



December, 2007

Dear all,

I have been a little remiss in not filling your inboxes with updates on the Research Network. Below are a few announcements, some details on what we have achieved this year and some priorities for 2008. There are two key take-home messages:

1. We strongly welcome suggestions for additional priorities in 2008.
2. Regular updates, announcements etc are posted at www.arcness.mq.edu.au – we have been using this forum rather than regular e-mails to avoid bombarding you. In particular, I receive regular requests to broadcast announcements of job opportunities, student opportunities etc and to bring these to your attention would require weekly e-mails. I am reluctant to do this and thus plan to continue to use the web site for most announcements in 2008. However, I will also try to send more regular updates via e-mail in 2008.

First, two important announcements:

1. A workshop, hosted by the Australian Academy of Science in association with the Department of Climate Change, the Bureau of Meteorology and CSIRO will be held at the Shine Dome on Wednesday 12 and Thursday 13 March 2008. It is titled: Future directions for Australian climate change science. Further details are at:

<http://arcness.mq.edu.au/fileadmin/general/docs/scienceflyer.pdf>

including an invitation to express interest in attending. I understand that the list of keynotes is not set in stone at this stage.

This is directly targeting Working Group 1 agenda – so those of you who read / contribute to the Science assessed by Working Group 1 may well wish to attend. It is not about impacts or adaptation.

2. This workshop is building on the Solomon/Steffen review recommendations released earlier this year – the review of the Australian Climate Change Science Program. A copy of this report is very interesting reading and is available at:

http://arcness.mq.edu.au/fileadmin/general/docs/ACCSP_REPORT_FINAL.doc

Second, what ARCNESS has been up to this year?

Our main priorities have involved tool and data provision. In terms of data we have funded a series of data set collations that are presently underway. These cut across atmospheric thought to ecological data including species distributions. All these data sets will be available via the Web to members. We have also run workshops on micrometeorological measurements, winter schools on aspects of meteorology and assimilation and we have supported parts of APAC workshops.

In terms of tools we have been lucky to have had Steve Phipps working on implementing the CSIRO Mk3-L model at APAC. This is now running. It is a relatively coarse-grid model available for palaeo-simulation or for multiple simulations of current climate etc. We have recently doubled the resolution of the ocean, and we plan to link the Community land model [CABLE] to this. Later, we hope to have dynamic vegetation coupled into this model to provide a really effective tool for exploring major issues to do with climate evolution over Australia. We have recently received confirmation for the computing resources to run this model for a suite of palaeoclimatic simulations in 2008. This will provide a benchmark for those interested to undertake some research and to engage the climate modeling and palaeoclimatic communities in a common agenda. The simulations will take most of 2008 to complete. This initiative is largely a response to several workshops where the palaeo-community has asked for this sort of capacity within Australia. Further details can be obtained from Steve Phipps or Andy Pitman.

ARCNESS has also provided significant resources to port the Unified Model (from Hadley) to APAC. The UM underpins ACCESS <http://www.accessimulator.org.au/index.html>. Our aim is to maintain a common development path of the ACCESS model at APAC for the University research community and their partners. This may prove infeasible given the complexity of maintaining common source codes on different platforms and alternative solutions to ensure the University community can engage strategically with ACCESS are always being explored. Andy Pitman can provide further details. We hope that the code will be actually available for users in January, though we plan to seek one or two projects from existing users of the UM to test the code prior to a more general release.

ARCNESS has also invested in CABLE. We have run a workshop offering initial training and we have supported some tools to be built for this model. Roughly 15 people are now using CABLE – this would be the first time any land surface model in Australia has had more than a handful of active developers/users.

ARCNESS continues to support participation in the University of the Sea, in students and postdocs attending conferences and workshops overseas, and some travel for more senior players to attend significant meetings internationally. We are always open to applications from graduate students, postdocs and indeed the more senior among you.

Finally, what is ARCNESS planning for 2008 ?

First, this is open to input from each and every one of you. We welcome suggestions on all of these themes and the identification of others that we have missed. Below, I have only noted the big-ticket items. There will be many smaller projects that are targeted at specific sections of the network. They are in approximate order of cost.

1. We plan to maintain investment in the UM/ACCESS model at APAC through 2008. We plan a workshop/training course or two. We have deferred organizing this until the code is actually ready to be used. However, if you are applying for ARC funding in 2008 you can indicate that the models will be available at APAC;
2. We plan a major initiative in statistical downscaling. A large fraction of the physical and biological impacts node community need a way to downscale from climate models to the scale of their applications. This is a generic problem that we hope to contribute to a resolution. We do not presently have a view on which statistical downscaling method to use (I sought advice today), nor do we have anyone to actually do the work. We are likely to invest up to a years salary. If you have skills in statistical downscaling and are interested in this in some way please contact Andy Pitman as soon as convenient;

3. We aim to implement the regional capacity in the UM model at APAC. This should provide the capacity of users to run the UM over selected domains. We will be in touch in 2008 to consult on specific regions that might interest you;
4. We plan on-going development of the CSIRO Mk3L model including implementation of CABLE and LPJ.
5. We may try to support other developments on CABLE including the provision of new data sets, urban parameterizations, hydrology models, improvements in other components etc. However, we need to be careful to focus on building CABLE as a tool, not funding research undertaken to develop the tools given the ARC funding rules;
6. We plan training in CSIRO Mk3-L and the UM at APAC;
7. We will fund the development of meta-data sets for physical and biological impacts and data sets on species distributions;
8. We hope to begin an engagement of the communities on issues of air quality and climate change.

With these initiatives funded, there is still some money for other projects. If you are aware of something that builds research capacity in the community, via data sets, via tools or methodologies, or you are aware of impediments please tell us and we will try to address these.

If you want to read more about what we have been doing, reports are available at www.arcness.mq.edu.au.

Best wishes for 2008,



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