

REDMIC - Integrated Marine Data Repository for Macaronesia -

URL: <http://www.redmic.es>



Purpose of application

One of the objectives of the National Foundation "Observatorio Ambiental Granadilla" is to collaborate in establishing a database of all marine species and habitats of the Macaronesian region, with special attention to the species in Annexes II, IV and V European Habitats Directive and the species that define the natural habitats of Annex I of the same Directive. A key part of the data base will be the geographic distribution of species in a Geographic Information System that brings together the most current state of knowledge and allow a temporary record of the dynamics of these habitats and species.

REDMIC is intended to provide a permanent system of systematic storage, custody and service of marine data in the Canary Islands and, by extension, Macaronesia, so as to optimize its use in order to facilitate understanding and management of the marine environment and resources, organize and enhance the existing and future data to be obtained. REDMIC is configured as an open system of integrated geographic information suitable for searching, viewing, downloading and data analysis.

Geographic extent

Macaronesia region, in the Atlantic sea (Canary Islands, Madeira islands, Azores islands, Cape Verde islands and the northwest African coast)

Target audience

State agencies, local and Tribal governments, federal agencies, researchers, consultants, and interested citizens.

Data included (general categories)

Number of data sets: More than 100

Information on:

Data within REDMIC can be of different nature, considering the multiple variables and environmental parameters interrelated in the marine ecosystem. A systemic analysis of data and metadata relevant to the repository is as follows:

- a) Marine climatology
- b) Physical oceanography
- c) Chemical oceanography
- d) Biodiversity
- e) Archaeology
- f) Environment
- g) Political and administrative data (spatial)
- h) Infrastructure
- i) Use of resources
- j) Navigation and incidents
- k) Images

Distinguishing features

- Sea Canary Islands strategy
- Bathymetry



- Seagrass
- Loggerhead turtle

Technology used

- **WebGIS:** ArcGIS server 10.1
- **Database:** ArcSDE 10.1 and Postgres 8.3. ArcMarine data model
- **Server:** IIS Server
- **Other:** Flex

Atlas support

The REDMIC has been produced and is maintained by Observatorio Ambiental de Granadilla staff (www.oag-fundacion.org) financial by Santa Cruz de Tenerife Port Authority and Canary islands Regional Government. Other state agencies have contributed staff time and small amounts of funding for specific components. Funding for work on the Coastal Atlas comes from state and regional funds.

Challenges encountered

- Securing long term funding commitments
- Setting up data sharing agreements
- Critical gaps in existing information relevant to coastal and marine issues
- Constantly changing technology
- Constantly evolving web standards
- Broad user base

Lessons learned

- Understand the business needs of the targeted audience and have open dialog with users
- Clearly articulate use and importance of Atlas to managers in related programs and agencies
- Communicate with occasional users about new information and features
- Market the Atlas to new audiences and potential stakeholders

Future directions

- Develop Web services-based interfaces to facilitate data exchange with suppliers and advanced users
- Implement analytical tools
- Integrate. Establish policies and agreements that allow data exchange with other regions
- Know other experiences and integrate knowledge
- Get funding

More information (www.redmic.es):

- [Abstract \(English\)](#)
- [Full paper \(English\)](#)
- [Slides Powerpoint \(English\)](#)