

Press Release - 9 May 2023



Launch of DRACCAR, the first French Offshore Research Platform dedicated to Offshore Wind Energy, coupled with an Innovative €8.2 million R&D Programme

The need for long-term field research at the scale of the seafloor

The French Channel coast, which already has highly developed human activities, is particularly concerned by the deployment of offshore wind farms. However, qualifying the effects of commercial wind farms on a local scale, and the cumulative impacts of the various uses of the sea on the environment on a coastline scale, remains a major research challenge. This requires the long-term acquisition of field data, which is made possible using a measuring mast located off Fécamp and belonging to France Energies Marines. The mast is a genuine research platform at sea where state-of-the-art instrumentation is deployed, and innovative monitoring protocols are developed. This is a first in France to support the sector's industrialists and the State with field studies, while encouraging their collaboration with the various research players.

A multidisciplinary R&D programme with an initial budget of €8.2M

This offshore research platform is coupled with a large-scale multidisciplinary R&D programme with an initial budget of €8.2m. The programme, called DRACCAR, aims to improve understanding of the interactions between offshore wind energy and the environment, to optimise the design of wind turbines and to co-construct a permanent observation network of the maritime seafloors. Six topics are studied:

- The **marine ecosystem** as a whole, to study the cumulative impacts of anthropogenic activities at the local and seafloor scales by developing robust numerical modelling approaches with a refined spatio-temporal resolution.
- The **marine megafauna** - mainly mammals, fish, and birds - to characterise the use of the area and assess the associated effects.
- The **fishery resources, biofouling, and benthos species** to characterise and better understand the reef effect generated by the installation of structures with foundations at sea.
- The **wind** and its physical parameters to develop new methods for measuring and modelling wind turbulence.
- The **structure behaviour** to gain a detailed understanding of the interactions between currents, sea states and the mast, like the phenomena present in a wind farm.

- The **hydrosedimentary processes** to qualify the way in which the measuring mast can influence the dynamics of the surrounding seabed, and vice versa.

A complementary scientific partnership supported by the Normandy region

Strongly supported by the **Normandy region** through funding from the European Regional Development Fund (ERDF), DRACCAR brings together four partners who are major R&D players strongly involved in the development of offshore wind energy: France Energies Marines, the University of Caen Normandy, the University of Le Havre Normandy and the INSA Rouen Normandy.

France Energies Marines, the French institute for energy transition dedicated to offshore wind and ocean energy, will ensure the overall coordination of the project, the steering of the work carried out on marine megafauna and wind, the co-steering of the ecosystem approaches, and will contribute scientifically to all the topics addressed.

Within the **University of Caen Normandy**:

- The Continental and Coastal Morphodynamics Unit (M2C - UMR 6143) will lead work on fishery resources, biofouling, and benthos, as well as on hydrosedimentary processes. It will contribute scientifically to studies on ecosystem approaches and structure behaviour.
- The Laboratory of Biology of Aquatic Organisms and Ecosystems (BOREA - UMR 8067) will co-steer the studies on ecosystem approaches. It will contribute scientifically to the work on fishery resources, biofouling and the benthos.
- The University Laboratory of Applied Sciences of Cherbourg (LUSAC - EA 4253) will contribute scientifically to the topics related to ecosystems, fishery resources, biofouling and benthos, structure behaviour and hydrosedimentary processes.

The **University of Le Havre Normandy**, through the Waves and Complex Environments Laboratory (LOMC - UMR 6294), will lead the studies that will be conducted on the behaviour of the structure. A scientific contribution will also be made concerning the hydrosedimentary processes.

Within **INSA Rouen Normandy**, the Normandy Mechanics Laboratory (LMN - EA 3828) will contribute scientifically to the structure behaviour topic.

PARTNERS' VERBATIM

"The Normandy Region's substantial support for the DRACCAR project of €3.5 million to France Energies Marines and €2.4 million to the three Normandy research establishments is a concrete sign of the acceleration of support for R&D and innovation in offshore renewable energy at a time when offshore wind farms are coming on stream and entering the production phase," said **Julie Barenton Guillas, Vice-President of the Normandy Region, responsible for higher education, research and digital technology.**

"Normandy can claim a leading role in the development of offshore renewable energies at French and European level. Three of the first six French offshore wind farm projects awarded are in Normandy. DRACCAR will support the understanding of the interactions between offshore wind energy and the environment off Courseulles-sur-Mer, Fécamp and Dieppe-Le Tréport," said **Hubert Dejean de La Bâtie, Vice-President of the Normandy Region, in charge of the environmental and energy transition.**

"The strong support from the Normandy region and the European Union, as well as the synergies that continue to be built between the DRACCAR partners, constitute a solid foundation for the innovative research work that is being carried out. The various field data that are being collected and the multidisciplinary nature of this programme will enable us to produce results with high added value for all the players in the offshore wind energy sector." **Herveline Gaborieau, Executive Director of France Energies Marines**

"As a founding academic member and member of the Board of directors of France Energies Marines, the University of Caen Normandy is delighted that three of its laboratories are involved in the innovative and multidisciplinary DRACCAR programme. Over a wide range of topics, they will be able to contribute to the production of research results on offshore wind energy, both fundamental and applied. Thanks to their work, the understanding of the interactions between offshore wind energy and the environment will be improved, and the design of wind turbines can be optimised. The University of Caen Normandy is delighted that its laboratories are involved in projects that contribute to meeting the major societal challenge of the ecological transition." **Lamri Adoui, President of the University of Caen Normandy**

"This ambitious project for our institution, within the Waves and Complex Environments Laboratory, reaffirms our university's ability to take part in innovation ecosystems where a range of players (research laboratories, institutional players, small and large companies, start-ups, financiers, etc.) study, envisage and implement responses to the challenges imposed by the economic, ecological and social transitions of the 21st century." **Pedro Lages Dos Santos - President of the University of Le Havre Normandy**

"This platform is a formidable tool for developing and verifying models representing the dynamic behaviour of fluid-structure interactions. The full-scale mast is instrumented in such a way as to observe both its own behaviour and the behaviour of its environment (wind, swell, current, etc.) and even more so with sediment monitoring or biofouling deposits. These are all opportunities to feed expert models, or to create new ones, to control the reliability of mechanical systems installed at sea." **Mourad Boukhalfa, Director of INSA Rouen Normandie**

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