

PRESIDENT: Professor Wolfgang Fennel SECRETARY: Professor Jorma Kuparinen EXECUTIVE DIRECTOR: Dr. Edward R. Urban Jr.

Secretariat: College of Earth, Ocean, and Environment Robinson Hall University of Delaware Newark, DE 19716 USA

MEMORANDUM

Meeting
J

- FROM: Ed Urban, SCOR Executive Director
- RE: Background Book for Meeting
- DATE: 10 September 2009

I am pleased to enclose the background book for the upcoming SCOR Executive Committee Meeting in Beijing. I hope that you have a chance to read it before the meeting, although I know that the time is limited and the background materials are extensive. Please be sure to review the annotated agenda following. I have tried to identify the actions that we need to consider at the meeting and have cross-referenced the issues to the pages where relevant background information can be found, so we can make the best use of our time together. Please skim the remainder of the book and focus on those sections that are most closely related to your interests and responsibilities. I hope that the book also will be a useful reference to you between SCOR meetings. The background book is also available on the Web, at http://www.scor-int.org/2009EC.htm.

We will not be able to bring many extra background books to the meeting, so please bring your copy. Please let me know if you think other items should be made available to participants at the meeting.

I look forward to seeing each of you in Beijing next month.

39th SCOR EXECUTIVE COMMITTEE MEETING Beijing, China 20-22 October 2009

LIST OF PARTICIPANTS

President:

Wolfgang Fennel (NM) Baltic Sea Research Institute Seestr. 15 Rostock 18119 GERMANY Phone: +49-381-51978 Fax: +49-381-51978-114 Email: wolfgang.fennel@io-warnemuende.de

Secretary:

Jorma Kuparinen (NM) Faculty of Biosciences Dept. of Biological and Environmental Sciences PO Box 65 (Viikinkaari 1) FI-00014 University of Helsinki FINLAND Tel: +358-9-1915-7820 Fax: +358-9-323-2970 E-mail: jorma.kuparinen@helsinki.fi

Past-President:

Bjørn Sundby (NM) Earth & Planetary Sciences McGill University 3450 University Street Montreal, QC, Canada H3A 2A7 Tel: +1-514-398-4883 Fax: +1-514-398-4680 E-mail: bjorn.sundby@mcgill.ca

Vice Presidents:

Peter Burkill (NM) Sir Alister Hardy Foundation for Ocean Science The Laboratory Citadel Hill Plymouth PL1 2PB, UNITED KINGDOM Phone: +44-1752-633281 Fax: +44-1752-600015 Email: phb@sahfos.ac.uk

Huasheng Hong (NM)

College of Oceanography and Environmental Science Xiamen University Xiamen, Fujian, CHINA Phone: +86-592-2182216 Fax: +86-592-2095242 Email: hshong@xmu.edu.cn

Mary (Missy) Feeley (NM)

P.O. Box 4778 Exxon Mobil Exploration Company GP8 896 Houston, TX 77210-4778 USA Phone: +1-281-654-3588 Fax: +1-281-654-7751 Email: missy.feeley@exxonmobile.com

Ex-Officio Members:

Michael MacCracken (IAMAS) 6308 Berkshire Drive Bethesda, MD 20814 USA Phone: +1-301-564-4255 Email: mmaccrac@comcast.net

Lawrence Mysak (IAPSO)

Dept. of Atmospheric and Oceanic Sciences McGill University 805 Sherbrooke Street West Montreal, Quebec, H3A 2K6 CANADA Phone: +1 514 398 3768 Fax: +1 514 398 6115 Email: lawrence.mysak@mcgill.ca

Co-opted Members:

John Compton (NM) Department of Geological Sciences University of Cape Town Rondebosch 7700 SOUTH AFRICA Tel: +27-21 650-2927 E-mail: john.compton@uct.ac.za

Venugopalan (Venu) Ittekkot

Leibniz Center for Tropical Marine Ecology Fahrenheitsstr 6 28359 Bremen, GERMANY Phone: +49-421-23800-21 Fax: +49-421-23800-30 Email: ittekot@zmt.uni-bremen.de

SCOR Secretariat:

Lora Carter

Financial Assistant SCOR Secretariat Robinson Hall College of Earth, Ocean, and Environment University of Delaware Newark, DE 19716 USA Phone: +1-302-831-7011 Fax: +1-302-831-7012 Email: lora.carter@scor-int.org

Elizabeth Gross

Finance Officer SCOR Secretariat Robinson Hall College of Earth, Ocean, and Environment University of Delaware Newark, DE 19716 USA Phone: +1-302-831-7014 Fax: +1-302-831-7012 Email: egross@scor-int.org

Ed Urban

Executive Director SCOR Secretariat Robinson Hall College of Earth, Ocean, and Environment University of Delaware Newark, DE 19716 USA Phone: +1-302-831-7013 Fax: +1-302-831-7012 Email: ed.urban@scor-int.org

Other Participants:

Victor Akulichev (NM) Pacific Oceanological Institute Far Eastern Branch, Russian Academy of Sciences 43 Baltiyskaya Street Vladivostok 690041 RUSSIA Phone: +7-423-2 311400 Fax: +7-423-2 312573 Email: akulich@poi.dvo.ru

Larisa Akulichev RUSSIA

Riitta Autio (NM)

Finnish Environment Institute (SYKE) P.O. Box 140 (Erik Palmenin aukio 1) FI-00251 Helsinki, FINLAND Phone: +358-50-520-3305 Email: riitta.autio@environment.fi

Wendy Broadgate

Deputy Director, Natural Sciences IGBP Secretariat Royal Swedish Academy of Sciences Box 50005 SE-104 05 Stockholm SWEDEN Phone: +46 8 6739 559 Fax: +46 8 16 64 05 Email: wendy@igbp.kva.se

Corina Brussaard (NM)

Royal Netherlands Institute for Sea Research, NIOZ PO Box 59 1790 AB Den Burg, Texel, THE NETHERLANDS Phone: +31 222 369513 Fax: +31 222 619674 Email: corina.brussaard@nioz.nl

Sergey Dobrolyubov (NM)

Moscow State University Faculty of Geography Leninskiye Gory Moscow 117234 RUSSIA Phone: +7-495-9391420 Fax: +7-495-9328836 Email: science@georgr.msu.ru

Marta Estrada (NM)

Institut de Ciencies del Mar, CSIC Pg. Maritim de la Barceloneta, 37-49 08003 Barcelona, SPAIN Phone: +34 932309500 Fax: +34 932309555 Email: marta@m.csic.es

Sybille Fennel

An den Buhnen 17 18119 Rostock GERMANY Phone: +49-381-52174 Email: S.Fennel@kabelmail.de

Adolfo Gracia Gasca (NM)

Instituto de Ciencias del Mar y Limnologia Universidad Nacional Autonoma de Mexico Apdo. Postal 70-305 Mexico, D.F. 16200 MEXICO Phone: +52 55 56221572 Fax: +52 55 56221503 Email: gracia@unam.mx

Natalia Golubeva

6, 2-d Peschanaya St., Ap 92 Moscow 125252 RUSSIA Phone: +7 863-263-7726 Fax: +7 863-266-56-77 Email: NGolubeva@ipiran.ru

Gwo-Ching Gong (NM)

Institute of Marine Environmental Chemistry and Ecology National Taiwan Ocean University No. 2 Rd. Pei-Ning, 20224, Keelung TAIWAN Phone: +886-2-24629707 Fax: +886-2-24620892 Email: gcgong@mail.ntou.edu.tw

Motoyoshi Ikeda (NM)

Higashi-ku, North 27, East 3 Sapporo, JAPAN Phone: +81-11-704-3965 Fax: +81-11-704-3965 Email: mikeda@ees.hokudai.ac.jp

Catherine Jeandel (NM)

LEGOS (CNRS/CNES/IRD/UPS) Observatoire Midi-Pyrénées 14, Ave E. Belin, 31400 –Toulouse, France Tel: +33-(0)5-61-33-29-33 Fax: +33-5-61-25-32-05 Email: catherine.jeandel@legos.obs-mip.fr

Roberto Purini (NM)

C.N.R. - I.S.A.C. Via del Fosso del Cavaliere 100 00133 Roma ITALY Phone: +39-6-43334248 Fax: +39-6-49934323 Email: r.purini@isac.cnr.it

Johan Rodhe (NM)

Dept. of Earth Sciences Univ. of Gothenburg Box 460 SE-40530 Goteborgs Universitet Göteborg, SWEDEN Phone: +46-317862876 Email: johan.rodhe@gu.se

Sergey Shapovalov (NM)

Russian Academy of Sciences 36 Nakhimovsky Ave. Moscow 117997 RUSSIA Phone: +7-499-1245981 Fax: +7-499-1245983 Email: smshap@ocean.ru

Marie-Alexandrine Sicre (NM)

LSCE, domaine du CNRS Ave de la Terrasse 91198 Gif sur Yvette cedex FRANCE Phone: +33 1 69 82 43 34 Fax: +33 1 69 82 35 68 Email: sicre@lsce.ipsl.fr

	Agenda for 20	009 SCOR Executive Com	mittee Meeting (draft)	
	Tues, Oct. 20	Wed., Oct. 21	Thurs., Oct. 22	Fri., Oct. 23
9:00 9:15 9:30	Welcome and Logistics	WG Proposals	Affiliated Projects InterRidge, CoML, IOCCG, IMAGES, iAnZone,	
9:45 10:00	Celebration of 25 years of China-Beijing in SCOR	(cont.)	Ocean Mixing	
10:15			PICES Other IGOs	
10:30 10:45	BREAK	BREAK	BREAK	
11:00 11:15 11:30 11:45 12:00	Celebration of 25 years of China-Beijing in SCOR	WG Proposals (cont.)	ICSU IABO, IAMAS, IAPSO IGBP, SCOPE, WCRP SCAR	
12:15 12:30			Other Organizations – POGO, AOSB	NO
12:45 13:00 13:15 13:30	LUNCH	LUNCH	LUNCH	Excursion
13:45 14:00	President's Report Approval of Agenda Exec. Director's Report	WG Proposals	Report of Ad Hoc	CC
14:15	Appointment of Ad Hoc Finance and Disciplinary Balance Committees Begin process for 2010 elections	(cont.)	Disciplinary Balance Committee	×
14:30 14:45		GLOBEC		
15:00 15:15	Current WGs	SOLAS	Finances Report of Ad Hoc Finance Committee	
15:30 15:45	BREAK	BREAK	BREAK	
16:00 16:15		GEOTRACES		
16:30 16:45	WG Proposals	IMBER	SCOR Executive Committee	
17:00 17:15 17:30		GEOHAB Ocean Carbon and other	(closed)	
17:45		activities		
18:00	Banquet			

39th SCOR EXECUTIVE COMMITTEE MEETING Beijing, China

20-22 October 2009

ANNOTATED AGENDA

1.0 OPENING

1.1 Opening Remarks and Administrative Arrangements Fennel, Urban, Hong

1.2 Approval of the Agenda

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

The President will briefly review activities since the SCOR Executive Committee Meeting in October 2008 in Woods Hole.

1.4 Report of SCOR Executive Director

The Executive Director will report on his activities since the 2008 SCOR meeting, and on the financial health of SCOR.

1.5 Appointment of an *ad hoc* Finance Committee

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 2010 activities. The Committee will report to the meeting under agenda item **8.3**.

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

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 when the next request for working group proposals is sent.

Action: Approve a Disciplinary Balance Committee

1.7 2010 Elections for SCOR Officers

By the end of the meeting, a nominating committee should be approved. This committee will solicit nominations for SCOR Officers according to the procedure described on **pp. 1-7**. Action: Select and approve Nominating Committee by the end of meeting.

Urban

Fennel

Sundby

Fennel

Fennel

2.0 WORKING GROUPS

2.1 **Disbanded Working Groups**

2.1.1 WG 78—Determination of Photosynthetic Pigments in Seawater

Urban

The book is complete, except for two chapters. Cambridge University Press has decided to publish the book after all.

Action: None.

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. The Executive Committee should make preliminary decisions, based on the progress of working groups and the merits of the requests, about whether funding should be provided for 2010 activities of working groups that request funds. The Finance Committee will take into account the recommendations of the Executive Committee as it develops the 2010 SCOR budget, which is then subject to final approval by the meeting.

2.2.1 WG 111—Coupling Winds, Waves and Currents in Coastal Models Mysak The group is developing a book entitled *Coupled Coastal Wind-Wave-Current Dynamics*, which will be published by Cambridge University Press. One of the co-chairs, Chris Mooers, is taking responsibility for the book and is waiting for revisions to one chapter. It is expected that the book will now be delivered to the publisher by January 2010.

Action: Approve disbanding when their book is completed.

2.2.2 SCOR/LOICZ/IAPSO WG 122—Estuarine Sediment Dynamics Sundby

The group met for its final time on September 23-27, 2007 at the University of Colorado, Boulder, Colorado, USA. The meeting concentrated on completing the Terms of References of the group and defining the publication of its findings in a special issue to Estuarine, Coastal and Shelf Sciences. Seven papers have been submitted for the special issue already and two more are expected. The papers should be available, at least online, by the end of 2009. Action: Approve disbanding when their publication is completed.

2.2.3 SCOR/IMAGES WG 124— Analyzing the Links Between Present Oceanic **Processes and Paleo-records (LINKS)** *Compton*

The group met for the final time on 20–24 November 2006, in Delmenhorst, Germany. The group has downscaled its plans from 5 review papers to one review paper, based on Karin Lochte's presentation last year at the SCOR 50th Anniversary meeting and some of the texts already written by the members in preparation of the originally planned manuscripts. Wolf-Gladrow, Klaas, and Lochte will prepare the outline of the review paper and seek input from working group members. They are creating the outline now, will seek input from November until March, and will finalize and submit the publication in June.

Action: Approve revise plan and encourage them to complete their work?

2.2.5 WG 126—Role of Viruses in Marine Ecosystems

The group held its final meeting on 14-16 May in Newark, Delaware (USA), as a community workshop (see http://www.scor-int.org/Working_Groups/WG126Symposium-2.pdf). 77 individuals participated. The group has been focusing on the production of an online, freely available publication currently entitled *Methods in Aquatic Virus Ecology* (MAVE). The special volume (funded by the Gordon and Betty Moore Foundation) will be assembled and published by ASLO. Chapters have been identified, and papers submitted. Several chapters are at the in-press stage and proofs being made. Only a couple of chapters remain in the review revision pipeline, and the project should be completed by the end of 2009. Action: Approve disbanding when their publication is completed.

2.2.6 SCOR/IAPSO WG 127 on Thermodynamics and Equation of State of Seawater

The fourth and final meeting of the Working Group is planned for 2-5 September 2009 in Arnhem, the Netherlands, funded by NOAA and IOC. Steffen Seitz (Germany) was added as an Associate Member because of his expertise and his contributions to the group. During the past year, the International Thermodynamic Equation of Seawater 2010 (TEOS-10) was adopted as the standard definition of seawater for engineering purposes by the International Association of the Properties of Water and Steam and by the Intergovernmental Oceanographic Commission (IOC) of UNESCO as the oceanographic definition of seawater. During this past year WG127 has also progressed many of its publications, including the creation of the TEOS-10 Web site (http://www.teos-10.org) and the writing of a comprehensive TEOS-10 manual. UNESCO/IOC plans to publish this TEOS-10 manual in 2010. The group has requested extension to 31 December 2010 so they can continue to serve as a source of advice regarding the introduction of the new standard.

Action: Consider extension of the WG until 31 December 2010.

2.2.7 WG 128 on Natural and Human-Induced Hypoxia and Consequences for Coastal Areas **Burkill**

The group decided to publish its papers in a special issue of *Biogeosciences*. The deadline for submission was 31 August and 10 papers were submitted and are available for discussion. Since some of the papers are rather lengthy, the group requested permission from SCOR to pay for page charges in lieu of having a third meeting. SCOR agreed to this proposal last year.

2.2.4 WG 125—Global Comparisons of Zooplankton Time Series

The group held its final meeting in May 2008 in Gijon, Spain, before the symposium on "Effects of Climate Change on the World's Oceans". During the symposium, the group presented one jointly authored summary paper in the symposium plenary session on "Impacts on Marine Ecosystems," and also held a one-day workshop session on zooplankton time series. 15-20 papers from the working group have been submitted for a special issue of Progress in Oceanography (editor-in-chief Cisco Werner has given pre-approval for a special issue, and Pierre Pepin has agreed to serve as "arms-length" guest editor for the issue). Publication is expected in early 2010. Papers will be available in pdf format on the Web before they are published in hard copy. The NOAA National Marine Fisheries Service committed funds to bring more participants (and data) into the process.

Action: Approve disbanding of group when publication is completed.

Kuparinen

Mysak

Action: Approve disbanding when their publication is completed.

2.2.8 SCOR/IAPSO WG 129 on Deep Ocean Exchanges with the Shelf *Mysak*

Papers from the group's 2008 workshop in Cape Town, South Africa will be published in *Ocean Science*; five have been submitted so far and 8 more are expected. Publication is expected in 2010. The group's final meeting and a special symposium were held in mid-2009, in conjunction with the IAPSO meeting in Montreal. The group has requested help from SCOR in finding funding for a student to help establish a database and maps.

Actions: Approve disbanding when their publication is completed and discuss approaches to meeting their request for help to establish a database and maps.

Burkill

Feeley

2.2.9 SCOR WG 130 on Automatic Plankton Visual Identification

This group met for the third time (two times with SCOR funding) in May in Baton Rouge, Louisiana, USA. The group discussed the progress of its work, as well as papers for a special issue of the *Journal of Plankton Research*. A pre-meeting Zooscan workshop provided an opportunity to learn how to use this instrument to process mesozooplankton samples. Plans were made to present progress in image classification at the next Zooplankton Production Symposium in Chile, at the ASLO Aquatic Sciences Meeting in Puerto Rico, and at the ICES ASC in 2010. The group's final meeting will be held at one of these venues.

Action: Consider funding for 2010 meeting.

2.2.10 SCOR WG 131 on The Legacy of in situ Iron Enrichment: Data Compilation and Modeling MacCracken

The group is still represented by two co-chairs, Philip Boyd (New Zealand) and Dorothee Bakker (UK). SCOR has postponed appointment of the remaining members of the group or analysis of the data compiled until the data compilation is completed. Until now, SCOR has provided partial funding for a post-doctoral fellow to gather data and metadata, and to work with the open-access Biological and Chemical Oceanography Data Management Office (BCO-DMO) at Woods Hole. Status of the input of each data set is shown at **p. 2-69**.

Action: Consider whether the group should be continued.

2.2.11 SCOR/LOICZ WG 132 on Land-based Nutrient Pollution and the Relationship to Harmful Algal Blooms in Coastal Marine Systems *Kuparinen*

This group is being co-funded by the Institute of Oceanology of the Chinese Academy of Sciences and the Land-Ocean Interactions in the Coastal Zone project, with a small amount of funding added by SCOR. They have made good progress on their work starting in mid-2008 and plan their second meeting in October 2009, in conjunction with the SCOR Executive Committee meeting in Beijing, China. The group plans to hold its final meeting in Crete, Greece, in conjunction with the 14th International Conference on Harmful Algae. **Action: Consider funding for 2010 meeting.**

2.1.12 SCOR/IAPSO WG 133: OceanScope

The OceanScope working group met for the first time in July in conjunction with the MOCA'09 meeting in Montreal. The meeting began with discussions of science, vessel and instrumentation issues, to bring all of participants up to a common frame of knowledge about the issues likely to

define and constrain the development of the OceanScope paradigm. Participants worked through each of the terms of references (ToRs) and homework assignments were developed for each of the ToRs, determining if they covered all the relevant issues. The group will meet for the second time in April 2010 at the International Council for Shipping.

Action: Consider funding for 2010 meeting.

2.1.13 SCOR WG 134 on The Microbial Carbon Pump in the Ocean Sundby

This working group will meet for the first time in Xiamen, China, on 27-30 October, in the week after the SCOR Executive Committee meeting. The meeting will include presentations by participants around the theme of "Bridging biology and chemistry in ocean carbon sequestration", relating how the expertise of each member can contribute to the group's terms of reference. Detailed plans will be made for how the terms of reference will be achieved in the reminder of the group's life.

Action: Consider funding for 2010 meeting.

2.1.14 SCOR/InterRidge WG 135 on Hydrothermal energy transfer and its impact on the ocean carbon cycles *Feeley*

This group will meet for the first time in Woods Hole (USA) on 23-24 November. Main points to be discussed will be the strategies to address the group's terms of reference and the definition of a preliminary agenda for the next three years. This will include the definition of sub-groups (water column, deep-biosphere, seafloor ecosystems) and the links with initiatives like GEOTRACES, IODP, and any future programmes emerging from CoML beyond 2010. The group also will develop the 2011 workshop organization committee and to discuss the venue of the workshop.

Action: Consider funding for 2010 meeting.

2.3 New Working Group Proposals

Six working group proposals were received by the SCOR Secretariat. SCOR can fund one or two new working groups to begin in 2010.

2.3.1 Working Group on Evaluating the ecological status of the world's fished marine ecosystems

Action: Determine whether to approve as new SCOR working group.

2.3.2 Working Group on Coupled climate-to-fish-to-fishers models for understanding mechanisms underlying low-frequency fluctuations in small pelagic fish

IMBER and PICES submitted support letters for this proposal.

Action: Determine whether to approve as new SCOR working group.

2.3.3 Working Group on Sea Ice Biogeochemistry

The SCOR Antarctica and the Global Climate System Steering Committee submitted a support letter for this proposal.

Action: Determine whether to approve as new SCOR working group.

2.3.4 Working Group on Climatic Importance of the Greater Agulhas System

IMAGES submitted a support letter for this proposal and WCRP has agreed to provide some financial support for the group, if approved.

Action: Determine whether to approve as new SCOR working group.

2.3.5 Working Group on Patterns of Phytoplankton Dynamics in Coastal Ecosystems: Comparative Analysis of Time Series Observation

PICES and the UNESCO regional office in Perth, Australia submitted a support letter for this proposal.

Action: Determine whether to approve as new SCOR working group.

2.3.6 Working Group on Coastal Lagoons

Action: Determine whether to approve as new SCOR working group.

3.0 LARGE-SCALE SCIENTIFIC PROGRAMS

3.1 SCOR/IGBP/IOC Global Ocean Ecosystems Dynamics (GLOBEC) Project

GLOBEC held its Third Open Science Meeting in Victoria, Canada in June 2009 as well as several other very successful meetings aimed at GLOBEC synthesis. Peter Burkill made remarks at the OSM on behalf of SCOR and Elizabeth Gross made a presentation with Roger Harris about the history of GLOBEC. SCOR issued a declaration of congratulations to GLOBEC for its OSM (following **p. 3-13**). The final GLOBEC SSC meeting will be held in Plymouth, UK in November 2009.

Action: None.

3.2 SCOR/IOC Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB) Program

GEOHAB continues to develop its Core Research Projects (CRPs). Reports for the Core Research Project on HABs in Fjords and Coastal Embayments and for Asian GEOHAB are nearing completion. GEOHAB held a successful Modeling Workshop in Galway, Ireland, just after the 2009 SSC meeting. The next SSC meeting is not yet scheduled, but may be held in Hawaii in conjunction with the Open Science Meeting on HABs in Benthic Environments. The SSC is working on nominations for new SSC members, starting in 2010. **Action: None.**

3.3 SCOR/IGBP Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) Project

The IMBER SSC met most recently in June 2009 at IOC Headquarters in Paris, France. They named a new Executive Officer in the past year, Lisa Maddison (South Africa). IMBER will hold its second Imbizo open science meeting in 2010 in Crete, Greece. Publications are still in progress from the first Imbizo. A major task of the IMBER SSC in the coming year will be to determine how to implement the recommendations of the Transition Task Team, which was

Burkill

Hong

Sundby

formed by SCOR and IGBP to advise IMBER about how to respond to the completion of GLOBEC (which has some unfinished projects), as well as other issues related to mid-life adjustments for IMBER.

Action: None.

3.4 GEOTRACES Project

Sundby

The GEOTRACES Scientific Steering Committee held its third meeting in Toyama, Japan in November 2008. One of the two GEOTRACES intercalibration cruises (in the Atlantic Ocean) was conducted in mid-2008 and the second took place this year in the Pacific Ocean. GEOTRACES has established an international GEOTRACES Data Management Office at the British Oceanographic Data Centre (BODC) in Liverpool, UK, and a full-time Data Liaison Officer has been hired. The U.S. National Science Foundation (NSF), BODC, and the UK Natural Environment Research Council are co-funding the position. NSF and several European sources are co-funding the first full-time position for a GEOTRACES International Project Office in Toulouse, France and interviews for the position will be held on 7 and 21 September. The GEOTRACES SSC and Data Management Committee will meet next in Washington, D.C. in November 2009. This will provide an opportunity for the SSC to meet with U.S. agency program managers. The SSC will establish a rotation scheme in 2010.

3.5 SCOR/IGBP/WCRP/CACGP Surface Ocean-Lower Atmosphere Study Hong

SOLAS is planning its third open science meeting for Barcelona, Spain in November and completed its fourth summer school in August. SOLAS and IMBER have created a cooperative research activity related to ocean carbon and have formed a working group to guide the activity and to interact with IOCCP. SOLAS is reviewing its progress and potentially revising its plans at mid-project. SCOR and other co-sponsors are considering new members for the SOLAS SSC. Action: None

4.0 OCEAN CARBON AND OTHER ACTIVITIES

4.1 IOC/SCOR International Ocean Carbon Coordination Project (IOCCP)

Fennel, Urban

IOCCP has continued to be very productive in the past year. NSF is funding 1+ positions at IOC for IOCCP and is providing activity funding through SCOR. A new IOCCP director, Kathy Tedesco (USA), was hired since last year's SCOR meeting. Maria Hood, the former director, has moved to part-time status as an NSF-funded consultant to the project. The group's major activity this year has been the continued work of a panel to revise the WOCE/CLIVAR hydrography manual, follow-up on a workshop on biogeochemical measurements at time-series stations, and an activity on standards for ocean acidification experiments (with the EU EPOCA project and others).

Action: None

4.2 Symposia on The Ocean in a High-CO₂ World

SCOR, IOC, IAEA and IGBP held the second symposium on The Ocean in a High-CO₂ World on 6-9 October 2008, at the Oceanography Museum in Monaco, immediately before last year's SCOR meeting. Several documents have been produced from the symposium and the special issue of *Biogeosciences* is now closed, including 29 papers. Fundraising has started for the third symposium, in 2012.

Action: Suggest potential financial sponsors.

4.3 Other Activities

4.3.1 Third SCOR Summit of International Marine Research Projects

Fennel, Sundby, Urban

SCOR obtained funding from the Alfred P. Sloan Foundation to convene a third meeting of representatives of the major large-scale ocean research projects, both SCOR-sponsored and others. The meeting was held at the University of Delaware, Newark, Delaware (USA) on 30 March-1 April 2009. The major discussion items included data management/data publication/project data legacy, capacity building, observing technology/ocean biology observatories, project visibility/publicity, modeling, and interactions with intergovernmental organizations. The SCOR Executive Committee will discuss additional support to the projects that was recommended by meeting participants. This was the final summit supported by the Sloan Foundation, so the projects and SCOR will need to determine whether to support a fourth summit in 2011. The SCOR Secretariat will pursue the possibility of focused online discussions among the projects.

Actions: Act on items included in 2010 budget.

4.3.2 Panel on New Technologies for Observing Marine Life

The Sloan Foundation allocated new funding for the Panel for 2008-2010. The fifth meeting of the panel was held in Newark, Delaware (USA) in December 2008. The Panel's primary task is to create a CoML technology synthesis as part of the overall CoML synthesis, as the program comes to an end in 2010. The Panel will also oversee two cross-project synthesis activities on electronic tagging and will convene a meeting on ocean biology observatories in conjunction with OceanObs09 in Venice, Italy in September 2009. Action: None.

4.3.3 SCOR/IODE Data Publication Activity

SCOR and IOC's International Oceanographic Data and Information Exchange (IODE) have been working together for the past 18 months on a project to promote getting data associated with research papers, as well as stand-alone data sets, into national and international data management systems. Activities since the 2008 SCOR meeting include a presentation by Ed Urban at the Fall American Geophysical Union meeting on the activity and the recent acceptance of a publication in *EOS*. A small group of people met in Oostende, Belgium earlier this year to scope out some pilot projects to test various aspects of data publication. The same individuals may convene later this year to assess the progress on these pilot projects, and activity will continue at least through 2010, pending funding support from SCOR.

Urban

Feeley

Action: Consider budgeting funds for 2010.

5.0 CAPACITY-BUILDING ACTIVITIES

5.1 SCOR Committee on Capacity Building

The committee will meet for the second time just prior to the SCOR Executive Committee meeting, on 17-18 October in Shanghai. The participants will discuss the status and progress of ongoing SCOR capacity-building activities, with a focus on activities in Asia and Africa. **Actions: Consider requests from the Committee's meeting.**

5.1.1 Regional Graduate Networks of Oceanography and Marine Environmental Sciences Ittekkot This activity is still unfunded, but the Committee on Capacity Building will use its upcoming meeting to discuss the potential for RGNOs in Africa and Asia. Action: Consider funding for 2010 activities of the committee.

5.1.2 POGO-SCOR Visiting Fellowships for Oceanographic Observations *Urban* Action: Consider whether to provide funding in 2010.

5.1.3 NSF Travel Support for Developing Country ScientistsUrbanSCOR received the second year of its grant from the U.S. National Science Foundation at a levelof \$75,000 per year. The grants have been an important source of support for several SCOR-related meetings in the past year. New requests are listed on pp. 5-6 and 5-7.Action: Consider recommendations of the SCOR Committee on Capacity Building

5.1.4 SCOR Reports to Developing Country Libraries

The SCOR Secretariat distributed one report to developing country libraries since the 2008 SCOR meeting, the JGOFS/LOICZ Continental Margins Task Team synthesis: *Carbon and Nutrient Fluxes in Continental Margins: A Global Synthesis.* Action: None

6.0 RELATIONS WITH INTERGOVERNMENTAL ORGANIZATIONS

6.1 Intergovernmental Oceanographic Commission

Bjørn Sundby attended the IOC General Assembly in June 2009 to represent SCOR (IOC changed the dates of the meeting after Wolfgang Fennel and Ed Urban had made other plans for those dates). As usual, SCOR represented ICSU at the meeting. SCOR received a lot of visibility at the meeting, as Trevor McDougall, chair of SCOR/IAPSO WG 127 gave the Bruun Memorial Lecture and Venu Ittekkot gave the Pannikaar Memorial Lecture. IOC adopted the new equation of state of seawater (TEOS-10) and will publish the manual that describes its use. SCOR and IOC cooperate on several different activities, as discussed in other sections.

GOOS is working with the Global Earth Observation System of Systems (GEOSS) on implementing an ocean observation system. GOOS is promoting the Chlorophyll Global

Annotated Agenda-10

Sundby

Ittekkot

Integrated Network (ChloroGIN) project which aims to increase the in situ measurement of chlorophyll in the ocean and to combine these data with satellite-derived estimates. Trevor McDougall made a presentation at the GOOS Scientific Steering Committee on SCOR/IAPSO WG 127's work and Missy Feeley made a presentation about the work of the SCOR/IAPSO WG 133 on OceanScope.

Action: None.

6.2 North Pacific Marine Science Organization (PICES) Hong

PICES conducts several activities that are relevant to SCOR interests and that implement SCOR activities in the North Pacific region. The 2009 PICES annual meeting will be held in Korea immediately after the SCOR meeting, and Wolfgang Fennel and Ed Urban will attend the meeting to represent SCOR and to meet with the new Korean SCOR Committee. PICES submitted letters of support for two of the working group proposals.

Action: Consider request for developing country scientist travel support.

6.3 International Council for Exploration of the Seas

ICES was involved in the SCOR Project Summit and has expressed an interest in increased interactions with SCOR.

Action: Appoint a liaison from the SCOR Executive Committee?

6.4 Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) Urban

SCOR provided support for one meeting of GESAMP Working Group 38 on The Atmospheric Input of Chemicals to the Ocean.

Action: Appoint a liaison from the SCOR Executive Committee?

7.0 RELATIONS WITH NON-GOVERNMENTAL ORGANIZATIONS

7.1 International Council for Science

ICSU has continued its development of regional offices in Africa, Southeast Asia, and South America. ICSU has designated SCOR its representative at IOC annual meetings. Action: None

7.1.1 International Geosphere-Biosphere Program (IGBP) *Fennel, Broadgate* Wolfgang Fennel attended the 2009 IGBP Science Committee meeting in Japan in May 2008 to represent SCOR. SCOR and IGBP staff members have ongoing discussions in relation to cosponsored projects.

Action: Determine which SCOR decisions need to be transmitted to IGBP for comment and joint action, particularly in relation to approvals of SSC members for joint projects.

Fennel, Urban

Action: Discuss any new interactions that SCOR should initiate with SCOPE.

7.1.4 Scientific Committee on Problems of the Environment (SCOPE)

7.2 **Affiliated Organizations**

and a funding plan.

7.2.1 International Association for Biological Oceanography (IABO) Urban No report has been received yet.

Action: Discuss potential areas of interaction with IABO.

7.2.2 International Association for Meteorology and Atmospheric Sciences (IAMAS) **MacCracken**

Mike MacCracken, as IAMAS past-president, continues as IUGG/IAMAS liaison to SCOR. Action: Discuss potential areas of interaction with IAMAS.

7.2.3 International Association for the Physical Sciences of the Oceans (IAPSO) Mysak SCOR and IAPSO are currently co-sponsoring WG 122 on Estuarine Sediment Dynamics (with LOICZ), WG 127 on Thermodynamics and Equation of State of Seawater, WG 129 on Deep Ocean Exchanges with the Shelf, and OceanScope WG 133. Action: None.

7.3 **Affiliated Programs**

The benefit of continued affiliation to SCOR is evaluated at each General Meeting. These programs were invited to send representatives to the project summit sponsored by SCOR in 2009. SCOR is using the project summits to help (among other benefits) the affiliated projects interact with other large-scale ocean research projects; there is no other forum for this interaction to take place.

WCRP is co-sponsoring the SOLAS project and SCOR projects are working well with CLIVAR, the part of WCRP most relevant to SCOR. WCRP has offered to co-sponsor the proposed working group on the Agulhas current, if approved, although the funding level they would provide has not been specified. Action: None.

7.1.3 Scientific Committee on Antarctic Research (SCAR) **Kuparinen**

SCAR and SCOR are co-sponsoring a joint Expert Group on Oceanography. The major focus for this group in 2009 was continued work on a plan for a Southern Ocean Observing System. The Expert Group will hold an opportunistic meeting on 26 Sept., after OceanObs'09 in Venice, to discuss the status of the planning document and plans for SOOS implementation. Action: Consider 2010 funding for the Expert Group on Oceanography.

SCOPE will become independent of ICSU in 2010 and is developing a new mode of operation

7.1.2 World Climate Research Programme (WCRP)

MacCracken

7.3.1 Census of Marine Life (CoML)

In 2010, this international research program will release its first report on the status of knowledge of marine biodiversity. To meet this deadline, CoML has begun implementing plans for integration, synthesis and visualization of marine biodiversity information, as well as the management needs to achieve them. The final CoML conference will be held in London in October 2010 and SCOR will be represented there by Peter Burkill, Ed Urban, and the chair of the SCOR Panel on New Technologies for Observing Marine Life (Alex Rogers). Information about the SCOR Panel is presented under agenda item 4.3.2. Action: None.

7.3.2 International Antarctic Zone (iAnZone) Program

iAnZone met in conjunction with MOCA'09 Assembly in Montreal in July 2009. They are discussing the future of the program.

Action: None.

7.3.3 International Marine Global Changes Study (IMAGES)

SCOR and IMAGES are currently co-sponsoring WG 124 on Analyzing the Links Between Present Oceanic Processes and Paleo-Records. IMAGES submitted a letter of support on the Agulhas Current working group proposal (see item 2.3.4). They are considering the future of their program.

Action: None.

7.3.4 InterRidge - International, Interdisciplinary Ridge Studies

InterRidge has an active program of working groups and scientific meetings, as well as significant education and outreach activities. SCOR and InterRidge are co-sponsoring WG 135 on Hydrothermal Energy Transfer and its Impact on the Ocean Carbon Cycles. The InterRidge office will move to the National Oceanography Centre in Southampton, UK, in 2010. Action: None.

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

Several monographs are in progress by IOCCG scientific working groups over the past year and seven have been published in the IOCCG Report series so far. Two additional reports are expected to be published by the end of 2009.

Action: None.

7.3.6 Ocean Mixing Processes

No report has been received yet. Action: None.

7.4 **Other Organizations**

7.4.1 Partnership for Observation of the Global Ocean (POGO)

The 2009 POGO meeting was be held in Concepcion, Chile in January and the 2010 meeting will be held in Moscow. POGO and SCOR are participating together on the POGO-SCOR

Compton

Compton

Kuparinen

Fennel

Burkill

Burkill

Visiting Fellowships for Oceanographic Observations. POGO devotes much effort to capacity building and to ocean input to the Global Earth Observing System of Systems (GEOSS). Action: None

7.4.2 Arctic Ocean Sciences Board (AOSB)

The AOSB re-established contact with SCOR in 2007 and is interested in expanding its role in the global oceans programs and will be looking to new linkages with various international marine science organizations such as SCOR and GOOS. AOSB merged with the International Arctic Science Committee in 2009, but will maintain a discrete profile within IASC. **Action: None.**

8.0 ORGANIZATION AND FINANCE

8.1 Membership

8.1.1 National Committees

Korea re-entered SCOR in 2009. The changes in Nominated Members since the 2008 General Meeting are given on **p. 8-1**. **Action: None.**

8.2 Publications Arising from SCOR Activities

The list of publications from SCOR-funded activities that have appeared in the past year can be found on **p. 8-4**.

2008 *SCOR Proceedings*—The *Proceedings* will be printed and distributed in electronic form in October. A limited number of hard copies may be printed.

SCOR Web site—The SCOR Web site is updated and checked for dead links regularly. Work continues on re-designing the site and the SCOR Executive Committee will discuss re-design options.

SCOR Newsletter—The SCOR Newsletter was started late in 2004, to provide more frequent updates about SCOR activities between annual meetings. Fourteen issues have been distributed so far. (All are available on the SCOR Web site.) The SCOR Secretariat issues three newsletters each year. The SCOR Secretariat improved the layout and design of the Newsletter in 2007 and will continue to have it printed in hard copy occasionally for limited distribution. **Action: Are additional changes needed to the Web site and/or the SCOR Newsletter?**

8.3 Finances

Finance Committee, Urban, Gross

The annual audit was competed in August. Elizabeth Gross worked to prepare information for the auditors. The financial records and financial controls were found to follow accepted

Urban

Urban

Kuparinen

standards (see **Tab 8**). New U.S. government requirements resulted in a more expensive audit and more work for SCOR staff.

SCOR received the following new or renewal grants since the 2008 SCOR meeting:

- Second year of NSF grant for travel of scientists from developing countries to ocean science meetings
- Approval of new 3-year science grant from NSF.

Actions: (1) Approve revised 2009 SCOR budget, (2) approve 2010 SCOR budget, and (3) approve any dues increases for 2011, as recommended by the Finance Committee.

8.4 The Disciplinary Balance among SCOR Working Groups Burkill

Peter Burkill will lead a group to consider the disciplinary balance among SCOR working groups and to make recommendations on any specific topics for the 2010 call for working group proposals.

Actions: Discuss instructions needed for 2010 working group proposals.

9.0 SCOR-RELATED MEETINGS

9.1 SCOR Annual Meetings

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

9.1.12009 Executive Committee Meeting – Beijing, ChinaFennelAction: Thank Chinese hosts for their hospitality in hosting the 2009 Executive CommitteeMeeting.

9.1.22010 General Meeting – Toulouse, FranceJeandelThe SCOR Executive Committee has accepted an offer from the French SCOR Committee to
hold the 2010 General Meeting in Toulouse, France.Action: Set dates and discuss other meeting-related issues.

9.1.3 2011 Executive Committee Meeting - Finland	Kuparinen
Action: Discussion of potential meeting venues, timing, and associated e	events.

9.1.4 2012 General Meeting – Canada Sundby Action: Discussion of potential meeting venues, timing, and associated events.

9.2 Other meetings of interest to SCORUrbanOther SCOR-related meetings are listed on p. 9-3.