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1.1 Opening Remarks and Administrative Arrangements

1.1.1 Memorials for Scientists Involved with SCOR

Warren Wooster



In the early morning hours of Wednesday, 29 October 2008, University of Washington Emeritus Professor of the School of Marine Affairs, WARREN SCRIVER WOOSTER, passed away in his sleep after a long bout with cancer, being 88 years of age. He was a (so-called descriptive) chemical and physical oceanographer (Ph.D., Scripps Institute of Oceanography, University of California, 1953), and from 1976-1991 a professor of marine studies and fisheries at the School of Marine Affairs of the University of Washington. For many decades on the national and international stages he struggled to bring the twains, oceanography and fisheries, closer together. He published about 50 papers on oceanography including fisheries and more than 40 on marine affairs. He was an efficient but tactful, persuasive and patient negotiator on many planes, not easily discouraged by adversity, and trusted by students

and colleagues at home and abroad.

The confidence in and trust of his abilities is shown by the many offices he held: Director de Investigacion, Consejo de Investigaciones Hidrobiologicas of Peru (1957-58); first Secretary of UNESCO's Intergovernmental Office of Oceanography (1961-63); chairman of the Graduate Department of the Scripps Institute of Oceanography (1967-1969); Dean of the Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, FL (1973-76); first Secretary of the Scientific Committee for Oceanic Research (SCOR) of the International Council for Scientific Unions (1963-67) and President (1968-73); Chairman of the Ocean Sciences Board of the U.S. National Academy of Sciences/ National Research Council (1978-81); and President of the International Council for the Exploration of the Sea of 1901 (ICES, 1982-85). Finally, he was the principal founder of the North Pacific Marine Science Organization of 1992 (PICES, for Pacific ICES) and served as its first chairman (1992-96). He was a fellow of the American Geophysical Union and the American Meteorological Society.

Warren was a great teacher, wonderful friend, and admirable human being. He is survived by Polly, his partner and wife for 60 years, three children, and two grandchildren.

Comments by Elizabeth Gross, Former Executive Director of SCOR

Warren Wooster seems to have been involved in the establishment of almost all the international marine science organizations, except for ICES, and that is only because someone else thought of ICES before Warren was even born! Others will speak about his important influence in ICES, and in the establishment of PICES and the early years of the Intergovernmental Oceanographic Commission. I would like to mention his pivotal role in the early years of the Scientific Committee on Oceanic Research. While Warren was not a participant in the very first meeting of SCOR in Woods Hole in 1957, he must have become involved as one of the U.S. members of SCOR very early because by 1964 he was serving on the Executive Committee as Secretary. In 1968 he was elected President of SCOR, and continued to be a member of the SCOR Executive Committee as President, then Past-President, until 1976. Even after that, he often attended SCOR meetings as a U.S. member, or in some other capacity.

Warren was really "Mr. SCOR" for many years, carrying out most of the organization's correspondence, keeping the books, organizing its meetings, and publishing the annual *SCOR Proceedings*, all out of his university offices. Some of this load was relieved when the first SCOR Secretariat was established in 1972 at the Royal Society in London. I am sure Warren had a hand in that.

At SCOR's 50th anniversary meeting in Woods Hole last month, Warren was mentioned often, and with great affection. We were all sorry that he could not participate in an event he would have enjoyed so much: it was all about looking forward to where ocean science is likely to go in the next decades, with lots of talks and posters by energetic young scientists from all over the world. It was just the sort of thing that would have brought that familiar twinkle to Warren's eyes, and that big, broad smile he had.

We should all be very grateful for Warren's guiding hand in leading the international development of active and productive international cooperation in the field of oceanography. His influence will be felt for years to come and he will be sorely missed.



Wolfgang Krauss

Wolfgang Krauss was an ex-officio member of the SCOR Executive Committee from 1983 to 1987, as IAPSO President. He also a member of SCOR/IOC WG 88 on Intercalibration of Drifting Buoys.

Passing of Prof. Dr. Wolfgang Krauss

The Leibniz Institute of Marine Sciences mourns the death of Prof. Dr. Wolfgang Krauss, one of the nationally and internationally leading scientists in the field of theoretical oceanography. He passed away on July 3 at the age of 78.

After his studies in meteorology Prof. Krauss settled in Kiel where he became a full professor at the Christian-Albrechts-Universität zu Kiel and was appointed director of the newly established department of Theoretical Oceanography at the Institute for Marine Research (IfM). Until his retirement in 1996, his academic teachings significantly contributed to the development of oceanography as an academic course, and he thereby helped to establish Kiel as an internationally renowned academic institution in the field of marine sciences. As dean of the School of Mathematics and Science in 1970-71 he contributed to the future shape of the Christian-Albrechts-Universität zu Kiel during challenging times. Between 1982 and 1988, Prof. Krauss was director of the IfM. As speaker of the Collaborative Research Project "Warm water sphere of the Atlantic" he had a significant impact on decoding the North Atlantic Current and its significance for the European climate.

The scientific work of Prof. Krauss is closely linked to the current system of the Atlantic Ocean. In particular, his work set the tone in the persistent linkage between innovative observational methods and mathematical modeling of complex current systems through computer models.

Professor Krauss received many scientific honours and awards. In Wolfgang Krauss, we lose an internationally significant marine scientist, a friend and a colleague. Our condolences go out to his family.

From the IFM-GEOMAR Web site (<a href="http://www.ifm-geomar.de/index.php?id=537&L=1&tx_ttnews[tt_news]=372&tx_ttnews[backPid]=2150&cHas

h=dc41c3f590)

1.2 Approval of the Agenda (see Tab 0)

The agenda can be rearranged at the meeting to accommodate the schedules of presenters and to add items to it.

1.3 Report of the SCOR President

The SCOR President will present a report at the meeting that describes his activities on behalf of SCOR since the 2008 SCOR General Meeting in Woods Hole.

1.4 Report of SCOR Executive Director

SCOR remains healthy, financially and in terms of the quality of SCOR activities.

Finances—At this time of difficult finances throughout the world, SCOR is maintaining its financial stability, thanks to continued contributions from all SCOR nations and additional contributions from a few. The SCOR Executive Committee and Secretariat staff also manage SCOR's finances conservatively to ensure our long-term financial sustainability. The dues from all 35 nations that participate in SCOR are used to fund the management of SCOR, the Secretariat, an annual meeting of the Executive Committee, representation at the meetings of other organizations, and some working groups and joint meetings with our partner organizations.

Special funding is provided for our research projects from agencies and institutions in the United States, France, the United Kingdom, Germany, and Spain, and from co-sponsorship by our international partners: the International Geosphere – Biosphere Program, the Intergovernmental Oceanographic Commission, and the World Climate Research Programme. We appreciate this support, without which we could not maintain international project offices and scientific steering committees that carry out the important work of international ocean research planning and coordination. We need more national partners for these activities, as most of our projects do not have enough funding to carry out all the activities they have planned.

Funding for SCOR working groups comes from SCOR dues, funding from the U.S. National Science Foundation, partner organizations that co-sponsor the groups (current examples include the International Association for the Physical Sciences of the Ocean, the Land-Ocean Interactions in the Coastal Zone project, the InterRidge Project, and the International Marine Aspects of Global Change project). In the past few years, a new national partner has emerged in the funding of working groups: Chinese institutions are now co-funding two SCOR working groups, by supporting all the costs for one meeting of the group in China and by paying for the travel of any Full Members of the

groups who are from China. I encourage other national funding agencies and even research institutions to identify working groups they would like to support and to take a similar approach.

Finally, SCOR is known in the global ocean science community for its capacity-building activities, beginning with the International Indian Ocean Expedition in the early 1960s. Most of these activities are funded from U.S. sources, with a small amount of funding from SCOR dues also contributing. The SCOR Committee on Capacity Building has a lot of ideas, but needs to identify more national funding to implement new activities. SCOR national committees could be very helpful in identifying new national funding sources for SCOR capacity-building activities.

The finances for SCOR are divided into two basic categories: (1) discretionary funding and (2) flow-through funding. For financial management and auditing reasons, and to give proper credit to SCOR's sponsors, SCOR does not mingle these funds, but keeps them distinct.

Discretionary funding primarily derives from dues to international SCOR from national SCOR committees, plus some funding from the U.S. National Science Foundation (NSF) for working groups and other activities. Dues are used to pay for operation of the SCOR Secretariat; the annual SCOR meeting; travel of the SCOR President, other Executive Committee members, and the Executive Director to represent SCOR at meetings of our partner organizations; sending SCOR reports to developing countries; and for some working group and other scientific activities. Flow-through funding derives from grants received by SCOR from national funding agencies, international organizations, and private foundations, and these funds are devoted to specific activities. The table below shows now SCOR expenses for 2008 were categorized, by either discretionary or flow-through.

Analysis of 2008 SCOR Expenses (courtesy of Elizabeth Gross)									
Major Expense Category	Discretionary	% of total	Flow- through	% of total	Discretionary + Flow- Through	% of total			
Working Groups	US\$57,028	13.53%	US\$47,686	6.54%	US\$104,714	9.10%			
GEOHAB, GEOTRACES, GLOBEC, IMBER, and SOLAS Other Scientific	US\$11,016 US\$107,855	2.61% 25.59%	US\$318,536 US\$284,640	43.66% 39.01%	US\$329,552 US\$392,495	28.63% 34.10%			
Activities*			. ,		. ,				
Capacity Building	US\$10,620	2.52%	US\$78,322	10.73%	US\$88,942	7.73%			
Administrative	US\$234,988	55.75%	US\$427	0.06%	US\$235,415	20.45%			
Totals	US\$421,508	100.00%	US\$729,610	100.00%	US\$1,151,117	100.00%			

^{*}e.g., IOCCP, PACKMEDS, High CO2 Symposium, SCOR/SCOR group, etc.

I submitted a proposal for a new three-year science grant to the U.S. National Science Foundation (Year 1 has been funded) and have begun seeking support for the Third Symposium on The Ocean in a High-CO₂ World, in 2012.

Nearly all of SCOR's international partners are experiencing serious financial difficulties now and into the foreseeable future. This situation means that our partners have less funding available for joint activities with SCOR and are considering significant restructuring. The experience of our partners should serve as a cautionary note for SCOR. How can SCOR keep its finances in good shape?

- 1. Maintain high scientific quality of all of SCOR's activities. SCOR's reputation internationally is built on high-quality work on important issues. Maintaining our good reputation is our first priority.
- 2. Focus finances, and volunteer and staff efforts, on activities in which SCOR has strengths and avoid spending our limited resources on activities that are not SCOR strengths. At the same time, we need to continue to be responsive to new scientific priorities identified by the international ocean science community.
- 3. Diversify SCOR's income, particularly new national funding for SCOR activities. We do our best to spend these funds provided by SCOR nations carefully, have the minimum Secretariat staff needed, and utilize volunteer effort much more than do many other international organizations. Still, conduct of our large-scale research projects, working groups, capacity building, and other activities, depend on national contributions beyond dues.
- 4. The continued scientific achievements and financial health of SCOR depend on continued strong participation by national SCOR committees. Participation of national committees in international SCOR activities contributes significantly to SCOR's effectiveness and its visibility in the nations that participate in SCOR. SCOR needs the assistance of national SCOR committees to develop more flow-through funding from national funding agencies for specific activities.

Membership—Korea has re-entered SCOR and has paid 2009 dues in Category II. Wolfgang Fennel and I will meet with the Korean SCOR Committee at the PICES meeting after the SCOR Executive Committee meeting. We have had contact with people in other countries about their potential membership in SCOR.

We encourage countries participating in SCOR to increase their membership levels, as China-Beijing and Spain have done in recent years.

Publications—The SCOR Web site is the major vehicle for providing up-to-date information about SCOR to the international ocean science community and I make changes to the site several times each week, as I receive new information. The site is checked for "dead links" monthly. I have intended to re-design the SCOR Web site for the past several years, but this have not been

possible due to the time required for other duties. SCOR activities yielded a number of publications in the primary literature and other venues this year, as noted in Tab 8.

Meetings—Between the 2008 and 2009 SCOR annual meetings, 5 SCOR working groups met (WGs 126, 129, 130, 132, 133). WGs 134 and 135 will meet by the end of 2009. The SSCs of GEOHAB, GEOTRACES, GLOBEC, IMBER, and SOLAS also met.

Outreach to Scientists From Developing Nations and Capacity-Building Activities—SCOR promotes the improvement of scientific capacity in developing countries and countries with economies in transition by ensuring that every SCOR working group and other activity includes scientists from such countries. In my opinion, this is SCOR's most significant approach to capacity building. In 2006, SCOR approved a SCOR Committee on Capacity Building, which draws together the set of individual capacity-building activities of SCOR into a coherent program.

The first SCOR Visiting Scholar, Dr. Paulo Relvas from Portugal, was appointed in 2009, and taught a two-week course in Guatemala.

A subgroup of the committee will meet for the second time, at the East China Normal University in Shanghai immediately before the SCOR Executive Committee meeting and will be able to report on its progress and plans at the Executive Committee meeting. The meeting in Shanghai will focus on capacity building activities in Asia and Africa.

Service to International Ocean Research Projects—SCOR helps individual projects in many different ways, including providing funds from the National Science Foundation and other sources, providing travel support for developing country scientists and scientists from countries with economies in transition to special events of the projects, providing IPO-type support at the beginning of projects, and providing access to the Conference Manager software for management of open science meetings. SCOR also is in a unique position to help individual projects work together, through the project summits funded by the Sloan Foundation. The Third SCOR Project Summit was held in March 2009 and recommendations from the meeting regarding service to the projects will be considered at the SCOR Executive Committee meeting.

Partnerships With Other Organizations—Maintaining existing partnerships and developing new ones depends on SCOR having the ability to commit funding to joint activities and to send representatives to partners' meetings. We have strong partnerships with IAPSO, IGBP, IOC, PICES, POGO, SCAR, and SCOPE. As mentioned earlier, SCOR is developing its role as a catalyst of interactions among large-scale ocean research projects, through regular meetings of the projects and other mechanisms. This year, Wolfgang Fennel represented SCOR at the IGBP-SC meeting, Bjorn Sundby represented SCOR at the IOC General Assembly, and Annelies Pierrot-Bults represented SCOR at the SCOPE General Assembly.

Staffing—Lora Carter, our Financial Assistant, has nearly completed her first year and is assuming greater responsibilities as time passes. Elizabeth Gross continues to handle many different financial aspects of SCOR, including working with our auditor on the annual audit and reimbursements from sponsoring agencies and organizations, and managing our use of the Conference Manager software that we lease.

I continue to manage all SCOR Secretariat activities and oversee the finances of SCOR activities, work on new project development/serve as a part-time Executive Officer for two projects (GEOHAB, GEOTRACES), pursue new funding for SCOR activities, represent SCOR at various meetings, and work on the SCOR Web site and publications. I was particularly active this year in relation to GEOHAB and GEOTRACES, working with the SCOR Panel on New Technologies for Observing Marine Life, and on our data publication activity with IOC's International Oceanographic Data and Information Exchange (IODE).

Professional Activities—I made two presentations at professional meetings in the past year to represent SCOR-related activities:

- Presentation at Fall American Geophysical Union meeting in San Francisco on "Data Publishing in Ocean Science". Roy Lowry and Peter Pissierssens were co-authors. We have an associated article accepted for publication in *EOS*.
- Presentation at CoastalZone'09 in Boston on "Do ethics matter? Addressing ethical, legal and regulatory implications of new ocean observing technology" Melissa Broedeur was a co-author. I am working on a paper based on this presentation. The U.S. Census of Marine Life committee invited me to make this presentation.

I serve on two advisory groups:

- Reference Users Group (RUG) of the European Project on Ocean Acidification (EPOCA)
- Census of Marine Life Science Council 2020

I believe that these activities benefit my professional development and also help make SCOR and its activities more visible.

1.5 Appointment of an *ad hoc* Finance Committee

The Executive Committee approved Johan Rodhe (Norway), Riitta Autio (Finland), and Motoyoshi Ikeda (Japan) to serve on the 2009 Ad Hoc SCOR Finance Committee. The committee was approved in advance so they could receive and review SCOR financial information before the meeting.

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

The disciplinary balance of SCOR activities will be analyzed after new working groups have been approved, to determine whether any specific instructions need to be given in the request for working group proposals in 2010. Peter Burkill will assume leadership of this activity this year, since Laurent Labeyrie rotated off the Executive Committee.

1.7 2010 Elections for SCOR Officers

The new SCOR officers will begin their terms at the end of the 2010 SCOR General Meeting. The schedule for the election process follows.

Procedures for the Nomination and Election of SCOR Officers

- 1. A call for nominations from national committees and affiliated organizations must be issued more than 6 months before the General Meeting. Nominations should include a suggestion of the position for which the candidate is being proposed, and a brief *curriculum vitae*. Candidates proposed must be Nominated Members of SCOR (see Constitution 8a). National committees may propose candidates from their own or any other member country.
- 2. A Nominating Committee of three SCOR members will be appointed by the Executive Committee meeting prior to each General Meeting at which an election will take place. The Nominating Committee will normally include the Past-President as its Chairperson. The role of the Nominating Committee is to provide an Executive Committee for SCOR that is balanced in terms of disciplinary, geographic, and gender distribution.
- 3. Nominations will not be accepted later than 4 months before the General Meeting, except as provided for in clause 4.
- 4. Between 2 and 4 months before the General Meeting, the Nominating Committee, after scrutinizing the nominations received, may seek additional nominations for specific positions through direct consultations with national committees and/or affiliated organizations. This process may be needed in order to maintain the appropriate disciplinary, geographic, and gender balance on the Executive Committee.
- 5. The Nominating Committee will prepare a final slate of candidates, one per position, and will confirm that the members of this slate are willing to serve.
- 6. Two months before the General Meeting, the Nominating Committee will announce its proposed slate and send it, along with all nominations received, to all voting members of SCOR as defined in Clause 21 of the SCOR Constitution (Nominated Members and Representative Members of Affiliated Organizations). Nominations received as a result of action taken under clause 4 will be identified.
- 7. Clause 22 of the SCOR Constitution states that when elections are held "only one Nominated Member from each Committee for Oceanic Research shall have a vote. One Representative Member from each Affiliated Organization may also vote."

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- 8. No further nominations will be allowed after the Nominations Committee has announced its slate of candidates.
- 9. If three or more national committees do not agree with the proposed slate of the Nominations Committee, they may request that a formal election be held and that all nominations received be included on the ballot. Notice of a request must be received not less than 2 weeks before the start of the General Meeting and the election will be held on the last day of the General Meeting.
- 10. If no vote is requested, the slate proposed by the Nominating Committee will be declared elected at the end of the General Meeting.

This procedure has been approved by the 24th General Meeting of SCOR (Amsterdam 1998) and may only be modified by a majority decision taken at a General Meeting. The word "gender" was added to items 2 and 4 at the 2008 General Meeting.