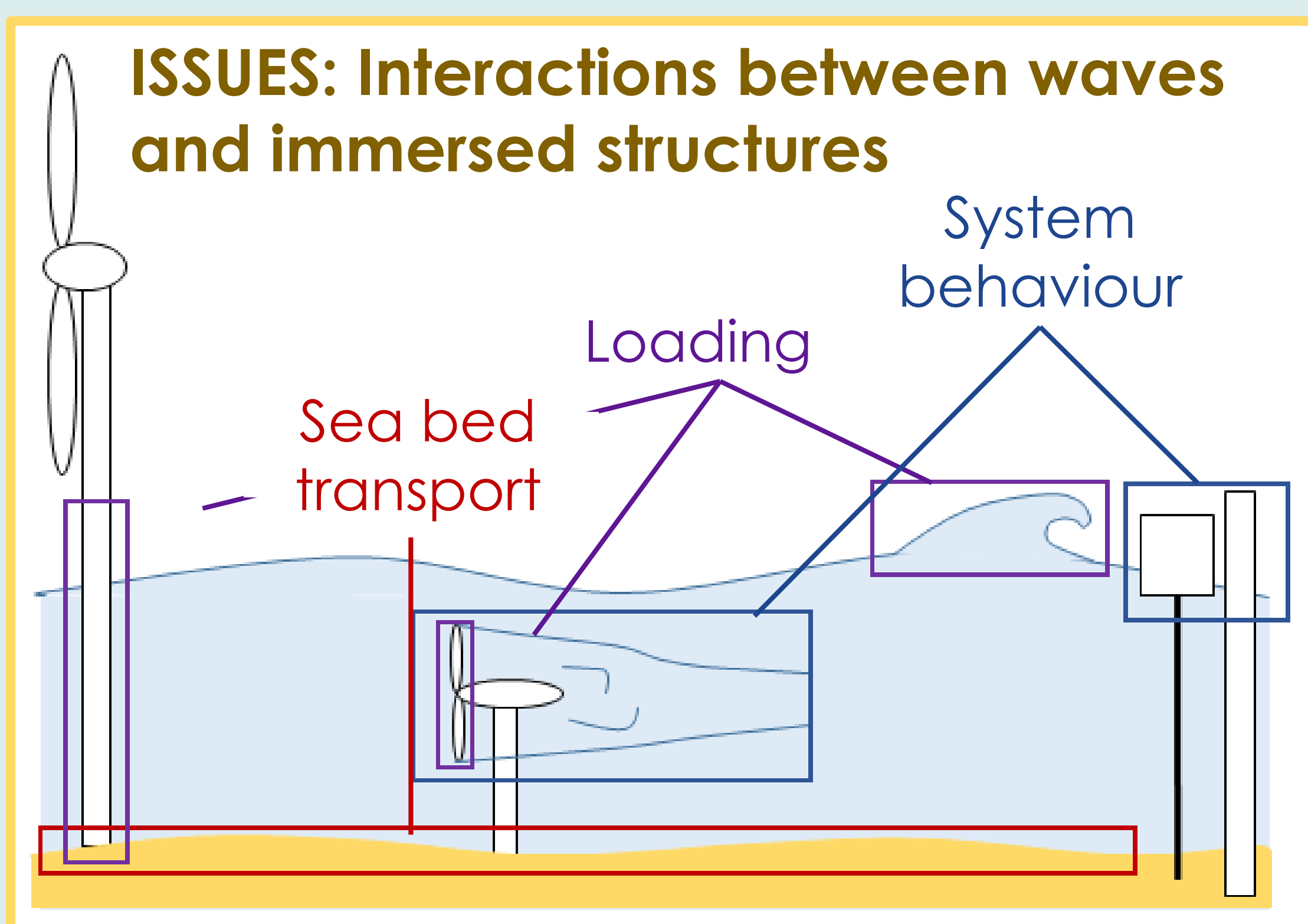




MÉCAFLUIDES : An experimental research plateforme in support to the EMR development

CONTEXT

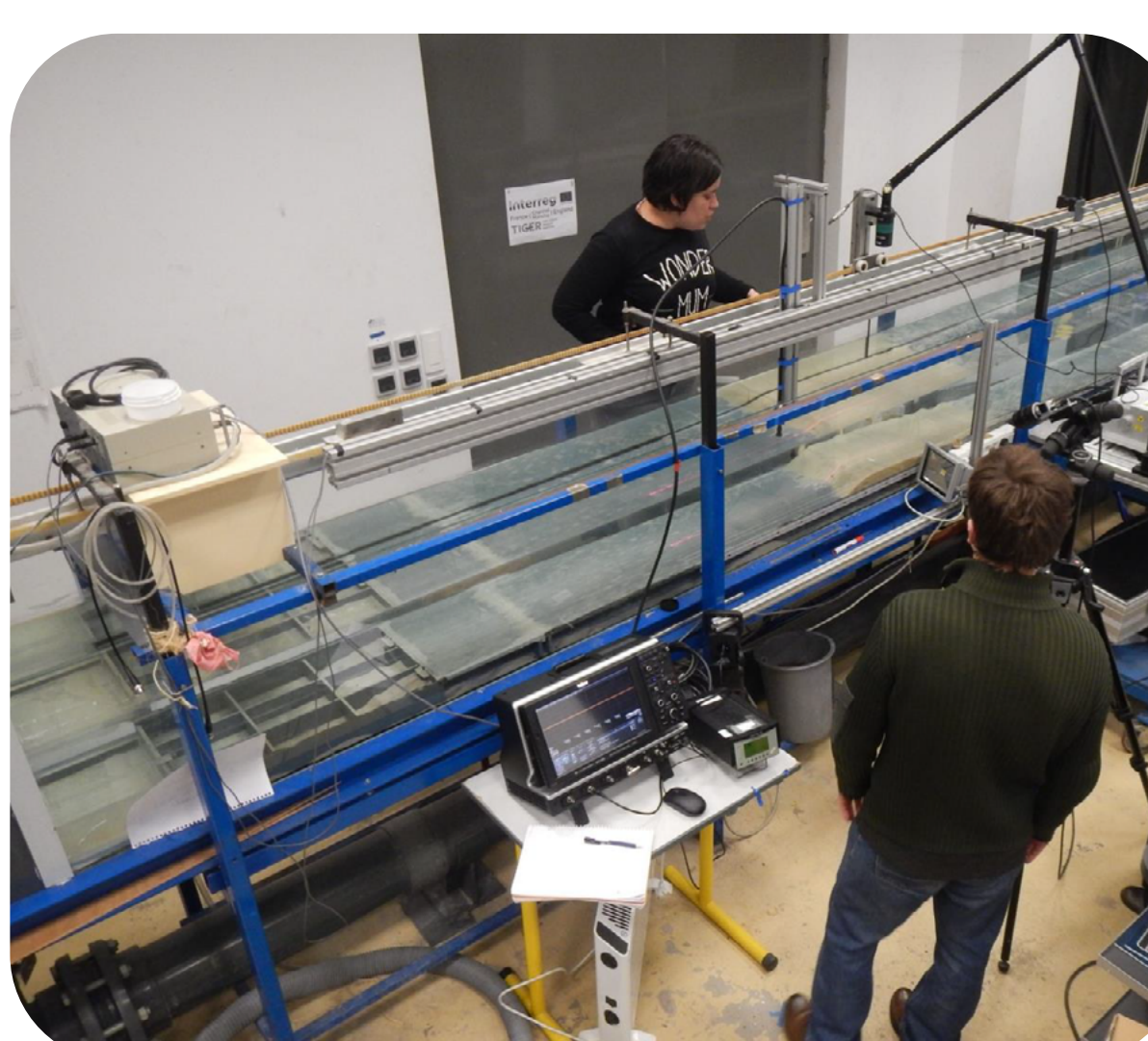
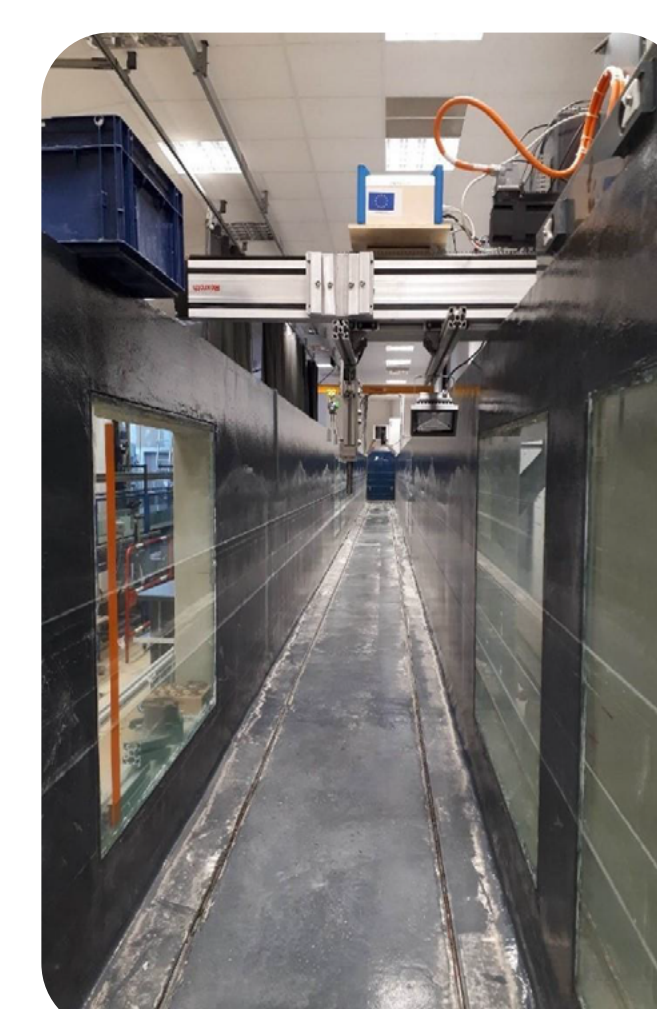
MÉCAFLUIDES platform provides testing facilities for studies in the field of marine renewable energy and costal and port territories in response to global change.



TEST FACILITIES

MÉCAFLUIDES platform gathers wave and current flumes with the following characteristics:

- Wave and towing flume up to 35 meters long
- Inclinal flume
- Ability to generate realistic waves
- Complex, reversible and tidal current



Following measurements are performed :

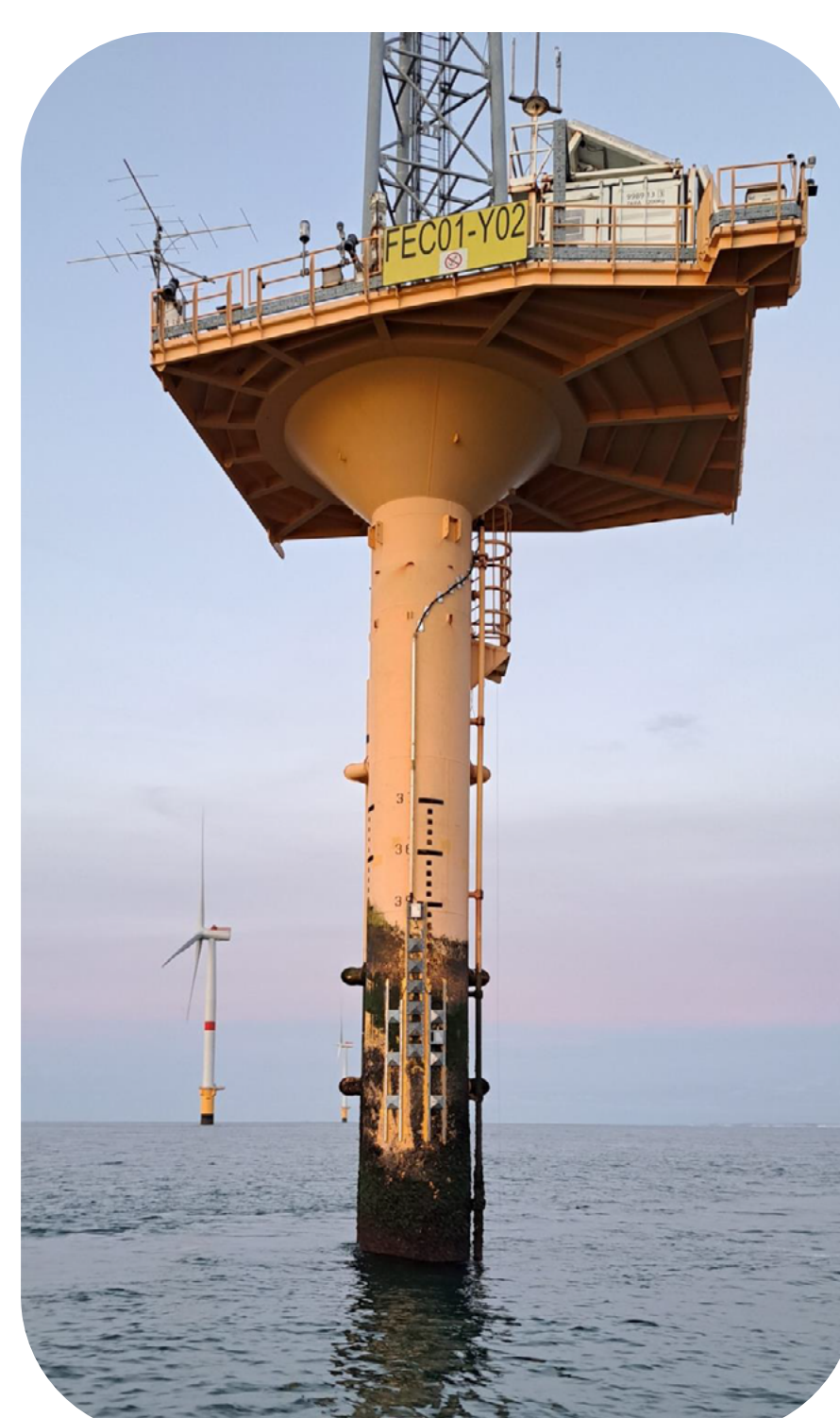
- Dynamical response of the structure
- Sediment morphodynamics
- Optical and acoustic measurement of the flow
- Impact pressure and global forces

RECENT RESEARCH PROJECT ON MÉCAFLUIDES



DRACCAR

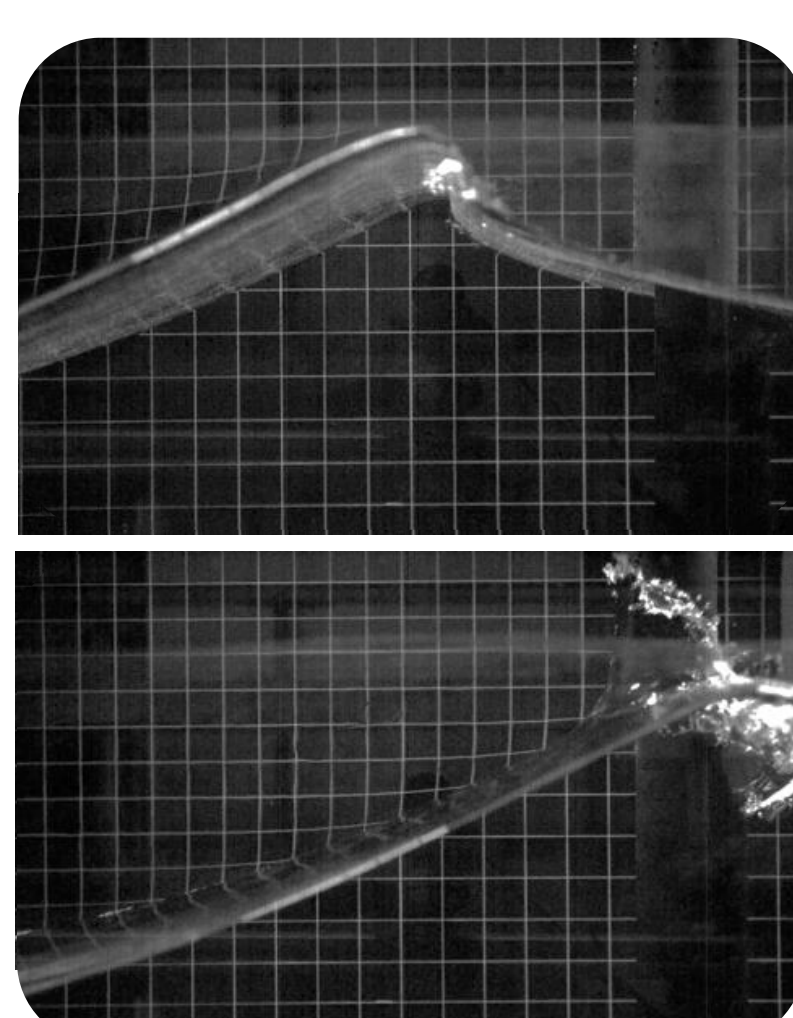
Measurement Mast in the Fécamp Offshore Wind Farm



The DRACCAR project is the first French offshore research platform dedicated to offshore wind energy coupled with an innovative R&D programme.

Among the many topics studied in DRACCAR, the structural behavior under impacting waves is analyzed.

The measurement mast is equipped with pressure sensors, accelerometers, and cameras for stereo video measurements.



Study conducted on the platform

A scaled-down model is reproduced in our wave flume. The flow velocity fields, impact pressures, forces on the structure, and the vibratory response of the structure are studied in a controlled environment.

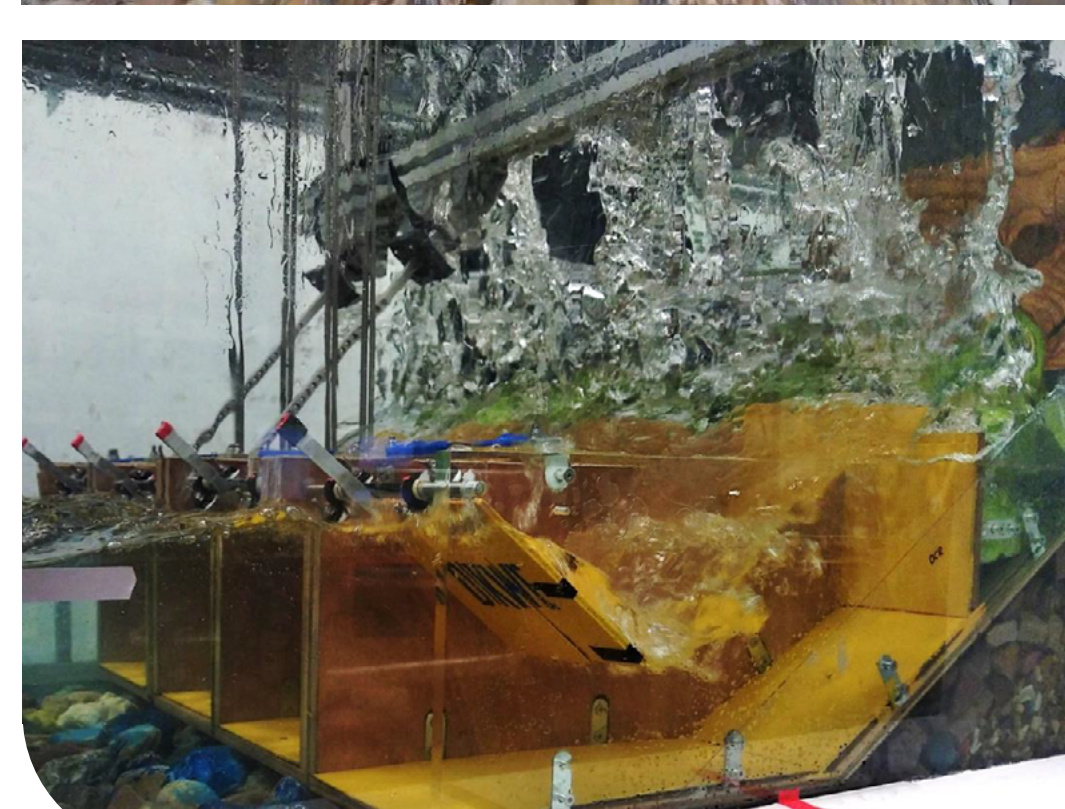


DIKWE



The first energy-positive harbor breakwater

The DIKWE project, led by Groupe Legendre, Geps Techno and Ifremer, aims to develop a harbor dike that captures wave energy from our coastlines to produce green electricity.



Study conducted on the platform

The survivability and behavior of the system under extreme wave conditions were studied using wave gauges, cameras and force sensors.

Since the system could be integrated into existing structures, its impact on the protective functions of the existing structure was studied (dike stability, rocks movement, overtopping, run-up, etc.).

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