

The IMEDEA Geoportal Approach

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1 SUMMARY

The Mediterranean Institute for Advanced Studies (IMEDEA) is a joint research center of the University of the Balearic Islands (UIB) and the Spanish Council for Scientific Research (CSIC). The main character of the IMEDEA is to emphasize the Interdisciplinary approaches to scientific research.

The mission of IMEDEA is to contribute to the advance of knowledge in critical areas in order to improve the living standards of the Balearic society. This general goal is being developed through scientific research characterized by a global scope, which is only achievable through an interdisciplinary approach. It pursues scientific excellence in the different scientific areas included in the IMEDEA.

The IMEDEA GI Service is involved in two areas:

- Building a geodatabase repository with scientific information. Static information from different campaigns and real time data delivery from oceanographic observation devices, like:
 - Gliders (underwater autonomous vehicles)
 - Oceanographic-meteorologic mooring (that provides meteorological, hydrographical and biogeochemical information from the water column).
 - Video-based coastal zone monitoring system.
 - etc
- Build a Geosensor network promoting the evolution from a GIS environment to a Scientific-SDI node infrastructure. Offering services over thick and thin clients; using map viewers; building and promoting OGC services (WMS, WFS, KML and considering nowadays other facilities like WPS).

2 ACTIONS

A Geographic Information System and a scientific spatial data infrastructure (SSDI) node of the Balearic coastal areas are developed within

the GIS IMEDEA service with the support of the project UGIZC (Unit for Integrated Coastal Zone).

The littoral SSDI provides visibility to the research results of the UGIZC projects and constitutes an instrument of support to the decision making process in a frame of Integrated Management of Coastal

Zones (ICZM). The SSDI-ICZM structure is based in a large Geographic

Data Base (DB) of the Balearic coastal zones. This DB has an exclusive data model specially adapted to manage coastal information including marine and territorial variables. The SDI node built is based on scientific information generated by researching tasks properly adapted to be used to support the integrated management of the Balearic coastal zones. The system constitutes an excellent example of transference of the scientific research for the resolution of real problems of the coastal zones.

- A Geoportal has been building and it is composed by:
 - GIS methodologies and international standards promotion in the geoproduction of the Balearic scientific community.
 - Interoperability and spatial processing.
 - Oceanographic Geosensor networks developments.
 - Map Viewers
 - Metadata searching.
 - Scientific SDI node offering WMS, WFS, KML, WPS
 - GIS Projects
 - GIS UGIZC
 - Beach Server
 - ...
 - Direct Downloads from campaigns in different formats (KMZ, SHAPES, ASCII, XML, ETC)

3 APPLICATIONS

Researches, administration and enterprise will take advantage of the Geoportal. These users will be able to consult information available, integrate and incorporate it into their studies and so generate new services and function for the system and the community.

4 RELATED WEBSITES

- IMEDEA: http://imedea.uib-csic.es/index_en.html
- GEOPORTAL IMEDEA (Beta phase): <http://imedea.uib-csic.es/gis/geoportal>
- UGIZC
http://www.imedeas.uib.es/goifis/GIZCBalears/en_index.html
- GIS UGIZC: <http://imedea.uib-csic.es/gis/>