

The CTM Centre's role is to promote research on the evolution of anthropised natural environments in the Earth-Sea Continuum, on technological changes in ports, energy and ecological transition, on the protection of resources and biodiversity, ecosystem services and on the promotion of well-being in a context of global change.

SUBJECT AREAS

- Ecology of land and sea environments
- Logistic systems management
- Mathematical and computer modelling of complex systems
- Civil engineering and environment, port and coastal engineering, energy performance in buildings, assessment and renovation of everyday architecture
- Sustainable management and exploitation of territories and resources
- Management of natural and technological risks
- Development of territorial and port infrastructures
- Earth and planet science
- Marine science

CTM CENTRE KEY FIGURES

- 150 PhD students
- 104 HDR
- 19 Laboratories
- 1 AMI Grand Éolien
- 1 IDEFI INNOVENT-E



RESEARCH AREAS

Seine-Channel Environment: Catchment basin, Sea and Coastline

Through the regional Seine-Channel area of work, this centre studies the evolution of natural environments and associated human activities in the face of new challenges such as the protection of resources, ecosystems and eventually populations, against a background of increasingly restrictive climate and environmental changes. It covers the knowledge and modelling of environments in which renewable marine energy systems are installed and their social acceptability, the risks on the quantity and quality of water resources, the performance of terrestrial and aquatic ecosystems, biological resources and marine biotechnologies.

Territorial and logistic ecosystems

This area of work is devoted to research into a systemic approach of the Normandy region in which industrial and logistic installations form a unique space. The challenge of modernising industry into green and responsible factories means designing integrated industrial energy, raw materials and risk management systems. This area of work covers the modelling of complex systems, territorial networks and intelligence, logistic system performance, technology risk management.

Stakeholders and Companies

This transdisciplinary area of work studies the existing potential and constraints relating to the social and political development of the land-sea interface. It brings together research on representations, memory and development of marine and port environments, transport, risks and landscape directions.

TRAINING

The CTM Centre is linked to 14 Master's degree courses in environmental science and social science applied to logistics and regional development and to the "Institut Supérieur d'Etudes Logistiques" (ISEL).

It relies on 6 doctoral schools in Normandy:

- ED 556 HSRT Man, Societies, Risks, Territory
- ED 590 MIIS Mathematics, Information, Systems Engineering
- ED 497 NBISE Norman Integrative Biology, Health, Environment
- ED 591 PSIME Physics, Engineering Science, Materials, Energy
- ED 98 DN Normandy Law
- ED 242 EGN Economics, Management, Normandie

These links to a wide range of disciplines offers many advantages for an ecosystem-based approach to issues related to the Land-Sea Continuum.

PARTNERSHIPS

Competitiveness clusters

- Nov@log
- Mov'eo
- TES
- Mer Bretagne Atlantique

Federative research structures

- FR 3730 SCALE
- SFR ICORE
- FED SFLog
- SFR STENOR
- CREC

Scientific interest groups (GIS) and/or public interest groups (GIP)

- GIP Seine Aval
- GIP France Énergies Marines
- GIP Labéo
- GIS SIEGMA
- GIS d'Histoire Maritime
- GIS AOP
- GIS TraFis
- GIS CIST – Territorial science

Technology Research Centre (CRT)

- Transport and Logistics

Industrial chair in collaboration with the industrial world

- Logistics (ISEL)

Industrial sectors

- Wood
- Eco-Industries
- Logistics Seine Normandie
- Fishing and Marine Farming

Labelled observatories linked to the CTM Centre

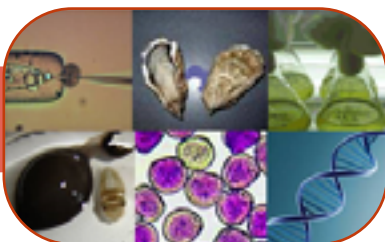
- NASA CNES international research observation network (SWOT satellite mission)
- CNRS national networks labeled by the ministry (SNO KARST, DYNALIT, OMIV, SOMLIT (INSU/CNRS), SOERE "Trait de Côte", SOERE Forêt- LTER RENE-COFOR)

Research infrastructures

- OZCAR (Critical Zone Observatories. Referent Applications and Research: INSU-CNRS)
- ELICO (coastline and coastal research infrastructure)

Scientific networks

- National complex systems network (RNSC)
- GU8 international network
- Complex System Society (CSS)
- Unitwin UNESCO Complex System Digital Campus



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