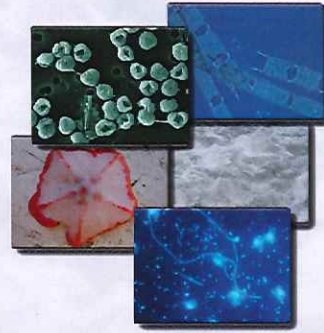


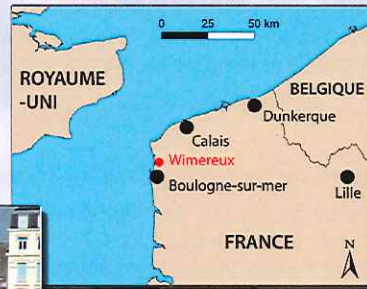
## Facts and figures:

- Staff: 126, (80 permanent - 58 researchers, and 22 technicians and administrators; 29 Ph.D. students; 9 post-docs; and 8 temporary staff).
- 100 publications per year in international journals
- International collaborations (Taiwan, China, Vietnam, Russia, India, Canada, Brazil, Morocco, Tunisia, Algeria, USA, Australia, New Zealand, Belgium, The Netherlands, Denmark, Italy, Great Britain, Germany, Greece, Switzerland, Spain...); Ph.D.s under joint supervision; international exchanges of researchers and professors; participation in European programs, INTERREG and H2020.



<http://log.cnrs.fr/>

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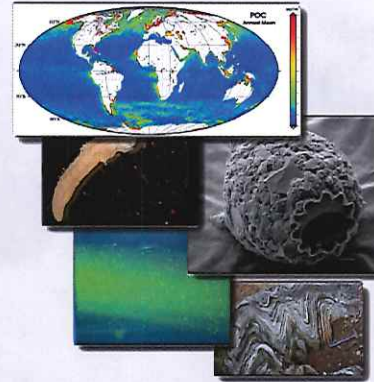
Wimereux Marine Station (Université de Lille) and SN5 Building  
Maison de la Recherche en Environnement Naturel (ULCO)  
in Wimereux and Lille



# Laboratory of Oceanology and Geosciences

CNRS Research Unit (UMR) LOG 8187

Wimereux and Villeneuve d'Ascq (Northern France) 13/03/2017



The laboratory of Oceanology and Geosciences (LOG) fields of research fall primarily within the coastal and littoral areas of the Eastern English Channel, although it also works within parallel global ecosystems and geosystems - including the French Guiana, the North Atlantic, the Mediterranean Sea, and the Southern Ocean.

The laboratory's wide range of oceanographic and geoscientific researchers are organized into **six research teams**, with activities divided into: **Observation, Experimentation, and Modeling.**

## Research teams:

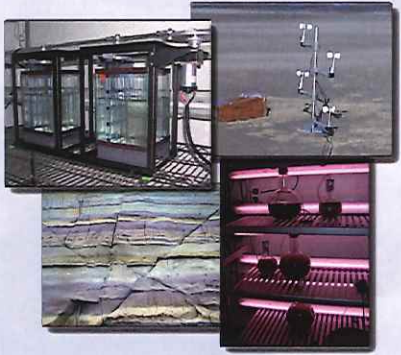
- RT1 DIVECOM: *Diversity, processes and interactions of marine ecosystems*
- RT2 ECOGLOB: *Ecosystems, biodiversity, and global changes*
- RT3 TELHYD: *Remote sensing and hydrodynamics*
- RT4 DYNACOR: *Practical coastal dynamics*
- RT5 GEOSED: *Mineralogical, and geochemical messages in sediments*
- RT6 TIMES: *Tectonics of margins and sedimentary basins*



Université du Littoral Côte d'Opale,  
Centre National de la Recherche Scientifique, Université de Lille







## Research activities at the LOG:

- Fundamental and applied research
- Research qualifications (Ph.D. candidates; 3 M.Sc. programmes: Marine sciences, Ecology, and Geosciences)
- Transfer of knowledge to private and industrial sectors
- Participation in national and international conferences
- Participation in national and international networks
- Organization of international symposia and workshops
- Publication of scientific papers in international peer-reviewed journals and expert reports

## Scientific knowledges development based on:

- Observation:** Fieldwork; oceanographic cruises; in-situ sampling/measurement; long-term monitoring; spatial remote sensing; geophysical acquisition
- Laboratory experimentation** (mesocosm, microcosm); aquaculture
- Modeling:** Data analysis using multiple methods developed in the laboratory; transport models, individual-based models, bio-energetic models, stochastics models, radiative transfer models, hydrocarbon-deposit models, Experimental (Analogue) modeling of deformation, erosion and sedimentation, theoretical developments.



## Funding agencies and programs:

French National Space Agency (CNES), French National Research Agency (ANR), European programs (INTERREG, H2020), National programs (Liteau, Sein-Aval), French National Center for Scientific Research (CNRS) programs (EC2CO, PNTS, LEFE, SYSTER, Actions Marges, Actions INSU-ST Oceanographic campaigns), European Space Agency (ESA)

## Observation:

Observation networks SOMLIT and DYNALIT

## Networking participation:

Network of French Marine Stations and laboratories (RE-SOMAR); French Marine Universities network, research groups participation (GDR): "Guiana coast under Amazonian influence-LIGA", "Trophic ecology-GRET", "Phyco-tox", "Turbulence", "Multifractals", "Marine Energy"; International network GEOTRACES (marine geochemistry); International Ocean Color Coordinating Group (IOCCG)



## Research infrastructures:

- Sepia II oceanographic vessel (INSU) and pneumatic craft
- Biologic sampling equipment (Benthic and Pelagic), Laboratory rooms including dust-controlled and temperature-controlled room
- Chemical analysis laboratory equipments (CHN, CHONS, HPLC, Auto analyzer, COT analyzer)
- Mineralogical analyzes equipment (XRD)
- Equipment for grain-size analyzes by laser diffractometry equipment
- Sensors for in-situ physicochemical measurements (Velocimeter, ADV and ADCP, oxygen probes, pH meters, temperature, salinity and PAR meters, wave sensors, tachometer, dGPS, fluorometers, radiometers and nephelometers...) and in the laboratory (fluorometers, spectrophotometers)
- Digital cameras
- Flow cytometers
- Laser granulometry
- Epifluorescence inverted microscopes, scanning electron microscopes
- Optical microscopy tray: polarized light microscopes, fluorescence, binocular magnifier, cathodoluminescence, Raman...
- Fully equipped facility for making petrographic thin sections and sorting system and sample grinding
- Materials for undisturbed sediment sampling: auger, vibrocorer 6m
- Core-cutting bench saw
- ROV and Multibeam echosounder
- Laboratory for analogue modeling of tectonic processes
- Very High-resolution seismic system (sparker)
- Seismic interpretation room on computer workstation

## Support actions for industry and local authorities:

- Marine and coastal environment surveys (ecological indicators, baseline status, monitoring, past and actual coastline evolution)
- Water Framework Directive, Marine strategy Framework Directive, Natura 2000, etc.
- Pelagic and Benthic habitats
- Faunal, Floral, Taxonomy (classic and molecular methods)
- Biotechnology alternatives for living preys in aquaculture
- Long term monitoring and surveys: methodological analyses
- Environmental, temporal and paleo-environmental data sets
- Marine and coastal geomorphology and sedimentology
- Physics and biogeochemical sampling semi-automatized measurements *in situ* and at the laboratory
- Materials expertise (crystallography, mineralogy and granulometry)
- Petroleum resources, tectonic-sedimentation interactions, basins analyzes
- Ocean and coastal zones remote sensing
- Scientific popularization for a general audience

## Industry Contracts:

EDF-R&D, CIDEN, CNPE Gravelines, Aquanord Ichthus, Total, Lafarge, Tioxide, Ports du Havre, Rouen, Boulogne-sur-mer, Calais et Dunkerque, Aluminium Pechiney, GIE Granulats Manche Orientale, local rock quarries...

