

## BLUE PLANET 3<sup>rd</sup> SYMPOSIUM: THE ROLE OF THE OCEANS IN EARTH'S LIFE-SUPPORT SYSTEM

*Blue Planet Symposium explores the critical role that oceans play in the Earth's life-support system, and the challenge of minimizing human impact on their wellbeing. Held in the run-up to the first [UN Oceans Conference](#), the Symposium established that the GEO initiative will focus efforts on supporting the ocean-related [Sustainable Development Goals](#).*



The [3rd GEO Blue Planet Symposium](#) took place in College Park, Maryland (USA) from 31 May - 2 June 2017, hosted by the National Oceanic and Atmospheric Administration ([NOAA](#)) and the [University of Maryland](#). The event served as a platform for information exchange and for identifying potential pilot and prototype projects/services for Blue Planet to focus on in the coming years.

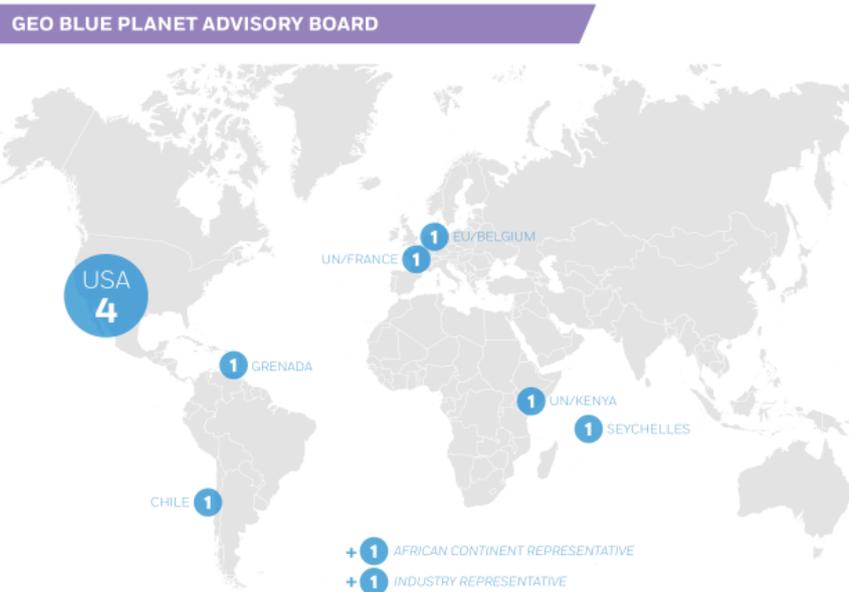
The [Symposium](#) brought together a diverse group of participants to discuss the challenges facing the ocean, and how GEO Blue Planet can add value to the existing ocean observing activities and programmes by highlighting the societal benefits of ocean observations, engaging with end-users and supporting informed decision making. Sessions covered the threats to and pressures on the oceans, current and predicted states, impacts to the Earth's life support system, as well as user information and existing information services.

### What is GEO Blue Planet?

[Blue Planet](#) is a GEO initiative working to ensure the sustained development and use of ocean and coastal observations for the benefit of society. Blue Planet envisions an informed society that recognizes the oceans' crucial role in Earth's life-support system and is committed to stewardship of the oceans for a healthy, safe and prosperous future for all.

GEO Blue Planet is an open network of voluntary organisations and individuals who value the benefit of Earth Observation (EO) information and knowledge for the sustainable management of our ocean. GEO Blue Planet is working to bring together individuals with varied expertise including oceanographers, EO specialists, social scientists, end-users, decision makers, industry representatives, etc. Participation in the recently appointed

Advisory Board and Steering Committee is therefore diverse in experience and, as can be seen in the maps below, geographic representation.



## The Symposium at a glance

The [3rd GEO Blue Planet Symposium](#) was organised around eight sessions. Four sessions covered the drivers and pressures on the oceans, the current and predicted states and impacts to the Earth’s life support system, while four sessions focused on user information and existing information services.

- Session 1: The changing oceans

- Session 2: Threats from pollution, warming and acidification
- Session 3: Processes and life at the Interfaces with the oceans
- Session 4: Sustainable use of ocean resources
- Session 5: Healthy ecosystems and food security
- Session 6: Coastal communities
- Session 7: The Blue Economy
- Session 8: Maritime awareness

## The added value of Earth Observations

During the first half of the Symposium presentations focused on the drivers and pressures on the oceans. Several presentations explored the pressing issue of increasing ocean acidification (OA). Jan Newton (University of Washington, USA), emphasized how OA is a global condition with local effects, and argued that we need to go beyond local measurements and observe on global scales in order to understand OA and its drivers correctly. Information and data products are needed to inform policy and the public with respect to global status of OA and implications for the overall ecosystem health of the planet. Sufficient data and understanding are needed to develop predictive skills and early warning systems, with coverage at appropriate scales (nesting local observations within global context). The use of ocean remote sensing is invaluable, as it provides consistent, synoptic perspective at different spatial and temporal scales. **Blue Planet looks forward to supporting existing partnerships, such as [GOA-ON](#), to further develop the end-to-end value chain and improve understanding of ecosystems response and stakeholder needs in a changing ocean.**

During the second half of the Symposium the focus turned to the applications, services, use cases and requirements. These sessions provided an overview of how EO is, and may be, used to bring value to society. Below are four short highlights:

- **Chris Aubrecht** ([European Space Agency](#) Geospatial Specialist seconded to the [World Bank](#)), provided an insightful talk on [Space for Blue Growth](#), describing the European Space Agency (ESA) – World Bank partnership focusing on marine and coastal resources management, and the use of Earth Observation data within ESA's [Earth Observation for Sustainable Development](#) Program (EO4SD).

Recognizing that EO technology has major potential to inform and facilitate international development work in a globally consistent manner, ESA is working closely with a number of International Financing Institutions (IFIs) and their client countries to harness the benefits of EO in their operations and resources management. EO4SD is an ESA initiative which aims to achieve a step increase in the uptake of satellite-based environmental information in the IFIs' regional and global programs. A next step is to develop EO4SD's Coastal Thematic Exploitation Platform (TEP), where strategic geospatial information user needs in individual developing countries, as well as international and regional development organizations, will be met. **Blue Planet is looking forward to cooperating with ESA and the World Bank on the implementation and requirements consolidation for the Coastal TEP.**

**Kwame Adu Agyekum** ([ECOWAS Coastal & Marine Resources Management Centre, University of Ghana](#)) delivered talk on [the use of Earth Observation Data for Decision Support and the Management of Fisheries Resources in West Africa](#). Within the context of the Monitoring for Environment and Security in Africa (MESA) project, examples were provided on the role of EO data for the provision of geospatial intelligence to artisanal fishermen and regional authorities on potential

fishing grounds and vessel traffic to aid monitoring control and surveillance against illegal, unregulated and unreported (IUU) fishing activities.

Western African countries utilize EO for decision support and policy formulation. It will be interesting to explore how Blue Planet can provide added value for the further consolidation and extension of this portfolio of EO-based ocean services to the Western African community.

- **Kristin Qui** (Yale University) presented the [Marine Monitoring for Evidence-based Action in Caribbean Small Island Developing States \(SIDS\)](#) project. A joint initiative of [UNDP Barbados](#), [Organisation of Eastern Caribbean States](#) (OECS), [IOCARIBE-GOOS](#) and Blue Planet, this Multipurpose Marine Monitoring Mechanism (4M) project looks at directly involving and end users and addresses their needs, focusing on capacity building and on building long lasting, sustainable partnerships in the region.

Using the [Framework for Ocean Observing](#) as a basis for development, the objectives of 4M are, *inter alia*, to: i) regional analysis of the Caribbean marine environment; ii) support evidence-based decision making; iii) create opportunities for data sharing; iv) monitor effects of climate change and land based pollution, and; v) support effective resource mobilization. Blue Planet looks forward to productive cooperation in the Caribbean.

- **James Movick** (Director of [Pacific Islands Forum Fisheries Agency](#)) gave an eye-opening talk on [Reinforcing and moving beyond Pacific SIDS monitoring of illegal, unreported and unregulated fisheries activities](#). The Western and Central Pacific Ocean (WCPO) Islands have been working together and sharing data and intelligence to combat IUU activities since the 1980s. This includes supporting monitoring, control and surveillance of fisheries as well as treaty administration, information technology and vessel registration and monitoring.

The FFA has supported WCPO SIDS to successfully reduce IUU losses from 1.4B US\$ in 2009 to 700M US\$ in 2016, and has identified the areas where they feel EO satellite data can be of benefit. These include the potential to further enhance the regional MCS framework through EO cooperation using existing regional cooperative mechanisms, specifically in the areas of security and law enforcement. Blue Planet will discuss the requirements with WCPO in details in the coming months.

These four speakers covered the services and needs of three different regions (Caribbean, Africa and Pacific SIDS) and provided a global perspective of existing and future programmes for increasing the uptake of satellite-based environmental information.

## Symposium takeaways

As a result of the discussions, it was agreed that Blue Planet will focus efforts around needs to support the ocean-related [Sustainable Development Goals](#), engaging with stakeholders at regional and local level, and where relevant support other policy mandates such as the [Paris Climate Agreement](#) and the [Sendai Framework for Disaster Risk Reduction](#).

The Symposium was an excellent opportunity to obtain tenable outcomes in recognizing Blue Planet's role in engaging with new communities of users and identifying potential pilot and prototype projects. Participants provided positive feedback and are looking forward to working towards a set of common objectives.

How well Blue Planet is able support to national, regional and international organisations for the development of an integrated set of services responding to specific needs will be a key factor in determining the future of

the Initiative. The implementation of relevant monitoring and reporting services is necessary for achieving the 2030 Agenda for Sustainable Development, and is an area where Blue Planet can provide a tangible added value by reducing the gap between the observed dataset and the information knowledge which is needed for the wise and sustainable management of our ocean.

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Congratulations to Dr. Emily Smail – Blue Planet Scientific Coordinator – for putting together such a high-quality event. See you in July 2018 in Toulouse (France) for the 4<sup>th</sup> GEO Blue Planet Symposium. A bientôt !

**If you are interested to join the GEO Blue Planet Initiative, please contact [info@geoblueplanet.com](mailto:info@geoblueplanet.com).**

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**About the author:**

Samy Djavidnia is a member of GEO Blue Planet’s Management and Steering Committees. Samy has been involved with the Initiative since its conception in 2012 and was the Lead Editor of the book “[Oceans and Society: Blue Planet](#)”. Currently working for a European Union Agency, his main interests and expertise include international cooperation, earth observation and oceanography from space.

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**About Blue Planet:**

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