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## MEMORANDUM

TO: Attendees, 2016 SCOR General Meeting  
FROM: Ed Urban, SCOR Executive Director  
RE: Background Book for Meeting  
DATE: 5 August 2016

I am pleased to enclose the background book for the upcoming SCOR General Meeting in Sopot, Poland. 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 agenda items 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/2016/2016GM.htm>.

We will not be able to bring 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 Sopot next month.

42<sup>nd</sup> SCOR EXECUTIVE COMMITTEE MEETING  
Sopot, Poland  
5-7 September 2016

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## Agenda for 2016 SCOR Annual Meeting in Sopot, Poland

	Sun., Sept. 4	Mon., Sept. 5	Tues., Sept. 6	Wed., Sept. 7	
9:00		Welcome, Logistics, and Introductions	WG Proposals – Beginning of Discussion to Develop Short List	GEOTRACES	
9:15		President’s Report		IMBER	
9:30					Executive Director’s Report
9:45					
10:00					Results of 2016 SCOR Election
10:15		<b>BREAK</b>	<b>BREAK</b>	<b>BREAK</b>	
10:30					
10:45		SCOR Capacity Building Activities	WG Proposals – Discussion of Proposals on Short List	IIOE-2	
11:00				IQOE	
11:15				SOOS	
11:30				Current WGs	GlobalHAB
11:45					JCS
12:00		<b>LUNCH</b>	<b>LUNCH</b>	<b>LUNCH</b>	
12:15					
12:30					
12:45					
13:00					
13:15					
13:30		Presentations on Polish Oceanic Science	WG Proposals – Feedback to Proponents	IOCCG InterRidge GACS	
13:35	IABO IAMAS IAPSO				
13:45	WCRP Future Earth				
14:00	<b>BREAK</b>			<b>BREAK</b>	<b>BREAK</b>
14:15					
14:30	SCOR Executive Committee Meets in Closed Session	Presentations on Polish Oceanic Science (cont.)	WG Discussion Wrap-up		
14:45			IOCCP		
15:00			Finances Report of Ad Hoc Finance Committee		
15:15		SCOR Executive Committee Meets in Closed Session			
15:30					
15:45					
16:00			SCOR Executive Committee Dinner		Conference Dinner
16:15					
16:30					
16:45					
17:00					
17:15					
17:30					
17:45					



# 42<sup>nd</sup> SCOR EXECUTIVE COMMITTEE MEETING

Sopot, Poland

5-7 September 2016

## ANNOTATED AGENDA

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### 1.0 OPENING

#### 1.1 Opening Remarks and Administrative Arrangements, p 1-1

*Pempkowiak, Burkill, Urban*

#### 1.2 Approval of the Agenda, p. 1-5

*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. 1-5

*Burkill*

The President will briefly review his activities for SCOR since the SCOR Executive Committee Meeting in December 2015 in Goa, India.

#### 1.4 Report of SCOR Executive Director, p. 1-6

*Urban*

The Executive Director will report on his activities for SCOR since the 2015 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 at least 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 2017 activities and dues for 2018. Members of the 2016 Finance Committee are Annalisa Griffa (Italy), Paul Myers (Canada), Johan Rodhe (Sweden), and Jing Zhang (Japan). The Committee will report to the meeting under agenda item 8.3.

#### 1.6 2016 Elections for SCOR Officers, p. 1-8

*Fennell*

The SCOR President and all three Vice-President positions were open for nominations for the 2016 elections.

**Action: Announce new SCOR Officers.**

## 2.0 WORKING GROUPS

### 2.1 Current Working Groups

The Executive Committee Reporter for each working group (or a member of the group) will present an update on working group activities and progress, and will make recommendations on actions to be taken. Working groups expire at each General Meeting, but can be renewed at the meeting and can be disbanded whenever appropriate.

#### 2.1.1 SCOR/InterRidge WG 135 on Hydrothermal energy transfer and its impact on the ocean carbon cycles, p. 2-1 *Smythe-Wright*

WG 135 was extended at the 2015 SCOR meeting for another year to complete its second publication. The status of the second publication is unknown.

**Action: Determine whether to disband the group.**

#### 2.1.2 SCOR/IGBP WG 138: Modern Planktic Foraminifera and Ocean Changes, p. 2-2 *Brussaard*

The final workshop of the group was held on 30 August-4 September 2015 on Catalina Island, California, USA (see

[http://www.eforams.org/img\\_auth.php/e/ed/SCORWG138\\_Catalina\\_2nd\\_circular.pdf](http://www.eforams.org/img_auth.php/e/ed/SCORWG138_Catalina_2nd_circular.pdf)). No report was received for the SCOR meeting.

**Action: Consider disbanding the group.**

#### 2.1.3 WG 139: Organic Ligands – A Key Control on Trace Metal Biogeochemistry in the Ocean, p. 2-3 *Naqvi*

At the 2015 SCOR meeting, SCOR WG 139 was granted an extension for an additional year to complete on-going activities. The first is the *Frontiers in Marine Science - Marine Biogeochemistry*, Research Topic: Organic ligands - A key control on trace metal biogeochemistry in the ocean: <http://journal.frontiersin.org/researchtopic/3981/organic-ligands--a-key-control-on-trace-metal-biogeochemistry-in-the-ocean>> . It received 16 submissions of high-quality articles. This is the second special issue from WG 139. The first was published in 2015 in *Marine Chemistry* (issue 173). The group's intercalibration exercise, originally planned for 2016, had to be postponed due to technical issues with the ICP-MS that was to be used. However, as soon as the trace element concentration of the samples already collected is confirmed, samples will be sent to participating scientists to measure organic ligands for Fe, Zn, Cu, and other trace metals. This work will lead to at least one more research paper in the near future as a direct outcome of the SCOR WG 139.

**Action: Consider disbanding the group.**

**2.1.4 WG 140: Biogeochemical Exchange Processes at the Sea-Ice Interfaces (BEPSII), p. 2-6** *Shapovalov*

WG 140 held its final meeting in March 2016, an open meeting designed to attract early-career scientists. The focus of the meeting was to have a final discussion of the activities of the group, discuss the future activities of BEPSII (to be continued as a SOLAS/CLiC group), and discuss the final papers to be submitted to the Special Feature of *Elementa: Science of the Anthropocene* (see <https://home.elementascience.org/special-features/biogeochemical-exchange-processes-at-sea-ice-interfaces-bepsii/>). Nine papers have been published online in this Special Feature so far.

**Action: Consider disbanding the group.**

**2.1.5 WG 141 on Sea-Surface Microlayers, p. 2-35** *Burkill*

The Schmidt Ocean Institute has approved approximately one month of ship time (tentatively 9 October-12 November 2016) for a cruise of the R/V *Falkor* by a team representing the working group. The cruise will start in Darwin, Australia and finish in Guam. The focus of the cruise will be to study the role of the sea-surface microlayer on air-sea interactions.

**Action: Consider funding for 2017 WG meeting.**

**2.1.6 WG 142 on Quality Control Procedures for Oxygen and Other Biogeochemical Sensors on Floats and Gliders, p. 2-36** *Burkill*

The group has discussed oxygen, nitrate, and pH sensors. In relation to oxygen sensors, the group will produce a technical report and an article in *Eos* as its final products. The group plans to hold its 4<sup>th</sup> and final WG meeting in conjunction with an Argo Science Team Meeting or Argo Data Management Team Meeting in 2017. This meeting will be used to combine all information available by then on the use of biogeochemical sensors on floats and gliders. It will decide on the form and content of the final product and will assign writing tasks on responsibilities to WG member for specific parts of the final document.

**Action: Consider funding for 2017 WG meeting.**

**2.1.7 WG 143 on Dissolved N<sub>2</sub>O and CH<sub>4</sub> measurements: Working towards a global network of ocean time series measurements of N<sub>2</sub>O and CH<sub>4</sub>, p. 2-42** *Turner*

The main activity of the group in the past year has been to prepare for another round of sample analysis and intercomparisons. Standard nitrous oxide and methane samples have been sent to laboratories around the world for analysis. A 10-day expedition to the Baltic Sea in October 2016 will be used to compare underway equilibrator systems for dissolved nitrous oxide analysis and to conduct another round of discrete sample collection. Efforts in 2017 will focus on report writing. Two documents will be produced. The first will be a technical report concerning the production of the gas standards for methane and nitrous oxide. The intended audience is any user of the gas standards or anyone seeking to reproduce the method. The second document will be a manuscript for the scientific literature in which the group outlines the inter-comparison and

distribution of gas standards.

**Action: None.**

**2.1.8 WG 144 on Microbial Community Responses to Ocean Deoxygenation,  
p. 2-46**

*Urban*

WG 144 on Microbial Community Responses to Ocean Deoxygenation, is in its third year. It has a white paper underway on methods to study oxygen minimum zones and is planning a symposium on OMZ microbial ecology and biogeochemistry to be held in Goa, India, at the National Institute of Oceanography during 2–5 December 2016.

**Action: None.**

**2.1.9 WG 145 on Chemical Speciation Modelling in Seawater to Meet 21st Century Needs  
(MARCHEMSPEC), p. 2-54**

*Naqvi*

The group met in conjunction with the Ocean Sciences Meeting in New Orleans, Louisiana, USA in February 2016, and held a Town Hall at Ocean Sciences to solicit input about what scientists in the community would like in terms of chemical speciation software. A SurveyMonkey questionnaire was distributed to seek additional input (see <https://www.surveymonkey.com/r/SGDQQG6>). The group is preparing a paper for a special section of *Frontiers in Marine Science*. A WG 145 website has been set up, hosted at Otago University (see <http://neon.otago.ac.nz/research/scor145/>). The next meeting is planned in conjunction with the April 2017 EGU meeting.

**Action: Consider funding for 2017 WG meeting.**

**2.1.10 WG 146 on Radioactivity in the Ocean, 5 decades later (RiO5), p. 2-71**

*Smythe-Wright*

WG 146 held its second meeting in Xiamen, China in June. The group updated its progress on its terms of reference and products. The group is working on four e-lectures that will be made widely available. Also discussed was the group's efforts to create a database of radionuclides in the ocean, and communication and outreach efforts, including the major review paper that has recently been published online.<sup>1</sup>

**Action: Consider funding for 2017 WG meeting.**

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<sup>1</sup> Buesseler, K., M. Dai, M. Aoyama, C. Benitez-Nelson, S. Charmasson, K. Higley, V. Maderich, P. Masqué, D. Oughton, and J.N. Smith. 2017. Fukushima Daiichi–Derived Radionuclides in the Ocean: Transport, Fate, and Impacts. *Annu. Rev. Mar. Sci.* 2017. 9:1.1–1.31. <http://www.annualreviews.org/doi/abs/10.1146/annurev-marine-010816-060733>

**2.1.11 WG 147: Towards comparability of global oceanic nutrient data (COMPONUT), p. 2-72** *Naqvi*

WG 147 will have its second annual meeting in September 2016 in Qingdao, China, having had a ‘poster cluster’ accepted as part of the annual CLIVAR science meeting. In order to promote the wider global use of reference materials (ToR 4 of WG 147), WG147 has arranged the provision of low-cost nutrient reference materials by the Japan Agency for Marine-Earth Science and Technology (JAMSTEC). To provide training in analytical protocols and best practices (ToR 4 of WG 147), the group has agreed with NIOZ (The Netherlands), to be the host laboratory for a training course for scientists from developing countries to be held in November 2017. The tutors from WG 147 will also continue with a workshop relating to silicate analysis so as to make recommendations to the world’s nutrient scientists about improving the quality of their analysis for this often difficult parameter. The training module will be supported by extra funding provided from a grant from SCOR.

**Action: Consider funding for 2017 WG meeting.**

**2.1.12 WG 148 on International Quality Controlled Ocean Database: Subsurface temperature profiles (IQuOD), p. 2-75** *Wainer*

The group will meet for the first time in Tokyo, Japan during 3-7 October 2016, in conjunction with the 5<sup>th</sup> XBT Science Workshop. The first element of IQuOD to be delivered will be data streams for iMeta and uncertainty estimates to be served as part of the World Ocean Database – using their standard data formats (NetCDF and ASCII). The aim is to deliver these before the meeting in October 2016. The first full IQuOD database, with automated QC flags applied, will be released in late 2017.

**Action: Consider funding for 2017 WG meeting.**

**2.1.13 WG 149 on Changing Ocean Biological Systems (COBS): how will biota respond to a changing ocean?, p. 2-79** *Miloslavich*

WG 149 held an opportunistic meeting in conjunction with the 4<sup>th</sup> Symposium on The Ocean in a High-CO<sub>2</sub> World in Hobart, Australia, in May 2016, followed by the first full meeting in conjunction with a Gordon Research Conference in July 2016, on Ocean Global Change Biology (see <http://www.grc.org/programs.aspx?id=15856>).

**Action: Consider funding for 2017 WG meeting.**

**2.1.14 WG 150 on Translation of Optical Measurements into particle Content, Aggregation & Transfer (TOMCAT), p. 2-82** *Fennel*

The first workshop will be held on the 12-14 September 2016 at the National Oceanography Centre, Southampton, UK. The group’s website will be hosted by the National Oceanography Centre, UK. Until then, an open discussion forum and mock website is available at <https://tomcatscor.wordpress.com/>. In the coming year, the group will (1) publish a review on the use of optical instruments to estimate carbon export; (2) make an active effort to start

intercalibrating the different devices in different oceanic settings; and (3) together with the IT team at NOCS and the BODC, start building the website and data repository.

**Action: Consider funding for 2017 WG meeting.**

## **2.2 Working Group Proposals**

**2.2.1 Atmosphere-waves-current interactions and oceanic extremes (EXTREMES),  
p. 2-857**

*Shapovalov*

**Action: Consider as new SCOR working group.**

**2.2.2 Climate-Change Impacts of Ocean Carbon Chemistry/Synergism with Other  
Stressors: How can Seamount Deep-Sea Coral Ecosystems respond to ASH/CSH  
Shoaling/Ocean Acidification? (IBDIOCC), p. 2-101**

*Smythe-Wright*

**Action: Consider as new SCOR working group.**

**2.2.3 Iron Model Intercomparison Project (FeMIP), p. 2-121**

**Action: Consider as new SCOR working group.**

**2.2.4 Measuring Essential Climate Variables in Sea Ice (ECVice), p. 2-137**

*Turner*

**Action: Consider as new SCOR working group.**

**2.2.5 Building a coral reef marine biodiversity observation network (CoralMBON),  
p. 2-152**

*Miloslavich*

**Action: Consider as new SCOR working group.**

**2.2.6 Global Assessment of Nutrient Export Through Submarine Groundwater Discharge  
(NExT SGD), p. 2-171**

*Naqvi*

**Action: Consider as new SCOR working group.**

**2.2.7 The dynamic ecogeomorphic evolution of mangrove and salt marsh coastlines  
(DEMASCO), p. 2-188**

*Miloslavich*

**Action: Consider as new SCOR working group.**

**2.2.8 Towards strategic observatories for regional ocean-atmosphere interactions in the  
Eastern Boundary Upwelling Systems (cOCtEAU), p. 2-202**

*Wainer*

**Action: Consider as new SCOR working group.**

**2.2.9 Towards the science-based jellyfish observing system (JOS), p. 2-218**

*Sun*

**Action: Consider as new SCOR working group.**

**2.2.10 Eastern Boundary Upwelling Ecosystems (EBUE): inter-comparisons, variability and forecasting responses to climate and global change, p. 2-235** *Fennel*  
**Action: Consider as new SCOR working group.**

**2.2.11 Carbon Hot Spot: Drivers and Sensitivities of Large Carbon Uptake in Western Boundary Currents, p. 2-250** *Smythe-Wright*  
**Action: Consider as new SCOR working group.**

### **3.0 LARGE-SCALE SCIENTIFIC PROGRAMS**

SCOR currently sponsors five large-scale research projects; four of them are co-sponsored by other organizations. Each project has its own scientific steering committee (SSC) to manage the project. 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. The SCOR Secretariat oversees the use of grant funds provided to the projects. SCOR uses solely grant funds for IMBER, SOLAS, and GEOTRACES, but is providing SCOR support for IQOE and IIOE-2 until they are self-supporting.

#### **3.1 SCOR/IGBP Integrated Marine Biogeochemistry and Ecosystem Research, p. 3-1** *Burkill*

IMBER has been in transition for the past several years, from having IGBP as a co-sponsor to having Future Earth as a co-sponsor, and in transition from the first to second phase of IMBER. The IMBER Science Plan/Implementation Strategy has been reviewed and reviewers' comments are being considered by IMBER. IMBER will be holding its 5<sup>th</sup> CLIMECO Summer School in Natal, Brazil in August 2016 and will hold its 5<sup>th</sup> Imbizo open science meeting in Woods Hole, Massachusetts, USA in 2017. Funding for the IMBER International Project Office has been extended to 2020 and IMBER is in the process of selecting a new Executive Officer.

**Action: None. IMBER funding is provided by specific funding from NSF and NASA grants to SCOR.**

#### **3.2 GEOTRACES, p. 3-36** *Naqvi*

GEOTRACES continues its systematic exploration of the chemistry of the ocean. The major activities for the past year have been (1) four cruises in the Arctic Ocean region, (2) preparation for the 2017 Intermediate Data Product, and (3) mid-project synthesis activities. Eighty-six GEOTRACES cruises have been conducted (including 11 International Polar Year cruises) with 946 section stations completed and about 683 peer-reviewed papers published. Planning is underway for Pacific and Indian ocean cruises. The 2017 Intermediate Data Product will be released at the 2017 Goldschmidt Meeting on 13-18 August 2017, in Paris, France.

GEOTRACES held two synthesis meetings in the United Kingdom in December 2015, sponsored by the Royal Society, and another synthesis meeting in the United States will be held in August 2016.

**Action: None. GEOTRACES funding is provided by specific funding from an NSF grant to SCOR.**

### **3.3 Surface Ocean – Lower Atmosphere Study (SOLAS), p. 3-65** *Turner*

SOLAS has added Future Earth as a co-sponsor, in place of IGBP, and is awaiting approval of the response to review of its Phase II Science Plan from co-sponsors. SOLAS is working with Future Earth, IMBER, and other projects to develop an Oceans Knowledge Action Network (KAN). SOLAS is funding two important workshops in June and October 2016. The first workshop was a SOLAS/ESA workshop on concurrent remote-sensing inversions of ocean and atmosphere, which took place at the ESA facilities in Frascati, Italy on 13-15 June. A second workshop to take place in Brussels, Belgium in late October on “SOLAS and Society”.

**Action: None. SOLAS funding is provided by specific funding from an NSF grant to SCOR.**

### **3.4 SCOR/POGO International Quiet Ocean Experiment (IQOE), p. 3-99**

*Urban, Shapovalov*

IQOE’s Science Committee was formed in early 2016 and met for the first time in London, UK in March 2016. The meeting was attended by representatives from several stakeholder groups and the Science Committee agreed to develop six working groups, on (1) Standards and Intercalibration, (2) Data Management and Data Access, (3) Arctic Acoustic Environment, (4) Acoustic Measurement of Biodiversity on Coral Reefs, (5) Acoustic Location of Spawning Aggregations of Fish, and (6) Stakeholder Relations. A Web site has been set up for the project, at [www.iqoe.org](http://www.iqoe.org).

**Action: Consider 2017 support from SCOR to IQOE.**

### **3.5 SCOR/IOC/IOGOOS Second International Indian Ocean Expedition (IIOE-2), p. 3-102** *Burkill*

The three co-sponsoring organizations—SCOR, the Intergovernmental Oceanographic Commission, and Indian Ocean Global Ocean Observing System—issued a call for nominations of chairs of 6 Science Theme teams and 7 working groups and the organizations are in the process of selection chairs. A call was also put out for members of these groups. A Joint Project Office has been set up, with offices in Perth, Australia and Hyderabad, India. An endorsement process has been developed to increase coordination among individual research projects and cruises in the Indian Ocean.

**Action: Consider 2017 support from SCOR to IIOE-2.**



## 4.0 INFRASTRUCTURAL ACTIVITIES

### 4.1 IOC/SCOR International Ocean Carbon Coordination Project, p. 4-1 *Fennel*

In January 2016, the GLObal Ocean Data Analysis Project version 2 (GLODAPv2) was released. Over the past few years, IOCCP was heavily involved in compiling this new interior ocean data synthesis product. The Surface Ocean CO<sub>2</sub> Atlas (SOCAT) is an activity coordinated by IOCCP on behalf of the ocean carbon international community. Its goal is to improve access to surface water CO<sub>2</sub> measurements by regular releases of quality controlled and documented data products on fugacity of carbon dioxide (fCO<sub>2</sub>) for the global oceans and coastal seas. Data submission for version 4 closed at the end of January 2016 (1,171 new and updated datasets submitted), the QC process is underway, and the release is scheduled for June 2016. The data submission, QC and release of subsequent versions will become an annual activity.

**Actions: None. IOCCP funding is provided by specific funding from an NSF grant to SCOR.**

### 4.2 SCAR/SCOR Southern Ocean Observing System (SOOS), p. 4-36 *Wainer*

SOOS was launched in 2011 with the mission to facilitate the collection and delivery of essential observations on dynamics and change of Southern Ocean systems to all international stakeholders, through design, advocacy, and implementation of cost-effective observing and data delivery systems. In 2015/2016, SCAR and SCOR facilitated an international review of SOOS progress and the new 5-Year Implementation Plan. SOOS has provided a response to the review comments, and will also be making significant changes to the 5-Year Implementation Plan as a result of the review. A major product of SOOS, SCOR, and SCAR was the Constable et al. (2016) paper.<sup>2</sup> SOOS is in the process of developing regional and capability working groups to implement SOOS, for example, a working group to drive observations under ice and another group focused on observations on the West Antarctic Peninsula. The Southern Ocean Satellite Data Task Team has led a community report that has been accepted by *Antarctic Science*.

**Action: Consider 2017 funding for SOOS.**

### 4.3 IAPWS/SCOR/IAPSO Joint Committee on Seawater, p. 4-41 *Smythe-Wright*

The Joint Committee on Seawater is a group that resulted from SCOR/IAPSO Working Group 127 on Thermodynamics and Equation of State of Seawater, which developed a new equation of state of seawater (TEOS-10), which has been widely accepted. The group holds opportunistic meetings, particularly in conjunction with annual meetings of the International Association for the Properties of Water and Steam (IAPWS).

**Action: Consider funding for 2017.**

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<sup>2</sup>Constable, A.J., D.P. Costa, O. Schofield, L. Newman, E.R. Urban Jr., E.A. Fulton, J. Melbourne-Thomasa, T. Ballerini, P.W. Boyd, A. Brandt, B. de la Mare, M. Edwards, M. Eléaume, L. Emmerson, K. Fennel, S. Fielding, H. Griffiths, J. Gutt, M.A. Hindell, E.E. Hofmann, S. Jennings, H.S. Las, A. McCurdy, B.G. Mitchell, T. Moltmann, M. Muelbert, E. Murphy, T. Press, B. Raymond, K. Reid, C. Reissy, J. Rice, I. Salter, D.C. Smith, S. Song, C. Southwell, K.M. Swadling, A. Van de Puttecc, and Z. Willis. 2016. Developing priority variables ("ecosystem Essential Ocean Variables" - eEOVs) for observing dynamics and change in Southern Ocean ecosystems. *Journal of Marine Systems* 161:26-41. <http://dx.doi.org/10.1016/j.jmarsys.2016.05.003>

#### 4.4 GlobalHAB, p. 4-45

*Berdalet, Sun*

GlobalHAB is an international project designed to “improve understanding, prediction, management and mitigation of HABs in aquatic ecosystems.” GlobalHAB will pick up some of the topics leftover from GEOHAB (e.g., benthic HABs), plus develop some new areas of interest, including cyanobacterial blooms, human health, and interactions of fish farming with HABs. The GlobalHAB SS met for the first time in March 2016 in Oban, Scotland.

**Action: None. GlobalHAB funding is provided by specific funding from an NSF grant to SCOR.**

#### 4.5 Workshop on Seafloor Ecosystem Functions and their Role in Global Processes, p. 4-52

*Urban*

SCOR sponsored a meeting of 12 marine scientists in September 2014 to develop a high-profile paper on research priorities related to seafloor ecosystem functions and their role in global Processes. The workshop participants are preparing a paper for submission to *Nature Geosciences*.

**Action: None**

### 5.0 CAPACITY-BUILDING ACTIVITIES

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

*Ittekkot*

The SCOR Executive Committee will be renewing the membership of the SCOR Committee on Capacity Building in the next few months.

**Action: Consider funding for 2017 activities of the committee. Consider any recommendations of the committee.**

#### 5.2 SCOR Visiting Scholars, p. 5-1

*Ittekkot*

SCOR has sent 19 Visiting Scholars to 13 different countries in the first 8 years of the program. The program has resulted in a significant outcome for a moderate investment, including a four-year Research Camp at the University of Namibia that has been developed by a two-time SCOR Visiting Scholar, Kurt Hanselmann. A survey of the 16 Visiting Scholars who served in 2009-2015 showed that they appreciated the opportunities provided by the program and also have suggestions for improvements.

**Action: Funding for this activity is provided by an NSF grant to SCOR. Identify sources of funding for the program from other countries to expand the program.**

#### 5.3 POGO-SCOR Visiting Fellowships for Oceanographic Observations, p. 5-10

*Urban*

SCOR has co-funded this program with POGO since 2001. The program has funded more than 125 fellows so far. A SurveyMonkey questionnaire was used in the past year to gather feedback about the program. Five fellowships were awarded in 2016.

**Actions: None. Funding for this activity is provided by an NSF grant to SCOR.**

**5.4 NSF Travel Support for Developing Country Scientists, p. 5-19** *Urban*

The current SCOR grant from the National Science Foundation for travel of developing country scientists to scientific meetings runs until 30 June 2017. The funding is used primarily for travel grants, but also for the SCOR Visiting Scholars and POGO-SCOR Fellowships. The SCOR Committee on Capacity Building approved several batches of requests since the 2015 SCOR meeting and additional requests will be considered before the SCOR meeting in Poland.

**Action: None. Funding for this activity is provided by an NSF grant to SCOR.**

**6.0 RELATIONS WITH INTERGOVERNMENTAL ORGANIZATIONS**

**6.1 Intergovernmental Oceanographic Commission (IOC), p. 6-1** *Burkill*

SCOR continues to co-sponsor several activities with IOC, including IOCCP (see item 4.1), the GlobalHAB project (see item 4.4), and the Second International Indian Ocean Expedition (see item 3.6).

**Actions: None**

**6.2 Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), p. 6-1** *Urban*

SCOR has funded GESAMP Working Group 38 on Atmospheric Input of Chemicals to the Ocean through grants from the U.S. National Science Foundation. The group is in its second phase, in which a workshop was held, which may result in as many as 8 peer-reviewed publications. GESAMP has approved continued work of WG 38 (two additional workshops) and NSF has agreed to provide funding through SCOR for this work.

**Action: None. Funding for this activity is provided by an NSF grant to SCOR.**

**6.3 North Pacific Marine Science Organization (PICES), p. 6-6** *Batchelder, Sun*

PICES and SCOR cooperation on a variety of activities and PICES helps to implement global SCOR projects in the North Pacific region. Sun Song and Ed Urban will represent SCOR at the 25<sup>th</sup> PICES anniversary meeting in November 2016.

**Actions: None**

**7.0 RELATIONS WITH NON-GOVERNMENTAL ORGANIZATIONS**

**7.1 International Council for Science** *Burkill*

ICSU is reviewing SCOR and SCAR in 2015 and 2016. The review report should be available by the time of the SCOR meeting in Poland. Peter Burkill and Ed Urban met with the ICSU Executive Director, Heide Hackmann, and the ICSU Head of Science Programmes, Lucilla Spini, in June 2016 to discuss the SCOR review, the evolution of Future Earth, and the potential merger of ICSU and the International Social Science Council.

**Actions: Discuss SCOR actions to respond to ICSU review.**

**7.1.1 World Climate Research Programme (WCRP), p. 7-1** *Caltabiano, Fennel*

WCRP co-sponsors the SOLAS project. WCRP projects particularly related to SCOR interests include the CLIVAR project and the WCRP Grand Challenge on Regional Sea-Level Change and Coastal Impacts. SCOR is co-sponsoring and providing funding for the WCRP Polar Challenge (see <http://www.wcrp-climate.org/index.php/polarchallenge>).

**Action: None**

**7.1.2 Scientific Committee on Antarctic Research (SCAR), p. 7-7** *Brussaard*

SCOR cooperation with SCAR is particularly in relation to the Southern Ocean Observing System, but SCAR conducts several other activities that may interest SCOR.

**Action: Discuss whether SCOR should offer to help with other SCAR activities.**

**7.1.3 Future Earth Initiative, p. 7-16** *Burkill*

The Future Earth initiative continues development. SCOR and Future Earth signed a letter of agreement and SCOR is working with Future Earth in relation to the Phase II science plans for SOLAS and IMBER. These two projects are working with other Future Earth-sponsored projects to develop an Oceans Knowledge Action Network (KAN).

**Action: None.**

**7.1.4 Belmont Forum, p. 7-16** *Burkill*

“The Belmont Forum is a group of the world's major and emerging funders of global environmental change research. It aims to accelerate delivery of the environmental research needed to remove critical barriers to sustainability by aligning and mobilizing international resources. It pursues the goals set in the Belmont Challenge by adding value to existing national investments and supporting international partnerships in interdisciplinary and transdisciplinary scientific endeavors.” – from <http://belmontforum.org/belmont-forum>. Peter Burkill and Ed Urban had a conference call with the Executive Director of the Belmont Forum and in in-person meeting with the Deputy Director, to discuss potential interactions with SCOR.

**Action: None.**

**7.2 Affiliated Organizations**

**7.2.1 International Association for Biological Oceanography (IABO), p. 7-17** *Miloslavich*

IABO has continued its work to coordinate the field of marine biodiversity research internationally, particularly through the series of World Conferences on Marine Biodiversity. SCOR provided support for developing country scientists to attend the third conference in the series, held in China in 2014. The next IABO General Assembly will be held in conjunction with the 4th World Conference in Marine Biodiversity (WCMB) in Montreal in May 2018.

**Action: Identify areas of future cooperation with IABO.**

**7.2.2 International Association for Meteorology and Atmospheric Sciences (IAMAS), p. 7-19** *Turner*

The international Commission on Atmospheric Chemistry and Global Pollution (iCACGP) of IAMAS co-sponsors SOLAS. iCACGP is one of 10 IAMAS commissions that form the core of IAMAS activities. The IAMAS Bureau and Executive have been heavily involved in the

planning of the joint IAPSO-IAMAS-IAGA assembly, which will be held in Cape Town, South Africa on 27 August–1 September 2017. A conference web site is now available at <http://www.iapso-iamas-iaga2017.com>.

**Actions: Identify future areas of cooperation with IAMAS.**

**7.2.3 International Association for the Physical Sciences of the Oceans (IAPSO), p. 7-21 *Smythe-Wright***

SCOR and IAPSO have co-sponsored many working groups in the past, and are discussing IAPSO co-sponsorship of new SCOR working groups. The two organizations currently co-sponsor the Joint Subcommittee on Seawater (see item 4.3).

**Action: Identify future areas for SCOR cooperation with IAPSO.**

**7.3 Affiliated Programs**

**7.3.1 InterRidge - International, Interdisciplinary Ridge Studies, p. 7-27 *Urban***

InterRidge has been a long-time affiliated program of SCOR, and the two organizations are co-sponsoring WG 135 on Hydrothermal Energy Transfer and its Impact on the Ocean Carbon Cycles. The InterRidge IPO moved to a new location in Toulouse, France this year.

**Action: None**

**7.3.2 International Ocean Colour Coordinating Group (IOCCG), p. 7-31 *Sun Song***

SCOR co-sponsors various IOCCG activities through support from the U.S. National Aeronautics and Space Administration. Currently, the SCOR/IOC GEOHAB project and IOCCG are co-sponsoring a project on applications of remote sensing to detection of harmful algal blooms. SCOR provided support for developing country scientists to participate in the 2016 IOCCG Summer School. Plans are underway for the third International Ocean Colour Science (IOCS) meeting, which will be convened by the IOCCG in partnership with EUMETSAT, ESA, the European Commission and likely NASA. The meeting is scheduled to take place from 15-19 May 2017, in Lisbon, Portugal.

**Action: None.**

**7.3.3 Global Alliance of CPR Surveys (GACS), p. 7-36 *Burkill***

GACS continues work toward fulfilling its goals of providing a global network of Continuous Plankton Recorder surveys and has achieved some success in helping establish new CPR surveys and providing training for people responsible for these new surveys. There has been no meeting of GACS since the SCOR meeting in Goa (GACS meetings are held in September of each year); however, there has still been a significant amount of activity. Early in 2016, a workshop was held at the Sir Alister Hardy Foundation for Ocean Science (SAHFOS) to provide CPR training for technicians from the National Institute of Oceanography in Kochi, India. The latest Global Status report was released in June 2016, available electronically at

<https://www.sahfos.ac.uk/publications/scientific-reports/ecostatus-reports/>.

**Action: None**

## 7.4 Other Organizations

### 7.4.1 Partnership for Observation of the Global Oceans (POGO), p. 7-37 *Shapovalov*

SCOR and POGO have many areas of mutual interest and have a good history of cooperation over the 16 years of POGO's existence. The two organizations have co-sponsored a fellowship program for ocean observations since 2001 and worked together to develop the International Quiet Ocean Initiative (see item 3.4). SCOR and POGO also work together in relation to global capacity building for ocean science.

**Action: None**

## 8.1 Membership

*Urban*

### 8.1.1 National Committees, p. 8-1

*Report on Membership Changes since 2013 Executive Committee Meeting, p. 8-1*

*Member Nations and Nominated Members, p. 8-2*

*Membership in the Scientific Committee on Oceanic Research (SCOR), p. 8-3*

**Actions: None.**

## 8.2 Publications Arising from SCOR Activities, p. 8-4

*Urban*

SCOR projects and working groups have produced many publications in the past year. Several SCOR working groups have special issues or significant papers under development, which will appear in the next year.

**Action: None**

## 8.3 Finances, p. 8-5

*Finance Committee, Urban*

The SCOR Executive Committee approved a Finance Committee consisting of Annalisa Griffa (Italy), Paul Myers (Canada), Johan Rodhe (Sweden), and Jing Zhang (Japan). This committee will conduct its work during the SCOR meeting and will report on (1) the 2015 Audit report, (2) recommendations related for revisions to the 2016 SCOR budget, (3) recommendations for the 2017 SCOR budget, and (4) recommendations for dues levels in 2017.

**Actions: Present (1) the 2015 Audit report, (2) recommendations related to revisions to the 2016 SCOR budget, (3) recommendations for the 2017 SCOR budget, and (4) recommendations for dues levels in 2018.**

## 9.0 SCOR-RELATED MEETINGS

### 9.1 SCOR Annual Meetings

#### 9.1.1 2016 General Meeting: Sopot, Poland, p. 9-1

*Burkill*

**Action: Thank hosts of the meetings**

#### 9.1.2 2017 Executive Committee Meeting, p. 9-1

*Burkill*

**Action: Announce location of 2017 meeting.**

**9.1.3 2018 General Meeting, p. 9-1**

**Action: Announce location of 2017 meeting.**

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

**9.3 SCOR-Related Meetings Since the 2015 SCOR Executive Committee Meeting and Planned for the Future, p. 9-3**