



# EUROMARINE FORESIGHT WORKSHOP

30-31  
January  
2019

Cadiz  
Spain

## Improving the visibility of ocean data from new technologies: a case study of high frequency flow cytometry

March 21-23, 2018 – Mediterranean Institute of Oceanography (MIO) Marseille, France



### CO-ORGANISERS:

VÉRONIQUE CRÉACH

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# EUROMARINE FORESIGHT WORKSHOP



## Manager

CEFAS



## Co-organisers

CNRS (INSU), Ifremer



## Key Participants

SYKE Ugent AMU  
UPMC AWI

## Objectives of the Workshop:

- Present the latest developments in high frequency in situ flow cytometry
- Flow cytometry data management
- Advertise the availability of good quality-controlled data
- Data freely available to various scientific communities for a better understanding of the marine ecosystem



## Aim :

Improving the visibility of ocean data from a new technology to better understand the marine ecosystem.

## Audience :

Scientists involved in H2020 European projects JERICO-NEXT and SeaDataCloud

- 43 participants (42% of women; 6 students supported by Euromarine and Regional funding)
- 12 different countries
- 21 research organisations (15 in the Euromarine network)
- 2 private companies



## Workshop divided in practical sessions, presentations and discussions:

### DATA PROCESSING

- Present the capabilities of the different types of data processing,
- Give the opportunity for specific questions to the experts,
- Completed by general presentations on data processing for high frequency in situ flow cytometry.



### DEVELOPMENT OF FLOW CYTOMETRY FOR IN SITU OBSERVATION

- A new vocabulary for flow cytometry European infrastructures (EMODnet, OBIS, EurObis).
- Example of coastal observation network with flow cytometry data : SOMLIT (French Service d'Observation en Milieu Littoral) in the frame of WFD (water framework directives) and MSFD (Marine strategy framework directives).
- Discussion about the European infrastructures to give a better visibility and accessibility to biological data. Need for standardisation and harmonisation.

### HIGH FREQUENCY FLOW CYTOMETRY DATA IN MONITORING AND FUNDAMENTAL RESEARCH

- To better understand the phytoplankton dynamic (abundance, diversity) at small and large geographical scales
- Impact on the food web.
- Possibility to use the flow cytometry data in different approaches such as modelling and remote sensing.
- Discussion: To understand the needs of the users. Limits of the observation. To establish a fully comprehensive and useful flow cytometry database

### OUTCOME

The synthesis of the workshop will be summarised in a position paper which will be used as a road map for future harmonised methods for data classification and analysis on flow cytometry, as well as integration with existing ocean data portals.



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## Participants

	<b>Number of participants</b>	<b>% per country</b>
Greece	1	2
Tunisia	1	2
Israel	1	2
Sweden	1	2
Denmark	1	2
Finland	1	2
Belgium	2	5
United Kingdom	3	7
Italy	3	7
Germany	3	7
The Netherlands	6	14
France	20	47

Name of institution	Category	Country
Afred Wegener Institute (AWI)	research organisation	Germany
Aquatic Ecology and Biological Oceanography laboratory- Bar Ilan university	University	Israel
BOREA research unit- University of Caen	University	France
Centre for Environment, Fisheries and Aquaculture Science (Cefas)	research organisation	United Kingdom
CNRS-LOG-Universite du littoral Cote d'Opale	University	France
Cytobuoy	University	Netherlands
Danish Centre for Environment and Energy (DCE)	research organisation	Denmark
Deltares	research organisation	Netherlands
Department of Biology - University of Ghent	University	Belgium
Finish Environment Institue (SYKE)	research organisation	Finland
Hellenic Center for Marine Research (HCMR)	research organisation	Greece
Intitut National des Sciences et Technologies de la MER (INSTM)	research organisation	Tunisia
Max Plank Institute (MPI)	research organisation	Germany
Mediterranean Institute of Oceanography (MIO)- University of Marseille	University	France
National Institute of Oceanography and Geophisic Experimental (OGS)	research organisation	Italy
Plymouth Marine Laboratory (PML)	research organisation	United Kingdom
rijkswaterstaat (RWS)	research organisation	Netherlands
Royal Netherlands Intitute for the Sea research (NIOZ)	research organisation	Netherlands
Swedish Meteorological and Hydrological Institute (SMHI)	research organisation	Swedden
ThomasRutten Project	SME	Netherlands
ULCO_CNRS LOG- Universite du Littoral Cote D'Opale	University	France
UMPR EPOC- University of Bordeaux	University	France
Biology Department- University of york	University	United Kingdom
Vlaams Instituut voor de Zee (VLIZ)	research organisation	Belgium