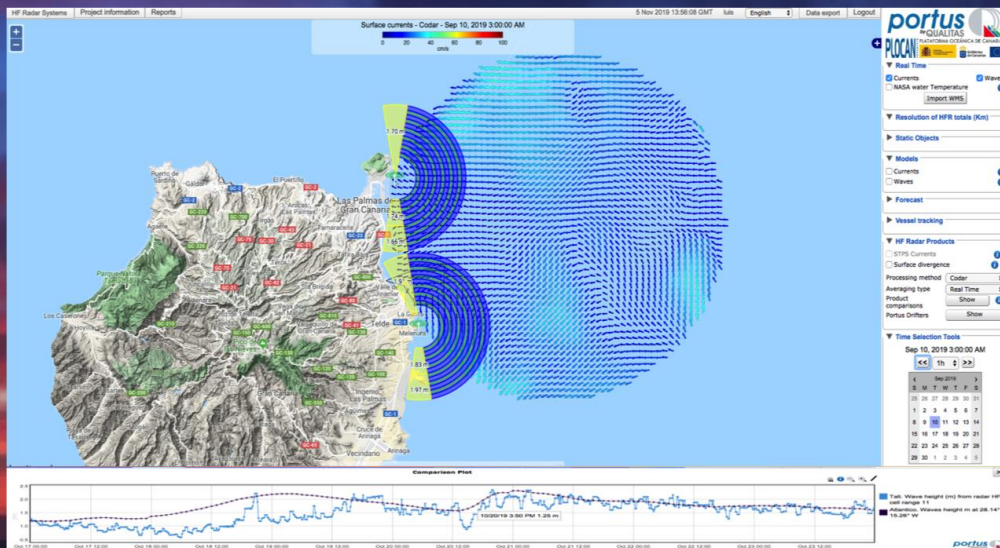


PORTUS Marine Information System: Adding value to CODAR SeaSonde HF radar data



COURTESY OF PLOCAN

Jorge Sanchez /
jorge.sanchez@qualitasremos.com
Andres Alonso-Martirena /
andres.alonso-martirena@qualitasremos.com



Outline

Introduction to PORTUS Marine Information System

CODAR SeaSonde HF radar data display

Added Value Products based on HF Radar data

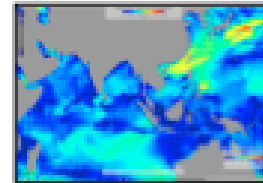
Additional Features (Export/sharing, monitor/report)

PORTUS References

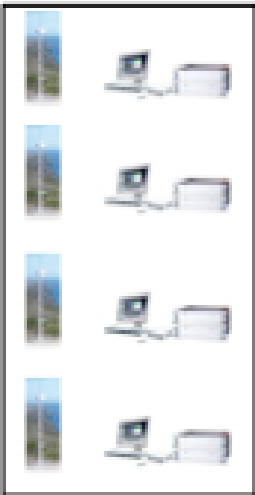
CODAR SeaSonde HF radar data display

Introduction to PORTUS

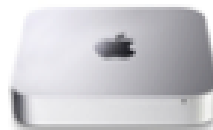
Numerical models (Winds, currents, short term currents forecast, particle trajectories, ...)



**SeaSonde HF
Radar Radial Sites**



**SeaSonde Central Site
Combining Station**



Web viewer

Monitoring System

OPeNDAP
(NetCDF)

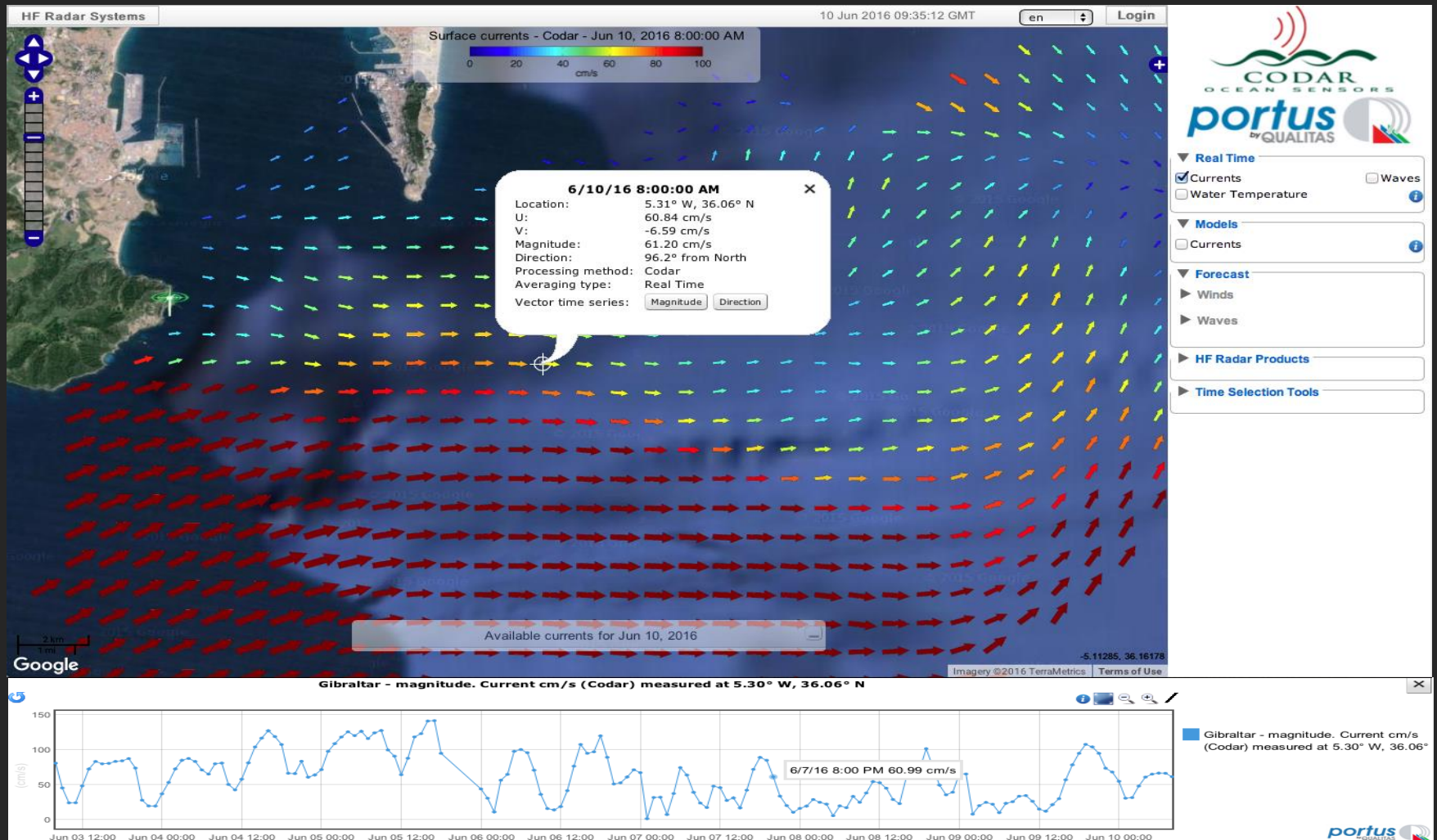
FTP Server

WMS Server
KMZ Export

Reporting System

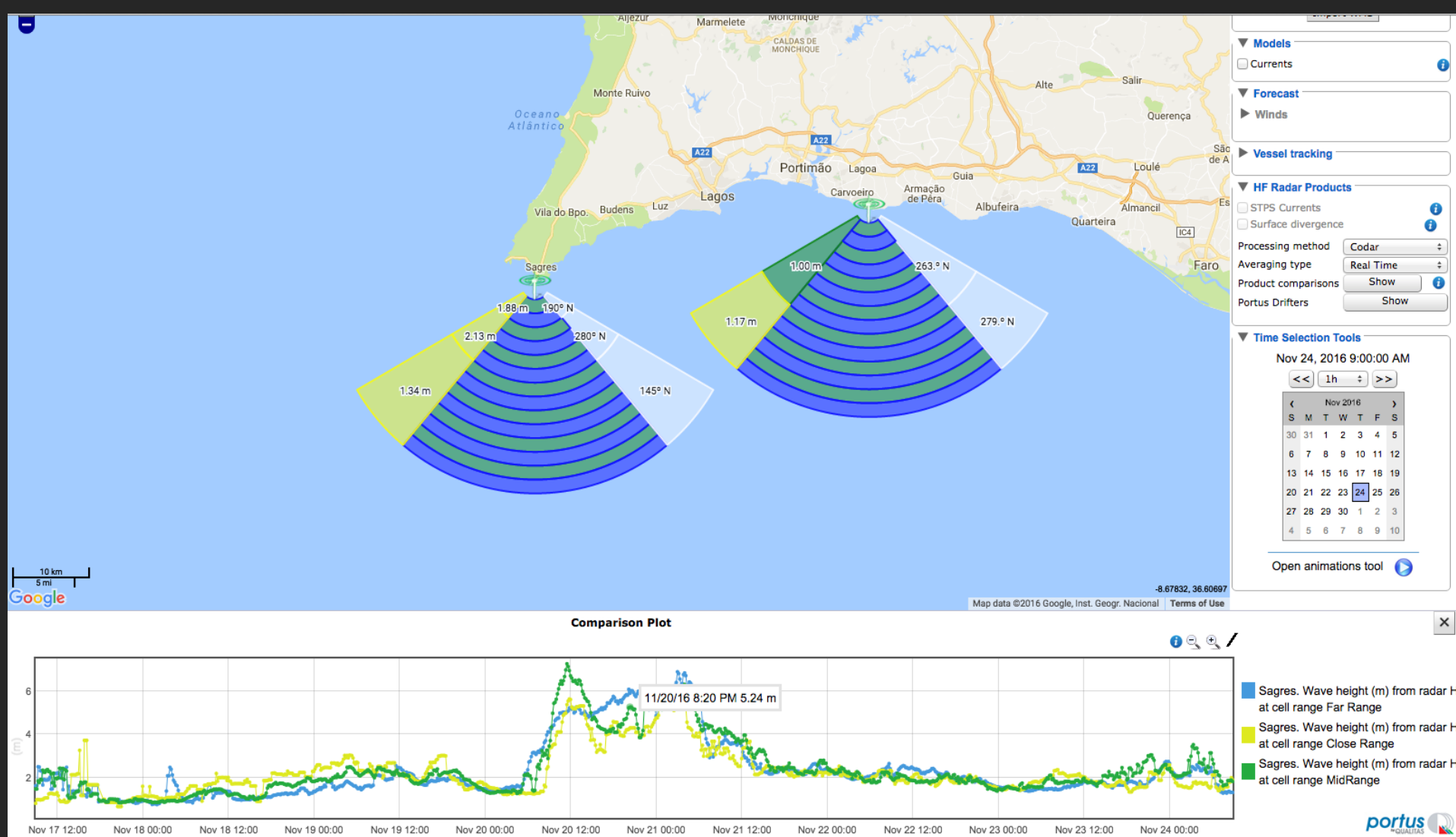
Added value
products

Hourly SeaSonde 2D surface currents fields



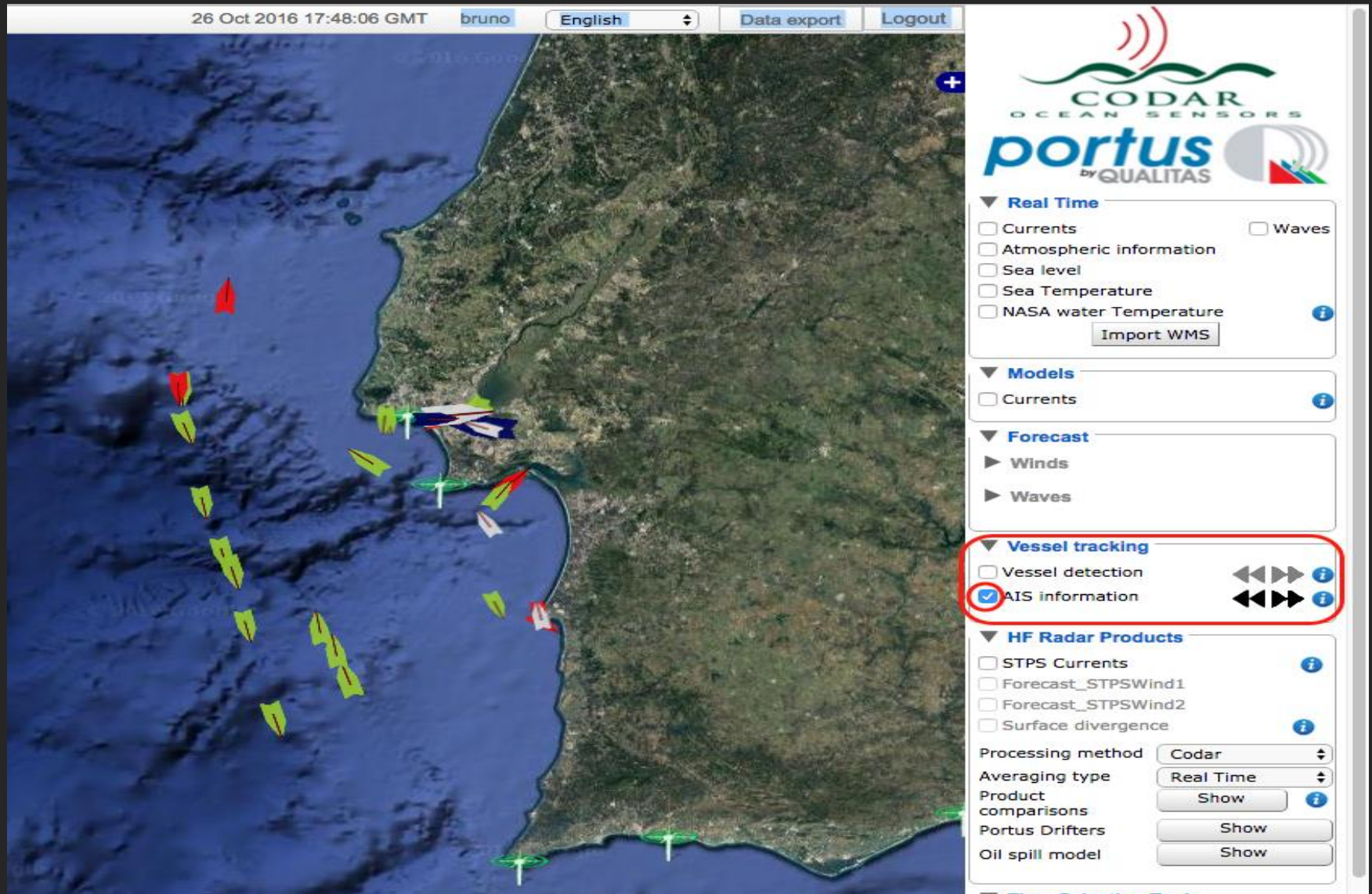
CODAR 2D currents map and time series

Half hourly SeaSonde waves



SeaSonde wave information from a system in Southern Portugal.
Inter-compare time series from different radar wave rings

CODAR AIS outputs

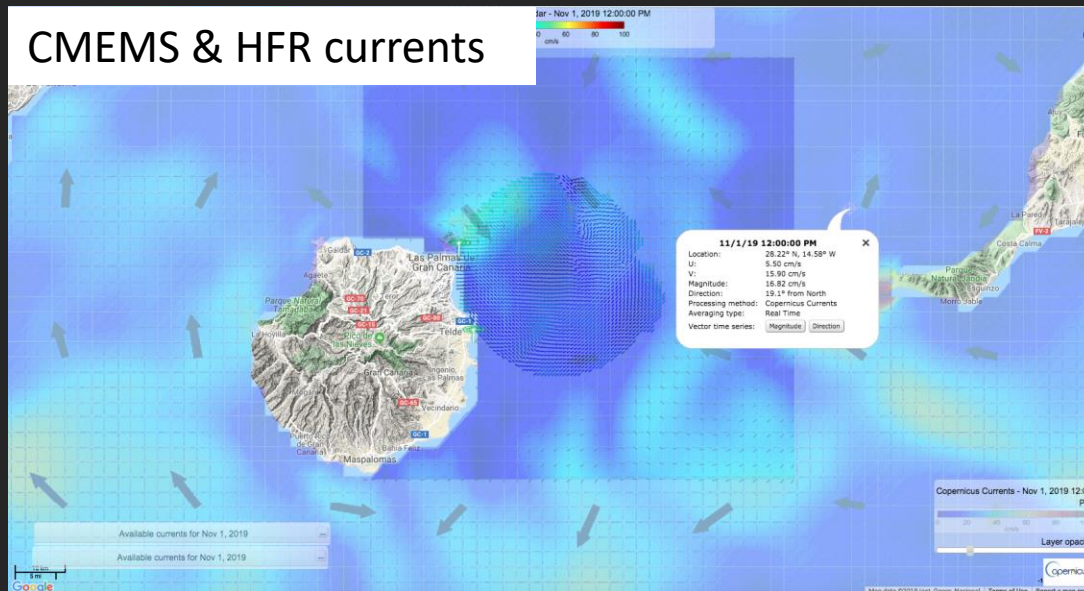


Example of AIS information in front of Lisbon, Portugal

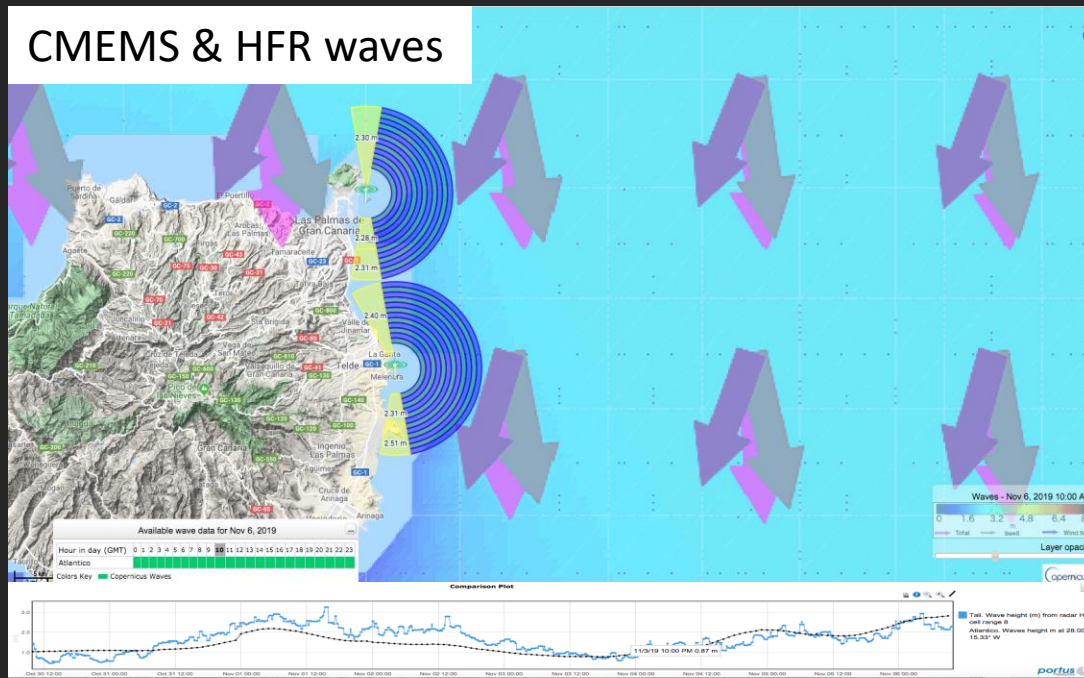
Added Value Products
based on HF Radar data
(few examples)

Numerical model skill score using HFR

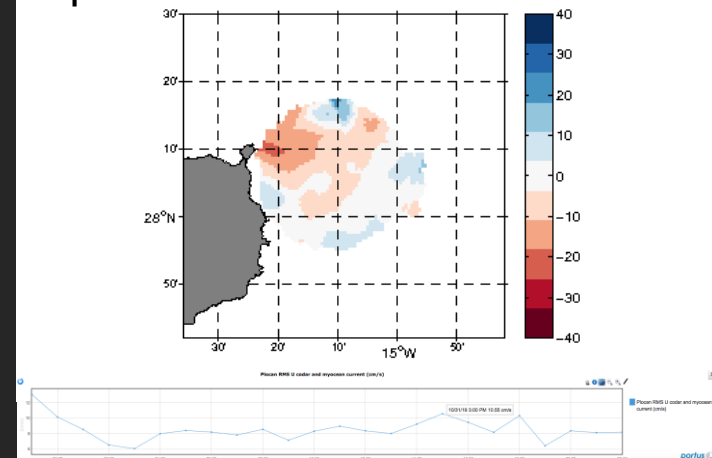
CMEMS & HFR currents



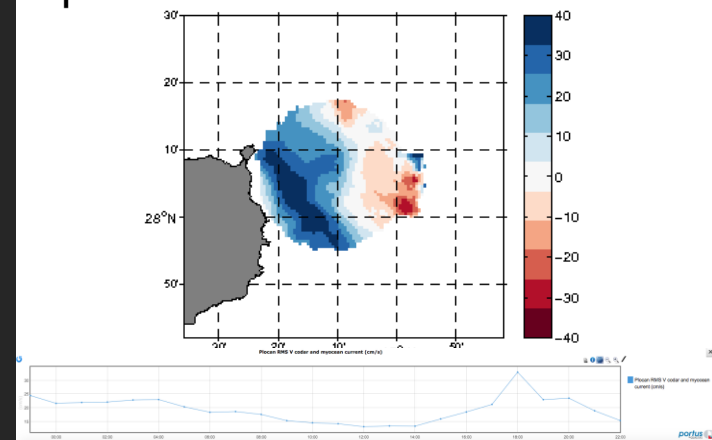
CMEMS & HFR waves



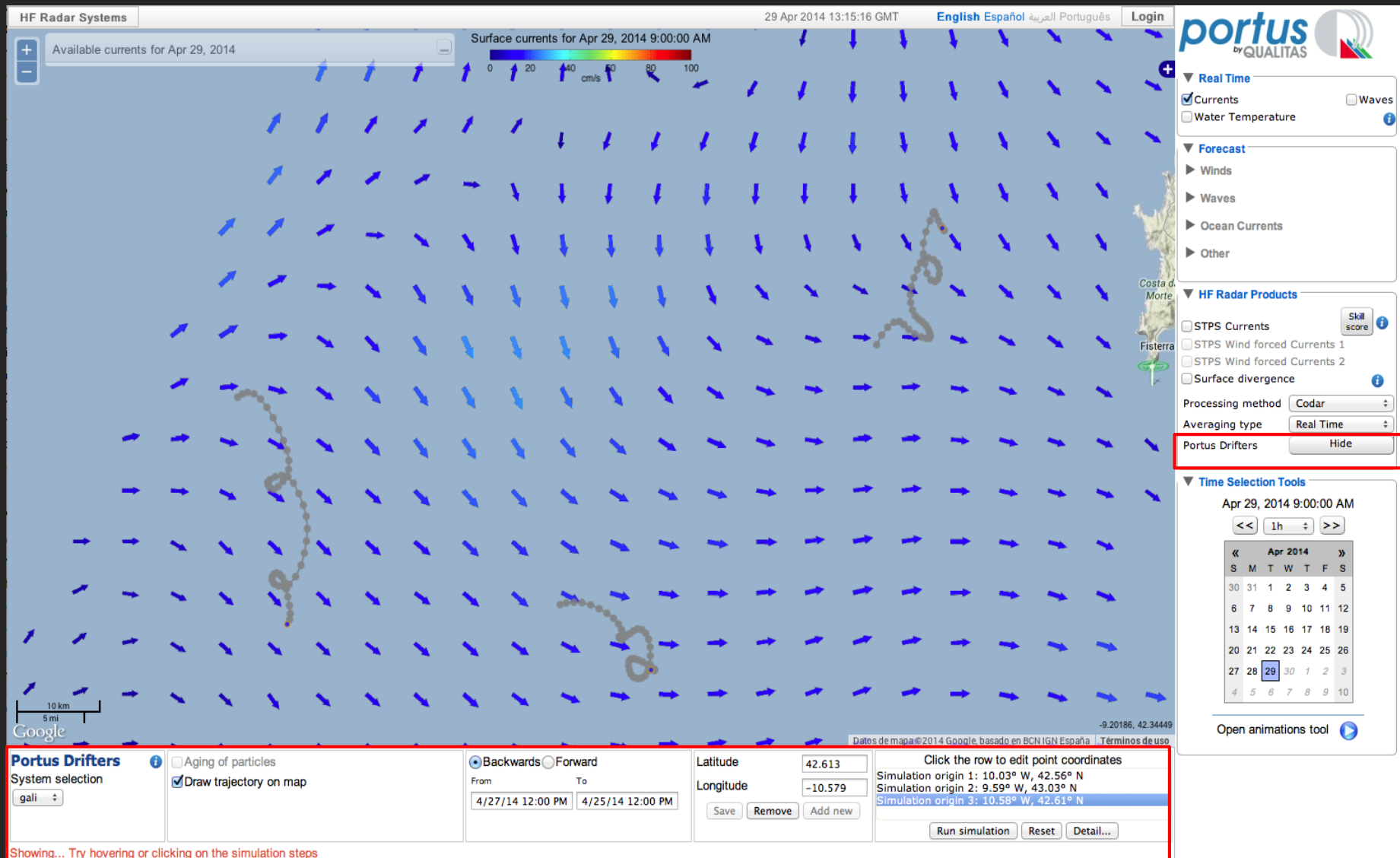
PLOC daily mean U component
31 Oct 01:00 to 01 Nov 00:00 CET 20
codar – myocean. Units: cm/s
Spatial mean rmseU: 5.8195cm/s



PLOC daily mean V component
31 Oct 01:00 to 01 Nov 00:00 CET 20
codar – myocean. Units: cm/s
Spatial mean rmseV: 17.0127cm/s

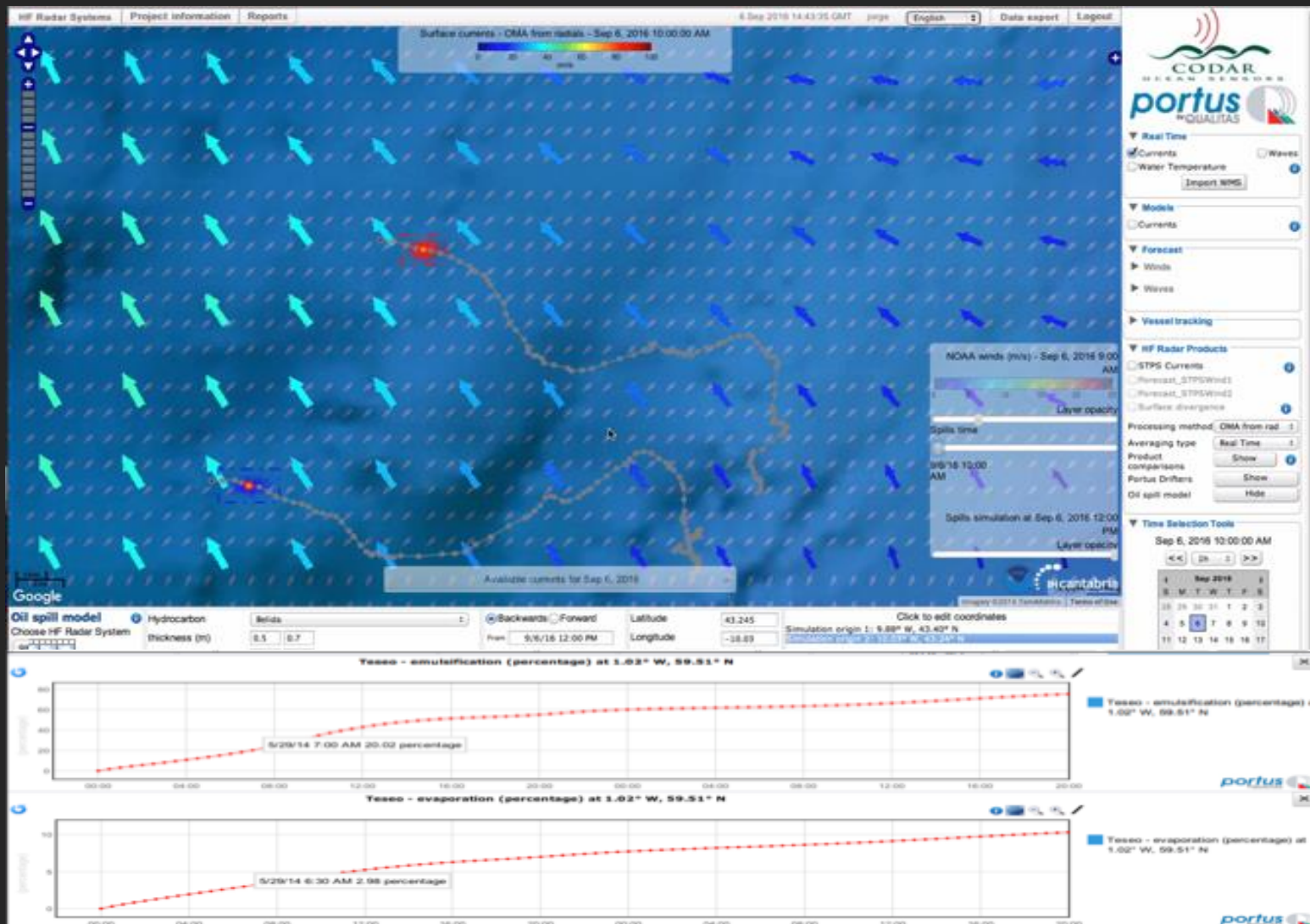


Particle trajectory/drift simulations



Example of a particle trajectory simulation using HFR surface currents fields

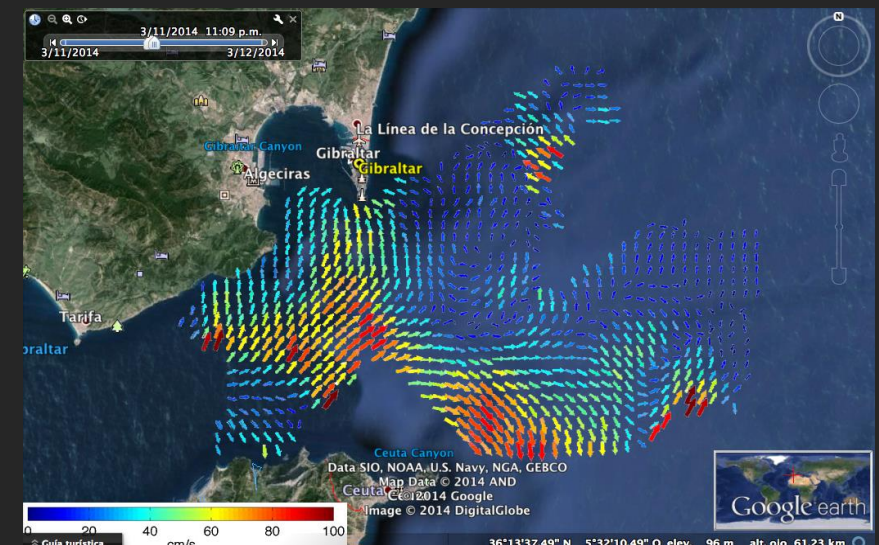
TESEO Oil spill transport and fate model (forced with HFR data)



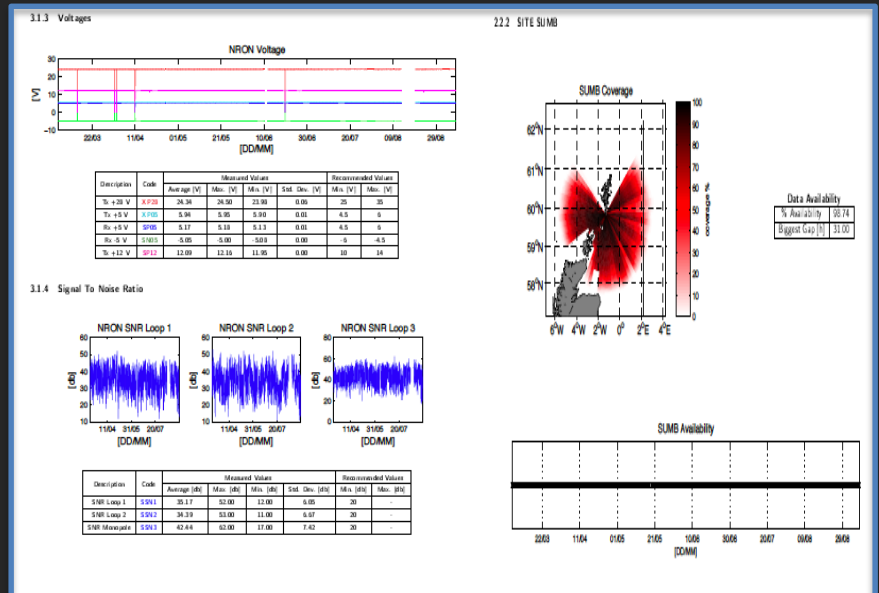
Example of an oil spill transport and fate simulation using HFR surface currents and wind fields as forcing

TESEO MODEL DEVELOPED BY HYDRAULIC INSTITUTE OF CANTABRIA

Additional features



Integrated Web Map Server to serve visual layers to other GIS

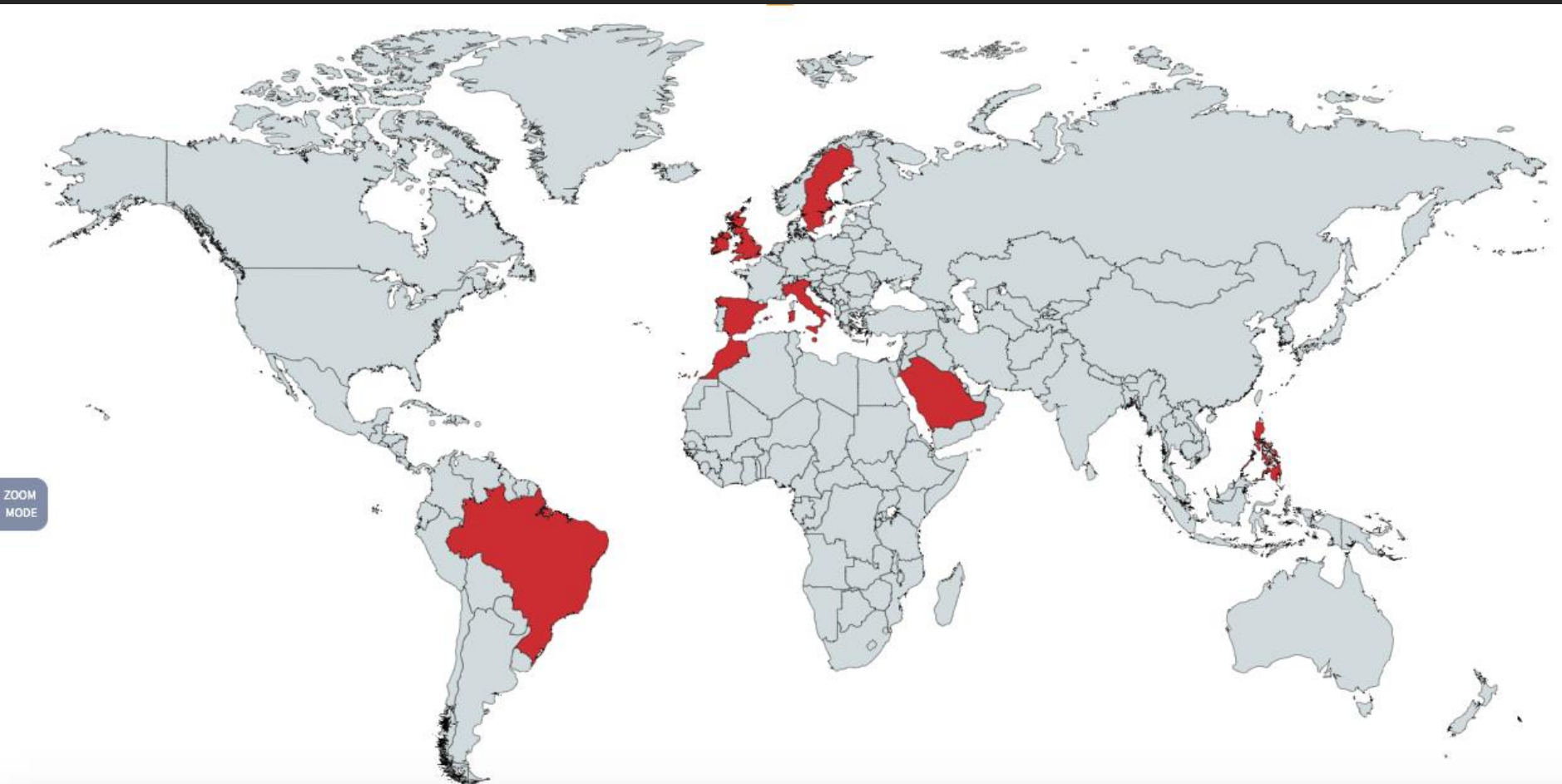


Automatic HFR reporting tool for user selectable periods to document system performance and optimize maintenance

PORTUS references

General PORTUS references

14 PORTUS Systems / 10 different countries / 4 continents
(Navies, Met-services, Ports, Universities, Private sector)



Obrigado!

