

1st POGO Directors' Meeting Report

7th June 2025

Hotel Aston La Scala, Nice, France

Participants

See separate Annex.

Format

This first POGO “Directors’ Meeting” was designed to re-engage the POGO membership with a format that would facilitate discussion among Directors and other senior representatives of POGO member institutions, without the dilution by attendance of other stakeholders from the broader community. To this end, the agenda was constructed around a series of discussion sessions, on 6 topics that were identified by the Board of Trustees as being high priorities for POGO.

The delegates were split into 6 groups, with varying combinations of two groups discussing each of three topics in parallel. This was designed to enable delegates to mix with the highest possible number of other members and to enable all voices to be heard. Depending on how each session was planned by the co-leads, written input was in some cases also gathered via post-it notes. All session co-leads were asked to fill in a Google Doc with their session outcomes.

Below is a brief summary of each of the session outcomes, with more detailed reports provided in the Annexes. For session A, the report from the Nice Meeting has been combined with outcomes from previous POGO meetings, to be shared with POGO members in early 2026.

Session A. Towards net zero ocean observing – (how) can we achieve this?

Co-leads: Andrew Meijers, Han Dolman, and Kate Hendry

The group agreed that moving toward net zero ocean observing offers significant opportunities for leadership, innovation, and improved observing efficiency. Key benefits include adopting advanced low-carbon and autonomous technologies, enabling smarter system design through AI, enhancing data sharing, strengthening coordination across fleets and institutes, and delivering monitoring products that support green-economy transitions. Partnerships with organisations already pursuing low-carbon operations could accelerate progress.

However, the transition presents major practical challenges. Low-CO₂ ship technology and autonomous platforms remain immature; autonomy cannot replace all ship-based observations, and clear communication of complementary roles is essential. Achieving national and international alignment on low-carbon strategies, managing fuel and operational constraints, and ensuring meaningful coordination across physical and digital systems were identified as core barriers.

Participants also highlighted serious risks. High costs, technological uncertainty, and shifting political will could undermine progress. The Global South may be left behind, and there is a danger that essential but carbon-intensive observations could be lost. Over-emphasising CO₂ metrics may compromise observing coverage and quality. Reputational and regulatory risks further reinforce the urgency of coordinated, strategic action.

Overall, the transition to net zero represents a major opportunity but requires careful management to avoid capability loss, inequity, and technological lock-in.

Session B. New collaborations for low-cost technology development

Co-leads: Tammy Morris, Subrata Sarker, and Hui Zhou

The discussion session examined gaps, challenges, and potential solutions related to affordable marine observation technologies, with a particular emphasis on inclusivity, data integration, and practical implementation—especially in the Global South.

The discussions highlighted a strong community desire to broaden access to marine observing technologies and make the observing system more equitable, affordable and innovative. The discussion underscored widespread unmet needs in affordable marine sensing, spanning molecular, nearshore, surface, benthic and autonomous platform technologies. Major gaps remain in sensing capabilities, data integration, calibration access and support for community-driven innovation. Procurement challenges, especially in the Global South, reinforce global inequities and slow scientific progress.

While a formal alliance is deemed unnecessary at this stage, POGO can play an important enabling role by coordinating efforts across networks, advocating for accessible technologies and tariffs policy, supporting open science and citizen science, and facilitating commercialisation and visibility of emerging low-cost solutions.

The overarching conclusion is that **the ocean observing community is rich with ideas and emerging solutions, but requires coordinated support, equitable partnerships and sustained attention to technology accessibility.**

C. POGO's role in influencing policy, from national to global scale

Co-leads: Francisco Arias and Margaret Leinen

The session focused on how POGO can strengthen the visibility, funding and policy integration of ocean observations in national programmes and international agreements. Participants agreed that

POGO must move beyond broad declarations and adopt more targeted, stakeholder-driven approaches.

To be more effective, POGO should identify priority audiences, simplify messaging, and use compelling case studies co-developed with stakeholders to demonstrate how ocean observations directly support decisions on issues relating to BBNJ, MPAs, plastics and hazards. POGO members should actively amplify these messages through their own communication channels, while POGO plays a coordinating and convening role.

Influencing policy requires engaging the right institutions. At national levels, the focus should be on executive and legislative bodies; internationally, key UN agencies, global conventions, assessment bodies (e.g., IPCC, WOA), and issue-specific partners such as IUCN or the insurance sector. Timely interventions—such as statements following major events—can help draw attention to the essential role of observations.

Measuring success will require clearer indicators. Beyond funding increases, metrics might include the presence of ocean-observation language in major policy documents, statements by high-level leaders, and uptake of recommendations in national or regional strategies. Learning from organisations experienced in policy impact, such as IUCN or the High Level Panel, can strengthen POGO's approach.

Overall, the group recommended that POGO adopt a more strategic, focused and evidence-based advocacy model, develop methods to track its influence, and leverage partnerships to ensure ocean observations are recognised as essential infrastructure for addressing global environmental challenges.

D. POGO's Role in fostering, promoting, and adopting emerging technologies

Co-leads: Fei Chair and Tony Knap

The discussion highlighted rapid advances in ocean observing technologies and strategies that could significantly enhance global-scale monitoring over the next decade, with a strong emphasis on biological and ecosystem variables to complement established physical and chemical observations.

Several technology families were seen as likely to achieve global relevance in the next decade:

- **Advanced and quantum sensors**, including genetically engineered organism-based sensors, smart cables, mooring-based sensors, and distributed acoustic sensing (DAS), enabling transformative real-time measurements.
- **Next-generation AUVs**, driven by AI-enabled autonomy, improved batteries, and advances in underwater communications.
- **Innovations in remote sensing**, leveraging high-resolution Earth observation and commercial satellites, alongside improved algorithms for detecting harmful algal blooms, biotoxins, plastics, and other ecosystem stressors.

Participants identified several actions for POGO to accelerate progress:

- Strengthen **coordination and community-building**, clarifying roles with GOOS, and positioning POGO as a facilitator of implementation and innovation.
- Establish **global Communities of Practice** and improve information sharing, including dedicated forums to connect innovators, manufacturers, and funders.
- Expand **capacity building and training**, particularly in developing regions, through sustainable programs and POGO-led guidance to industry and funding agencies.
- Promote **equitable global participation** in next-generation ocean observing systems.

The session concluded that future global observing systems must prioritize **AI integration**, scalable biological and ecosystem measurements, and technologies adaptable to diverse and extreme ocean environments. Success will depend on sustained investment in **training, international collaboration, and coordinated implementation**, with POGO playing a central enabling role.

E. Infrastructure Challenges in the Global South

Co-leads: Carmen Paniagua and Yara Rodrigues

The discussion identified major systemic barriers to developing and sustaining ocean observing infrastructure in the Global South, including chronic underfunding, limited technical and human capacity, short-term project-based funding, high equipment and logistics costs, and weak or inconsistent policy support. Fragmented initiatives, poor data integration, and limited alignment with national priorities further reduce long-term impact and equity.

To address these challenges, participants emphasized the importance of international collaboration, regional cooperation, and strengthening existing institutions rather than creating new ones. Effective long-term support mechanisms include mentoring and train-the-trainer models, building capacity at the organizational level, establishing regional hubs and centers of excellence, and promoting open technologies and accessible data-sharing platforms aligned with local needs.

Sustainable financing requires a diversified approach, combining traditional sources (international donors, development banks, climate finance) with innovative mechanisms such as public–private partnerships, private-sector contributions, philanthropic funding, and links to climate services and risk reduction. Overall, achieving equity in ocean observing depends on long-term, coordinated investment that prioritizes local relevance, institutional sustainability, and regional collaboration.

F. Addressing the funding challenges facing the Global Ocean Observing system: New funding models, sources and/or international partnerships?

Co-leads: Katja Matthes and John Siddorn

The discussion focused on how diversified funding models, stronger industry engagement, and coordinated advocacy could address chronic funding gaps in the global ocean observing system. The marine economy - particularly maritime transport, telecom cables, energy, tourism, defence, and fisheries - offers significant opportunities to generate science-ready ocean data, but collaboration is often fragmented, localized, and constrained by data ownership, regulatory complexity, and misaligned incentives.

Government investment remains essential and requires a consistent, unified message, clear policy entry points, and compelling case studies that demonstrate societal benefits (e.g. tourism, climate services, environmental impact assessments). Philanthropy is a growing but selective funding source; success depends on aligning ocean observing needs with philanthropic priorities while managing risks of short-term or topic-driven funding.

POGO could play a key enabling role by acting as a broker between industry, governments, and philanthropy; articulating ocean data needs; sharing best practices and case studies; developing a portfolio of fundable projects; and potentially serving as a channel for mobilizing and redistributing funds to support global and regional ocean observing efforts.