Cooperation US/Canada/Europe for the Atlantic Observing System and implications for Argo and Euro-Argo

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Galway Statement on Atlantic Ocean Cooperation

Launching a European Union - Canada - United States of America Research Alliance

The Signatories of this Statement meeting on the occasion of the high level event

*The Atlantic – a Shared Resource, held on*

*23 and 24 May 2013*

*at the Marine Institute, Galway, Ireland*

Recognizing the importance of the Atlantic Ocean to our citizens, prosperity, human health and well-being, adaptation to climate and other environmental change, and security,

Cognizant of our reliance upon the best available science and knowledge to inform decisions affecting the Atlantic Ocean,

Realizing that our countries face similar challenges in promoting a healthy and well-understood Atlantic Ocean,

Acknowledging the critical interlink between the Atlantic Ocean and the portion of the Arctic region that borders the Atlantic,

Appreciating the value of our ongoing cooperation on ocean science and observation in the Atlantic Ocean, and

Valuing the essential role of international partnership to achieve our shared objectives and the potential of greater cooperation to advance our knowledge of the Atlantic Ocean,

Intend to advance our shared vision of an Atlantic Ocean that is healthy, resilient, safe, productive, understood and treasured so as to promote the well-being, prosperity, and security of present and future generations.

This cooperation is intended to increase our knowledge of the Atlantic Ocean and its dynamic systems - including interlinks with the portion of the Arctic region that borders the Atlantic - by aligning our ocean observation efforts to improve ocean health and stewardship and promote the sustainable management of its resources. Observation is fundamental to understanding the ocean and forecasting its future. Activities may include efforts to better coordinate data sharing, interoperability and coordination of observing infrastructures and seabed and benthic habitat mapping.

This cooperation may result in mutual benefits including better ecosystem assessments and forecasts and deeper understanding of vulnerabilities and risk, including those relating to the global climate system and climate change impacts. It can also help to generate new tools to increase resilience, conserve rich biodiversity, manage risk and determine social, environmental and economic priorities.

We further intend to promote our citizens’ understanding of the value of the Atlantic by promoting oceans literacy. We intend to show how results of ocean science and observation address pressing issues facing our citizens, the environment and the world and to foster public understanding of the value of the Atlantic Ocean.

We intend to advance this agenda by

- taking stock of and utilizing existing bilateral science and technology cooperation (e.g. the U.S. - European Union Science and Technology Joint Consultative Group and the Canada - European Union Science and Technology Joint Coordinating Committee) and multilateral cooperation frameworks including those related to ocean observation, and ocean literacy initiatives;
- recommending priorities for future cooperation and, where possible,
- coordinating the planning and programming of relevant activities in these areas, including promoting researcher mobility.

This cooperation could potentially involve national partners and European Commission representatives, the private sector, and the scientific community to further our efforts by harnessing the value of public-private partnerships.

This initiative is also expected to reinforce existing international efforts to advance our knowledge of the ocean, including the World Ocean Assessment.

Signed in Galway on 24 May 2013 in three originals in the English language.

For the European Union

Maire GEGHEGAN-QUINN
Commissioner for Research, Innovation and Science

For the Government of Canada

Edward FAST
Minister of International Trade and Minister for the Asia-Pacific Gateway

For the Government of the United States of America

Dr. Kerri-Ann JONES
Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs

Maria DAMANAKI
Commissioner for Maritime Affairs and Fisheries

EU, U.S., Canada launch Atlantic Ocean research alliance in Galway (May, 2013)
EU Call for proposal  BG-8-2014: 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. ... 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 EMODnet may enable addressing this challenge.

Proposal submission:  Pre- proposal Stage 1 (March 12) (done) and full proposal mid June.  Total EU budget : 20 Meuros (4 years).
Governance of AtlantOS

Executive Committee
(4 people)

Steering Committee
(WP co-leaders 16 people)

AtlantOS General Assembly
(all partners are represented)

Engagement board
(stakeholders, funders)

Scientific and Technical advisory board
(observing and data experts)

AtlantOS Supporters
(large group of international Atlantic Observing community)
Governance and partnership for AtlantOS

Executive Committee:
Chair: Martin Visbeck (Johannes Karstensen)
Matt Mowlem (Doug Connelly)
Pierre-Yves LeTraon (Herve Claustre)
Albert Fischer (Katherine Hill)

Steering Committee:
Richard Lampitt
Glenn Nolan
Stefan Fritz
Christoph Waldmann
Sylvie Pouliquen
Kevin Horsburgh
Eva Ramirez-Llodra
Ana Colaco
Kostas Nittis
Ken Drinkwater
Nadia Pinardi

Executive Committee
(4 people)

Steering Committee
(WP co-leaders 16 people)

About 50 partners/institutions incl. SMEs

International Partners
(signature of a MoU)
Structure of AtlantOS

- WP1 Observatory system requirements and design
- WP2 Improvement of ship based observing networks
- WP3 Improvement of autonomous observing networks
- WP4 Interfaces with coastal ocean observing systems
- WP5 Integrated regional observing systems
- WP6 Cross-cutting issues and emerging networks
- WP7 Data flow and data integration
- WP8 Product development and demonstration
- WP9 System evaluation and sustainability
- WP10 Dissemination, Exploitation, Communication
- WP11 Management
Argo in Atlantos

One Task led by the Euro-Argo ERIC with contributions from Ifremer, LOV, GEOMAR and Euro-Argo ERIC partners

Objective: contribute to the progressive extension of the Argo core mission towards the deep ocean and biogeochemistry. AtlantOs activities will complement already existing pilot projects developed at national level. Develop long-term plans.
Argo in Atlantos

Deep-Argo float deployment: 10 deep Argo floats (complementing 30 floats already funded at national or European level) in the North Atlantic.

Bio-Argo float deployment: 10 Bio-Argo floats (complementing 60 floats and 60 O2-floats funded at national level) in the North-Atlantic to enhance this network in various biogeochemical provinces of the Atlantic.

Improving Bio-Argo float capabilities (adapt novel optode-based sensors for CO2 and O2 partial pressure and new pH sensors)

Data Management: Real time/delayed mode data processing. Refine delayed mode QC and deliver a consistent Argo and Bio-Argo dataset for the Atlantic.

Sustainability issues: work on the long-term sustainability issues for Bio-Argo and Deep Argo after the AtlantOs pilot project. Long-term targets for Europe will be defined and the Euro-Argo ERIC will seek agreements at ministerial level and with the EU for their implementation. To be done with international partners.
Argo in Atlantos

*International partnership*

Interaction/coordination with non-EU partners (in particular US and Canada) planning Bio-Argo and deep-Argo activities in the Atlantic is essential.

This needs to be organized through Argo international. Need to identify main international partners willing to be involved in Atlantos (to be done by May 2014).

Two main activities:

- Develop long term joint implementation plans.