The Next Generation

POGO is dedicated to serving as an exceptional resource for education, training, and capacity building, with special focus on developing countries where the need for ocean observation is often most crucial. The goal is to provide students and young scientists with the tools needed to tackle challenges facing the world's oceans.

For three years, the NIPPON Foundation and POGO worked together to operate the Visiting Professorship Programme, which facilitated extended visits of experienced scientists to oceanographic institutions in developing countries to provide extensive oceanographic training. The programme connected young scientists to a network of the world's most experienced oceanographers. POGO and its partners, notably the international Scientific Committee on Ocean Research (SCOR), now offer a fellowship programme, which allows for training in advanced oceanographic centres around the world, and the University of Concepción, a POGO member, has regular university programmes aimed primarily at oceanographic training in Latin American countries.

A Glimpse into the Future

Despite the impressive accomplishments of ocean observation networks, such programs have only scratched the surface. Oceans cover 71% of the planet, but they remain vastly under-sampled and poorly understood. Continuous, integrated ocean observation systems will return the investment many times over by providing safer maritime operations, storm and tsunami damage mitigation, and conservation of living marine resources, as well as collecting the vital signs of the ocean that are needed to monitor climate change across the planet.

POGO's Vision

POGO's vision for the next 10 years is a multi-disciplinary, well-integrated, globally complete ocean observation system designed to serve the needs of all nations. POGO invites oceanographic institutions around the world that share POGO's vision to join POGO in its efforts to promote ocean observations.

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Partnership for Observation of the Global Oceans

Building links worldwide among oceanographic institutions to promote long-term co-operation in comprehensive global ocean observations

Taking the Pulse of the Global Ocean

A Voice for the Oceans

The world's oceans are vast and dynamic, yet poorly understood. Since 71% of the planet is covered with water, the oceans have an overwhelming influence on the earth system. Thus, as our oceans and climate change, a comprehensive diagnosis of the planet's "vital signs" is becoming increasingly crucial to the well being of humanity. Warming seas, collapsing fisheries, increased acidification, and pollution are among the most profound concerns facing the planet today. Human society relies on the oceans for food, transport, and recreation. Therefore, a sufficiently dense global network of thorough and continual measurements of the oceans is required to help society respond in well-informed, timely, and cost-effective ways. Governments at all levels must accelerate their support of ocean observations for the benefit of the planet's inhabitants.

For more than a decade, the Partnership for Observation of the Global Oceans, POGO, has served as a forum for leaders of major oceanographic institutions around the world to promote global oceanography, particularly the implementation of international and integrated global ocean observing systems. POGO is an international network of collaborators who foster partnerships that advance efficiency and effectiveness in studying and monitoring the world's oceans on a global scale. Through its efforts, POGO has promoted observations underpinning ocean and climate science, interpreted scientific results for decision makers, provided training and technology transfer to developing countries, and built awareness of the many challenges still ahead.

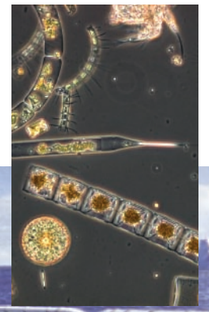
A Call for Ocean Observations

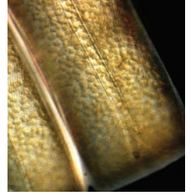
Following the World Ocean Circulation Experiment in the 1990s, there is consensus in the world oceanographic community on the importance of constructing a comprehensive, integrated ocean observing system. Satellites and modern robotic technologies enable a global system to be successfully deployed and operated, providing an unprecedented insight to ocean behaviour and conditions. But a great deal more remains to be done.

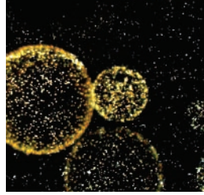
POGO's Initial Priorities

The Argo Network

Argo, a network of more than 3,000 ocean profiling floats operated voluntarily for scientists in 26 countries, is dedicated to recording the state of the world's oceans and has entered a vital sustained maintenance phase. The floats measure the ocean's basic health signs—temperature, salinity, and current velocity—with a level of detail never before achieved. The operational floats in the Argo array provide coverage of the oceans at approximately every 3 degrees latitude and longitude around the globe. From the conception of the Argo project, POGO advocated for complete coverage of the world's oceans, especially in the historically under-sampled Southern Hemisphere. Today, data from the Argo programme, especially on trends in ocean temperature and salinity, are profoundly advancing the way scientists understand the oceans and their effects on global climate.







Southern Hemisphere

About 60% of the global oceans are in the Southern Hemisphere, and these areas are much less well observed and monitored than in the Northern Hemisphere. Opportunities to observe the Southern Hemisphere have been limited by difficulty of access and by the concentration of financial, scientific, and technological resources in the north. POGO calls upon world leaders of government, industry, science, and education to use their influence and resources to devote attention and resources to extending ocean observing systems in the Southern Hemisphere as a critical part of integrated strategy for observing the global oceans. The Blue EArth GLobal Expedition (BEAGLE), an international circumpolar cruise in the Southern Hemisphere, was conducted to detect and quantify changes in the Antarctic Overturning System corresponding to global warming and to estimate the amount of human-generated carbon taken up by the Southern Ocean. Research also included a comprehensive suite of bio-optical measurements that have been used to validate satellite ocean-colour data and to improve satellite-derived estimates of standing stocks of algae phytoplankton as plants at the basis of the great majority of marine ecosystems and primary production. As part of POGO's mission of education and capacity building, scholarships were provided to student trainees on the cruise.