

Paris Declaration on All-Atlantic Ocean Observing

Ocean experts assembled at the First International AtlantOS Symposium support an All-Atlantic Ocean Observing System to address the challenges and realize opportunities for society, the economy, and the environment.

(Paris, 27 March 2019) The ocean covers 71% of the Earth's surface, regulates our weather and climate, provides us with essentials such as food, materials, energy, and transportation. Sustainable use of the ocean requires a dynamic and well-balanced marine ecosystem, improved governance and science-based ocean information. Thus, it is time to advance a fit-for-purpose AtlantOS, which is more efficient and less fragmented, to provide ocean data and information urgently needed by society. Implementation will follow policy frameworks such as the Galway and Belém Statements, the G7 and G20 declarations, and be guided by the Global Ocean Observing System (GOOS) Framework for Ocean Observing, the Group on Earth Observations (GEO), and the strategy for an All-Atlantic Ocean Observing System.

We call on all nations, scientists, ocean stakeholders and citizens to join together to

- Raise global awareness of the importance of the ocean and of fit-for-purpose ocean information for increased prosperity and sustainable management.
- Work to expand ocean observing, ocean forecasting, interdisciplinary research, innovative outreach, science ethics, early careers and ocean education training and capacity building.
- Ensure that this Atlantic Ocean observing system is sustainably and adequately resourced.
- Realize and foster ocean observing benefits through international collaboration, innovation, sharing of observing platforms, infrastructure and systems.
- Share ocean data freely without restriction, grow interoperable data infrastructures.
- Ensure integration of ecological and biological observations with the physical and biogeochemical systems, for the coastal, seafloor and water column regimes.
- Promote the engagement of the ocean observing community with natural and social sciences, engineering, civil society, private sectors and citizens who rely on this information.
- Support adherence to global standards, best practices and joint ambitions articulated through GOOS, the Partnership for Observation of the Global Ocean, and GEO's Blue Planet Initiative.

Motivation and policy context for the Paris Declaration on All-Atlantic Ocean Observing

Sustained, integrated, multidisciplinary and shared ocean observations and information improve our understanding of ocean, coastal and climate systems. The information enables earth system predictions, services and sciences that support management of human intervention and mitigation. Realization of the United Nations 2030 Agenda on Sustainable Development, the Paris climate agreement and the Sendai Framework for Disaster Risk Reduction require coordinated, long-term collection and reporting of ocean information. Additionally, the UN has proclaimed a Decade of Ocean Science for Sustainable Development (2021–2030) whose objective is to ensure that we develop the 'science that we need for the ocean that we want'.

However, the scale of observational effort to support ocean information required to understand the climate system, address human-induced ocean challenges, improve large-scale marine ecosystem management and guide the development of a more sustainable ocean economy are beyond the capabilities or mandate of any single nation. Global trans-basin investment and coordination are required across the value chain – from observations, products, information, and capacity building tools - to ensure a fit-for-purpose ocean observing system.