

Observatorio Oceánico do Marxen Ibérico (RAIA)

Oceanic observatory for the Iberian shelf (RAIA)

Interreg IV-A (2009-2011)

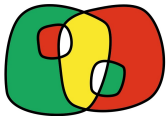
Galicia – North of Portugal

IBIROOS- Toulouse 25/02/09

Coordination: Consellería de Medio
Ambiente. MeteoGalicia.

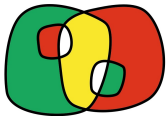
Partners: 12

Budget: 3,6 M€



Objectives

- Improve the oceanic observation at the Western Iberian Peninsula in terms of meteorological, oceanographical and water quality data. To that end, 5 new buoys will be located at the near-coast.
- Improve operational forecasting models; hydrodynamic and biogeochemical.
- Build up a new operational server www.observatoriaia.org where all the information will be served to the community.
- Prepare specific tools to end-users; harbors, renewable energies, fishermen, tourism, etc



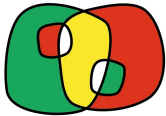
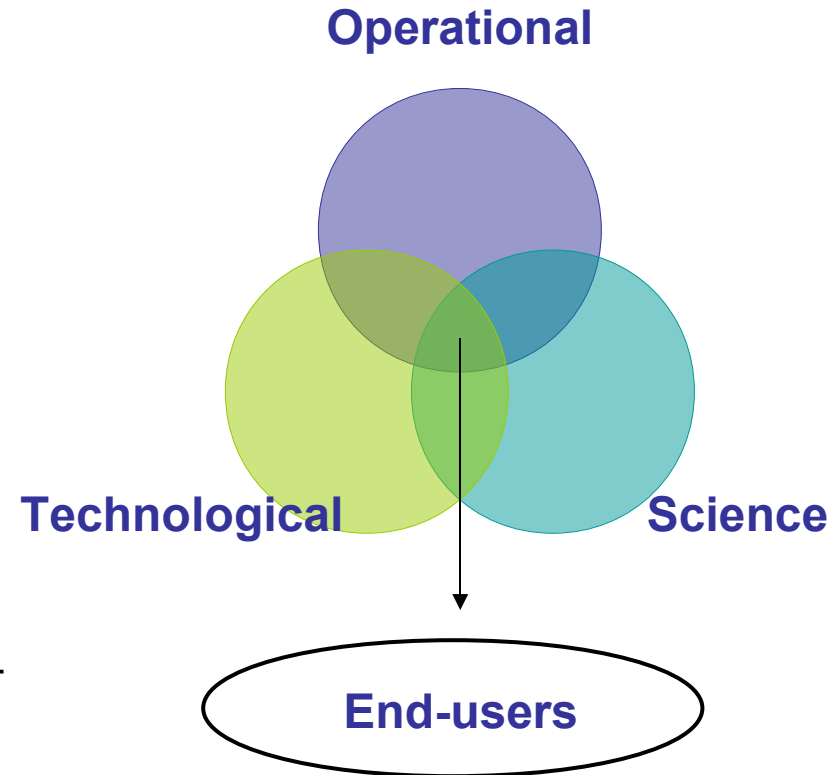
12 Partners

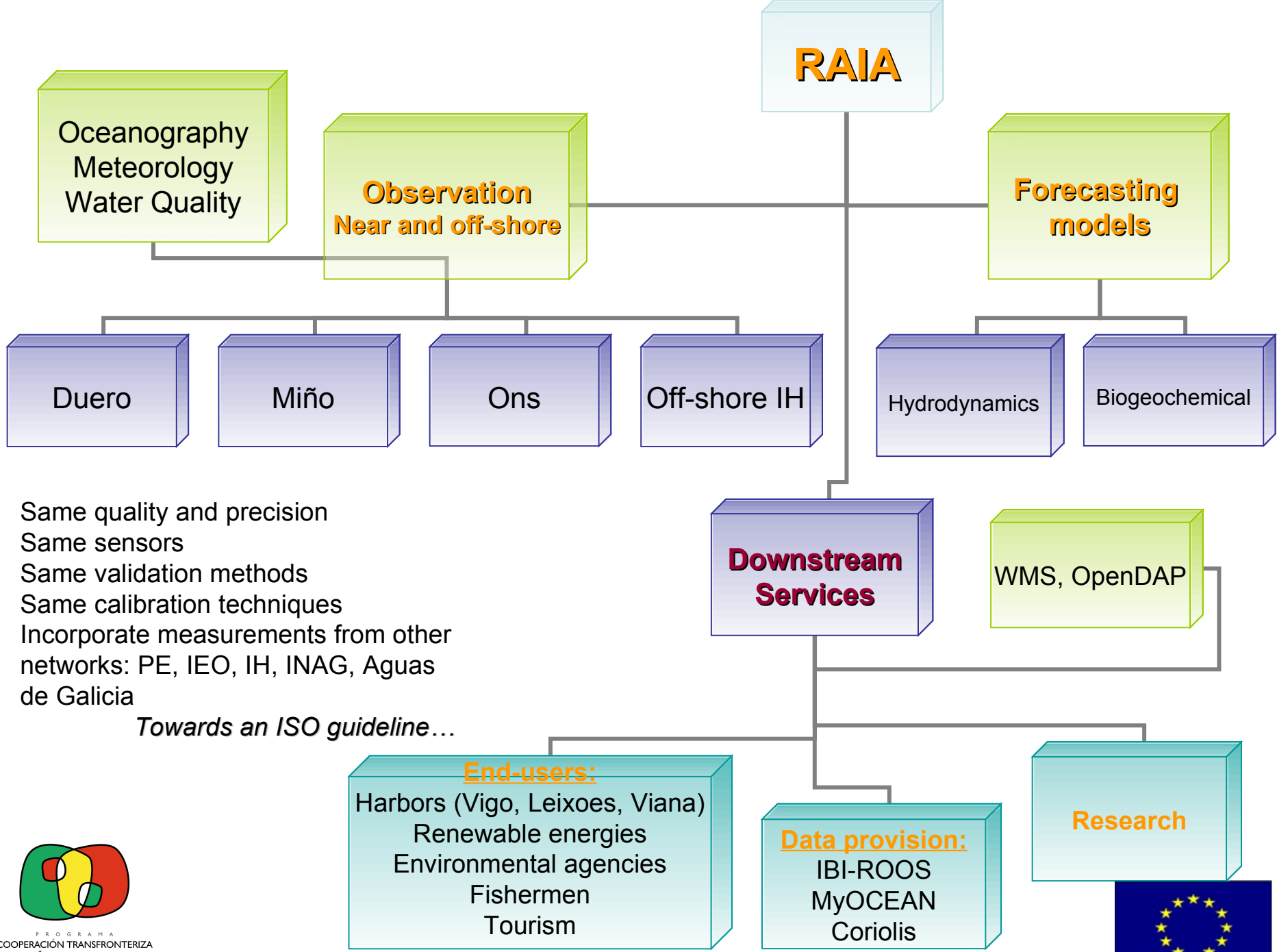
Portugal

- Instituto Hidrográfico (IH)
- Universidade de Porto (UP); INEGI, INESCP, FEUP, FCUP
- Universidade de Aveiro (UA)
- CIIMAR (Porto)

Galicia

- Instituto Español de Oceanografía (IEO)
- Universidade de Vigo (UVigo)
- Intecmar
- CETMAR
- Instituto de Investigaciones Mariñas (IIM-CSIC)
- Consellería de Medio Ambiente. MeteoGalicia. (**Lead partner**)

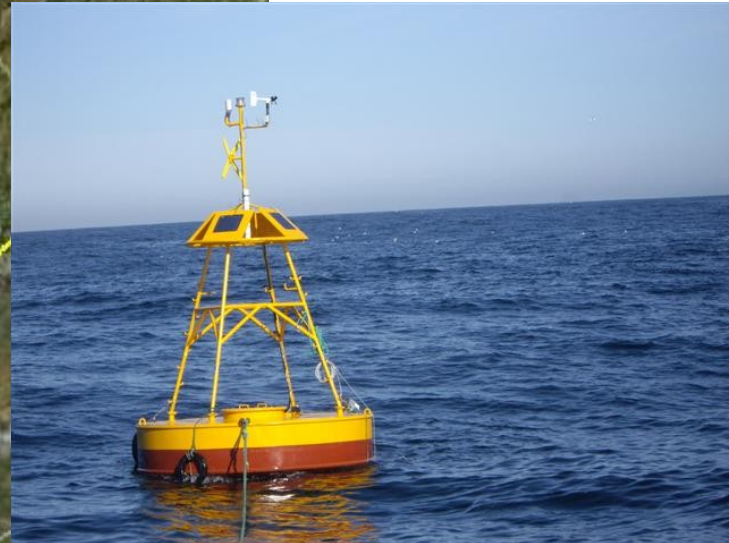


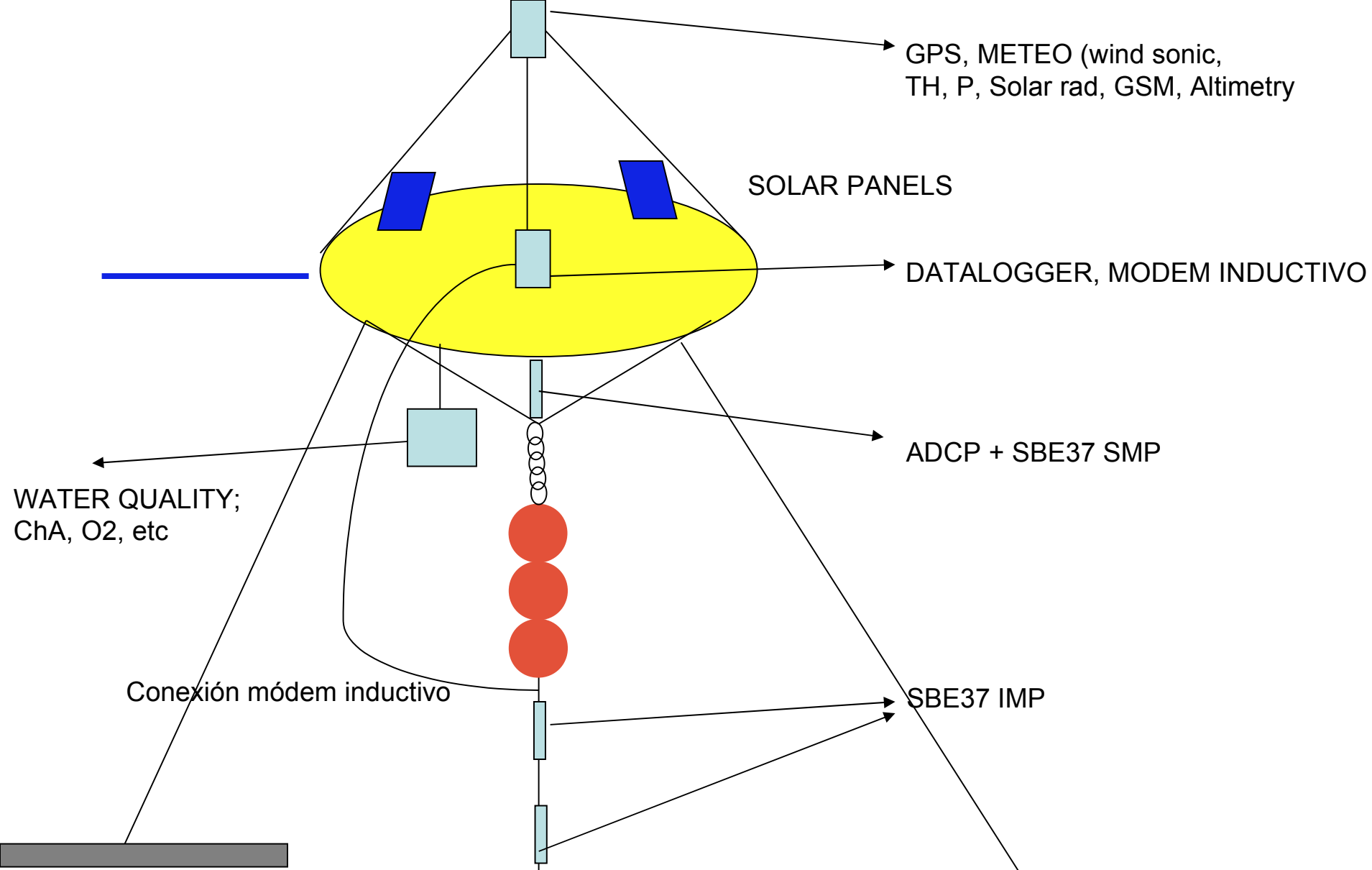


Same quality and precision
 Same sensors
 Same validation methods
 Same calibration techniques
 Incorporate measurements from other networks: PE, IEO, IH, INAG, Aguas de Galicia
Towards an ISO guideline...

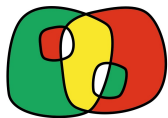


Oceanic Observatory NW Iberian Peninsula RAIA



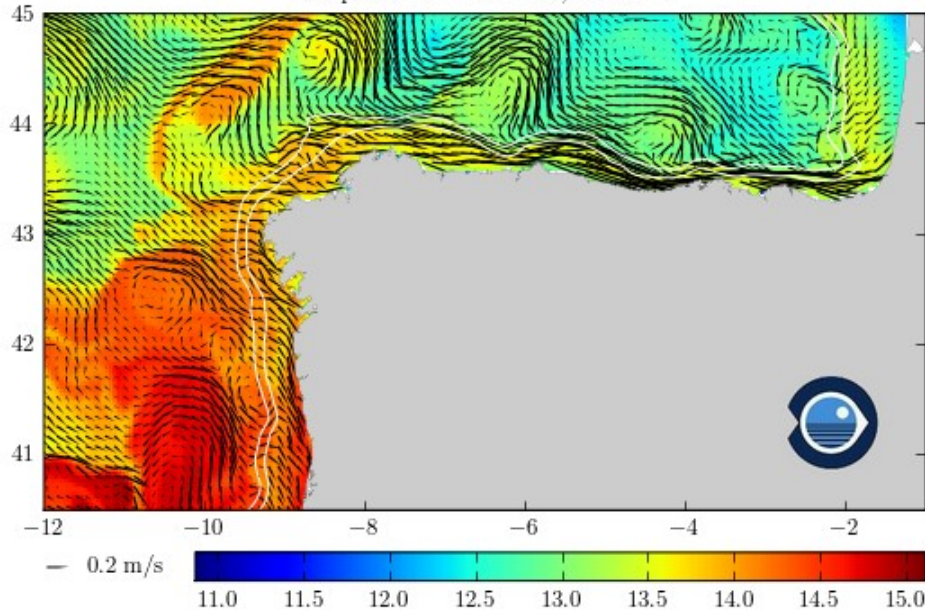


At least 3 buoys will be developed on-site. One for renewable energy at Duero river.
 Calibration lab at Galicia to complement IH's.
 Same validation techniques for all the network.
 All data distributed through RAIA via WMS and OpenDAP.

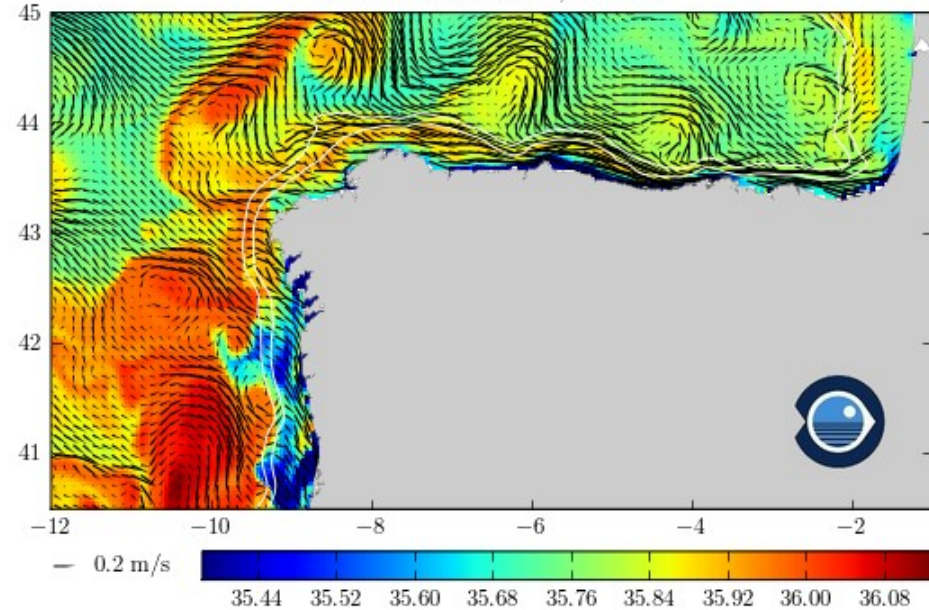


Hydrodynamic model at IEO

temp & currents - surface, 28-3-2008



salt & currents - surface, 28-3-2008



Run in several hindcast and forecast exercises 2006-2007

Operational february 2007-autumn 2008. Daily forecasts again in 2009 (for RAIA).

Every day at 9:00, a 3 day forecast is launched

3d fields of T,S and currents in the area are provided

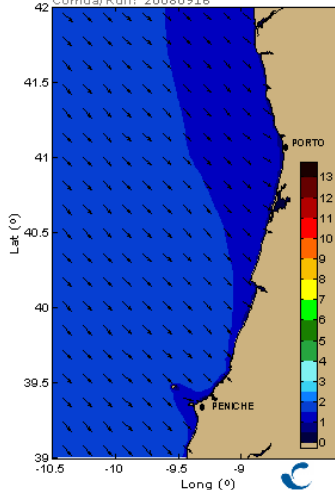
Results available in an internal web server: Python code developed



Altura Significativa (m) e Direcção de Pico (°)
Significant Height (m) and Peak Direction (°)

Análise/Nowcast 20080916 00:00

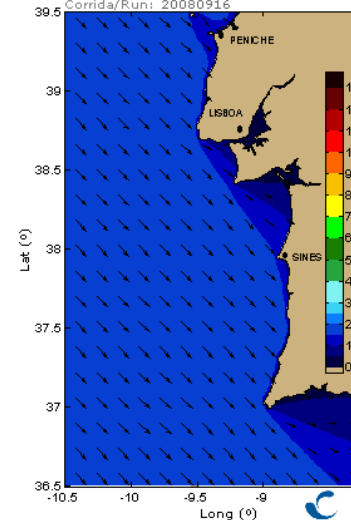
Corrida/Run: 20080916



Altura Significativa (m) e Direcção de Pico (°)
Significant Height (m) and Peak Direction (°)

Análise/Nowcast 20080916 00:00

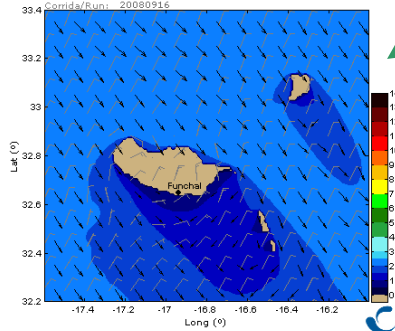
Corrida/Run: 20080916



Altura Significativa (m) e Direcção de Pico (°)
Significant Height (m) and Peak Direction (°)
Intensidade (nós) e Direcção do Vento (°)
Wind Speed (knots) and Direction (°)

Análise/Nowcast 20080916 00:00

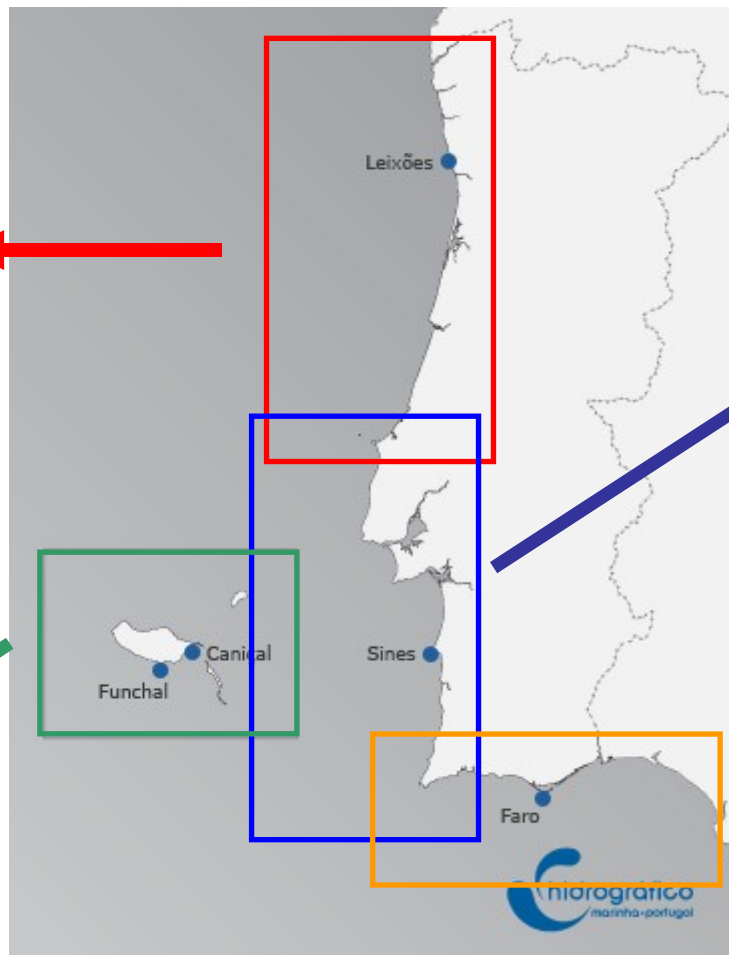
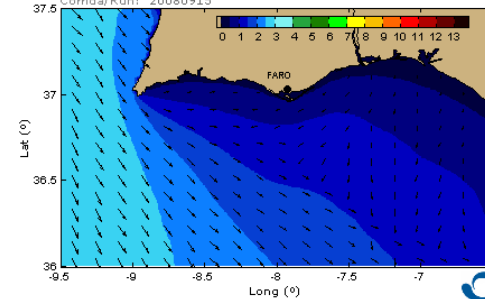
Corrida/Run: 20080916



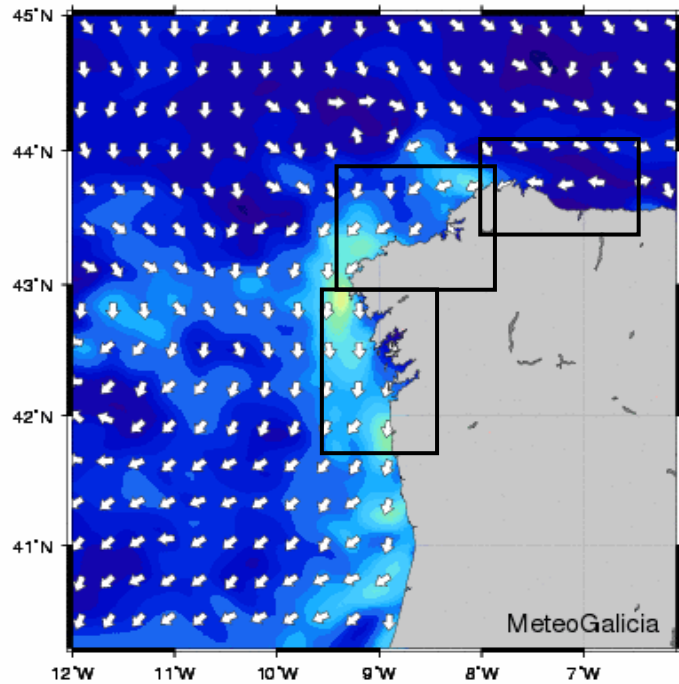
Altura Significativa (m) e Direcção de Pico (°)
Significant Height (m) and Peak Direction (°)

Análise/Nowcast 20080915 00:00

Corrida/Run: 20080915

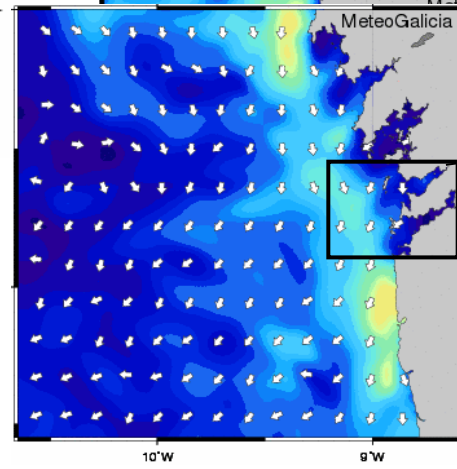
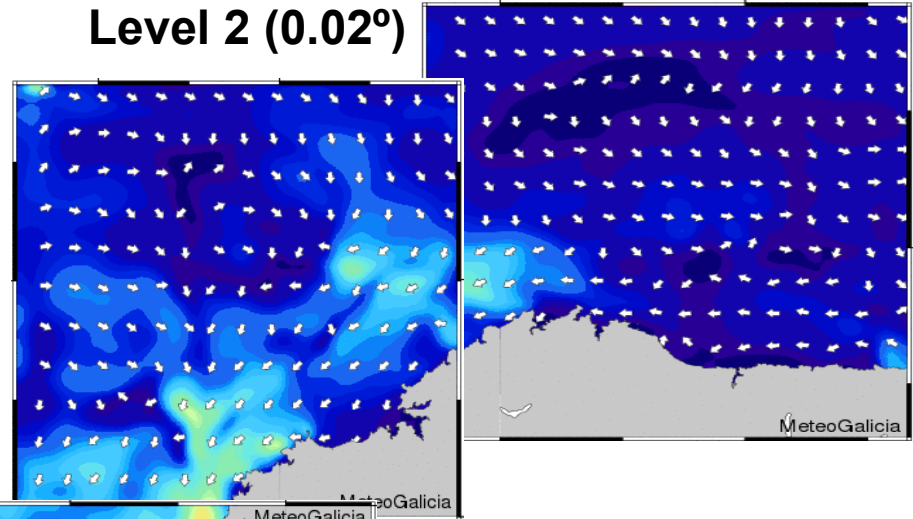


Hydrodynamic models at MeteoGalicia

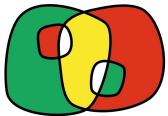
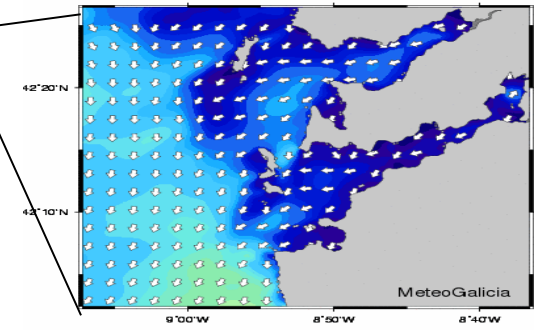


Level 1 (0.06°)

Level 2 (0.02°)



Level 3 (500 m)



Forecasting models

Regional scale

Local scales Harbors

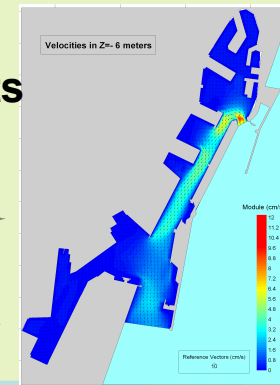
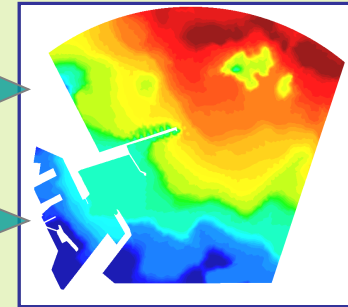
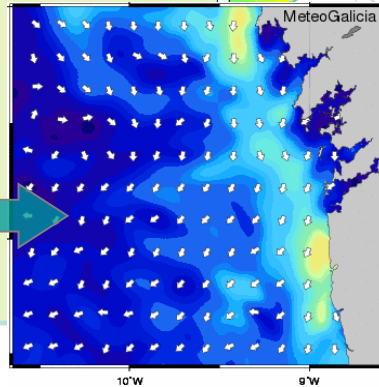
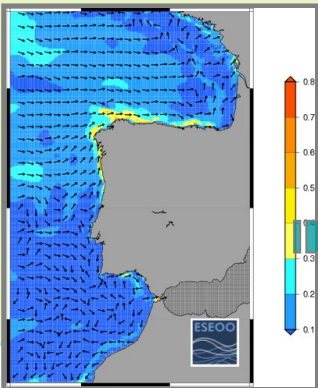
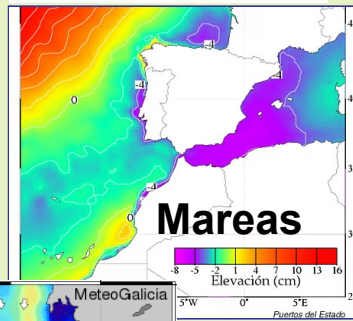
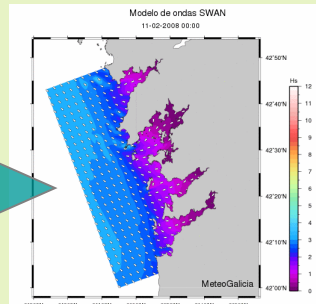
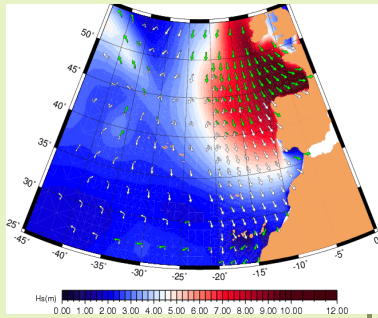
Waves

Waves

Currents

Currents

Water quality



Main points...

To consolidate operational oceanography at the Western Iberian Peninsula by improving the observational network and the operational forecasting models.

At least 5 new buoys complementing the existing network. New technological developments.

A single web server to visualize all the information for the Western Iberian Peninsula.

Specific tools for end-users; harbors of Vigo, Leixoes and Viana do Castelo, fishermen, renewable energy, tourism, etc.

The initial seed for a future oceanic observatory at the Western Iberian Peninsula.

