

Rosby Centre Newsletter

No 2

October 2004

This is the second issue of the Rosby Centre electronic Newsletter. It aims to provide useful information to stakeholders on climate change research and policies on the work and results of the Rosby Centre. This newsletter will be published 2-6 times a year.

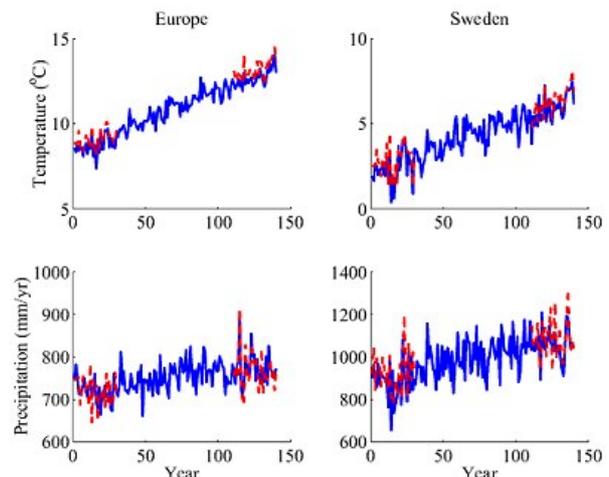
The following topics are covered in this Newsletter:

1. **A 140-yr regional climate simulation**
2. **ENSEMBLES has started**
3. **Regional Climate Modelling Day at SMHI**
4. **A new PhD student at Lund University and Rosby Centre**
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6. **Subscriptions and cancellations of subscriptions**
7. **Basics of the Rosby Centre**

1. A 140-yr regional climate simulation

The first climate change application of the new version of the Rosby Centre regional climate model, RCA3, has been completed. It is a regional climate change simulation for the entire time period from 1961 to 2100. The boundary conditions are from a global climate model ECHAM4/OPYC3 simulation at DKRZ, the Deutsches Klimarechenzentrum GmbH, and the Max-Planck Institute for Meteorology in Hamburg. In terms of greenhouse gas forcing, the simulation follows the actual changes from 1961 to 1990, followed by the IPCC B2 scenario until 2100. In terms of global climate change, the first (1961-90) and the last (2071-2100) 30-year periods of the new simulation overlap with one of the earlier RCA2-simulations at the Rosby Centre (red in figure). A first analysis shows that the interannual variability in temperature and precipitation in the overlapping periods are comparable. Compared to the earlier regional simulations, the present long simulation offers several advantages: It provides a scenario also for the first half of the

21st Century; It provides multi-decade forcing data for such impact study applications as forestry and ecosystem modelling; It offers a pedagogic tool to study detection, in terms of several climate parameters, i.e., how climate change signals might emerge from natural variability.



2. ENSEMBLES has started

The EU/FP6 Integrated Project ENSEMBLES (ENSEMBLE-based Predictions of Climate Changes and their Impacts) a 5-year research effort with about 70 partners has now started. ENSEMBLES homepages can be found at www.ensembles-eu.org. Links to the homepages of ENSEMBLES Research Teams (RTs) are being added. The Rosby Centre participates in RT2B, RT3 and RT6. The main aim of the project

is to construct scenarios of future climate change with ensemble simulations of Earth-System Models addressing different time scales, spatial scales and plausible future world developments to provide improved policy-relevant climate change assessment and advance our knowledge on the climate system.

3. Regional Climate Modelling Day at SMHI

Regional climate modelling and how to obtain data were discussed at the Rosby Centre modelling day, October, 6 at SMHI, by 60 internal

and external participants. An introduction to the RCAO model system and its components was given, focusing on the provision of results to

interested users, including both possibilities and inherent limitations. Some of the active users presented their own work and commented on future needs. As a whole, it was a day with new insights and contacts between researchers, and

4. A new PhD student at Lund University and Rossby Centre

Anna Wramneby has recently started her PhD studies at the Department of Physical Geography and Ecosystem Analysis at Lund University thanks to a grant from the Swedish Research Council Vetenskapsrådet. In co-operation with Rossby Centre, she will work on a coupled system of RCA and the dynamic vegetation model LPJ-GUESS developed, among others, by Ben Smith at the same department. LPJ-GUESS is a process-based model of vegetation dynamics and

5. Open position at the Rossby Centre

The Rossby Centre seeks a post-doctoral research scientist to work on high-resolution meteorological modelling with applications in climate, climate change and NWP research. The position is available from November 2004. For further information, check out the link to "Jobba

6. Subscriptions and cancellations of subscriptions

This issue of the Rossby Centre electronic newsletter is sent as a blind copy to provide email address privacy. Should you not wish to receive further copies of this newsletter, please send an email to rossby.data@smhi.se

7. Basics of the Rossby Centre

The Rossby Centre is the regional climate modelling research unit of the Swedish Meteorological and Hydrological Institute, SMHI. The Centre was built up within SWECLIM, the Swedish Regional Climate Modelling Programme, 1996-2003. The Rossby Centre works on regional climate model development and evaluation as well as model applications on process studies, climate system studies, climate change research and impact studies. The Rossby Centre regional climate models include the atmospheric model RCA, the oceanographic model RCO model as well as their coupled set-up, the RCO system. The HBV hydrological model of SMHI is also used. The Rossby Centre is involved in a number of EU- and other projects on climate modelling

certainly something to be repeated. Copies of the presentations are available on the Rossby Centre homepage at:

www.smhi.se/sgn0106/ff/rc/modelday_pres.htm

biogeochemical cycling. The intention is to use the coupled model system as a tool to examine the sensitivity of the regional climate to changes in vegetation and ecosystems. Studies are planned in conjunction with measured and observed environmental data to assess potential impacts of climate changes on such ecosystem "services" as carbon storage, timber production and water resources.

på SMHI" at the bottom of www.smhi.se or contact Markku.Rummukainen@smhi.se.

Application with the reference number 1606 should be sent to SMHI SE-601 76, Norrköping, Sweden or by e-mail to Registrator@smhi.se by October the 31, 2004.

Comments and suggestions as to the scope, content and forms of the Rossby Centre electronic newsletter are welcome. Feedback can be provided via the email address mentioned above.

and other aspects of climate and climate change research, in co-operation with other research groups on a national and an international level. In 2003-2005, the Rossby Centre is funded also by SMHI, Naturvårdsverket (the Swedish EPA), Statens energimyndighet (the Swedish Energy Agency) and Mistra (the Foundation for Strategic Environmental Research).

Rossby Centre homepages are in English and can be found via www.smhi.se (click on "Forskning" [on the Swedish version] and "Research" [on the English version] at the top of the page, after which the link to Rossby Centre appears on the list to the left of the page that opens.)