

## Blue Planet Kick-Off Symposium

19-21 November 2012

Hotel Itapemar, Ilhabela Island, Sao Paulo State, Brazil

### 2nd Announcement

The Symposium will bring together current and prospective participants in the new GEO Marine Task SB-01 "Oceans and Society: Blue Planet". It will take place just prior to the GEO-IX Plenary in Foz do Iguaçu, Brazil (22<sup>nd</sup> - 23<sup>rd</sup> November 2012), to allow participants to attend both events.



## Update on POGO capacity building

### Special POGO Grant to attend SAHFOS-MBA Phytoplankton Identification Workshop

This year, POGO decided to sponsor a young scientist from a developing country, to attend the SAHFOS/MBA Phytoplankton Identification Workshop that was run from 3rd to 13th July in Plymouth. This was decided in the context of POGO's support for the development of the Global Alliance of CPR Surveys (see p. 5), and in particular its expansion to developing countries. Among the fifty or so applications received, the workshop organisers selected Dr. Gaston Almandoz, from National University of La Plata in Argentina.

At the end of the course, Gaston was invited to visit the POGO Secretariat and PML, to give him the opportunity to meet some PML scientists and to give a presentation on his current work, and on how the phytoplankton workshop will help him to further develop his research. Gaston wrote the following report on his experience in Plymouth.

"The 2nd International Marine Phytoplankton Identification Workshop was jointly run by the Marine Biological Association (MBA) and the Sir Alister Hardy Foundation for Ocean Science (SAHFOS). The international experts, Prof. Carmelo Tomas, Dr. Karen Steidinger, Dr. Diana Sarno and Dr. Ian Probert, were the professors in charge of the workshop. A total of 20 students attended, from the United Kingdom, Italy, Portugal, Finland, Estonia, Saudi Arabia, Namibia, Ghana, South Africa, the United States and Argentina.

The main topics covered during the workshop were the classification and taxonomy of the major marine microalgal groups (diatoms, dinoflagellates and other marine flagellates), but there were also practicing classes on methodologies and techniques including: sampling, settling and slide preparation, cell counting, isolation, microscopy and culturing. Likewise, a great diversity of specimens were observed during laboratory sessions, using more than 70 living cultures from the MBA Culture Collection and fixed field samples.

The possibility to attend this relevant workshop represented a big impulse to my research career. As part of my work, I routinely analyze phytoplankton samples from Argentina

and Antarctica, including poorly known environments. Consequently, the identification of species, genus or even higher groups is a hard challenge for me. In this sense, to take part in the MBA Workshop gave me the opportunity to improve and update my knowledge of marine phytoplankton taxonomy, and will help me to solve my current problems with species identification.



Gaston taking part in a practical session on identifying phytoplankton species.

Attending the workshop also allowed me to establish new contacts for future research. It was really invaluable to meet some of the most renowned phytoplankton taxonomists in the world. They were all very friendly and gave me the chance to discuss with them about particular problems I have during the identification of some poorly known taxa. Given that the taxonomy of some marine flagellates is a research field that is currently relatively unexplored in Argentina, this first contact with international experts could result in the establishment of new cooperation programs in the near future.

I hope the gained experience will be useful in the organization of a South-American course on taxonomy and toxicology of harmful algae, to be held in Argentina during 2014. This course, which had a first edition in November 2007, is now being planned together with Dr. Martha Ferrario and collaborators (University of La Plata) and Dr. Nora Montoya and collaborators (INIDEP), in answer to the increasing problems related to harmful algae blooms in the region and the importance to disseminate knowledge in this field."



Gaston giving a presentation at Plymouth Marine Laboratory.



Gaston with course tutors, and world experts in phytoplankton taxonomy, Karen Steidinger and Carmelo Tomas.

## POGO Outreach at Expo 2012 Yeosu Korea

After almost two years of preparations, the POGO exhibit at Expo 2012 Yeosu Korea was opened to the public on 12 May 2012, along with the many other exhibits featured in the 23 pavilions that occupy the imposing 25-hectare Expo site.

The theme of this year's International Expo, "the Living Ocean and Coast", sparked POGO's interest back in January 2010 when the Expo was first brought up by scientists of the then Korea Ocean Research and Development Institute, KORDI (now Korea Institute of Ocean Science and Technology, KIOST), during the 11th POGO Annual Meeting. POGO was subsequently asked to submit a proposal by the Oceans and Coasts Best Practices Area (OCBPA) Organising Committee, and was selected. POGO was allocated 150 K USD in kind to prepare its exhibit in close collaboration with the design company appointed by the OCBPA (SigongTech).

The exhibit concept that we proposed was articulated around three main themes:

- (1) The history of ocean observations
- (2) The institutes carrying out these observations
- (3) Experiencing the ocean –an interactive display.

With the help of the POGO News and Information Group, who provided a lot of the material used for the exhibit, the POGO Secretariat worked with SigongTech to produce an exhibit that would be educational and interesting for the general public visiting the Expo.

The first theme was illustrated by a time-line depicting some major events in the history of ocean observations, as well as the dates the POGO member institutions were established. In addition, there was a display of oceanographic instruments, dating from the 1910s to the 1990s, for measuring temperature and currents, as well as a Continuous Plankton Recorder. Visitors could use their iPhones and the QR code system to access more detailed information relating to the display.

The second theme consisted of a 12-minute video presenting the 37 POGO member institutions, which was created especially for the Expo. The third, and probably the most popular theme, consisted of five interactive kiosks where the visitors could experience different aspects of the ocean. They could look through a microscope at phytoplankton cells, listen to the natural and anthropogenic sounds that can be heard in the ocean, experience the pressure and light fields at different depths, and the temperature of different water masses. A short video of the exhibit can be viewed at: <http://www.youtube.com/watch?v=ol7z1HM6O14&feature=plcp&noredirect=1>.



The time line of ocean observations and display of historical instruments.

The interactive kiosks where the public could "experience" microscopic life, pressure, temperature, light and sound in the ocean.

The Theme Pavilion (that includes the OCBPA) has proved to be very popular, with long queues of people waiting to enter. The number of Expo visitors has been steadily increasing since the beginning of the school holidays at the end of June, reaching 78,000 visitors in a single day. So far, nearly 1 million people have visited the OCBPA and POGO exhibit.

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## POGO Outreach at Expo 2012 Yeosu Korea (cont'd)



Dr. Ahn's talk on ocean observation from space in the Korean region.

POGO also had the opportunity to organise a special communication event, which took place from 22 to 24 June. This consisted of a mixture of public lectures and video and film screenings.

The lectures were given in Korean by Drs Seung-Hyun Son (NOAA) and Yu-Hwan Ahn (KIOST), and by Drs Yoshihisa Shirayama (JAMSTEC), Shubha Sathyendranath, Trevor Platt and Sophie Seeyave in English. The topics covered satellite oceanography and ocean colour, the Great Tohoku Earthquake of March 2011, biological oceanography and sound in the ocean.

All lectures were well received by adults and children alike, and it was extremely satisfying to see the look of concentration on all the

childrens' faces, and their enthusiasm when it came to asking questions.

Before and after the lecture sessions, videos about the POGO member institutions and their research projects were shown. The film "Oceans", produced in collaboration with the Census of Marine Life, was shown in the evenings, as well as the film "Living with a Warming Ocean", produced by the CLAMER project.



Many children attended the talks and showed a lot of enthusiasm, asking questions at the end.

## PML and POGO participation in PEMSEA East Asian Seas Congress 2012

*The following article was provided by Thecla Keizer (PML) and Trevor Platt (POGO/PML)*

In July, Trevor Platt travelled to Korea on an externally-funded mission to chair a session on the 'Sea from Space' Session at the PEMSEA East Asian Seas Congress (<http://eascongress.pemsea.org/>). POGO members PML and KIOST, both on the PEMSEA Partnership Council, worked closely on the preparation of the session.

This EAS Congress focused on the crucial role of coastal and ocean resources in support of the global commitments to enhance human welfare and environmental sustainability while pursuing economic growth. In particular, it provided participants with the prospect of identifying contributions, progress and achievements in the governance of regional/sub-regional seas within the framework of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA), which are the essential building blocks for a blue economy, as well as new opportunities and the intergovernmental and multi-sectoral partnerships, which are required in order to realize the full potential of the ocean economy of East Asia.



The POGO exhibit at the East Asian Seas Congress 2012.

The congress is supported by the Global Environment Facility (GEF) and United Nations Development Programme (UNDP) with participants ranging from research institutions, academics, national and local governments, UN and other international organizations, NGOs and civil society.

POGO took advantage of the opportunity to have an exhibit at the Congress, which was manned by Trevor Platt, Shubha Sathyendranath and Thecla Keizer (of Plymouth Marine Laboratory) on a stand close to KIOST and Plymouth Marine Laboratory (see photo). Visitors to the stand were very varied and included delegates from the ministerial forum.

## Update on POGO partner programme

### The Global Alliance of CPR Surveys

*The following article was provided by Graham Hosie, Chair of GACS.*

It is nearly one year since the creation of the Global Alliance of CPR Surveys. During that time members of the GACS community have attended various international and national meetings, actively promoting the purpose and value of GACS to the marine community.

The GACS website has been officially launched and is available at <http://www.globalcpr.org>. Please visit the site regularly to keep in touch with what we are doing.

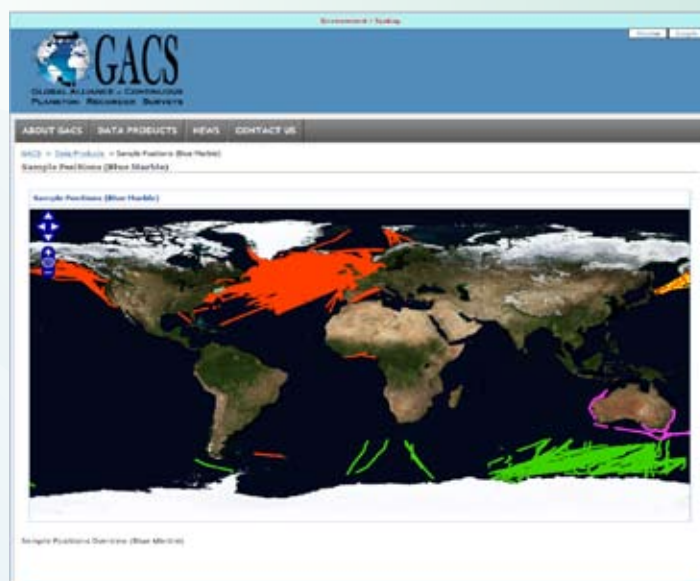
The two main working groups on Standards and Methodology (WGSM) and Database (DWG) have been established, with the Terms of Reference and membership set.

The Continuous Plankton Recorder is unique in being a standardised instrument that has changed little since Sir Alister Hardy's design of 1931. Nonetheless, the WGSM chaired by Dr Hans Verheye (South Africa, Benguela Current CPR), has the task of ensuring the methods and standards are agreed and properly documented for all CPR operations, from setting up the machines through to the analysis of data. WGSM is also tasked with developing training programmes within and between CPR laboratories.

The DWG, chaired by Dr Sonia Batten (Canada, SAHFOS North Pacific CPR Survey), has the job of coordinating the creation and development of the global CPR Database. This includes agreeing on a common schema for data input and ease of access, and what should be stored in the database in addition to the obvious taxonomic and ecological plankton data. The database, when fully developed, will be held at the Sir Alister Hardy Foundation for Ocean Science (SAHFOS). Data have already started flowing in.

Two new members have joined the GACS Board of Governance, Prof. Nick Owens (UK), who is the new Director of SAHFOS, and Dr Sun Song (China), Director of the Institute of Oceanology, Chinese Academy of Science in Qingdao, China. Both gentlemen bring an immense amount of marine science and plankton expertise to GACS.

The next GACS meetings will be 17th to 20th September at the IOC headquarters in Paris, and will include meetings of the two working groups and the Board of Governance. We look forward to reporting the outcome of those meetings in the next newsletter.



Development of an online map of GACS Sample positions is in progress, it is shown here on a "Testing" version of the GACS website.

## News from the POGO members

### KORDI is Recapped by KIOST

*The following two articles were provided by Dosoo Jang (KIOST)*

On July 1, 2012, the Korea Ocean Research & Development Institute (KORDI) changed its name to the Korea Institute of Ocean Science & Technology (KIOST). KIOST now sets sail by closing a 39-year-long history of the era of KORDI. With a new name which is not still familiar to our ocean scientific community, "KIOST," the Institute will expand its horizon through nurturing young generations based on its experiences and expertise gathered for the past four decades.

A major change is to include an educational function. The Institute is preparing a new curriculum to foster the next generation of marine experts, in collaboration with related universities. KIOST has acquired the capability to discover and train promising young scientists and serve the ocean

community at large. Moreover, the Institute will emphasize both basic and applied marine science and technology R&D, expansion and modernization of the research infrastructure, forward-looking studies of global scale climate and observation, and strengthening of international cooperation and partnership. KIOST will continue the legacy of KORDI by working together hand-in-hand with POGO members to contribute to increasing the capability of global ocean observations.

Dr. Jung-Keuk Kang has been re-appointed as the President of KIOST and Professor Han Il Park, President of Korea Maritime University, is appointed as the first Chairman of the Board of Directors.



**News from the POGO members (cont'd)**

**KIOST Builds Partnership with a POGO Member in Recovery of a JAMSTEC TRITON Buoy**

A TRITON buoy belonging to the Japan Agency for Marine-Earth Science and Technology (JAMSTEC), which drifted away from its original position, was recovered by the R/V Onnuri of the Korea Institute of Ocean Science & Technology (KIOST) on June 28.



Recovery of a TRITON buoy on the R/V Onnuri.

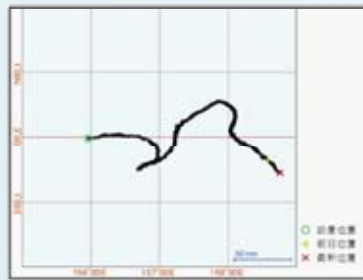
The buoy was originally moored at the position of (Eq.-156E) as a component of the TAO/TRITON buoy array in the western equatorial Pacific Ocean. JAMSTEC reached out to KIOST for assistance after it determined that the buoy was lost and had been drifting eastward since May 27. Fortunately, a KIOST research team, led by Dr. Jae-Hak Lee, was on a survey cruise for a GAIA project in the waters near the last location of the lost buoy. In response to the call for assistance, KIOST agreed to help JAMSTEC in recovering the valuable buoy.

The KIOST research team temporarily suspended their survey cruise on June 27 to assist in tracking down the buoy. JAMSTEC continuously provided the data on the location of the buoy via the Argos transmitter throughout the operation. After searching for more than 12 hours, the buoy was located in the early morning of June 28, roughly 170 miles away from its original mooring position.

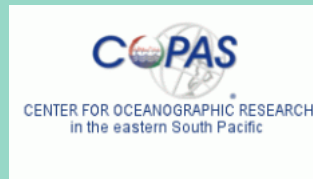
The buoy, along with 8 underwater sensors, was successfully recovered following 2.5 hours of tense and cautious operations. The buoy was recovered exactly one month after it originally drifted away. The cause of the lost buoy is believed to be a scratch to a plastic cover of the wire rope probably by a long-line fishing gear, which had become corroded by sea water. The buoy was brought to the Phonpei port, Micronesia, on July 30, where it was transferred to JAMSTEC. This support by KIOST brings benefit for sustainable ocean observation system in the Pacific.

Collaboration between KIOST and JAMSTEC in recovering the buoy demonstrates the positive relationship between the two organizations. Despite the tight work schedule of the R/V Onnuri and resources expended in the operation, KIOST decided to help JAMSTEC with the recovery of the buoy in light of the close partnership between the two institutions.

As well, it was a good opportunity to further strengthen the friendship in parallel to the port call of Yokosuka, the mother ship of the Shinkai 6500, at the Yeosu 2012 Expo on June 29, as well as the establishment of KIOST on July 4.



The trajectory of eastward drifting buoy from May 27 to June 28, 2012.



**Announcement: Austral Summer Institute XIII (ASI-XIII)**

POGO will once again be sponsoring the Austral Summer Institute at the University of Concepcion, Chile, to provide travel bursaries to students from other Latin American countries to attend the course. ASI-XII will take place in December 2012 and January 2013. The programme is outlined below:

- Symposium UV radiation and marine ecosystems: Current research and strategies for the future
- Circulation and water masses in the South West Atlantic
- Trace metals in the oceanic carbon cycle
- Coastal Antarctic ecosystems and the case of the Larsen Ice Shelf System
- Chemical and biological characteristics of the oceanic phosphorous cycle

The deadline for applications is **1 October 2012**. See [http://www2.udec.cl/oceanoudec/pag\\_ASI13/index.html](http://www2.udec.cl/oceanoudec/pag_ASI13/index.html) for more details.



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