



PRESIDENT: Professor Peter Burkill
SECRETARY: Dr. Mary Feeley
EXECUTIVE DIRECTOR: Dr. Edward R. Urban Jr.

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

MEMORANDUM

TO: Attendees, 2013 SCOR Executive Committee Meeting

FROM: Ed Urban, SCOR Executive Director

RE: Background Book for Meeting

DATE: 28 October 2013

I am pleased to enclose the background book for the upcoming SCOR Executive Committee Meeting in Wellington, New Zealand. 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/2013EC/2013EC.htm>.

We will not be able to bring many extra background books to the meeting, so please bring your copy if you requested one. 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 Wellington next month.

41st SCOR EXECUTIVE COMMITTEE MEETING
Wellington, New Zealand
25-28 November 2013

LIST OF PARTICIPANTS

SCOR Executive Committee:

President:

Peter Burkill (NM)

Drake Circus
Plymouth University
Plymouth PL4 8AA
UNITED KINGDOM
Email: peter.burkill@plymouth.ac.uk

Secretary:

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

Past-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

Vice Presidents:

Satoru Taguchi (NM)

Department of Environmental Engineering for
Symbiosis
Soka University
1-236 Tangi-Cho, Hachioji, Tokyo 192-8577
JAPAN
Phone: +81 42 691 8002
Fax: +81 42 691 8002
Email: staguchi@soka.ac.jp

John Volkman (NM)

Research Program Leader
Marine Biogeochemistry Program
CSIRO Marine and Atmospheric Research
GPO Box 1538
Hobart, Tasmania 7001
AUSTRALIA
Phone: +61-3-62325281
Fax: +61-3-62325090
Email: john.volkman@csiro.au

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 319674
Email: corina.brussaard@nioz.nl

Ex-Officio Members:

Mark J. Costello (IABO)

Leigh Marine Laboratory
University of Auckland
PO Box 349
Warkworth 0941
NEW ZEALAND
Email: markcost@gmail.com

Athena Coustenis (IAMAS)

LESIA (Bat. 18)
Observatoire de Paris-Meudon
5, place Jules Janssen
92195 Meudon Cedex
FRANCE
Tel: +33145077720
Email : athena.coustenis@obspm.fr

Eugene Morozov (IAPSO)

Shirshov Institute of Oceanology
Pokrovka street 20 apt 27
Moscow 101000
RUSSIA
egmorozov@mail.ru
Tel: +7 967 133 1880

SCOR Secretariat:**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:**Riitta Autio (NM)**

Erik Palmenin aukio 1
Helsinki 00560
FINLAND
Email: riitta.autio@ymparisto.fi

Harold (Hal) Batchelder

Oregon State University
104 CEOAS Admin Bldg.
Corvallis, OR, 97331-5503
USA
Tel: +1-541-737-4500
Email: hbatchelder@coas.oregonstate.edu

Lionel Carter

Antarctic Research Centre
PO BOX 600
Wellington 6012
New Zealand
Email: lionel.carter@xtra.co.nz

Nick D'Adamo

UNESCO Intergovernmental Oceanographic
Commission
Level 5
1100 Hay Street
West Perth, Western Australia ,6005
AUSTRALIA
Tel: +61 8 92262899
Email: nick.dadamo@bom.gov.au

Colin Devey (NM)

Deputy Director
IFM-GEOMAR
Leibniz Institute Of Marine Sciences
Wischhofstr. 1-3
D-24148 Kiel, GERMANY
Phone: +49 431 600 2257
Fax: +49 431 600 2924
Email: cdevey@ifm-geomar.de

Robert Duce (NM)

Texas A&M University
145 Pioneer Passage
Bastrop, TX 78602
USA
Tel: +1-979-229-3821
Email: robertduce@hotmail.com

Toshitaka Gamo (NM)

The University of Tokyo
5-1-5 Kashiwanoha
Kashiwa, Chiba, 277-8564
JAPAN
Tel: +81-4-7136-6080
Email: gamo@aori.u-tokyo.ac.jp

Diana Greenslade

ICSU
5 rue Auguste Vacquerie
Paris 75012
FRANCE
Email: diana@icsu.org

Julie Hall (NM)

NIWA
Private bag 14901, Kilbirnie
Wellington 6021
NEW ZEALANS
Tel: +64275952369
Email: julie.hall@niwa.co.nz

Karen Heywood (NM)

Centre for Ocean and Atmospheric Sciences
School of Environmental Sciences
University of East Anglia
Norwich NR4 7TJ
UNITED KINGDOM
Email: k.heywood@uea.ac.uk

Graham Hosie

Global Alliance CPR Surveys
c/- SAHFOS
The Laboratory, Citadel Hill
Plymouth PL1 2PB
UNITED KINGDOM
Email: gacs@sahfos.ac.uk

Motoyoshi Ikeda (NM)

Hokkaido University
Takatsu-ku, Shimosakunobe, 6-4-20
Kawasaki 213-0033
JAPAN
Tel. +81-44-844-2510
Email: mikeda@ees.hokudai.ac.jp

Venu Ittekkot

Berner Chaussee 114
Hamburg 22175
GERMANY
Phone: +49406411875
Fax: +49406411875
Email: ittekkot@uni-bremen.de

Raphael Kudela

University of California Santa Cruz
1156 High Street
Ocean Sciences Department
Santa Cruz, CA, 95064
USA
Email: kudela@ucsc.edu

Cliff S. Law

NIWA
Private Bag 14-901
Kilbirnie, Wellington 6023
NEW ZEALAND
Tel: +64-43860478
Email: cliff.law@niwa.co.nz

Mike Lucas

Dept. Biological Sciences
University of Cape Town
Rondebosch, Western Cape 8801
SOUTH AFRICA
E-mail: mikelucasuct@gmail.com

Sylvia Sander

University of Otago
PO Box 56
Dunedin, 9054
NEW ZEALAND
Tel: +64-3-479-7844
Email: sylvia.sander@otago.ac.nz

Sergey M. Shapovalov (NM)

Russian Academy of Sciences
36 Nakhimovsky ave.
Moscow 117997
RUSSIA
Email: smshap@ocean.ru

Song Sun

Institute of Oceanology
Chinese Academy of Sciences
7 Nanhai Road
Qingdao, 266071
PEOPLE'S REPUBLIC OF CHINA
Email: sunsong@qdio.ac.cn

Sinjaee Yoo (NM)

Korea Institute of Ocean Science and
Technology
787 Haeanro
Ansan 426-744
SOUTH KOREA
Email: sinjaee.yoo@gmail.com

Xuelel Zhang

First Institute of Oceanography, SOA
6 Xianxialing Road, Laoshan District
Qingdao 266061
CHINA
Email: zhangxl@fio.org.cn

Wei Zheng

First Institute of Oceanography, SOA, China
6 Xianxialing Road, Laoshan District
Qingdao 266061
CHINA
Email: zhengwei@fio.org.cn

Agenda for 2013 SCOR Executive Committee Meeting

	Sun., Nov. 24	Mon., Nov. 25	Tues., Nov. 26	Wed., Nov. 27	Thurs., Nov. 28
9:00	SCOR Committee on Capacity Building Meets	Welcome, Logistics, and Introductions	WG Proposals (cont.)	GEOTRACES	Ocean Science in New Zealand
9:15		Pres. Report		IMBER	
9:30		Exec. Director's Report			
9:45		Preparations for 2014 SCOR Election			
10:00					
10:15					
10:30		BREAK	BREAK	BREAK	
10:45			WG Proposals – Discussion of Proposals on Short List	IGBP WCRP SCAR/SOOS	
11:00		SCOR Capacity Building Activities		IABO IAMAS IAPSO	
11:15				InterRidge IOCCG GACS POGO IASC Marine Working Group	
11:30					
11:45					
12:00	Current WGs – Reports will be tabled and only will cover questions on any groups				
12:15					
12:30					
12:45					
13:00		LUNCH	LUNCH	LUNCH	
13:15					
13:30					
13:45					
14:00		WG Proposals	WG Proposals – Fine- tune advice to WGs	IOC IIOE ICES GESAMP PICES	
14:15					
14:30					
14:45					
15:00	SCOR Executive Committee Meets in Closed Session	BREAK	BREAK	BREAK	
15:15					
15:30					
15:45					
16:00			Future Earth	Finances Report of Ad Hoc Finance Committee	
16:15		WG Proposals – First Discussion to Develop Short List	GEOHAB		
16:30				SCOR Executive Committee Meets in Closed Session	
16:45		SOLAS			
17:00					
17:15					
17:30					
17:45					
18:00	SCOR Executive Committee Dinner				

41st SCOR EXECUTIVE COMMITTEE MEETING

Wellington, New Zealand

25-28 November 2013

ANNOTATED AGENDA

1.0 OPENING

1.1 Opening Remarks and Administrative Arrangements, p 1-1 *Hall, Burkill, Urban*

1.2 Approval of the Agenda, p. 1-6 *Burkill*
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, p. 1-6 *Burkill*
The President will briefly review his activities for SCOR since the SCOR General Meeting in October 2012 in Halifax, Canada.

1.4 Report of SCOR Executive Director, p. 1-6 *Urban*
The Executive Director will report on his activities for SCOR since the 2012 SCOR meeting, and on the current condition of SCOR.

1.5 Appointment of an *ad hoc* Finance Committee, p. 1-8 *Burkill*
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 Executive Committee approved Colin Devey (Germany), Karen Heywood (UK), and Motoyoshi Ikeda (Japan) as the three members. The Finance Committee reviews the administration of SCOR finances during the previous fiscal year and the current year, and will propose a budget for 2014 activities and dues for 2015. The Committee will report to the meeting under agenda item **8.3**.

1.6 2014 Elections for SCOR Officers, p. 1-9 *Fennell*
The SCOR Secretary and all three Vice-President positions are open for nominations for the 2014 elections.

Action: Approve Nominating Committee for 2014 elections.

2.0 WORKING GROUPS

2.1 Disbanded Working Groups

2.1.1 SCOR WG 131 on The Legacy of in situ Iron Enrichment: Data Compilation and Modeling, p. 2-1 *Urban*

The group publicized its database through an article in *Oceanography* magazine.¹ The co-chairs were thanked for their work and the group was disbanded.

Action: None

2.1.2 SCOR/LOICZ WG 132 on Land-based Nutrient Pollution and the Relationship to Harmful Algal Blooms in Coastal Marine Systems, p. 2-4 *Taguchi*

The group has two final papers in review based on its work. The group members were thanked for their work and the group was disbanded.

Action: None.

2.1.3 SCOR/WCRP/IAPSO Working Group 136 On the Climatic Importance of the Greater Agulhas System, p. 2-6 *Urban*

The group held its final meeting in conjunction with a Chapman Conference that it stimulated, on The Agulhas System and its Role in Changing Ocean Circulation, Climate, and Marine Ecosystems was held on 8–12 October 2012, in Stellenbosch, Western Cape, South Africa (see <http://www.agu.org/meetings/chapman/2012/ecall/>). Group members continue their work in promoting research and observations in the Agulhas Current region. Lisa Beal, one of the group's co-chairs, served as a SCOR Visiting Scholar in South Africa in early 2013.

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. Any working group chairs present will be given time to make comments about their group. Meeting participants will make preliminary decisions, based on the progress of working groups and the merits of the requests, about whether funding should be provided for 2014 activities of working groups that have funds remaining. The Finance Committee will take into account the recommendations of the Executive Committee as it develops the 2014 SCOR budget, which is then subject to final approval by the meeting.

2.2.1 SCOR WG 134 on The Microbial Carbon Pump in the Ocean, p. 2-12 *Urban*

Some group members participated in one of the three theme sessions at the IMBER IMBIZO in early 2013 as the final activity of the group.

Action: Consider disbanding.

¹[Boyd, P.W, D.C.E. Bakker, and C. Chandler. 2012. A new database to explore the findings from large-scale ocean iron enrichment experiments. *Oceanography* 25:64-71.](#)

2.2.2 SCOR/InterRidge WG 135 on Hydrothermal energy transfer and its impact on the ocean carbon cycles, p. 2-22 *Coustenis*

The group's final activity will be a special session at the 2014 European Geosciences Union meeting and a final meeting of the group (this meeting was postponed from 2013). The group is preparing two publications, tentatively entitled "Coupled cycling of Fe and Corg in submarine hydrothermal plumes: potential for impact on the global deep-ocean carbon cycle" and "Hydrothermal energy transfer and the ocean carbon cycling: how to assess vent ecosystem productivity?"

Action: Consider funding for 2014.

2.2.3 WG 137: Patterns of Phytoplankton Dynamics in Coastal Ecosystems: Comparative Analysis of Time Series Observation, p. 2-26 *Volkman*

The group met for the third time in Hiroshima, Japan during 12-14 October 2012, in conjunction with the annual PICES meeting, and will hold its next meeting on 2-4 November 2013 in San Diego, California, USA in conjunction with the Coastal and Estuarine Research Federation (CERF) November 2013. The Web site for data sets has been set up (see <http://wg137.net/>). The group continues to work on an ambitious set of analyses and papers.

Action: Consider funding for 2014.

2.2.4 WG 138: Modern Planktic Foraminifera and Ocean Changes, p. 2-30 *Feeley*

Working Group members have been busy in the past year working toward individual products. An open-access eBook will be produced through Copernicus Press. A Web site has been developed for the group on the eForams platform (http://www.eforams.org/index.php/WG138_Startpage) and is currently being filled with content. A taxonomic database and an annotated list of references also are being developed. The group held workshops in mid-2012 on (1) foraminifera taxonomy and (2) standardization of foraminifera collections.

Action: Consider funding for 2014 meeting.

2.2.5 WG 139: Organic Ligands – A Key Control on Trace Metal Biogeochemistry in the Ocean, p. 2-35

This group met for the second time on 16 February 2013, immediately before the ASLO meeting in New Orleans. As with the first meeting, this minimized travel costs for the meeting. The group had a special session accepted for the ASLO meeting, on "Biogeochemistry of metal-binding organic ligands in the ocean: Sources, composition and impacts on trace metal cycling." The third meeting of the group will be held in Honolulu, Hawaii in conjunction with the Ocean Sciences meeting in February 2014, at which they will also convene a special session.

Action: Consider funding for 2014 meeting.

2.2.6 WG 140: Biogeochemical Exchange Processes at the Sea-Ice Interfaces, p. 2-40

Volkman

The group held its first meeting in March 2013 in conjunction with the Gordon Research Conference on Polar Marine Science in Ventura, California, USA. The group has divided its work into three task groups (Methodologies and Intercomparisons, Data, and Modeling). Work is proceeding on each theme and the first papers citing the group's work have already appeared.²

²E.g., Meiners, K.M., et al. 2012. Chlorophyll a in Antarctic sea ice from historical ice core data. *Geophys. Res. Lett.* 39, L21602, doi:10.1029/2012GL053478.

Action: Consider funding for 2014 meeting.

2.2.7 WG 141 on Sea-Surface Microlayers, p. 2-44

Volkman

The group met for the first time in conjunction with the European Geosciences Union meeting in April 2013 in Vienna, Austria. The group is planning a workshop in Qingdao, China in 2014. The four-day workshop will have an open session for Chinese students, including training in microlayer sampling. A closed session of the workshop will focus on developing a paper that will highlight the role of microlayers in the changing ocean, aerosol chemistry, gas exchange, eutrophication, ecosystem health and hydrophysical modeling. This paper is intended to help communicate the topic beyond specialists.

Action: Consider funding for 2014 meeting.

2.2.8 WG 142 on Quality Control Procedures for Oxygen and Other Biogeochemical Sensors on Floats and Gliders, p. 2-47

Feeley

The group did not meet in 2013, but is planning its first meeting in February 2014 in conjunction with the Ocean Sciences meeting in Honolulu, Hawaii.

Action: Consider funding for 2014 meeting.

2.3 New Working Group Proposals

Eleven working group proposals were received by the SCOR Secretariat. SCOR can probably fund two new working groups to begin in 2014, pending recommendations from the Finance Committee.

2.3.1 SCOR Working Group on Zooplankton Production Measurement Methodologies and Their Application, p. 2-48

Burkill

Action: Evaluate proposal for potential as new SCOR working group.

2.3.2 SCOR Working Group on Response of marine biota to complex global environmental change: co-ordination and harmonization of experimental approaches, p. 2-54

Brussaard

Action: Evaluate proposal for potential as new SCOR working group.

2.3.3 SCOR Working Group on Dissolved N₂O and CH₄ measurements: Working towards a global network of ocean time series measurements of N₂O and CH₄, p. 2-62

Volkman

Action: Evaluate proposal for potential as new SCOR working group.

2.3.4 SCOR Working Group on Climate and tsunami science with green repeaters on submarine cable systems, p. 2-74

Feeley

Action: Evaluate proposal for potential as new SCOR working group.

2.3.5 SCOR Working Group Towards harmonization of global oceanic nutrient data, p. 2-86

Action: Evaluate proposal for potential as new SCOR working group.

2.3.6 SCOR Working Group on Development of new methodologies for chemical and other branches of oceanography, p. 2-96 *Volkman*

Action: Evaluate proposal for potential as new SCOR working group.

2.3.7 SCOR Working Group on Microbial Community Responses to Ocean Deoxygenation, p. 2-103

Action: Evaluate proposal for potential as new SCOR working group.

2.3.8 SCOR Working Group on Surface Waves in Ocean Circulation and Climate System, p. 2-110 *Coustenis*

Action: Evaluate proposal for potential as new SCOR working group.

2.3.9 SCOR Working Group on Standard protocols for the development of an atlas of marine plankton biogeography, p. 2-117 *Costello*

Action: Evaluate proposal for potential as new SCOR working group.

2.3.10 SCOR Working Group on Studying Ocean Acidification Effects on Continental Margin Ecosystems, p. 2-134 *Taguchi*

Action: Evaluate proposal for potential as new SCOR working group.

2.3.11 SCOR Working Group on Science and Technology Imperatives Created by Deep-Ocean Industrialization, p. 2-140 *Fennel*

Action: Evaluate proposal for potential as new SCOR working group.

3.0 LARGE-SCALE SCIENTIFIC PROGRAMS

SCOR currently sponsors four large-scale research projects; three of them are co-sponsored by other organizations. Each project has its own scientific steering committee (SSC) to manage the project on a day-to-day basis. SCOR and other co-sponsors are responsible to oversee the projects, which they do primarily through responsibility for the project SSC memberships and terms of reference, although sponsors also oversee the results of the projects' activities. Any proposed changes in membership or terms of reference are considered by the SCOR Executive Committee, in partnership with other co-sponsors, throughout the year. SCOR does not use discretionary funds (funds from SCOR member nation dues) for the research projects it sponsors, instead writing grant proposals to fund meetings and other activities of the research projects. The SCOR Secretariat oversees the use of grant funds provided to the projects.

3.1 SCOR/IOC Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB) Program, p. 3-1 *Kudela, Taguchi*

GEOHAB held its final open science meeting in April 2013, at which was discussed accomplishments of the projects and priorities for future research. The GEOHAB SSC will meet for the final time on 3-5 December 2013 to work on synthesis products from the project and to discuss to how SCOR and IOC will work together after 2013 in relation to the topic of harmful algal blooms. Creation of publications related to GEOHAB synthesis will continue into 2014.

Action: None.

3.2 SCOR/IGBP Integrated Marine Biogeochemistry and Ecosystem Research (IMBER) Project, p. 3-28

Hall, Burkill

The IMBER SSC met most recently in June 2013 in Las Palmas, Canary Islands, Spain. IMBER will hold its first open science meeting in Bergen on 23-27 June 2014, on “Future Oceans”. SCOR and IGBP approved the addition of Edward Allison (USA), Katrin Rehdanz (Germany), Gerhard Herndl (Austria), and Laurent Bopp (France) to the IMBER SSC in 2013. The IMBER SSC is working on its plans for project extension and determining how it might interact with the Future Earth Initiative.

Action: None

3.3 GEOTRACES Project, p. 3-62

Volkman

GEOTRACES cruises were conducted in the Mediterranean Sea, Black Sea, Indian Ocean and Pacific Ocean since the 2012 SCOR annual meeting. The GEOTRACES Scientific Steering Committee held its seventh meeting in Goa, India in November 2012, immediately after a meeting of the GEOTRACES Data Management Committee. The SSC, Data Management Committee, and Standards and Intercalibration committee met together in Bremerhaven, Germany, on 30 Sept.-4 October 2013. GEOTRACES will release its first intermediate data product in 2014, which will primarily include data from the Atlantic Ocean cruises carried out so far, as well as GEOTRACES cruises that were part of the International Polar Year. The SCOR Executive Committee approved the addition of Luidmila Demina (Russia) to the GEOTRACES SSC members in 2013, and second terms for Pinghe Cai (China-Beijing), Angela Wegener (Brazil), Andrew Bowie (Australia), and Olivier Marchal (USA)

Action: None.

3.4 SCOR/IGBP/WCRP/CACGP Surface Ocean-Lower Atmosphere Study, p. 3-83

Law, Coustenis

SOLAS held its sixth summer school in 2013, in a new location, at Xiamen University in China. The SOLAS Scientific Steering Committee (SSC) met in Tsukuba, Japan in May 2013. The project co-sponsors approved Ilan Koren (Israel) as a new SSC member and re-appointment of Yukihiro Nojiri and Christoph Heinze. The SOLAS SSC is working on its plans for project extension and determining how it might interact with the Future Earth Initiative.

Action: None

4.0 OCEAN CARBON AND OTHER ACTIVITIES

4.1 IOC/SCOR International Ocean Carbon Coordination Project (IOCCP), p. 4-1

Fennel, Urban

IOCCP is jointly sponsored and funded by SCOR and IOC. It continues to focus on coordination of carbon data, from collection through serving the data, through the Global Ocean Ship-based Hydrographic Investigations Panel (GO-SHIP), the Surface Ocean CO₂ Atlas (SOCAT) project, and the GLObal Ocean Data Analysis Product (GLODAP) project. IOCCP is assisting the Global

Ocean Observing System on developing biogeochemical Essential Ocean Variables. The U.S. National Science Foundation is the primary financial sponsor of IOCCP and has asked that the project demonstrate multinational interest in IOCCP by diversifying its funding sources. (IOCCP does receive support from IOC and from in-kind support from its host institution in Poland.)

Action: Discuss potential new funding sources

4.2 Symposia on The Ocean in a High-CO₂ World, p. 4-13

Volkman

IGBP is leading an effort to produce a Summary for Policymakers from the 2012 symposium in Monterey, which will be released at the nineteenth session of the Conference of the Parties (COP 19) of the United Nations Framework Convention on Climate Change. The SCOR Executive Committee will announce at the meeting SCOR's desired role in a 2016 symposium.

Action: Consider sponsorship of 2016 symposium.

4.3 Other Activities

4.3.1 Data Publication Activity, p. 4-13

Costello

Representatives from SCOR, IOC's International Oceanographic Data and Information Exchange (IODE), the MBLWHOI Library, the British Oceanographic Data Centre, and the U.S. National Oceanic and Atmospheric Administration have been working together for the past several years 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 in forms that can be cited. The group is conducting two pilot projects and the results of these pilot projects have been reported at meetings of ocean scientists, data managers, and ocean librarians. The group completed a "Cookbook"³ describing implementation of the two pilot projects since last year's SCOR meeting and is looking for opportunities to implement the data publication system in new locations.

Action: Consider funding for 2014.

4.3.2 SCOR/POGO International Quiet Ocean Experiment, p. 4-14

Feeley

The International Quiet Ocean Experiment (IQOE) Science Plan is in review and reviews are due by the end of October. The SCOR Executive Committee will consider adopting IQOE as a SCOR project when the response to review is completed. The next step in the project would be consideration and approval by POGO, formation of a Scientific Steering Committee (SSC), and seeking funding for the SSC's work.

Action: Discuss funding opportunities.

4.3.3 Joint Committee on Seawater (SCOR/IAPWS/IAPSO), p. 4-15

Morozov

SCOR agreed to form a Joint Subcommittee on Seawater with IAPSO and the International Association for the Properties of Water and Steam (IAPWS). This group is a follow-on to the SCOR/IAPSO Working Group 127 on the Thermodynamic Properties of Seawater. The SCOR Executive Committee has approved an Executive Committee and Terms of Reference for the

³ See http://www.iode.org/index.php?option=com_oe&task=viewDocumentRecord&docID=10574.

group, and is now considering nominations for the full group. Funding for the group is for the JCS Executive Committee to attend IAPWS meetings. They do not anticipate having the entire group meet.

Actions: Consider funding for 2014.

5.0 CAPACITY-BUILDING ACTIVITIES

5.1 SCOR Committee on Capacity Building, p. 5-1

Ittekkot

The committee will meet in Wellington immediately before the SCOR Meeting to prepare for the SCOR meeting discussions. A meeting was hosted by the University of Namibia in early November 2012 to focus on continued extension of SCOR capacity-building activities in southern Africa.

Actions: Consider any requests from the Committee's meeting.

5.2 SCOR Visiting Scholars, p. 5-5

Ittekkot

SCOR started a program of SCOR Visiting Scholars in 2009 and has now appointed 13 different Visiting Scholars. The program provides airfare and some funding for subsistence for ocean scientists to teach and mentor students for several weeks to months. Local hosts are expected to provide some support for local expenses. The program has resulted in new exposure for SCOR in countries like Ghana, Morocco, and Thailand.

Action: Consider providing support for SCOR Visiting Scholars in 2014.

5.3 POGO-SCOR Visiting Fellowships for Oceanographic Observations, p. 5-7

Urban

POGO and SCOR have co-funded this program since 2001 and have supported more than 100 participants so far. Both recipients and hosts have expressed that this has been a worthwhile program.

Action: Consider whether to provide funding in 2014.

5.4 NSF Travel Support for Developing Country Scientists, p. 5-15

Urban

The grant to SCOR from the U.S. National Science Foundation continues at a level of \$75,000 per year. The grants have been an important source of support for several SCOR-related meetings in the past year. We are in the third year of a three-year grant; a renewal proposal will be submitted early next year.

Action: Consider recommendations of the SCOR Committee on Capacity Building.

6.0 RELATIONS WITH INTERGOVERNMENTAL ORGANIZATIONS

6.1 Intergovernmental Oceanographic Commission, p. 6-1

D'Adamo, Burkill

Peter Burkill and Ed Urban attended the IOC General Assembly in June 2013 to represent SCOR and ICSU. SCOR and IOC cooperate on several different activities, as discussed in other sections: the Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB) Program, the International Ocean Carbon Coordination Project, and the Symposium on the Ocean in a High-CO₂ World. IOC also partners with SCOR on capacity-building activities. IOC support for joint activities has been significantly curtailed because of drastic cuts in activity funding at IOC resulting from the United States and other nations withdrawing their funding to UNESCO. The newest area of cooperation is related to the International Indian Ocean Expedition 2.

Action: None

6.2 International Council for Exploration of the Seas, p. 6-6

Fennel

Much ICES work focuses on climate change and impacts on ecosystems and fisheries. ICES has been involved in various SCOR activities in the past few years, including co-sponsoring a regional program of GLOBEC. New Strategic Initiatives are on Biodiversity Science and Advice, Spatial Planning and Area-based Management, and Stock Assessment Methods.

Action: None

6.3 Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), p. 6-9

Duce

NSF provided support through SCOR for a meeting of GESAMP Working Group 38 on The Atmospheric Input of Chemicals to the Ocean in February 2013 at the University of East Anglia. As many as 8 peer-reviewed papers may result from the meeting.

Action: None.

6.4 North Pacific Marine Science Organization (PICES), p. 6-11

Batchelder, Taguchi

PICES' goals are to (1) advance scientific knowledge and capacity available for the member countries, including information on human activities affecting, and affected by, marine ecosystems, and (2) to provide a mechanism for collaboration among scientists in addressing timely and critical scientific questions. PICES conducts several activities that are relevant to SCOR interests and that implement SCOR activities in the North Pacific region and often supports members of SCOR working groups related to PICES activities. A PICES representative is a member of the SCOR Committee on Capacity Building.

Action: Consider request for developing country scientist travel support and identify new areas of cooperation with PICES.

7.0 RELATIONS WITH NON-GOVERNMENTAL ORGANIZATIONS

7.1 International Council for Science

Burkill

Peter Burkill and Ed Urban met with Steven Wilson, the ICSU Executive Director, in June 2013 in conjunction with the IOC annual meeting in Paris. As part of its periodic review process, ICSU will review SCOR sometime in the next three years. ICSU awarded SCOR and SCAR a grant for 2013/2014 to fund an activity designed to identify and evaluate potential Ecosystem Essential Ocean Variables (eEOVs) that would be monitored through an enhanced Global Ocean Observing System, particularly as part of the Southern Ocean Observing System.

Actions: None.

7.1.1 International Geosphere-Biosphere Program (IGBP), p. 7-1

Burkill

Peter Burkill attended the 2013 IGBP Science Committee meeting in Bern, Switzerland to represent SCOR. SCOR and IGBP are co-sponsoring WG 138 on Modern Planktic Foraminifera and Ocean Changes, and SCOR contributed support for travel of developing country scientists to two IGBP Fast-Track Initiatives that completed in the past year. IGBP has initiated its final synthesis activities in preparation for the program completion at the end of 2015. SCOR and IGBP staff members have ongoing discussions in relation to co-sponsored projects.

Action: Determine which SCOR decisions need to be transmitted to IGBP for comment and joint action.

7.1.2 World Climate Research Programme (WCRP), p. 7-3

Fennel

WCRP is focused on the climate aspects of different parts of the Earth system, including the ocean. WCRP is co-sponsoring the SOLAS project, and previously co-sponsored SCOR/WCRP/IAPSO WG 136 on Climatic Importance of the Greater Agulhas System, and development of the Southern Ocean Observing System. SCOR projects (including IOCCP) are working well with CLIVAR, the part of WCRP most relevant to SCOR. Ed Urban co-authored a paper in *Oceanography* magazine with Roberta Boscolo of WCRP on “Using scientific meetings to enhance the development of early career scientists.”⁴

Action: None.

7.1.3 Scientific Committee on Antarctic Research (SCAR), p. 7-13

Brussaard

SCAR and SCOR are co-sponsoring the Southern Ocean Observing System (SOOS). The SOOS SSC met in May 2013 in Shanghai, China and held a meeting there to encourage Asian participation in SOOS. SCAR is sponsoring an activity on ocean acidification in the Southern Ocean.

Action: Consider 2014 funding for SOOS Scientific Steering Committee.

7.1.4 Future Earth Initiative, p. 7-18

Greenslade

ICSU officially launched the Future Earth initiative at the Rio+20 summit in June 2012. The initiative will bring together IGBP, DIVERSITAS, and the International Human Dimensions Programme (IHDP) in a new structure entitled *Future Earth: research for global sustainability*. An interim Future Earth governing body has been announced and a secretariat will be established by mid-2014. More information is available at <http://www.icsu.org/future-earth/>.

⁴ http://www.tos.org/oceanography/archive/26-2_urban.html.

Action: Discuss plans of SCOR-related projects in Future Earth.

7.2 Affiliated Organizations

7.2.1 International Association for Biological Oceanography (IABO), p. 7-18 *Costello*

IABO is an association of the ICSU International Union of Biological Sciences.

Action: Discuss potential areas of interaction with IABO.

7.2.2 International Association for Meteorology and Atmospheric Sciences (IAMAS), p. 7-20 *Coustenis*

IAMAS is an association of the ICSU International Union of Geodesy and Geophysics. IAMAS is a parent of the international Commission on Atmospheric Chemistry and Global Pollution (iCACGP), which is a co-sponsor of SOLAS.

Action: Discuss potential areas of interaction with IAMAS.

7.2.3 International Association for the Physical Sciences of the Oceans (IAPSO), p. 7-22 *Morozov*

IAPSO is association of the ICSU International Union of Geodesy and Geophysics. SCOR and IAPSO recently co-sponsored WG 136 on Climatic Importance of the Greater Agulhas System (with WCRP) and are co-sponsoring the new IAPWS/SCOR/IAPSO Subcommittee on Seawater. SCOR and IAPSO (and its predecessors) have co-sponsored working groups for more than 50 years.

Action: None.

7.3 Affiliated Programs, p. 7-26

The benefit of continued affiliation to SCOR is evaluated at each General Meeting, but annual reports are requested from the programs for information.

7.3.1 InterRidge - International, Interdisciplinary Ridge Studies, p. 7-28 *Feeley*

InterRidge has an active program of working groups and scientific meetings, as well as significant education and outreach activities.. There are currently seven active InterRidge Working Groups, including the SCOR/InterRidge WG 135 on Hydrothermal Energy Transfer and its Impact on the Ocean Carbon Cycles. The InterRidge program office moved to Peking University at the beginning of 2013. The new chair is John Chen (School of Earth and Space Sciences, Peking University, Beijing) and Jiabiao Li (Second Institute of Oceanography, Hangzhou) is co-chair. InterRidge has been working on its Third Decadal Plan throughout 2012.

Action: None.

7.3.2 International Ocean Colour Coordinating Group (IOCCG), p. 7-34 *Volkman*

IOCCG scientific activities are carried out by specialized scientific working groups which investigate various aspects of ocean-color technology and its applications, and produce a report on the topic, published in the growing *IOCCG Report* series (13 reports published to date). The Joint GEOHAB/IOCCG WG on Harmful Algal Blooms has met twice and is working on an *IOCCG Report* and a special journal issue. Over the past decade, IOCCG has played an important role in training and capacity building on a global scale. IOCCG stated a new series of

workshops called the International Ocean Colour Science (IOCS) meetings, with the first held in May 2013.

Action: None.

7.3.3 Global Alliance of CPR Surveys (GACS), p. 7-38

GACS was formed in September 2011 to foster global cooperation and coordination of the Continuous Plankton Recorder (CPR) surveys carried out in several different parts of the world. GACS became affiliated to SCOR in 2012.

Action: None

7.4 Other Organizations

7.4.1 Partnership for Observation of the Global Oceans (POGO), p. 7-39 *Feeley*

POGO is a non-profit consortium of oceanographic institutions from around the world. POGO promotes global oceanography, particularly the implementation of international and integrated global ocean observing systems. POGO has focused much of its attention in recent years on interactions with the Group on Earth Observations (GEO) to represent ocean observation issues. A new Task on “Oceans and Society: the Blue Planet” is included in the GEO Workplan, and this task draws together POGO and many of the other organizations and projects involved in ocean observations. POGO convened a kick-off symposium for the task, held in Brazil on 19-21 November 2012. POGO and SCOR are cooperating on development of the International Quiet Ocean Experiment (IQOE) and co-fund the POGO-SCOR Visiting Fellowships for Oceanographic Observations.

Action: None.

7.4.2 IASC Marine Working Group, p. 7-39 *Fennel*

The Marine Working Group (MWG) of the International Arctic Science Committee (IASC) is a non-governmental body that includes members and participants from research and governmental institutions in all 19 IASC countries. It’s predecessor, the Arctic Ocean Science Board, was established in May 1984 to fill a recognized need to coordinate the priorities and programs of countries and institutions engaged in research in the Arctic Ocean. The MWG has identified the following priority themes for 2011-2015: Arctic Ocean System: predicting and understanding rapid changes in the Arctic; sea ice structure dynamics and the Arctic system; ecosystem responses to changing physical parameters in the Arctic; understanding geochemical process in the Arctic Ocean and Sub-Arctic Seas; and improving access to the geological record of the Arctic Ocean. There may be potential interactions between some of these groups and SCOR WG 140 on Biogeochemical Exchange Processes at the Sea-Ice Interfaces.

Action: Discuss potential areas of interaction with the IASC Marine Working Group.

8.0 ORGANIZATION AND FINANCE

8.1 Membership

8.1.1 National Committees, p. 8-1

Urban

The changes in Nominated Members since the 2012 SCOR General Meeting are given on **p. 8-1**. Ed Urban and Peter Burkill met with the French SCOR Committee in June 2013 and met with the UK SCOR Committee in July 2013. Ed Urban made a presentation to the U.S. SCOR Committee in August 2013.

Action: None.

8.2 Publications Arising from SCOR Activities, p. 8-5

Urban

SCOR-sponsored research projects have produced many peer-reviewed publications, as listed in their project reports in Tab 3. One SCOR working group completed a special issue from its work in the past year, and several other groups published articles about their work in *EOS* and other publications.

2012 *SCOR Proceedings*—The *Proceedings* will be distributed in electronic form only.

SCOR Web site—The SCOR Web site is updated and checked for dead links regularly. Many historical documents from the SCOR files have been scanned and are available on the SCOR History page (<http://www.scor-int.org/history.htm>). The papers of Robert Snider (first coordinator of the International Indian Ocean Expedition) were scanned and are available on a specific page for the IIOE (http://www.scor-int.org/IIOE_History.htm).

SCOR Newsletter—The SCOR Newsletter was started late in 2004, to provide more frequent updates about SCOR activities between annual meetings. Twenty-five issues have been distributed so far. (All are available on the SCOR Web site.) The Newsletter is printed in hard copy occasionally for limited distribution. A graphic designer was employed to format issue #25 and will be involved in formatting future issues of the newsletter.

Action: Are additional changes needed to the Web site and/or the SCOR Newsletter?

8.3 Finances, p. 8-6

Finance Committee, Urban

All SCOR staff worked to prepare information for the auditors this year. The financial records and financial controls were found to follow accepted standards. 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 2012 SCOR meeting:

- Grant from NASA for IMBER and a separate grant for the IMBER IMBIZO

Actions: (1) Approve revised 2013 SCOR budget, (2) approve 2014 SCOR budget, and (3) approve any dues increases for 2015, as recommended by the Finance Committee.

9.0 SCOR-RELATED MEETINGS

9.1 SCOR Annual Meetings

9.1.1 2013 Executive Committee Meeting – New Zealand, p. 9-1

Burkill

The SCOR Executive Committee extends its thanks to the New Zealand SCOR Committee, especially to the local host, Julie Hall, for hosting the Executive Committee meeting and arranging for SCOR meeting participants to learn about marine research being conducted in New Zealand.

Action: None.

9.1.2 2014 General Meeting – Bremen, Germany, p. 9-1

Fennel

The SCOR Executive Committee will hold the 2014 SCOR General Meeting in Bremen, Germany on 15-17 September, with special presentations on Sept. 18 on ocean science in Germany.

Action: None

9.1.3 2015 Executive Committee Meeting, p. 9-1

Burkill

The SCOR Executive Committee has accepted an invitation to hold the 2015 Executive Committee meeting in Goa, India. The SCOR meeting will be held before or after the symposium on the 50th anniversary of the completion of the International Indian Ocean Expedition.

Action: None

9.1.5 2016 General Meeting, p. 9-1

Burkill

The SCOR Executive Committee has accepted an invitation to hold the 2016 General Meeting in Sopot, Poland.

Action: None

9.2 Locations of Past SCOR Annual Meetings, p. 9-2

9.3 SCOR-Related Meetings Since the 2012 SCOR General Meeting and Planned for the Future, p. 9-3