

**Minutes of the 2001 CNC/SCOR Meeting**  
**Sunday, May 27, 2001**  
**Sheraton Hotel Downtown Winnipeg Room 307**

Attendance:

Dr. Ken Lee, Chairperson, BIO,  
Dr. Raj Murthy, CCIW,  
Dr. Susan Allen, UBC, (by phone),  
Dr. Neil Campbell, CMOS Ottawa,  
Dorothy Neale, CMOS Ottawa,  
Paul-André Bolduc, Secretary.

1. Welcome and introductory remarks

Dr. Ken Lee opened the meeting at 08:30 hours and welcomed all the participants at this CNC/SCOR Meeting. He expressed his views on the future of SCOR and mentioned that this meeting was important for reviving SCOR among the scientific community, particularly for the younger scientists.

2. Approval of the agenda

The proposed agenda was approved with two minor additions:

10.3 Review and expansion of membership (including "nominated members to SCOR);  
10.7 Next CNC/SCOR Session.

The final approved agenda is shown in Appendix "A".

### 3. Minutes of 2000 Annual Meeting

#### 3.1 Statement

Paul-André Bolduc mentioned the fact that the minutes of the 2000 meeting held in Victoria were lost due to a computer failure. Unfortunately, the damaged computer files could not be recovered.

#### 3.2 Review of action items

Susan Allen has provided the URL for the web page for the NSERC Earth Science vision committee. It is:

<http://www.nserc.ca/programs/real2000/web-earth-e.htm> in English; and

<http://www.nserc.ca/programs/real2000/web-earth-f.htm> in French;

Susan Allen has also provided a one pager on the status of GLOBEC-Canada. Her status report is shown in Appendix "B".

Edwin Bourget has investigated the interest of Dr. Richard Rivkin in setting up a SCOR working group. He has reported that Dr. Rivkin is still interested in setting up a working group on Canadian involvement in JGOFS. Action for the Secretary to communicate with Dr. Rivkin and find out the status of this new working group.

Edwin Bourget has asked Maurice Levasseur on the current status of GEOHAB. He has reported that the current executive committee is composed of Allan Cembella, NRC, Halifax, and John Cullen from Dalhousie University. There have been some delays in implementing the science plan, but this is being done and implemented on the web. The Secretary was requested to determine the GEOHAB URL.

#### 3.3 Other matters arising from the 2000 meeting

As the minutes of the 2000 meeting were lost, there were no further matters arising from the 2000 meeting.

#### 4. Review of partnership agreement between NRC and DFO in support of Canada's affiliation with SCOR

Under this partnership, approved in 1993, NRC agreed to pay the international affiliation fees for SCOR and ECOR. At that time the fees were \$17,600 and \$4,700 respectively.

Under an agreement signed between DFO and CMOS in 1999, it was agreed that the Secretariat function of SCOR and ECOR will be carried out by CMOS and that DFO will contribute to an amount equal of \$20,000 per year. This contribution allows for an overall saving to the department while at the same time allows CMOS to manage year to year cost variations. This agreement is in effect until March 31, 2003. It stipulates that funding will be provided in two equal instalments upon provision of reporting SCOR and ECOR activities to DFO in the spring and in the fall of each year of the agreement.

#### 5. Role of CNC/SCOR (Working Groups)

It was pointed out at the meeting the booklet describing SCOR working principles and working groups was outdated. The issue on hand is dated 1998 and no update has been received since. The Committee has asked the Secretary to investigate a new more up-to-date publication and to distribute it to all Committee members.

Ken Lee proposed to form a new working group to investigate the cumulative effect of on-going discharge impacts from the offshore drilling industry. The proposition was seconded by Raj Murthy and unanimously approved by the Committee.

The Committee expressed its concerns about CNC Working Groups and has taking notice of Bjorn Sundby's e-mail on that subject (Appendix "C"). It was proposed by Ken Lee and seconded by Susan Allen

to ask each member of the Committee to write a small paragraph of their work in relation with SCOR. This description shall indicate the interest of each member to remain on the SCOR Committee. If the member wishes to step down from the Committee, he/she should indicate a short list of potential candidates to replace him/her on the Committee. This description is to be sent to the Secretary.

#### 6. International SCOR Update

The Committee was briefed on the Highlights of the 25th General Meeting that took place last October in Washington, D.C. The highlights, produced by Bjorn Sundby, were published in the CMOS Bulletin SCMO (Vol.28, N0.6, page 181-184) and are reproduced in Appendix "D". It was pointed out that several new working groups are active within SCOR and many Canadian scientists are members or chair those working groups. It was also realized that the move of some Canadian scientists to the United States has reduced the Canadian participation in those working groups. The Committee requested that the Secretary merge the information provided by Sundby's report with the information provided by CNC/Members (Agenda item #5). An up-to-date and complete list will be provided to all members and published on the web.

Edwin Urban has produced a document that describes SCOR International. This is the year 2000 report. Ken Lee will provide an electronic copy to the Secretary for distribution to the Committee members and also for inclusion on the website.

#### 7. Review of Canadian Involvement in various International large programs

The information provided within agenda item #6 provides this involvement. It was not possible to review the involvement at the time of the meeting in Winnipeg.

#### 8. Review of Canadian Involvement in SCOR Working Groups

Bjorn Sundby's report (Appendix "D") provides the information required at this agenda item.

#### 9. Other Scientific and Technical items

### 9.1 SCOR Affiliated Programs

No information was provided on this agenda item.

### 9.2 Report on CNC/ECOR activities

The Minutes of the October 28 ECOR Meeting held in Toronto were distributed to the Committee members and comments were provided by Neil Campbell. The Minutes of this meeting are shown in Appendix "E". It was pointed out that the report on the Marine Oil Pollution working group has been published in the Spill Science and Technology Bulletin, Volume 5, Number 3/4, December 1999. It was also pointed out that there was considerable effort in bringing this important report to publication.

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### 9.3 Chapman Conference

Ken Lee reported on a request received from Charles Tang for supporting the "Chapman Conference on high-latitude ocean processes being organized by scientists working in polar and sub-polar oceans. The Conference is being sponsored by the AGU and will be held in Montréal in the fall of 2002. He proposed for CNC/SCOR to support the Conference and to seek financial support from SCOR for a total of CAN\$9,000 (US\$6,000) to cover the living expenses for 15 scientists from Soviet Union and developing countries including lodging, meals and local transportation but not international travel. The proposition was seconded by Raj Murthy and adopted unanimously by the Committee Members. Neil Campbell reported that CMOS has been approached to support the Chapman Conference in Montréal. The Chair requested the Secretary to write a letter to International SCOR asking financial support for the Chapman Conference for Soviet Union and developing countries scientists.

## 10. Committee Business

### 10.1 Secretariat

Nothing to report on this agenda item.

## 10.2 Finance

Paul-André Bolduc reported on the financial status of CNC/SCOR. A copy of the Auditors' Report for the calendar year 2000 is shown in Appendix "F". During the year 2000, there were \$14,000 of revenues and \$4,136 of expenses for a surplus of \$9,864. The total assets of SCOR is at the end of year 2000 \$23,739. More details can be found in Appendix "F".

## 10.3 Review of membership (including "nominated members to SCOR")

From the revised list dated May 2000, it was pointed out that there are now three vacant positions (Hobson, Krauel and Juniper positions). Ken Lee pointed out that membership should come from different sectors and different regions of Canada, for example a member from industry, a member from Québec region, etc. Different names were mentioned but it was realized that we need to proceed with caution. The Committee then decided to ask members when they are stepping down as Committee members and to provide a list of potential candidates for their replacement. This goes along with what was required from each Member under agenda item #5. The CNC/SCOR Membership list as of May 2001 is shown in Appendix "G".

The Chair, Ken Lee, has raised the issue of the status of Neil Campbell on the CNC/SCOR Committee. After a short discussion, the Committee has agreed to nominate Neil Campbell as the CMOS Liaison Officer for CNC/SCOR.

## 10.4 CNC/SCOR Web Page Update

The French translation of the English text shown on CNC/SCOR website has been received and is now under review by the Secretary. The French text will be installed shortly, thus providing a full bilingual website for CNC/SCOR.

#### 10.5 Timing of future CNC/SCOR meetings

Bjorn Sundby has raised the issue (See Appendix "H") of the timing of the annual CNC/SCOR meeting. Now the meetings are taking place in the Spring along with the Annual CMOS Congress. It was pointed out by Bjorn Sundby that the meeting is long before the proposals arrive from SCOR. Reviewing the proposals by mail has proved unsatisfactory. He has suggested moving the meeting to the fall, prior to the SCOR meeting.

Other members of the Committee thought the timing as it now stands is adequate. Mostly, it is out of the field work season. Also a fall meeting may conflict with teaching assignment by some members of the Committee. It was therefore decided to leave the timing of the annual meeting as is with the possibility of a conference call in the fall to discuss issues raised by the SCOR meeting. Action is required by the Secretary to raise these issues with the members of the Committee and request a conference call if necessary.

#### 10.6 2001 SCOR Executive Meeting

The Executive SCOR 3-day Meeting will be held in Argentina in October. No further information has been received at this time. CNC/SCOR should be sending two representatives from Canada. Their names will be provided at a later date by the Committee.

#### 10.7 Next Session

The next Annual Meeting is scheduled to take place during the 2002 Annual CMOS Congress to be held in Rimouski. The 2002 meeting will be a week earlier as the dates of the Congress have to be changed.

During the next CMOS Annual Congress to be held in Rimouski under the theme "The Northern Environment", it was decided to hold a 1/2-day session on SCOR. It was the feeling of the Committee members that the status of CNC/SCOR needs to be raised and promoted among Canadian younger scientists. During this 1/2-day session, members of the working groups would present the results of their research to the scientific community. It is hoped that this 1/2-day CNC/SCOR session will receive sufficient exposure, thus bringing new interest among Canadian scientists to participate in its activities through the working groups mechanism. Action is required from the Secretary to arrange this 1/2-session with the Rimouski Local Arrangement Committee and with the Scientific Organizing Committee as well. When the logistic arrangements are known, information will be distributed among the CNC/SCOR Community for submission of an abstract of a paper to be presented at the Rimouski Congress.

#### 11. Information reports by Members

There was an informal discussion of the various projects by the members present at the meeting although no written reports were tabled.

The Secretary reported that he has received a copy of the International Council for Science Newsletter (Nos.72-74), December 2000. Items covered in this Newsletter include:

- 1) ICSU's new vision for the future;
- 2) ICSU helping research on GMOs;
- 3) ICSU begins preparations for Rio Plus 10 Summit;
- 4) Some IUBMB initiatives;
- 5) INASP;
- 6) A new threat to data access;
- 7) 79th Meeting of the Executive Board of ICSU;
- 8) Standards and Ethics and Responsibility in Science.

Members who wish to receive part of or a complete copy of this Newsletter should contact the Secretary.

## 12. Adjournment

The meeting was adjourned at 11:00 hours.

### **List of Appendices**

"A" Approved Agenda for the 2001 SCOR Meeting.

"B" GLOBEC-Canada by Susan Allen.

"C" Bjorn Sundby's concerns on CNC Working Groups.

"D" Highlights of the 25th General Meeting, Washington, D.C., October 2000.

"E" Minutes of the October 28, 2000, ECOR Meeting held in Toronto.

"F" Auditor's Report for year 2000 for SCOR

"G" CNC/SCOR Membership List as of May 2001

"H" Bjorn Sundby's concerns about timing of CNC/SCOR meetings.

### **List of Action Items**

1. Investigate with Dr. Richard Rivkin the status of the new working group on Canadian involvement in JGOFS. PAB
  
2. Determine the url for GEOHAB science plan. PAB
  
3. Report to DFO on 2001 SCOR Meeting. PAB
  
4. Investigate a new and more up-to-date SCOR publication on governing principles and working groups listing. PAB
  
5. Merge Sundby's report information with the information provided by CNC/Members. Distribute and publish on the web an up-to-date list. PAB
  
6. Write a letter for signature by Ken Lee, Chair, requesting financial support for Soviet Union and developing countries to cover living cost (lodging, food and local transportation) at the Chapman Conference to be held in Montréal in the fall of 2002. PAB & KL
  
7. Review issues raised by SCOR at their annual meeting, distribute them to members and arrange a conference call in the fall if required. PAB
  
8. Determine the Canadian delegates to the 2001 SCOR Executive meeting in Argentina. Committee

9. Arrange a 1/2-day CNC/SCOR Session at the 36th CMOS Annual Congress in Rimouski in 2002. PAB & KL

### **List of Acronyms**

AGU	American Geophysical Union
CMOS	Canadian Meteorological and Oceanographic Society
DFO	Department of Fisheries and Oceans
ECOR	Engineering Committee on Oceanic Resources
ICSU	International Council for Scientific Union
GEOHAB	Global Ecology and Oceanography of Harmful Algal Blooms
GLOBEC	GLOBal ocean ECosystems dynamics
GMOs	Genetically Modified Organisms
INASP	International Network for the Availability of Scientific Publications
IUBMB	International Union of Biochemistry and Molecular Biology
NRC	National Research Council
SCOR:	Scientific Committee on Oceanic Research

## Appendix A

### Canadian National Committee for the Scientific Committee on Oceanic Research (CNC/SCOR)

#### 2001 Annual Meeting

Sunday, May 27, 2001 08:30-11:00 hrs

Sheraton Hotel, Winnipeg, Manitoba Room 2

#### Proposed Agenda

1. Welcome and introductory remarks: Dr. Ken Lee, Chair, CNC/SCOR
2. Approval of agenda
3. Minutes of 2000 Annual Meeting.
  - 3.1 Statement;
  - 3.2 Review of action items;
  - 3.3 Other matters arising from 2000 meeting.
4. Review of partnership agreement between the National Research Council and DFO in support of Canada's affiliation with SCOR.
5. Role of CNC/SCOR (Working Groups).
6. International SCOR Update.
7. Review of Canadian Involvement in various international programs including JGOFS, GLOBEC, WOCE, CLIVAR, GOOS, LOICZ, Others.
8. Review of Canadian Involvement in SCOR Working Groups.
9. Other Scientific & technical items.
  - 9.1 SCOR Affiliated Programs;
  - 9.2 Report on CNC/ECOR activities;
  - 9.3 Chapman Conference.
10. Committee Business;
  - 10.1 Secretariat;
  - 10.2 Finance;

- 10.3 Review and expansion of membership (including “nominated members to SCOR);
  - 10.4 CNC/SCOR Web Page update;
  - 10.5 Time of future CNC/SCOR meetings;
  - 10.6 “00 SCOR Executive Committee Meeting.
  - 10.7 Next CNC/SCOR Session
- 11. Information reports by Members.
  - 12. Adjournment.

Agenda prepared by: *Paul-André Bolduc*

*Secretary CNC/SCOR*

First draft: 9 May 2001

Second draft: 23 May 2001

Final agenda: 27 May 2001

## Appendix B

### GLOBEC Canada Status Report

June 5, 2000

Author: S. E. Allen

GLOBEC-Canada was funded for 4 years (June 1996-June 2000) through Fisheries and Oceans Canada (DFO) and the Natural Science and Engineering Research Council (NSERC). About 50 scientists were involved. A web page detailing projects and personal is available at

<http://brigus.physics.mun.ca/globec>.

The GLOBEC-Canada team submitted a intent-to-apply to NSERC in July 1999. After receiving a favourable response we submitted a full application to NSERC and DFO in the fall. DFO awarded funding (contingent on NSERC's funding) in mid January. On January 19, members of the steering committee met with an NSERC site visit committee in Halifax. Although the meeting

appeared to go well, the eventual report of the site visit committee was not favourable and GLOBEC phase II was not funded.

We did consider appealing but have decided against that course of action. DFO has funded (\$200k for one year) a very much smaller effort to keep GLOBEC alive. Discussion on the use of the money is continuing but it appears that some of the money will be used for fall workshops. Although no final decisions have been made, the community is considering a series of smaller, strategic proposals to NSERC. If this plan of action is followed, there will continue to be a GLOBEC national committee but its role will be more informal and focussed on communication (internal and external).

Although the funding situation is bleak the science is alive and vigorous. Our first grouping of papers (other papers have been published singly) will appear in the Canadian Journal of Fisheries and Aquatic Sciences shortly. A full GLOBEC issue is currently under revision to be published

in March 2001. GLOBEC-Canada was well represented at the Ocean Sciences Meeting in January 2000 and copies of the abstracts can be found on the American Geophysical Union web site (<http://www.agu.org>).

### **Bjorn Sundby e-mail 10 May 2001, re role of SCOR working groups**

I would have liked to see a discussion on how CNC/SCOR can get the word out to the community that a) SCOR is always interested in proposals for new working groups, that b) these proposals should be initiated at the grass roots level, and that c) the members of CNC/SCOR are there to help produce a strong proposal. During my tenure as SCOR secretary, many of the proposal we received were rather weak. I am sure that well-prepared proposals from Canada (the

Boudreau proposal was a good example) would stand a very good chance to be accepted.

Related to the above is of course the perennial issue of how to let people, especially the younger members of the community, know what SCOR is and what SCOR does. We need to activate CNC/SCOR so we do more than just meet once a year. Perhaps the members could give talks

in their regions about SCOR. (Earlier this year I gave an invited talk during the Forum Québécois des Sciences de la Mer about SCOR and what is new and hot in international marine science. It was well received.)

**REPORTS - RAPPORTS**

**Scientific Committee on Oceanic Research**

<http://www.jhu.edu/~scor/>

Highlights of the 25<sup>th</sup> General Meeting

National Academy of Sciences, Washington, DC

October 16, 2000

(The full report will, as usual, be produced by the SCOR secretariat and distributed to national SCOR committees when ready.)

Canada was represented at the General Meeting by Dr. Bjorn Sundby, outgoing Secretary of SCOR, and by Dr. Michael Sinclair, Chair of Working Group 105.

**1. Large Programs Development**

*A. Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB)*

GEOHAB became a SCOR Program in 1998 and is co-sponsored by IOC and IGBP. The GEOHAB Science Plan was presented by Dr. Patricia Glibert on behalf of the Scientific Steering Committee. The external and internal reviewers expressed concern that the plan lacked focus and that it needed to be edited for clarity before publication. The assembly felt that the Science Plan is an important document that should get broad distribution and accepted the plan on the condition that the reviewers concerns be addressed and the text be edited. Arrangements have been made for this to be done. The steering committess will now proceed to the next step in the evolution of this program: the Implementation Plan. As was noted in the report of last year's Executive Meeting, there is not yet a Canadian GEOHAB program. However, Canadian researchers have been active in developing the international GEOHAB since its inception. For more information, consult the GEOHAB web site: <http://www.jhu.edu/~scor/GEOHAB.html>

## *B. Surface Ocean - Lower Atmosphere Study (SOLAS)*

SCOR and IGBP have jointly supported the development of a new international research program on ocean/atmospheric biogeochemical coupling, with the acronym SOLAS. The primary goal of SOLAS will be to address key interactions among the marine biogeochemical system, atmospheric chemistry, and climate. The program will be highly interdisciplinary, involving chemists, physicists, and biologists from both the marine and the atmospheric sciences.

An open science meeting, held in February 2000 in Damp, Germany, attracted 250 participants from 22 countries, and led to a SOLAS Science Plan that was presented at the General Meeting by Bob Duce on behalf of the SOLAS Editorial Team. The reviews of the plan were glowing and it was accepted by the general meeting. SOLAS has thus been accepted as a new international program of SCOR. For more information, consult the SOLAS web site: <http://www.ifm.uni-kiel.de/ch/solas/main.html>

It is worth noting that Canadian SOLAS is ahead of international SOLAS. An organizing meeting was held in Montreal in June 2000 and a SOLAS proposal spearheaded by Dr. William Miller is about to be submitted to NSERC. It appears that Canada is the first nation to develop its own SOLAS program.

## *C. Future of Global Ocean Biogeochemistry*

SCOR and IGBP, the main international sponsors of JGOFS and GLOBEC, organised a workshop in Plymouth, UK, from 23-26 September 2000 to plan a framework for future marine global change research. A draft report of the meeting was presented to SCOR. The report identifies four issues, each of which is of interest to Canada and Canadian researchers:

- Ecosystem structure, function and feedbacks;
- Carbon storage;
- Continental margins;
- Fisheries.

To bring the program forward, a small international planning group will be established. Dr. Peter Burkhill (UK) will take the lead on behalf of SCOR. The group is asked to come up with its report before the end of 2001. Professor Alfonso Mucci (Canada) has been proposed as a member of this group.

In my opinion this project has the potential for becoming the next major new international oceanographic program. Canadian scientists should be aware of it. I have appended the draft document to this report.

## **2. New Working Groups**

There were no working group proposals from Canada this year. I urge those who read this report and have ideas for new working group topics to contact members of the Canadian National SCOR Committee for advice on how to prepare a successful proposal for forwarding to SCOR. The deadline for receipt by SCOR is 3-4 months before the annual meeting in October. Working groups form the backbone of SCOR, and SCOR needs good proposals for working groups on exciting and emerging areas of marine science. There are plans for posting the guidelines for new working group proposals on the SCOR web site.

The General Meeting of SCOR approved the creation of two new working groups:

### *1) Marine phytoplankton and global climate regulation: The phaeocystis cluster as model.*

This working group, proposed by Professor Winfried Gieskes (the Netherlands), will make an inventory of aspects that relate to cycling of biogeochemically relevant elements:

- Factors regulating bloom inception;
- The grazing issue: bottom up or top down control;
- Cellular response to environmental factors;
- Distribution patterns with molecular probes;

- Genetics: pathways of distribution and biodiversity in the cluster;
- Biogenic fixation and emission of climate-relevant gases;
- Cloud inception and characterization of condensation nuclei over blooms.

Dr. Maurice Levasseur (Canada) is on the proposed list of members.

## *2) Developing quantitative measures for marine ecosystems from environmental, ecological and fisheries perspectives*

This working group was proposed by Dr. Philippe Cury (France). It is an outcome of the work of WG 105 (Impact of World Fisheries Harvest on Marine Ecosystems, Dr. Michael Sinclair, chair). The objective of this working group is to develop theory to evaluate changes in marine ecosystems from environmental, ecological and fisheries perspectives. The objectives of the group include:

- define generic measures that can be used in marine environments, fisheries, and exploited fish populations and ecosystems;
- formulate these measures in mathematical or statistical terms;
- assess when values of a measure are statistically and/or ecologically meaningful;
- apply these measures to specific data sets or specific models in order to evaluate their usefulness.

Professor Daniel Pauly and Dr. Jake Rice (Canada) are on the list of suggested members.

## **3. Reports from Existing Working Groups and Programs**

WG 103: *The role of wave breaking on upper ocean dynamics*. M. Banner, chair. No Canadian members.

The work of this group is essentially completed and a manuscript will be submitted to a major journal early in 2001.

WG 105: *The impact of world fisheries harvests on the stability and diversity of marine ecosystems.* Canadian members: M. Sinclai (chair), D.Pauly, E. Melzer, H. Powles, J. Rice, R. Sumaila.

Dr. Michael Sinclair presented the final report of this group whose work culminated with an ICES/SCOR symposium on Ecosystem Effects of Fishing in Montpellier, France, in 1999. The proceedings have been published in the ICES Journal of Marine Science, Volume 57 (3), June 2000. See also <http://www.ices.dk/symposia/ecoeff/ecoeffe.htm>

WG 106: *Relative sea level and muddy coasts of the world.* Y. Wang, chair. Canadian member: Dr. C.Amos.

The work of this group is essentially completed and will be published as a book by Elsevier under the title "Muddy coasts of the world: processes, deposits and function: (eds. T. Healy and Y. Wang).

WG 108: *Double diffusion.* Y. Chasheckin and J. Fernando, chairs. Canadian members: A. Gargett and B.Ruddick.

The work of this group is in progress. Information can be found on their website: <http://www.phys.ocean.dal.ca/programs/doubdiff/doublediffusion.html>

WG 109: *Biogeochemistry of iron in seawater* (with IUPAC) D. Turner and K. Hunter, chairs. **No Canadian members.**

The main activity of the group was to prepare a book for publication in the IUPAC series 'Analytical and Physical Chemistry of Environmental Systems', published by John Wiley. There is a firm commitment to deliver the manuscript of the book to the publisher by the end of October.

WG 110: *Intercomparison and validation of ocean-atmosphere energy flux fields.* S. Gulev and P. Taylor, chairs. No Canadian members but note the workshop announcement.

This group has a web site: <http://www.soc.soton.ac.uk/JRD/MET/WGASF/>

containing the full report of the outcome of the working group's activities plus the announcement of a WCRP/SCOR Workshop on intercomparison and validation of ocean-atmosphere flux fields, Washington, DC, 21-25 May 2001.

WG 111: *Coupling of winds, waves and currents in coastal models.* N. Huang and C. Mooers, chairs. No Canadian members.

The work of this group will culminate with a workshop at the University of Miami in Spring 2001.

WG 112: *Magnitude of submarine groundwater discharge and its influence on coastal oceanographic processes.* W. Burnett and E. Kontar, chairs. Canadian member: Leslie Smith.

This is undoubtedly the most active of all the working groups. It has attracted a great deal of attention and at last count has nearly 40 associate and corresponding members in addition to the 10 full members. Their activities are posted at the web site: <http://www.jhu.edu/~scor/WG112.html> which includes an extensive bibliography on submarine groundwater discharge investigations.

WG 113: *Evolution of Asian monsoon in marine records. Comparison between Indian and East Asian subsystems.* W. Pinxian, chair. No Canadian members.

This group is concentrating its efforts on the results of OSP Leg 184 to the South China Sea. A meeting is planned for May 2001.

WG 114: *Transport and reaction in permeable marine sediments.* B.P. Boudreau (formerly Canada) and M. Huettel, chairs. No Canadian members.

This group is very active and has an informative web site: <http://www.mpi-bremen.de/SCOR-WG114/>. An information paper can be found at <http://www.skio.peachnet.edu/coop/issue11.pdf>, and a second paper will appear in EOS.

WG 115: Standards for the survey and analysis of plankton.

This WG was established at the previous SCOR meeting, but it has not yet started its work because of difficulties in finding someone willing to chair it.

WG 116: Sediment trap and <sup>234</sup>Th methods for particulate organic carbon export in the upper ocean: Current status. K. Buesseler, chair. No Canadian members.

This group has just been formed.

WG 117: Synthesis of decadal to millennial climate records of the last 80 ky. M. Sarnheim and J. Kennet, chairs.

The membership of this group has yet to be determined.

WG 118: New technologies for observing marine life. D. Farmer (Canada) chair.

The group will hold its first meeting in Sidney, BC, later this year.

#### JGOFS and GLOBEC

The Scientific Steering Committees submitted their annual reports to the General Meeting. The reports are substantial for these are very successful programs. Details will not be reported here, but the interested reader is referred to the SCOR web site for information: <http://www.jhu.edu/~scor/>

## **4. Finance and Organization**

1) Membership fee: It was decided to raise the membership fees for SCOR members by 1%, in accordance with ICSU guidelines.

2) Election of new officers: Professors John Field (President), Bjorn Sundby (Secretary), and Sergei Lappo (Vice-President) were not eligible for re-election. Professor Bob Duce (USA) was elected President, Dr. Julie Hall (New Zealand) was elected Secretary, and Professor Roberto Purini (Italy) was elected Vice-President. John Field remains on the Executive as Past President.

3) SCOR Secretariat: The search committee set up by SCOR, following the announcement of Elizabeth Gross that she intended to retire from full-time employment this year, selected Dr. Edward Urban to serve as her successor as the SCOR Executive Director. Dr. Urban accepted SCOR's offer and has assumed the Executive Director's responsibilities. Dr. Urban earned a Ph.D. in marine studies and a Masters of Business Administration from the University of Delaware in 1989. He decided on a career in science administration early on and from 1989 till last week worked for the U.S. National Research Council's Ocean Studies Board.

The new Executive Director will maintain the office at Johns Hopkins University with Wesley Anne Ross continuing as Executive Officer. Mrs. Gross will stay on as a part-time Finance Officer with responsibilities for grant and contract management and budget oversight.

*Reported by Bjorn Sundby*

*Canadian nominated member to SCOR*

**Note:** An electronic or a paper copy of this report is available from the Secretary of CNC/SCOR. If you wish to receive it, just send a note to the Secretary to that effect:

Paul-André Bolduc

Secretary CNC/SCOR

CMOS - SCMO

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e-mail: [paulandre.bolduc@sympatico.ca](mailto:paulandre.bolduc@sympatico.ca)

### **Note from the Editor**

The first decade of global change marine biogeochemistry has been synthesised by JGOFS, and the IGBP is also undertaking synthesis across its other mature programs. The time is right to take stock of these findings and plan a framework for future marine global change research. SCOR and IGBP, the main international sponsors of JGOFS and GLOBEC, organized a workshop in Plymouth, UK from 23-26 September 2000 to build on these and other findings. In developing this report, the participants noted both the exciting advances in quantifying variability and global change in the ocean, and also the pressing concerns that society is demanding of global change scientists. They also noted the need to plan synthesis and integration across all elements from the beginning of the developing new phase of global change research.

A report summarising their discussions has been written. It stipulates the preliminary stage in developing a framework for linking together existing and future elements of international marine global change research in the context of **Earth System Science**, the unifying concept underpinning the restructuring of the IGBP.

If you wish to receive this report, write to the CNC/SCOR Secretary. You may ask for an electronic

copy (MSWord format) of the report. A paper copy is also available upon request.

**Annual Meeting Canadian National Committee  
of the Engineering Committee on Ocean Resources (CNC/ECOR)**

**October 28, 2000**

**Quality Suites Hotel, Toronto**

Attendees:

Dr. Charles Schafer

Natural Resources Canada (GSC) Atlantic

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## **Agenda**

1) Greetings to Members and Guests

2) Approval of draft Agenda

3) Review of 1999 AGM Minutes

4) Review of Outstanding Actions

- Ocean Engineering Council (Schafer)

- Workshop on marine Sciences in Canada
- CNC/ECOR advisory role (Thomas)
- Canada's Ocean Strategy submission
- Large Scale Cleansing of Polluted Seabeds W.G. (Thomas)
- Marine oil pollution (Schafer)
- Project Neptune (Bull)
- Exploration of the Seas Act
- Ciset assessment

#### 5) Committee Business

- new secretariat for SCOR/ECOR (Bolduc)
- CNC /SCOR/ECOR web page (Bolduc)
- Financial statement as of Sept 30, 2000
- Recognition mechanism - Canadian Ocean Engineers

#### 6) New Business

##### I - Information reports by members

- Marine Intelligent Services Initiative (Schafer)
- Super Oceans Conference (Collins)
- Pew Oceans Commission (Schafer)
- ECOR issues raised by NRC (Schafer)
- DFO Advisory council on Oceans
- Other reports

##### 7) II - CNC/ECOR mission statement formulation (Schafer)

## 1) Introduction

Charles Schafer welcomed members to the Annual Meeting of the CNC /ECOR

and since there were a few new faces he suggested that attendee introduce themselves and their principal areas of interest.

**Charles Schafer**, the Chairman of CNC/ECOR, is a marine geologist, retired from the AGC Atlantic but is still active at the AGC in a benthic ocean monitoring network. He has a personal interest in marine ecotourism

**Jim Collins** besides being on the engineering staff at University of Victoria he is active in an engineering society of 1700 members.

**James Ball** is an electrical engineer by training and the head of the engineering section at NWRI and heavily involved in engineering research projects at NWRI, Woods Hole and the University of Miami. Much of their work is focused on support of chemical limnology.

**Claude Daley** is a graduate of Princeton and the University of Helsinki, where he specialized in naval architecture, ship structures and ice loads. He is teaching at Memorial University and head of Ocean Engineering Research. He works closely with Neil Bose in the Ocean Engineering Research Centre and is representing him at this meeting.

**Derek Muggeridge**, formerly at Memorial University, is dean, Faculty of Science and Associate Vice-President Research at Okanagan university College. He is a structural engineer and is currently involved in research studies on watershed management. He does some private consulting and works internationally.

Referred to Canada Research chairs?

**Fiona Itamunoala** is an associate in Baird & Associates and works out of their Oakville office. The company has extensive international connections and specializes in coastal engineering works, wave analyses, plume dispersion, dredging inputs and water quality.

## **2) Approval of Draft Agenda**

The Draft Agenda was approved by motion of Derek Muggeridge, seconded by Jim Bull.

Carried.

## **3) Review of 1999 Minutes**

### **Ocean Engineering Council**

Dr. Schafer reviewed the letters of inquiry sent out by Dr. Jacques Locat and himself to obtain interest in forming a national ocean engineering council to organize and promote Canadian marine and engineering programs and the relationships of these activities within industry, and education sectors. Despite all the efforts to date by Locat and Schafer, there has been a nil response. One can only guess at the reasons but the number of existing societies and councils in related fields would have to be a factor and one with a broader mandate and umbrella would most likely be viewed as a threat to the existence of the status quo.

Claude Daley made the observation that the connections in Canada are virtually non-existent and most are all offshore and in New York, hence the effort is somewhat misdirected. He indicated a willingness to discuss the matter further with Schafer.

Because of the parallel of this concept with the CGC Campbell volunteered to obtain a list of CGC directors.

### **Workshop on Marine Sciences in Canada**

When this workshop was proposed to NSERC there was very little support and the matter was finally dropped.

### **CNC/ECOR Advisory Role**

The CNC/ECOR indicated its willingness to provide insight on its activities to the department of Fisheries and Oceans in respect to the Oceans Act and public consultation which has largely been shelved. The Act and its various functions appear to be on hold.

### **Canada's Ocean Strategy submission**

Public consultation is on hold and no action is proposed until after the election. It was suggested that Geoff Holland be contacted to determine the status of Marine Advisory Council on Oceanography.

### **Large Scale Cleansing of Polluted Seabeds**

This report still remains unfinished but action is underway, largely by Charles Schafer to complete the work

### **Marine Oil Pollution Publication**

The report of this Working Group is complete and has been published in the *Spill Science and Technology Bulletin*, Volume 5 Number 3/4, published December 1999. The special issue is entitled: "Physical Properties and Processes that Influence the Clean Up of Oil Spills in the Marine Environment" There was considerable Canadian effort in bringing this important report to publication and a copy of the Preface is reproduced here with these minutes for reference

## **Project Neptune**

Canadian ocean industries on the east and west coasts are familiar with their project, a US initiative "NEPTUNE" A Fibre Optic Telescope to Inner Space. For details refer to [www.neptune.washington.edu](http://www.neptune.washington.edu). One of the current proposals is to install a system on the Juan de Fuca ridge to measure earthquake activity ECOR has been asked to find partners who could assist but also to put some money into the project.

James Bull would like to hear from anybody who is interested in following up on the project.

## **Exploration of the Seas Act**

This Act is being promoted in the US Senate by Senator Greenwood on ocean resources utilization. It is in the formative stage of development and John Brooke has been in contact with the office of the senator but at this stage nothing definitive has evolved.

## **CIVET assessment**

A comprehensive review of ECOR's activity was prepared by Brian Nicholls for DFO and the NRC Advisory Committee on International Science, Engineering and Technology (CIVET). It was submitted to NRC in 1999, but a follow-up was requested in October, 2000. Details of which are covered under **New Business** - ECOR Issues raised by NRC.

## **5. Committee Business**

### **- New Secretariat for ECOR/SCOR**

DFO experienced some administrative deficiency between the Bedford Institute of Oceanography and Headquarters with the result that ECOR/SCOR business affairs were consolidated in Ottawa. This change in policy brought CMOS into the picture when DFO approached the Society to take on the Secretariat. Subsequently, Paul André Bolduc assumed this position from Brian Nicholls, who served in this capacity for many years. Brian continues to assist CMOS in the capacity of an advisor to both Paul André and CMOS.

### **- CNC/ECOR /SCOR Web Page**

The CNC SCOR/ECOR Web Page was put together by Brian Nicholls and is up on the CMOS web page **WWW. CMOS.ca**. The English text is being translated into French and will be put up on the web when it becomes available

### **- Financial Statement as of Sept 30, 2000**

The year end audit of CMOS is conducted in March-April of each year for CMOS. The fiscal year ends on December 31 of each year. SCOR/ECOR is now being funded by DFO to a total of \$20,000 annually effective in year 2000. The carryover and funding from the previous fiscal year shows ECOR in a deficit position of about \$400. This has been brought about by pro-rating the total grant, SCOR, on the other hand had less expenditures than anticipated which can be used to offset the ECOR deficit. As of this fiscal year expenditures will be charged directly to each organization.

### **- Recognition Mechanism - Canadian Ocean Engineers**

The question of creating an award to recognize the work of Canadian ocean engineers was debated. One of the questions being whether or not it was appropriate for ECOR to make such an award or some

other body. It was finally left to John Brooke to explore the matter with the Canadian Council of Professional Engineers.

Action:

## **6. New Business**

### **I Information Reports by Members**

#### **- Marine Intelligent Systems Initiative**

- An invitation was extended to ECOR to attend an information session on The Marine Intelligent Systems Initiative. The purpose of the meeting was to provide mechanisms to support industrially-relevant, market oriented collaborative R&D in intelligent systems with application to maritime industries including marine transportation, fisheries and offshore oil and gas.

#### **- Super Oceans Commission**

In the course of the discussions on conferences the question came up as to whether the journal Oceanic Engineering International and the IEEE publication Marine Technology should be combined or not. The outcome is not known as yet but it is being examined.

Major conferences being scheduled are:

Hawaii            2001

Mississippi            2002

San Diego            2003

Bergen            2003 Oceans Europe

Japan             2004

Hamburg          2005

Canada has held three such conferences

It was suggested that these conferences be placed on the web site. In order to do so more information needs to be sent to the Secretary.

### **Pew Oceans Commission**

- Pew Charitable Trusts, a formidable financial institution has created a commission of knowledgeable and well-connected individuals to take oceans policy discussion to extraordinary levels One of its missions is "restore and protect the living resources in US waters. The six primary areas of focus are: /, unintended consequences of fishing, pollution, climate change, aquaculture and invasive species. The Commission is to report to Congress in year 2002.

### **ECOR Issues raised by NRC**

- NRC requested additional information on the status of ECOR through an e-mail to the Secretary. This request and reply is reproduced in these minutes.

### **DFO Advisory Council on Oceans**

- The Minister of Fisheries and Oceans announced plans to establish a Minister's Advisory Council on Oceans. Dr Arthur Hanson and Geoffrey Holland were engaged to seek names for nominees for the Council. Appointments were made on September 17, 2000

The Council will be asked to provide information on:

Balancing economic, environmental and social goals for sustainable development

Managing increasing complexity and diversity of oceans use; and

Engaging communities, and stakeholders in making decisions that affect them.

### **Other Reports**

- Nil

### **II CNC/ECOR Mission Statement Formulation**

The chair stated that he thought a mission statement should be prepared for the CNC and that he would try and put together a draft for discussion.

### **Adjournment**

It was thought that the next meeting should be held on the East Coast in association with another meeting, possibly the 6<sup>th</sup> Canadian Marine Hydromechanics and Structures conference.

It was moved by James Collins and seconded by Dave Muggeridge that the meeting be adjourned

N.J. Campbell and Dorothy Neale

CMOS November 16, 2000.

**Excerpt from the CMOS Bulletin, April 2001, Vol. 29, No. 2**

Page 11 of the Auditor's Report, of Payne Foreman Kalli, reads as follows:

**Canadian Meteorological and Oceanographic Society**

**Statement of Revenues and Expenses**

**Scientific Committee on Oceanic Research (SCOR)**

**for the year ended December 31, 2000**

<b>REVENUE</b>	<b>2000</b>	<b>1999</b>
Grants	\$ <u>14,000</u>	\$ <u>18,521</u>
 <b>EXPENSES</b>		
Overhead Services	\$ 210	\$ 2,949
Other	\$ 474	\$ 19,527
Travel	\$ <u>3,452</u>	\$ <u>1,697</u>
	\$ 4,136	\$ 24,173

Net revenue over expenditures

(expenditures over revenue)

for the year

\$ 9,864

\$ (5,652)

**CNC/SCOR MEMBERSHIP**

*(Revised May 2001)*

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**Bjorn Sundby e-mail 10 May 2001, re timing of CNC/SCOR meetings**

I would like to see an improvement in the way CNC/SCOR reviews the new working group proposals that are circulated among the national committees each year. Presently, the annual meeting of CNC/SCOR is held long before the proposals arrive from SCOR, so we cannot deal with them during the meeting. Reviewing them by mail has not been a satisfying experience. The solution would be to move the annual CNC/SCOR meeting closer to the annual SCOR meeting, or to hold a second meeting in the fall to review the proposals. My feeling is that moving the meeting to the fall would help us prepare a Canadian position not only on the proposals but also on other issues on the SCOR agenda. As far as I know, there is no reason other than convenience to meet during the annual CMOS meeting.