

Introduction and Objective

The H2020 NAUTILOS project aims to fill existing gaps in marine observation and modelling through the development of innovative and cost-effective technologies and observational methodologies for use in a wide range of crucial environmental contexts and sectors that can further support EU policies. The H2020 NAUTILOS project fills marine observation and modelling gaps by developing and deploying new technologies, promoting innovative and cost-effective methods in a wide range of crucial environmental settings and EU policy-related applications.

Material and Methods

NAUTILOS is developing innovative and cost-effective sensors and samplers for physical, chemical, and biological essential ocean variables in addition to micro-/nano-plastics. Newly developed technologies are integrated into diverse observing platforms, i.e. ships of opportunity, research vessels, surface and autonomous underwater vehicles, landers, fixed observatories, Argo floats, and Animal-borne instrumentation modules, to be deployed in key environmental settings.

Results and Data relevance

NAUTILOS will contribute to improving future ocean observation and forecasting capabilities through its holistic approach, which includes new sensors, new data to feed metocean forecast models, and the assessment of the forecasting capabilities, i.e. (OSSE)

NAUTILOS data products FAIRness includes adopting standard vocabularies and open data publishing systems interoperable with European and international Ocean Data integrators. Moreover, synergies with relevant initiatives, Citizen Science campaigns and capacity building courses are also planned to reach out to all relevant stakeholders and users and promote free access and exchange of scientific data and knowledge.

Conclusion

The project will improve our understanding of environmental fluctuations and anthropogenic impacts in the oceans, relevant to aquaculture, fisheries and marine litter. Moreover, it will also complement and contribute to expanding European observation tools and services to obtain data collection at a much higher spatial resolution, temporal regularity and length than currently available at the European scale, and further democratise the marine environment's monitoring.