



The aim of this newsletter is to inform Bolin Centre researchers of recent-past and upcoming activities. The Bolin Centre for Climate Research is a multi-disciplinary consortium of more than 200 researchers led by Stockholm University that conducts fundamental research on the climate system. Founded in 2006, it involves collaboration between the Departments of Meteorology, Applied Environmental Science, Physical Geography and Quaternary Geology and Geological Science at Stockholm University together with FLOW at Royal Institute of Technology (KTH) and the Rossby Centre at the Swedish Meteorological and Hydrological Institute (SMHI). It also forges connections to other Swedish research institutions and to international research organizations.

The strategic plan of the Bolin Centre was approved by the Board 19 May 2014. It is now on the website. The formally agreed mission stated in the plan is:

“To create and communicate fundamental knowledge about climate and the Earth system as part of an evolving global effort to understand and adapt to the Earth’s changing climate.”

A decision of the Board in the last section of the plan is noteworthy stating that:

“The Board, the Departments, SMHI and KTH are strongly committed to the continuation of the Bolin Centre and will continue to use the strategic (SFO) funds in the second 5-year period (to 2019) to finance the Centre in order to ensure its future.”

Implementation of our research is through six multidisciplinary and cross departmental Research Areas (RA) with co-leaders:

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| 1. Oceans-atmosphere dynamics and climate | - A. de Boer, J. Nilsson, R. Caballero |
| 2. Clouds, aerosols, turbulence and climate | - A. Ekman, G. Svensson, I. Riipinen |
| 3. Hydrosphere, cryosphere and climate | - J. Jarsjö, M. Hansson, C-M. Mörth |
| 4. Biogeochemical cycles and climate | - C. Beer, V. Bruchert, Ö. Gustafsson |
| 5. Historical to millennial climate variability | - M. Kylander, Q. Zhang |
| 6. Orbital to tectonic climate variability | - H. Coxall, N. Kirchner |

Directors' Message

From April to June 2014, much has happened. Our membership rose to 230 people. The External Science Advisory Group of the Centre announced in the last newsletter has agreed to give personal science seminars on the afternoon of 18 Nov. 2014 from 13:00 to 15:00 prior to Bolin Days. They will attend the annual Bolin Days on 19 and 20 Nov. 2014 to hear presentations, read posters and share experience with Bolin Centre researchers.

On 22 May 2014, the 7th Annual Bert Bolin Climate Lecture was presented by Corrinne Le Quéré distinguished Professor of Climate Change Science and Policy at the University of East Anglia UK and Director of the Tyndall Centre for Climate Change Research. The Lecture was on *“The Role of the Carbon Cycle in Regulating Climate”*. This was preceded on 21 May by a joint Bolin Centre/EkoKlim Science Forum on *“A Land/sea Scape Perspective to Climate”*. Both events were extremely well-received. Nominations for the next lecturer will be requested soon.

The SWERUS-C3 Arctic expedition, a flagship project co-sponsored by the Bolin Centre, was *cast off* at an ambassador-level ceremony 3 June 2014 at the Polar Research Institute in Stockholm. The Swedish icebreaker ODEN will sail in July from Tromsø, Norway to the East Siberian Shelf with a large contingent of Bolin Centre researchers as well as Russian and American scientists. Thanks and good luck to the lead organizers Professors Martin Jakobsson (IGV) and Örjan Gustafsson (ITM) and to all scientists involved. We note with thanks that despite busy semester-ends, many RA leaders showed initiative in organizing science events. For details, please read the rest of this newsletter.

Leonard Barrie
Director for Research

Alasdair Skelton
Director



Centre News

Jonas Nycander of MISU will undertake a sabbatical visit at the Geophysical Fluid Dynamics Laboratory (GFDL). GFDL in Princeton New Jersey USA works to advance scientific understanding of climate and its natural and anthropogenic variations and impacts, and improve US NOAA's predictive capabilities, through the development and use of world-leading computer models of the Earth System.

A concept developed by Jörg Gumbel and the MISU Atmospheric Physics groups was selected by the Space Board of Sweden to be developed into the next Swedish low-cost/high-profile research satellite - MATS - to study mesospheric waves.

A remarkable communication event was the Bolin Days for Schools from 5 to 9 May 2014. Over four hundred school children participated in hands-on and interactive activities aimed at conveying fundamental concepts of climate science.

On 19 May 2014, the Directorate and Climate Modeling Coordinator submitted the self-assessment report of the Bolin Centre as part of a process conducted by the government reviewing the Strategic Research Initiatives (SFOs).

An upgrade of the Bolin Centre website has been completed by Inês Jakobsson our website administrator. Now the membership and function of every group in the Bolin Centre can be reached from the structure diagram which is in the "About us" page.

The Bolin Centre linking program led by Agatha de Boer and Malin Kylander is well under way with a good number of mentor – mentee pairs. This is a shining example of bottom-up initiatives that improve the research environment.

An RA2 workshop was held on 9 May 2014 at Ersta conference center with 22 participants, two invited speakers (Natalie Mahowald and Peter Hess, Cornell University, USA) and three representatives from the SU research liaison and communication offices. The workshop involved a longer science presentation by Peter Hess on Atmospheric Ammonia, short 3-minute speed presentations by RA2 members and 15-min presentation by representatives of projects funded by RA2. The research liaison office of Stockholm University gave an overview of the services they provide as well as things to think about in grant applications. The representative from the communications office gave advice on, and introduced a discussion on, how we can popularize our research. Natalie Mahowald, a member of the Bolin Centre External Science Advisory Group, presented her views on career development which was followed by a general discussion on how to plan your career in science.



Upcoming Science Events/Activities

- In September 2014, Professor Tomas Rossby a well-known oceanography researcher at the University of Rhode Island will be awarded an Honorary Doctorate by Stockholm University. This was sponsored by MISU, a department participating in the Bolin Centre, and the host is Peter Lundberg. Prof. Rossby's current research interests include the dynamics and kinematics of ocean currents with special interest in the Gulf Stream and the circulation of the North Atlantic. He is also interested in ocean instrumentation issues.
- A COMSOL workshop organized by RA2 member Sebastian Arnoldt (sebastian.arnoldt@itm.su.se). The time is sometime in September 2014. COMSOL Multiphysics is a finite element analysis, solver and simulation software for various physics and engineering applications. The target audience is teaching staff with an affiliation to the Bolin Center for Climate Research. The goals of this workshop are: 1. Demonstrate how COMSOL can be used for solving problems related to research and teaching at the Bolin Centre. 2. Identify and form a work group in order to pinpoint how COMSOL can be integrated in existing teaching curricula at the Bolin Centre. If you would like to participate in the workshop, please vote in the following doodle, indicating a time that would suit you: <http://doodle.com/gwvv56itgztkbr2>
- 20-22 October, 2014, RA5 workshop on "*Stable water isotopes and climate*", organised by Qiong Zhang (INK), Francesco Pausta (MISU) and Rienk Smittenberg (IGV). The main focus of the workshop is stable water isotope measurements both from paleo-proxy archives (ice-core, speleothem, lake sediment, etc) and from modern satellite data (Odin/SMR, Envisat/MIPAS etc), as well as stable water isotope modeling. Several international experts have been invited to come and communicate their recent research with Bolin centre scientists. The workshop aims to establish collaboration between different communities with common interests in stable water isotopes and climate. Please mark your calendar for this event!
- 18-20 November an afternoon **Science Forum followed by the Bolin Days Science Symposium** will take place. Please mark your calendars and prepare presentations/posters.
- Late November/early December, RA5 workshop on "*African paleoenvironmental change: modeling and reconstruction*", organised by Malin Kylander (IGV), Hanna Sundqvist (INK) and Eiln Norström (INK). We envisage the workshop to cover 2-3 days and would see more formal presentations from our invited guests but also time for discussion, networking and strengthening of collaboration. Finalized dates coming soon.
- The Bolin Centre booth at the American Geophysical Union Fall meeting was a smashing hit last year. This year, we are aiming just as high. The meeting is 15-19 December 2014 in San Francisco (<http://fallmeeting.agu.org/2014/>). The submission deadline for abstracts is 6 August 2014. Bolin Centre members presenting papers or posters and visiting the booth will get a reward. More information on that will come later.
- The Climate Research School of the Bolin Centre has put out a call for ideas for its 2015 summer school. The call is mainly aimed at PhD students but suggestions from any Bolin Centre member are very welcome.