New Approach to Underwater Technologies for Innovative, Low-cost Ocean Observation

Fact Sheet

Project Information

NAUTILOS
Grant agreement ID: 101000825

Status
Ongoing project

Funded under
H2020-EU.3.2.5.1.

Overall budget
€ 0

EU contribution
€ 9 048 349,10

Coordinated by
CONSIGLIO NAZIONALE DELLE RICERCHE
Italy

Project description

New technology improves our understanding of changes in the marine environment

Existing European observation tools and services have the potential to take advantage of cutting-edge technologies to obtain a wide range of data at a much higher spatial resolution and temporal regularity and duration. The EU-funded NAUTILOS project will develop a new generation of sensors and samplers for physical, chemical and biological essential ocean variables in addition to micro- and nanoplastics. The project will improve our understanding of environmental variations and anthropogenic impacts connected with aquaculture, fisheries and marine litter.
NAUTILOS will integrate recently advanced marine technologies into different observing platforms and deploy them through innovative and cost-effective methods in a wide range of key environmental settings and EU policy-related applications. The project aims to complement and expand existing European observation instruments and services and further enable and democratise the monitoring of the marine environment for both traditional and non-traditional data users.

**Objective**

NAUTILOS will fill in existing marine observation and modelling gaps through the development of a new generation of cost-effective sensors and samplers for physical (salinity, temperature), chemical (inorganic carbon, nutrients, oxygen), and biological (phytoplankton, zooplankton, marine mammals) essential ocean variables, in addition to micro-/nano-plastics, to improve our understanding of environmental change and anthropogenic impacts related to aquaculture, fisheries, and marine litter. Newly developed marine technologies will be integrated with different observing platforms and deployed through the use of novel approaches in a broad range of key environmental settings (e.g. from shore to deep-sea deployments) and EU policy-relevant applications:

- Fisheries & Aquaculture Observing Systems,
- Platforms of Opportunity demonstrations,
- Augmented Observing Systems demonstration,
- Demonstrations on ARGO Platform,
- Animal-borne Instruments.

The fundamental aim of the project will be to complement and expand current European observation tools and services, to obtain a collection of data at a much higher spatial resolution and temporal regularity and length than currently available at the European scale, and to further enable and democratise the monitoring of the marine environment to both traditional and non-traditional data users. The principles that underlie the NAUTILOS project will be those of the development, integration, validation and demonstration of new cutting-edge technologies with regards to sensors, interoperability and embedding skills. The development will always be guided by the objectives of scalability, modularity, cost-effectiveness and open-source availability of software and data products produced. NAUTILOS will also provide full and open data feed towards well-established portals and data integrators (EMODnet, CMEMS, JERICO).

**Field of science**

/agricultural sciences/agriculture, forestry, and fisheries/fisheries
/engineering and technology/electrical engineering, electronic engineering, information engineering/electronic engineering/sensors
Programme(s)

Topic(s)

Call for proposal
H2020-BG-2020-1

Funding Scheme
IA-LS - Innovation action Lump Sum

Coordinator

CONSIGLIO NAZIONALE DELLE RICERCHE
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UNIVERSITA DELLA CALABRIA
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<td>IMAR - INSTITUTO DO MAR</td>
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<td>Rua Prof Dr Frederico Machado 4 Departamento De Oceanografia E Pescas Univ Dos Acores 9901-862 Horta</td>
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<td>EVROPROJECT OOD</td>
<td>Bulgaria</td>
<td>€ 171,850</td>
<td>Ulica Graf Ignatiev 1 Fl 1 Ap 3 1000 Sofia</td>
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**Last update:** 27 November 2020  
**Record number:** 231033  
**Permalink:** [https://cordis.europa.eu/project/id/101000825](https://cordis.europa.eu/project/id/101000825)