

# Indigeo : scientific infrastructure of spatial data and information on the environment



**URL:** <http://indigeo.fr/>

## Purpose of application

indigeo, is a Spatial Data Infrastructure (SDI) dedicated to scientific research and observation of the environment. It consists of a metadata catalog and a spatialized data server backed to a map viewer.

It is at the initiative of the research lab [LETG](#) of [CNRS](#), the Observatory for Earth Sciences of Brest ([IUEM](#)) and relies on the Brest Iroise LTER Site ([ZABri](#))

## Geographic extent

Indigeo mainly covers the marine shoreline of Brittany (west France), stretches from the harbor of Brest to Iroise sea, from watersheds to the islands (Sein, Ouessant, Molène) on an area about 6690 km<sup>2</sup> of which 3730 km<sup>2</sup> in sea. However, these limits are not fixed and some data are outside this area for example coastal zone of Guinea-Bissau.

## Target audience

Researchers, students, coastal resource managers, planners and decision-makers from administrative institutions

## Data included (general categories)

**Number of data sets (december 2014) :** 184 metadata record and published datasets

### Information on:

- coastal vulnerability and risks (50)
- climate change, ecological state and eco-system perspectives (46)
- management, uses and conservation (88)

## Distinguishing features

### Spatiotemporal data

- Indigeo presents spatiotemporal data through which it is possible to navigate thanks to the advanced viewer features. Example : <http://zabri.indigeo.fr/geocms/zabri-fsuziscn>

### Temporal data series

- Indigeo allows to view time-series data in graphical form through which it is possible to navigate thanks to the advanced viewer features. Example : <http://zabri.indigeo.fr/geocms/zabri-qwnwxqbe>

## Technology used (web GIS, server, database, content management system?)

- **WebGIS:** georchestra, geoCMS
- **Database:** geoserver, geonetwork, postgresql 9.3 / postgis 2
- **Server:** Nginx Server with Apache Tomcat 6 and Unicorn Ruby server

- **Other:** geoAuth, manageGraph (highcharts library)

### **Atlas support (financial/institutional)**

Indigeo has been produced and is maintained by the UMR LETG of CNRS in collaboration with the IUEM observatory. Funding for work comes from CNRS

### **Challenges encountered**

- Working together from several locations and institutions
- Develop new features for scientific purpose
- Metadata management
- Interoperability with other SDI
- Constantly changing technology
- Constantly evolving web standards
- Securing long term funding commitments

### **Lessons learned**

- importance of setting up a training plan
- Fit skills and availability of multipliers in the research units
- Available time for people in charge of this issue in units
- Communicate with users about new information and features

### **Future directions (ongoing and future improvements?)**

#### **Governance**

- Establishment of a western scientific SDI steering committee
- Develop interaction with other research labs and observatories

#### **Skills transfer**

- Establishment of a two-level training plan:
  - User level (all research staff)
  - Professional level (multipliers in teams)

#### **Developments**

- Optimization of ergonomics (interrogation, mapping, metadata ...)
- Integration of new ways of viewing data (multiplicity of ways of representing graphs with highcharts, temporal raster, 3D, ...)
- Web Services Process (provision of specific geoprocessing ...)