

Ionian Integrated Marine Observatory



European Territorial Cooperation Programme

Greece - Italy
2007-2013

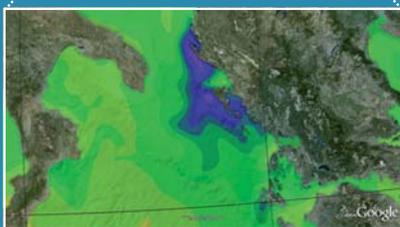
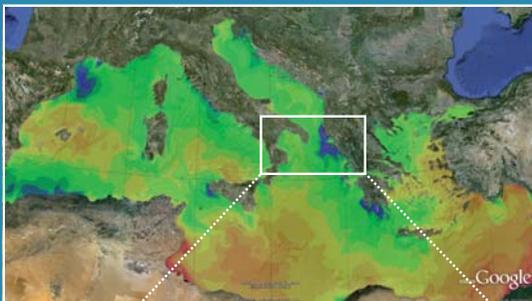
INVESTING IN OUR FUTURE

Co-funded by the European Union (ERDF)
and by National Funds of Greece & Italy



The Project

IONIO (IONian Integrated Marine Observatory) is a marine observatory aimed at providing environmental information about the Southern Adriatic and Northern Ionian (SANI) Programme Area to support safer maritime traffic and the reduction of pollution hazard. The project, funded by the European Territorial Cooperation Operational Programme "Greece-Italy", involves three different institutes (CMCC – Euro-Mediterranean Centre on Climate Change, ENEA – Italian National Agency for New Technologies, Energy and Sustainable Economic Development, and HCMR – Hellenic Centre For Marine Research). They are developing analyses and tools to improve safety and sustainable perspectives in the SANI area.



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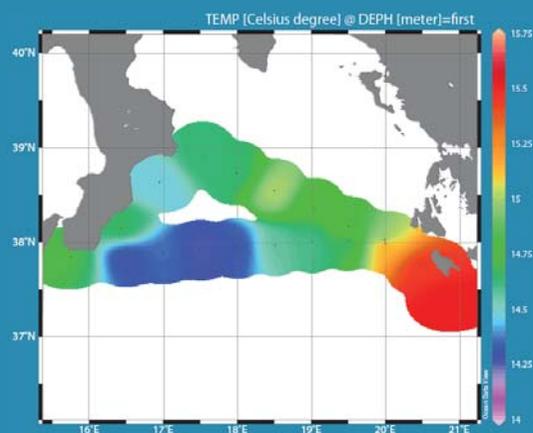


IONIO



IONIO: Products and Services

- An observing system which will provide in situ meteo-oceanographic measurements in real time from moored buoys, ships of opportunity and Argo floats
- A forecasting system delivering in real time high resolution currents and wave products
- A "IONIO" service constituted by an information system based on Web tools for the rapid exploration of the environmental information from the regional stakeholders
- Decision Support Systems (DSS)



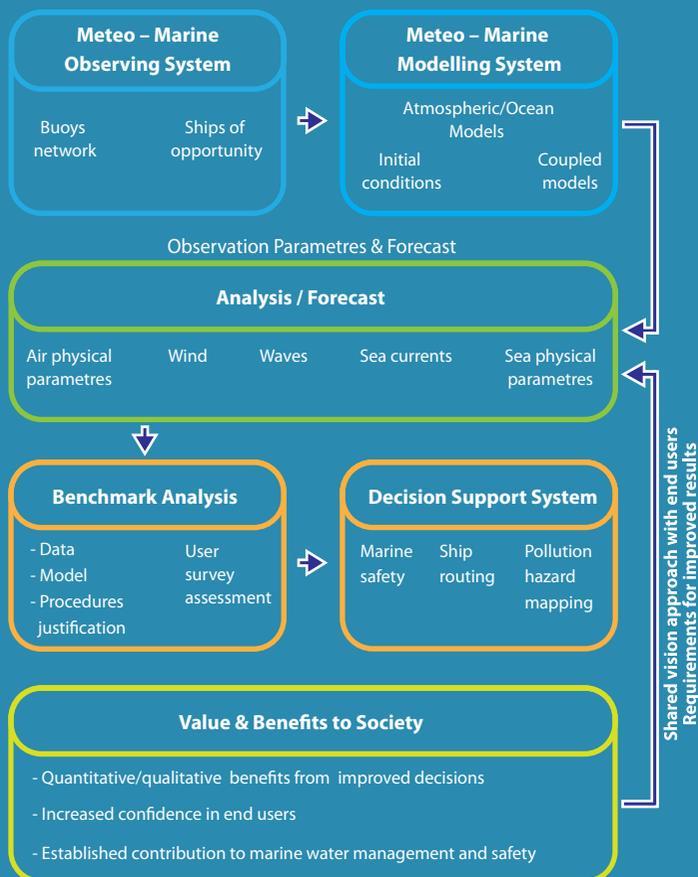
The Integrated Observatory Concept

IONIO is one of the first projects in the Mediterranean initiating a transformation of ocean science toward an Integrated Marine Observatory Initiative. IONIO is designed to provide new, persistent, interactive products and services for ocean science, and has a global physical observatory footprint.

The core activities and the principal objectives of IONIO Integrated Observatory are: collecting real-time data, analyzing data, modelling and forecasting the SANI (Southern Adriatic Northern Ionian) area.

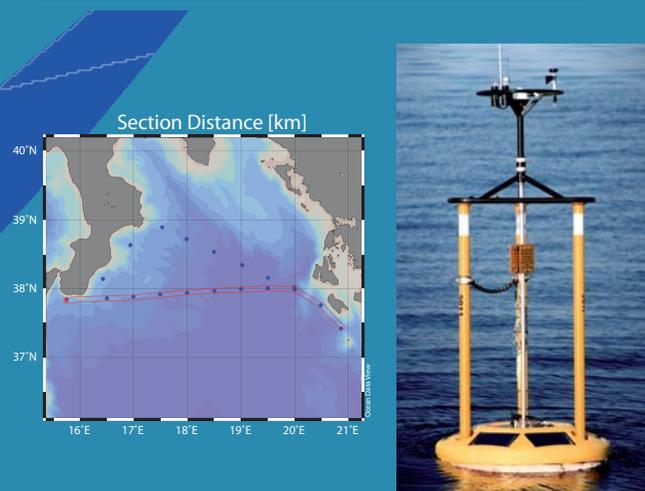
- IONIO is based on an existing set of tools that facilitate:
- End-to-end data preservation and access
 - Direct, closed loop interaction of models with the data acquisition process
 - Virtual collaborations created on demand to drive data model coupling and share ocean observatory resources (e.g., instruments, networks, computing, storage and workflows)

Data management and Decision Support System



Research and Analysis

The IONIO service complies with the INSPIRE principles of leaving data as close as possible to their collection source, by basing the system on distributed data nodes. Data are processed into interoperable formats, agreed standards and protocols. The service will be complemented with several Decision Support Systems (DSS) for Search and Rescue (SAR), for Ship Routing and Safety (SRS) and for Pollution Hazard Mapping (PHM), based upon the environmental information produced by observational and modelling components. The IONIO service will be tested with the marine and maritime stakeholder groups of the Programme Area. The IONIO products and services should contribute to the future cross border marine water management and safety.



Shared vision approach with end users
Requirements for improved results