

Royal Netherlands Institute for Sea Research acquires Slocum gliders



Teledyne Marine has sold and delivered three Webb Slocum gliders to the Royal Netherlands Institute for Sea Research (NIOZ). NIOZ conducts multidisciplinary applied marine research to address major scientific questions about our oceans and seas.

NIOZ scientists, engineers and ship technicians recently underwent operational and maintenance training on the systems with field support staff from Teledyne Webb Research and the UK's National Oceanographic Centre (NOC), which form Teledyne's European Slocum Service Centre. This training was conducted in Spain at SOCIB facilities in preparation for the glider science project to be undertaken initially by the RV *Pelagia* in the North Sea in the spring of 2023.

Mapping the absorption of CO₂

The NoSe (North Sea-Atlantic Exchange) project will study the absorption of CO₂ in the North Sea. Slocum gliders were acquired with an NWO Large-scale Research Infrastructure (NWO-GWI) grant, awarded in 2020 to a broad nationwide marine research consortium of universities, institutes and TO2 institutions. The project will determine the past, present and future role of the North Sea and link it to the larger biogeochemical system of the Atlantic Ocean.

This will be done by determining the exchange of carbon and other essential nutrients between the North Sea and the Atlantic Ocean. This exchange will be studied in the Norwegian Trench, the main outflow route to the Atlantic Ocean and the main place where sediments accumulate in the North Sea.

"After tendering, we opted for cooperation with Teledyne Webb Research in the United States of America. For us, the G3 Slocum Glider proved to be a flexible platform with long endurance and an acoustic data transfer capability," said Marck Smit, NIOZ Sea Research.

NWO-NIOZ Royal Netherlands Institute for Sea Research is the Dutch national oceanographic institute. It principally performs academically excellent multidisciplinary fundamental and frontier-applied marine research addressing important scientific and societal questions pertinent to the functioning of oceans and seas. NIOZ serves as a national marine research facilitator (NMF) for the Dutch scientific community and stimulates and supports multidisciplinary fundamental and frontier-applied marine research, education and marine policy development in the national and international context.