1.0 OPENING

1.1 **Opening Remarks and Administrative Arrangements** *Shapovalov, Duce, Urban*

1.2 **Approval of the Agenda—**Additions or modifications to the agenda may be suggested prior to approval of the final version, **p. 1-1** *Duce*

1.3 **Report of the SCOR President—**The President will briefly review activities since the 26th General Meeting in October 2002 *Duce*

1.4 **Report of SCOR Executive Director** *Urban*
2003 SCOR Executive Director's Report, **p. 1-18**

1.5 **Appointment of an *ad hoc* Finance Committee, p. 1-30** *Duce*

1.6 **Committee to Review the Disciplinary Balance of SCOR's Activities, p. 1-30** *Duce*

1.1 Opening Remarks and Administrative Arrangements

1.2 Approval of the Agenda

36th SCOR EXECUTIVE COMMITTEE MEETING
Russian Academy of Sciences
Moscow, Russia

15-18 September 2003

ANNOTATED AGENDA

1.0 OPENING

1.1 Opening Remarks and Administrative Arrangements ***Shapovalov, Duce, Urban***

1.2 Approval of the Agenda ***Duce***
Additions or modifications to the agenda as distributed may be suggested prior to approval of the final version.

1.3 Report of the President of SCOR ***Duce***
The President will briefly review activities since the 26th General Meeting in October 2002.

1.4 Report of SCOR Executive Director ***Urban***

1.5 Appointment of an *ad hoc* Finance Committee ***Duce***
The SCOR Constitution requires that a Finance Committee be appointed at every SCOR meeting. It must consist of three members of SCOR who are not members of the Executive Committee. The Finance Committee reviews the administration of SCOR finances during the previous fiscal year and the current year and will propose a budget for 2004 activities. The Committee will report to the meeting under agenda item 8.4. The SCOR Executive Committee members approved an ad hoc Finance Committee consisting of Bjorn Sundby (Canada), K.K. Liu (China-Taipei), and Mingyan Zhu (China-Beijing) before the meeting.

1.6 *Ad hoc* Committee to Review the Disciplinary Balance of SCOR's Activities

Duce

The Executive Committee meeting in 1999 agreed that at future SCOR meetings, after the consideration of working group proposals is complete, the current disciplinary balance of SCOR groups should be assessed. Scientific gaps should be identified and communicated to national committees when the next request for working group proposals is sent. The 2002 General Meeting decided to retain the same members (Laurent Labeyrie, John Field, and Roberto Purini), who will report to the meeting under agenda item 8.5. The committee will also review the input received from previous WG chairs.

Action: See agenda item 8.5.

2.0 WORKING GROUPS

2.1 Disbanded Working Groups

2.1.1 WG 93—Pelagic Biogeography

Annelies Pierrot-Bults reported at the 2002 General Meeting that the English version of biogeography terms was ready to publish, and Spanish terms were to be published soon. Meeting participants suggested that the initial documents could be posted on the SCOR Web site while the other translations are being sought.

2.1.2 WG 107—Improved Global Bathymetry

The group's report was published in the *IOC Manuals and Guides* series in 2002, soon after the SCOR General Meeting and the group was disbanded. (The Executive Committee Reporter had requested that the report not be published, but this request was too late.) The Executive Committee requested that the WG chair produce (or commission) a summary of the report for publication as an *EOS* article. A follow-up letter to agencies holding bathymetric data was to be prepared and other actions were to be considered (see **p. 2-3**).

2.1.3 WG 108—Double Diffusion

The group's work is completed and a special issue of *Progress in Oceanography* was published in 2003. The WG was thanked and disbanded.

2.2 Current Working Groups

The Executive Committee Reporter for each working group will present an update on working group activities and progress, and will make recommendations on actions to be taken. (In some cases, the working group chair will also present comments.) The Executive Committee should make preliminary decisions, based on the progress of working groups and the merits of the requests, whether funding should be provided for 2004 activities of working groups that request funds. The Finance Committee will take into account the recommendations of the Executive

Committee as it develops the 2004 SCOR budget, which is then subject to final approval by the Executive Committee.

2.2.1 WG 109—Biogeochemistry of Iron in Seawater ***Duce***

The first book of the group was produced in 2001. A subgroup on iron standards was set up at the Amsterdam General Meeting (1998) and met at the 2000 Ocean Sciences Meeting in San Antonio, Texas; an intercalibration of standards was underway at the time of the 2000 SCOR General Meeting. The subgroup met in late 2002 to discuss the results of the intercomparison and determine how these results will be published. The results of these discussions are being prepared for inclusion in a paper to be submitted to *Marine Chemistry*.

Action: None

2.2.2 WG 111—Coupling Winds, Waves and Currents in Coastal Models ***Wainer***

The group convened a meeting of authors of the book in late 2002 in Goa, India. The group is developing a book tentatively entitled *Coupled Coastal Wind-Wave-Current Dynamics*, which they hope will be published by a leading publisher in late 2004. The draft outline of the book is shown on **p. 2-9**. The group's activities are funded by the U.S. Minerals Management Service and National Aeronautics and Space Administration.

Action: None

2.2.3 WG 112—Magnitude of Submarine Groundwater Discharge and its Influence on Coastal Oceanographic Processes ***Duce***

The planned products of this working group include a special issue of the journal *Biogeochemistry* (due to be published before the end of 2003; see list of papers at **p. 2-17**) and a chapter in the synthesis book for the Land-Ocean Interactions in the Coastal Zone (LOICZ) project. The group will be disbanded upon the publication of its special journal issue.

Action: None

2.2.4 WG 113—Evolution of the Asian Monsoon in Marine Records: Comparison between Indian and East Asian Subsystems ***Labeyrie***

Marine Geology has agreed to publish a special volume of the papers contributed to the working group's second workshop (all papers have been reviewed and revised and the publication process is underway, as of June 2003). The third and final workshop was held in late 2002 in France. A review paper is being prepared based on the results of the first and third workshops, to be published in a journal such as *Quaternary Science Reviews.*

Action: None

2.2.5 WG 114—Transport and Reaction in Permeable Marine Sediments *Labeyrie*

The group has enhanced its Web site and convened a Gordon Research Conference (GRC) on their topic in 2003, the latter involving several members of WGs 114 and 112. The group decided that the GRC and Web site would be its products, plus possibly a volume of past seminal papers on this topic. They are asking permission to remain dormant until 2006, so that they can serve as an organizing committee for the next GRC on this topic.

Action: Consider request to continue group in dormant state until 2006 and discuss proposed products.

2.2.6 WG 115—Standards for the Survey and Analysis of Plankton *Pierrot-Bults*

The working group will meet for the second time in Concepción, Chile in November 2003. Song Sun (China-Beijing) was added as a Full Member of the working group, and Erika Head (Canada) and Juha Flinkman (Finland) were added as Associate Members of the WG in 2003. The group plans to meet for its third and final time in early 2005.

Actions: None.

2.2.7 WG 116—Sediment Traps and ^{234}Th Methods for Carbon Export Flux Determination *Labeyrie*

The working group was asked by SCOR not to meet in 2002, because of SCOR budget limitations. The group's 2003 meeting in China was postponed due to the SARS epidemic. The group will meet in Nov. 2003 and is requesting permission to convene its final meeting in 2004 to coincide with a larger meeting on this topic in the United States.

Action: Consider 2004 budget request and plans.

2.2.8 WG 118—New Technologies for Observing Marine Life *Pierrot-Bults*

The working group met most recently in Lima, Peru in October 2002 (see **p. 2-35** for meeting report) and will meet for the third and final time in Washington, D.C. in October 2003 in conjunction with a major meeting of the Census of Marine Life (CoML) project. The group is funded by the Alfred P. Sloan Foundation, which has requested that the group be extended for at least three years to continue providing advice on technology for the CoML projects, with a new grant from the Sloan Foundation. If SCOR approves this extension, it is probably more appropriate that the group be transformed into a panel, since it will not fulfil the normal expectations of a SCOR working group to have a limited term and a final written product.

Action: Consider proposal to transform the group into a SCOR panel.

2.2.9 WG 119—Quantitative Ecosystems Indicators for Fisheries Management ***Field***

The working group met most recently in Cape Town, South Africa in December 2002 to evaluate its progress and plan its large symposium for Paris on March 31-April 3, 2004. The workshop is being funded by IOC, the U.S. National Marine Fisheries Service, FAO, PICES, several French agencies, and GLOBEC. A special issue of the *ICES Journal of Marine Science* will be produced from the symposium.

Action: Consider providing support for scientists from developing countries and countries with economies in transition to attend the symposium (see p. 5-3).

2.2.10 WG 120—Marine Phytoplankton and Global Climate Regulation: The *Phaeocystis* Species Cluster As Model ***Hall***

The working group's second meeting, planned for May 2003 in Savannah, Georgia, USA, was cancelled due to concerns about SARS and the war in Iraq. The WG has rescheduled its meeting in Savannah for late 2003. The chair's report makes no request for a meeting in 2004.

Action: None.

2.2.11 WG 121—Deep-Ocean Mixing ***Purini***

The working group held its first meeting in Sapporo, Japan in July 2003, in conjunction with the IUGG meeting there. One additional Associate Members (Theo Gerkema, The Netherlands) was approved by the Executive Committee in the past year. One additional Full Member and several additional Associate Members will be proposed as a result of discussions at the group's first meeting. The proposal to the U.S. Office of Naval Research (jointly by SCOR and IAPSO) to fund the group's meetings was unsuccessful, but a revised version will be submitted this year.

Action: Consider 2004 budget request and plans.

2.2.12 WG 122—Estuarine Sediment Dynamics ***Labeyrie***

SCOR asked the proponents of this working group to resubmit their proposal with a revised terms of reference and membership, which they did. The group was approved by the Executive Committee and will be co-funded by LOICZ and co-sponsored by IAPSO.

Action: Consider 2004 budget request and plans.

2.3 New Working Group Proposals

Five working group proposals were received by the SCOR Secretariat. SCOR can fund one or two new working groups in 2004. The proposal on "Investigation of Physical and Biochemical Classification of the coastal estuaries in the southeastern Pacific to be applied on Integrated Management of Coastal Areas" was sent to Nominated Members, but was removed from further consideration because of comments received about the poor fit of the proposed activity with the criteria for SCOR working groups.

2.3.1 Working Group to plan and implement GEOTRACES, a collaborative multi-national program to investigate the global marine biogeochemical cycles of trace elements and their isotopes ***Labeyrie***

2.3.2 SCOR/IMAGES Working Group to Investigate the Reconstruction of Past Ocean Circulation ***Zatsepin***

2.3.3 Working Group on Analysing the Links Between Present Oceanic Processes and Paleo-Records ***Wainer***

2.3.4 Working Group on the Physical and Biological Structure of Meso-scale Rings in World's Oceans ***Field***

3.0 LARGE-SCALE SCIENTIFIC PROGRAMS

3.1 Committees

3.1.1 SCOR/IGBP Joint Global Ocean Flux Study (JGOFS) ***Saino, Field***

The full JGOFS SSC met for the final time in conjunction with their final Open Science Meeting in Washington, D.C. in May 2003. The SSC's Executive Committee will meet in Bergen, Norway, after the SCOR Executive Committee Meeting. The JGOFS Executive Officer, Roger Hanson, has requested from SCOR moving expenses from Norway to the United States, as was promised as part of his employment package. The JGOFS IPO staff members are making plans for closing the IPO. JGOFS SSC Member Toshiro Saino will present the final JGOFS report to SCOR.

Action: Consideration resolution of appreciation to Norwegian government, University of Bergen, JGOFS SSC, JGOFS IPO, etc.

3.1.2 SCOR/IGBP/IOC Global Ocean Ecosystems Dynamics (GLOBEC) Project ***Barange, Taniguchi***

GLOBEC held its 2nd Open Science Meeting in Qingdao, China in October 2002. Many of the activities of GLOBEC and its subgroups centered around the Open Science Meeting, which was a well-attended and successful event. SCOR arranged extra support of the meeting from the U.S. National Oceanic and Atmospheric Administration ($25,000 for the report publication and $10,000 funding for U.S. scientists to attend) and the National Science Foundation ($25,000 for general expenses). The 2003 GLOBEC SSC meeting was held in Banff, Canada in conjunction with the IGBP Congress. GLOBEC has helped raise SCOR's visibility by publishing an article about SCOR in its newsletter (see **p. 1-28**). Manuel Barange has

established an annual research highlights document that will be posted on the SCOR Web site and could be a model for other projects to follow (see following **p. 3-40**).
Action: Approve new SSC members.

3.1.3 SCOR/IOC Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB) Program *Hall*

The GEOHAB SSC met in France in November 2002 to work on the *GEOHAB Implementation Plan* and an editorial group met in early 2003 to finish the plan for review. Reviewers' comments and the revised report will be presented to the Executive Committee for approval. Two new SSC members were appointed in 2003: Robin Raine (Ireland) and Ken Furuya (Japan). The SCOR Reporter, SSC chair, and IOC and SCOR staff have agreed to a draft schedule for rotating the original SSC members.
Action: Approve new chair and SSC members.

3.1.4 SCOR/IGBP/WCRP/CACGP Surface Ocean-Lower Atmosphere Study *Labeyrie*

The SOLAS SSC met most recently in Banff, Canada in June 2003, in conjunction with the IGBP Congress. At the Banff meeting, they discussed the comments from the review of the *SOLAS Science Plan/Implementation Strategy* and formation of working groups to develop detailed research plans. SOLAS has a variety of implementation activities scheduled for 2003, including a SOLAS Summer School. The SOLAS chair, Peter Liss, obtained support for an international project office in the United Kingdom as part of a national SOLAS project. The Terms of Reference for SOLAS were revised to acknowledge CACGP as a full sponsor of the project (although not contributing financial support), as agreed by the four co-sponsors and the SCOR Reporter.
Action: Approve new SSC members.

3.1.5 SCOR/IGBP Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) Project (under development) *Hall, Field*

The IMBER Transition Team (and subgroups of it) met in Potomac, Maryland, USA; Paris, France; and Banff, Canada since the SCOR General Meeting. The Transition Team convened a well-attended Open Science Conference in Paris in January 2003. Since that time, the team has focused on developing the scientific focus of the proposed project and working on how it will interact with related projects. SCOR and IGBP agreed to change the project's name from OCEANS to Integrated Marine Biogeochemistry and Ecosystem Research (IMBER). The draft *IMBER Science Plan/Implementation Strategy* will be completed in Oct. 2003 and placed on the Web to solicit comments from the global ocean science community. These comments will be

used to revise the draft, which will be sent to formal review by SCOR and IGBP around the beginning of 2004.
Action: Discuss SSC composition.

3.1.6 Land Interactions in the Coastal Zone (LOICZ) Project *Hall*

The 2002 SCOR General Meeting agreed, in principle, to co-sponsor the elements of LOICZ related to coastal ocean science, pending development of financial support for LOICZ (see **p. 3-57** for letter to LOICZ). SCOR would not be considered a full co-sponsor with IGBP, as is the case for other projects, but would be a co-sponsor particularly of LOICZ Theme 3 on "Fate and transformation of materials in coastal and shelf waters." SCOR co-sponsorship depends on arranging external funds for LOICZ activities. Ed Urban met with the LOICZ SSC in Banff at the IGBP Congress to convey SCOR's decision and to hear about LOICZ plans.
Action: Discuss potential sources of SCOR funding to LOICZ

4.0 OCEAN CARBON AND OTHER ACTIVITIES

4.1 SCOR/IOC Advisory Panel on Ocean Carbon Dioxide *Urban*

The panel was involved in 2003 in helping to plan a joint activity with the Global Carbon Project on coordinating ocean carbon observations, in a new activity called the International Ocean Carbon Coordination Project (IOCCP). A CD and an article in *EOS* resulted from this activity. A second meeting is scheduled on carbon data formats, to be held in Japan in Oct. 2003. Panel members will reach the end of their first three-year terms at the end of 2003. The 2002 General Meeting recommended that the Panel's terms of reference be modified to broaden the Panel's scope to all ocean carbon and to acknowledge the ending of JGOFS, and the development of SOLAS and IMBER. The Panel's membership needs to be modified in relation to the new terms of reference.
Action: Discuss new draft terms of reference and membership

4.2 SCOR-IOC International Symposium on "The Ocean in a High-CO_2 World" *Duce*

The committee for this activity met in Irvine, California, USA, in February 2003 to develop the agenda for the symposium. The symposium was originally to be focused on ocean carbon sequestration, but the committee decided that the scientific issues related to sequestration could best be examined in the context of the changes in the ocean that would occur under projected scenarios of atmospheric carbon dioxide, without any attempts at purposeful sequestration. The agenda for the symposium will be presented at the Executive Committee meeting. The symposium will be held in Lisbon or Paris in May 2004. Papers from the symposium will be published in a special issue of the *Journal of Geophysical Research—Oceans*.
Action: None

4.3 Other Activities

4.3.1 Basin-Scale Modelling *Urban*

SCOR and IOC are co-sponsoring an activity in 2003 to bring together experts to examine how existing models can be scaled up to basin scales, requested by IOC. The outcome of the activity is hoped to be an article in *Science* or *Nature*. Scientists from GLOBEC, JGOFS, and IMBER are involved.

Action: None

4.3.2 The Global Iron Cycle *Duce*

SCOR was a supporting applicant for a proposal from IGBP to ICSU for an IGBP "fast-track" activity on the global iron cycle (see **p. 4-27**), which will bring together experts on oceanic, atmospheric, and terrestrial aspects of the global iron cycle to create a synthesis paper for *Science* or *Nature*. Bob Duce, Peter Liss, and Ed Urban wrote the proposal. ICSU awarded $40,000 to IGBP for this activity.

Action: None

5.0 CAPACITY-BUILDING ACTIVITIES

5.1 Regional Graduate Schools of Oceanography and Marine Environmental Sciences *Field, Wainer*

The Executive Committee formed a small committee at the 2002 General Meeting to determine how to proceed with this activity, co-chaired by John Field and Ilana Wainer, and also including Huasheng Hong (China-Beijing) and Manuwadi Hungspreugs (Thailand). The committee will present their report. The database of foundations was given to Johann Lutjeharms (South Africa) and José Stuardo (Chile) for specific purposes, with the instructions that they are required to inform the SCOR Secretariat if they make any contacts based on the database information.

Action: Determine actions necessary to implement recommendations of ad hoc committee.

5.2 POGO-IOC-SCOR Visiting Fellowships for Oceanographic Observations *Urban*

Three rounds of fellowships have been awarded (13 each in 2001 and 2002, and 10 in 2003). This program was contributed by POGO as an activity to respond to the World Summit on Sustainable Development.

Action: Consider whether to provide funding in 2004.

5.3 NSF Travel Support for Developing Country Scientists ***Urban***

SCOR is in the second year of a three-year grant from the U.S. National Science Foundation (NSF) for these awards, at a level of $75,000 per year. The Executive Committee approved support for the following meetings since the 2002 General Meeting: History of Oceanography (ICHO), a workshop on HABs at PICES XIIth Annual Meeting, POGO-IOC-SCOR Fellowships, Land Use and Coastal Zones (LOICZ) Meeting, and for the symposium on Russian Ocean Sciences at the SCOR Executive Committee meeting.

Action: Consider new requests.

6.0 RELATIONS WITH INTERGOVERNMENTAL ORGANIZATIONS

6.1 Intergovernmental Oceanographic Commission ***Duce, Urban***

Robert Duce and Ed Urban attended the IOC Assembly in June 2003 to represent SCOR. They made a few interventions (see **p. 6-1**) and Duce made a presentation to the Assembly regarding SCOR activities of relevance to IOC (see **p. 6-4**). The SCOR brochure was available at the meeting in English, Spanish, and French.

Action: None

6.1.1 Coastal Ocean Advanced Science and Technology Studies (COASTS) Meeting ***Unluata***

The COASTS meeting was held in 2001 and two volumes of *The Sea* are being prepared.

Action: Should SCOR purchase copies?

6.1.2 IOC Policy on Access to Oceanographic Data ***Unluata***

The IOC Assembly discussed a draft policy and approved a revised version. Robert Duce made an intervention on behalf of SCOR and ICSU regarding the changes, particularly the changes to Clause 4, which could be considered to negate Clauses 1-3 and thus weaken the overall policy.

Action: None.

6.2 Other Intergovernmental Organizations

6.2.1 Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) ***Duce***

6.2.2 World Meteorological Organization ***Urban***

6.2.3 International Council for the Exploration of the Sea (ICES) ***Urban***

ICES provided comments regarding the 2003 working group proposals.

6.2.4 North Pacific Marine Science Organization (PICES) ***Radchenko***

SCOR and PICES have cooperated in several activities in the past year, as described in the PICES report.

7.0 RELATIONS WITH NON-GOVERNMENTAL ORGANIZATIONS

7.1 International Council for Science ***McBean, Duce***

No 2004 funds were requested from ICSU, although as mentioned earlier, SCOR did support a successful application from IGBP to ICSU. Robert Duce made a presentation about SCOR to ICSU's Priority Area Assessment (PAA) on the Environment in Relation to Sustainable Development in February 2003 (see **p. 7-1**). The findings of the assessment are scheduled to be released in August 2003 and Gordon McBean, a member of the PAA committee, will attend the Executive Committee meeting to discuss the progress of the review. The SCOR Secretariat and Executive Committee have also responded to several other requests for information and nominations, and have participated in other ICSU activities in the past year.

Action: (1) Nominate an individual to represent SCOR in asteroids study (2) Suggest ideas for 2005 proposals.

7.1.1 International Geosphere-Biosphere Program (IGBP) ***Broadgate***

Robert Duce and Ed Urban attended the IGBP Science Committee meeting in Punta Arenas, Chile in January 2003 to represent SCOR. Duce made a presentation about SCOR and its activities. Julie Hall also attended at IGBP's expense as the OCEANS (now IMBER) Transition Team chair. All three will attend the 2004 IGBP-SC meeting in St. Petersburg, Russia. IGBP held its triennial Congress in Banff, Canada in June 2003 and Julie Hall, John Field, and Ed Urban attended. At this event, all project SSCs and project development teams met together to develop joint activities.

Action: Develop a formal communication after the SCOR meeting to convey to the IGBP-SC any relevant SCOR decisions.

7.1.2 Scientific Committee on Antarctic Research (SCAR) ***Hall***

SCAR and SCOR presidents developed a cooperative agreement in 2001 (see **p. 7-23**), although not much progress has been made in implementing the agreement since then. SCAR has formed an Action Group on Oceanography in 2001, and SCOR will send a representative to their next meeting. Julie Hall represented SCOR and IMBER at a meeting on Southern Ocean Research sponsored by the the British Antarctic Survey in July 2003. SCOR, SCAR, and IAPSO co-

convened a session on Southern Ocean research at the IUGG meeting in Sapporo, Japan in June/July 2003. Plans are now being made for the next International Polar Year (IPY), which will take place in 2007, and SCOR may take part in that activity.
Action: Discuss potential SCOR activities in relation to the International Polar Year

7.1.3 World Climate Research Program (WCRP) ***Urban***
WCRP is a partner with SCOR in the SOLAS project.
Action: None

7.1.4 Scientific Committee on Problems of the Environment (SCOPE) ***Pierrot-Bults***
Annelies Pierrot-Bults attended the 47th SCOPE meeting in June 2003 to represent SCOR (see report at **p. 7-30**). IAPSO and SCOPE may propose a joint activity on "an appraisal of our understanding and future research needs on the role of physical and chemical processes in the dynamics and structure of marine ecosystems" and ask SCOR to be involved.
Action: Discuss relationship of proposed project with SCOR and IGBP projects.

7.1.4 International Union of Pure and Applied Chemistry (IUPAC) ***Urban***
Action: None

7.2 Affiliated Organizations

7.2.1 International Association for Biological Oceanography (IABO) ***Pierrot-Bults***
Action: Discuss potential areas of interaction with IABO.

7.2.2 International Association for Meteorology and Atmospheric Sciences (IAMAS) ***MacCracken***
Action: Discuss potential areas of interaction with IAMAS.

7.2.3 International Association for the Physical Sciences of the Oceans (IAPSO) ***Morozov***
As mentioned earlier, a cooperative SCOR/SCAR/IAPSO session was convened on Southern Ocean research at the IUGG meeting in Sapporo, Japan in June/July 2003. Eileen Hofmann (USA) served as the SCOR convener for the session. The SCOR-IAPSO joint request of funds from the U.S. Office of Naval Research for WG 121 was not successful. IAPSO has requested to be a partner on WG 122.
Action: Discuss potential areas of interaction with IAPSO.

7.3 Affiliated Programs –The benefit of continued affiliation to SCOR is evaluated at each General Meeting. Reports are provided at Executive Committee meetings for information only.

7.3.1 Census of Marine Life (CoML) ***Taniguchi***

7.3.2 International Antarctic Zone (iAnZone) Program ***Purini***

iAnZone will be having its final meeting in 2003 and will end its affiliation with SCOR at that time.

7.3.3 PAGES/SCOR International Marine Global Changes Study (IMAGES) ***Purini***

7.3.4 InterRidge - International, Interdisciplinary Ridge Studies ***Labeyrie***

7.3.5 International Ocean Colour Coordinating Group (IOCCG) ***Field***

7.4 Other Organizations

7.4.1 Partnership for Observation of the Global Ocean (POGO) ***Field***

POGO met in Hobart, Tasmania, Australia at the same time as the IGBP-SC meeting and John Field represented SCOR. The next POGO meeting will be held in Yokahama, Japan and Akira Taniguchi will be representing SCOR at that meeting.

Action: None

7.4.2 Ocean Studies Board, U.S. National Academy of Sciences: International Global Ocean Exploration Workshop ***Kastner***

SCOR assisted the U.S. National Academy of Sciences in convening an International Global Ocean Exploration workshop in 2002. The interim report from the activity has been published and the final report may be published by the time of the SCOR meeting. The final report may include recommendations related to SCOR.

Action: Respond to reports?

8.0 ORGANIZATION AND FINANCE

8.1 2004 Election of SCOR Officers ***Field***

The election process for 2004 officers will begin at the Executive Committee meeting, with the appointment of a Nominating Committee. The steps in the process are listed on **p. 8-1**. The actual deadlines for the steps in the process will depend on the dates selected for the 2004 meeting.

Action: Appoint Nominating Committee.

8.2 Membership *Field, Urban*

8.2.1 National Committees

National Committees—Argentina withdrew from membership in 2002, due to financial considerations.

Robert Duce and Ed Urban made presentations to the U.S. National SCOR Committee in July 2003. Duce and Urban attempted to set up a meeting with the Chilean SCOR Committee in January 2003 in conjunction with the IGBP-SC meeting, but the timing conflicted with summer holidays in Chile.

8.2.2 Proposed New Membership Policy *Field*

The 2002 General Meeting accepted the report of the Membership Procedures committee with some modifications (see **p. 8-9**). The next action will be to set steps and a timetable for implementation of the new policy.

Action: Discuss potential next steps to implement the policy.

8.3 Publications Arising from SCOR Activities *Urban*

Publications from Working Groups and Major Projects—The special issue of *Progress in Oceanography* from WG 108 was published in March 2003. The synthesis book from the JGOFS project, entitled *Ocean Biogeochemistry: The Role of the Ocean Carbon Cycle in Global Change* was published in mid-2003, in time for the final JGOFS Open Science Meeting. Two additional special issues (for WGs 112 and 113) are due to be published by the next SCOR meeting.

Links have been added to the Publications page of the SCOR Web site to the publishers' Web sites, so SCOR reports can be ordered easily.

2002 *SCOR Proceedings*—The *Proceedings* was printed in late June and was distributed by the end of July. 650 copies were ordered this year to ensure enough copies to last until the next *Proceedings* is printed.

SCOR Brochure—The SCOR brochure is updated occasionally and given to potential sponsors, potential member nations, and others. The brochure is now available in English (see front inside pocket of background book), Spanish, and French. Copies of the brochure were taken to the IOC meeting in June.

SCOR Web site—A calendar of SCOR meetings was added to the SCOR Web site, with links to the Web sites for specific meetings, where available. Information for the Executive Committee

Meeting was placed on the Web site for the first time, including sections of the background book. The Web site now includes information for the Executive Committee, including a PowerPoint presentation about SCOR. The request made at the 2002 meeting to add scientific highlights related to SCOR activities has not yet been accomplished.
Actions: (1) Are additional changes needed to the Web site? (2) How should science highlights be generated?

SCOR Poster—A draft SCOR poster has been developed, which will be available for review at the Executive Committee meeting. The large version of the poster will include a pocket for SCOR brochures, so the brochure should be redesigned, if possible, to complement the poster.
Actions: (1) Review the poster and approve/recommend changes. (2) Discuss how and where the poster might be used, and how it might be distributed.

8.4 Finances *Finance Committee, Urban, Gross*

The annual audit was performed in mid-February and Elizabeth Gross worked to prepare information for the auditors. The financial records and financial controls were found to follow accepted standards (see **p. 8-14**).

The large science grant from the U.S. National Science Foundation to SCOR was renewed for three years, starting on June 1, 2003. Two other grants were obtained from NSF for separate activities in 2003, for the ocean carbon observation activity with IOC and the grant for GLOBEC's Ecosystem Studies of Sub-Arctic Seas (ESSAS) meetings. Russia and France paid a considerable amount of back dues, which will help replenish SCOR's cash reserves. A Memorandum of Understanding is being developed with IOC to make it easier to co-fund projects.
Actions: (1) Approve revised 2003 SCOR budget. (2) Approve 2004 SCOR budget. (3) Approve dues increases for 2005.

8.5 The Disciplinary Balance among SCOR Working Groups

Disciplinary Balance Committee

Additional information was collected from past chairs of SCOR working groups and was provided to the SCOR Disciplinary Balance Committee, which was charged in 2002 to review this input.
Actions: What actions and/or changes in working procedures are needed?

8.6 SCOR Secretariat Personnel Actions

8.6.1 Review of SCOR Executive Director *Duce*

The initial appointment of Ed Urban was for a period of three years, subject to review of his performance. At the 2002 General Meeting, the SCOR Executive Committee agreed to a review process. The general results of the review will be presented at the Executive Committee meeting, with specific results being discussed with Urban in closed session.

Action: Determine timing of next review of the SCOR Executive Director.

8.6.2 Hiring of New Administrative Secretary for SCOR Secretariat *Urban*

The duties of the former SCOR Administrative Officer have been handled by Ed Urban and Elizabeth Gross over the past year. Urban is in the process of interviewing candidates for a new, half-time Administrative Secretary at the Secretariat. The new person will have the primary responsibility for receiving and dispersing SCOR funds and will help Urban with logistical duties in the Secretariat.

Action: None

9.0 SCOR-RELATED MEETINGS

9.1 SCOR Annual Meetings

The Executive Committee will consider potential locations in which to hold future meetings, particularly in nations that have not recently hosted annual meetings.

9.1.1 2003 Executive Committee Meeting – Moscow, Russia *Duce*

This is the first annual meeting in SCOR history to be held in Russia. Many thanks are due to the Russian Academy of Sciences, the Russian SCOR Committee, and particularly to Prof. Sergey Lappo and Dr. Sergey Shapovalov.

Action: Thank the Russian SCOR Committee for hosting the 2003 SCOR Executive Committee Meeting.

9.1.2 2004 General Meeting – Venice, Italy *Purini*

SCOR received an invitation from the Italian National Research Council to hold the 2004 SCOR General Meeting in Venice, Italy, which the Executive Committee accepted. The last annual SCOR meeting held in Italy took place in Rome in 1966, so it is timely to return to Italy. The dates of the meeting will be announced at the Executive Committee Meeting.

Action: (1) Announce dates of 2004 General Meeting. (2) Identify special agenda items/speakers.

9.1.3 2005 Executive Committee Meeting ***Urban***

The meeting location for 2005 has not yet been determined.

Action: Discuss potential locations of 2005 meeting.

9.1.4 2006 General Meeting – Concepción, Chile ***Urban***

The Chilean SCOR Committee has informally offered to host the 2006 General Meeting in Chile. **Action: Discuss whether to accept an invitation from Chile, if made officially.**

9.1.5 2007 Executive Committee Meeting—SCOR 50th Anniversary— Woods Hole, USA ***Duce***

The Executive Committee has agreed to hold its 2007 meeting in Woods Hole to celebrate SCOR's 50th Anniversary, since Woods Hole was the site of the first SCOR annual meeting, in 1957. The meeting will include some kind of symposium or session that will look backward and/or forward.

Action: Appoint planning committee to report back at 2004 General Meeting.

9.2 Other meetings of interest to SCOR ***Urban***

Other SCOR-related meetings are listed on **p. 9-5**.

10.0 OTHER BUSINESS

Adjourn Open Executive Committee Meeting

1.3 Report of the SCOR President

1.4 Report of SCOR Executive Director

This report will describe the status of SCOR in a number of general areas. The annotated agenda gives a summary of the various projects, which are amplified by the written reports of each group and some verbal reports at the General Meeting.

Finances—SCOR's continuing science grant from the U.S. National Science Foundation was renewed for three years (approximately $300,000 per year). SCOR also received two new grants from NSF, for a joint SCOR/IOC activity on ocean carbon observation activities ($75,000) and for workshops to discuss a potential new GLOBEC activity in sub-arctic areas ($86,000). In both cases, NSF approached SCOR to request a proposal, because of SCOR's reputation and ability to conduct such activities, directly or through its projects, such as GLOBEC.

Membership—One country, Argentina, left SCOR in 2002, due to financial limitations in the midst of their difficult economic conditions. An individual from Mauritius has made preliminary inquires about that country entering SCOR. The Executive Committee will discuss the next steps in implementing the new membership policy.

Publications—The SCOR Web site is the major vehicle for providing up-to-date information about SCOR to the international ocean science community and I make changes to the site several times each week, as I receive new information, and the site is checked for "dead links" occasionally.

The SCOR brochure (in English, Spanish, and French) has been updated and I continue to use it when meeting with potential sponsors and potential member nations. I believe that having some materials available in Spanish was helpful in gaining new member nations from Latin American countries last year. The availability of the brochure in French (thanks to the Canadian SCOR Committee) may improve SCOR's reach into African nations. We were able to send copies of one SCOR report to libraries in developing nations and received feedback that these contributions were greatly appreciated.

SCOR activities yielded a number of publications in the primary literature and other venues this year (see **p. 8-11** for the list).

Meetings—Between the 2002 and 2003 SCOR annual meetings, five SCOR working groups met (WGs 111, 113, 118, 119, and 121). As described in the working group reports, two meetings were postponed due to travel concerns related to SARS and the war in Iraq. The Scientific Steering Committee (SSC) for GEOHAB and its Editorial Committee met twice to continue

work on its Implementation Plan (the revised plan and summary reviewers' comments and SSC responses will be presented at the Executive Committee meeting.) The GLOBEC SSC and its focus groups have conducted several meetings to continue working on implementing international GLOBEC activities. GLOBEC also conducted a successful open science meeting, with substantial financial support ($60,000) arranged through SCOR. The JGOFS SSC is sponsoring continued regional and global synthesis activities and held its final open science conference in 2003. The SOLAS SSC met twice between the SCOR meetings and its *Science Plan/Implementation Strategy* is being revised to respond to reviewers' comments. It will be presented at the Executive Committee meeting. The Integrated Marine Biogeochemistry and Ecosystem Research (IMBER, formerly OCEANS) Open Science Conference was held at IOC in Paris in January 2003 and was attended by 370 participants from 36 countries.

Outreach to Scientists From Developing Nations and Capacity-Building Activities—SCOR promotes the improvement of scientific capacity in developing countries and countries with economies in transition by ensuring that every SCOR working group and other activity includes scientists from such countries. (Approximately 20% of the membership of SCOR working groups, major projects, and other committees are from developing countries and countries with economies in transition.) SCOR also (1) administers a grant from the U.S. National Science Foundation to provide travel support to scientists from such countries to attend scientific meetings (see **p. 5-1**), (2) participates with POGO and IOC in supporting a program of visiting fellowships for oceanographic observations (see **p. 5-1**), and (3) is considering an activity to promote regional graduate schools of oceanography and marine environmental sciences (see **p. 5-1**).

Partnerships With Other Organizations—Maintaining existing partnerships and developing new ones depends on SCOR having the ability to commit funding to joint activities and to send representatives to partners' meetings. We have made progress in new partnerships with SCOPE, IAPSO, and PICES, and have also strengthened our relationships with IGBP and IOC. I want to extend special thanks to my colleagues Wendy Broadgate (IGBP), Maria Hood (IOC), and Umit Unluata (IOC) for their great assistance in our joint activities in the past year.

Staffing—Liz Gross continues to manage many different financial aspects of SCOR, including the audit and reimbursements from sponsoring agencies and organizations. Liz is also working on the logistics of several large meetings for us, using project funds. I continue to evaluate how SCOR operates, work on revising the Web site, work on new initiatives (SOLAS and IMBER), pursue new funding for SCOR activities, and focus on more strategic financial issues. Wesley Anne Ross retired from the Secretariat in July 2002 and I am in the process of hiring a half-time administrative secretary.

SCOR's Visibility in Member Nations and Internationally—SCOR often is not acknowledged adequately in publications that result from SCOR activities and in joint projects with other organizations. Knowledge of SCOR and its activities in member nations often does not extend beyond the few scientists who have been or are involved in SCOR activities, resulting in government policymakers deciding to quit paying dues to SCOR because they don't think any of their country's scientists are involved in SCOR, or that SCOR has a high enough value to their nation to justify continued payment of their dues. Our long-term reputation and financial health depend on ensuring that the investment of our finances and volunteer and staff time are acknowledged. This is a long-term issue that will involve constant attention. I especially appreciate the assistance SCOR has received from IGBP, IOC, and GLOBEC in the past year by giving SCOR time in their meetings and/or space in their newsletters to raise our visibility.

An important aspect of raising SCOR's visibility nationally and internationally is having SCOR Executive Committee members, Nominated Members, and myself make presentations at meetings of related organizations and write articles for newsletters and other publications. We chose a small number of meetings this year for Executive Committee members to attend on SCOR's behalf. Bob Duce made presentations about SCOR at the IGBP-SC annual meeting and the IOC Assembly. John Field represented SCOR at the POGO meeting. Annelies Pierrot-Bults represented SCOR at the SCOPE Executive Committee meeting. Julie Hall represented SCOR at various meetings, including one on Southern Ocean research. Laurent Labeyrie represented SCOR at an ICSU-sponsored meeting on Comet/Asteroid Impacts and Human Society (see **p. 7-11**). Finally, Bob Duce, Bill Burnett (WG 112 co-chair), and I made 1.5 hours of presentations to the U.S National Committee to SCOR, the longest time that has been devoted to SCOR in one of their tri-annual meetings (most of their work is related to other responsibilities for the U.S. National Academy of Sciences) in the past 14 years. I made a presentation about SCOR at a meeting convened by the U.S. National Academy of Sciences and the U.S. Department of State about international oceanographic research (**p. 1-21**), to increase SCOR's visibility among U.S. funding agencies and policymakers, important for SCOR's current and future financial health. An article about SCOR appeared in the *GLOBEC International Newsletter* in the past year (see **p. 1-28**).

In terms of finances, relationships with other organizations, publications, and the progress of SOLAS, IMBER, and GEOHAB since last year's meeting in Sapporo, the SCOR community should be very proud of its accomplishments.

Cover of U.S. Department of State Report

U.S. Participation in International Ocean Science

Ed Urban, Executive Director, Scientific Committee on Oceanic Research (SCOR)

The Scientific Committee on Oceanic Research (SCOR) is an international non-profit organization that promotes international cooperation in ocean sciences. SCOR was formed in 1957 as the first interdisciplinary committee of the International Council for Science (ICSU). SCOR's formation was partially in response to the positive experience of the International Geophysical Year, with the realization of the value of international cooperation in planning and executing large ocean research projects. SCOR has played a major role in developing and executing many of the major international ocean research projects since 1960, including the International Indian Ocean Expedition, the World Ocean Circulation Experiment (WOCE), the Joint Global Ocean Flux Study (JGOFS), the Global Ocean Ecosystem Dynamics (GLOBEC) project, and more recently, the Surface Ocean – Lower Atmosphere Study (SOLAS) and the Ocean Biogeochemistry and Ecosystems Analysis (OCEANS) planning activity. My remarks are based on a relatively short experience working on international research coordination, but a longer acquaintance with U.S. ocean science activities.

Priorities for Marine Scientific Research

Many organizations in the United States and elsewhere are involved in setting priorities for marine scientific research. Priorities arise from both (1) societal needs for information about how ocean processes work and how such processes are affected by, and affect, human activities; and (2) areas of scientific inquiry that might not have immediate application, but which are valuable in terms of increasing our knowledge about fundamental processes of the ocean—its biology, chemistry, physics, and geology—and the ocean's relations to the atmosphere and land. In my opinion, there is no shortage of activity worldwide in relation to identifying priority areas of marine scientific research. The best U.S. example is *Ocean Sciences at the New Millennium* (NSF, 2001), an effort of the National Science Foundation that involved input from a significant portion of the U.S. ocean sciences community. A recent international example is *Oceans 2020: Science, Trends, and the Challenge of Sustainability*, which resulted from a meeting organized by SCOR, UNESCO's Intergovernmental Oceanographic Commission (IOC), and the Scientific Committee on Problems of the Environment to link ocean science priorities with societal needs (Field et al., 2002).

It is much harder, however, to prioritize among research areas to target the areas that are the most important. This difficulty in prioritization results from different perspectives of the most interesting science and the most vital societal needs, relative weighting of fundamental versus mission-driven science, and expectations about the desirable time horizon for results from the scientific activities. In the United States, the portfolio of research activities is well balanced between science focused on solving shorter-term societal needs (such science tends to be decided from the top down based on mission agency mandates) and science with a longer-term focus,

which tends to be determined by the "proposal pressure" from individual scientists who submit unsolicited proposals to the National Science Foundation and some parts of other agencies. The National Research Council, particularly the Ocean Studies Board, has been an active source of research priorities for individual agencies and their subagencies (e.g., many studies related to fisheries management, oil and sound pollution in the ocean, and other topics) and to the collection of federal agencies (e.g., *Priorities for Coastal Ecosystem Science*; NRC, 1994). The priorities for marine scientific research set in the United States are only adopted by other nations and international organizations insofar as they are transmitted through organizations in which the United States (either the government or individual scientists) participates. Major priority-setting exercises, such as *Ocean Sciences at the New Millennium*, are often discounted by other nations, if their scientists did not participate in the development of the priorities.

Another means of setting marine scientific priorities, which has been extremely effective internationally, is the "open science conference." Such conferences usually aim to bring together the international ocean science community to discuss rather broad areas of ocean science, present ideas for specific science activities, and contribute to resulting documents that are designed to form coherent plans for large international ocean research projects. Such international plans are often implemented as national, multinational, and international research activities. U.S. scientists have been fully involved in planning and participating in most such projects in the past two decades, thanks to research support primarily from the National Science Foundation, but also from some other U.S. agencies. This mechanism has been used specifically in recent years to plan and execute projects related to the ocean's role in global change.

Current Scope of Participation in International Science Organizations

The U.S. government and individual scientists participate fully in international marine science organizations, both intergovernmental and non-governmental. In the intergovernmental arena, the major organizations that relate to ocean sciences are IOC, the International Council for Exploration of the Seas (ICES), and the North Pacific Marine Science Organization (PICES). The United States participates in many other binational and multinational treaty organizations that have at least some ocean science mandates, particularly with relation to fisheries and marine pollution. Intergovernmental approaches should be used in cases for which it desirable to motivate national governments to agree on, fund, and carry out common actions. Examples include IOC's efforts to establish a global ocean observing system and ensure free and open access to data collected as part of IOC activities.

My organization, SCOR, is the primary international non-governmental science organization that covers all areas of ocean science. SCOR provides a means for the U.S. community of academic ocean scientists to develop collaborative activities with scientists from other nations. The U.S. National SCOR Committee is the U.S. National Research Council's Ocean Studies Board, and it has taken an increased role in SCOR activities in recent years. For example, the 2000 SCOR

General Meeting was held at the U.S. National Academy of Sciences and the current SCOR President, Dr. Robert Duce, is a well-known U.S. scientist and member of the Ocean Studies Board. U.S. scientists have played a major role in SCOR history, including Roger Revelle as SCOR's first president and a driving force in establishment of SCOR, and Warren Wooster as a later SCOR president. Many SCOR working groups and scientific steering committees are chaired or co-chaired by U.S. scientists, and most groups have one or more U.S. members. The National Science Foundation has been a major contributor to U.S. and international SCOR. NOAA, MMS, and NASA also contribute to SCOR activities.

Other international non-governmental organizations also contribute to specific areas of ocean science, including the International Association of Biological Oceanography, International Association of Meteorology and Atmospheric Sciences, International Association of the Physical Sciences of the Ocean, International Geosphere-Biosphere Programme, Scientific Committee on Antarctic Research, Scientific Committee on Problems of the Environment, and World Climate Research Programme. All of these organizations are part of ICSU and SCOR works with each one in relation to their interests in ocean research. A number of other non-governmental ocean science organizations exist outside the ICSU structure. Examples include the Census of Marine Life (focusing on marine biodiversity), Partnership for Observation of the Global Ocean (applying ocean institutions' resources to implementation of GOOS) and InterRidge (focusing on studies of the global mid-ocean ridge system).

I believe that no new structures need to be created for participation of U.S. scientists in international marine science organizations, although it may be helpful for the U.S. government and scientists to interact more intensely with the organizations to which they already belong. For any specific international activity, it is likely that an existing organization can be used as a vehicle, with the choice depending on the goals of the activity and whether an intergovernmental or non-governmental approach is likely to be more fruitful. (It should be noted that some activities are best addressed by cooperation of intergovernmental and non-governmental organizations; SCOR and IOC cooperate on many different issues and SCOR is a scientific advisor to IOC.) However, there is also latitude for creation of new international organizations that focus on specific areas of science and for which existing organizations are not well suited. The potential International Global Ocean Exploration activity being investigated by the Ocean Studies Board may fall into this category.

Needs of International Organizations

How can U.S. agencies and scientists help meet the needs of international marine science organizations? From my personal perspective, I can suggest some areas that deserve special attention. As mentioned previously, SCOR has received good support from U.S. federal agencies and scientists. Some important ways that I believe the U.S. government and scientists can continue to help SCOR and international marine scientific research activities more generally relate to several specific areas:

1. Free and open access to data. IOC is in the midst of an examination of its data access policy. After two meetings, IOC has proposed a policy that would ensure free and open access to data derived from IOC activities. The U.S. delegation to IOC has supported this position consistently, and SCOR and ICSU have provided support from the non-governmental scientific community. However, there is great pressure from some other governments to commercialize ocean data and restrict access to it. The IOC Executive Council will discuss this issue in 2003 and there is a danger that restrictions will be placed on access to ocean data. SCOR and ICSU believe that such restrictions would have serious consequences for the development of the global ocean observing system, as well as other operational and scientific use of such data.

2. Capacity building. Both SCOR and IOC emphasize the enhancement of scientific capacity in developing nations through targeted activities by international organizations and national governments. SCOR promotes capacity building by including developing country scientists in each of our activities. SCOR also provides travel support for scientists from developing countries to participate in ocean science meetings, through a grant from the National Science Foundation. I believe that U.S. federal agencies should devote much more attention and funding to capacity building. Some areas that should be explored include regional ocean education centers in developing regions of the world, enhanced exchanges of scientists between the United States and developing nations, and devotion of a greater proportion of international aid to scientific capacity building. Another idea would be graduate fellowships provided by the Department of State and other U.S. agencies for students from developing countries to study ocean science and/or policy in the United States.

3. Funding for IOC. The re-entry of the United States into UNESCO is likely to have a negative effect on IOC, because U.S. funds were previously provided directly to IOC, but will now be provided to UNESCO, which will decide what percentage of the funds will be devoted to IOC in relation to other parts of UNESCO. It will be important for the United States and other nations to ensure that important IOC activities, for example, those related to the global ocean observing system and ocean carbon, receive adequate continued support.

4. Funding for collaborative international research. The level of support for international scientific activities from U.S. federal agencies is relatively small, because there appears to be little interest in Congress and perhaps in agencies for such activities. I was surprised to learn some years ago that there is almost no collaborative research conducted by U.S. and Mexican scientists, because Mexican research support is low and U.S. agencies have few special funds available for collaborative research with Mexican scientists. Strong arguments can be made for special collaborative research efforts

between scientists of the United States and those of Mexico and Canada because we share contiguous waters and the fate of our marine areas is intimately related to activities in waters "upstream" from the United States.

5. Staffing of international science activities. One of the most important ways that U.S. agencies have promoted international science has been in assigning U.S. scientists to posts abroad. This so-called "secondment" has been quite important for IOC and many U.S. scientists have served with great distinction in Paris for IOC. NOAA has been a major provider of seconded personnel, but other agencies, such as NSF and Department of State, have contributed staff and/or salary support for such positions. Not only IOC, but also the sending agencies, have benefited from these arrangements, by giving their staff opportunities to learn about the international aspects of ocean science and build cooperative relationships between scientists from the United States and other nations.

   Less common has been the secondment of scientists to serve in the International Project Offices of the major international ocean science projects. SCOR, IGBP, and IOC are seeking to create three new International Project Offices for three developing projects, SOLAS, OCEANS, and the Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB). It seems to be relatively easy to find other nations that will provide office space and salaries of support staff, but difficult to find funding for the executive officers for such projects. U.S. agencies could provide a major service to international projects by volunteering some of their staff or to pay the salary of an academic scientist to fill an executive officer position for two to three years.

6. Implement Recommendations of *The Pervasive Role of Science, Technology, and Health in Foreign Policy* (NRC, 1999). This National Research Council report made recommendations to the Department of State regarding how it could increase the use of "science for diplomacy" and "diplomacy for science." Although most of the recommendations are aimed at the department generally, their implementation could be beneficial to the role of U.S. agencies and scientists in international ocean sciences. Examples of relevant recommendations including establishing "scientific affairs" as the major focus of a departmental undersecretary and re-establishing the department's corps of Science Counselors.

Current Resources Utilized for Global Cooperation

As described above, I believe that U.S. agencies and scientists do a good job of participating in international intergovernmental and non-governmental organizations. I believe that the Department of State's most important role in international organizations is in the area of helping U.S. agencies in their representation in intergovernmental organizations such as IOC, ICES, and PICES. Additionally, the Department of State can assist the academic community in helping U.S. scientists interact with scientists from other nations and in promoting capacity development in developing nations. Because several U.S. agencies are already active in international ocean

science activities, it will be important for the Department of State to find a niche that will help, and not hinder, activities that are already working well.

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GLOBEC Newsletter Article, page 1

GLOBEC Newsletter Article, page 2

1.5 Appointment of an *ad hoc* Finance Committee

The Executive Committee approved Bjorn Sundby (Canada), K.K. Liu (China-Taipei), and Mingyan Zhu (China-Beijing) to serve as the 2003 Ad Hoc SCOR Finance Committee. The committee was approved in advance so they could receive and review SCOR financial information before the meeting.

1.6 Committee to Review the Disciplinary Balance of SCOR's Activities

The committee of Laurent Labeyrie, John Field, and Roberto Purini was formed at the 2002 General Meeting and was asked to continue their work through the 2003 Executive Committee meeting.