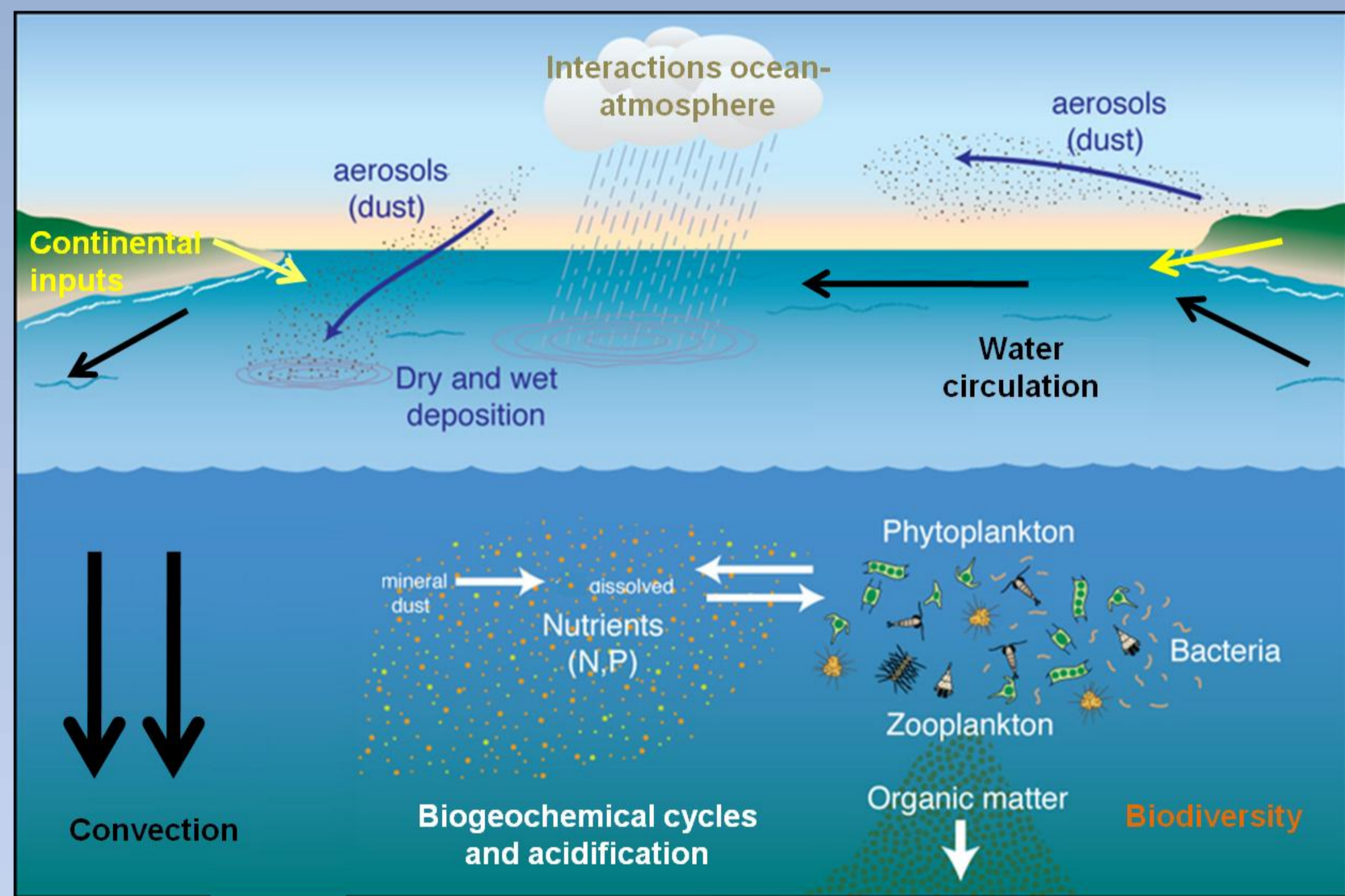


Coordinators: F. Mantoura¹, L. Coppola¹, M. Cousin¹,
 D. Antoine², L. Beguery³, S. Blain⁴, M-N. Bouin⁵, JF Cadiou⁶, X. Durrieu de Madron⁷, P. Forget⁸, P. Fraunié⁸, C. Gojak³, G. Gorsky², C. Goyet⁹, P. Lebaron⁴, J.M. Lellouche¹⁰, W. Ludwig⁷, A. Molcard⁸, L. Mortier¹¹, L. Petit de la Villéon¹², A. Petrenko¹³, J. Piazzola⁸, B. Queguiner¹³, P. Raimbault¹⁴, V. Rigaud⁶, R. Sempéré¹⁴, C. Tamburini¹⁴, P. Testor¹¹, R. Vuillemin⁴, B. Zakardjian⁸

1 Observatoire Océanologique de Villefranche-sur-Mer, Villefranche-sur-mer, France ; 2 Laboratoire d'Océanographie de Villefranche, Villefranche-sur-mer, France ; 3 Division Technique, Institut National des Sciences de l'Univers, Seyne/mer, France; 4 Laboratoire d'Océanographie Biologique, Banyuls/mer, France; 5 CNRM/Centre de Météo Marine, Brest, France; 6 IFREMER, Centre Méditerranée La Seyne/mer, France ; 7 Centre de Formation et de Recherche sur l'Environnement Marin, Perpignan, France; 8 Laboratoire de Sondages Electromagnétiques de l'Environnement Terrestre, Toulon, France; 9 Université de Perpignan, Perpignan, France; 10 Mercator-Ocean/Cerfacs, Toulouse, France; 11 Laboratoire d'Océanographie et du Climat : Expérimentation et Approches Numériques, Université Pierre et Marie Curie, Paris, France ; 12 SISMER & CORIOLIS DATA CENTRE IFREMER, Plouzané, France; 13 Laboratoire d'Océanographie et de Biogéochimie, Centre d'Océanologie de Marseille, Marseille, France ; 14 Laboratoire de Microbiologie Géochimie et Ecologie Marines, Centre d'Océanologie de Marseille, Marseille, France

Objectives:

- Interactive, distributed and integrated network of the NW Mediterranean marine and atmospheric observatories
- Observe long-term evolution of the NW Mediterranean Sea in the context of the climate change and anthropogenic pressure (more than 10 yrs)
- Detect and identify long-term environmental anomalies
- Build efficient indicators of the health of the NW Mediterranean basin



Science Plan:

- WP1- Mesoscale circulation of the North Gyre
- WP2- Continental inputs (Rhône, Têt)
- WP3- Biogeochemical cycle, acidification and contaminants
- WP4- Biodiversity and biological resources
- WP5- Air-sea interactions

Scientific strategies:

- Project based on relevant scientific questions in relation to the HYMEX, MERMEX and CHARMEX projects
- Key questions adapted for the long-term observation (seasonal, annual and decade variability)
- Reply to societal needs: operational oceanography, large database, contaminants, biodiversity

Implementation strategies:

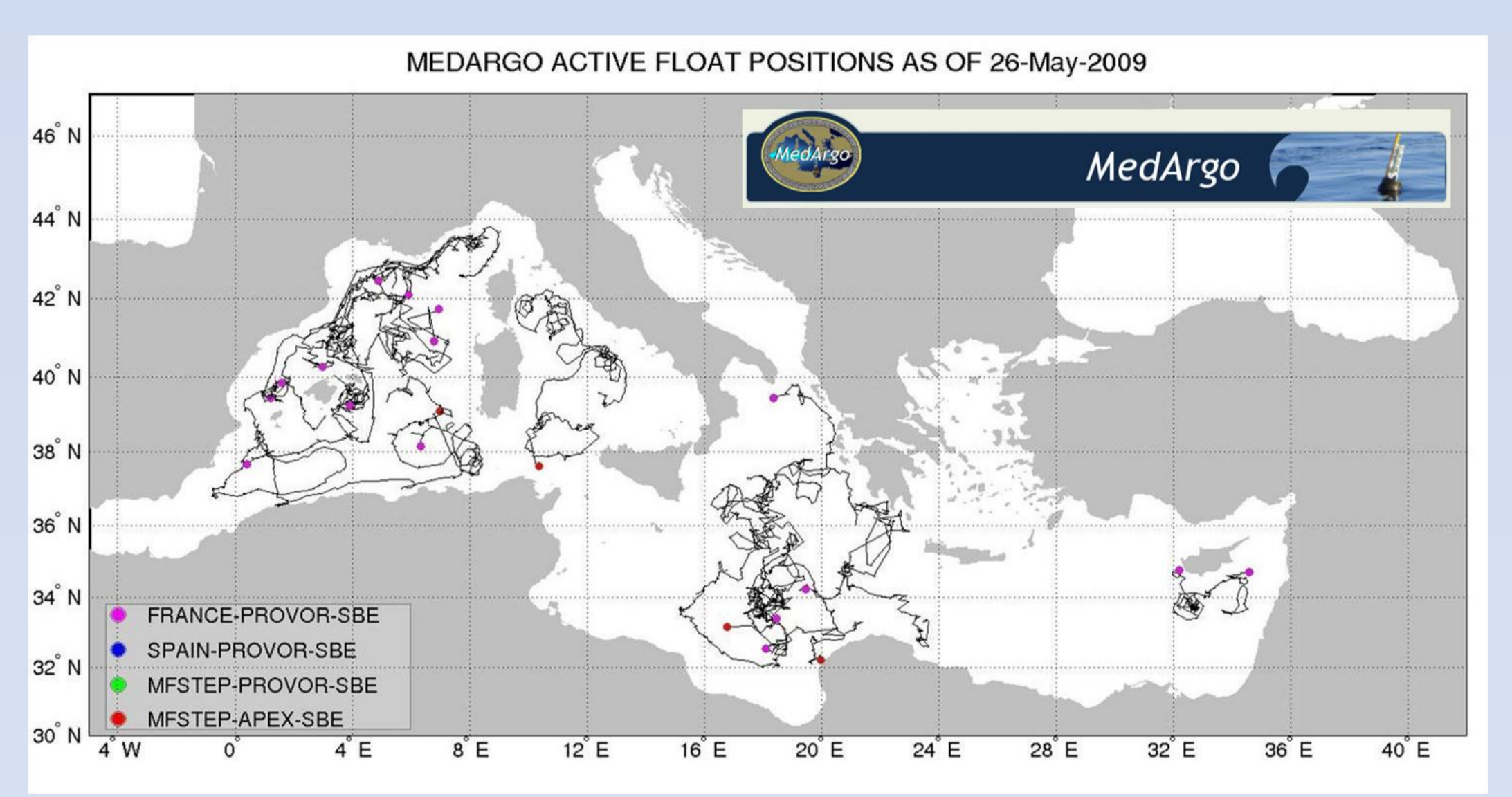
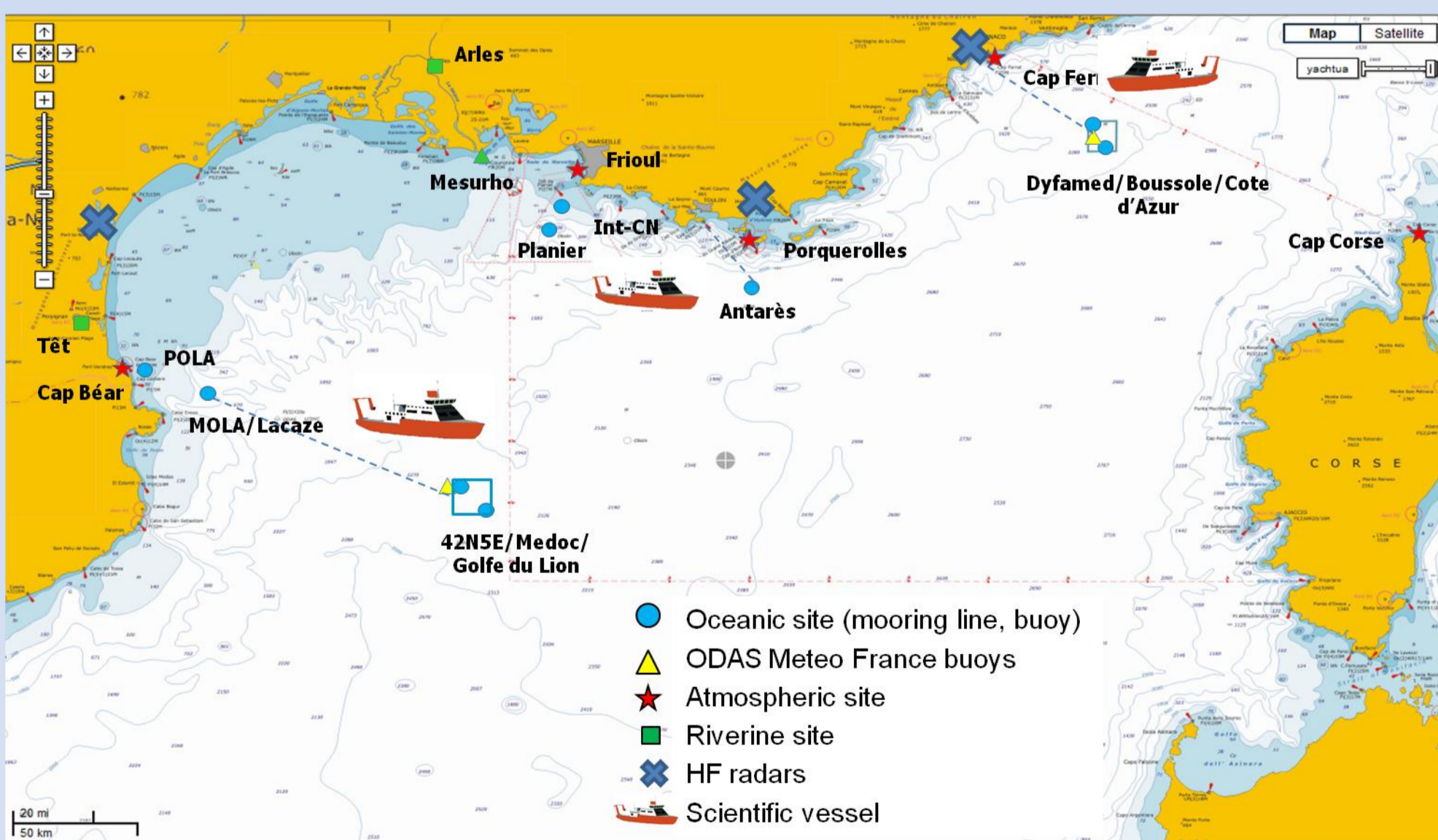
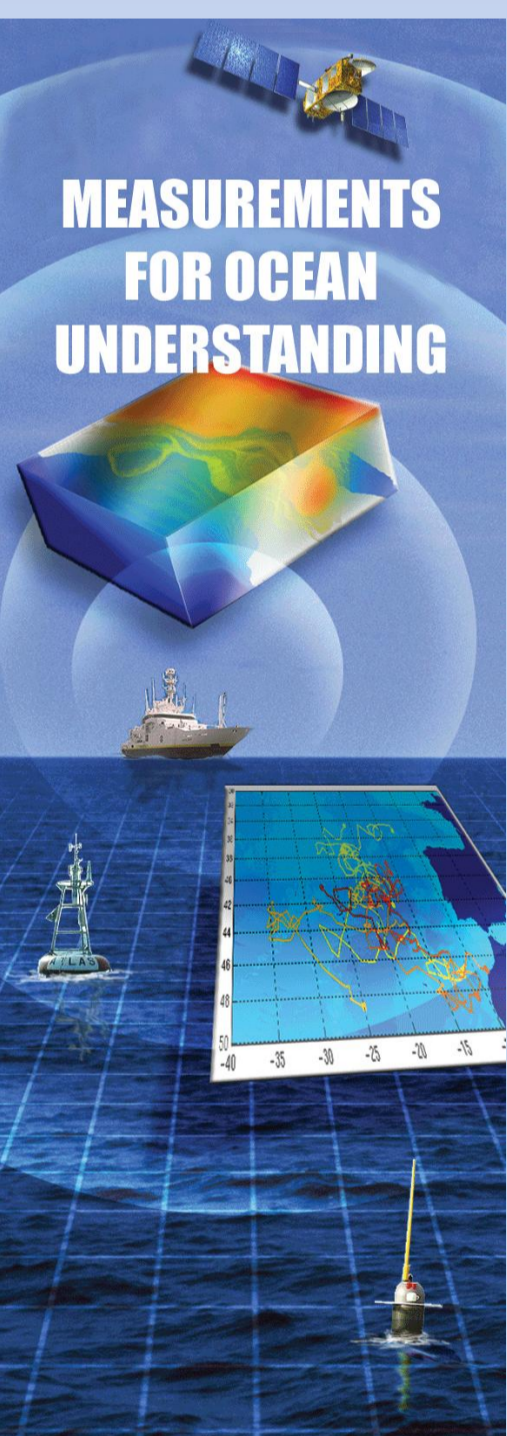
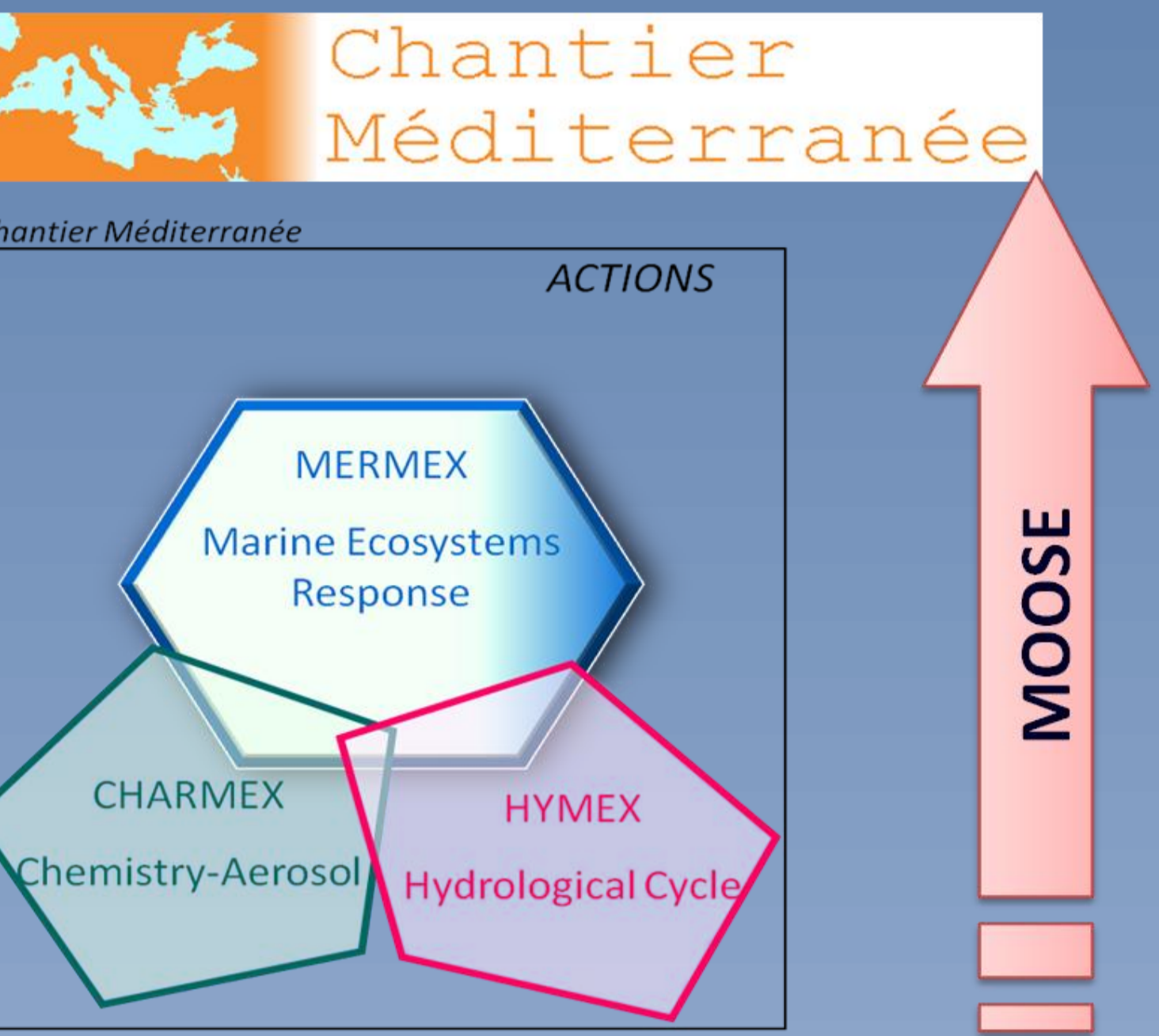
- Focus on the Long-term Observation Period (LOP) and strong collaboration to support the SOP and EOP actions of HYMEX, MERMEX and CHARMEX (time series of core parameters, logistic and human needs)
- Implement the open ocean sites for real-time data transmission from the surface to deep waters
- Integrate mobile platforms (gliders, bio-Argo floats) to enlarge our vision of physical impact on biogeochemistry (sub and meso-scale observation)
- Implement new and relevant parameters in the Mediterranean evolution context: pH, pCO₂, Hg, Cd, ...
- Provide high quality data for science: homogenize sensors, protocols acquisition, quality control and validation procedures

Operational oceanography and data management:

- Operational oceanography (Mercator-Coriolis): need higher amount of real-time data to improve models and forecast
- Data Management (SISMER-IFREMER): common data storage, public access

Observation strategies:

- ✓ Network of eulerian oceanic stations, atmospheric deposition sites and riverine monitoring in the Med NW region
- ✓ 4 Endurances lines (gliders) to observe the impact of the hydrodynamic on biogeochemistry: North Current variability, coastal-open ocean exchanges, deep open ocean convection
- ✓ Deployment of 2 bio-Argo floats in the framework of the MedArgo strategy to profile the water masses at the mesoscale level



International integration:

- Need to coordinate observation strategies with Med EU partners: IMEDEA, NURC, CNR, ENEA, Stazione Zoologica Naples, ... (gliders deployment, vessel cruises, database, ...)
- Integrate the MOOSE strategy in the international programs in the framework of the ocean observing system (MedGOOS): Eurosites, Esonet, MOON, MedArgo, ...



Contact: coppola@obs-vlfr.fr
 Web site: www.obs-vlfr.fr/moose

