSON and jQuery libraries
- **Geoíndex** viewers include basic functions of searching and displaying information based on geographic location and connection with other internal or external WMS via URL



## WHAT DOES NOT GEOÍNDEX OFFER?

Currently **it is not possible** to directly download information online.

Users can request for information from the viewers and they will receive them in few days.

## WHAT DOES GEOÍNDEX OFFER?

**Geoíndex** is operational since December 2011 and on February 2012 are available through the IGC web site ([www.igc.cat](http://www.igc.cat)) the following viewers.

[Geological maps](#): Geologic map of Catalonia, at a resolution equivalent to 1:250.000 and 1:50.000 scales.

[Ground deformations](#): Vertical deformation obtained by leveling land surveying, GPS and radar differential interferometry.

[Geothermics](#): Deep and shallow geothermal regime maps and models.

[Geoworks](#): State of the work of geothematic mapping programs.

[Snowpack information and avalanches](#): Snow avalanche database of Catalonia (BDAC), existing protections and study areas

[Geological hazards](#): Danger zones evaluated from preliminary reports and map for the prevention of geological hazards

[Seismology](#): Seismic broad-band and accelerometer network and instrumental and macroseismic epicenters location

[Geotechnical surveys](#): Location of geotechnical surveys from public works projects, with code that contains the data report

[Geophysical techniques](#): Geophysical data acquisition surveys.

## Geoindex and SDI

WMS and metadata have been incorporated to the Catalonia Spatial Data Infrastructure (IDEC). So, IGC's WMS are available from Catalonia SDI resources catalogue

Consequently,

**IGC's WMS are standardized and interoperable**

## THE FUTURE OF GEOÍNDEX

- ü Improving capacities and services.
- ü Online downloading data will be available through Web Feature Service (WFS)
- ü Geoíndex has the aim of becoming the main window for providing users with geological information and knowledge of Catalonia.
- ü Geoíndex's contents and technology upgrade is one of the IGC priorities.

## ACKNOWLEDGEMENTS

Geoindex is built with a collective effort.

Geoíndex Team want to thanks to all the technical staff at IGC.



**Thank you very much for your attention!**