SCIENCE AND TECHNOLOGY ORGANIZATION
CENTRE FOR MARITIME RESEARCH AND EXPERIMENTATION

Press release
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CMRE listens to the sea to know it better

The oceanographic campaign GLISTEN '15, starting off Elba Island (Italy) at the end of August 2015, will test new sensors and solutions for ocean characterisation using underwater gliders. Scientists from the NATO Centre for Maritime Research and Experimentation will operate on board the NATO Research Vessel Alliance along with researchers from nine collaborating institutions.

From 26 August to 9 September 2015, the NATO Research Vessel Alliance will be conducting the oceanographic campaign GLISTEN '15, in the Tyrrhenian Sea, north of Elba Island. The trial will be preceded by five days of engineering tests (from 17 to 21 August).

Scientists from the NATO STO Centre for Maritime Research and Experimentation (CMRE) and their partners from nine institutions of five NATO Nations (Canada, Italy, Norway, United Stated and United Kingdom) will collect acoustic, oceanographic and geophysical data using both traditional and novel observation methods, such as underwater gliders, the greenest unmanned underwater robotic platforms that are available to date. In particular, GLISTEN '15 aims to test the readiness and feasibility of the novel payloads and smart sensing methodologies, which CMRE has developed to enhance current capabilities for ocean environment characterisation. GLISTEN is one of the sea going efforts of the CMRE EKOE (Environmental Knowledge and Operational Effectiveness) programme that develops scientific and technical solutions to the ocean environment predictions for NATO Nations and Navies. "A deeper knowledge of this area could be also beneficial to the local communities for a more effective protection of the marine environment", underlines Yong-Min Jiang, CMRE GLISTEN '15 Scientist in Charge. "The final data will be made available to the scientific community under request".

CMRE fleet of seven gliders will be deployed to study the properties of the seabed, water column and sea surface. The research will also include seabed characterisation using naturally occurring ambient noise that is generated by the sea surface waves. Thanks to the hydrophone and hydrophone array equipped gliders, which have no propulsion and are able to operate silently, scientists shall be able to obtain the seabed types and layer structures by listening and then analysing the ambient noise in the ocean.

About CMRE. The STO-CMRE (Science and Technology Organization – Centre for Maritime Research and Experimentation) is located in La Spezia, Italy. Formerly the NATO Undersea Research Centre (NURC), the Centre focuses on research, innovation and technology in areas such as defence of maritime forces and installations against terrorism and piracy, secure networks, development of the common operational picture, the maritime component of expeditionary operations, mine countermeasure systems, non-lethal protection for ports and harbours, anti-submarine warfare, modelling and simulation, and marine mammal risk mitigation. CMRE operates two ships, NATO Research Vessel *Alliance*, a 93-meter 3,180-ton open-ocean research vessel, and Coastal Research Vessel *Leonardo*, a smaller ship designed for coastal operations. In addition to its laboratories the Centre is equipped with a fleet of autonomous underwater and surface vehicles and a world-class inventory of seagoing sensors.

CMRE PAO: pao@cmre.nato.int CMRE Press office: Francesca Nacini, francesca.nacini@cmre.nato.int, +39 3357809721