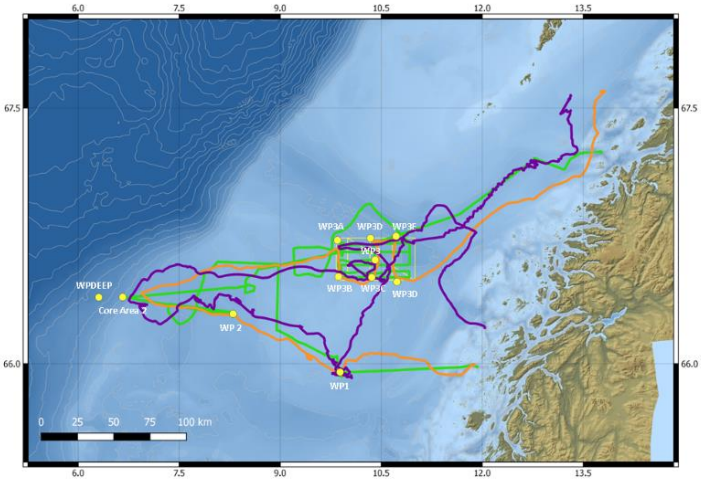
Unmanned ocean vehicles: tools for the development of ocean industries

Three unmanned ocean vehicles (gliders) will be deployed outside Bodø during week 10 (5 – 11 March). The vehicles will be operating on the Norwegian shelf, in Vestfjorden and outside the Lofoten and Vesterålen Islands.

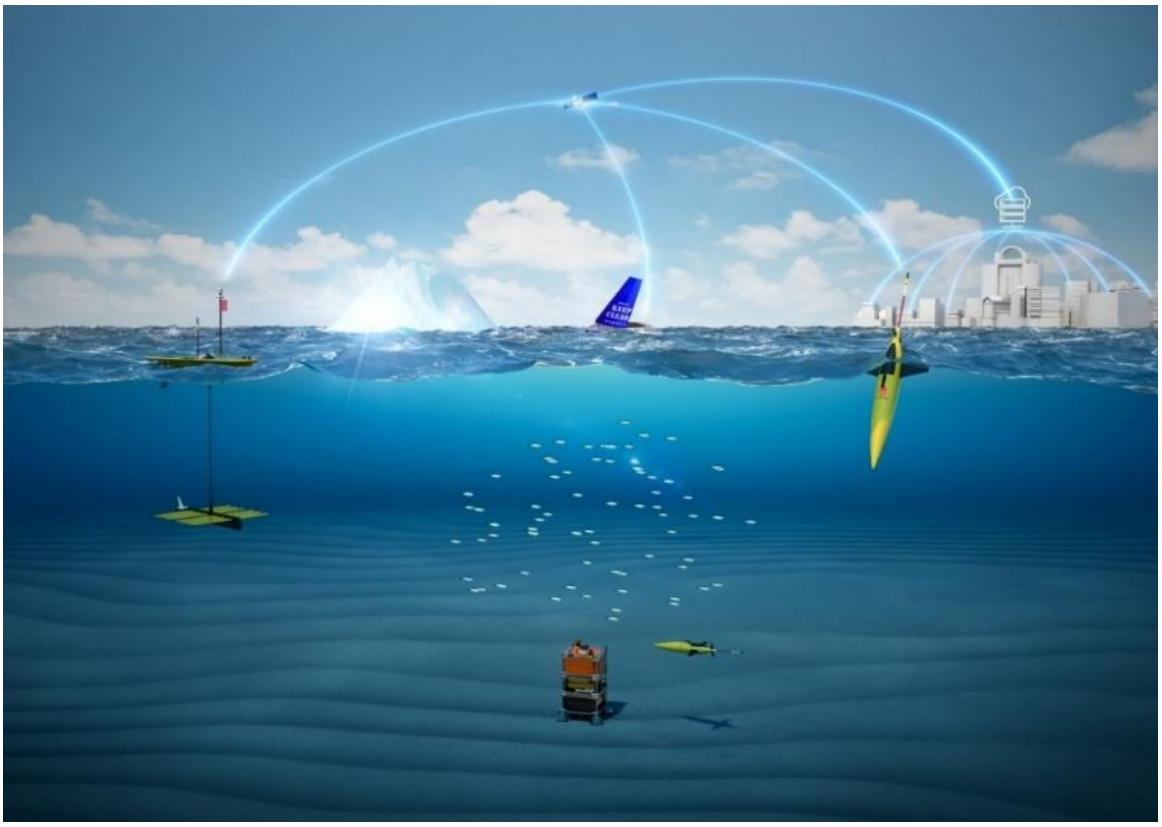
In 2017 the vehicles were tested in the same area, deployed outside Sandnessjøen in August and retrieved outside Bodø in September. The map below illustrates the route of the gliders, each covering a distance of 1200 km during a 5-week period.



From left to right: Sailbuoy, Wave Glider and Seaglider™.

The vehicles are a diving Seaglider™ (Kongsberg Maritime AS), a Sailbuoy (Offshore Sensing AS) and a Wave Glider (Maritime Robotics AS). These are energy efficient platforms taking advantage of energy from waves, wind and solar power. The vehicles are equipped with a GPS, and programmed and navigated from land. Each vehicle carries a variety of sensors for the collection of chemical, physical and biological ocean and atmospheric data. The sensors provide continuous measurements of weather, waves, currents, temperature, salinity, O_2, CO_2, marine algae, animal plankton, fish fry, fish and marine mammals. The Glider project will collect a vast amount of met-ocean and environmental data in time and space at lower cost as traditional sampling. The collected data will partly be transmitted via satellite, where they can be analyzed in near real-time, and in part be stored on board the vehicles and downloaded on certain intervals.

The project *"GLIDER - Unmanned Ocean Exploration"* is financed by the Research Council of Norway DEMO 2000 program and ConocoPhillips Norway. The research and consultancy company Akvaplan-niva (Tromsø, Norway) is leading the project. The research and innovation partners in the project are the Norwegian Meteorological Institute, the Norwegian Institute for Water Research, UiT The Arctic University of Norway, Nord University, Kongsberg Maritime AS, SIMRAD, Maritime Robotics AS, Offshore Sensing AS, Christian Michelsen Research AS, and Aanderaa Data Instruments AS.



Unmanned ocean vehicles collect field data and transfer via satellite on shore (3D visualization by Kongsberg Maritime AS).

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