

BEST PRACTICES WORKSHOP



JOINT EUROPEAN RESEARCH INFRASTRUCTURE NETWORK FOR COASTAL OBSERVATORIES

SUMMARY OF THE FIRST WORKSHOP ON FIXED PLATFORMS

Rome, 29 February – 1 March, 2012

Stefania Sparnocchia | CNR | stefania.sparnocchia@ismar.cnr.it

OBJECTIVE



*To **review the current distribution** of Fixed Platforms in European coastal observing efforts and to **advance the development of harmonized Fixed Platforms operations** within the JERICO network.*

Contribution to the preparation of deliverables of WP3 and WP4:

D3.3. report on status of fixed platforms (M21=Jan 2013)

D4.1 Report on existing calibration facilities (M18 = Oct 2012)

D4.2 Report on calibration Best Practice (M36 = Apr 2014)

D4.3 Report on biofouling prevention methods (M36 = Apr 2014)

SESSIONS



Session 1: Fixed platforms: current status and improvement (WP3 T3.3), 29 February 2012

Session 2: Maintenance methods: calibration (WP4 T4.1), 1 March 2012

Session 3: Maintenance methods: biofouling and prevention methods (WP4 T4.2), 1ST March 2012

PARTICIPANT LISTS



Organization	Name and surname
IFREMER	Patrick Farcy, Ingrid Puillat, Laurent Delauney, Florence Salvetat
IBWPAN	Rafał Ostrowski, Piotr Szmytkiewicz
OGS	Rajesh Nair, Stefano Kuchler
CNR	Stefania Sparnocchia, Marco Faimali, Mauro Bastianini, Carolina Cantoni, Francesco Riminucci
HCMR	George Petihakis, Thanasis Chondronasios, Manolis Ntoumas
NERC	Michael J. Howarth
HZG	Wilhelm Petersen
BSH	Detlev Machoczek
Flemish Hydrography	Stephanie Vandevreken
CEFAS	Naomi Greenwood, Dave Sivyver
SMHI	Bengt Karlson, Olle Petersson
MI	Sheena Fennell
AZTI	Carlos Hernández
CNRS/INSU	Laurent Coppola, François Bourrin, Pascal Morin
IH	Sara Almeida
SYKE	Jukka Seppala
CSIC/IMEDEA	Benjamín Casas Pérez
SOCIB	Carlos Castilla
UOM	Adam Gauci
CMCC	Srdjan Dobricic
ENEA/ EMODNET PP	Giuseppe Manzella

36 participants from 21 Institutions

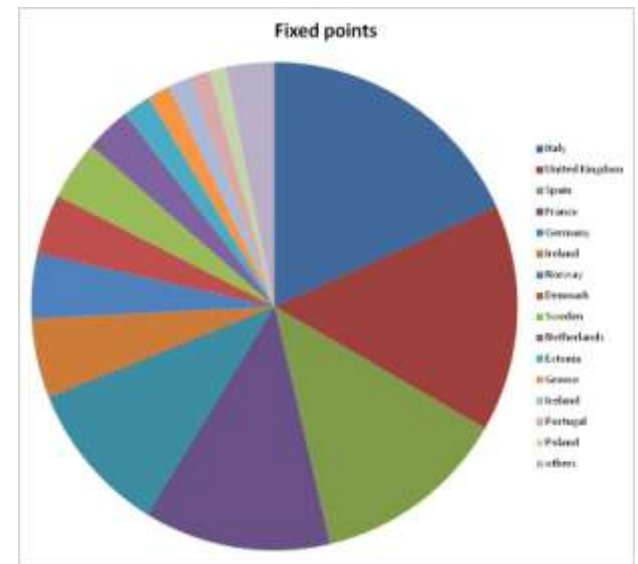
SESSION 1 – CURRENT STATUS AND IMPROVEMENT



JERICO survey on fixed platforms (T3.3.1 - Fixed Platforms Questionnaire) – Dave Sivyer (CEFAS) & Wilhelm Petersen (HZG)

Actions to take

- Compare JERICO table with SEADATANET / EDIOS archives
- Compare JERICO table (~550 stations) with MyOCEAN live data feeds (~850 stations)
- Verify positions and depths, assure standard GPS format, std parameter codes etc.
- Add details on: system downtime, platform manufacturers, sensor manufacturers, impact of the platform on data quality.
- **Final report with stations list and gaps according to geographic regions, or measurement parameter.**



Overview of fixed platforms information collected at the date of the workshop

SESSION 1 – CURRENT STATUS AND IMPROVEMENT

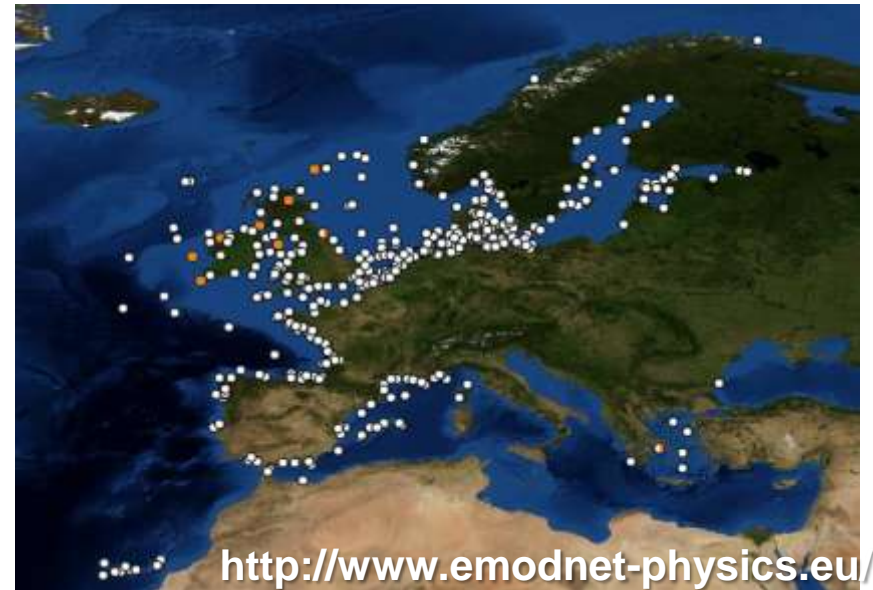


Overview of fixed platforms by Giuseppe Manzella (ENEA & EMODNET PP)

Built upon pre-existing initiatives (SEPRISE, EDIOS), EMODNET PP will be helpful to JERICO in describing distribution of stations and data collected.

Overview by JERICO partners

Status reports on the Fixed Platforms operated in JERICO and their contribution to existing Coastal Observatories.



For details:

<http://www.jerico-fp7.eu/reports-a-deliverables/fixed-platforms-workshop>

SESSION 1 – CURRENT STATUS AND IMPROVEMENT



New sensors and techniques for in situ measurements at fixed points

- ***pH and pCO₂ measurements***
Lab measurements and image analysis for monitoring the ecosystem status (abundance, biomass, taxa, size spectra)
L. Coppola, L. Stemmann, M. Picheral, F. Prejger, G. Obolensky
Observatoire Océanologique de Villefranche-sur-Mer
- ***New sensors tested at HZG: Nutrients, PSICam, pCO₂***
W. Petersen, Helmholtz-Zentrum Geesthacht
- ***Needs of fixed observing sites for estimating/modelling processes in the coastal zone (in collaboration with WP9)***
Srdjan Dobricic (CMCC)

SESSION 1 - DISCUSSION & CONCLUSION



Defining information useful for deliverable **3.3.1 “Review of the current marine fixed instrumentation”** due in January 2013

Q1. What is the experience with different kind of platforms? What kind of purposes do need big or small platforms, fixed platforms or buoys, etc.?

Q2. What is the experience with profiling devices?

Q3. What type of platforms should we mention in the deliverable?

Q4. What is the accessibility of the platforms? What are the advantages and disadvantages of different options?

SESSION 1 - DISCUSSION & CONCLUSION



Next Action

Drafting the report

D 3.3. report on status of fixed platforms (M21=Jan 2013)

1. Description of types of platforms in use (Bengt Karlson)
2. Review of experiences. Find a regional coordinator to collect info and synthesize.
3. Description of equipment and sensors on board.

SESSION 2 – CALIBRATION

Calibration Questionnaire – George Pethiakis (HCMR)

The questionnaire had 2 parts, one focused on in-house calibration facilities, other on the practices adopted by partners regarding calibration.

- 16 out of 18 partners replied at the date of the workshop.
- 6 out of 16 partners operate a dedicated calibration facility.
- Most of the platform operators send the sensors to the manufacturer for calibration (expensive practice!), but in most case operations are not regular.



For details:

<http://www.jerico-fp7.eu/reports-a-deliverables/fixed-platforms-workshop>

SESSION 2 – CALIBRATION



Calibration Practices

- ***Calibration of optical sensors: outcomes from the Helsinki workshop of February 2nd, 2012***
Jukka Seppala (SYKE)
- ***Metrology for Oceanography: main issues and IFREMER's actions***
Florence Salvetat (IFREMER)

For details:

<http://www.jerico-fp7.eu/reports-a-deliverables/fixed-platforms-workshop>

SESSION 2 – CALIBRATION



Points to work out:

- Enlarge the community of operators of in-house calibration facilities.
- Promote the adoption of accreditation for the calibration, and in general work more on the Quality Standards issues.
- Sharing of facilities and mutual training of technical staff.
- Create a space on the JERICO web-site where people can upload/download manuals.
- Homogenize calibration approaches.
- **Set up a permanent calibration working group. Identify key nodes as reference for calibrating specific type of sensors.**

SESSION 2 – CALIBRATION



Follow up actions:

- Organize a calibration workshop, including DO Optode sensors.
Next week at IFREMER, Brest.
- White paper on Oxygen measurements to be discussed in the
Forum for Coastal Technology.
Discussion during this workshop.

SESSION 2 – CALIBRATION



Next Actions

Drafting the reports

D4.1 Report on existing calibration facilities (M18 = Oct 2012)

D4.2 Report on calibration Best Practice (M36 = Apr 2014)

Key persons were identified for each parameter who will coordinate the drafting of the documents.

Jukka Seppala	SYKE	Chlorophyll and turbidity sensors
Rajesh Nair	OGS	Temp. and Cond. sensors
Wilhelm Petersen	HZG	Chemical sensors
Florence Salvetat	IFREMER	DO sensors

- describe the best practice for the sensor calibration of each parameter or group of parameter
- recommend methodologies and issue protocols
- distribute the information/draft to full and associated partners

SESSION 3 – BIOFOULING

Biofouling Questionnaire – Marco Faimali (CNR)

The questionnaire had 2 parts, a general part (A) and one specific for each type of sensor (B).

- 16 out of 18 partners completed part A at the date of the workshop, returning totally 52 part B for different sensors.
- Biofouling is perceived as a problem in making measurements.
- Passive techniques are more in use than active ones even if mechanical device are believed to be the most effective.
- Knowledge of type of organisms contributing to fouling is poor.



For details:

<http://www.jerico-fp7.eu/reports-a-deliverables/fixed-platforms-workshop>

SESSION 3 – BIOFOULING



Biofouling impact and protection methods

- **Biofouling protection for marine sensors – Review**
Laurent Delauney (IFREMER)
- ***An example biofouling impact after long-term deployment***
Carlos Hernández (AZTI)
- ***Antifouling device at EOL buoy***
Laurent Coppola (Obs.Oc. CNRS)
- ***Biofouling – Techniques to fight the plague***
Detlev Machoczek (BSH)

For details:

<http://www.jerico-fp7.eu/reports-a-deliverables/fixed-platforms-workshop>

SESSION 3 – BIOFOULING



I Follow up actions

- Improve the questionnaire to collect more information and better specify “not clear/difficult-to-answer questions”, diffuse to partners and associated.
 - Review of biofouling methods vs sensors (literature, BRIMOM project), focus on new methods
 - Testing the effect of biofouling on **Dissolved Oxygen sensor** (focus on “immunity”)
 - literature and manufacturers documentation review
 - comparison of sensors measurements with Winkler data (at the meeting in Crete, October 2012)**→ White paper**
 - Plan of a biofouling experiment to discuss at the meeting in Crete, Oct. 2012)
 - **Drafting the report**
D4.3 Report on biofouling prevention methods (M36 = Apr 2014)
- Key persons to work on this task with CNR: Laurent Delauney, Wilhelm Petersen and someone from the gliders community.

FIRST FIXED PLATFORMS WORKSHOP

ROME 29 FEB - 1 MAR 2012



!!! EFKARISTOS !!!