

Developing in-situ Atlantic Ocean Observations for a better management and sustainable exploitation of the maritime resources

Specific challenge: The challenge is to conduct the Research and Innovation activities necessary to the deployment of an Integrated Atlantic Ocean Observing System (IAOOS), building on existing capacities on both side of the Atlantic. The Atlantic Ocean is the most prominent maritime domain situated at the doorstep of Europe. However, the sustainable exploration, exploitation and protection of this maritime domain require a knowledge base and predictive capabilities which are currently fragmented or not yet available. The creation of this knowledge base and predictive capability requires systematic collection of ocean observations recorded both remotely using Earth observation satellites and in-situ. Central to the development of the IAOOS should be the acquisition and use of in-situ observations and their integration with remote sensed data across the whole Atlantic Ocean in order to fill out the existing observational gaps. Applications based on the Copernicus Marine Monitoring service and the European Marine Observation and Data Network (EMODnet) may enable addressing this challenge.

Scope: The Integrated Atlantic Ocean Observing System initiative should cover the whole Atlantic with the objective to deliver the knowledge base supporting the understanding of the Ocean Process at the level of the entire basin. Another focus of proposals should be to fill the observational gaps regarding the in-situ part of the Integrated Atlantic Ocean Observing System including through the optimisation of existing systems and the use of new ocean observation technologies enabling reducing the costs of in-situ ocean observation and integration of the biological dimension into observing systems. The research and innovation necessary to underpin the full and open discovery and access to the ocean observations and facilitating the interoperable exchange of ocean observation as promoted through GEO (Group on Earth Observation) at the scale of the Atlantic Ocean should require the participation of international partners from both sides of the Atlantic. In line with the objectives of the EU strategy for international cooperation in research and

innovation (COM (2012) 497), proposals should contribute to implementing the Transatlantic Research Alliance, launched by the Galway Statement^[1] on Atlantic Ocean Cooperation in May 2013, and should benefit from the inclusion of partners from the US and Canada[2].

The Commission considers that proposals requesting a contribution from the EU in the range of EUR 15–20 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected impact:

- Enhance societal and economic role of the Atlantic Ocean in Europe.
- Provide leadership for Europe in implementing GEOSS.
- Increase temporal and geographic coverage of observational data in the Atlantic Ocean.
- Integrate standardised in-situ key marine observations including biological, (meta)genomic data into process models and forecast systems.
- Improve modelling outputs and reduce cost of data collection in support of ocean-related industrial and societal activities.
- Increase competitiveness of European industry and particularly SMEs within the marine industrial sector.
- Increase safety for offshore activities and coastal communities
- Contribute to make better informed decisions and documented processes within key sectors (manufacturing, ICT, maritime industry, environment technology, marine science and fisheries).
- Improve the implementation of European maritime and environmental policies (e.g. Marine Strategy Framework Directive, Common Fisheries Policy, EU Integrated Maritime Policy).
- Enhance documentation necessary to cope with global challenges such as climate change, scarceness of natural resources and global scale hazards.

Type of action: Research and innovation actions

[1] Galway Statement on Atlantic Ocean Cooperation Launching a Canada-European Union- United States of America Research Alliance (Galway, 24th of May 2013)

[2] This is without prejudice to the general rules on the funding of legal entities from third-countries, as set in part A of the annex to the work programme.

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