

Littoral ENvironnement et Sociétés (LIENSs)

The LIENSs - Littoral Environment and Societies laboratory, an interdisciplinary research unit: scientific expertise to understand coastal socio-ecosystems, their functioning, their evolution on different time scales, their uses, and to enable the sustainable development of their resources in a context of climate change and increasing human pressure.



Director — **Valérie Ballu**

Permanent research staff — **108**

Phd students — **39**

Permanent technical assistant staff — **27**

Staff on research project — **54**

— **6 teams**

- ▶ Approach by Geography: Islands, Littoral areas and Environment (AGILE)
- ▶ Biodiversity and Functioning of Coastal Ecosystems (BIOFEEL)
- ▶ Biotechnologies and Chemistry applied to Bioresources for Health (BCBS)
- ▶ Marine animals' responses to environmental variability (AMARE)
- ▶ Physical Dynamics of the Littoral zone (DPL)
- ▶ SpacEs, Societies, TerritoRies of Ancient and New shores (ESTRAN)

Disciplines — **Biology . Ecology . Geophysics .
Oceanography . Geography . History . Chemistry .
Biotechnology . Environmental law . Political science**

human factors, in a global environmental health approach.

Coastal risks

Study of the evolution of coastal hazards (storms, erosion, submersion, pollution, invasive species...) and of the vulnerability of populations living on the coasts at the national and global level.

Attractiveness of the space

Study of the interactions between the different categories of populations living in the coastal strip and their consequences on the natural balance of the area. Half of humanity lives in this 140 km wide zone, it is a highly coveted space where many uses and socio-economic exchanges are developed.

Sustainable management

Long-term monitoring of the marine environment to acquire the necessary knowledge to deduce good practices for sustainable coastal management.

Living organisms, bio surveys

Study of the roles and functions of marine organisms. Understanding their functions allows us to valorize these biomasses through biotechnologies and bio-prospecting to produce molecules with health benefits (antibiotics, antidiabetics, anti-tumors...).

Historical perspectives

Study of the ancient periods on the scale of the littoral zone in order to better understand its current functioning and to shed light on its future evolution.



Societal challenges

Coastal socio-cosystem, evolution and adaptation

Study of the functioning and evolution of different coastal socio-ecosystems, integrating a set of physical, biological and



– Research Network

Member of the Institut Universitaire de France carrying 19 programs of the National Research Agency (ANR), 7 European programs including 3 INTERREG, 3 FEAMP and 3 programs PIA3 and at the origin of 70 conventions and research programs, LIENSs laboratory is today a key player in the observation and understanding of the coastal system.

Observatory partners: OASU, SNO-INSU, SONEL, SOMLIT, PHYTOBS, DYNALIT, BENTHOS, OBIONE, ECOP.

Network: INCREASE, ForM@Ter, IR-ILICO, BIOSENA, RIVAGE, FUTUR act, ACCLIMATERRA, ONCOSPHERE, H2SR, EAU, SFDE, LUDI, SFC, GP2A. Brevets : 10



– Expertise Achievements

The laboratory is associated with two start-ups from La Rochelle, Valbiotis and Peatiadis, in the field of biopharmaceuticals, around patents in the field of nutrition and health and anti-infectives.

The laboratory is a constituent unit of the OASU, reinforcing part of the research themes and supporting the technical and observation activities (UMS Porea) and the structuring of data led by the CeDONA.

Conducting research fed by the reality of the field, the observation and acquisition of in-situ data are a strong point of our activities as evidenced by the number of observation services of the Infrastructure of Coastal Research (IR-ILICO) to which the laboratory contributes.



Training

MASTER ENVIRONMENTAL SCIENCES

- ▶ programme Coastal Geosciences and Geophysics
- ▶ programme Environmental Management and Coastal Ecology
- ▶ programme Geography applied to coastal management

MASTER PUBLIC LAW

- ▶ programme Local authorities, environment and coastline

MASTER BIOTECHNOLOGY

- ▶ programme Biochemistry
- ▶ programme Biotechnological engineering and management in agro-industries
- ▶ programme Marine Biotechnology

– Partnerships Collaborations



The LIENSs collaborates with local authorities: Nouvelle-Aquitaine Region, Charente Maritime Urban Communities, national institutions (OFB, marine parks, or the Conservatoire du Littoral).

The research is conducted in partnership with French and foreign laboratories and scientific organisations, associations or joint unions (LPO, UNIMA), consultancies (Créocéan, Berger-Levrault) and several French companies (Total, Nestlé, Léa Nature, Créocéan, Valbiotis, Innov'ia, Seprosys, Flores de Terroirs, etc.) which finance theses via the CIFRE scheme. The LIENSs is a stakeholder in the PIA3 project La Rochelle Territoire Zéro Carbone (Zero Carbon Territory) led by the Urban Community of La Rochelle and a partner in the PIA3 MARMOR coordinated by Ifremer.



CONTACT

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