



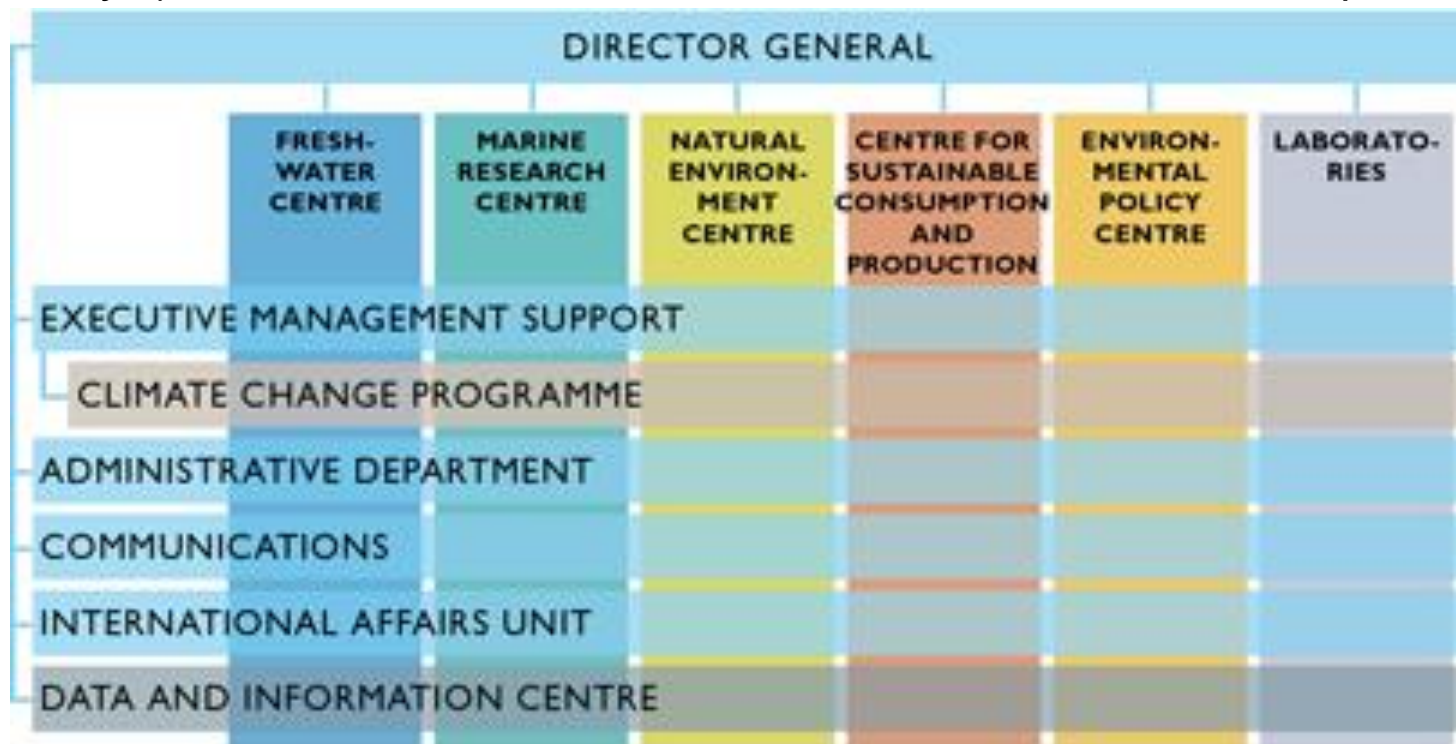
JOINT EUROPEAN RESEARCH INFRASTRUCTURE NETWORK FOR COASTAL OBSERVATORIES

*CALIBRATION AND BIO FOULING
PREVENTION OF OPTICAL SENSORS &
SHARING OF CALIBRATION FACILITIES*

SYKE INTRODUCTION



The Finnish Environment Institute (also known as SYKE, after the Institute's Finnish acronym) is both a research institute, and a centre for environmental expertise.



SYKE INTRODUCTION



SYKE's Marine Research Centre conducts wide-ranging research on the ecosystems, marine life and state of the open Baltic sea and the coastal waters around Finland, also assessing the factors that shape the marine environment.

Marine Research Centre of SYKE
Modelling and Innovations Unit
State of the Marine Environment Unit
Marine Spatial Planning Unit
Marine Pollution Response




Work package number ⁵³	WP4	Type of activity ⁵⁴	COORD
Work package title	HARMONIZING OPERATION AND MAINTENANCE METHODS		



TASK 4.1: CALIBRATION (M1 – M42), (HZG, OGS, SMHI, SYKE, NERC(POL), HCMR, CNR, IH)

SubTask 4.1.2: Optical sensors Chl-a, Turbidity, PAR (SMHI, IH, OGS, SYKE).

- 1) Harmonization of calibration practices through documentation and assessment of existing calibration methodologies, equipment, and reference material currently in use within JERICO
- 2) Sharing of calibration facilities including: a) joint meetings for documentation of existing calibration infrastructures within JERICO b) identification/definition of potential trans-network “nodes” for these services.
- 3) Designation of best practices for the use of optical sensors. This includes recommendations on time of day and frequency for sampling, calibration procedures, anti fouling measures and procedures to combine different data to produce high quality products.



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Work package title	HARMONIZING OPERATION AND MAINTENANCE METHODS		



TASK 4.2: BIO FOULING PREVENTION (M1 – M42), (CNR, HCMR, SYKE, NERC(POL), HZG, NIVA, IFREMER, CNRS)

SubTask 4.2.2:

- 1) all different methods and approaches will be described and evaluated in terms of costs;
- 2) the impacts of biofouling on the data quality will be evaluated;
- 3) recommendations for the best practice will be given.



Timetable



9:00-12:00 Scientific session: ***Principles of calibration and bio fouling prevention of optical instruments, especially fluorometers***

9:00-9:10 Welcome (Kaitala)

9:10-9:40 Seppälä: *Challenges in matching up concentration and fluorescence data*

9:40 – 10:10 Karlson: *Diversity of phytoplankton and implications for the use of fluorescence of photosynthetic pigments as biomass proxies*

10:10-10:30 Coffee

10:30-10:50 Sörensen: *Calibration of Chla-Flu*

10:50-11:10 Petersen: *Bio-fouling prevention and experiences with the solid-standard in HZG*

11:10-11:30 Gkritzalis-Papadopoulos: *Experience on chlorophyll sensors - calibrations, applications and data - and on bio-fouling of various sensors*

11:30-11:50 Petihakis: *Fluorescence sensor metrology : Main issues and Ifremer's actions & Biofouling protection for in situ oceanographic sensors by local chlorination*

11:50-12:20 Kaitala: *Calibration, validation and bio fouling prevention of optical sensors in Alg@line project*

12:20-13:30 Lunch (at your own cost in cafeteria next to the meeting room)

13:30-15:00 ***Demonstration of Alg@line-project calibration activities at SYKE***

Chl-a & turbidity (Maunula, Kaitala)

Phycocyanin & CDOM (Seppälä)

Recent developments in optical measurements at SYKE (Simis, Ylöstalo, Olsson) *with coffee*

15:00-18:00 ***Discussions: harmonization of calibration activities, current practices and way forward***

18:00 – Evening buffet and sauna



	13:30-14:00	14:00-14:30	14:30-15:00
Chla, Petri & Seppo	Group A		Group B
Trios fluoro Jukka	Group B	Group A	
SYKE optics Stefan, John, Pasi		Group B	Group A