

JOINT EUROPEAN RESEARCH INFRASTRUCTURE NETWORK FOR COASTAL OBSERVATORIES

MARCOM FORUM WORKSHOP

SEATECHWEEK

October the 9th - Le quartz Brest

P.Farcy | Ifremer | patrick.farcy@ifremer.fr

JERICO



A

Joint

European

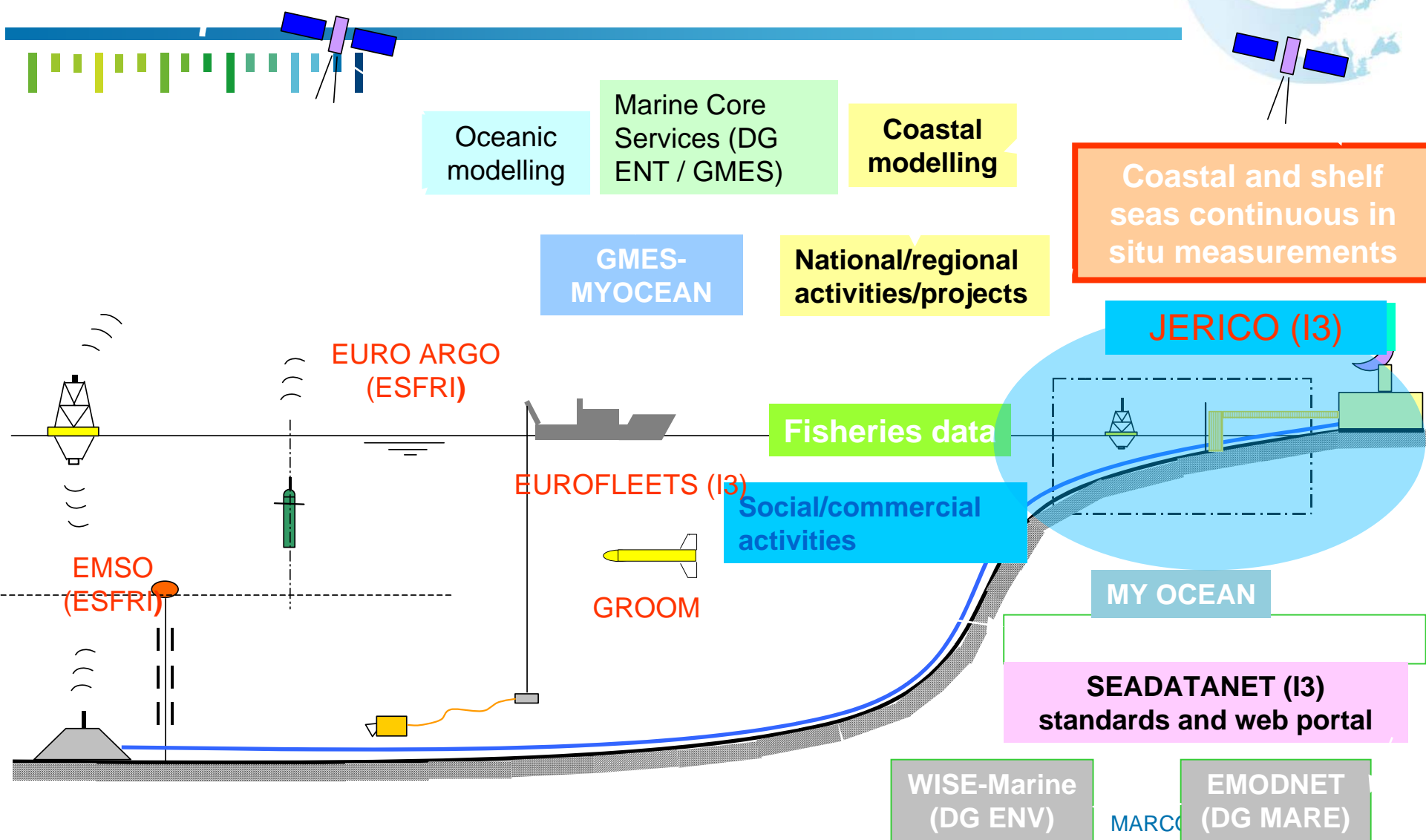
Research

Infrastructure network

for **C**oastal

Observatories

Towards a long-term and sustained European network of coastal observatories



MAIN OBJECTIVE



Prepare for the future European Network of operational coastal observatories through:

Better coordination

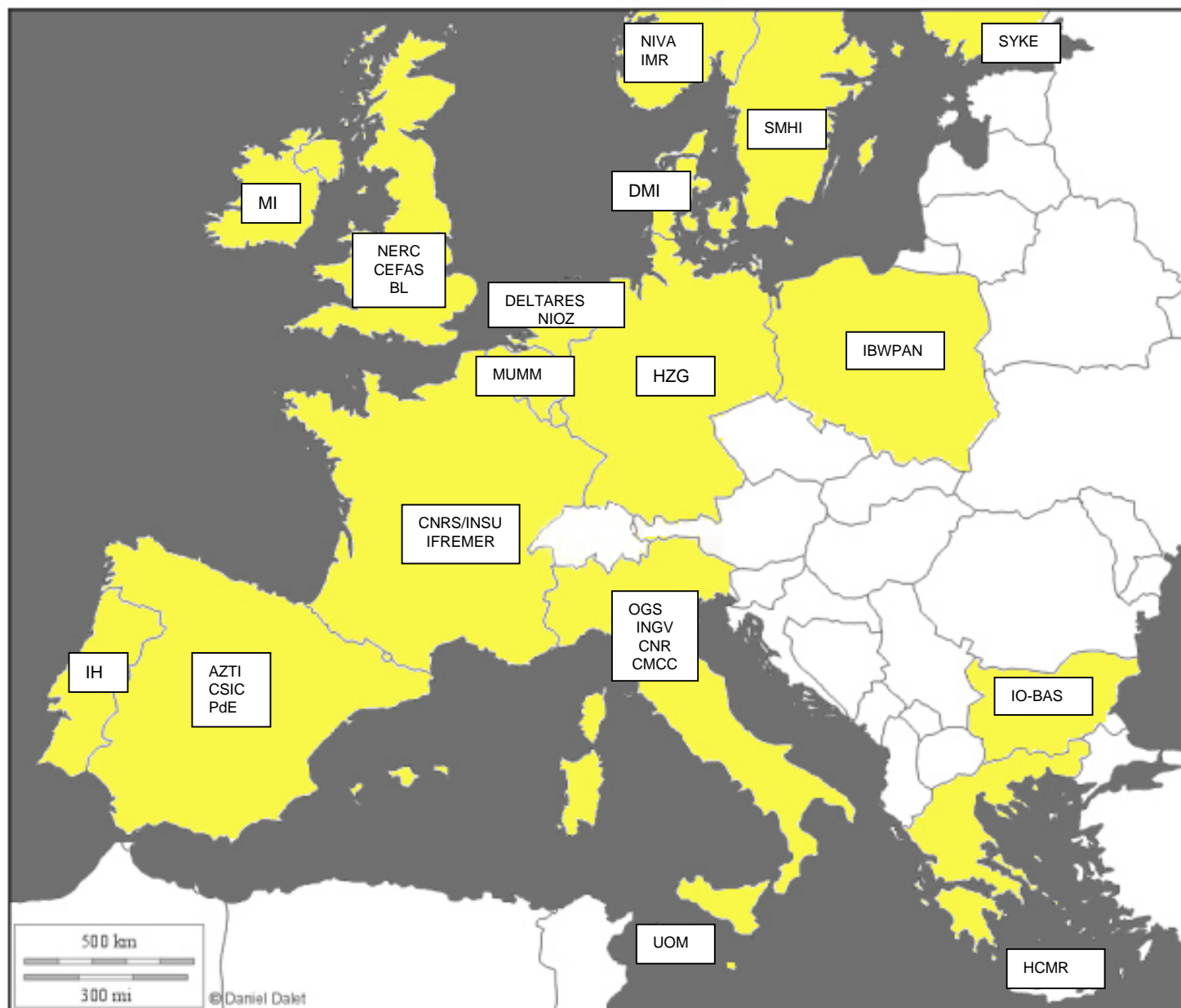
Increased harmonisation of existing infrastructures

Exchange of know-how and definition of Best Practices

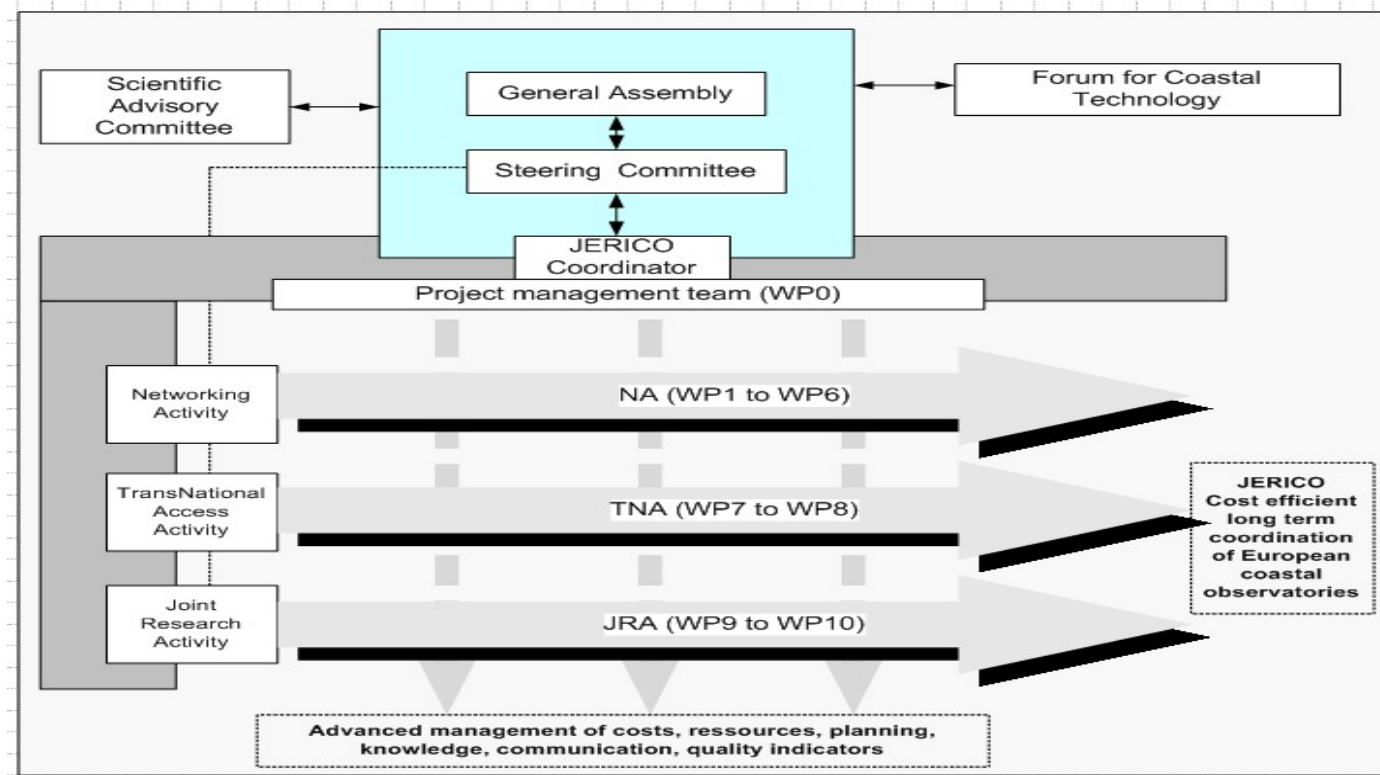
Promoting coastal oceanography through TNA

Agreed deployment strategy

PARTNERS



How the project is structured ?



The JERICO Infrastructure Network



Fishing vessels

Ferryboxes

Joint European Research Infrastructure
network for Coastal Observatories



Report on current status of Ferrybox D 3.1

Grant Agreement n° 262584

Project Acronym: JERICO

Project Title: Towards a Joint European Research Infrastructure
network for Coastal Observatories

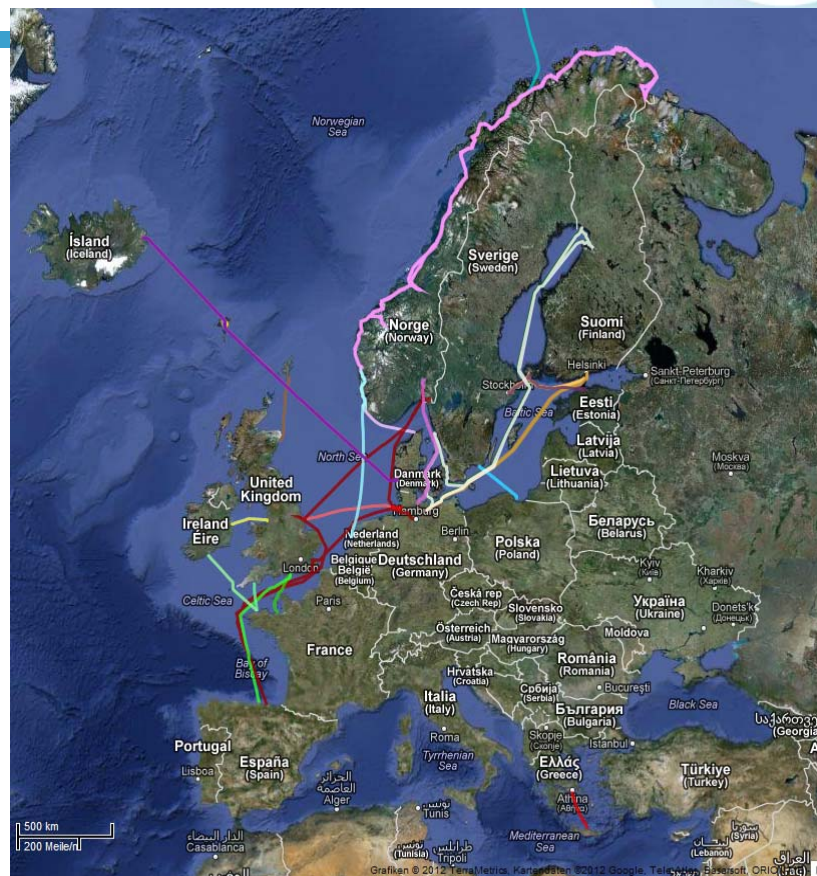
Coordination: P. Farcy, IFREMER,

jerico@ifremer.fr, www.jerico-fp7.eu:

Authors: David Hydes, Wilhelm Petersen, Kai Sorensen, Pierre
Jaccard, Mark Hartman

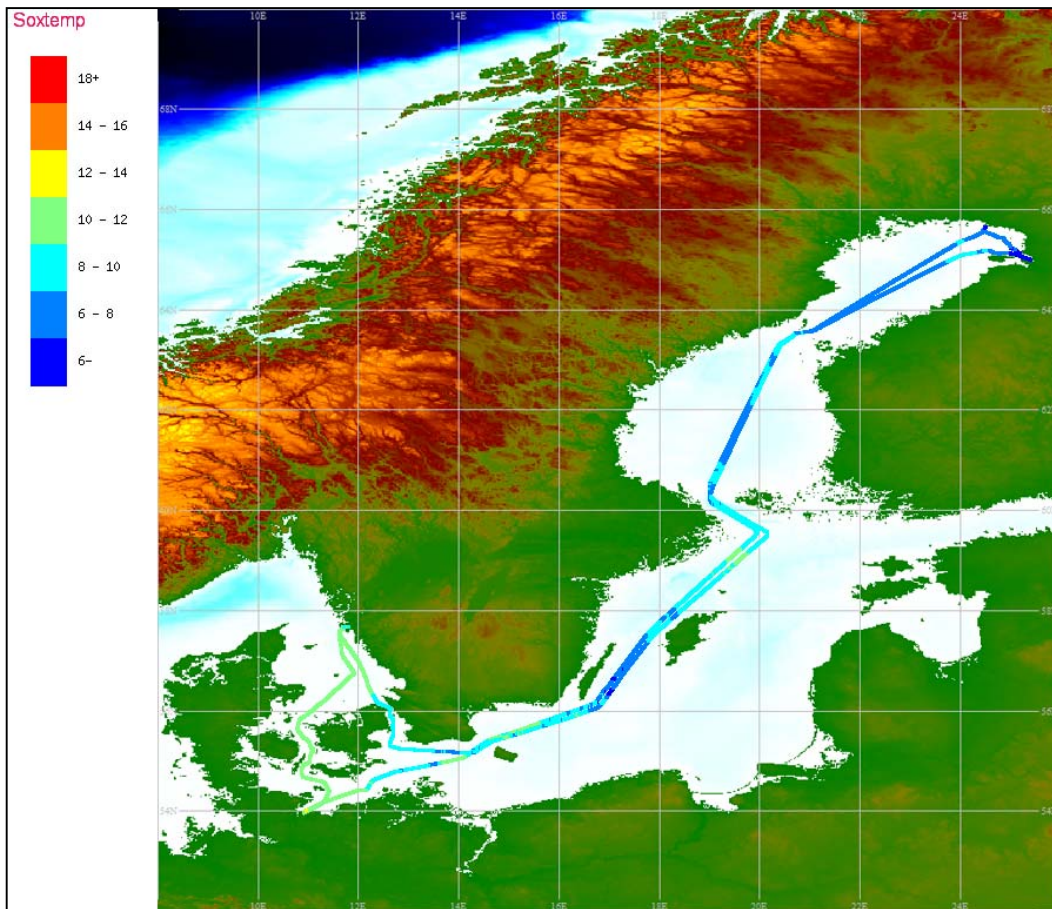
Involved Institutions: NOCS, HZG, NIVA

Version and Date: 1.6 06.08.2012



www.ferrybox.org

FERRYBOX DATA PUBLIC DISPLAY

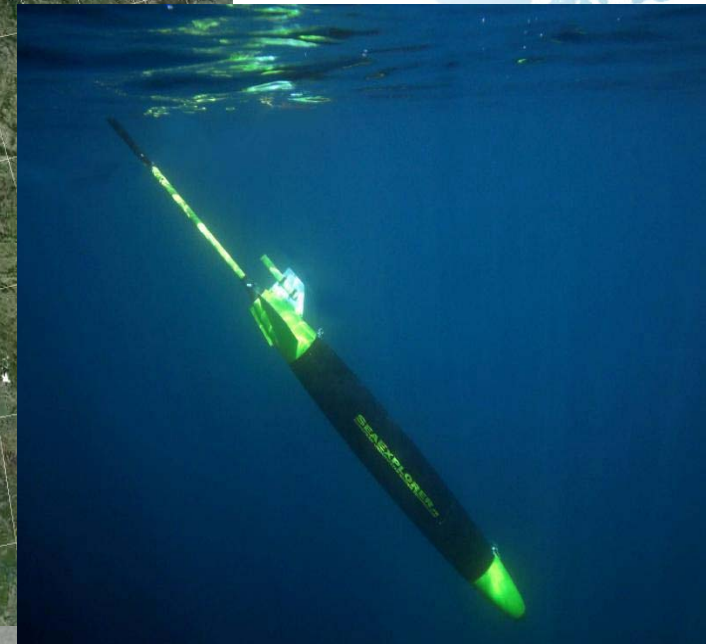
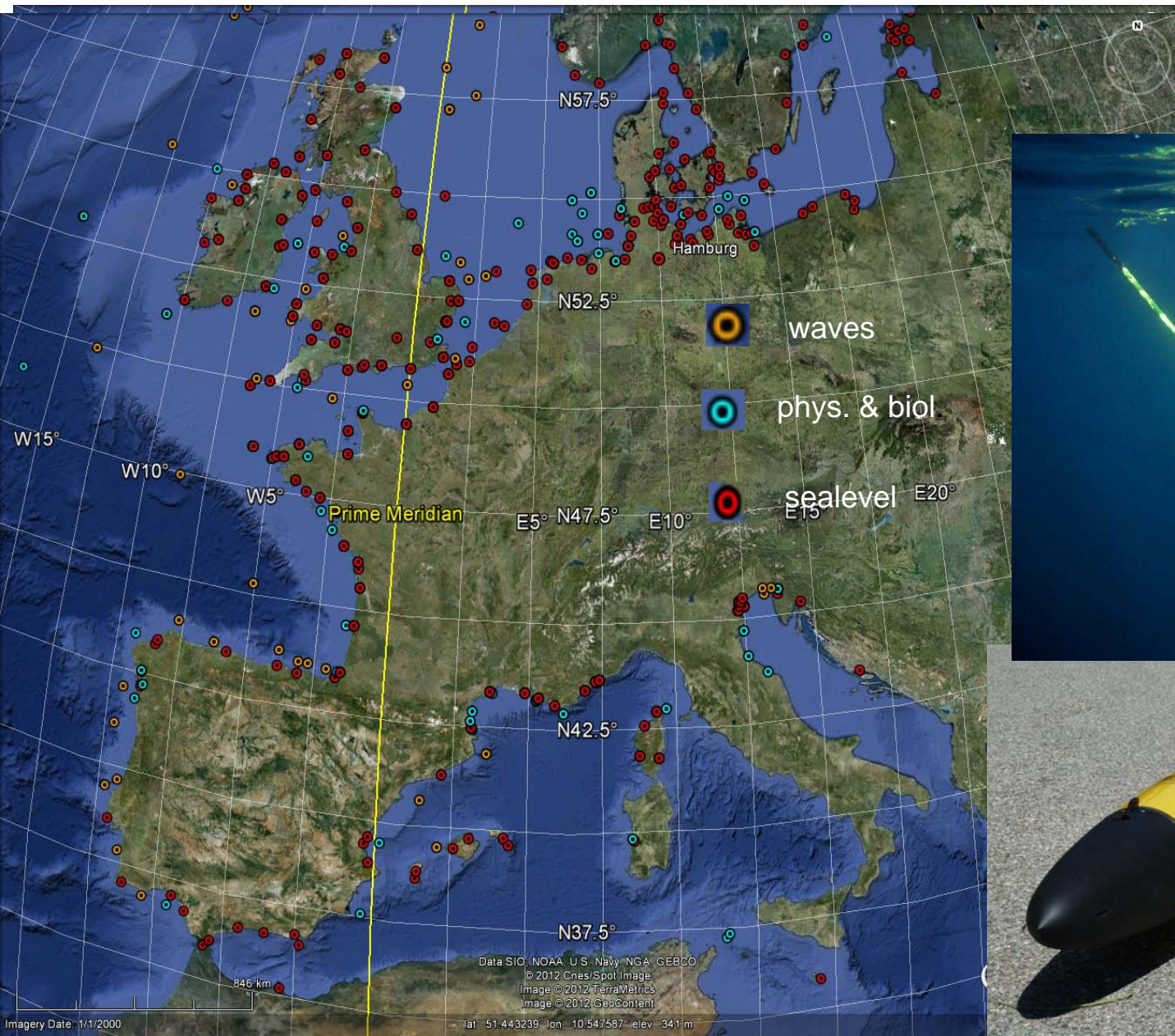


Jerico User Display for FerryBox

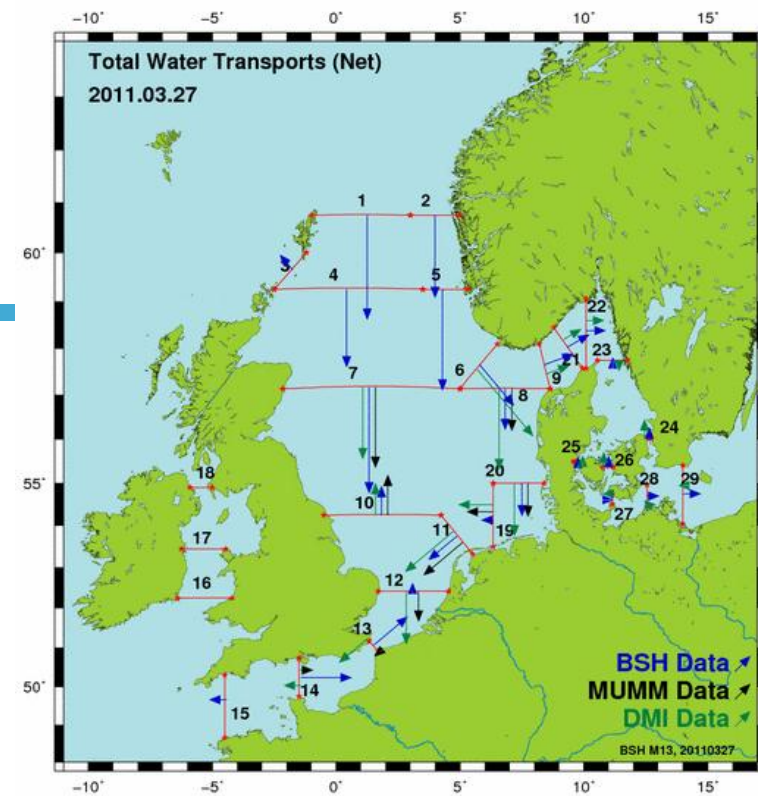
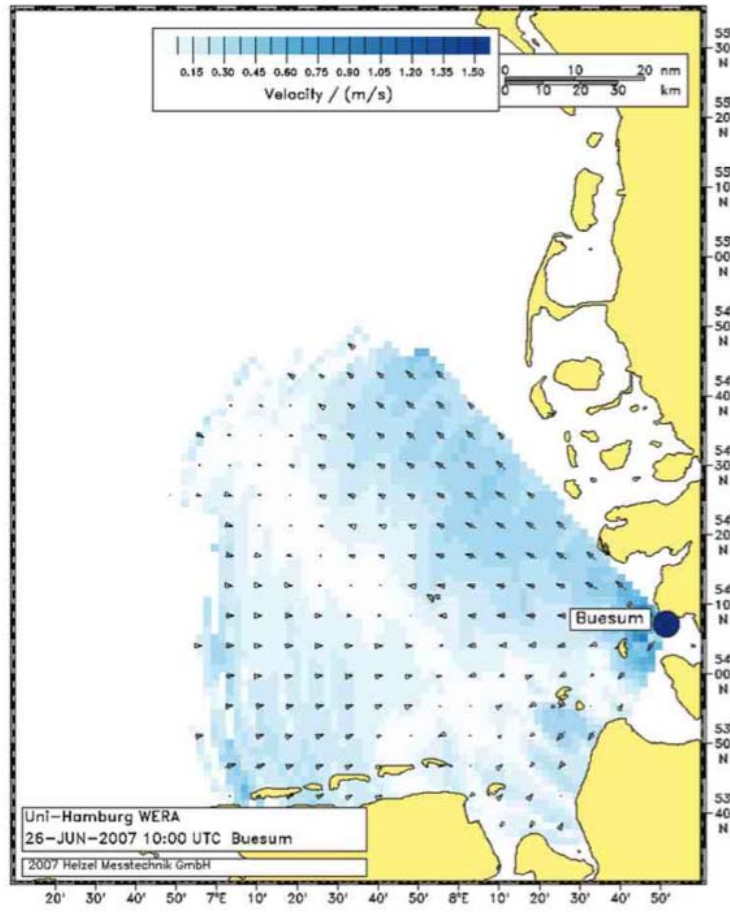
Figure 1. Track plot of the Transpaper ferry overlaid on a Gebco bathymetric image

Overview Fixed Platforms in Europe

& Gliders



TASK 2.2.1 CROSS REGIONAL INTEGRATION AND DEMONSTRATION



Transport

Model products existing

*observations for an observational based
product existing*

Users that are foreseen:

science related to ecosystem approach

OSPAR; MSFD

National requirements and authorities

WORKING ON FOR USERS RELEVANT INDICATORS



- Position of fronts
- Upwelling indexes
- Currents, temperature, salinity and turbulence
- Fluxes of nutrients (though given sections)
- Timing (of peak spring bloom) and strength of primary prod.
- Contaminant exposure on plankton and benthic ecosystems
- Overlap between species (prey and predators)

TASK 2.2.2 CROSS REGIONAL INTEGRATION AND DEMONSTRATION



E-HYPE

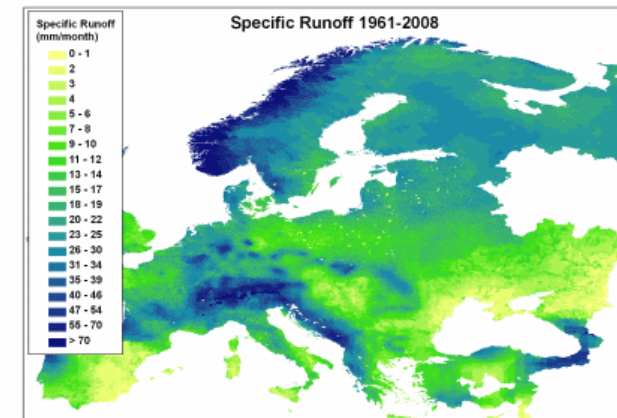
*New, daily output, hydrological model based on
widely accepted hydrological concepts (SMHI/HBV)*

*Integrated modules for nutrient and conservative
tracers*

*Wide range of parameters modelled (runoff,
soilmoisture, snowdepth, groundwaterlevel, N, P,
O18)*

*Model used at local, regional and pan-European scale
for research purposes*

Updated version in November



WP10: Emerging technologies

Objectives



*To examine the extent to which **existing technologies** can be improved and/or adapted to the benefit of coastal operational oceanography and to document and test **emerging technologies** that will underpin future operational oceanographic systems in Europe's coastal seas. The work package is sub-divided into 5 tasks :*

- 1. New tools and strategies for monitoring key biological compartments and processes*
- 2. Development of new **physico-chemical sensors**.*
- 3. Use of **emerging profiling technologies** for coastal seas.*
- 4. Increased use of **ships of opportunity** in making coastal oceanographic measurements.*
- 5. Best practices in **coastal observatory implementation***

HOW TO OPTIMIZE THE OBSERVATION



TO EXTEND THE USE OF OBSERVING SYSTEMS

HF RADAR

COASTAL SUBSEA OBSERVATORIES

VOO = VECTOR OF OPPORTUNITY

CARGO BOATS

FISHING VESSEL

SAILING BOATS

EXISTING MARITIME TRAFFIC BUOYS, WIND FARMS

OTHERS, SEA LIONS, DIVERS ?

A participative approach to collect data on fishing activities and environmental parameters



Integrated multidisciplinary system

A sample of voluntary fishing vessels fit out with sensors (data logger)

Recording data on fishing effort, catches and physical parameters (temperature and salinity, turbidity coming soon) → Concrete achievement of participative approach



A sample of vessels representative of the whole fishing fleets (métier, fishing areas, length), at a national scale



A modular and affordable system adapted to:

active or passive gears

the different types/lengths of vessels



Recopesca relies on and feeds existing operational data centers:





Recopesca Data Center



Concentrator
Data storage,
GPS positionning,
GPRS transmission



Onboard scale

Recording of the weigh
of fish catches



**Depth / Temperature /
Salinity data logger**

Measure of fishing effort
and physical environmental
parameters at the bottom
and along the water column



**Hauler revolutions
counter**

Implemented on the hauler of
passive gears. Records the
number of revolutions
(=> length of gear hauled).

Recopesca diagram
Example of a netter



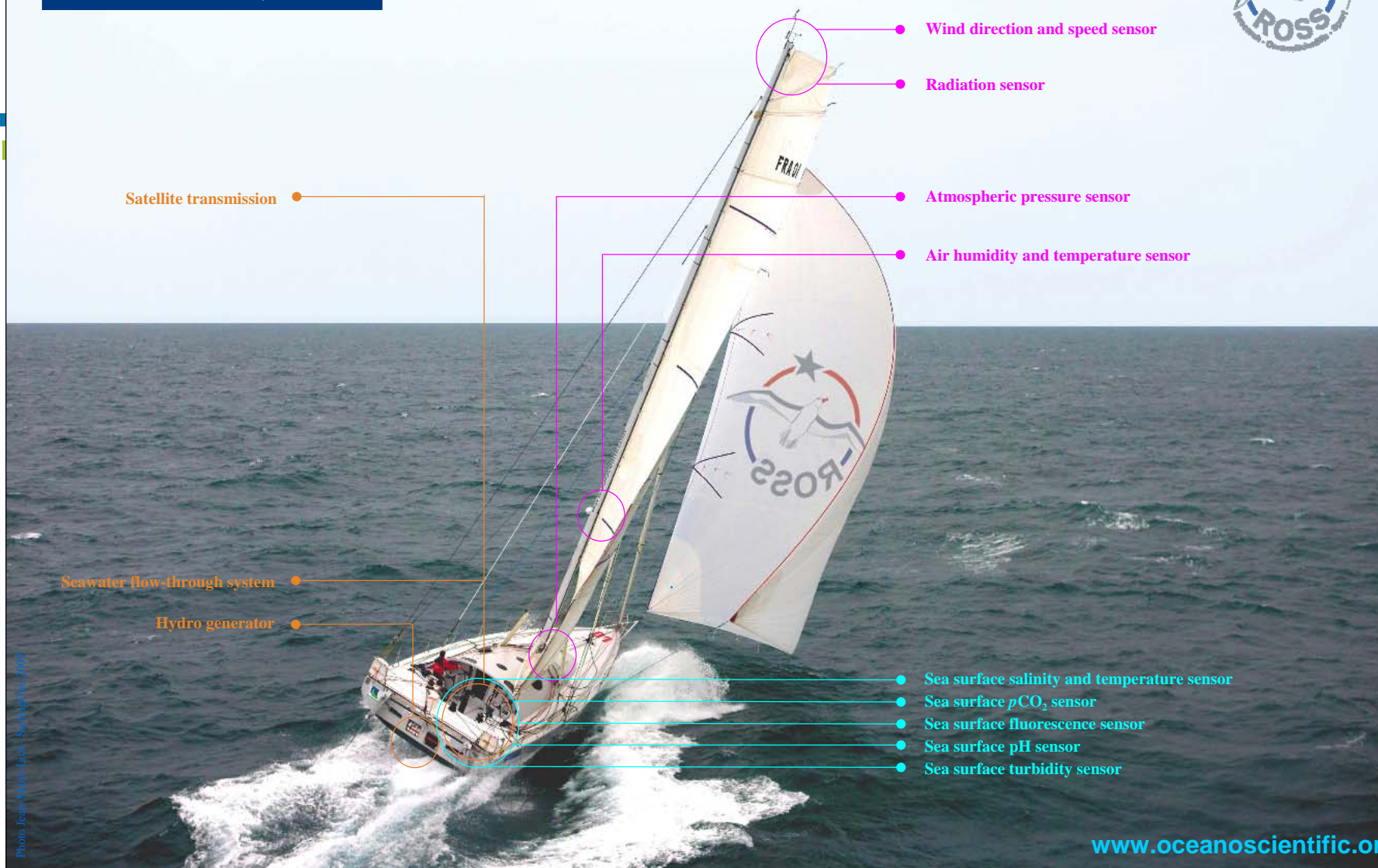


Photo: Jean-Marc Laroche - Sciencemagazine 2009

www.oceanoscientific.org

OceanoScientific

SYSTEM

Wind direction

Wind speed

Atmospheric pressure

Air temperature

Air humidity

Radiation

Sea surface fluorescence

Sea surface power of hydrogen - pH

Sea surface partial pressure of carbon dioxide - $p\text{CO}_2$

Sea surface salinity

Sea surface temperature

Sea surface turbidity

Ifremer



METEO FRANCE
Toujours un temps d'avance



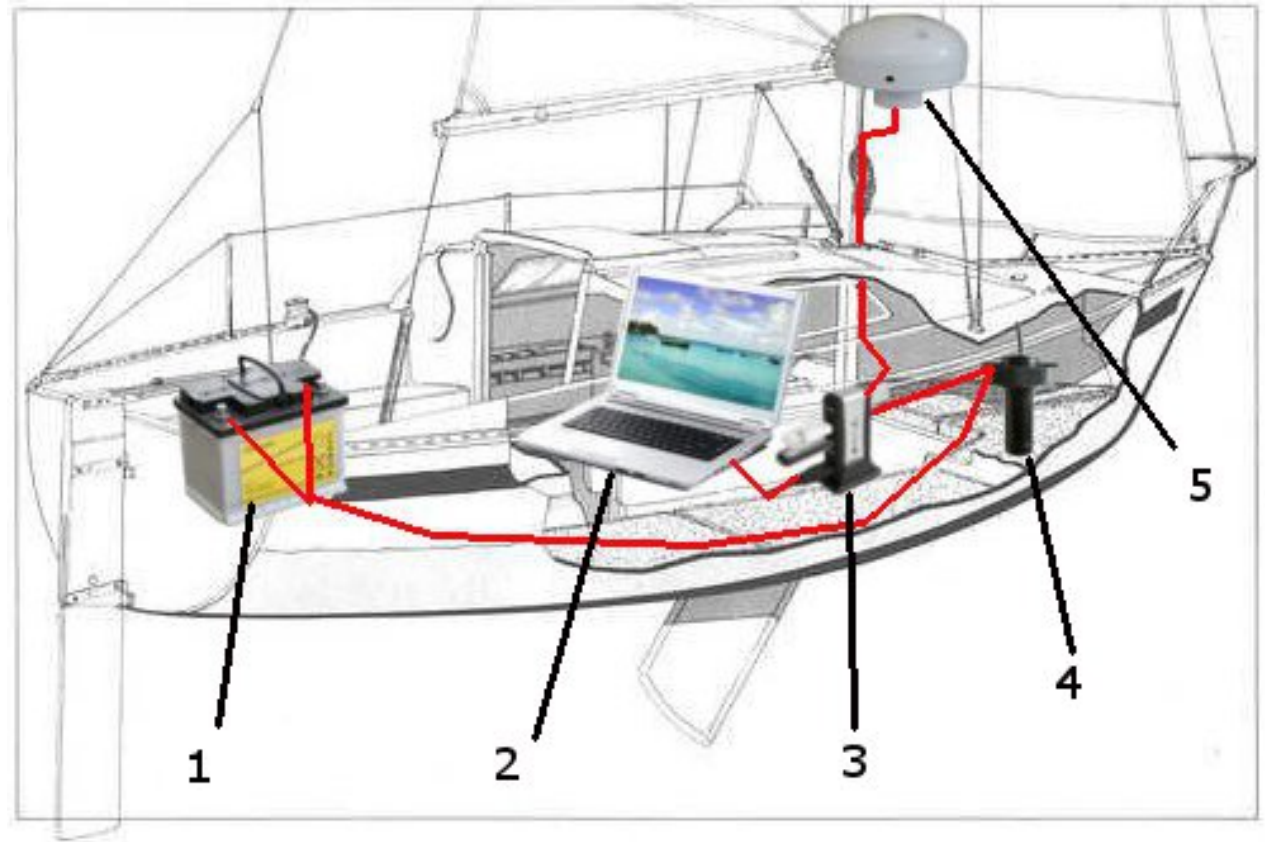
SailingOne



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The CANOE system : how to include the observation by the society for the science



THANK YOU FOR YOUR ATTENTION