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## DCNS to study swell motion prediction

French defence procurement agency DGA has awarded DCNS and subsidiary Sirehna a study contract to improve the prediction of lulls in swell motion.

This 15-month study is part of a larger effort to predict ship motions up to several minutes in advance and to identify the best time to carry out delicate operations. Such predictions will be particularly useful for landing fixed- and rotary-wing aircraft and UAVs on a ship's flight deck, for boat, RHIB or USV launch and recovery and well-deck operations.

To date, ship motion prediction has been essentially restricted to the extrapolation of real-time motion data measured by shipboard sensors resulting in a prediction horizon of up to 30 seconds.

This study is being conducted under the aegis of the European Defence Agency as a collaborative development project. The participants include France (DGA, DCNS and Sirehna), Spain (University of Madrid and Navantia), Italy (INSEAN and CETENA) and Finland (VTT).

DCNS and Sirehna will focus primarily on comparing various techniques and sensors to measure wave height and analyse methods of prediction. They will also carry out an at-sea measurement campaign in liaison with the DGA's hydrodynamics laboratory (*DGA Techniques Hydrodynamiques*, previously known as *Bassin d'Essais des Carènes* or the towing tank research facility).

DCNS will draw on its expertise in warship operational capabilities and the first results of wave measurement tests.

Sirehna, the DCNS Group's R&D centre specialising in naval hydrodynamics, will contribute its expertise in wave propagation modelling and platform motion prediction. Sirehna employs 45 high-level researchers.

RHIB: rigid-hull inflatable boat  
UAV: unmanned aerial vehicle  
USV: unmanned surface vehicle

### About DCNS

DCNS is a world leader in naval defence and an innovative player in energy. The Group's success as an advanced technology company with global reach is built on exceptional know-how and unique industrial resources. DCNS designs, builds and supports submarines and surface combatants as well as associated systems and infrastructures. The Group proposes services for naval shipyards and bases. It also develops solutions in civil nuclear engineering and marine renewable energy. Committed to sustainable development, DCNS was one of the first defence contractors to achieve Group-wide certification to ISO 14001. The Group employs 12,000 people and generates annual revenues of around €2.4 billion. [www.dcnsgroup.com](http://www.dcnsgroup.com)

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