



Blueprint for an Integrated Atlantic Ocean Observing System

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The ocean plays a vital role in the global climate system and biosphere, providing crucial resources for humanity including water, food, energy and raw materials. The ocean is the seventh largest economy in the world, with goods and services from coastal and marine environments amounting to US\$ 2.5 trillion each year. Our growing use of the oceans poses challenges for the sustainable management and development of ocean resources. Informed decision-making, at national, regional and global levels requires a sustainable, internationally-coordinated and comprehensive ocean observing system to assess current trends and predict future scenarios. Internationally, ocean observation has primarily been coordinated through the Global Ocean Observing System (GOOS) cosponsored by IOC-UNESCO, ICSU and WMO and the Blue Planet initiative of GEO supported by numerous other national and international programs and projects. GOOS and its partners are working to develop and implement effective ocean observing capacities and trying to manage and if possible minimize the complexity of the current observing systems.

At present, Atlantic Ocean observation is undertaken through loosely-coordinated, in-situ observing networks, satellite observations and data management arrangements of heterogeneous international, national and regional systems to support science and ocean management more generally. Thus, there is a tremendous opportunity to develop the systems towards a fully integrated Atlantic Ocean Observing System consistent with the 'Framework of Ocean Observing' (FOO). One initiative to address this challenge is the EU Horizon 2020 project AtlantOS with 62 partners from 18 countries including non-European countries such as Canada, USA, Brazil and South Africa. AtlantOS aims to improve and innovate Atlantic observing by using the Framework of Ocean Observing to develop an enhanced international, sustainable, efficient, integrated, and fit-for-purpose system. The EU funded AtlantOS project ends in 2019, however, an international team of experts from Atlantic basin rim countries (<http://atlanticblueprint.net/blueprint-core-group/>) has been assembled to develop a BluePrint for Ocean Observing in the Atlantic. Its goal is to develop an advanced, international elaborated framework for the formation and operation of an integrated Atlantic Ocean Observing System that goes beyond the state-of-the-art and leaves a legacy of sustainability and enhanced coordination. The BluePrint will lay out the principles, and plans for sustained ocean observations in the North and South Atlantic and will integrate existing ocean observing activities into a sustainable, efficient, and fit-for-purpose integrated Atlantic Ocean Observing System. Accordingly, the observing system should be ambitious, multi-national, multi-sectoral and purposeful, but not prescriptive, and enhance new partnerships between science, service, private sector and civil society. It includes capacity development and emphasizes the role of resource mobilization for observations of the entire Atlantic Ocean.