

5.0 CAPACITY-BUILDING ACTIVITIES

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5.0 CAPACITY-BUILDING ACTIVITIES

5.1 SCOR Committee on Capacity Building

The 2006 SCOR meeting approved terms of reference for a SCOR Committee on Capacity Building, whose primary purposes are to oversee all of SCOR's capacity-building activities and to help the SCOR Secretariat manage these activities. The approved terms of reference follow:

- Provide direction for all of SCOR's existing capacity-building activities: participation of scientists from developing countries and countries with economies in transition in SCOR activities, POGO-SCOR Fellowship Program, travel grants, and provision of reports to libraries in developing countries.
- Guide and assist SCOR Executive Director in development of new capacity-building activities, particularly the Regional Graduate Schools of Oceanography activity.
- Assist SCOR-sponsored projects in developing their capacity-building activities.
- Help SCOR arrange funding for existing and new capacity-building activities.
- Assist SCOR in interacting with regional and international groups related to capacity building in ocean sciences, such as the ICSU regional centers, START, IOC regional programs, etc.

The SCOR Executive Committee approved an initial committee membership in July 2007:

Venu Ittekkot (Germany), Chair

Alfonse Dubi (Tanzania)

John Farrington (USA)

Chair of the IMBER Capacity Building Task Team—This was originally Wajih Naqvi (India), but he has been replaced by Jing Zhang (China-Beijing)

Shubha Sathyendranath (Canada)

Jilan Su (China-Beijing)

Tatsuki Toda (Japan)

Memberships will be evaluated annually. The committee will begin its work by evaluating the range of capacity building currently conducted by SCOR and described below. An exciting development arose from the SCOR Project Summit, when Murray Brown, training consultant for UNESCO/IOC/IODE at its Project Office in Ostend, Belgium offered to develop a Web-based catalog of the capacity-building activities of ocean research projects and organizations (see http://www.scor-int.org/Capacity_Building/index.htm).

A questionnaire was sent to all SCOR nations about their support for and participation in capacity-building activities for ocean sciences. The results have been compiled and made available on the SCOR Capacity-Building Web page. The Committee on Capacity Building will use this information to help guide its activities.

A subset of the committee will hold their first meeting on 17-18 October in Woods Hole.

5.1.1 Regional Graduate Schools of Oceanography and Marine Environmental Sciences (RGSO)

The Committee on Capacity Building is making preliminary inquiries toward holding a regional planning meeting for the Latin America/Caribbean region.

5.1.2 POGO-SCOR Visiting Fellowships for Oceanographic Observations

This fellowship program continues to attract highly qualified applicants. In the seventh round of applications, 84 applications were received and 15 individuals were funded for fellowships in 2007. SCOR provided \$10,000 of the total estimated cost of \$73,470. Information about the recipients follows.

Applicant Name	Parent	Host	Subject of Study
Hector Garcia Nava	CICESE, Mexico National Institute of	Prof Brian Haus Rosenstiel School of Marine and Atmospheric Sciences, USA	collection and processing of air-sea interaction data from field and laboratory
Anil Kumar Medikonda	Oceanography, India	Dr K Mizuno JAMSTEC, Japan	data analysis and simulation of Madden Jullian Oscillations
Juliet Hermes	South African Environmental Observation Network, South Africa	F Gerald Plumley Bermuda Institute of Ocean Sciences	Training in integrated, multi- disciplinary oceanography
Wided Aloui	Institut National des Sciences et Technologies de la Mer, Tunisia	Dr Lesley J Rickards British Oceanographic Data Centre, United Kingdom	Quality control of time series sea level data
Mariana Soppa	Instituto Nacional de Pesquisas Espaciais, Brazil	Dr David Cromwell National Oceanographic Centre Southampton, United Kingdom	spatiotemporal variability of the Southwestern Atlantic ocean and related climate forcing
Ivonne Katherine Montes Torres	Universidad de Concepcion, Chile Ministry of	Dr Bruno Blanke Laboratoire de Physique des Oceans, France	Lagrangian analysis of numerical simulation runs in the Southeastern Tropical Pacific
Asmi Marintan Napitu	Ministry of Marine Affairs and Fisheries, Indonesia	Prof Arnold Gordon LDEO Columbia University, USA	Quantitative analysis of mooring dataset observed in the inflow passage of the Indonesian throughflow

Rodrigo Kerr Duarte Pereira	Federal University of Rio Grande do Norte, Brasil	Prof Karen J Heywood School of Environmental Sciences, University of East Anglia, United Kingdom	Analysis of the OCCAM model outputs and moorings data in Antarctic Peninsula area
Jadranka Sepic	Institut za oceanografiju i ribarstvo, Croatia	Dr Sebastian Monserrat University of Balearic Islands, Mallorca, Spain	modelling techniques to study meteotsunamis, 3 months
Xavier Flores Vidal	Universidad Autonoma de baja California Sur, Mexico Wildlife Conservation Society Coral Reef Conservation Project, Kenya	Prof Pierre Flament University of Hawaii at Manoa, USA	field training and modelling sea surface currents using High Frequency Radar data
Joseph Maina	Tanzania Fisheries research Institute, Tanzania	Dr Paolo Cipollini Laboratory for Satellite Oceanography, National Oceanographic Centre Southampton, UK	Coastal altimetry training in support of ALTICORE- Africa
Shigalla Mohongo	Nansen Environmental Research Centre, India Foundation for Applied Biological Research, Argentina	Dr Javier Zavala-Garay Rutgers University USA	Modelling the dynamics of the Zanzibar Channel, Tanzania
Dr Madhusoodanan M.S.		Laurent Bertino Nansen Environmental and Remote Sensing Center, Norway	compute meridional heat transport in Indian Ocean Studies on the abundance and distribution of picophytoeukaryotes in the Argentinean Sea using molecular methodologies
Gonzalo F. Calo		Dr Ramon Massana Molera Institute of Science of the Sea, Spain	
Yesid Lozano Duque	Institute of Marine and Coastal Research, Columbia	Daniel Grunbaum University of Washington, School of Oceanography, USA	cell tracking video and analysis to quantify movement characteristics and fine-scale distributions of harmful cells

5.1.3 NSF Travel Support for Developing Country Scientists

SCOR has received support from the U.S. National Science Foundation (NSF) since 1984 to provide funding for an important SCOR activity in the area of capacity building. Travel grants are awarded to ocean scientists from developing countries and the former Soviet Union, Eastern Europe, and other countries with economies in transition, to enable them to attend international scientific meetings.

The amount of the award from NSF is now \$75,000 per year. Of this, a small amount (\$5,000 per year) is used to offset SCOR Secretariat expenses for contacting meeting organizers and recipients of travel funds, and for making travel arrangements. Recipients of SCOR travel awards are always chosen in consultation with the organizers of meetings that SCOR has agreed to cosponsor; direct applications from individuals are not accepted by the SCOR Secretariat. Priority is given to applicants who are presenting a paper or poster at the meeting or to those who have some special expertise or regional knowledge to bring to a workshop or working group. Preference is also given to younger scientists. In general, care is taken to ensure that the recipients of SCOR/NSF funds are *active* scientists, and that they have not received similar support from SCOR in the previous two years. All travel grant recipients are informed that their support comes from SCOR and that it is made possible through NSF funding.

Since 2001, a portion of total funding has been provided for longer-term courses or fellowships, such as the POGO-IOC-SCOR Visiting Fellowships for Oceanographic Observations.

The most recent three-year grant began on 1 July 2008, running until 30 June 2011.

2009 Requests for Travel Grants

Some of the requests listed below are for meetings in which SCOR is directly involved in planning, so there is no formal written request. Any funds approved will be contingent on SCOR receiving continuing funding from NSF. \$37,000 can be committed for each 6-month period, but it does not need to be committed at this meeting. Requests come in throughout the year and the Executive Committee considers new requests between meetings.

Meeting	Dates	Suggested Allocation
January-June		
SCOR Office Overhead for 2009		\$5000
#1—Humboldt Conference, South Africa	12-16 January 2009	\$5000
#2—ASLO 2009	25-30 January 2009	\$5000
#3—GEOHAB Modeling Workshop	15-19 June 2009	\$7500
#4—Summer school on Automated plankton identification: State of the art, calibration and practice	16-25 June 2009	\$3000
#5—GLOBEC OSM III	22-26 June 2009	\$7500
	Total	\$33,000

July-December

#6—IMBER Global Carbon Synthesis Symposium	13-17 July 2009	\$7,500
#7—IAPSO/SCOR Session on Ocean Mixing at Session IAMAS-IAPSO-IACS Assembly	19-29 July 2009	\$5000
#8—SOLAS Summer School	3-15 August 2009	\$5000
#9— PICES Summer School on “ <i>Satellite Oceanography</i> ”	23–27 August 2009	\$5000
#10— SCOR-relevant sessions/workshops at PICES XVIII	October 23–November 1, 2009	
#11—SOLAS Open Science Meeting	November 2009	\$5000
	Total	\$27,500

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Request #1



AEON

First Circular (January 2008)

Fifth EGU Alexander von Humboldt International Conference

**Iphakade : Climate Changes and African Earth Systems
– past, present and future**

(Iphakade – xhosa for “observe the present and consider the past to ponder the future”)

Co-sponsors:

EGU – European Geosciences Union

AEON – Africa Earth Observatory Network

ACCESS – Africa Centre for Climate & Earth Systems Science

University of Cape Town, South Africa

January 12-16, 2009

**Preceded and/or followed by a Students/Young Scientists’
Workshop on Earth Systems Modelling**

Goal

To understand the processes that make earth a habitable planet and that maintain the environmental conditions that suit a great diversity of species, including ours, so well.

Because humans have started to significantly alter earth’s natural systems and disturb their balances, there is an urgent need of deeper understanding of these disequilibria so that appropriate action can be taken to avert, as yet, unpredictable changes to these systems. Across Africa, communication systems, infrastructures, and management of natural resources must adapt to an environment that will be irreversibly affected by changing sea levels, land management, magnetic fields, and climate systems.

Because earth systems operate over very diverse spatial and temporal scales, it requires application of a wide range of specialist technologies to measure and model their interactions. Such activities are also the most likely to guide the basic science into exploring arenas of designated technologies and social problem solving. In such an environment a robust foundation for Earth Stewardship Science can emerge.

Because earth has a long history of pre-human climate changes, these should be analysed with greater curiosity and precision as cautious guides for the future: those who do not understand and remember the past are doomed to be caught by surprise. A first-order task of Iphakade is to establish with a high degree of certainty how to best differentiate natural from anthropogenic earth system changes, and to use this knowledge wisely to assess and economically evaluate global changes induced by humans, with particular reference to Africa.

Because Africa comprises about 21% of the earth's total continental and plate surface, changes affecting her cannot be left out of global models, as is presently often the case due to lack of observational data and intellectual capital. Collectively, this requires new mindsets, new research foci, and new technologies to forge a new multidisciplinary approach, bringing together a critical mass of specialists to catalyse science thinking, big and small, through which to provide new and detailed insight into how earth and life co-evolve.

Aim of the Conference

It is the aim of this interdisciplinary and international EGU Humboldt Conference to bring together earth system researchers from diverse specializations, largely involving scientists from African countries. Hosting an EGU Humboldt Conference in Cape Town will strengthen the discourse amongst African scientists and their international colleagues. With a shared vision of a sustainable Africa, this will send a powerful message to the African leadership to engage in scientific debate and to act with well informed agendas.

The students/young scientists' workshop preceding and/or following the conference aims at providing an introduction to Earth Systems and modelling applications. Strong participation by students from Africa is expected and will be catered for.

Conference Information

Broad Topics

Contributions from all fields of the Geosciences are welcome. In particular the conference will focus on:

- 1 **Climate change and coupled systems**
- 2 **Fluctuation in African Climate Systems**
- 3 **Changing topography of Africa: coupled earth systems from core to space**
- 4 **Palaeo-climate analyses in Africa and its surrounding oceans**
- 5 **Economics and social issues of climate change**

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We expect to have contributions, amongst others, on: ocean currents around Africa, African atmospheric circulation and weather patterns, solar radiation variability, magnetic field changes, African biosphere, African river basins and geomorphology, palaeo-ecodynamics, palaeoclimates, CO2 sequestration, geothermal energy, ecological economics, natural resources, risk management, social engagement through outreach, and capacity building.

Conference Language

English

Venue

The 5th EGU Alexander von Humboldt International Conference and the preceding/following workshop will be held at the University of Cape Town, Rondebosch 7701, Cape Town, South Africa.

Scientific Program Committee

Peter Fabian, EGU, TU, Munich, Germany; Co-Chair
Maarten de Wit, AEON, UCT, South Africa; Co-Chair
Neville Sweijd, ACCESS, CSIR, South Africa, Co-Chair

Members: Isabelle Ansorge, John Compton, Woody Cotterill, Stephanie de Villiers, Andy Duncan, Juliet Hermes, Bruce Hewitson, Peter Kotzé, Guy Midgely, George Philander, Alakendra Roychoudhury, Frank Shillington.

Logistics

The conference will be hosted in the Kramer Building on the campus of the University of Cape Town, South Africa. Cape Town is connected directly to Europe with up to 10 daily flights, with many more via Johannesburg which is also a gateway to many African countries. Registration, accommodation, ground transport and other arrangements will be managed by a professional event management company (Global Conferences Africa). More details will follow with second announcement.

Conference Fee

A conference registration fee will be charged for all delegates. A student discount will be offered for bona fide post-graduate students and some exemptions may be offered in special cases.

Please display this Circular and/or make it available to other colleagues who might be interested in this conference.

Request #2**OBSERVATOIRE OCÉANOLOGIQUE DE VILLEFRANCHE-SUR-MER
LABORATOIRE D'OCÉANOGRAPHIE DE VILLEFRANCHE**

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Villefranche-sur-Mer E-Mail : Markus.Weinbauer@obs-vlfr.fr France*

SCOR Travel Grant

Villefranche-sur-Mer, July 1, 2008

Dear Madam, dear Sir

End of January 2009, the third ASLO (Advancing the Science of Limnology and Oceanography) meeting outside North America will be held in Nice, France. The Scientific Committee consists of scientists from America, Europe and Asia. More than 2,000 attendees are expected and requests for more than 100 sessions have been submitted. Keynotes lectures will be held every day on a specific topic by two scientists leading in this field. These keynote topics address vividly disputed issues in oceanography and limnology.

ASLO is one of the leading societies in oceanography and limnology and the ASLO meeting belong to the best attended in oceanography and limnology. ASLO meetings are internationally attended and also support a strong minority program. ASLO and the organizers of the ASLO meeting in Nice have the strong wish to open the meeting to developing countries and to countries with economics in transition. However, ASLO cannot provide funding for that. Therefore, we make a request for funding to the SCOR Travel Grants.

Yours sincerely

Markus Weinbauer
Jean-Pierre Gattuso
Peter Bossard

Request #3

GEOHAB will be holding its first modeling workshop in Galway, Ireland on June 15-19 2009. More information about the workshop is given in **Section 3.2**.

Request #4

Summer School 16-25 June 2009 (8-days) at University of Plymouth Marine Institute

Automated plankton identification: State of the art, calibration and practice

Phil Culverhouse

Course overview

This course is designed to give marine ecology students an appreciation of the potential of automated plankton identification. The course will first review current automatic plankton recognition systems and how they work. Their performance will be contrasted to that of human experts doing the same tasks. Students will get an opportunity to analyse a plankton water sample themselves, and gain a first-hand understanding of the problems of identification and consensus.

The second part of the course will look at image analysis and recognition techniques, allowing students to gain some experience in pattern recognition methods that underpin plankton recognition. Finally students will put this all together by using ZoolImage and related software to analyse and recognise plankton images. Reviews of performance and system limitations, with a look at the future potential of these types of instruments, will conclude the course. Fig.1 (a-d) shows images from a similar course held at University of Concepción, Chile.



Fig. 1 a) some of the students, b) the class room, c) the sub-sampling kit, and d) Caminalcules experiment

Summer School 16th -25th June 2009 (8-days) at University of Plymouth Marine Institute

Course schedule (by day)

Day 1. Current automated plankton recognition

- a. Lecture: review of current systems and methods
- b. Practical: sample analysis. Manually analyse water samples for ecology, biodiversity, note the change in analysis and difficulty and throughput. Measure consensus.

Day 2. Human performance

- a. Lecture: human vision and cognitive biases
- b. Practical: inter calibration. Repeat day 1 practical after inter-calibration and measure amount of consensus. Identify standards for experts.
- c. Practical: Caminalcules sorting experiment to highlight human variance.

Day 3. Review of current machine identification methods

- a. Lecture: Image analysis background, Shape recognition, feature extraction

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- b. Practical: Image analysis I. Matlab introduction for image feature analysis

Day 4. Practical image analysis workshop

- a. Practical image analysis II. Using Matlab
 - i. Use existing images of plankton practise feature extraction techniques

Day 5. Practical image classification workshop

- a. Lecture: Recognition – Statistical and ANN methods
- b. Practical image classification using WeKa
 - i. Using data from day 4 explore recognition of taxonomic groups

Day 6. Using ZooImage with a flatbed scanner

- a. Lecture: ZooImage and Zooscan
- b. Practical:
 - i. Apply ZooImage to analyse data
 - ii. Train and test system
 - iii. Evaluate performance and report

Day 7. Practical: issues of calibration with flat bed scanners

- a. Lecture: issues of calibration.
- b. Practical:
 - i. Image and analyse water samples using ZooImage
 - ii. Review variance and calibration
 - iii. Report

Day 8. Conclusions

- a. Presentations of student assignments
- b. Lecture & discussion: The future of automatic plankton identification

Request #5

Dr Ed Urban
 Executive Director
 SCOR
 College of Marine and Earth Studies
 University of Delaware
 Newark
 USA

GLOBEC International Project Office
 Plymouth Marine Laboratory
 Prospect Place
 Plymouth PL1 3DH
 United Kingdom
 Telephone (01752) 633 401
 Fax (01752) 633101/ 160
globec@pml.ac.uk
www.globec.org

13 August 2008

Dear Ed:

As you know GLOBEC will be holding its **3rd and final open science meeting “Marine ecosystems: from function to prediction”** in Victoria, BC, Canada, 22-26 June 2009.

This conference will culminate the integration and synthesis activities of the international GLOBEC Programme, ten years after its launch as an IGBP-SCOR-IOC activity. The convenors of this meeting are Drs Ian Perry (DFO, Canada), Manuel Barange (PML, UK) and Eileen Hofmann (Old Dominion University, USA), and the Steering Committee includes many key players in GLOBEC: J. Alheit (Germany), H. Batchelder (USA), K. Brander (Denmark), W. Broadgate (Sweden), D. Checkley (USA), D. Haidvogel (USA), J. Hall (New Zealand), R. Harris (UK), G. Hunt (USA), A Jarre (South Africa), S. Lluch-Cota (Mexico), O. Maury (France), Y. Sakurai (Japan), S. Sundby (Norway), Q. Tang (China), E. Urban (USA) and F. Werner (USA).

The format of the conference will be innovative, including,

- Workshops/ Theme sessions - The first two days of the meeting will be devoted to topical workshops/ theme sessions, selected by the GLOBEC community. The objective of these sessions is multiple: to provide avenues to explore specific research areas in more detail, to brainstorm issues that require a minimum capacity and multidisciplinary, or to develop future research plans after the life of GLOBEC, to name a few. These will provide the majority of the contributed presentations to the OSM.
- Plenary sessions - Three days of plenary sessions will follow on the workshops, all of them in plenary to ensure maximum group dynamics (providing 15 invited and 44 contributed presentations). The sessions are along five themes, to recognise both the

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celebratory nature of the meeting and the need to frame future research in the area of ecosystem science:

- GLOBEC achievements
 - Ecosystem structure, function and forcing
 - Ecosystem observation, modelling and prediction
 - Ecosystem approach to management
 - Marine ecosystem science: into the future
- Poster sessions will be included in association with the afternoon coffee breaks on days 3-5. A commercial fair is under consideration.

A detailed programme is included below. The website for the conference is <https://www.confmanager.com/main.cfm?cid=1345&nid=10031>, and it can also be accessed directly from the GLOBEC website www.globec.org.

We estimate that the symposium will attract approximately 300-400 attendees (scientists, fisheries professionals, programme managers and students), interested in learning what GLOBEC has achieved and keen on participating in the planning for the next decade of ecosystem research. It is likely that the opportunity will be used to establish and develop networks at a crucial time in the history of GLOBEC. Opportunities will also be provided for the project's sponsors (SCOR, IOC, IGBP) to capitalize on their investment and share their experiences in relation to GLOBEC.

Given that this will be the last large GLOBEC meeting and the importance that we all place in building capacity, we would like to ensure that we have significant participation from scientists from developing countries. A fund-raising activity is in place and has already secured funding from NSF, SCAR, PICES and the South Korean government. Through this we would like to request a contribution from SCOR to cover the expenses of 5-7 scientists from developing countries to attend this important symposium. Of course the amount would be at SCOR discretion but a figure between \$10,000 and \$15,000 would go a long way in achieving this objective. Needless to say SCOR would become a sponsor of the symposium and would be adequately acknowledged in the book of abstracts, Proceedings, website, and at the meeting itself.

We would be grateful if you could bring this request to the attention of the SCOR General Meeting in Woods Hole, 22-24 October 2008.

Thanks you in advance for your consideration.

With regards,



Manuel Barange
 Director GLOBEC International Project Office
 Co-Convenor 3rd GLOBEC OSM

	Monday	Tuesday	Wednesday	Thursday	Friday					
09:00	Workshops 1, 2, 3	Workshops 7, 8, 9	Session 1 Opening Ceremony	Session 3 Ecosystem Structure, Function and Forcing 6 x 15' Contributed talks	Session 5 Ecosystem Approach to Management 6 x 15' Contributed talks					
09:10										
09:20										
09:30										
09:40			Session 2							
09:50			GLOBEC Achievements							
10:00	Coffee									
10:10										
10:20										
10:30										
10:40	LUNCH									
10:50										
11:00						Workshops 1, 2, 3	Workshops 7, 8, 9	Session 2 GLOBEC Achievements	Session 4 Ecosystem observation, modelling and prediction 8 x 15' Contributed talks	Session 5 Ecosystem Approach to Management 8 x 15' Contributed talks
11:10										
11:20										
11:30										
11:40	4 x 30' Invited talks									
11:50										
12:00	Into the Future									
12:10										
12:20										
12:30										
12:40	Workshops									
12:50										
13:00										
13:30										
13:40	Workshops									
14:40										

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14:50	4, 5, 6	10, 11, 12	Structure, Function and Forcing	observation, modelling and prediction	2 x Invited talks (GLOBEC and IMBER) Book presentation Round table and Debate		
15:00							
15:10							
15:20			6 x 15' Contributed talks	6 x 15' Contributed talks			
15:30							
16:00	Coffee + POSTER SESSIONS (+ Commercial Fair?)						
16:10	Coffee	Coffee	Poster Session Ecosystem Structure, Function and Forcing	Poster Session Ecosystem observation, modelling and prediction	Poster Session Ecosystem Approach to Management		
16:20							
16:30							
16:40							
16:50	Workshops 4, 5, 6	Workshops 10, 11, 12	Session 3 Ecosystem Structure, Function and Forcing	Session 5 Workshop feedback	Session 7 Closing Ceremony IOC, IGBP, SCOR slots (10' each) 10' x 4 Chairs slots Final remarks		
17:00							
17:10							
17:20						4 x 15' Contributed talks	~ 12 x 5' talks (hopefully less wks so discussion time)
17:30							
17:40	Welcome Reception						
18:00							
19:00							
20:00							
21:00					Conference Banquet		
22:00							

Request #6

Dr Edward Urban
Executive Officer
Scientific Committee on Oceanic Research (SCOR)
College of Marine and Earth Studies
Robinson Hall
University of Delaware
Newark, DE 19716 USA

**OBJECT: SCOR Travel funds for developing country scientists**

Dear Ed,

IMBER is planning a Global Carbon Synthesis Symposium in 2009. The title of the symposium is *Decadal Variations of the Ocean's Interior Carbon Cycle: Synthesis and Vulnerabilities*. This effort is lead by the interior Ocean sub-group of the SOLAS/IMBER Carbon Research group. This symposium will be held at the Centro Stefano Franscini in Ancona (Switzerland) on July 13-17, 2009.

The ocean represents the most important long-term sink for the anthropogenic carbon that is emitted into the atmosphere as a result of human actions. yet little is known about how this sink may react to future climate change. A powerful way to gain insight into the sensitivity of the ocean to climate is the study of past and present variations. This symposium will bring together specialists from around the globe who have been measuring and studying such variations. The objective of the symposium is to (i) synthesize the presently available information about the decadal time-scale variability of the ocean interior carbon cycle, (ii) assess the processes responsible for these variations, and (iii) identify processes and regions that might be particularly sensitive to future climate change. Important sources of information are observations of ocean interior changes, particularly those obtained as a result of the international repeat hydrography program, as well as model-based analyses.

The four-day programme will comprise plenary talks, poster session and working group discussions. Each of the three key topics (Synthesis, process attribution and vulnerability) will be the focus of one day, and the fourth day devoted to future planning. Participants

The organising committee has already obtained funding from the ESF Conference program to support the organisation of this symposium and approximately 75 participants are expected to attend this symposium. I would like to apply for support from SCOR for travel funds for scientists from developing countries and countries with economies in transition. The amount of support

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needed is estimated at 10k USD. These funds would help us to support travel of scientists from developing countries to the symposium and facilitate their contribution to the scientific develop.

Please feel free to contact me if you need any further details about the.

Yours sincerely



Dr Julie Hall
Chair
Integrated Marine Biogeochemistry and Ecosystem Research (IMBER)

Request #7

IAPSO/SCOR Session on Ocean Mixing at Session IAMAS-IAPSO-IACS Assembly
P06 Ocean Mixing Processes and Consequences

Convenors: **Barry Ruddick**, *Robin Muench*, *Anna K. Wåhlin*

Description:

Diapycnal and horizontal ocean mixing ranges from exchange processes near the surface and bottom to slower interior mixing processes, affecting ocean circulation and large-scale heat transport so important to climate. Other consequences include chemical exchanges such as nutrient transport to the photic zone (affecting biological productivity), exchanges in the coastal ocean and across shelves, and mixing of deep ocean currents and overflows. The driving mechanisms are numerous; tidal and other currents, internal waves, turbulence generated by bottom friction, surface wind and waves, and double-diffusive effects, to name but a few. Recent discoveries about horizontal mixing at mesoscales and smaller illustrate important links between horizontal and vertical mixing mechanisms. A key objective of mixing studies is a mechanistic understanding combined with observations, leading to specific parameterizations that can be confidently implemented in circulation models. This session will focus on recent process studies and data sets, and new parameterization schemes for ocean mixing as well as studies of the effects of specific parameterizations on circulation models.

This symposium is co-sponsored by the US National Committee for Geodesy and Geophysics and the Scientific Committee on Oceanic Research.

Request #8

23 July 2008

Dr Ed Urban
Executive Officer
Scientific Committee on Oceanic Research
Department of Earth and Planetary Sciences
The Johns Hopkins University
Baltimore MD 21218
USA

Dear Ed,

The Surface Ocean Lower Atmosphere Study (SOLAS) will be holding its fourth International Summer School in Cargese Corsica over the period 3-15 August 2009. The SOLAS Summer School is a smashing success, but it depends upon the generosity of international sponsors and national funding agencies.

In previous Summer Schools, we are proud to have hosted participants from over 30 different nations of the world, and SOLAS would like to increase the participation and exposure of our science to more students from nations with economies in transition.

SOLAS places particular emphasis on the Summer School, as the development of the current generation of young researchers are vital to the success of the project. We believe that the young researchers have the capacity to make immediate significant progress in response to the significant environmental and societal challenges.

With this in mind, SOLAS kindly requests support from SCOR for the International Summer School to cover the travel costs for students from nations with economies in transition. We expect that a contribution of \$10k will partially or fully support the participation of up to 8-10 students from the developing world.

I thank SCOR for their continued support of SOLAS and for your consideration in this matter.

Warm regards,



Jeffrey Hare Executive Officer, SOLAS International Project Office

Request #9

Travel support at the level of US\$4,000–5,000 is requested for early career scientists from countries with “economies in transition” to attend a 4-day PICES Summer School on “*Satellite Oceanography*” to be held August 23–27, 2009, in Seoul, Republic of Korea. In this course, principles and applications in three major areas (optical, infra-red and microwave) of satellite oceanography will be introduced to students who have little experience in the field (focus will be on Asian countries). In addition to lectures and seminars, hands-on training of image processing will be provided.

Request #10

From PICES 2008 Report to SCOR: Travel support at the level of US\$5,000–7,500 is requested for scientists from countries with “economies in transition” from the Pacific Rim to attend SCOR-relevant sessions/workshops at PICES XVIII to be held October 23–November 1, 2009, in Jeju, Republic of Korea. The overall theme for PICES XVIII is “*Understanding ecosystem dynamics, pursuing ecosystem approaches to management*”, and the scientific program for this event will be finalized in October 2008 at PICES XVII in Dalian, China.

Request #11

23 July 2008

Dr Ed Urban
Executive Officer
Scientific Committee on Oceanic Research
Department of Earth and Planetary Sciences
The Johns Hopkins University
Baltimore MD 21218
USA

Dear Ed,

The Surface Ocean Lower Atmosphere Study (SOLAS) will be holding its next Open Science Meeting (OSM) in Barcelona Spain in mid-November 2009. We are pleased to conduct our conference in Spain, as their strong scientific effort will benefit from the increased networking and collaborations that such events engender.

This OSM will have a format similar to that of the previous SOLAS conferences in Halifax Canada and Xiamen China, with oral presentations from leaders in the science of SOLAS, sustained poster presentations by the majority of conference attendees with ample time for networking, and late afternoon discussion fora on topics of future import to the project.

SOLAS feels strongly that this conference program is most constructive for moving the science forward and for the development of the next generation of SOLAS researchers.

With this in mind, SOLAS kindly requests support from SCOR to cover the travel costs for scientists and students from nations with economies in transition. We expect that a contribution of \$5000 will partially or fully support the participation of up to 4-8 scientists and students.

I thank SCOR for their continued support of SOLAS and for your consideration in this matter.

5-23

Warm regards,

A handwritten signature in black ink, consisting of several fluid, overlapping strokes. The signature is contained within a rectangular box that is partially defined by a horizontal line above it.

Jeffrey Hare Executive Officer, SOLAS International Project Office

A core project of the International Geosphere-Biosphere Programme, co-sponsored by the Scientific Committee on Oceanic Research (SCOR) and the Intergovernmental Oceanographic Commission of UNESCO (IOC)

5.1.4 SCOR Reports to Developing Country Libraries

Three reports were sent to developing country libraries since the 2007 Executive Committee Meeting:

- 2007 *SCOR Proceedings*
- *Guide to Best Practices for Oceanic CO2 Measurements* - A.G. Dickson, C. Sabine, and J. Christian, eds., PICES Series Publication 3, IOCCP Report No. 8, 191 pp.

Libraries in Developing Countries That Receive SCOR Reports

Argentina	Universidad Nacional del Sur Bahía Blanca, Argentina
Bangladesh	Library SPARSO Dhaka, Bangladesh
Brazil	FURG Departamento de Oceanografia Rio Grande, Brazil Instituto Oceanográfico Universidade de São Paulo São Paulo, Brazil Dept. of Oceanography and Hydrology University of the State of Rio de Janeiro
Bulgaria	State Fisheries Inspectorate (SFI) Fisheries and Aquaculture Department Sofia, Bulgaria
Chile	Departamento de Oceanografia Universidad de Concepción Concepción, Chile Servicio Hidrografico y Oceanografico Valparaiso, Chile
China-Beijing	Library of Ocean University of Qingdao Qingdao, China Institute of Oceanology Chinese Academy of Sciences Qingdao, China Second Institute of Oceanography

	State Oceanic Administration Hangzhou, China
Croatia	Rudjer Boskovic Institute Zagreb, Croatia
Cote d'Ivoire	Centre de Recherches Oceanologiques (CRO) Abidjan, Côte d'Ivoire
Cuba	Centro de Investigaciones Pesqueras (CIP) Ministerio de la Industria Pesquera (MIP) Habana, Cuba
Egypt	National Institute of Oceanography and Fisheries Cairo, Egypt
Estonia	Estonian Marine Institute (MEI) Tallinn, Estonia
Fiji	Pacific Islands Marine Resources Information System (PIMRIS) The University of the South Pacific Suva, Fiji Islands
Ghana	Institute of Aquatic Biology Achimota, Ghana
India	National Institute of Oceanography Goa, India Physical Research Laboratory Ahmedabad, India
Indonesia	Centre for Oceanology Indonesian Institute of Sciences Jakarta, Indonesia
Kenya	Kenya Marine and Fisheries Research Institute (KMFRI) Mombasa, Kenya
Korea	Korea Ocean Research and Development Institute (KORDI) Seoul, Korea
Lithuania	Ichthyobank Vilnius, Lithuania
Malaysia	ICLARM - The World Fish Center Penang, Malaysia
Mexico	Universidad Nacional Autónoma de México (UNAM) México, D.F., México Biblioteca CICESE Ensenada, Mexico
Morocco	Institut National de Recherche Halieutique (INRH) Casablanca, Morocco
Pakistan	National Institute of Oceanography

	Karachi, Pakistan
Peru	Instituto del Mar del Perú (IMARPE) Callao, Peru
Poland	Institute of Oceanology Polish Academy of Sciences Sopot, Poland
Philippines	College of Science, University of the Philippines Quezon City, Philippines
Romania	Romanian Marine Research Institute Constanta, Romania
Russia	P.P. Shirshov Inst. of Oceanology Russian Academy of Sciences Moscow, Russia All Union Research Inst. of Fisheries and Oceanography V Moscow, Russia
South Africa	University of Cape Town Cape Town, South Africa
Thailand	Dept. of Marine Sciences Chulalongkorn University Bangkok, Thailand
Tunisia	Institut National des Sciences et Technologies de la Mer (INSTM) Salammbô, Tunisia
Turkey	Institute of Marine Sciences Middle East Technical University Icel, Turkey
Ukraine	Southern Scientific Research Institute of Marine Fisheries and Oceanography (YugNIRO) Laboratory of Pacific and Indian Oceans Fish Resources and Fishery Statistics Crimea, Ukraine Marine Hydrophysical Institute Ukrainian Academy of Sciences Sevastopol, Ukraine
Vietnam	National Institute of Oceanography Nha Trang, Vietnam