GO-SHIP International Planning Meeting

21 February 2010
Crowne Plaza Hotel, Windsor C room
Portland, Oregon

Meeting Goals and Objectives

Despite numerous technological advances over the last several decades, ship-based hydrography remains the only method for obtaining high-quality, high spatial and vertical resolution measurements of a suite of physical, chemical, and biological parameters over the full water column. Ship-based hydrography is essential for documenting ocean changes throughout the water column, especially for the deep ocean below 2 km (52% of global ocean volume).

Global hydrographic surveys have been carried out approximately every decade since the 1970s through research programs such as GEOSECS, TTO/SAVE, WOCE / JGOFS, and CLIVAR. Formal organization of hydrography, however, has been absent since the end of WOCE. Because of the integrated climate focus of CLIVAR, repeat hydrography did not continue as a distinct coordinated activity of the program, and it was thought that many hydrographic sections would simply be sustained without formal agreements. While hydrography has continued during CLIVAR, the lack of formal organization has led to a lack of visibility in the global observing system as well as a significant decrease of sections carried out by some countries. More importantly, the lack of international agreements for implementation of hydrographic sections has led to disparate data-sharing policies and both gaps and duplications in sections.

The IOCCP-CLIVAR Global Ocean Ship-based Hydrographic Investigations Panel (GO-SHIP) developed scientific justification and guidelines for the development of a regular and coordinated global survey. Two types of surveys are required to meet scientific objectives: (1) a global decadal survey conducted such that each full ocean basin is observed over an approximately synoptic time-period (< 3 years), and (2) a sub-set of the decadal survey lines sampled at high-frequency (repeats at least every 2-3 years). This strategy, developed by 46 co-authors from 9 countries, was presented as a community white paper at the OceanObs09 conference (Venice, 21-25 September 2009). The paper was highlighted by several plenary speakers and the authors were particularly congratulated for the report's core variables approach and for recommending rapid data release.

During OceanObs, the GO-SHIP Panel met to discuss the way forward and agreed that developing a sustained activity was necessary, noting that repeat hydrography will be increasingly important to the global observing system as more biogeochemical variables are added to the system. It is time to consider how future surveys can build on the foundations of WOCE and CLIVAR to create a coordinated network of sustained ship-based hydrographic sections that will become an integral component of the ocean observing system.

The Panel recommended holding a 1 day international planning meeting in conjunction with the AGU/ASLO/TOS Ocean Sciences Meeting in Portland, Oregon (22-26 February 2010), to:

1. inform the wider community about the initiative to develop a sustained coordination activity for hydrography (and to highlight the revised hydrography program manual),
2. review existing national plans and proposals for repeat hydrography,
3. identify potential areas of duplication or sections that do not include the full suite of core variables,
4. review on-going and planned ocean interior synthesis activities, and
5. discuss data assembly / management of recent and near-future cruises.

This meeting will provide community consensus and guidance on the further development of an international activity with a view to seeking endorsement for GO-SHIP from the UNESCO Intergovernmental Oceanographic Commission as part of the Global Ocean/Climate Observing Systems at the next session of the IOC Executive Council (June 2010).

GO-SHIP International Planning Committee Members

Christopher Sabine – USA, NOAA PMEL (co-chair)
Bernadette Sloyan – Australia, CSIRO (co-chair)
Masao Fukasawa – Japan, JAMSTEC
Nicolas Gruber – Switzerland, ETH-Zurich
Gregory C. Johnson – USA, NOAA PMEL
Toste Tanhua – Germany, IFM-GEOMAR
Lynne Talley – USA, SIO
Brian King – UK, NOCS
Masao Ishii – Japan, MRI-JMA
Richard Feely (*ex-officio*) – USA, NOAA PMEL

DRAFT AGENDA

0900-1000	Introduction of the GO-SHIP program: • presentation of the strategy • introduction of the hydrographic program manual • overview of the way forward • open discussion *-Chris Sabine, Bernadette Sloyan, Maria Hood*
1000 – 1245 *(coffee break from 1045-1100)*	Review of National Plans and Proposals (~ 10 min each) • Australia (Bernadette Sloyan) • Brazil (Edmo Campos) • Canada (Kumiko Azetsu-Scott) • France (Herle Mercier) • Germany (Toste Tanhua) • Japan (Masao Fukasawa) • Korea (Tongsup Lee) • Netherlands (Hein de Baar – *to be confirmed*) • Norway (Are Olsen – *will send ppt*) • Spain (Pedro Velez colleague – *to be confirmed*) • Sweden (Leif Anderson) • UK (Brian King) • USA (Dick Feely)
1245-1400	Lunch break (*on your own*)
1400-1445	Review of potential gaps or duplications or cruises without core variables
1445-1530	Review ongoing and planned ocean interior synthesis activities Carbon synthesis (Nicolas Gruber – *to be confirmed*) Deep ocean synthesis (Bernadette Sloyan) PACIFICA (Masao Ishii) North Atlantic sub-polar hydrography synthesis project (Igor Yashayaev)
1530-1545	Coffee break
1545-1630	Overview of data assembly / management issues - Overview of current DACs and archives (Shawn Smith, SAMOS; *others to be confirmed*) - Open discussion: What sort of DAC structure is needed for hydrography ? - Open discussion with CCHDO, CDIAC, and other centers about options.
1630-1645	Overview of the JCOMM Observation Monitoring Center and options for establishing a GO-SHIP office (Yves Desaubies)

1645-1700	Summary and Close of meeting