



Partnership for Observation of the Global Ocean

Introduction to POGO

POGO's Mission: The Three Pillars



Innovation in Ocean Observing

Lead the making and innovation of observations that contribute to the global ocean observing system.

To this end, POGO supports projects proposed by our members, which aim to identify and fill gaps in global ocean observation. Innovation is also supported via the NF-POGO Alumni Network for the Ocean (NANO).

Some of POGO's current projects are summarised here. Scan the QR codes for more details.

Ocean Biomolecular Observing Network (OBON)

The Ocean Biomolecular Observing Network is an endorsed programme of the UN Decade of Ocean Science for Sustainable Development that will monitor, research & understand ocean life by analyzing biomolecules.



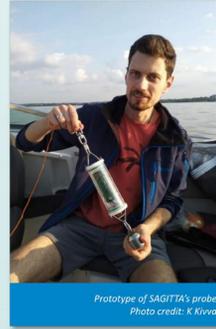
The OBON project grew out of the POGO Task Force on Biological Observations, set up in 2017, which was charged with identifying the policy rationale for biological observations of the ocean, developing a census of approaches to ocean biological observation, and suggesting ways to foster intercalibration, intercomparison and linkage to existing time series of ocean observations.

SAGITTA - Social AGITation for Temperature Analysis

SAGITTA, a Nippon Foundation funded project, aims to develop a new simple-to-use, cheap, yet scientifically reliable probe for citizen science. It will be operated and connected to the Internet via smartphone, providing ease of use, geolocation, data transmission and open access.



The main achievements to date have been (1) development and production of the probe prototype, (2) development of the smartphone application, and (3) testing the prototype in the field (reservoir/lake and open ocean).



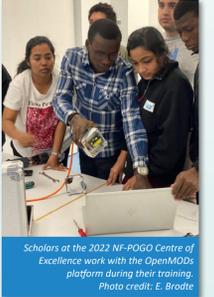
Prototype of SAGITTA's probe
Photo credit: K Kiwa

OpenMODs 3.0

POGO's OpenMODs (Open Access Marine Observation Devices) project has the overarching goal "To devise ocean sensors and monitoring devices, globally available to all and not just to a privileged few."



In the first two phases of the project, three drifters were produced and tested. The instrument was connected to a portable data reception system using a cell phone. The systems were used by students during the NF-POGO Centre of Excellence (CofE) training in Germany, which helped to identify both the strengths of the system and important issues.



Scholars at the 2022 NF-POGO Centre of Excellence work with the OpenMODs platform during their training.
Photo credit: E. Brodie

Phase 3.0 continues work on the drifter with further CofE student testing. OpenMODs will take advantage of 3D printing technology and create a 3D file of complex system components, which can be created locally by the end-user.

International Quiet Ocean Experiment (IQOE)

This international scientific programme, sponsored by POGO and SCOR (Scientific Committee on Oceanic Research), promotes research, observations, and modelling to improve understanding of ocean soundscapes and effects of sound on marine organisms. Specific POGO contributions have included development of the Ocean Sound Essential Ocean Variable (EOV) and the establishment of a Task Team on low cost hydrophones for research, education and citizen science.



Capacity Development

Develop the world-wide capacity and capabilities needed for ocean observations and nurture new generations of scientists, technical experts and leaders in ocean affairs.

Lack of trained personnel is considered to be a major obstacle to development of a global ocean observing system. POGO has developed an extensive array of training and education activities targeted primarily at scientists from developing countries and those with economies in transition.

Since 2001 POGO has supported over 1200 trainees from more than 90 countries.

The main programmes are summarised here.

NF-POGO Centre of Excellence



2019-20 NF-POGO CofE Scholars
Photo credit: E. Brodie

In collaboration with the Nippon Foundation, POGO established the NF-POGO Centre of Excellence in Observational Oceanography, hosted by world-wide recognised advanced oceanographic institutions (2008-2012 Bermuda Institute of Ocean Sciences; 2014-2024 Alfred Wegener Institute for Polar and Marine Research). This is an intensive training course for young professionals at the post-graduate level, ten months in duration, with an intake of ten trainees per year.



Shipboard Training & Ocean Training Partnership



CTD Deployment training on board SoNoAT Training Cruise, 2019. Photo credit: L. Krug

POGO coordinates the Ocean Training Partnership, whose objective is to pool infrastructure, resources and expertise to provide marine science graduates with offshore technical skills and experience onboard research vessels, whilst building capacity in ocean observations. NF-POGO offers fellowships to early-career scientists to receive hand-on training and shipboard experience, and we invite the principal scientists of research cruises to offer their spare berths for shipboard training.



POGO-SCOR Visiting Fellowship Programme

In partnership with the Scientific Committee on Oceanic Research (SCOR), POGO has developed a Visiting Fellowship programme on Oceanographic Observations which supports young professionals from developing countries to spend up to three months training in their speciality at a major oceanographic institution. This programme has been very successful in providing training, and has also helped to develop collaborations between institutes.

Training in Developing Countries

The NF-POGO Regional Training takes place in a different country every year, and is often hosted by a POGO alumnus. The 2-3 week long training courses have focused on specific topics delivered by experts in the fields, and have been held in Brazil, Vietnam, India, the Philippines, Mexico, Malaysia and Bangladesh.

POGO also provides support for regional participation in training. Examples include the Austral Summer Institute (Chile), Masters in Applied Marine Science (South Africa), training at the Indian National Centre for Ocean Information Services, and the Masters in Physical Oceanography (Benin).

Training Initiatives by POGO Member Institutes

POGO co-sponsors training initiatives and provides grants for workshop attendance to enable scientists from developing countries to take part.

NANO Alumni Network

NANO (NF-POGO Alumni Network for the Ocean) is a global network of former scholars of NF-POGO programmes on capacity development. The objective of NANO is to maximize benefits and extend opportunities beyond the training. Within the NANO network, NF and POGO promote joint research and outreach activities and provide a platform for networking and exchange. NANO has been providing grants for regional research projects, global research projects and outreach activities to NANO members since 2012.



Outreach & Advocacy

Advocate and promote world-wide the importance of making systematic sustained, ocean observations for the advancement of science and for sustainable management of the ocean.

Shipboard Outreach

In 2019, NF-POGO and the Alfred Wegener Institute (AWI) ran a shipboard outreach initiative during the month-long South-North Atlantic training Transect (SoNoAT). Students and teaching staff on board interacted with thirteen schools in five countries (Germany, UK, Ireland, Brazil, Japan) via Skype sessions, blog posts and social media - reaching over 250 school children aged between nine and 18 years.

For the similar "NoSoAT" in 2022, we purchased four 1.5m uncrewed 'miniboat' kits (with satellite transmitters and temperature sensors) and worked with partners in Ireland, Germany, Spain and South Africa to have them assembled by local school children. The miniboats were deployed during the NoSoAT transect and tracked by students as they sailed across the ocean. The NF-POGO miniboat fleet was the first to be deployed in the South Atlantic and travelled a combined total of over 15000 kilometres.



COLLECT - Citizen Observation of Local Litter in Coastal ECosystems

Funded by the Richard Lounsbery Foundation (2021-23), COLLECT aimed to acquire data on marine plastic debris distribution and abundance on the coasts of six African countries, through training citizen scientists (secondary school students) and promoting knowledge transfer between local communities, researchers, and POGO members. This project included ten secondary schools from six African countries (Ghana, Nigeria, Benin, Ivory Coast, Cape Verde and Morocco) and Malaysia.



Students participating in the COLLECT beach sampling in Benin
Photo credit: Z. Souhou

Ocean Observing Case Studies

POGO has published case studies from members in different parts of the world to illustrate socio-economic benefits of ocean observing, including coastal water quality monitoring, climate critical observing and geohazard warning systems.



About POGO

The Partnership for Observation of the Global Ocean (POGO) was founded in 1999 by directors of oceanographic institutions around the world as a forum to promote and advance the observation of the global ocean. POGO is a UK-registered charity with member institutions from around the world, and works closely with other international and regional programmes and organisations. POGO does not set scientific goals, but focuses attention on implementation issues such as technical compatibility among observing networks; shared use of infrastructure; and on public outreach and capacity building.

Our vision is to have by 2030, world-wide cooperation for a sustainable, state-of-the-art global ocean observing system that serves the needs of science and society.

POGO has been designated as a UN Ocean Decade Implementing Partner (DIP) for its commitment to supporting the Decade by coordinating existing Decade Actions, catalyzing new initiatives, leading targeted communications and outreach, and mobilizing resources.



Contact

Email: pogoadmin@pml.ac.uk
Website: pogo-ocean.org

POGO Secretariat
Plymouth Marine Laboratory
Prospect Place, The Hoe
Plymouth, PL1 3DH
United Kingdom

