

MINISTERO DELLA DIFESA



**MARINA  
MILITARE**

Ufficio Pubblica Informazione e Comunicazione

## **ITALIAN NAVY: HIGH NORTH21 ARCTIC CAMPAIGN READY TO START**

[#MarinaMilitare live on Twitter \(@ItalianNavy #ProfessionistiDelMare #UnMarediOpportunità #NoiSiamolaMarina\)](#) and on the Italian Navy website ([www.marina.difesa.it](http://www.marina.difesa.it))

The research vessel Alliance started on June 11th 2021, High North21 Marine geophysical campaign, the fifth Italian Navy Arctic expedition under the Hydrographic Institute (IIM) scientific coordination. ITS Alliance (A5345) is a Research Vessel owned by NATO and operated by the Italian Navy, with its crew and flag. She left Italy on may 21st, after quarantine due to COVID19 sanitary protocol, reaching Tromsø (Norway) for a quick technical stop, on [World Ocean Day](#), June the 8th.

HN21 team is composed of 45 crew member and 20 scientists from IIM, NATO Centre for Maritime Research & Experimentation ([CMRE](#)) and Joint Research Centre of EU ([JRC-EU](#)). The presence of six young researchers, within HN21 team, witnesses the Italian Navy particular attention on training and education. This year's campaign also aims at supporting the [UN Ocean Decade](#) action of Ocean Science for Sustainable Development 2021-2030 with ECOP (Early Career Ocean Professional) involving in the vision of the "Science we need for the ocean we want".

This year, part of Campaign Activity HN21 will develop with CMRE coordination on Nordic Recognized Environmental Picture project (NREP21), "Joint High North21-NREP21".

The focus of HIGH NORTH21 on ocean observation for OCEAN DECADE, performing a 3D-mapping, from the satellite to the seabed, to gain environment features characterization with multiplatform systems data collection.

The hydro-oceanographic campaign and research activities will focus on the unsurveyed area closed to the sea ice-edge and observation sites. Fundamental contribution will be the environmental observation to achieve data collection continuity with in-situ mooring (at different depth sensors) as part of SIOS (Svalbard Integrated Observing System).

This synergic activity is expression of IIM Italian Navy' commitment with the main Italian research Centres ([CNR](#), [ENEA](#), [INGV](#) and [OGS](#)) and [FFI](#) (Norwegian Defence Research Establishment).

Two new yearly moorings (CIO I e CIO II) in cooperation with CMRE and ([ONR](#)) will be placed in the Molloy area to monitor the water masses with in-situ oceanographic short term and long term observations.

The data collection is devoting to the bottom mapping, water column and seabed features characterization, acoustic imaging of the seabed, marine optical research and remote sensing data in order to obtain a 3D mapping of the area (Fram Strait and Yermak Plateau, Arctic Ocean).

The research activities study the seabed and the evolution of observed oceanic process under different climate and environmental condition to evaluate the variability of bio-geo chemical and physical parameters, marine pollution, speed, depth of Western Svalbard current (surface and deep), in the Fram Strait, the Arctic dynamics and the relationship with changes in North Atlantic circulation.

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High North21 is innovation technology and research for a sustainable ocean with the implementation of the ARNACOSKY project (ARctic NAVigation with COSmo SKYmed), a joint activity IIM and [e-Geos](#), for the best route along the marginal ice and its environment monitoring.

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