

SCOR Meeting on Coordination of International Marine Research Projects

Introduction

The Scientific Committee on Oceanic Research (SCOR) convened a meeting on Coordination of International Marine Research Projects on 23-24 September 2004 in Mestre, Italy. Meeting participants included representatives from virtually all international marine research projects and programmes (CLIVAR, CoML, DIVERSITAS, GEOHAB, GLOBEC, iAnZone, IMAGES, InterRidge, IMBER, LOICZ, and SOLAS), and the chairs of the Global Ocean Observing System (GOOS) panels. Profs. John Field and Laurent Labeyrie convened the meeting on behalf of the SCOR Executive Committee. SCOR thanks the Alfred P. Sloan Foundation for its support of this meeting. The purpose of this meeting was to bring together representatives of the major international ocean research and observation projects and programs to discuss common opportunities, issues, and problems. The meeting agenda included several specific topics determined in advance to be important inter-project issues, including data management; interactions of projects with the Global Ocean Observing System (GOOS); project coordination in the area of Southern Ocean research (including possible links to the Scientific Committee on Antarctic Research [SCAR]) and participation in the International Polar Year; project needs for time-series stations; and future project contributions to global environmental assessments. The agenda also provided an opportunity for projects to raise and discuss other issues that were not determined in advance. Information about the meeting is available on the activity Web page (see www.jhu.edu/scor/ProjCoord.htm).

Recommendations

The following recommendations resulted from the meeting.

Mechanisms for Interactions Among Projects

Given the opportunities for scientific and operational cooperation among research projects, more attention should be given to several aspects of project coordination:

- Identify individuals that are members of more than one project Scientific Steering Committee (SSC). If there is not joint membership between relevant projects, identify new people as liaison people between projects. In either case, the responsibility for communication between groups should be made clear to the linking individuals.
- SCOR should investigate setting up a list-server system/email aliases that can be used for communication between projects, IPO Executive Officers, Chairs, or both. Such aliases might be set up at Johns Hopkins University.
- Where projects have regional nodes or structures, they should develop channels of communication at regional levels. Projects should consider convening inter-project coordination meetings at regional levels, where appropriate.
- SCOR should seek funds for projects to hold annual coordination meetings, with the agenda items set by the projects. Potential topics for future meetings include standardisation of Web sites and project data management.

- A searchable international database of research cruises should be maintained on the Web. This database might be an enhancement of the University of Delaware Web site (see <http://www.researchvessels.org/>).

Project Data Management

A small subgroup met to develop specific recommendations on project data management, to follow up on the results of the Liverpool meeting sponsored by SCOR and IGBP in December 2003 (see <http://www.jhu.edu/scor/DataMgmt.htm>).

Immediate Actions

- Meeting participants and SCOR staff should write a short *EOS*-type paper to be published in programs newsletters, *EOS*, Challenger Society, *OCEANOGRAPHY Magazine*, etc., giving the main recommendations from the Liverpool meeting, abstracting and updating information from the meeting report, including the lessons learned from previous projects' successes and failures. It would also be helpful to provide (on the Web) tutorials and visualizations regarding data management.
- IOC/IODE should initiate a project to support multi-national programs to retrieve cruise reports from before the period of electronic cruise reports (this will require translation and scanning of reports after the scientific value of the data has been assessed by local experts).
- SCOR should prepare a letter to project managers and funding agencies to convey the high priority of preparing and budgeting for data management as an important part of projects, and to ensure inter-operability of data from different projects, in terms of metadata, data discovery, data transport, data archival, and data access.
- SCOR and other relevant organizations should implement ways to guarantee long-term archiving and management of ocean data, not depending on individual agencies/national policies, and encouraging the use of the World Data Centers.
- Projects should use GBIF standards for species-level geo-referenced data, and species-specific data should be put into OBIS.

Longer term actions

- Increase the benefit of data submission for individual/small projects without data management facilities. Data will be submitted by the investigators in such projects only if there is a net benefit for them to do so. Some of the benefits that could be developed include
 - easy data access through the Web
 - training in accessing and using the data
 - software for easy intercomparison between an investigator's own data and what is available from others, to generate maps, sections, graphs, etc.
 - availability of the database as a research tool
 - standardization of formats should not be an issue if each file carries its metadata
 - inter-operability should become a "black-box" automatic system, with catalogue sets of "overall" formats and "minimum common" formats, standard search engines, XML-like files.
- Increase the access of non-scientists to information/data from projects. Each project should have a front page with easy-to-understand results and nice figures and maps.

- SCOR should develop a Web portal to all available quality controlled-ocean databases, with short descriptions and available tools for exploitation.

Project Interactions with GOOS

The meeting provided an opportunity for project representatives to meet with the chairs of the GOOS Open Observation Panel for Climate (OOPC) and Coastal Observations Panel (COOP). A subgroup of meeting participants developed the following recommendations about project interactions with GOOS:

- GOOS presentations should be made at SSC meetings to inform SSCs about GOOS plans and to encourage projects to provide input to GOOS.
- Links to GOOS should be considered when project SSCs are formed.
- A non-carbon biogeochemist member should be added to OOPC.
- GOOS and projects should work together to create joint working groups/workshops on topics such as biogeochemical measurements, sensor technology, and environmental indicators. SCOR should consider a working group on these topics.
- Both GOOS and research projects should link their Web sites to one another.
- GOOS should transmit to the projects needs for specific routine measurements to build the ocean observing system and help in deploying Argo floats, etc.
- SCOR is involved in the development of the Coastal IGOS Theme and should offer to be involved in the review of the Ocean IGOS Theme, which is due to take place shortly.

Project Needs for Ocean Time Series Stations

- GOOS or OceanSITES should maintain a list of time-series observation programs, similar to the list of research cruises maintained at the University of Delaware. OceanSITES should make available on its Web site a simple list of time-series sites.
- A useful capability of time-series stations and other systems would be coded animal tracking.
- Projects should overlay their needs for time-series sites on the OceanSITES map of sites (see <http://www.oceansites.org/OceanSITES/networkmap.html>).

Coordination of Project Research in the Southern Ocean

- SCOR should circulate to meeting participants any announcements about IPY.
- Research projects should consider the desirability of forming links between themselves and SCAR, and vice versa, where they have strong Southern Ocean interests.

Project Contributions to Global Environmental Assessments

- Global assessments relevant to the projects (e.g., IPCC and MA) need to make known their data needs.
- If the MA conducts a post-assessment meeting to plan for the next assessment, it would be useful for the projects and GOOS to attend such a meeting to ensure that the marine and coastal parts of the next assessment have the data it needs.

- There is a need to (1) develop and standardize indicators and (2) identify what data are needed for better assessments.
- Projects should consider whether to provide data to the next IPCC and/or MA assessments and, if so, to initiate a process to do so.

Summary

This report will be considered by SCOR and will be distributed to SCAR, IOC, IGBP, POGO, and other organizations that could help implement these recommendations.

Acronyms

CLIVAR	Climate Variability project
CoML	Census of Marine Life
COOP	Coastal Oceans Panel (GOOS)
GEOHAB	Global Ecology and Oceanography of Harmful Algal Blooms Programme
GLOBEC	Global Ocean Ecosystem Dynamics Project
iAnZone	International Antarctic Zone Programme
IGBP	International Geosphere-Biosphere Programme
IMAGES	International Marine Aspects of Global Change project
IMBER	Integrated Marine Biogeochemistry and Ecosystem Research Project
InterRidge	An initiative for international cooperation in ridge-crest studies
IODE	Intergovernmental Oceanographic Data and Information Exchange
IPCC	International Panel on Climate Change
IPO	International Project Office
LOICZ	Land-Ocean Interactions in the Coastal Zone
MA	Millennium Ecosystem Assessment
OOPC	Ocean Observations Panel for Climate (GOOS)
POGO	Partnership for Observations of the Global Oceans
SCOR	Scientific Committee on Oceanic Research
SSC	Scientific Steering Committee
SOLAS	Surface Ocean – Lower Atmosphere Study
WDC	World Data Centre
WOCE	World Ocean Circulation Experiment

Meeting Participants

<u>Name</u>	<u>Project/Organization</u>
Jackie Alder	Millennium Ecosystem Assessment
Keith Alverson	GOOS Project Office Director
Bob Anderson	GEOTRACES Planning Committee Co-chair
Dawn Ashby	GLOBEC International Project Office
Patricio Bernal	IOC Executive Secretary
Roberta Boscolo	International CLIVAR Project Office

Colin Devey
Tommy Dickey
Henrik Enevoldsen
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Julie Hall
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Karen Heywood
Hartwig Kremer
Laurent Labeyrie
Tom Malone
Ron O'Dor
John Parslow
Grant Pitcher
Casey Ryan
Ralph Schneider
Colin Summerhayes
Ed Urban

InterRidge Steering Committee Chair
OceanSITES Committee
IOC/GEOHAB
SCOR Past-President
CoML Scientific Steering Committee Chair
IMBER Scientific Steering Committee Chair
IMBER International Project Office
GOOS OOPC Chair
DIVERSITAS Scientific Steering Committee
iAnZone Steering Committee Chair
LOICZ Executive Officer
SCOR Vice-President
GOOS/COOP Chair
CoML
LOICZ Scientific Steering Committee
GEOHAB Scientific Steering Committee Chair
SOLAS International Project Office
IMAGES Executive Director
SCAR Executive Director
SCOR Executive Director