SEEWALL

SURVEILLANCE OF SEA DEFENCE WORKS USING SEISMIC LISTENING AND MULTI-PHYSICAL MEASURING

Preventing marine submersion is a key element in the proper management of often highly urbanised coastal zones. When already fragile sea defences are subjected to extreme swell conditions this can lead to catastrophic flooding, as was seen with storm Xynthia in France in 2010.

Diagnostic tools for sea walls are still mainly limited to visual inspection systems, which are sometimes inadequate for detecting internal erosion, and to one-off geotechnical surveying.

The SEEWALL project involves perfecting a tool for the surveillance of sea defence structures that comprises durable seismic and fibre-optic sensors capable of recording ambient seismic noise as well as the temperature and force at work in the sea wall with sufficient sensitivity.

This tool will collect real-time data for continuous monitoring of defence structures and swell conditions. Round-the-clock surveillance of sea walls will provide advance warning of possible failures as well as notice of any preventative maintenance required.

Partners

Companies

Calligée, Nantes [Project Developer]
SERCEL, Carquefou

Research center

Université Gustave Eiffel, Bouguenais

Funder

- Région Pays de La Loire

Labelisation

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2 488 K€