

OBJECTIVES

1. To review the main requirements from geo-information in the Atlantic Region from science to information services;
2. To review the main activities, projects and initiatives taking place in the region where Earth Observation may contribute;
3. To assess the potential of the increasing observation capacity offered by satellites to address the needs for science, applications and future information services;
4. To characterise gaps and identify high-level requirements and associated solutions for support ICT infrastructure in the Atlantic region, including the basis for developing an Atlantic Regional Earth Observation Exploitation Platform.

The Workshop Report will summarise recommendations for dedicated scientific activities, applications development, service innovation and underlying ICT capabilities for a wide spectrum of users and will support ESA in launching an Atlantic initiative.

ORGANISING COMMITTEE

Jérôme Benveniste | ESA

Gordon Campbell | ESA

Diego Fernandez-Prieto | ESA

Eric Doyle | ESA

Stefano Ferretti | ESA

Christine Gommenginger | NOC, UK

Conor Sheehan | Enterprise Ireland

Victor Silva | Foundation for Science and Technology, Portugal

PARTICIPATION

- The workshop is organised around oral presentations and discussions.
- Sessions will be designed around dedicated topics related to the workshop's objectives.
- An interactive session will be organised around selected posters. Poster authors are required to submit abstracts, 200-250 words, by the 19th of November 2018.
- The working language of the workshop is English.
- No participation/registration fee will be charged.
- Participants are expected to finance their own travel and accommodation expenses.

Presentations given at the workshop will be published on the workshop website: www.eo4atlantic.info

CONTACTS

ESA Conference Bureau

e-mail: events.organisation@esa.int

Fax.: +39 06 9418 0902 | Tel. : +39 06 9418 0912

VENUE

NOC, Southampton, UK
European Way
Southampton, SO14 3ZH
United Kingdom

Local public transport and cycle maps are available in the NOC Southampton reception area and are downloadable from here:
www.discoverouthampton.co.uk/visit/visitor-info/maps

Please note that NOC is located within the Southampton Docks area, operated by the Associated British Ports (ABP). When entering the docks, you may be stopped by ABP Security and asked to present ID.

→ ATLANTIC FROM SPACE WORKSHOP

23–25 January 2019
National Oceanography Centre
Southampton, UK

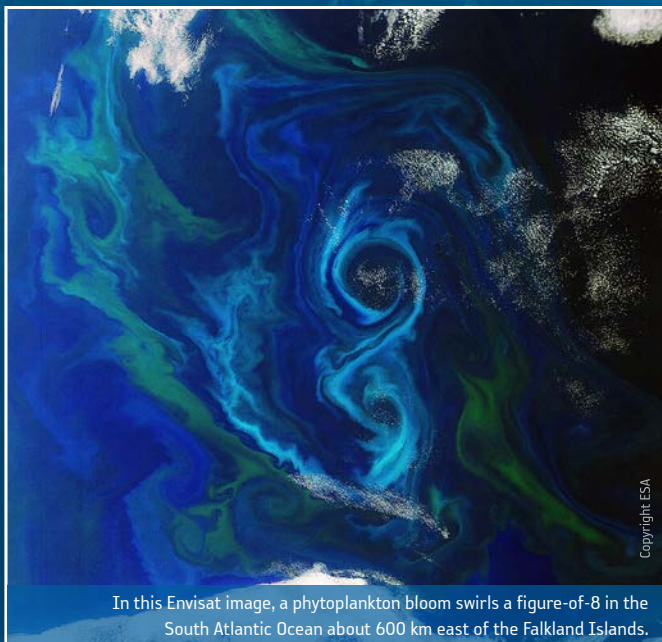
BACKGROUND

The countries bordering the wider Atlantic, including the southern Atlantic and North Sea coastal states, generate almost half of the total global economic output. The region hosts a large and expanding portion of global maritime traffic, the Atlantic is considered to be a major source of renewable energy has one of the most sophisticated fisheries management regimes in the World – however many Atlantic areas are experiencing only slow economic growth. The Atlantic is an important component of global heat transport processes modulated by fresh water inflows from both river discharges and glacier melt. In addition, Atlantic atmospheric dynamics and air sea exchange processes are important elements of many biogeochemical cycles and significantly influence processes outside the immediate region.

Finally, the Atlantic region is experiencing a range of pressures driven by climate change and other factors, which affect the environment and socioeconomic activities e.g., ocean oxygen deficiency, increased

temperature, changed ocean salinity and increased acidification are impacting on the marine ecosystem and may erode resilience.

There is an increasing need for adaptive management strategies in the Atlantic area (e.g. for forestry, agriculture, urban complexes and the coastal environment), which deal with both climate change but also with emissions of nutrients, aerosols, carbon dioxide and other anthropogenic drivers. This requires a comprehensive mix of different information layers and compiling representative measurements on reasonable timescales is not viable without satellites. At the same time, the Atlantic region is a focal area for measures to stimulate enhanced economic expansion through infrastructure development, support to new industries (deep sea mining, ocean pharmaceuticals, aquaculture, ocean energy), application of new governance structures (Areas Beyond National Jurisdiction) and expansion of traditional sectors such as tourism and maritime transport.



In this Envisat image, a phytoplankton bloom swirls a figure-of-8 in the South Atlantic Ocean about 600 km east of the Falkland Islands.

In this context, Earth Observation (EO) combined with conventional data collection and analysis assets can support innovative science, applications and information services to address the issues highlighted above, while at the same time acting as a potential catalyser for innovation and growth in the region.

The focus of this workshop is to assess the opportunities for regionally focused EO research and development, downstream activities and ICT evolution, which may be the basis for future ESA investments to address some of the key information needs of this important area. These opportunities will be framed with respect to emerging Earth science, development of novel applications, testing innovative information services and implementing required upgrades to capabilities to manage and manipulate large data volumes.

TOPICS

- Atlantic Ocean Processes including salinity and sea level dynamics
- Protecting the Ocean - eutrophication, pollution, aggregates extraction, ballast water exchange and marine plastics
- Land - Sea biogeochemical feedbacks in the Atlantic region
- Atmospheric dynamics, transport and exchange in the Atlantic region
- Protecting biodiversity, sensitive ecosystems and natural capital
- Natural hazards and extreme events in the Atlantic region
- Regional safety and security
- Understanding regional variability and common issues with respect to water and energy exchanges
- Regional climate evolution modelling and forecasting
- Regional level tectonic processes and lithospheric-atmospheric-ionospheric coupling
- Spatial planning, natural resources management and blue economy development in the region
- Maritime transport and port development in the Atlantic region
- Supporting and strengthening innovation clusters in the region
- Atlantic regional initiatives for data collection, management and exchange