



NCCARF Newsletter

Director's message
 Professor Jean Palutikof, NCCARF Director

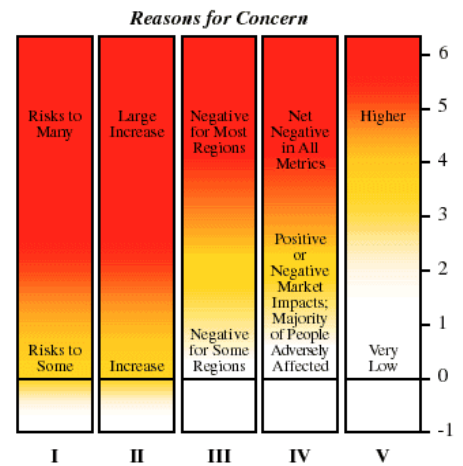
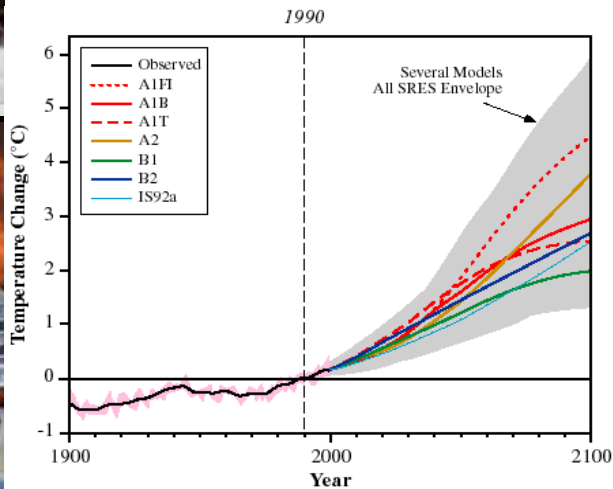
Steve Schneider and burning embers



The global community of climate change science is mourning a great scientist and communicator, Steve Schneider, who died suddenly on July 19th. He had recently attended the 2010 Climate Adaptation Futures Conference (see page 2) and the audience was privileged to hear him speak to the theme of Uncertainty/limits to adaptation/adapting to +4°C – as those who knew him will agree, a typical Steve wide-ranging, indeed unbounded, choice of title.

Steve will be remembered for his scientific contribution to the understanding of climate change, and his ability to communicate complex science in clear and straightforward language to policymakers and the general public. He did outstanding work on the effects of aerosol particles on climate, and the roles of clouds in climate change.

But for those of us working in adaptation, maybe his greatest contribution will be in the policy debate around dangerous levels of climate change, and the reductions in greenhouse gas emissions required to avoid these levels. When we hear policymakers and politicians talking about the need to stabilise emissions concentrations at 450 ppm (parts per million carbon dioxide in the atmosphere), and to hold global temperature change at no more than 2°C to avoid dangerous climate change, they are drawing on a body of work which first emerged in 2001, in the IPCC Working Group II Third Assessment, Chapter 19 and the Summary for Policymakers. I reproduce the figure below. Widely known as the burning embers diagram, and co-authored by a group led by Joel Smith and Steve Schneider, it shows modelled global temperature changes out to 2100 for a range of scenarios on the left, and five 'reasons for concern' on the right, with the colour intensity relating to the level of concern. It's been criticised for being too subjective, too alarmist, for lacking clear-cut definition of the five reasons for concern. Nevertheless, it has a power to communicate eloquently the true risks of climate change which has influenced policy thinking and direction in a way which science rarely is able to do. For those wanting to know what happened next, the 'reasons for concern' were revisited in a paper by Joel Smith, Steve Schneider and colleagues. (See Proc. Nat. Academy of Sciences, 106, 4133-4137 (2009))



- I Risks to Unique and Threatened Systems
- II Risks from Extreme Climate Events
- III Distribution of Impacts
- IV Aggregate Impacts
- V Risks from Future Large-Scale Discontinuities

I am privileged to have known Steve Schneider. I do not think we yet recognise how much he will be missed in the struggle to persuade the world of the need for action to address climate change.



2010 International Climate Change Adaptation Conference
Climate Adaptation Futures
 Preparing for the unavoidable impacts of climate change
 29 June – 1 July 2010, Gold Coast Convention Centre, Gold Coast, Queensland, Australia

Conference a global success

More than 1000 delegates from 48 countries gathered in Queensland last month for the first international conference to focus solely on adapting and preparing for the impacts of climate change, jointly hosted by NCCARF and the CSIRO Climate Adaptation Flagship.

Conference proceedings made news headlines around the world and plans are underway for a second event to be held in Arizona in 2012.

Along with the full program of plenary, parallel and panel events, a range of specialised side meetings and events were held. This included the CSIRO Adaptation Challenges Workshop in which 80 leaders from the public, policy and science domains were invited to provide views on the key adaptation challenges facing Australia in developing a national, integrated response to climate change.

A Postgraduate Students Workshop was also held for Australian and international students working on climate change adaptation research. The workshop was designed to bring together the community of next-generation climate change adaptation researchers. Attendees had the opportunity to present their research and meet other students working in their field. The Workshop explored the challenges of beginning a research career in climate change adaptation. It is likely that a network for postgraduate students in adaptation will emerge.

There are plans to produce a proceedings publication featuring selected papers from the Conference. In the meantime, NCCARF will continue to maintain the website on-line at www.nccarf.edu.au/conference2010 to provide access to material presented at the Conference.

Farewell Stephen Schneider

The NCCARF team is deeply saddened to learn of the death of Stephen Schneider on July 19, 2010. Stephen delivered a keynote address at Climate Adaptation Futures.

Stephen had an innate ability to engage, inform and challenge people about the reality of climate change and the urgency of the need to respond.

Stephen's contribution to this field of research has been extraordinary and beyond compare, as has his level of personal commitment to influencing and inspiring response to climate change. View video of Stephen Schneider's presentation at Climate Adaptation Futures online at www.nccarf.edu.au/conference2010



Photo Gallery

Images from the conference are available for viewing online at http://www.flickr.com/photos/nccarf_au/



Above: One of four busy poster sessions

Right: Minister for Climate Change, Energy Efficiency and water Penny Wong



Above: UNEP Chief Scientist Joseph Alcamo

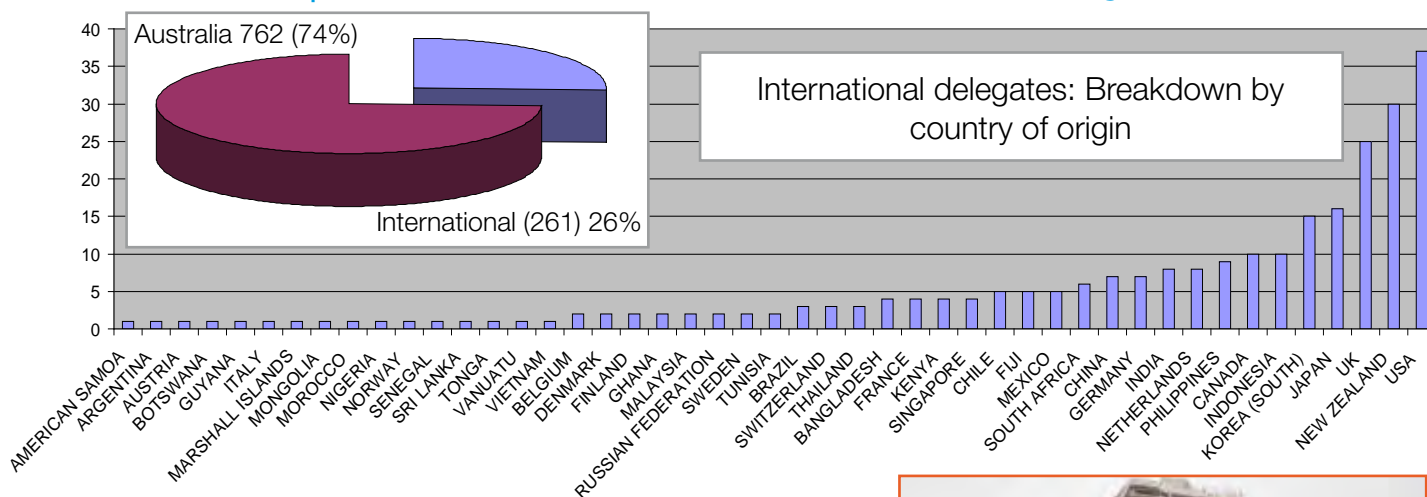
Right: NCCARF Director Professor Jean Palutikof



What's online?

- Videos of all plenary addresses
- Conference handbook containing all abstracts and speaker bios
- Postgraduate students presentation abstract book
- Pdfs of presentations from parallel, panel and poster sessions
- Event image gallery

Climate Adaptation Futures - Where did Conference delegates come from?



Post-conference field trips

Conference delegates had the opportunity to join one of four themed post-conference field trips, each presenting climate change adaptation challenges in a distinct Australian ecosystem, region or sector.

Each trip was guided by researchers active in climate adaptation research and practice in that region, as well as local people coping with change.

The *Wet Tropics World Heritage Area* tour led by JCU Professor Steve Turton took visitors on a 3-day tour from Cairns to the Daintree rainforest to the Australian Canopy Crane Research Facility then the Atherton Tablelands and on to Innisfail to view ecosystem recovery from Cyclone Larry.

Gold Coast Planning for Change viewed the challenges of planning for sustainable development in the rapidly growing Gold Coast coastal strip, a region highly vulnerable to climate impacts.

Gondwana Rainforests of Australia: Biodiversity Monitoring, Conservation and Restoration (below right) took visitors on a 6km hike and 4wd bus trip through the ancient forests of Lamington National Park with renowned Griffith ecologist Professor Roger Kitching.

Water, Wheat and Wine (below) investigated horticulture and agriculture innovations and challenges being worked on by QUT, CSIRO and Queensland Government researchers in the agricultural heartland of the Samford and Lockyer Valley and the Toowoomba Southern Downs region.



Above: Gold Coast Planning for Change field trip. Image: Ann Penny



Image: Right: Kerry Fitzgerald
Below: Frank Stadler



NCCARF Seminar Series

NCCARF hosts public climate change adaptation seminars and networking events. To suggest speakers or host a seminar at your institution contact Jeannette Langan at j.langan@griffith.edu.au. Where possible, slides and audio from previous seminars are available for download from www.nccarf.edu.au

Upcoming seminars:

Thursday 5 August, 4.30pm:

'Social science and climate adaptation - some starting points' with Dr **Nadine Marshall** of CSIRO Sustainable Ecosystems, a social scientist working in natural resource management to maximise conservation goals and minimise associated social impacts.

Where: Griffith University South Bank Brisbane QCA Theatre (s05_2.04) **RSVP:** Essential to Kerry Fitzgerald 07 5552 7326 k.fitzgerald@griffith.edu.au

Thursday 23 September, 4.30pm:

Guest speaker **Professor Ove Hoegh-Guldberg**, Director, Global Change Institute, University of Queensland.

Where: Griffith University South Bank Brisbane QCA Theatre (s05_2.04) **RSVP:** Essential to Kerry Fitzgerald 07 5552 7326 k.fitzgerald@griffith.edu.au

Research News

Synthesis and Integrative Research Program: Phase II projects announced

The second phase projects in the NCCARF Synthesis and Integrative Research Program have been announced, and an open call for expressions of interest for funding proposals held.

- *Coastal ecosystems response to climate change*

This project will synthesise current knowledge and experience to assess the implications of climate change for Australia's coastal ecosystems. It will define 'priority' ecosystems and species across Australia's various coastal zones, based on their vulnerability, and consider how these will respond to the impacts of climate change.

- *Limits to adaptation*

A project comprising 5 work packages designed to identify the thresholds at which actions to adapt cease to reduce vulnerability. These will focus on places and sectors in Australia where the impacts of climate change will be unavoidable, even with adaptation measures, for example the Great Barrier Reef, alpine areas, wetlands, and small Australian islands.

- *Learning from regional climate analogues*

This project will take a spatial approach to the identification of analogues for future climate environments. It hypothesises that there are regions of Australia, defined by their location, that currently experience climatic conditions which are indicative of future climates elsewhere. Institutional experience in these analogues can inform planning for future climate change.

- *Literature review: impacts of climate change*

Information about impacts of climate change in Australia is limited and dispersed. This project will search the literature to generate a consolidated and regularly updated set of 'facts' about the observed and likely future impacts of climate change in Australia. These 'facts' will be used to compile a searchable database of information relevant to Australian impacts.

Work teams for each project will be announced in coming weeks. For more information and announcements on these projects see www.nccarf.edu.au



Image: Kasia Wallis

Update: National Climate Change Adaptation Research Plans

Completed and released: Human Health; Emergency Management; Settlements & Infrastructure, Marine Biodiversity and Resources.

Final draft awaiting approval: Terrestrial Biodiversity; Social, Economic and Institutional Dimensions; Primary Industries

Draft in preparation: Freshwater biodiversity, Indigenous communities

Completed Plans are available online at www.nccarf.edu.au or contact NCCARF to request hard copies of completed Plans.

Adaptation Research Networks

The NCCARF Adaptation Research Networks continue to grow in size and reach, now totalling more than 2800 members across government, research, industry and community sectors.

The networks share a common purpose in promoting collaboration and facilitating the sharing of information and resources among the research community, stakeholders and end-users, but each has a program of activities tailored to the unique needs of its own sector.

All networks now have their own websites and newsletters that detail the huge variety of activities, projects and events underway for members to become involved in. To sign up for network newsletters and updates, visit www.nccarf.edu.au. Click on the link to the network of your choice, then register with them to receive regular updates. Members may belong to more than one network, and membership is free.

Terrestrial Biodiversity co-convened by Professor Stephen Williams (JCU), and Professor Lesley Hughes (Macquarie). Contact: stephen.williams@jcu.edu.au or lhughes@rna.bio.mq.edu.au

Water Resources & Freshwater Biodiversity convened by Professor Stuart Bunn (Griffith). Contact: s.bunn@griffith.edu.au

Marine Biodiversity & Resources convened by Associate Professor Neil Holbrook (UTas). Contact: neil.holbrook@utas.edu.au

Research call news

Research calls have now been completed for research addressing the priorities detailed in the National Climate Change Adaptation Research Plans for Human Health (two rounds); Emergency Management; Marine Biodiversity and Resources, and Settlements and Infrastructure.

The Emergency Management grant process has been completed, and applicants notified of the outcome.

Grants conducted through the second NHMRC special funding call for the Health Impacts of Climate Change are being assessed and applicants will be advised.

The Fisheries Research and Development Corporation and NCCARF received 65 applications for funding to address the Marine Biodiversity and Resources NARP priorities. Shortlisted applicants were invited to submit full proposals, which are now being assessed.

The Settlements and Infrastructure research call attracted 161 applications. Shortlisted applicants were invited to submit full proposals, which are now being assessed.

Human Health convened by Professor Tony Capon (ANU). Contact: tony.capon@anu.edu.au

Settlements & Infrastructure convened by Associate Professor Ron Cox (UNSW). Contact: r.cox@unsw.edu.au

Primary Industries convened by Professor Snow Barlow (Melbourne) Contact: s.barlow@unimelb.edu.au

Emergency Management convened by Professor John Handmer (RMIT). Contact: john.handmer@rmit.edu.au

Social, Economic & Institutional Dimensions convened by Associate Professor Jon Barnett (Melbourne). Contact: jbarn@unimelb.edu.au

New at NCCARF

NCCARF has recently welcomed three staff members to the team.



Ann Penny - Networks Coordinator.

Ann will be responsible for working closely with the Convenors and Coordinators of the 8 NCCARF Adaptation Research Networks to support all Network activities. Ann joined NCCARF from JCU, where she worked as the Communications and

Liaison Officer with the Fishing and Fisheries Research Centre. Ann has strong project management experience working with university and government based researchers to achieve project outcomes.



Sarah Boulter - Research Fellow

Sarah will be responsible for coordinating the compilation and publication of a volume of work conducted under NCCARF's Synthesis and Integrative Research Program.

Sarah has been involved in biodiversity research for the past ten years at Griffith University as a research assistant and

PhD student. Her research has focussed on plant-animal interactions in the rainforests of both the Wet Tropics and subtropics near Brisbane. Most recently, her work looked at natural variability of pollination systems under different climates using an altitudinal gradient as part of the IBISCA Queensland collaborative project. Sarah has also worked in research communication with the then Queensland Department of Natural Resources during the introduction of tree clearing legislation and permit assessment in the EPA.



Donovan Burton - Adapting local governments project

Local governments are at the coal face of both climate change impacts and adaptation strategies. They will play a critical role in implementing climate change adaptation actions. They also play a significant role in emergency

management planning and response; economic development; environmental protection; and community support. Although there are common types of risks shared by councils across Australia, the degree of exposure and vulnerability to these risks vary considerably, as does the timing of the risks. NCCARF appointed Donovan to help ensure that the needs of local governments are



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recognised by the wider research community and that research can manifest into tangible local actions for adaptation. Donovan is experienced in working with local governments, state agencies and industries throughout Australia assessing climate change risks and opportunities. He is currently helping NCCARF develop strategies to help councils better understand and manage challenges presented by climate change. Donovan's work includes liaising with the Australian Local Government Association, relevant State local government associations as well as individual councils.

NCCARF
Partners:



Australian Government
Department of Climate Change
and Energy Efficiency



National Climate Change Adaptation Research Facility

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If you have comments, feedback or news items you would like included in the next NCCARF Newsletter please contact Jeannette Langan j.langan@griffith.edu.au. To receive this newsletter please subscribe online at www.nccarf.edu.au/user/register

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