

**A RACE WE MUST WIN
CLIMATE ACTION NOW!**

EFG Private Banking

Albatros



Global Climate Action
United Nations Climate Change



OCEAN OBS'19



**An Ocean of
Opportunity**

September 16-20, 2019
Hawai'i Convention Center

OCEANOBS99

300 attendees

43 White Papers

Climate

OceanObs'09

620 attendees

99 Community White Papers

Climate

Operational services

Ocean health



1500 attendees

128 Community White Papers

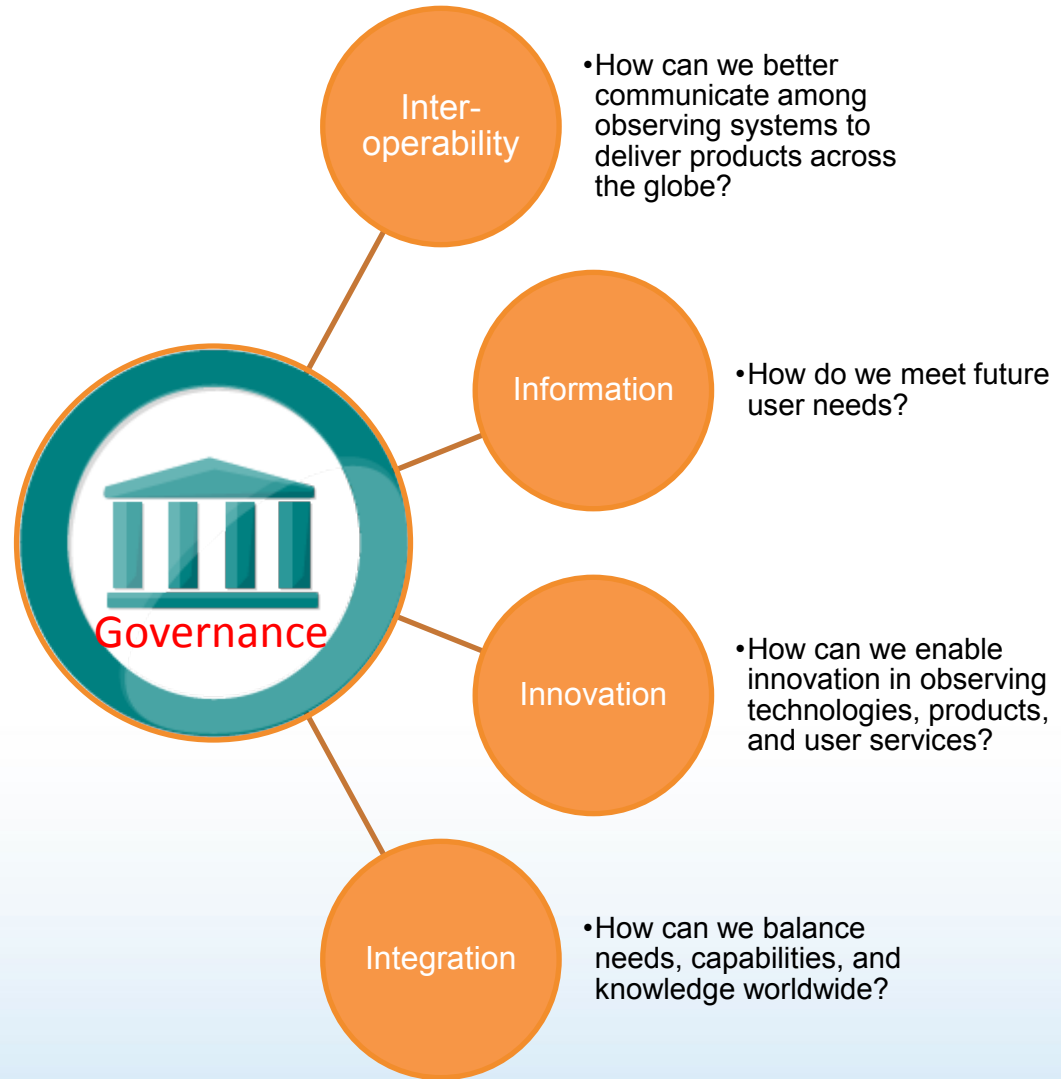
2480 contributing authors

Ocean solutions

Conference Themes

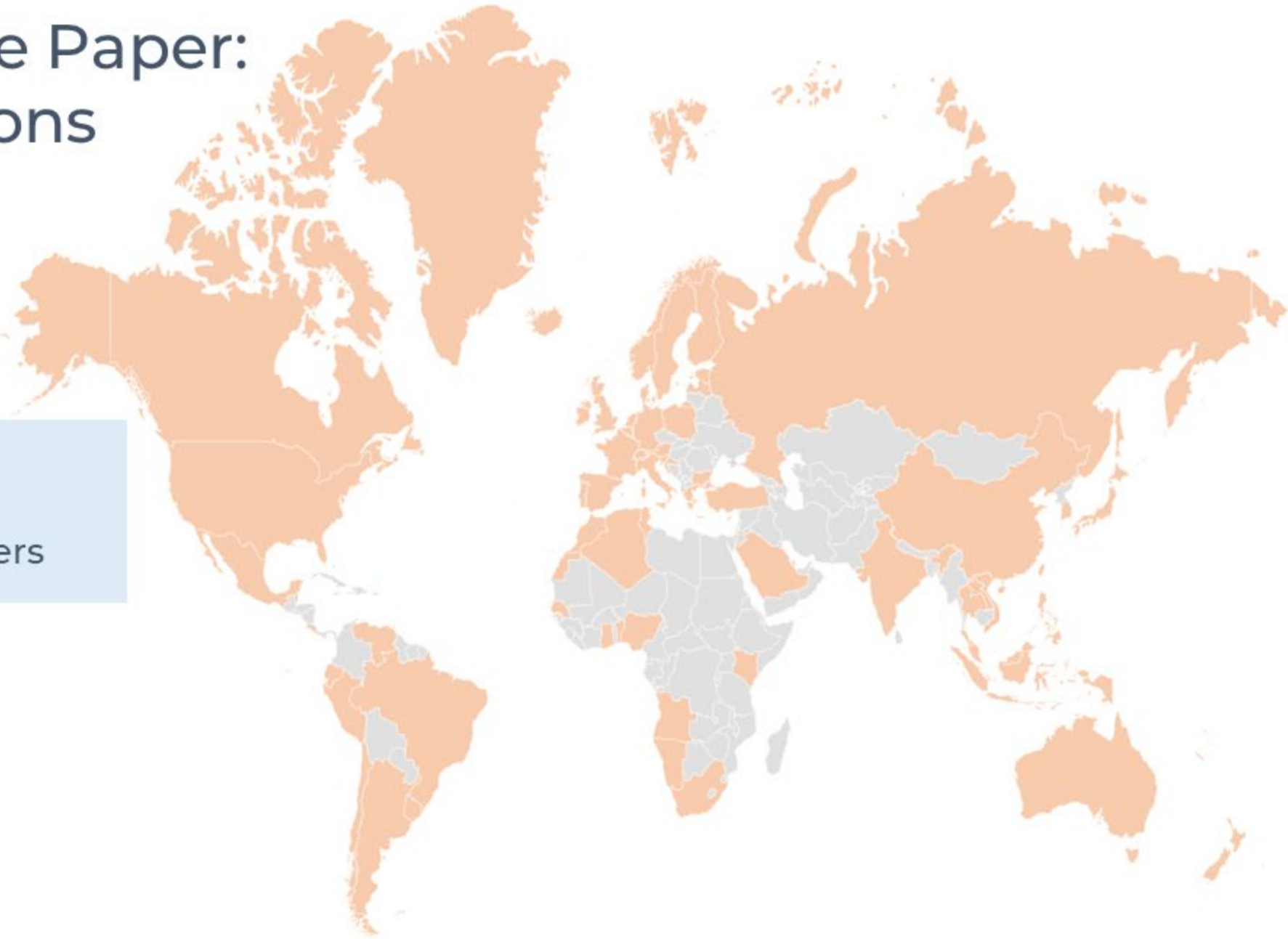


-  Observing System Governance
-  Data & Information Systems
-  Observing Technologies & Networks
-  Discovery
-  Ecosystem Health & Biodiversity
-  Climate Change & Variability
-  Water, Food, & Energy Securities
-  Pollution & Human Health
-  Hazards & Maritime Safety
-  Blue Economy



Community White Paper: Global Contributions

- More than 2500 Authors
- 79 Countries
- 140 Community White Papers



Contributing Country

Non-Contributing Country



www.oceanobs19.net/community-white-papers/

“Living Action Plan”

- A **plan** that incorporates recommendations from Community White Papers, Conference, Sponsors, and Foundational documents (e.g. FOO, GOOS-2030). Much to unpack and organize in coming months!
- An **actionable, executable plan** – in post-conference era we must add details to our “what” and “why” statements – who, when, where, and how. Lots of outreach work!!!
- A **living plan** will evolve and adapt. We can “baseline” the plan at regular intervals (check in with community), but we must keep evolving and adapting based on new knowledge and externalities.
- **HOW?** “Do it the OceanObs way!”
 - Dedicated staff (globally distributed)
 - Joint sponsor AND OceanObs community ownership
 - Iterations (check-ins) with stakeholders
- The plan can be used by sponsors/UN Decade/others as a guide or roadmap to community-vetted requirements for sustained ocean observations.

GOOS process

- GOOS is using the recommendations from the OceanObs'19 conference – white papers, session summaries, sli.do comments and polls etc. – to develop and expand on the **Implementation Roadmap**
- The process is underway engaging a large part of the GOOS SC in the endeavour.
- Goal is to have a more inclusive IP early next year, that we can use to discuss among partners
- In parallel, we will work with partners to champion effective **governance** of the observing system.

GOOS impressions

We heard some key themes emerging, including:

- **Planning for impact:** co-design of the observing system, end-to-end, with stakeholders and users
- **Core system integration:** Democratization of data, best practice, integration of biological and ecological observations, and a growing emphasis on the coast
- **Embracing innovation** in technology and governance, and looking to the [#OceanDecade](#) as a vehicle for transformation

GOOS impressions

The conference underscored needed and priority action areas under the **2030 Strategy** objectives in:

- strengthening partnerships for delivery,
- advocacy and communication,
- strengthening observing implementation and best practices,
- FAIR data,
- guiding capacity development, and measuring human impacts.

It also emphasized a core GOOS action around **global system design**, synthesizing across different stakeholder requirements.

We will need both **global unified approaches and local action** moving forward, with partnerships and effective governance of ocean observations.

The role of the UN Decade of Ocean Science for Sustainable Development (#OceanDecade) was widely recognized, it will be an initiative within which key projects for transformational change can be developed.

GOOS impressions – key themes

Deepening engagement and impact

- **Stakeholder connection:** The observing community needs to work harder in developing links with data users.
- **Co-design** of the observing system was also echoed many times
- **Communication** with the public, with stakeholders, with policy makers.
- **Indigenous peoples' perspective on ocean observing** was a welcome new dimension at the conference.

System integration and delivery

- **Connecting to the coast:** Better integrate coastal observations into the global ocean observing system It has a strong connection to **increasing capacity** in regions
- **Integrate biological observations** in the observing system
- **Data, Data, Data:** We need the principle of FAIR and open data
- **Best Practices** in ocean observing were prevalent throughout the discussions.

Building for the future

- **Embracing innovation:** Extending the observing system to all countries will depend on both present "exquisite and rare" observations, and the development of "ubiquitous and simple" platforms and sensors.
- **New social/human impact EOVs** should be embraced by the observing community.

Personal Impressions

- The CWPs, the break-out sessions and presentations did address all the 11 Strategic Objectives in the GOOS 2030 strategy
- A few themes were on the agenda in addition to those in the GOOS 2030 strategy – e.g. The role of indigenous knowledge
- A large, and growing, OO community with a lot of enthusiasm.
- Need guidance on priorities and overall performance and integration of the observing system

OceanObs'19 Conference Statement

- **Engage** observers, data integrators, information providers, and users from the scientific, public, private, and policy sectors in the continuous process of **planning, implementation and review** of an integrated and effective OOS;
- Focus the ocean observing system on addressing **critical human needs**, **scientific understanding** of the ocean and the linkages to the **climate system**, **real time** ocean information services, and **promotion of policies** that sustain a healthy, biologically diverse, and resilient ocean ecosystem;
- **Harness the creativity** of the academic research and engineering communities, and work in **partnership** with the private and public sectors to evolve sensors and platforms, better integrate observations, revolutionize information products about the ocean, and increase efficiency and reduce costs at each step of the ocean observing value chain;
- **Advance the frontiers of ocean observing capabilities** from the coast to the deep ocean, all aspects of the marine biome, disease vectors, pollutants, and exchanges of energy, chemicals and biology at the boundaries between the ocean and air, seafloor, land, ice, freshwater, and human populated areas;
- **Improve the uptake of ocean data** in models for understanding and forecasting of the Earth system;
- Ensure that all elements of the observing system are **interoperable** and that data are managed wisely, guided by open data policies and that data are shared in a timely manner;
- Use **best practices**, standards, formats, vocabularies, and the highest ethics in the collection and use of ocean data;
- Involve the public through **citizen-engaged observations**, information products, outreach, and formal education programs;
- **Evolve ocean observing governance** to learn and share, coordinate, identify priorities, increase diversity, promote partnerships, and resolve conflicts, through a process of continuing assessment to improve observing; and
- **Promote investments** in ocean observing and information delivery and sustain support.