Environmental and coastal planning and development

HEXECO

IMPROVED FORECASTING OF THE IMPACT ON THE LITTORAL OF HURRICANES AND POWERFUL STORMS

Hurricanes and powerful storms principally result in the formation of exceptional waves accompanied by a significant run-up, a rise in the littoral sea level (a positive surge) and the inundation of emergent zones. The damage to human life and property may be considerable. The hydrodynamic modelling currently available for such extreme events and their consequences is inadequate. Given that half the world's population lives along a 200-km wide coastal strip and that between now and 2025 that proportion will rise to 75%, representing a total of around 6.3 billion people, the big challenge is to improve prediction of such events and their consequences.
The HEXECO project, which stands for Hydrodynamique EXtrême du largE à la COte (Extreme Hydrodynamics from Open Ocean to Coast), will develop forecasting models which take account of the specific parameters relating to the open ocean and the coastal and littoral zones. This research, which brings together the bodies in France directly involved in improving understanding of extreme hydrodynamic coastal events, will comprise major modelling and simulation work coupled with experimental monitoring, measuring and validation.

Recognised jointly by the Pôle Mer Bretagne and Pôle PACA, HEXECO has secured funding from the Agence Nationale de la Recherche (French National Research Agency) as one of the approved projects from its Programme Blanc (open research programme).

Partners

Research centers

Centrale Marseille, Marseille [Project Developer]
Centrale Nantes, Nantes
Centre National de la Recherche Météorologique/ Météo France, Toulouse
École Normale Supérieure, Cachan
Ifremer, Brest
SHOM, Brest

Funder

- Agence Nationale de la Recherche

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