



## NCCARF Newsletter

### Director's message

Professor Jean Palutikof, NCCARF Director



The year 2009 is important for climate change, both for policy and for research.

The challenge is to arrive at a replacement for the Kyoto Protocol, aimed at combating global warming, and which is due to expire in 2012.

It is the responsibility of the United Nations Framework Convention on Climate Change (UNFCCC) to lead the world's nations to the table at the fifteenth Conference of the Parties (COP-15), to negotiate this replacement.

The two-week COP-15 will be held in Copenhagen in December 2009. In the run-up, many scientific and policy meetings are being held, and scientific academies from around the world are publicising statements on climate change and its impacts, which will feed into the negotiations.

In March, I attended the Copenhagen Climate Change Congress, which brought around 2,500 scientists and policy people together to discuss the very latest findings. This important scientific meeting developed a set of six Key Messages to be delivered by the Government of Denmark to the COP at the opening ceremony.

If you want to read more, you can access <http://climatecongress.ku.dk> Recently, I received a statement on ocean acidification from a consortium of 70 national scientific academies, including the Australian Academy of Science. This draws attention to the threat that increasing concentrations of carbon dioxide in the atmosphere, and hence the acidification of the oceans, poses to shell-forming organisms as diverse as warm- and cold-water corals and clams, as well as the plankton which are the foundation of oceanic food chains. You can read this statement at [http://www.interacademies.net/Object.File/Master/9/075/Statement\\_RS1579\\_IAP\\_05.09final2.pdf](http://www.interacademies.net/Object.File/Master/9/075/Statement_RS1579_IAP_05.09final2.pdf).

Policy-makers will have a series of meetings in the run-up to COP, beginning in Bonn in June and progressing through Bangkok and Barcelona, before arriving in Copenhagen in December. Australia ratified the Kyoto protocol on December 2007, and will no doubt take an active part in the negotiations.

Against this backdrop of international negotiation to reduce greenhouse gas emissions into the atmosphere, NCCARF is charged to lead the Australian research communities in climate change adaptation. Through adaptation, we manage the impacts of climate change which will inevitably occur despite our best efforts to limit emissions.

If you have feedback, information or items for inclusion in subsequent newsletter editions, email [j.langan@griffith.edu.au](mailto:j.langan@griffith.edu.au)

### Events calendar:

July 8: Workshop: *'Bushfire research after February 7: What can we expect and what's needed?'*, Melbourne.

July 21: Seminar: *'Loving an even more sunburnt country'*, Brisbane.

August 20: Seminar: *'Climate Change and the Future of Coral Reefs'*, Brisbane.

For information on these and other upcoming events see the back page and [www.nccarf.edu.au](http://www.nccarf.edu.au)

# Call for abstracts: The 2010 International Climate Adaptation Conference

The Call for Abstracts for the *Climate Adaptation Futures: Preparing for the unavoidable impacts of climate change* conference opens on 20 July.

Hosted by NCCARF and the CSIRO Climate Adaptation Flagship, this will be one of the first international forums to focus solely on climate impacts and adaptation.

The Climate Adaptation Futures Conference will showcase leading impacts and adaptation research from around the world. It will explore the contribution of adaptation science to planning and policy making, and how robust adaptation decision making can

proceed in the face of uncertainty about climate change and its impacts.

Keynote addresses will be given by speakers from across the international climate change adaptation community, including Steve Schneider (Stanford University) R.K. Pachauri (Chair of the IPCC) and Chris Field (Co-Chair of the IPCC Working Group II).

## Who should attend?

- The community of researchers in climate change impacts, adaptation and vulnerability seeking to present and discuss the latest science developments.
- Representatives of government, business, industry and vulnerable communities seeking to interact with that science.

The Conference will be held on the Gold Coast, Qld, 29 June-1 July 2010. Registrations open in August. For information and to submit an abstract see [www.nccarf.edu.au/conference2010](http://www.nccarf.edu.au/conference2010)

## Who's who in the Adaptation Research Networks

**Terrestrial Biodiversity** hosted by James Cook University, and co-convened by Associate Professor Stephen Williams, and Professor Lesley Hughes of Macquarie University.  
Contact:

[stephen.williams@jcu.edu.au](mailto:stephen.williams@jcu.edu.au)  
[lhughes@rna.bio.mq.edu.au](mailto:lhughes@rna.bio.mq.edu.au)

**Water Resources & Freshwater Biodiversity** hosted by Griffith University and convened by Professor Stuart Bunn.  
Contact: [s.bunn@griffith.edu.au](mailto:s.bunn@griffith.edu.au)

**Marine Biodiversity & Resources** hosted by University of Tasmania and convened by Associate Professor Neil Holbrook.  
Contact: [neil.holbrook@utas.edu.au](mailto:neil.holbrook@utas.edu.au)

**Human Health** hosted by the Australian National University and co-convened by Professor Tony Capon and Dr Liz Hanna.  
Contact: [tony.capon@anu.edu.au](mailto:tony.capon@anu.edu.au)  
[liz.hanna@anu.edu.au](mailto:liz.hanna@anu.edu.au)

**Settlements & Infrastructure** hosted by the University of New South Wales and convened by Associate Professor Ron Cox.  
Contact: [r.cox@unsw.edu.au](mailto:r.cox@unsw.edu.au)

**Primary Industries** hosted by Land and Water Australia and convened by Professor Snow Barlow of the University of Melbourne.  
Contact: [s.barlow@unimelb.edu.au](mailto:s.barlow@unimelb.edu.au)

**Emergency Management** hosted by RMIT University and convened by Professor John Handmer.  
Contact: [john.handmer@rmit.edu.au](mailto:john.handmer@rmit.edu.au)

**Social, Economic & Institutional Dimensions** hosted by the University of Melbourne and convened by Associate Professor Jon Barnett.  
Contact: [jbarn@unimelb.edu.au](mailto:jbarn@unimelb.edu.au)

For information on the role of the NCCARF Adaptation Research Networks see [www.nccarf.edu.au](http://www.nccarf.edu.au) or contact Marie Waschka [m.waschka@griffith.edu.au](mailto:m.waschka@griffith.edu.au)

## Primary Industries Network: Call for expressions of interest

NCCARF invites expressions of interest from eligible organisations to host the Adaptation Research Network for Primary Industries.

This Network will form part of NCCARF, and will work with the Facility to advance regional and sectoral knowledge about climate change impacts and vulnerability, adaptation options, and to foster an inclusive collaborative research environment.

This Network will be hosted by a single institution, but will engage broadly with Australian key researchers and organisations. This focus on collaboration is intended to encourage approaches that integrate different disciplines, researchers and institutions in the generation of research outputs.

The Adaptation Research Network for Primary Industries is currently hosted



by Land and Water Australia. This call for submissions for an alternative host institution is being made following the Australian Government decision to close Land and Water Australia.

Expression of interest guidelines and the application form are available online at [www.nccarf.edu.au](http://www.nccarf.edu.au) or by contacting Marie Waschka, NCCARF Knowledge Adoption Manager on 07 5552 7735, email: [m.waschka@griffith.edu.au](mailto:m.waschka@griffith.edu.au)

Closing date for expressions of interest is Wednesday 22 July, 2009 at 5pm.

Funding of up to \$1,160,000 until 31 December 2012 is available to support the activities of the Adaptation Research Network for Primary Industries.

## Update: National Adaptation Research Plans

Completed and approved by Minister for Climate Change: Human Health.

In final stages ahead of release: Emergency Management; Marine Biodiversity & Resources.

Preparing draft for review: Terrestrial Biodiversity; Social, Economic &

Institutional Dimensions; Water Resources & Freshwater Biodiversity; Settlements & Infrastructure; Primary Industries.

Check [www.nccarf.edu.au](http://www.nccarf.edu.au) for regular updates, especially information on opportunities to review.

# Synthesis & integrative research

A core function of NCCARF is to conduct a program of research that synthesises and integrates existing and emerging national and international climate change adaptation knowledge.

This program is just getting underway, and will be conducted over four years, with the majority of projects being one year or less in duration.

The first contracts for research projects were signed in June 2009. The research will be undertaken primarily by the NCCARF consortium members, with additional effort and support recruited as needed from the wider Australian research community.

The general model for research is of tiered projects. These consist of a first tier of studies carried out by different groups with different areas of expertise to address a single larger topic.

The second tier then integrates these studies into overarching assessments. In Year 1, projects will be undertaken under two general headings as follows:

## Forest Vulnerability Assessment:

As described in more detail on the right, four first-tier reports will be prepared to address different aspects of forest vulnerability followed by a second-tier synthesis of their results

into a report directed to decision-makers needs.

This suite of projects is in response to a need identified by the Climate Change in Agriculture and NRM Task Group (CLAN).

## Historical Case Studies:

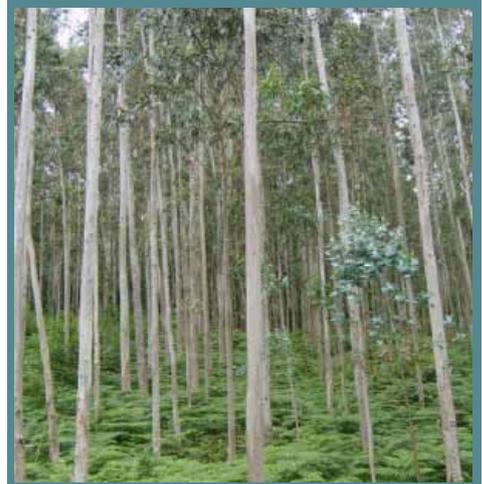
A suite of case studies will be developed examining present-day management of climate variability and the lessons that can be learned for adaptation to future climate change.

Although the parallels are not exact, understanding community, institutional and governance responses to climate change, and their interactions, is informative of the conditions that determine the success or failure of climate change adaptation strategies.

These projects will examine case studies of six historical extreme events including Cyclone Tracy, the 2009 heat waves and the northern Queensland floods of 2009.

The outcome will be a set of free-standing case studies that together provide in-depth explorations of our knowledge of present-day adaptation, vulnerabilities and resilience to climate variability and change.

The studies will be published as a book together with overarching discussion papers.



## Project profile:

A preliminary assessment of the vulnerability of Australian forests and plantations to the impacts of climate change will be the first NCCARF synthesis and integrative research project.

This project will provide government, natural resource managers and the business sector with a better understanding of the biophysical and socioeconomic impacts of climate change on Australian forests.

It will deliver a report that synthesises existing knowledge to determine the vulnerability of native forests, plantations, farm forestry and environmental plantings across Australia's diverse regions.

Vulnerability will be determined by considering potential impacts for each forest type or region balanced against their adaptive capacity. It will also identify knowledge gaps and pinpoint where more detailed analyses are required to improve adaptation and reduce vulnerability.

The project is broken down into five distinct work packages:

- 1. Establish the needs and consult with key stake holders.** Principal investigator: Associate Professor Helen Wallace, USC.
- 2. Review the biophysical impacts of climate change on forests.** Principal investigators: Dr Belinda Medlyn, Macquarie and Professor Tom Lyons, Murdoch.
- 3. Review the socioeconomic impacts of climate change on forested regions.** Principal investigator: Associate Professor Geoff Cockfield, USQ.
- 4. Review adaptive capacity, barriers to adaptation and vulnerability.** Principal investigator: Professor Steve Turton, JCU.

The fifth work package will be a synthesising overview.

## Cases for adaptation

Case studies of east coast lows and storm tides will be among those examined by NCCARF in this year's program of synthesis and integrative research.

The impact of storm tides on vulnerable coastal settlements was demonstrated in South East Queensland in May.

A combination of rain, windy weather and abnormally high tides eroded beach up to 10 metres inland, creating four-metre high cliffs in front of some of Australia's most valuable beachfront homes and causing the worst floods in more than 30 years around Brisbane.



Image: Professor Jan McDonald

# NCCARF Seminar Series

NCCARF hosts regular free seminars featuring speakers from across the international climate change research community.

These have become a popular information sharing and networking opportunity for public and private sector professionals, researchers and students of climate change adaptation.

As well as the regular Brisbane series, two seminars were recently held in Sydney through the support of NCCARF partner Macquarie University.

To discuss hosting an NCCARF Seminar or for more information on upcoming seminars see [www.nccarf.edu.au/seminarseries](http://www.nccarf.edu.au/seminarseries) Where possible, past seminars will be made available online. Please RSVP for all seminars to [k.fitzgerald@griffith.edu.au](mailto:k.fitzgerald@griffith.edu.au)

## Contact us

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## Upcoming seminars:

**Tue 21 July, 4.30-5.30pm:** 'Climate change: Loving an even more sunburnt country.' What are the challenges and options for primary industries and natural resource managers who must adapt their industries to cope with climate change? Guest presenter is Dr Mark Howden - Theme Leader, Adaptive Primary Industries, Enterprises and Communities, CSIRO Climate Adaptation Flagship. Where: Griffith University South Bank QCA Theatre & Gallery (s05\_2.04).

**Thu 20 August, 4-5pm:** 'Climate Change and the future of coral reefs' Guest speaker Professor Terry Hughes, Director of the ARC Centre of Excellence for Coral Reef Studies at JCU is one of the world's leading authorities on the climate change impacts on these important and vulnerable ecosystems.

Where: Griffith University South Bank QCA Theatre & Gallery (s05\_2.04).

## About NCCARF

In 2008 the Australian Government established the National Climate Change Adaptation Research Facility to lead Australia's research community in a national interdisciplinary effort to generate the information needed by decision makers to manage the risks of climate change impacts.

NCCARF is based at Griffith University Gold Coast and has nine partners: The Queensland Government, Griffith University, James Cook University, Macquarie University, Murdoch University, University of Newcastle, Queensland University of Technology, University of Southern Queensland and University of the Sunshine Coast.

NCCARF has nine staff working to deliver its priority activities, these are:

- To provide national scientific leadership for adaptation research, including the development of National Adaptation Research Plans.
- To coordinate researchers and funders to implement the National Adaptation Research Plans using resources available Australia-wide.
- To coordinate the Australian research community, particularly through the Adaptation Research Networks.
- To undertake synthesis and integrative research to address national priorities and synthesise existing and emerging national and international research on climate change impacts and adaptation.
- To communicate research findings and facilitate the adoption of adaptation knowledge.

## NCCARF Partners:



**Australian Government**  
**Department of Climate Change**



**National Climate Change Adaptation Research Facility**

**Griffith University Gold Coast Campus, Qld Australia 4222 Tel: 07 5552 9333 Fax: 07 5552 7333 [www.nccarf.edu.au](http://www.nccarf.edu.au)**

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