Tangible Evidence for the Impact of POGO

As a direct response to the POGO São Paulo Declaration of 2000 on sampling the oceans of the Southern Hemisphere, JAMSTEC (Japan Agency for Marine-Earth Science and Technology) organised and executed a major expedition (the Blue Earth Global Expedition, BEAGLE), a circumnavigation of the Globe at the latitude of approximately 30° South in 2003. In the planning of this Expedition, JAMSTEC responded positively and enthusiastically to a request from the POGO Secretariat that a modest bio-optical component be added to the proposed research, following up on the POGO Dartington Report (2001) on biological observations. JAMSTEC also promoted a strong on-board capacity-building initiative in which 18 individuals from South America, Africa and Asia were involved in the various legs of the expedition, many of whom requested, and received training on, bio-optical measurements. JAMSTEC also adopted the laudable strategy of opening the expedition to scientific participation from many countries of the Southern Hemisphere,

Over and above the success of the training element, the scientific results were of very high order and have been recognised as such by the publication of the initial results in the leading journal Science (May 12, 2006). In this paper, authored by Heather Bouman and others, the bio-optical properties of the phytoplankton are related to the molecular genetic structure of the populations. The global-scale variations in population structure are accounted for by the global-scale variability in vertical mixing.

Heather Bouman, who obtained her masters and doctorate degrees from Dalhousie University in Canada under the guidance of Trevor Platt (Bedford Institute of Oceanography, Canada), is now an NSERC (Natural Sciences and Engineering Research Council of Canada) Fellow with Prof. Osvaldo Ulloa at the University of Concepción (Chile). Many of the co-authors are also from southern hemisphere countries, which is a testimony to the value of the inclusive strategy adopted by JAMSTEC during the planning of the cruise, and to the merit of sustained capacity building.

It would be difficult to find a more convincing performance indicator for the positive influence and benefit of POGO. In the short period of 6 years, a policy declaration has metamorphosed into scientific results accepted at the pinnacle of the peer-reviewed literature. Moreover, the paper (being the first of many from the BEAGLE cruise) is truly interdisciplinary and fully representative of the broad range of POGO interests. The BEAGLE cruise was a truly impressive example of



international collaboration, cooperation and capacity building within the POGO family.

Figure shows the distribution of Prochlorococcus and its properties in the Southern hemisphere, across three ocean basins. For further details, see the article by Bouman et al. in the May 12, 2006, issue of Science.

POGO web site: www.ocean-partners.org