Iceland Liechtenstein Norway grants

Closing Event of the PT02 Programme

Integrated Marine and Coastal Waters Management "Achieved Outcomes"

December 6th - Lisbon

REPÚBLICA PORTUGUESA
MAR

dgpm
Direção-Geral de Política do Mar

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SIMOCEAN

SYSTEM FOR INTEGRATED MONITORING OF THE OCEAN

Open Data and Services Platform for Portuguese Institutions

Nuno Almeida

DEIMOS Engenharia

REPÚBLICA PORTUGUESA
MAR

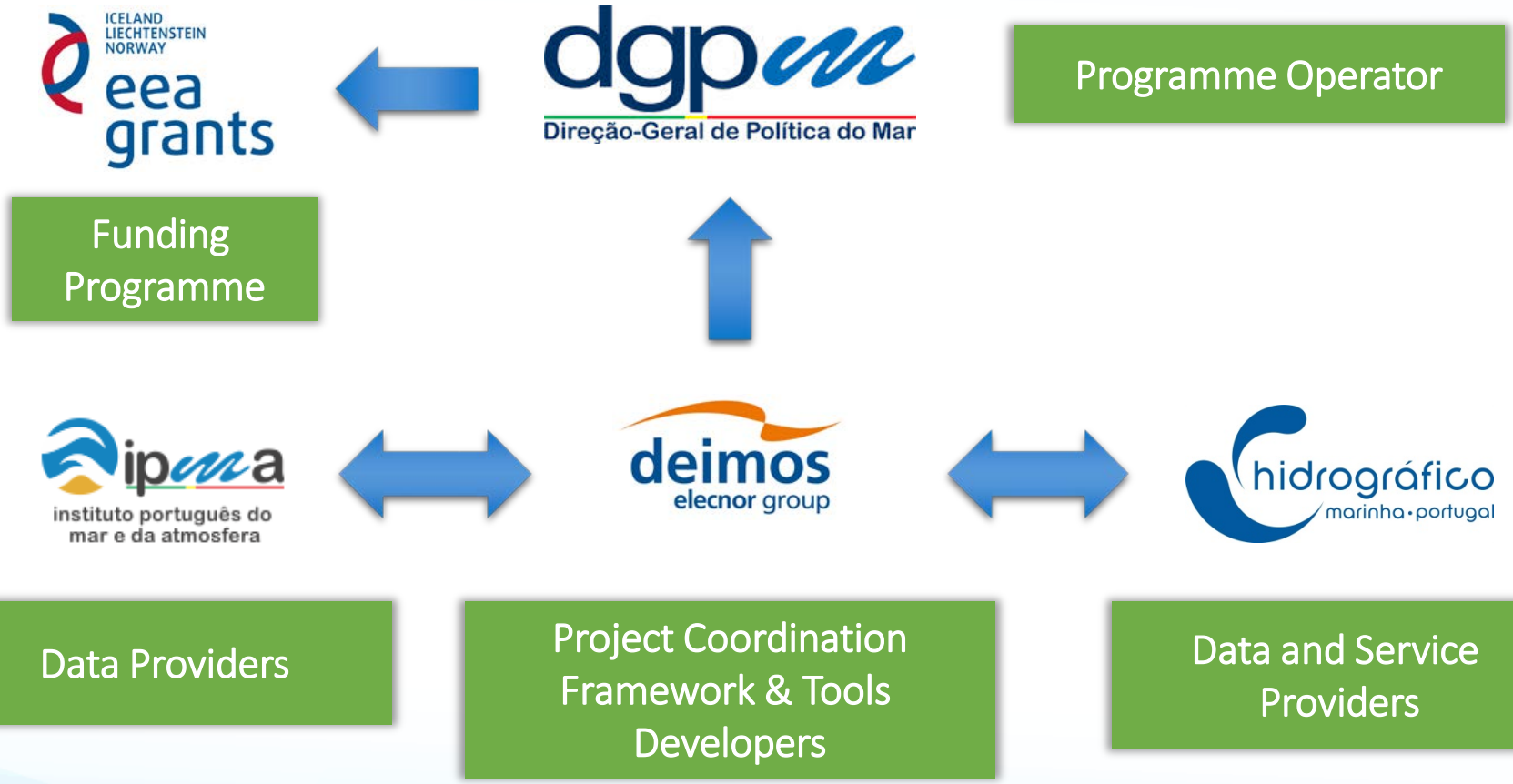
dgpm
Direção-Geral de Política do Mar

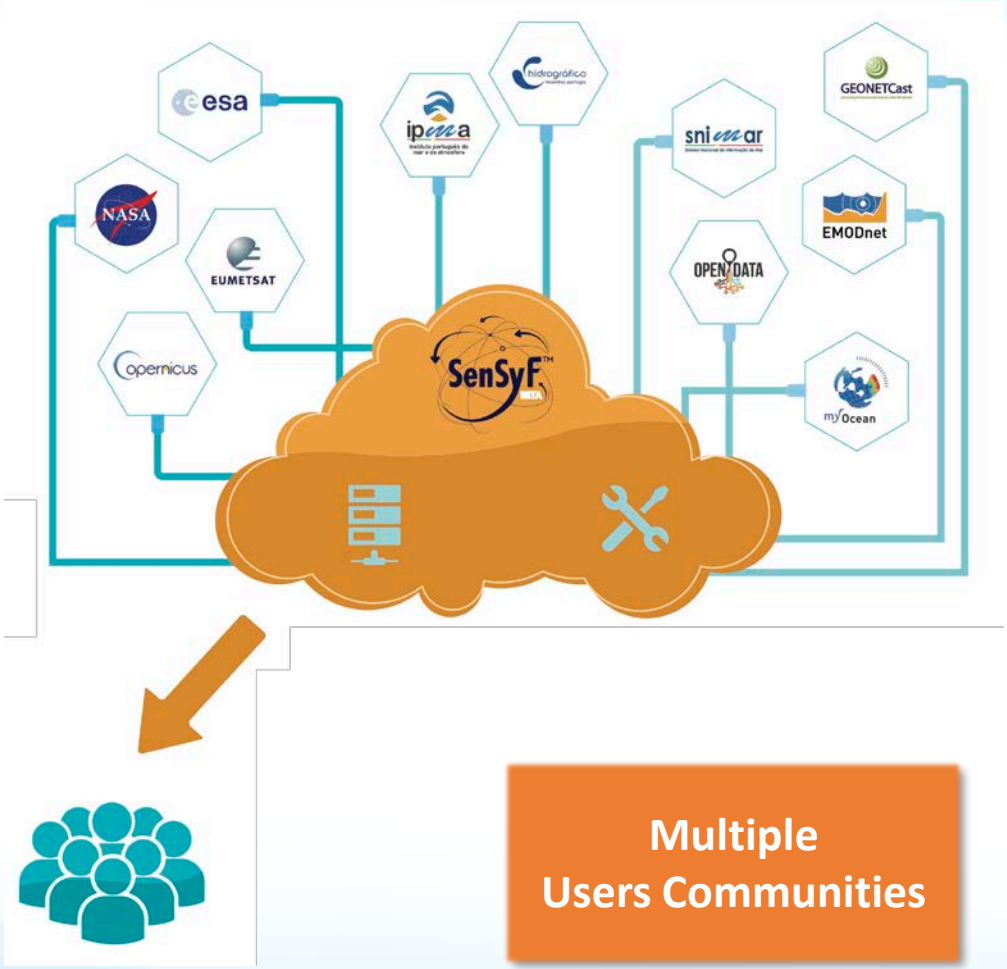
- **SIMOcean** aims to contribute for the improvement of the National marine management, monitoring and vigilance capabilities
- Aggregates data from wide variety of sources:
  - Earth Observation
  - Meteorological Data
  - Maritime Environmental Monitoring Data
  - Other Applicable Open Data Sources
- Data is available on a Cloud Environment
  - For the development and exploitation of **new Value Added Services**

Schedule

Start: 09/2015

Finish: 04/2017


ICELAND LIECHTENSTEIN NORWAY
eea grants
dgpm
Direção-Geral de Política do Mar
Programme Operator
Funding Programme
ipma
instituto português do mar e da atmosfera
deimos
elecnor group
hidrográfico
marinha · portugal
Data Providers
Project Coordination Framework & Tools Developers
Data and Service Providers

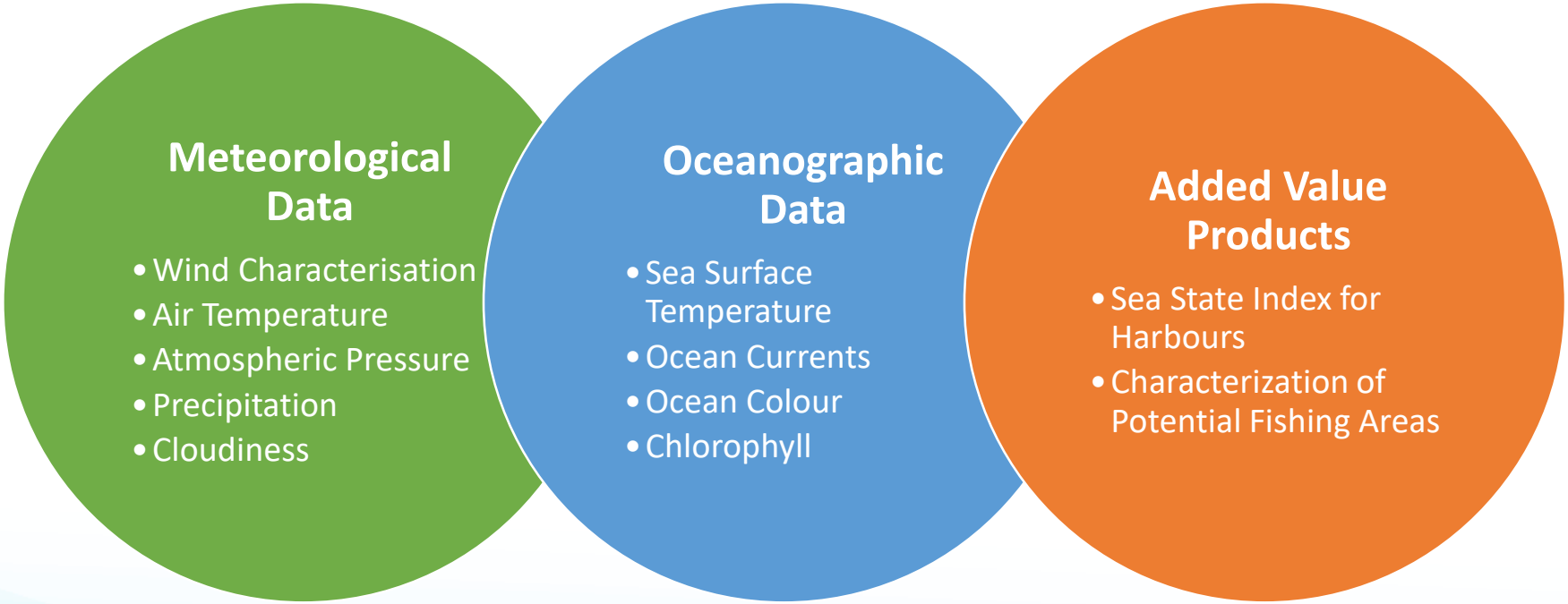


Wide Variety of Data Sources

Cloud Computing Capabilities for Data Fusion

Multiple Users Communities

DATA CATALOGUE



FISHING AREAS CHARACTERIZATION

Prediction of fish distributions and potential areas of catch for the main species along the Portuguese coast

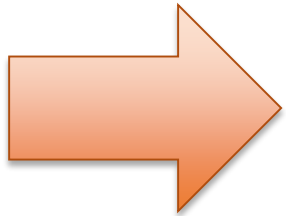
SEA STATE INDEX FOR HABOUR APPROACHES

To provide access to real-time sea state information based on high-resolution forecast models for the port authorities.

COMPARISON OF METEO-OCEANOGRAPHIC PARAMETERS

Integrated web visualization environment of different meteo-oceanographic fields

- Quick and User Friendly Search Interface
  - Web and REST
- Scalable
- Interoperable capabilities with European Open Data portals
- Easy to deploy and expand capabilities
- Open Source
- Support several metadata profiles
  - INSPIRE, DCAT



ckan

http://catalogue.simocean.pt

/ Organizations / CMEMS / **Observed Sea Surface ...**

Observed Sea Surface Temperature

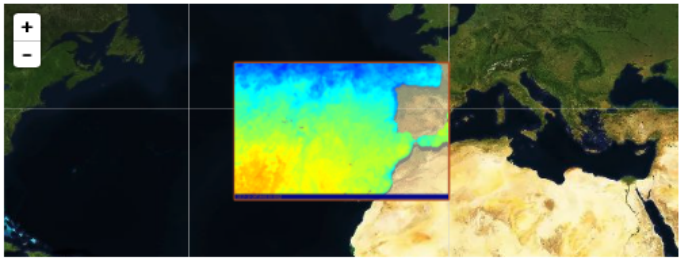
Dataset | Groups | Activity Stream | Manage

Organization

CMEMS

The CMEMS provides regular and systematic core reference information on the state of the physical oceans and regional seas. The observations and forecasts produced by the... read more

Dataset extent



Map data © OpenStreetMap contributors
Tiles by MapBox

Observed Sea Surface Temperature

O produto observação tri-horária da temperatura da superfície do mar é gerado para a região da Europa pelo satélite multi-sensor L4 (dia e noite), é uma análise com uma resolução horizontal de 2km e que contém o sinal de aquecimento diurno.

Data and Resources

Product Download — Explore

GIF Preview ... — Explore

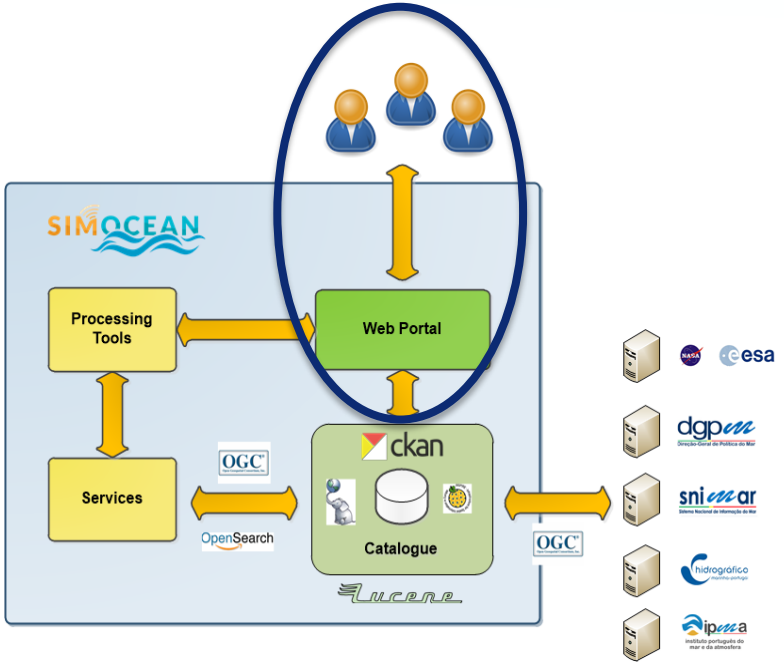
XML Metadata Download ... — Explore

CMEMS | Características oce... | Observação da Terra | Oceanografia | Temperatura da supe...

Additional Info

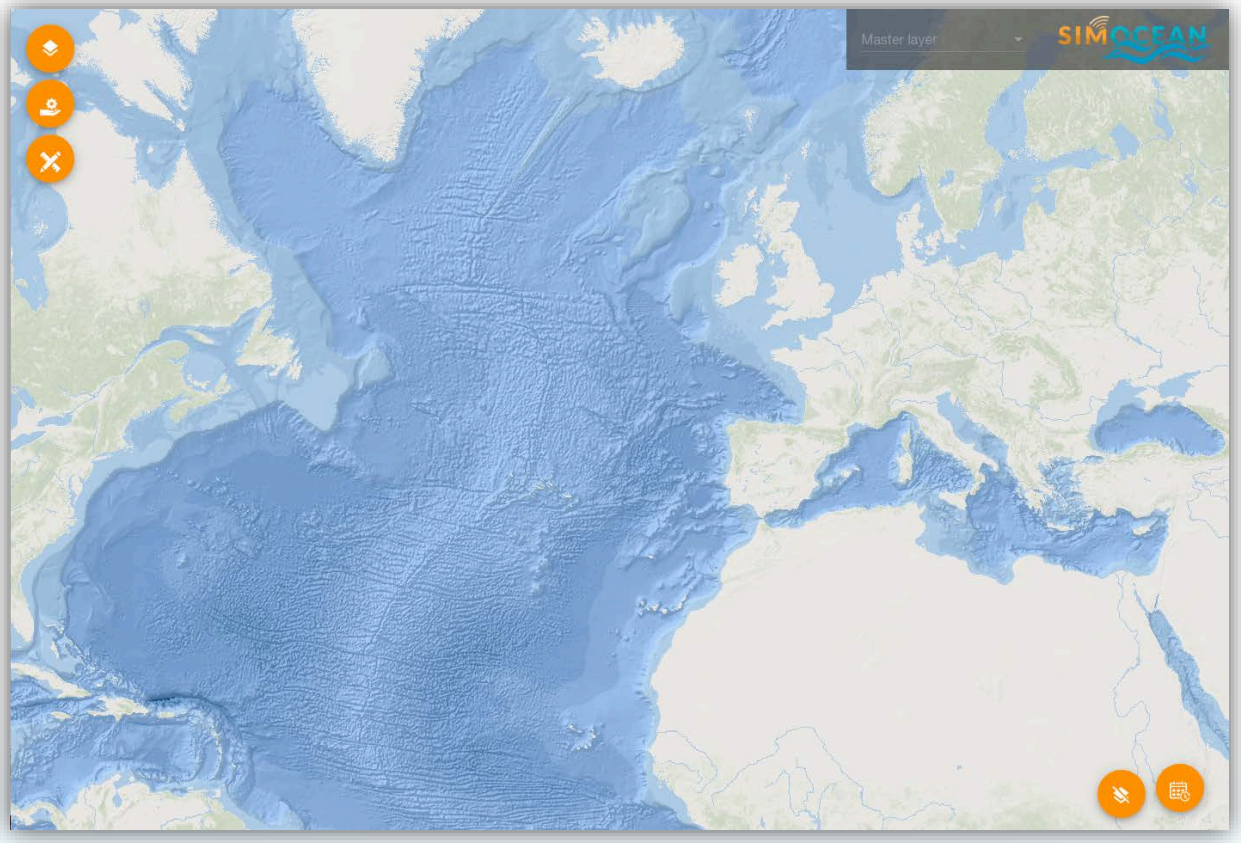
Field	Value
State	active
Last Updated	October 30, 2017, 7:00 AM (UTC+00:00)
Created	October 30, 2017, 7:00 AM (UTC+00:00)
Contact	OSI-METNO-OSLO-NO (SD)
Contact Email	marine-servicedesk@met.no
CreationTime	2017-10-30T00:00:00.000000Z
Limitations On Public Access	See Copernicus Marine Environment Monitoring Service Data commitments and licence at: http://marine.copernicus.eu/web/27-service-commitments-and-licence.php
Lineage	Esta análise SST é gerada pelo Meteo France CMS para a região da Europa. Este produto é um produto tri-horário construído com L3S tri-horários provenientes de produtos (agrupados) mono-sensor L3 gerados a partir de amostras ploarizadas, com resolução de 0,02 graus e

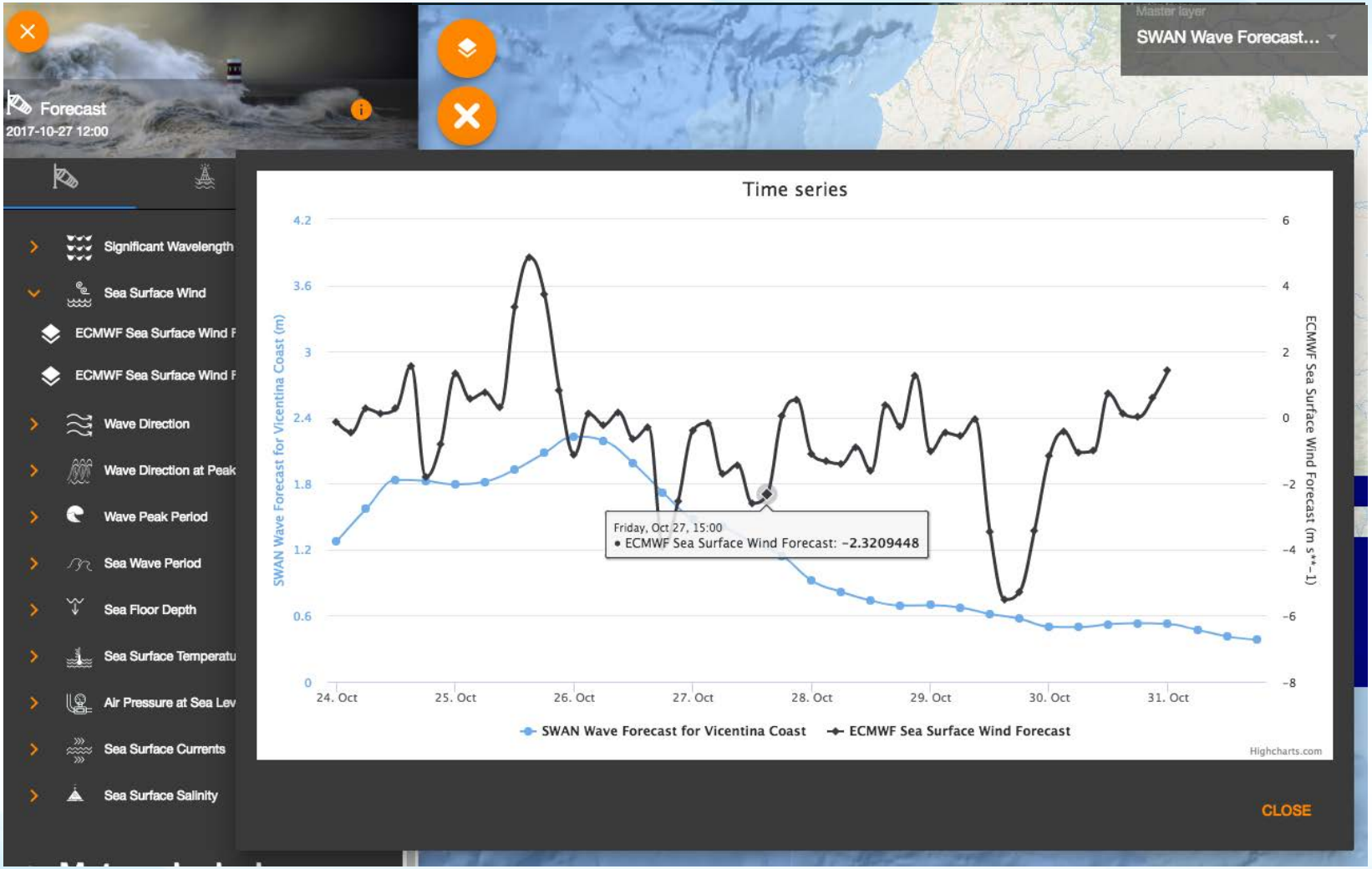
- Main entry point for the end users to view all datasets available
  - Maps
  - Plots
  - Animations

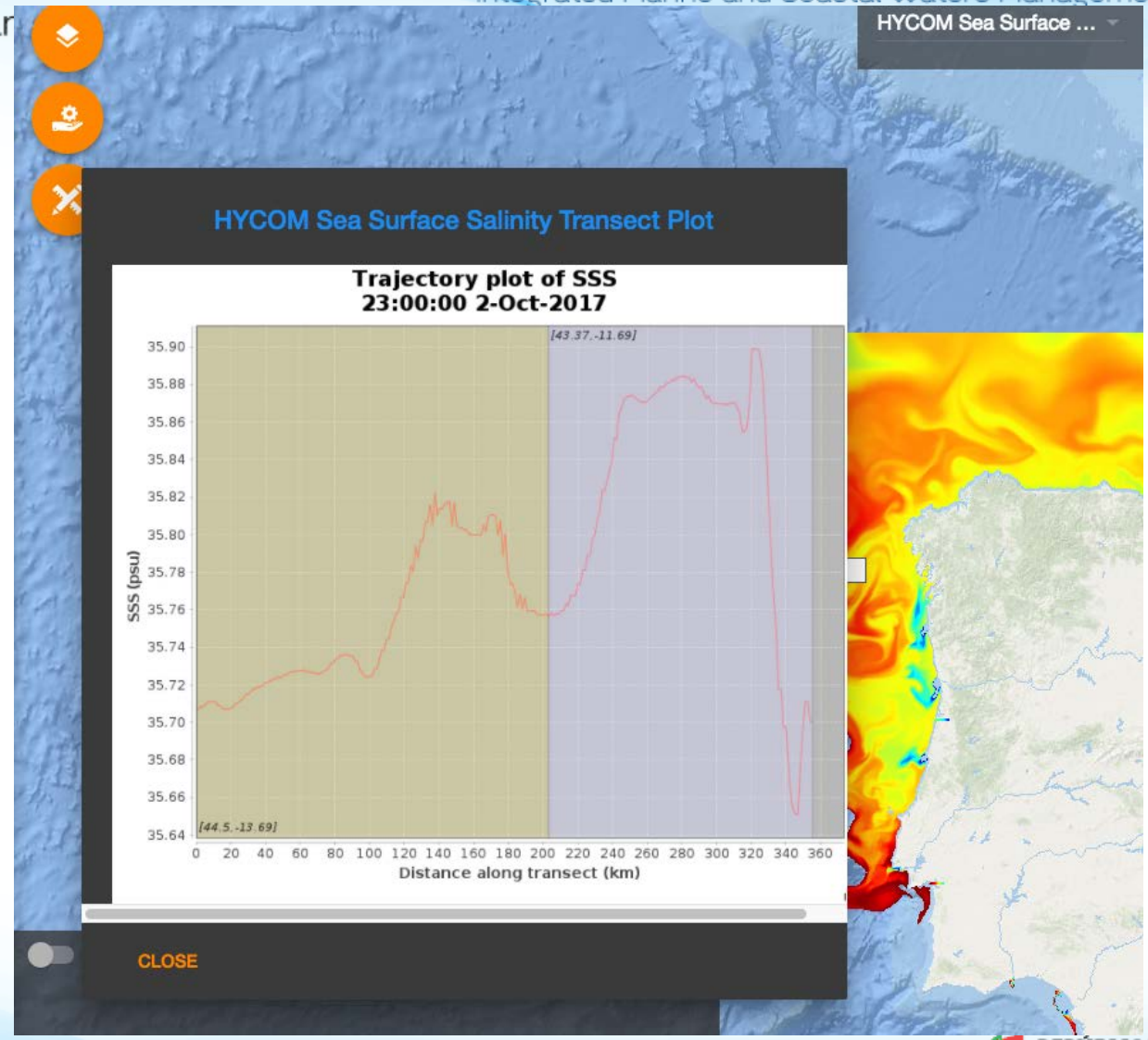


- To provide unique visualization capabilities according to the use cases and end users needs.
- Facilitate the analysis on the data/services available

http://geoportal.simocean.pt




Forecast
2017-10-27 12:00
Master layer
SWAN Wave Forecast...
Significant Wavelength
Sea Surface Wind
ECMWF Sea Surface Wind F
ECMWF Sea Surface Wind F
Wave Direction
Wave Direction at Peak
Wave Peak Period
Sea Wave Period
Sea Floor Depth
Sea Surface Temperatu
Air Pressure at Sea Lev
Sea Surface Currents
Sea Surface Salinity
Time series
SWAN Wave Forecast for Vicentina Coast (m)
ECMWF Sea Surface Wind Forecast (m s**-1)
4.2
3.6
3
2.4
1.8
1.2
0.6
0
6
4
2
0
-2
-4
-6
-8
24. Oct
25. Oct
26. Oct
27. Oct
28. Oct
29. Oct
30. Oct
31. Oct
Friday, Oct 27, 15:00
• ECMWF Sea Surface Wind Forecast: -2.3209448
SWAN Wave Forecast for Vicentina Coast
ECMWF Sea Surface Wind Forecast
Highcharts.com
CLOSE


HYCOM Sea Surface ...
HYCOM Sea Surface Salinity Transect Plot
Trajectory plot of SSS
23:00:00 2-Oct-2017
[43.37.-11.69]
[44.5.-13.69]
SSS (psu)
35.90
35.88
35.86
35.84
35.82
35.80
35.78
35.76
35.74
35.72
35.70
35.68
35.66
35.64
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360
Distance along transect (km)
CLOSE

- Flexible platform able to communicate with different data provision systems from IH, IPMA, CMEMS
- Store datasets and metadata according to user needs
- Powerful search engine supporting queries through Web Portal or M2M
- Scalable platform supporting the integration of new services
- Catalogue is compliant with other initiatives:
  - SNIMAR, NIPIMAR, EMODNET, MyOcean
  - Through INSPIRE directive
  - OGC Standards

AKNOWLEDGEMENTS

- EEAGrants Programme
- DGPM
- Project Team

Thank You

http://www.simocean.pt

http://catalogue.simocean.pt

Http://geoportal.simocean.pt