

## The 2021 AtlantOS Program Development Plan

### GOOS-SC Briefing

#### *General strategy for the development of the basin-scale program*

AtlantOS supports Atlantic basin scale implementation by actively supporting collaborative partnerships among observing networks, data and information systems and the wider user communities. We offer a platform for communication and outreach to bring these actors together. AtlantOS is actively building formal relationships with international bodies (GOOS, GEO Blue Planet) and supports engagement with national and regional entities (e.g. EOOS, IOCARIBE of IOC-UNESCO, NOAA), connecting observing networks (e.g. US-IOOS, C-IOOS, EuroGOOS, DOOS, TAOS), and providing visibility to the common challenges, needs and opportunities of Atlantic basin-scale observing (e.g. the Newsletter and the AtlantOS OceanHour).

By December 2021, AtlantOS will rework and more explicitly articulate a governance structure. It will release an open call for new program participation and participation on committees. It will layout a detailed work plan of work for the Atlantic basin scale implementation and Atlantic use cases.

The AtlantOS Coordination Team is presently supported by NOAA and the German Marine Research Consortium (until December 2021). All other program related activities (Ocean Hour, workshops, use cases) can be conducted through further contributions (in-kind, financial) by our partners.

#### *How will AtlantOS grow and integrate new program elements not presently represented within the program?*

AtlantOS will contribute to international planning and science meetings and workshops, such as the All Atlantic 2021 Forum. We had planned to hold an in person meeting in the USA in 2021 but have postponed plans for this meeting until travel resumes. AtlantOS will establish a more formal process to review ongoing, close and open up use cases. AtlantOS will continue its community engagement through the recently established OceanHour and a regular Newsletter. This forum will be used to share ideas, showcase progress, use cases, projects, programs, and address issues in developing e.g. communities of practice. For this year, we are alternating between AtlantOS Use Cases and Network activities such as Ocean Gliders, VOS et al. as we further develop the All-Atlantic Ocean Observing System. The AtlantOS Newsletter will be published three times a year to provide updates on AtlantOS and share information about related activities of the ocean community.

#### *What connections with other organisations will AtlantOS further develop or strengthen?*

The primary goal of AtlantOS is coordination rather than the direct implementation of

existing or new ocean observing activities. AtlantOS is a project of GOOS and GEO Blue Planet and seeks partnerships with other actors in the Atlantic region. AtlantOS has the ambition to work with all partners to articulate a roadmap for an Atlantic basin scale implementation of sustained ocean observing. In addition, it will showcase the full value cycle from observations to societal benefits by supporting and building upon the use cases. As an example we are working to ensure that the AtlantOS Use Case on AMOC is complimentary to the newly formed CLIVAR Atlantic Regional Panel AMOC Task Team. AtlantOS does require funding to support the program activities, not for ocean observing activities directly but to support the development and connections between the divers actors of Atlantic ocean observing. Further AtlantOS will contribute to All Atlantic meetings to ensure the successful implementation of integrated observing systems and connectivity with stakeholders. AtlantOS is, however, not a funding mechanism to support ocean observing.

## *How will AtlantOS offer additional value beyond that of existing GOOS structures such as OCG, OceanOPS?*

The AtlantOS vision from its inception has been to establish a program that integrates ocean observing at the basin-scale level. The focus on the basin-scale will enable AtlantOS to connect national programs, such as US-IOOS, C-IOOS and EOOS in the North Atlantic and similar national programs in the South Atlantic with the Atlantic part of global scale networks such as Argo and OceanSITES, GDP, OTN, GEO-BON etc.. AtlantOS differs from the OCG in that it has a basin-scale focus but a broader ambition to coordinate ocean observing beyond the global networks. AtlantOS offers a broader approach to aligning the interests of the regional scale with the strengths and alignment of global-scale networks.

The other ambition is that the Atlantic observation system should strive to be appropriately responsive and adaptive to meet societal needs. Therefore, AtlantOS in collaboration with many other entities established use cases both to showcase the full value cycle as articulated in the AtlantOS prospectus and to contribute to a fully integrated ocean observing system that meets a specific societal need.

At present there are five active use cases and one in development:

- Mitigating Impacts of Sargassum on Coastal Communities in the Tropical Atlantic.
- Providing basin-scale climate services - Atlantic Meridional Ocean Circulation (AMOC)
- Ocean Carbon Uptake - identifying sources and sinks.
- Supporting Ecosystems Based Management for Fisheries in the Atlantic Upwelling Regions.
- Supporting networks to predict and explain Marine Animal Movements in a changing environment.
- Deep Sea geology and ecology around the Azores Islands (under development)

AtlantOS will fill a gap not addressed elsewhere, either by national or regional initiatives or global networks. It is a goal of AtlantOS to build a basin-scale ocean observing community, through supporting the use case studies, and directly by working with partners around the Atlantic.

## *What is the 5-year development plan to build a 'component' of GOOS or integrate into existing structures?*

AtlantOS has established some credibility with the national and regional implementers of the Global Ocean Observing System in the Atlantic Sector. AtlantOS supports the GOOS networks in their implementation ambition in the Atlantic but also engages with GEO and in particular the BON networks and has emerging links to observations from the fishery sector (ICES and RFMOs). The work plan will have three areas of focus:

- a) Engage with the national/regional supporters to obtain a comprehensive picture of their implementation plans and areas of emphasis and need for increased international coordination (we have some pilots to work from)
- b) Connect the networks of GOOS and beyond to consider partnerships and resource sharing as well as to improve the timely and open data delivery and sharing
- c) Work with the community to establish a process to design a fit for purpose All Atlantic Ocean observing system that is informed by OSSE type studies, expert consultations and resource opportunities

All of the work above will take into account the specific needs of the North, Tropical and South Atlantic community with the ambition to arrive at equal amounts of engagement and support across the Atlantic Basin.

## *What will AtlantOS build?*

AtlantOS will support the All Atlantic ambition of GOOS and GEO Blue Planet. It will provide a platform for engagement, sharing of platforms and resources and articulate the basin scale ambition. AtlantOS could be seen as a community of practice to establish a basin scale ocean observing system, akin to TPOS and SOOS.

As GOOS continues to mature and implement its own governance, AtlantOS will be well positioned to co-evolve and advertise and enable the GOOS structure around the Atlantic basin. Ideally, this will result in increased engagement from nations and sectors previously less well represented in the global ocean observing community who are looking to increase their national capabilities. Thus AtlantOS will provide a bridge between many different communities - from the coastal to the open ocean, from the North to the South, and from the different regions of the Atlantic.