

EMODnet is a programme –
NOT yet another project....

Unlock the potential of Europe's marine knowledge

marine knowledge 2020

Planning 2011-2013



European
Commission
Maritime Affairs
and Fisheries

DG MARE



MARIA DAMAKI, COMMISSIONER FOR MARITIME AFFAIRS AND FISHERIES

(..) the data collected through these observations can only generate knowledge and innovation if Europe's engineers and scientists are able to find, access, assemble and apply them efficiently and rapidly. At present this is often not the case.



PREPARATORY ACTIONS

- set up prototype European Marine Observation and Data Network (ur-ENODnet) to provide access to observations and highlight gaps

- hydrography (water depth, coastlines ..)
- physics (temperature, currents waves ..)
- chemistry (concentrations in water, sediments, sea-life ..)
- biology (abundance and diversity ..)
- geology (sediments, hazards, erosion ..)
- habitats (common classification for European waters ..)

shipping, ports

coastal protection

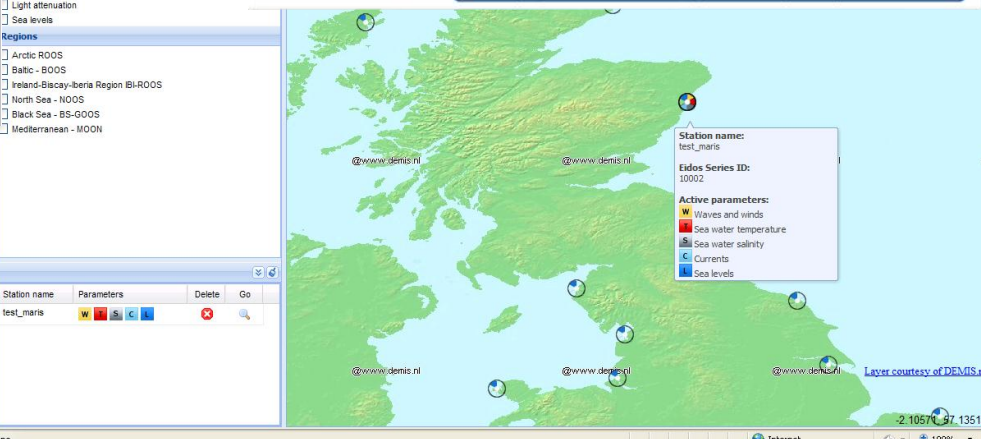
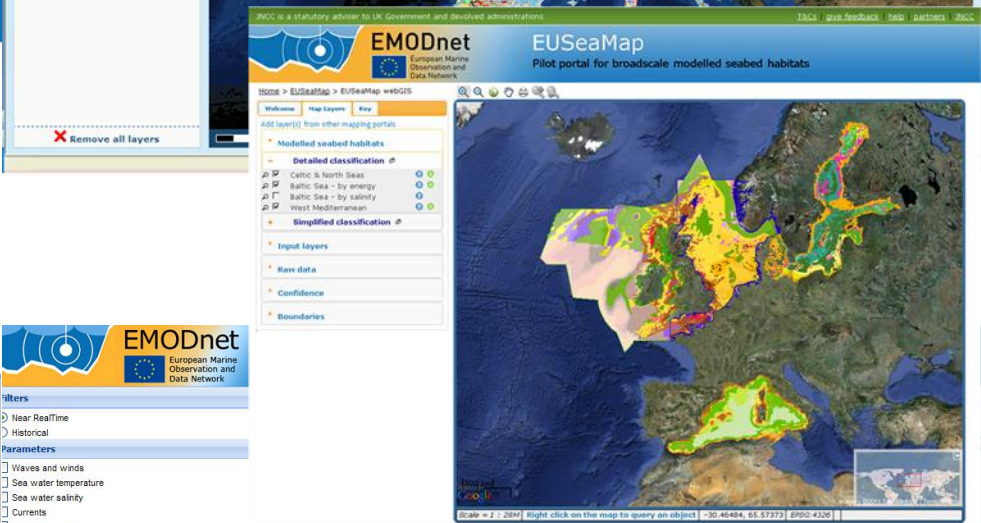
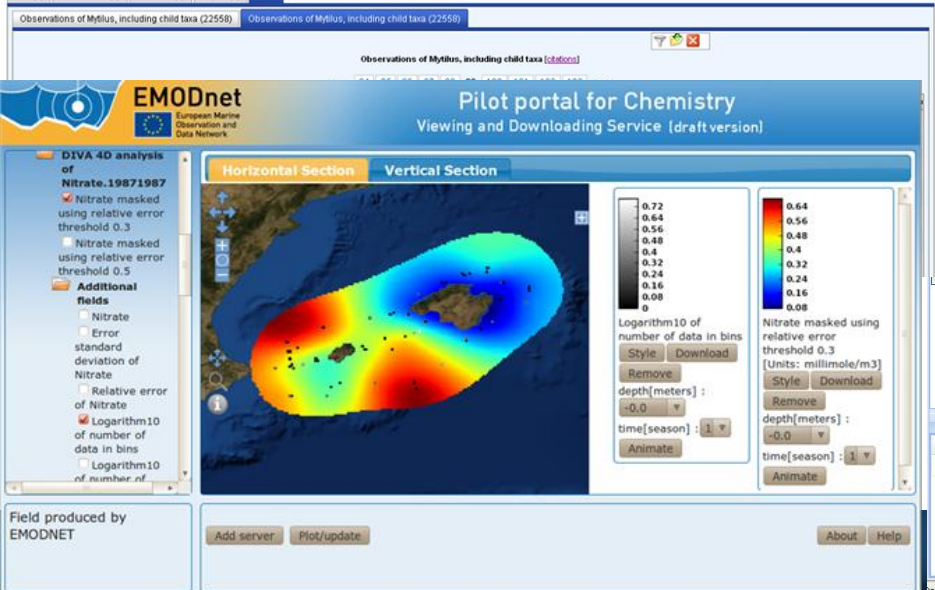
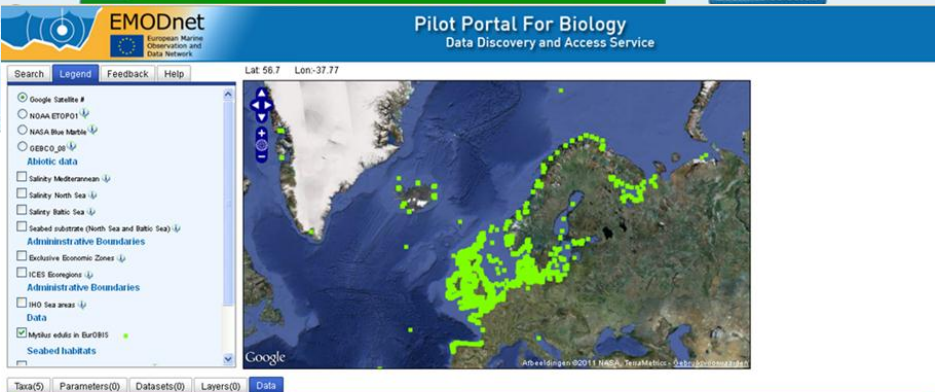
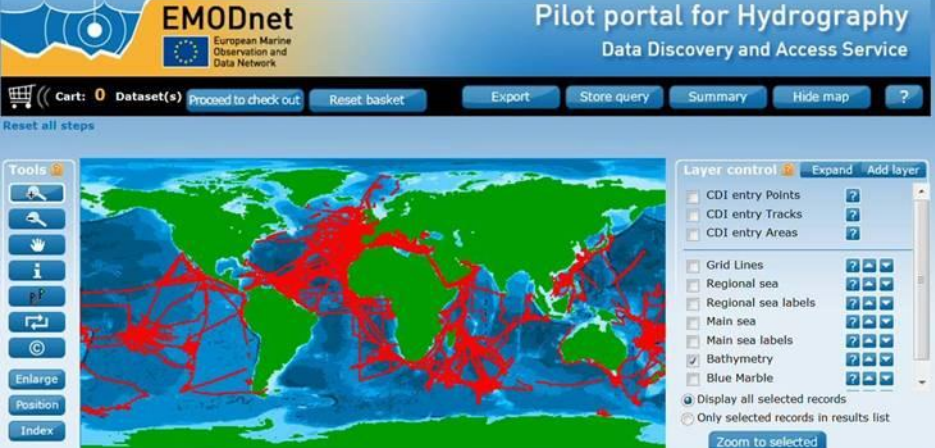
renewable energy

Marine Strategy Framework
Directive, protected areas

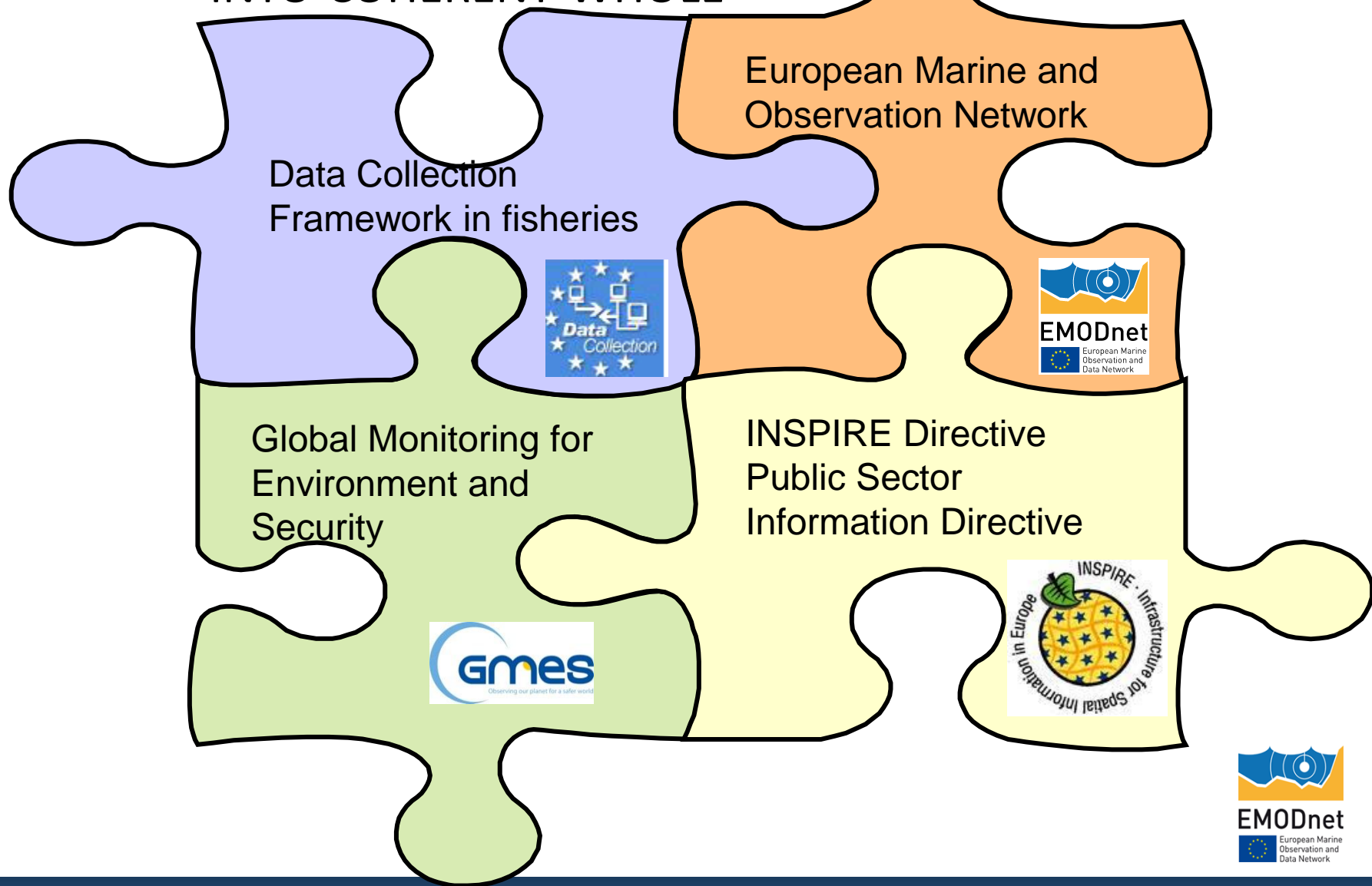
- 52 organisations from 24 countries

- Flanders Marine Institute/Vlaams Instituut voor de Zee(VLIZ), Royal Belgian Institute of Natural Sciences, University of Liege - GeoHydrodynamics and Environment Research (ULG) Belgium; Institute of Oceanology Bulgarian Academy of Science (IO-BAS), University of Cyprus-Oceanography Centre (OC) , Danish Environmental and Planning Agency (BLST), Danish Hydraulic Institute (DHI), Geological Survey of Denmark and Greenland, National Environmental Research Institute (NERI-MAR), Geological Survey of Estonia, Geological Survey of Finland,, Bureau de recherches géologiques et minières, Collecte Localisation Satellites (CLS), Institut Français de Recherche pour l'Exploitation de la Mer (Ifremer), Service Hydrographique et Oceanographique de la Marine (SHOM), Iv. Javakhishvili Tbilisi State University (TSU-DNA), Alfred Wegener Institute for Polar Research and the German Arctic Research Expedition (AWI), Bundesamt für Seeschifffahrt und Hydrographie (BSH-DOD), Federal Institute for Environmental and Natural Resource Research (BfN), University of Bremen (UniHB), Hellenic Centre for Marine Research (HCMR), Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (INOG), Istituto Nazionale per lo Studio e la Cura degli Ambienti (ISPRA), Latvian Environmental Centre (LEC), Institute of Geography, ATLAS, Deltares, Mariene Wetenschappen (NIOZ), Netherlands Institute of Oceanography (NIOZ), Norwegian Institute of Marine Research (NIMR), Norwegian Marine Data Centre - Institute of Marine Research (IMR), Norwegian Institute of Marine Research and Development "Grigore Antipa" (NIMR), Norwegian Institute of Hydro-meteorological Information -(RIHMI-WDC), P.P. Shirshov Institute of Oceanology Russian Academy of Science (SIO-RAS), Instituto Español de Oceanografía (IEO), Geological Survey of Sweden, Sveriges Meteorologiska Och Hydrologiska Institut (SMHI), Swedish Environmental Protection Agency, Institute of Biology of the Southern Seas, National Academy of Sciences of Ukraine (IBSS NASU), Marine Hydro-physical Institute (MHI), Joint Nature Conservation Committee Support Co, NERC, National Oceanography Centre Southampton (NOC), NERC, British Geological Survey, Edinburgh (BGS), NERC British Oceanographic Data Centre, Liverpool (BODC), Rutgers University; Institute for Marine and Coastal Sciences (IMCS), International Council for the Exploration of the Sea (ICES), The Global Biodiversity Information Facility (GBIF), UNEP/GRID-Arendal,

€6,450,000



INTEGRATES EU INITIATIVES INTO COHERENT WHOLE





Service Contract. No. MARE/2010/02

**Preparatory Actions for European Marine Observation and
Data Network**

Physical Parameters Lot [SI2.579120]



Objectives of DGMARE tender

- Provide access to archived and real-time data on physical conditions in Europe's seas and oceans and to determine how well the data meet the end user needs.
- Make layers of physical data and their metadata available for use by industry, public authorities and scientists
- Contribute towards the definition of an operational European Marine Observation and Data Network (EMODnet)

EMODnet PP – the Methodology

- Provide through a portal:
 - free and open access to marine data from fixed measurement stations and ferryboxes.
 - metadata to these parameters using INSPIRE standards.
- Monitoring and reporting on the effectiveness of the portal in meeting the needs of users in terms of ease of use, quality of information and fitness for purpose of the products delivered.

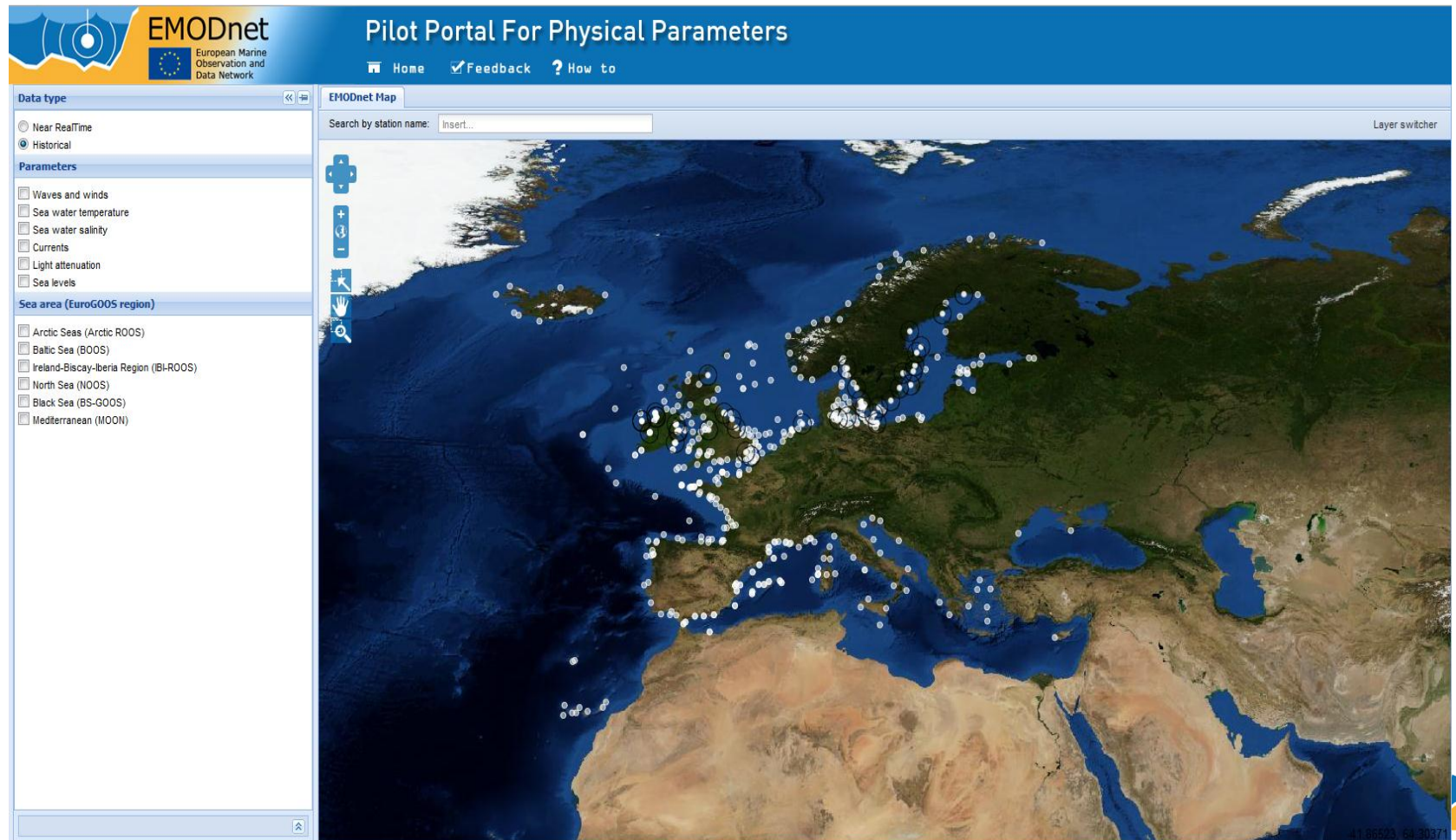
EMODnet PP – the Parameters

○ Parameters:

- wave height and period;
- temperature of the water column;
- wind speed and direction;
- salinity of the water column;
- horizontal velocity of the water column;
- light attenuation;
- sea level.

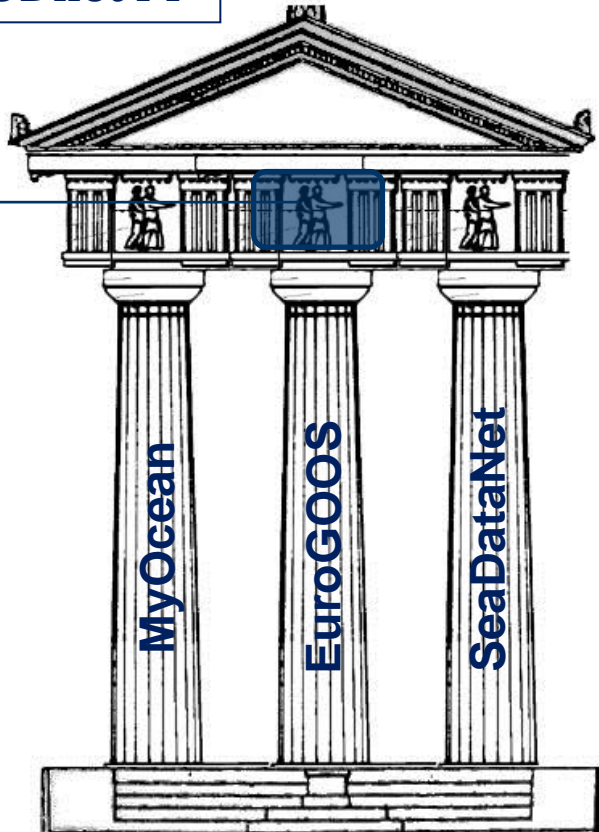
Geographical coverage – What's the goal?

SEPRISE heredity



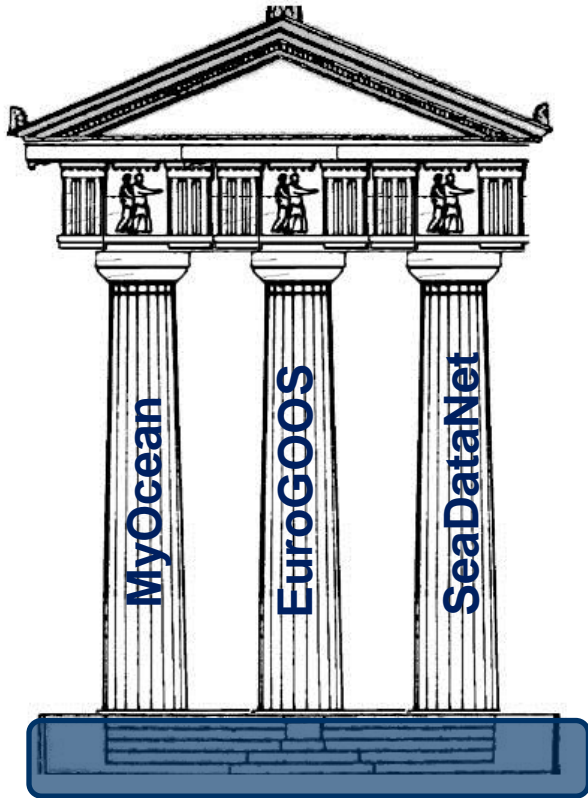
EMODnet PP – the Pillars

EMODnet PP



EMODnet PP aims to bridge the communities behind EuroGOOS, MyOcean and SeaDataNet, the Commission agenda and expand in the future the participation to all partners

EMODnet PP – Sustainability



EMODnet PP aims also to attract data holders not yet participating and involve them in the existing infrastructures.

- MyOcean→MyOcean2
- SeaDataNet→SeaDataNet2

EMODnet PP – NRT Data

Access to NRT data is organized within ROOSs in cooperation with MyOcean

Feeding the system



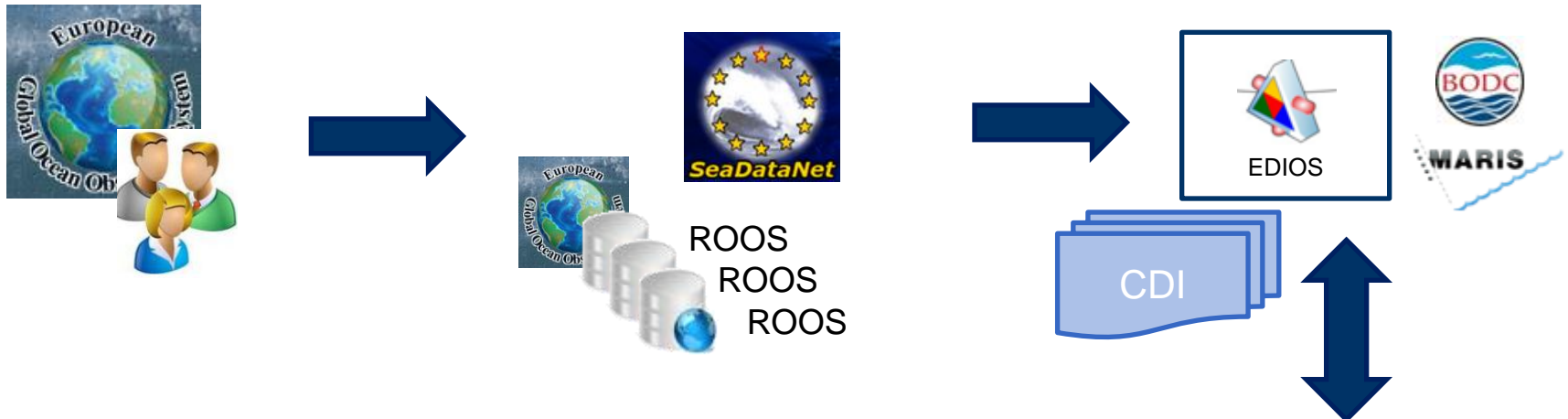
- ROOSs share info according MyOcean std.
- MyOcean index is published according EDIOS std.
- EMODNet PP access metadata info by EDIOS



EMODnet PP - Historical Data

Access to historical data is organised through SeaDataNet

Feeding the system



- ROOSs info published in SEADATANET
- SEADATANET publishes according EDIOS std.
- EMODNet PP access metadata info by EDIOS

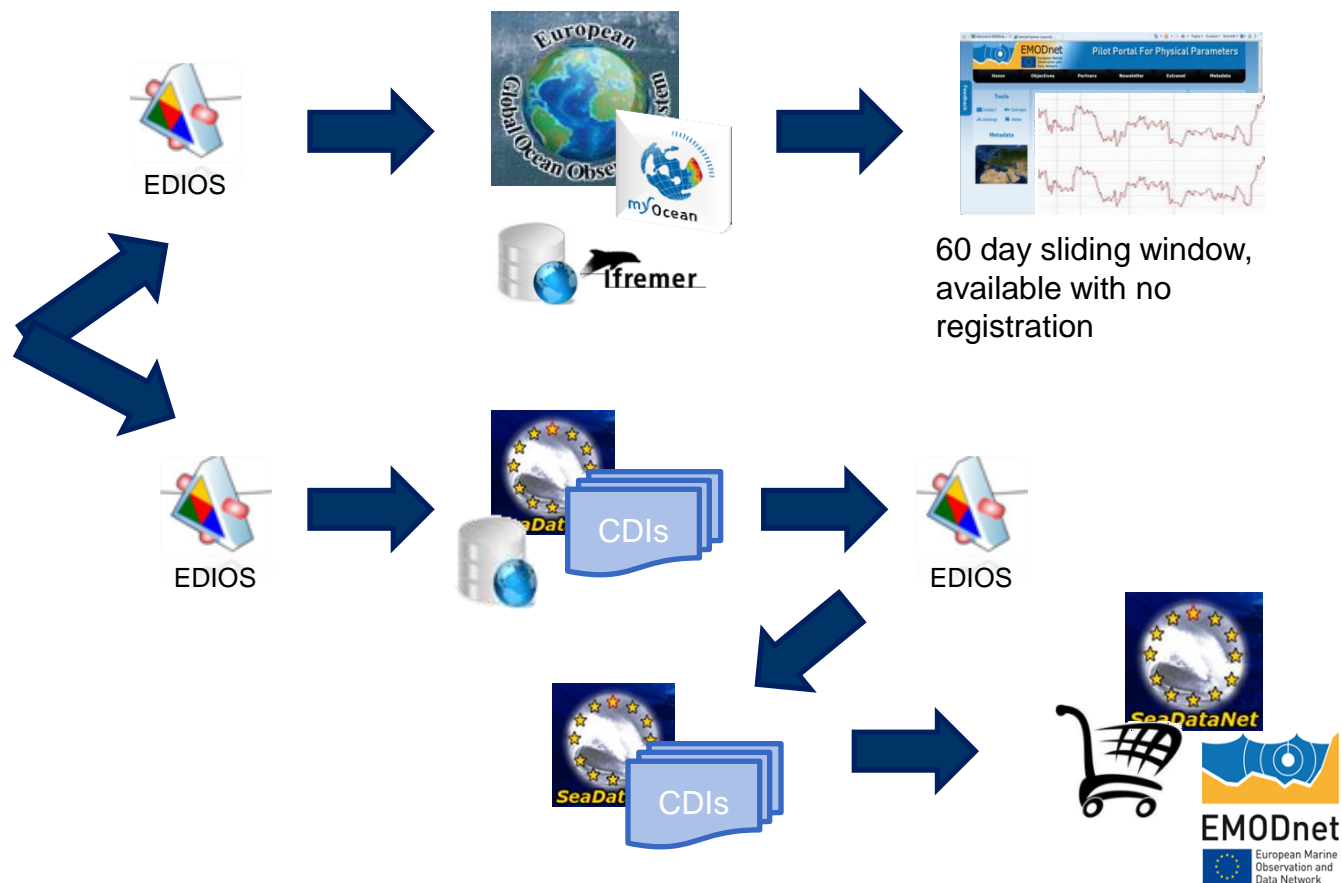


EMODnet PP – Data Access

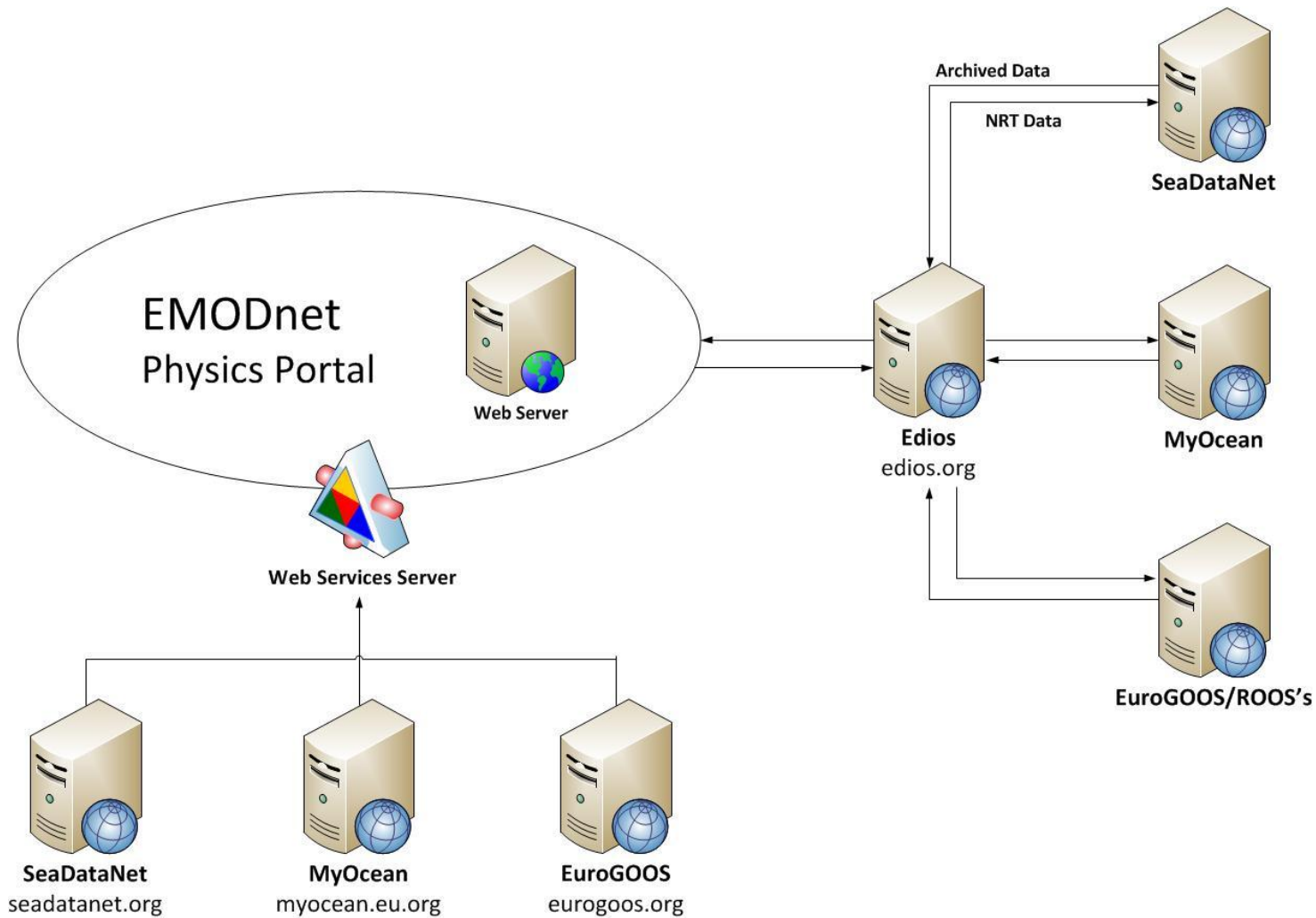
Near Real Time



Archived Data

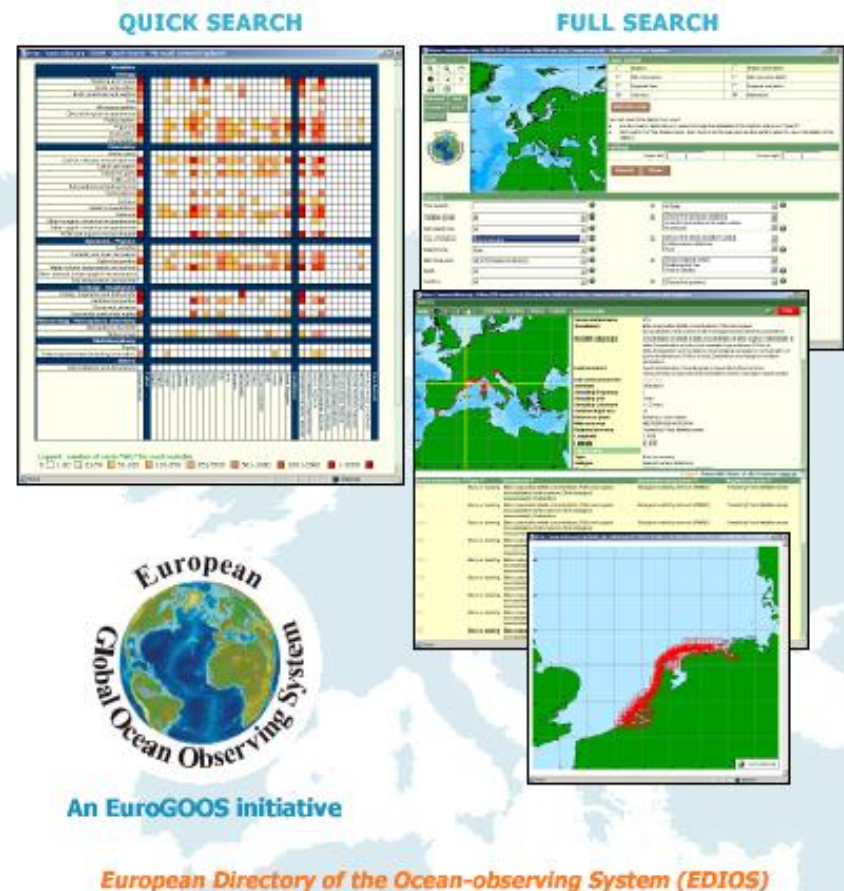


Web Portal Architecture

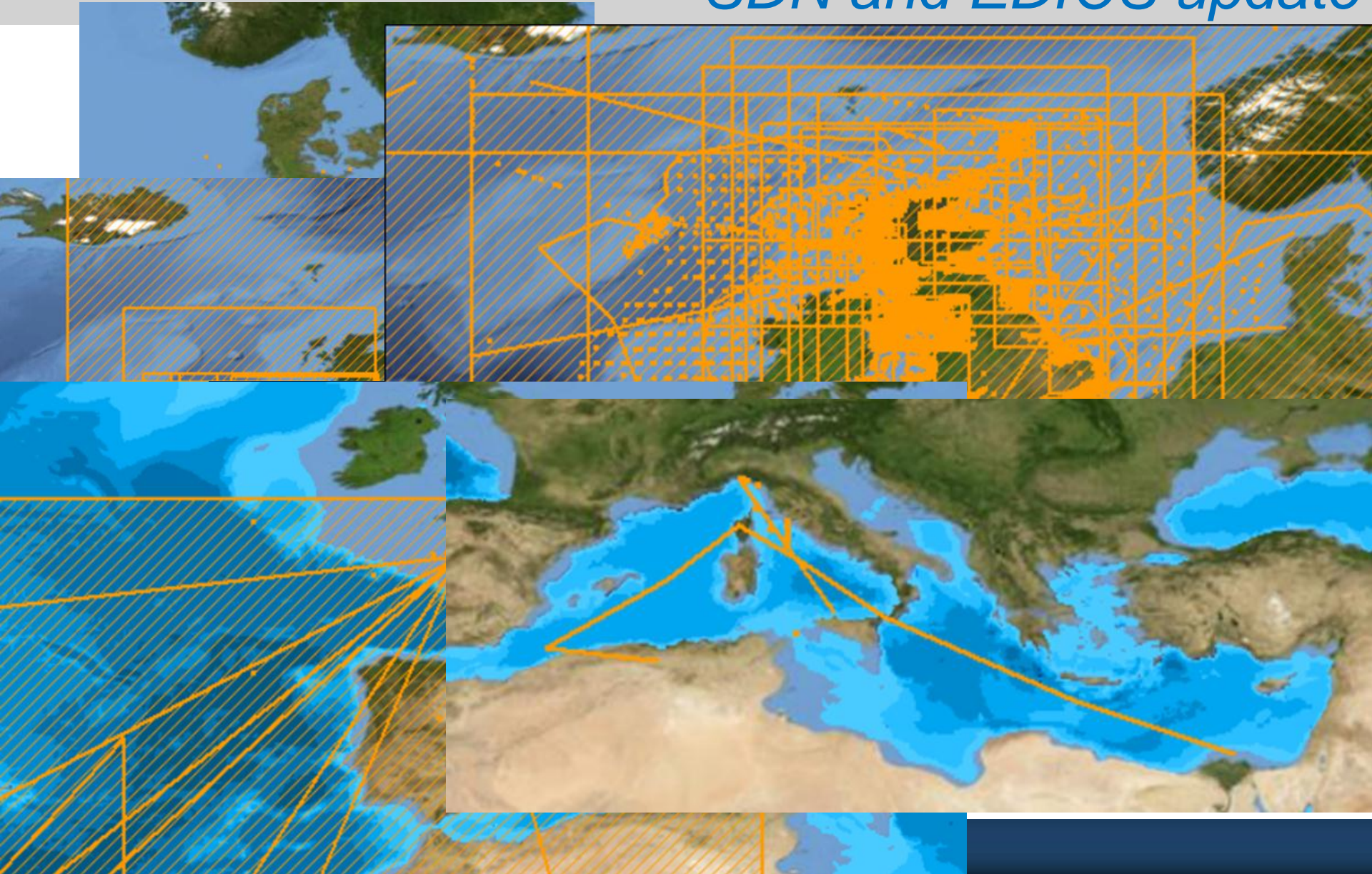


European Directory of the Ocean-observing System (EDIOS)

- On-line searchable directory of observing, measuring, and monitoring systems
- Approx. 10,000 observation entries
- Links to on-line real-time and archive data



EMODnet PP – Historical data available through SDN and EDIOS update



EMODnet PP - pilot portal

[Feedback](#)

**EMODnet**
European Marine Observation and Data Network

Pilot Portal For Physical Parameters

HomeObjectivesAccess to DataExtranetPartnersNewsletter

Tools
Contact Extranet
Sitemap Home
How to Video
f t YouTube RSS



<<	2012 February							>>
Su	Mo	Tu	We	Th	Fr	Sa		
				1	2	3	4	
5	6	7	8	9	10	11		
12	13	14	15	16	17	18		
19	20	21	22	23	24	25		
26	27	28	29					

**EMODnet**
European Marine Observation and Data Network

EMODnet Physics – First Workshop, Tallinn 2011



Welcome to EMODnet - Physical Parameters

The European Commission, represented for the purposes of this project by the Directorate-General for Maritime Affairs and Fisheries (DG MARE), is conducting service contracts for creating pilot components of the **European Marine Observation and Data Network (EMODNET)**. The overall objective is to create pilots to migrate fragmented and inaccessible marine data into interoperable, continuous and publicly available data streams for complete maritime basins observation. The final objective is to provide layers of physical data and metadata available for use by public authorities, scientists and industry, and contribute towards the definition of an operational **European Marine Observation and Data Network (EMODNET)** and contribute to developing of the definition of the Global Monitoring for Environment and Security (GMES) marine core service.

[Click here for fullscreen map](#)



[Click here for fullscreen map](#)

This **EMODNET-Physical Parameters Portal** is one of the EMODNET portals and it is aimed at providing access to archived and real-time data catalog on the physical conditions in Europe's seas and oceans.

News

Report "EMODnet Physics - Workshop with representatives of NOOS, BOOS and IBI-ROOS" available
[More](#)

News from web

Vacancy notice now published for EEA Executive Director - to take office June 2013

Youth video competition: share your vision of a sustainable future and win cash prizes

Events: Marine Monitoring Service: A GMES Workshop on Jan25th

Product Showcase: La Niña, the terrible Sister
[More](#)

Newsletter

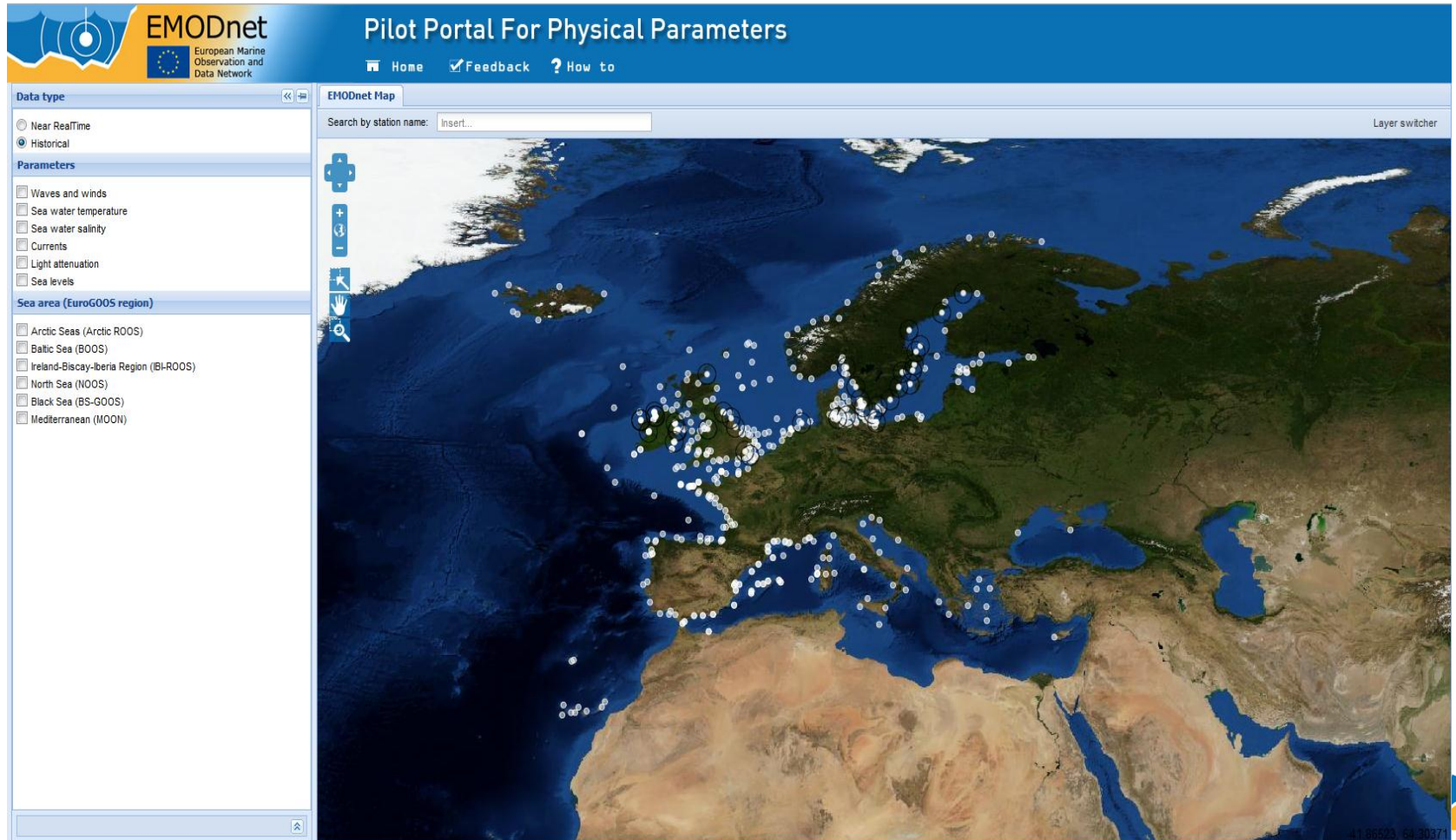
EMODnet Physical Parameters
[More](#)

Meetings

Draft Agenda EMODnet Physical Parameter Workshop in the Mediterranean - Rome 9th - 10th February 2012

6th EuroGOOS Conference (4th - 6th October 2011,

The portal....





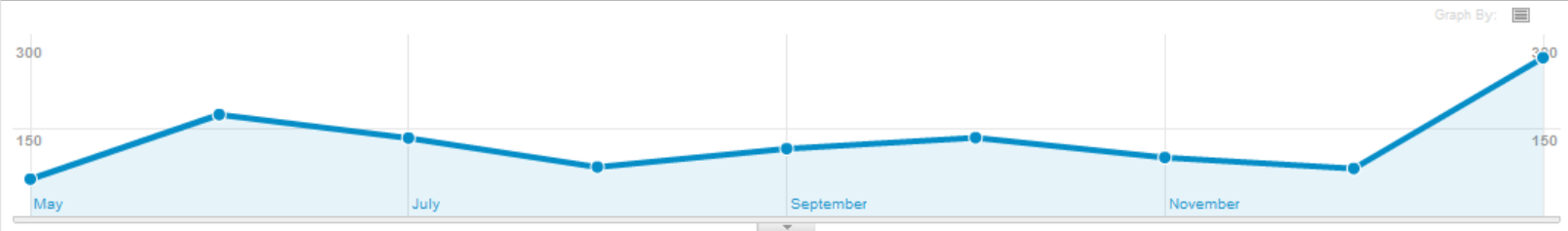
EMODnet PP - pilot portal

Traffic Sources Overview

May 1, 2011 - Jan 31, 2012

100.00% of total visits

Overview



1,153 people visited this site



- **45.01%** Search Traffic
519 Visits
- **10.75%** Referral Traffic
124 Visits
- **43.02%** Direct Traffic
498 Visits
- **1.21%** Campaigns
14 Visits

Search Traffic

Keyword

Matched Search Query

Source

Referral Traffic

Source

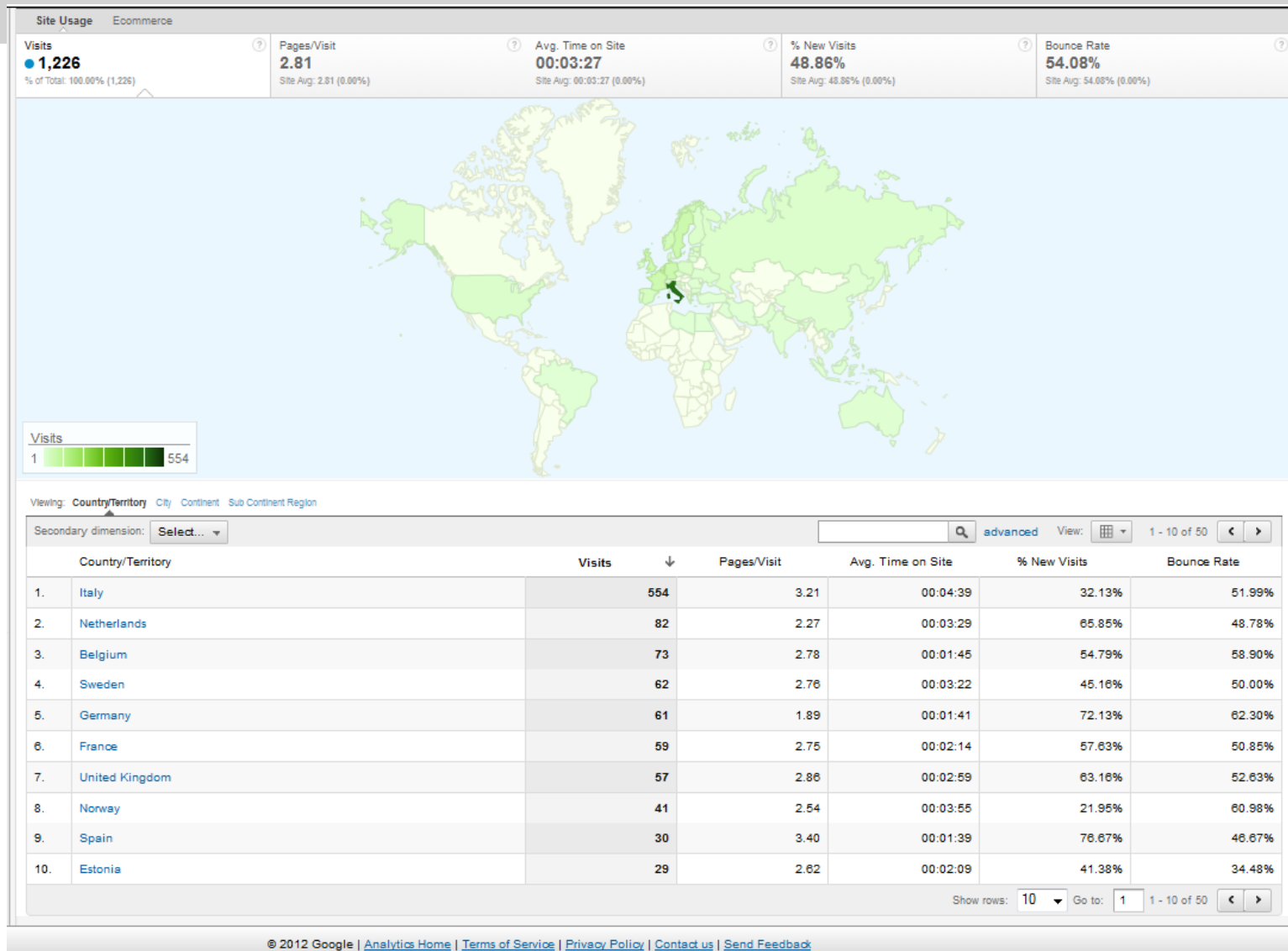
Direct Traffic

Landing Page

Keyword	Visits	% Visits
emodnet physics	145	27.94%
emodnet	94	18.11%
emodnet physical parameters	62	11.95%
emodnet physics	19	3.66%
emodnet physical	18	3.47%
physical parameters	12	2.31%
emodnet-physics	9	1.73%
emodnet-pp	7	1.35%
eomodnet	7	1.35%
www.emodnet-physics.eu	7	1.35%

[view full report](#)

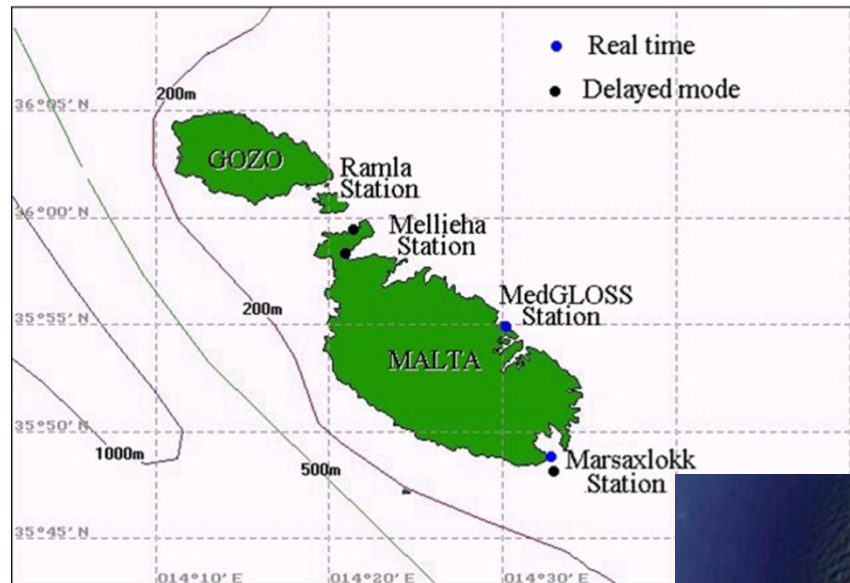
EMODnet PP - pilot portal



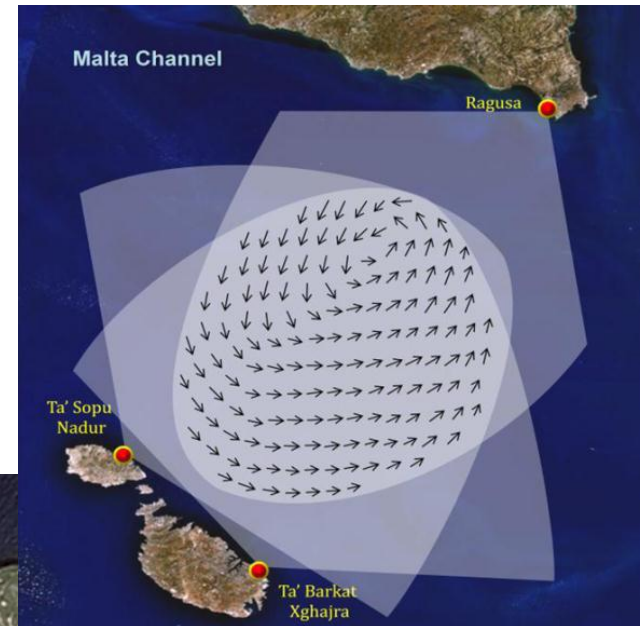
◦ Workshop

- Tallinn (Estonia) → 6-17 June 2011
- Rome (Italy) → 9-10 February 2012
- Istanbul (Turkey) → 21-23 February 2012

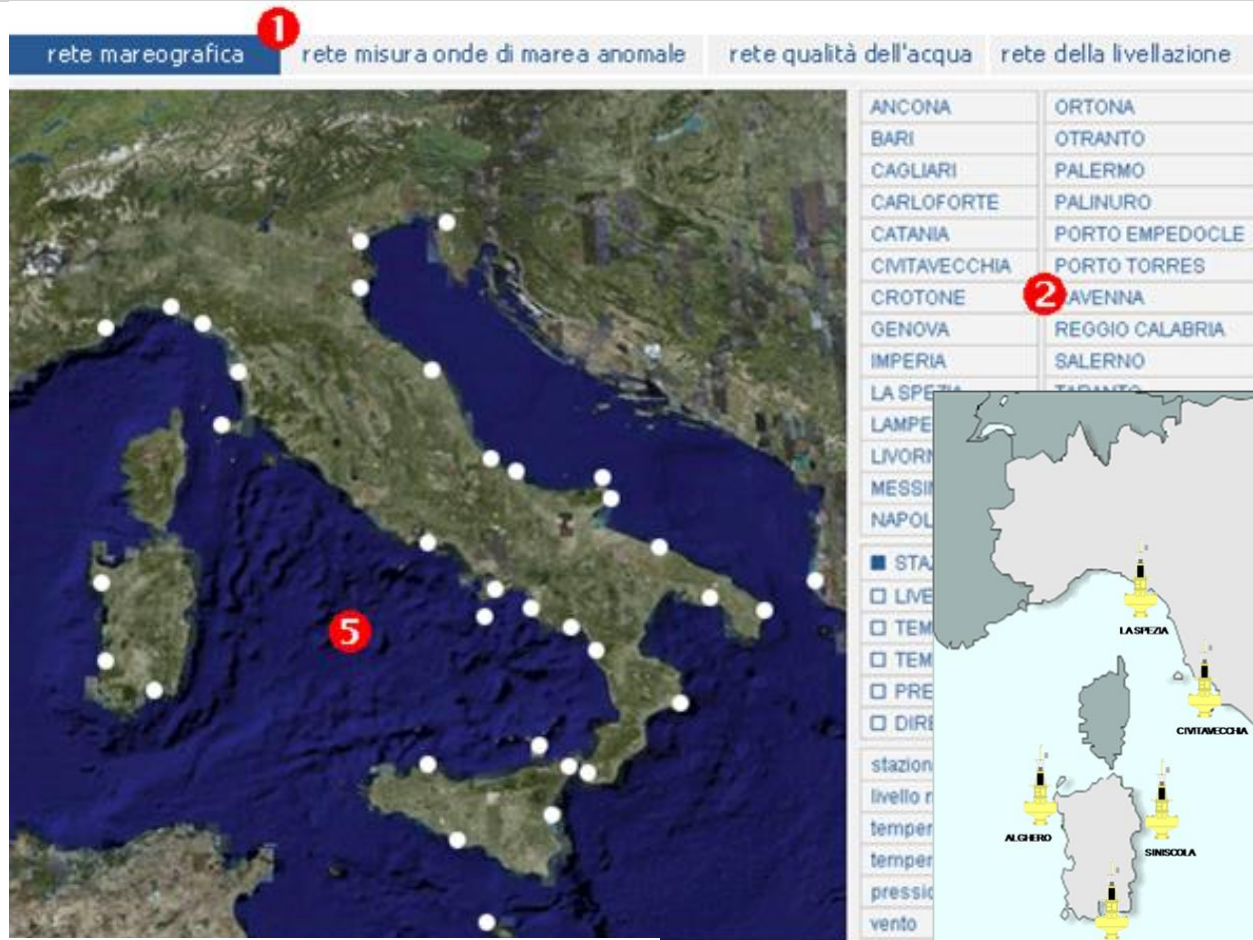
MEDITERRANEAN WORKSHOP



- 1 tide gauge
- 1 wave buoy
- HF radar



MEDITERRANEAN WORKSHOP



- 34 tide gauges
- 15 wave buoys
- 10 multiparametric probes



MEDITERRANEAN WORKSHOP



- Wave buoy
- Tide gauge

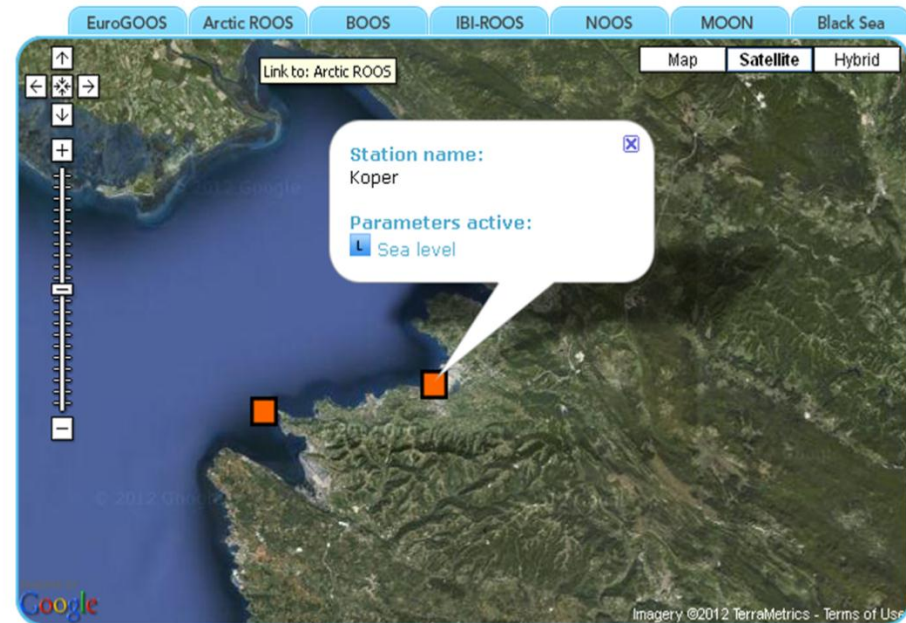
All data

- W** Wave height & winds
- T** Sea surface temperature
- S** Sea surface salinity
- L** Sea level
- C** Currents

Models

Contributors

About SEPRISE



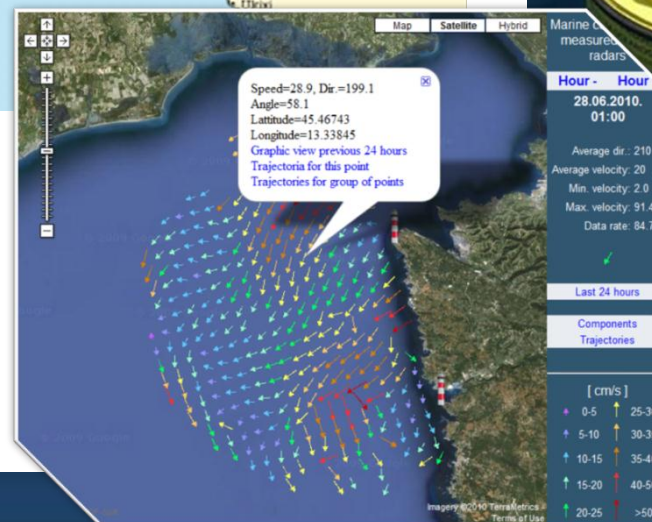
NATIONAL INSTITUTE OF BIOLOGY
MARINE BIOLOGY STATION



MEDITERRANEAN WORKSHOP

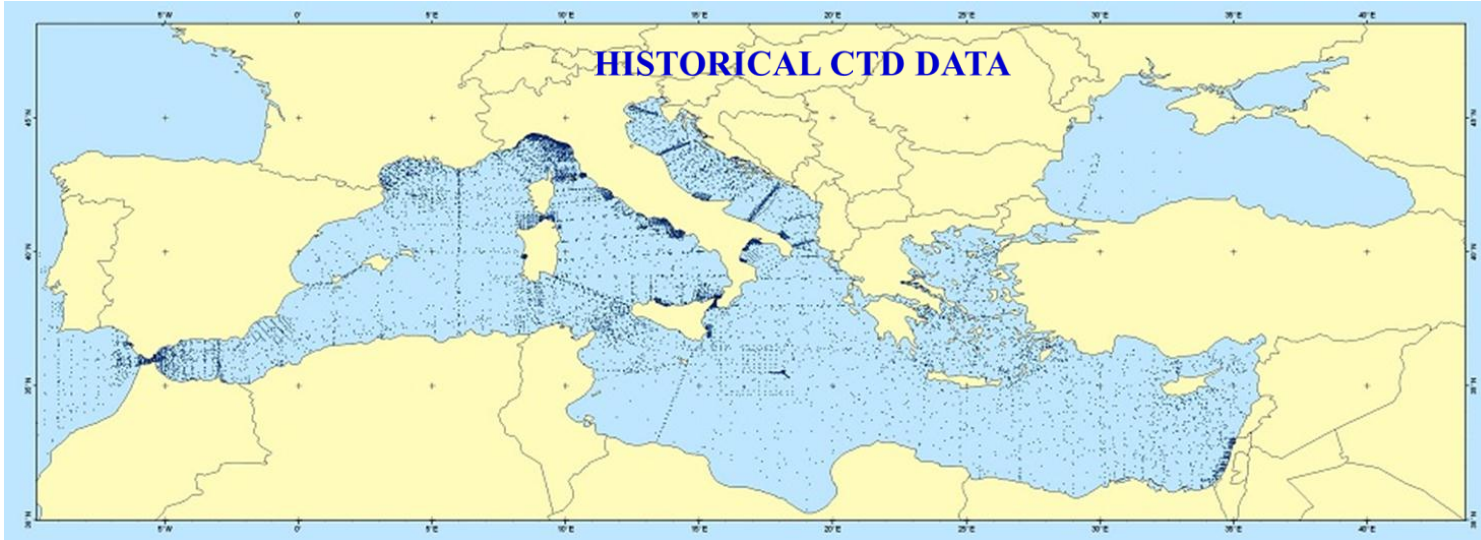
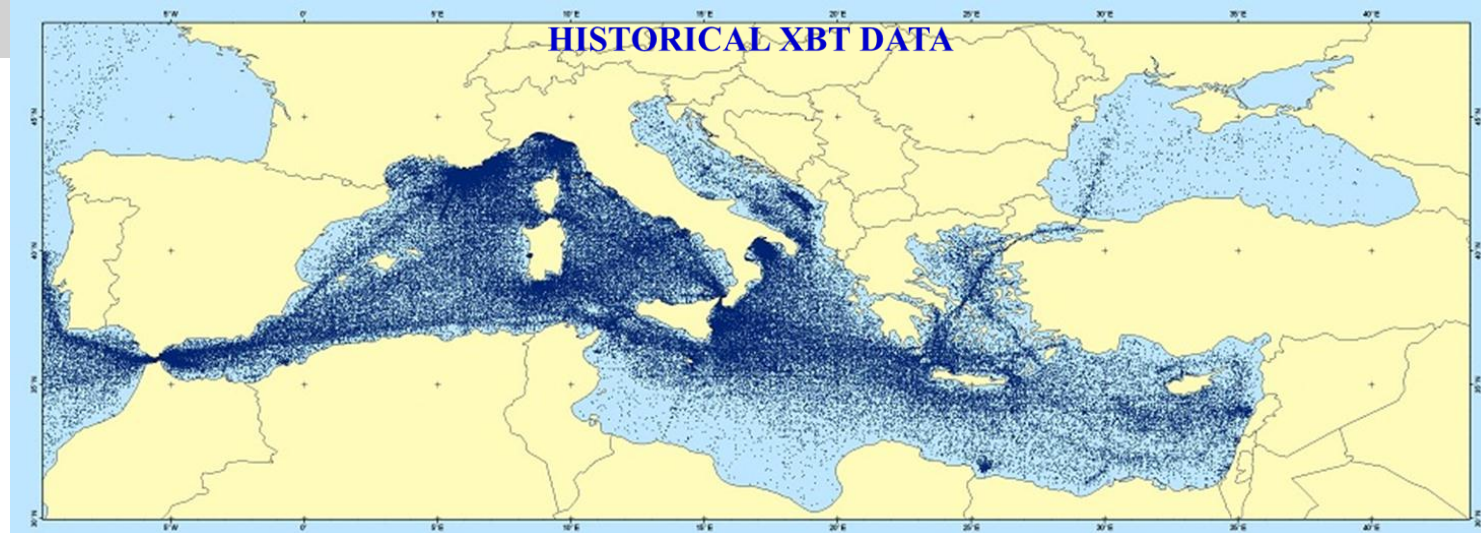


- 8 tide gauges
- One buoy
- HF radar



MEDITERRANEAN WORKSHOP

~ 160.000
observations
1950 →



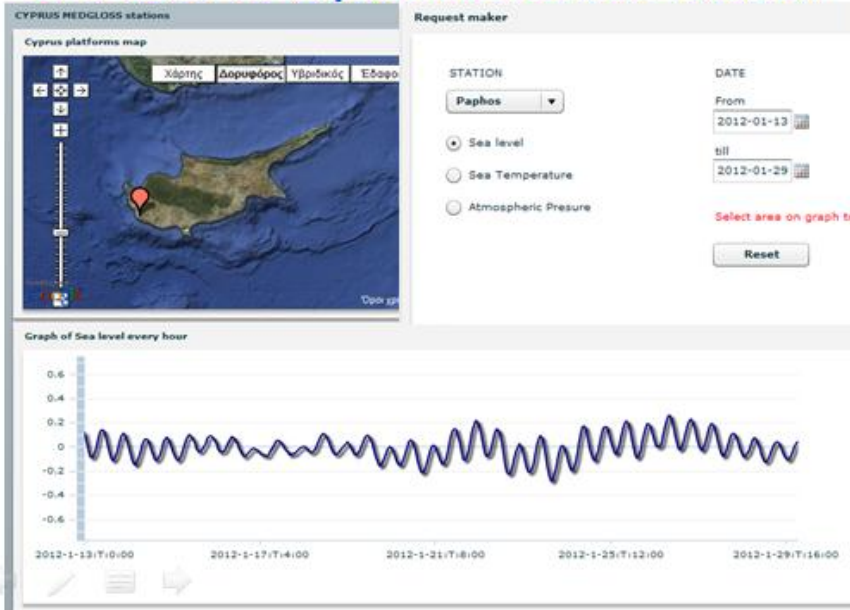
MEDITERRANEAN WORKSHOP



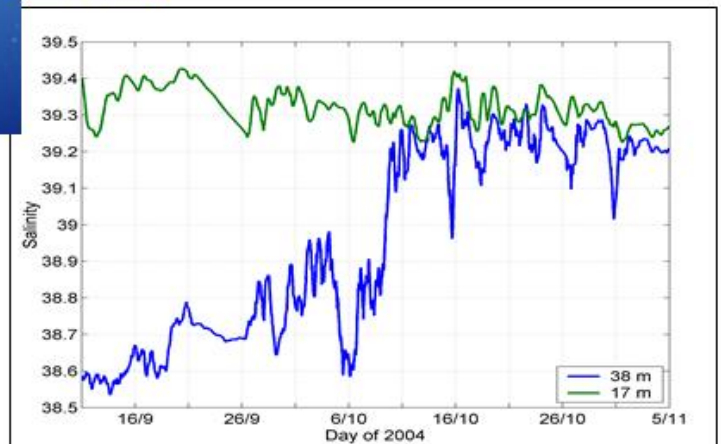
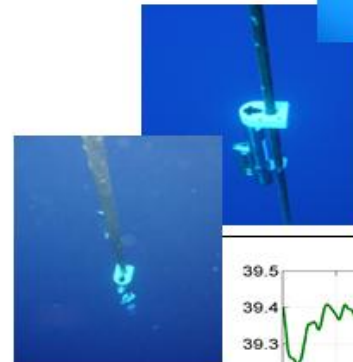
Network of
sea level and
sea surface
temperature
stations



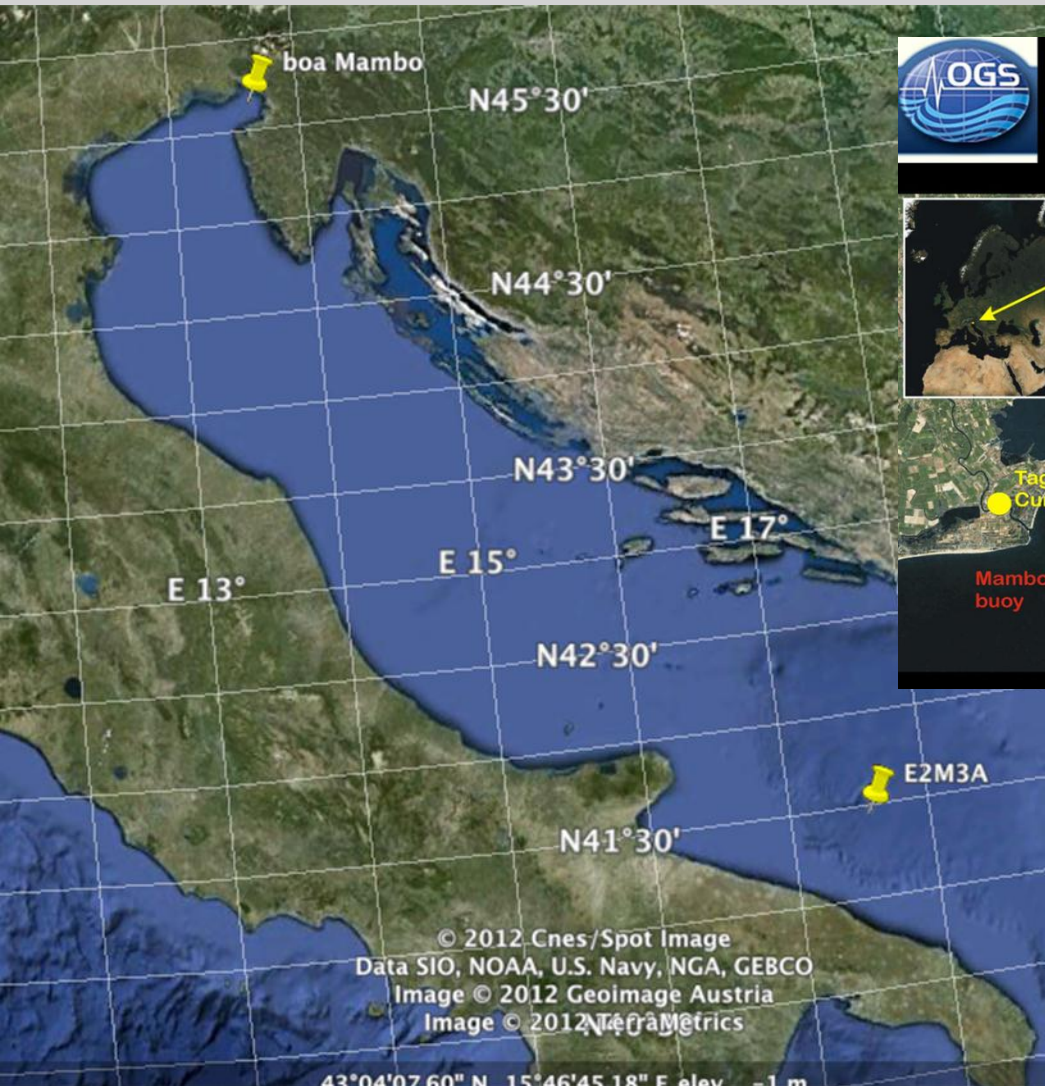
Sea level at Paphos MedGLOSS station



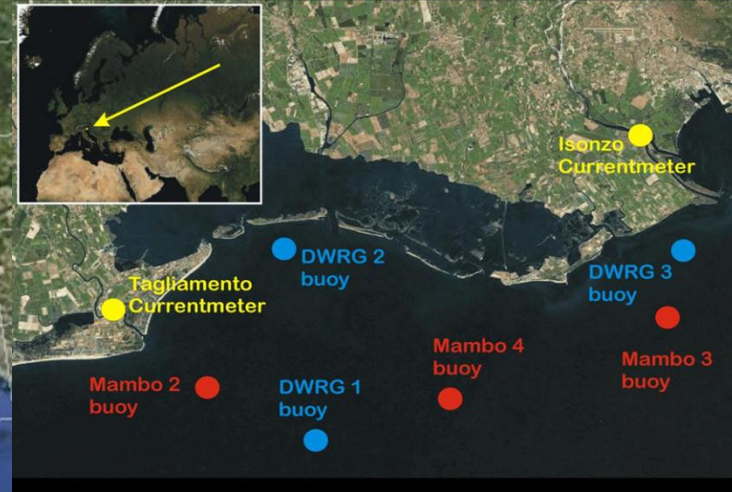
Salinity at MedGOOS-3
Ocean Buoy, at 38 m
shows the AW



MEDITERRANEAN WORKSHOP



Italian contribution to the JERICO infrastructure - **OGS**

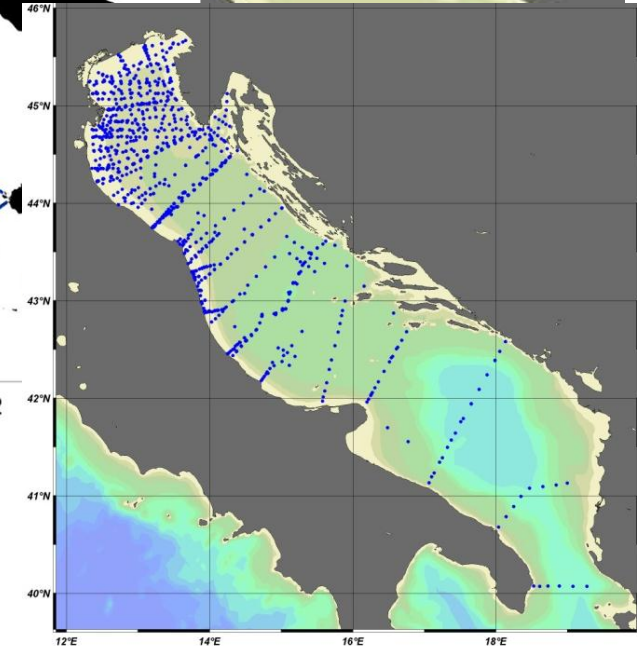
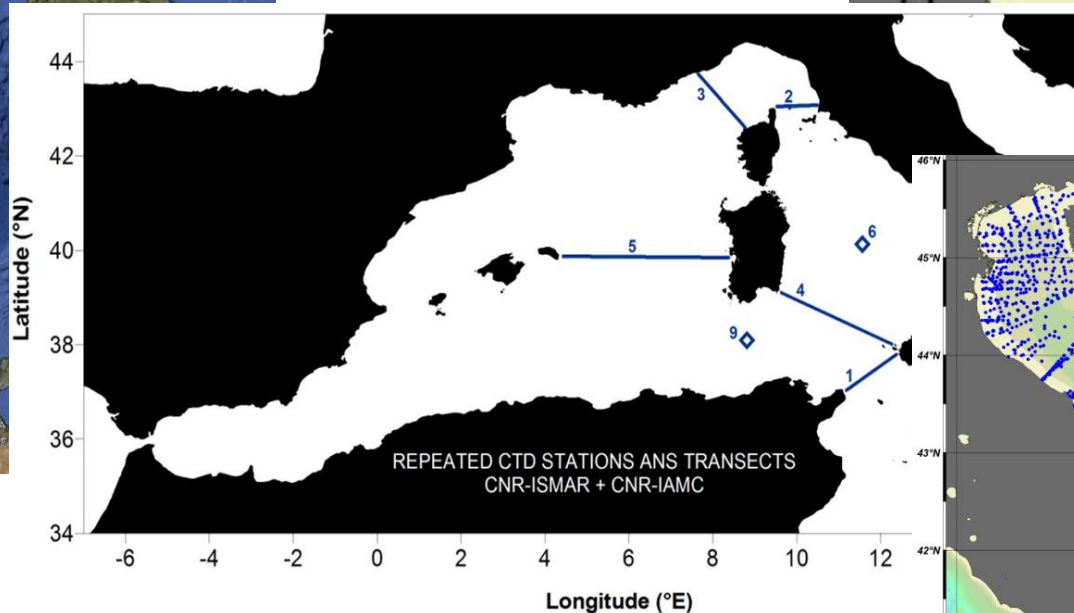
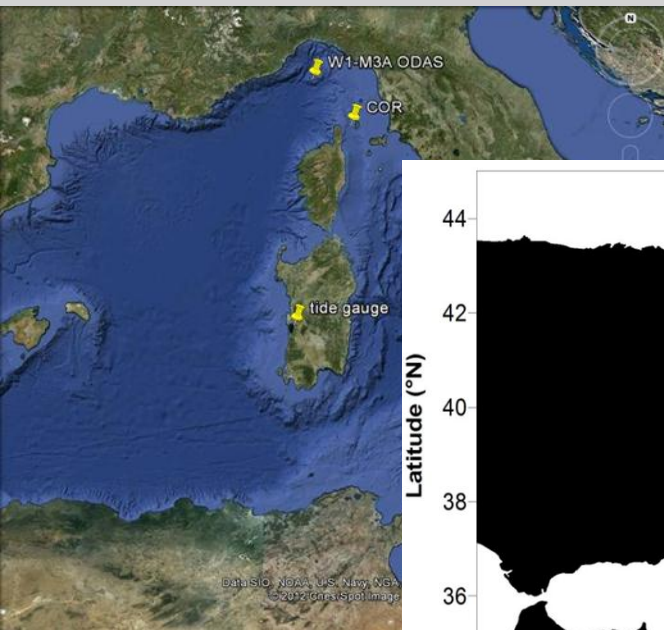


Oceanographic Calibration Centre



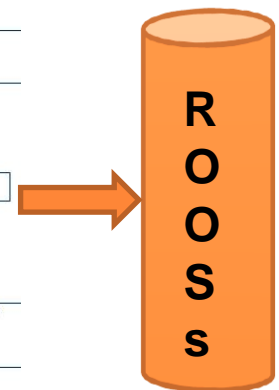
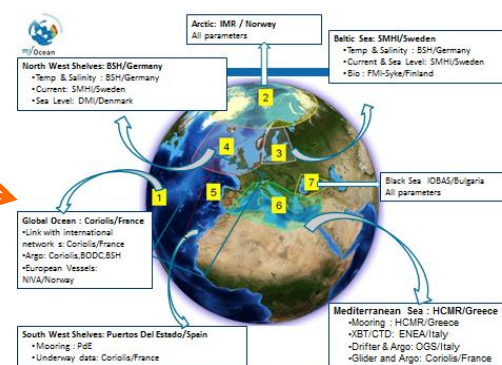
- 2 byous
- 8 additional stations in cooperation with JERICO

MEDITERRANEAN WORKSHOP



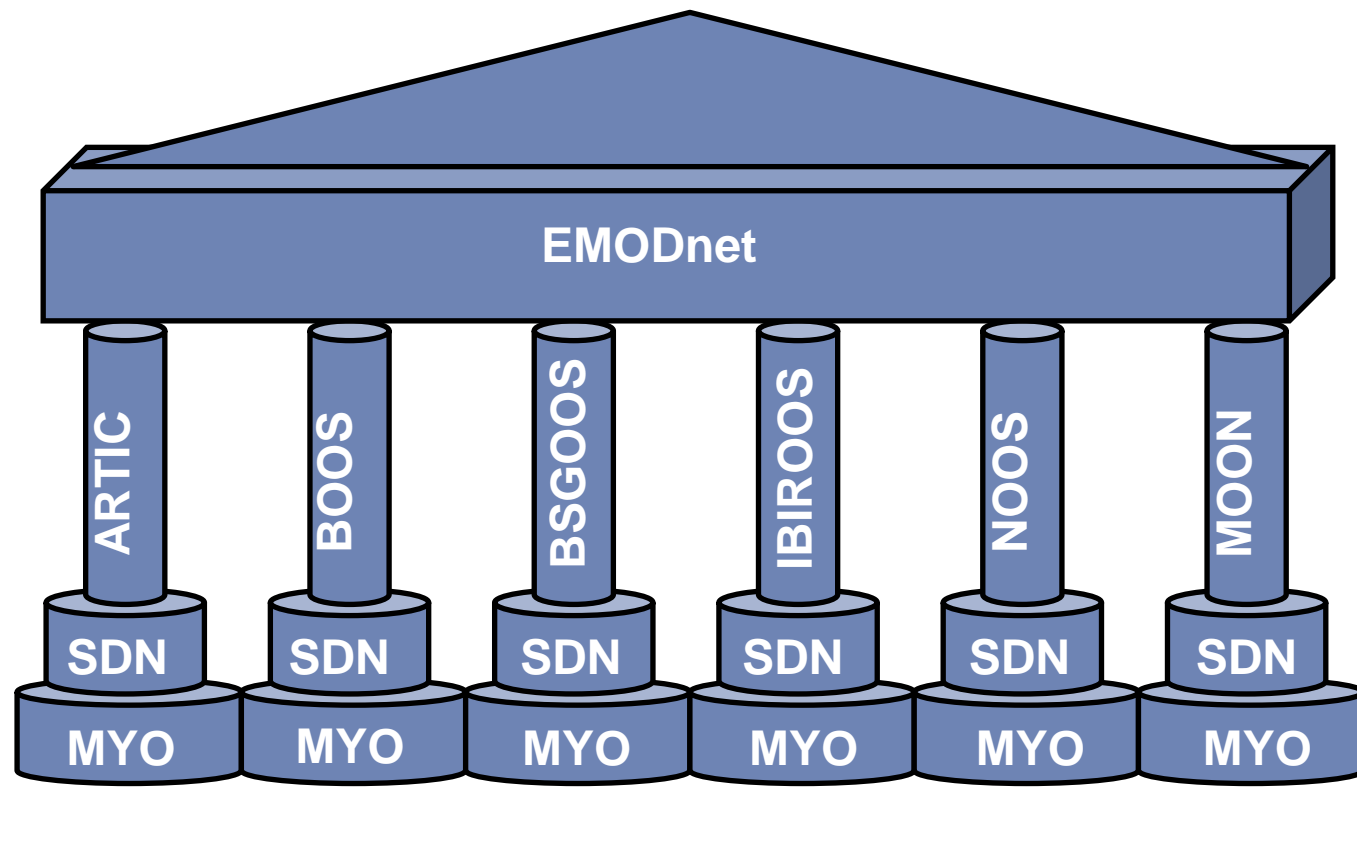
- 5 boys
- 3 tide gauges level (one with data from 1859)
- 3 coastal station in the Adriatic
- ~ 130 repeated CTD stations in W Med/year (data from 1998 →)
- ~ 1000s of repeated CTD stations in the Adriatic (data from 1999 →)





LESSONS LERNED SO FAR.....

- The portal is simply a shopping window to please the politicians
- Lets use EMODnet to strengthen our core activities and in particular the ROOSs activities.
- Sustainability lies in the ROOSs – not the projects



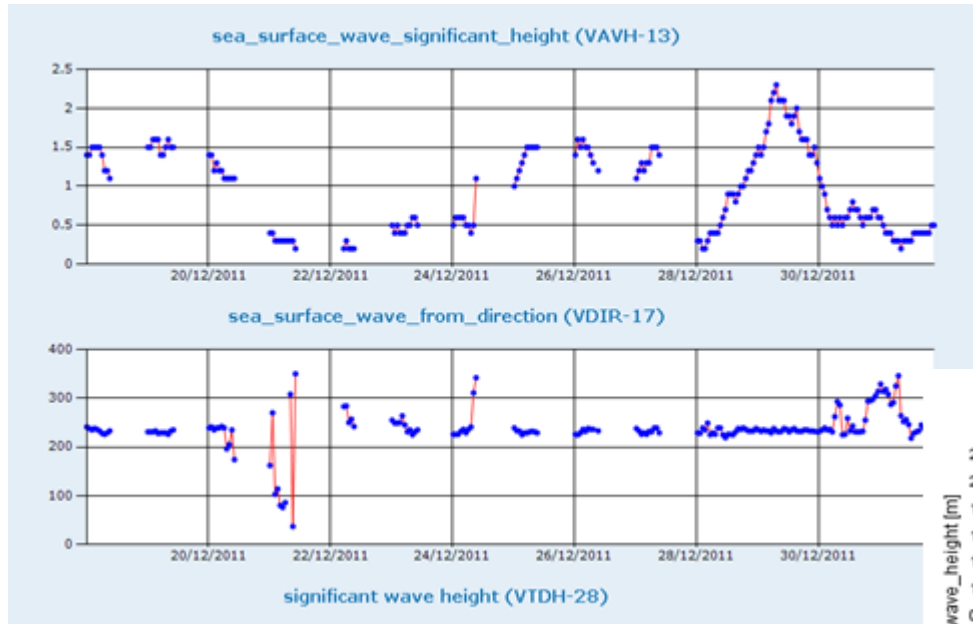
LESSONS LEARNED SO FAR.....

Collecting RT/NRT station data through MyO/ROOSs

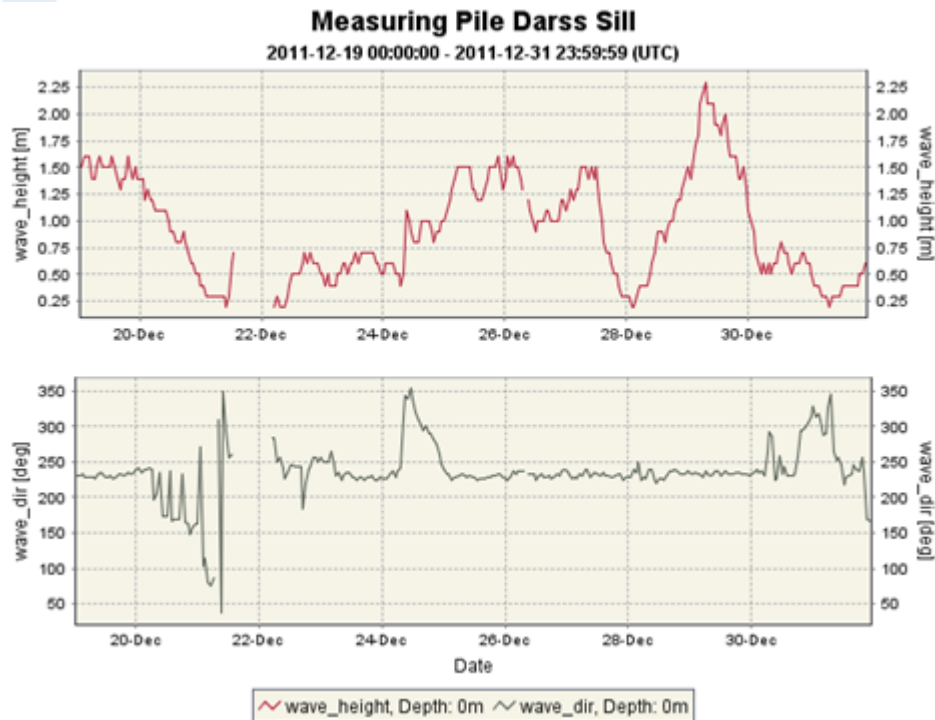
- Not all data from all monitoring stations is exported to MyOcean
- Data flows show hickups when collected from MyO
- Stations often temporarily offline
- Stations in MyO and ROOS are identified by name. And they change names... this causes problems to link datafiles to station.
- There are several steps from data originator to MyO where the data is retrieved => each steps is potential synchronisation problem. Best to connect directly from the data originator i.e. the ROOSs portals
- Avoid detours (SMHI)
- How well can MARIS handle RT/NRT data?

LESSONS LEARNED SO FAR.....

EMODnet portal. Platform DarsserSWR



Same platform plot from BSH database



LESSONS LEARNED SO FAR.....

...Therefore

- we have gone from collecting data via MyO to go directly to the ROOSs portals
- ...and inform the ROOSs to avoid unnecessary detours when collecting data

LESSONS LEARNED SO FAR.....

Collecting archived fixed station data through SDN

- Monitoring data of fixed stations not in SDN CDI via NODC (data often in hands of other partners and not shared with NODC)
- Data from fixed stations is difficult to find in SDN, because the station name is not uniform with the name used in EDIOS, or in ROOSs/MyO

LESSONS LEARNED SO FAR.....

...Therefore

- ...we would like to do the same with archived data as for RT/NRT data via MyO. If we want seamless access to data from fixed stations we can not use a "shopping basket" mechanism
- ...already a lot of archived data available directly from the ROOSs
- ...a number of institutes prefer to contribute this way → SDN will still benefit due to the fact that EMODnet unlocks data
- MyO – asking for archived data from 1990 → ?

LESSONS LEARNED SO FAR.....

Station information via EDIOS

- EDIOS needs to be built up in new format
- When using Mikado the NODC's have difficulty with the relation "monitoring programme => stations => platforms" (and create the same programme several times..)
- It's difficult to retrieve the information for the operational programmes and stations

LESSONS LEARNED SO FAR.....

...Therefore

- EDIOS, how can we make it easier.....?
- ...How useful is it?

FUTURE...

- Provide seamless access to data
- Make direct access to more data, both RT/NRT and archived data
- Make the portal more user friendly i.e. basically copy what PE has done or simply use/support the PE portal (or other existing portal?)
- Add Argo floats?
- Gliders?
- Radars?
- SOOP?
- Drifters?

According to the Commission:

"EMODnet is owned by the oceanographic community/member states – not by the Commission. The Commission is simply supporting the activity"

- After 2013 ongoing funding of € 30-40 mil/year will be available to maintain the (whole) system
- Merge all the EMODnet portals into one single portal

Thank you