



NCCARF Newsletter

Director's message

Professor Jean Palutikof, NCCARF Director

No Man is an Island

Thinking about the impacts of climate change is often blinkered. I live on the Australian Gold Coast and, when I think about climate change impacts, it is the effects of sea-level rise on coastal development, and of the impacts of drought on urban water resources that concern me. What I rarely consider is the sideways impacts – the effects that an impact overseas, maybe many thousands of miles away, can have on my comfortable Gold Coast existence. And yet the most severe impacts may well come from these interactions with distant places.

What happened in July and August 2010 is a good example of what I mean. Russia experienced its hottest summer on record which, together with a drought which is estimated to be the worst in 50 years, led to devastating forest fires throughout late July and August. Wheat yields were reduced by between 20 and 30%, leading the government to ban wheat exports, first until the end of 2010 and, subsequently, until the results of the 2011 harvest are known. Russia is one of the world's top wheat exporters and, in 2009, the third largest. In response to the Russian export ban, grain prices rose on the world market. At the moment, it looks like these price increases won't be sustained – large existing stocks, plus good harvests in the USA and eastern Australia, are likely to cushion the impact. But there are reminders of 2007, when low grain stocks and drought in Australia (also a large wheat exporter) led to record high international prices and, in some hard-hit less-developed countries (for example Mexico and India), food riots.

The reasons why one climate extreme will lead to food shortages and another will not are complex, but the underlying cause of price fluctuations in both 2007 and 2010 was climatic. Few scientists would claim that such events are driven by global warming – they would use the carefully-considered phrase that they are 'entirely consistent with anthropogenic climate change'. But that isn't the point – for those working in adaptation, there are some important lessons. First, we live in a world where the population is growing rapidly and getting richer, where grain is being diverted to feed livestock to put meat on the dining table, and where land is being diverted to grow biofuels. Second, and as a result of this, nations must increasingly rely on being able to buy food on the international market to feed their people. Third, climate modellers tell us that climate extremes are likely to increase in severity and frequency in the future. Finally, putting together all these three, the potential for climate extremes to affect global food stocks and prices is increasing, with implications for international relations and, ultimately, global security. To believe that it is possible to remain isolated from this chain of reasoning would be, to say the least, unrealistic: we are for better or worse a global society. In 1624 John Donne wrote 'No man is an island, entire of itself; every man is a piece of the continent, a part of the main' and those words remain as true today as they did in 1624, even though John Donne had surely never heard of, or concerned himself with, climate change.

To read more: http://www.economist.com/node/16994407?story_id=16994407



Emergency Management grants announced

Six projects have been selected to share in almost \$1 million funding allocated by the Australian Government Department of Climate Change and Energy Efficiency through the Climate Change Adaptation Grants Program. The funding follows an open call for applications. The successful projects and Principal Investigators are:

- *A spatial vulnerability analysis of urban populations to extreme heat events in Australian capital cities.* Margaret Loughnan, Monash University.
- *Recovery from disaster experience: its effect on perceptions of climate change risk on adaptive behaviours to prevent, prepare and respond to future climate contingencies.* Helen Boon, James Cook University.
- *Harnessing private sector logistics for emergency food and water supplies in flood prone areas.* Leo Dobes, Australian National University
- *Public understandings, risk perceptions and*

responses to climate change and associated natural disasters. Joseph Reser, Griffith University.

- *Adaptation of the built environment to climate change induced increased intensity of natural hazards.* David King, James Cook University.
- *Agent-based simulation framework for improved understanding and enhancement of community and organisational resilience to extreme events.* Lin Padgham, RMIT University.



Extreme heat in Melbourne, 2009. Image: Melburnian

Synthesis and Integrative Research

A number of new research projects are now underway as part of NCCARF's Synthesis and Integrative Research Program (Phase 2). These projects are due for completion in mid 2011.

Coastal ecosystems response to climate change project: Wade Hadwen, Griffith University

Regional Climate Analogues Project: Jon Kellett, University of South Australia

Literature review: impacts of climate change: Elvira Poloczanska, CSIRO

The *Limits to Adaptation* project will examine the abilities of six specific, vulnerable Australian locations and ecosystem

in which the impacts of climate change are unavoidable and adaptation options are limited.

Locations and investigators selected for Limits to Adaptation are:

- The Great Barrier Reef: Louisa Evans, James Cook University
- Alpine areas: Catherine Pickering, Griffith University
- Coorong Wetlands: Catherine Gross, Australian National University
- Macquarie Marshes: Richard Kingsford, UNSW
- Small Islands: Scott Smithers, James Cook University
- Drought and inland settlements: Anthony Kiem, University of Newcastle.

Freshwater Biodiversity Plan open for consultation

The draft NCCARF National Climate Change Adaptation Research Plan for Freshwater Biodiversity is now open for consultation. The development of the Plan was led by a writing team co-chaired by Stuart Bunn (Griffith University Australian Rivers Institute) and Bryson Bates (CSIRO). It identifies climate adaptation research priorities for freshwater species and ecosystems for the next 5-7 years and a framework for longer-term research. This research aims to support ongoing protection of freshwater species and ecosystems by enabling governments, conservation agencies, landowners, community organisations and individuals to implement effective climate change adaptation initiatives for freshwater species and ecosystems.

The research aims to generate information, knowledge and tools to determine:

- Why, and to what extent, freshwater species and ecosystems are vulnerable to climate change
- Their adaptive capacity
- How can this adaptive capacity be increased
- How the management of freshwater biodiversity integrates climate change information, knowledge and tools
- What implications this integration has for policies, plans and on-ground management of freshwater biodiversity

Download a copy of the Plan and consultation package at www.nccarf.edu.au For information contact Ida Fellegara at nccarf-researchteam@griffith.edu.au or 07 5552 7235.

Submissions must be received by 1 November 2010.

Update: National Climate Change Adaptation Research Plans

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

Consultation completed: Terrestrial Biodiversity; Social, Economic and Institutional Dimensions, Primary Industries

Open for consultation: Freshwater Biodiversity

In development: Indigenous Communities
Check www.nccarf.edu.au for updates.

Adaptation Research Networks overview

The eight NCCARF Adaptation Research Networks now have a broad national reach, with representatives in each state and territory, and a membership of more than 3000.

NCCARF established the Networks in an effort to: build a collaborative, inclusive environment supporting creative, inter-disciplinary research that bridges gaps between fundamental and applied science; advance priority sectoral research; and facilitate interactions between researchers to advance climate adaptation knowledge.

The Networks aim to:

- Promote and facilitate open exchange of information and sharing of resources.
- Contribute to the work of NCCARF in synthesising existing and emerging research.
- Contribute to the development and implementation of National Adaptation Research Plans, and
- Nurture the careers of young investigators and research students by promoting a sense of community, collaboration and strong, effective mentoring.

There is a network for each NCCARF research theme area.

Why should I become a Network member?

Network members have access to climate change adaptation information, the opportunity to exchange information and resources with other members and to stay in touch with the latest news, events, research grants and funding opportunities in Australia.

While each network is structured to meet the needs of its sector, typical activities include seminars and professional development opportunities, scholarships and fellowships.

Who can join a Network?

Anyone from Australia or overseas with an interest in climate change adaptation research in Australia. Members include researchers, students, people working in government policy and planning, industry bodies and

community and non-government groups. Members can belong to more than one network, and membership is free.

Find out more: All networks have their own websites. Visit www.nccarf.edu.au/adaptation-research-networks to access each website, then sign up to subscribe to the networks of your choice.

- See pages four and five for a full rundown of Adaptation Network News

Adaptation Research Network contacts:

Terrestrial Biodiversity co-convened by Professor Stephen Williams (JCU), and Professor Lesley Hughes (Macquarie). Contact: Coordinator Yvette Williams on yvette.williams@jcu.edu.au

Water Resources & Freshwater Biodiversity convened by Professor Stuart Bunn (Griffith). Contact: Coordinator Sam Capon at climate.water@griffith.edu.au

Marine Biodiversity & Resources convened by Associate Professor Neil Holbrook (UTas). Contact: Coordinator Clare Brooker arnmbr@arnmbr.org

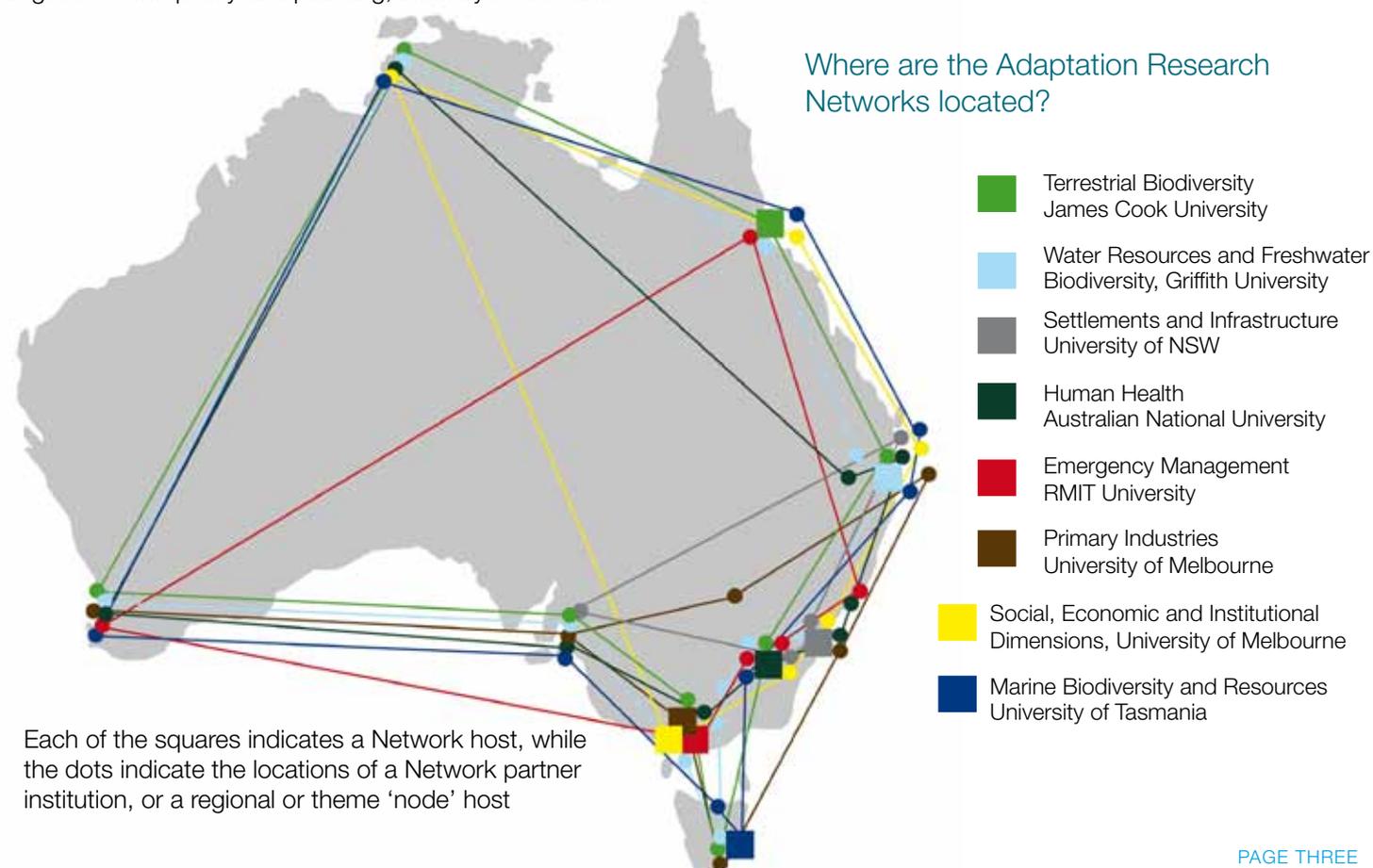
Human Health convened by Professor Tony Capon (ANU). Contact: Coordinator Leila Kouatly arn.humanhealth@anu.edu.au

Settlements & Infrastructure convened by Associate Professor Ron Cox (UNSW). Contact: Coordinator Tamara Rouse accarnsi@unsw.edu.au

Primary Industries convened by Professor Snow Barlow (Melbourne) Contact: Coordinator Alison Turnbull piarn-coordinator@unimelb.edu.au

Emergency Management convened by Professor John Handmer (RMIT). Contact: Coordinator Frank Yardley frank.yardley@rmit.edu.au

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



Each of the squares indicates a Network host, while the dots indicate the locations of a Network partner institution, or a regional or theme 'node' host

News from the Networks



Early Career Researchers' event

The Australian Climate Change Adaptation Research Network for Settlements and Infrastructure (ACCARNSI) will host the 4th National Forum and Workshop for Early Career Researchers in Adelaide from 24-

26 November. The workshops encourage participation from early career researchers (tertiary and private sector) doing innovative climate change adaptation work. Thirty participants will be selected, with travel, accommodation and meals funded by ACCARNSI. Each participant must submit an abstract of up to 250 words and give a presentation at the workshop.

Learning to Adapt forum

Following the successful collaboration between ACCARNSI and EIANZ, a second 'Learning to Adapt' Forum has been scheduled for 16 November as part of the EIANZ's Professional Development series on Climate Change Adaptation for Business. A vodcast of the first 'Learning to Adapt' Forum can be viewed at <http://tiny.cc/eianz>.

Also last month, ACCARNSI research assistants presented at the Engineers Australia Practical Responses to Climate Change National Conference in Melbourne. ACCARNSI also sponsored the Australian Transport Research Forum in Canberra, 29 September to 1 October.

Position Papers

Two more Network Position Papers have been completed. The first, authored by David Carmichael and Maria Balatbat, examines 'The incorporation of uncertainty associated with climate change into infrastructure investment appraisal'.

The second, co-authored by Michelle Philp and Node Convenor, Michael Taylor, examines 'Voluntary travel behaviour change and its potential implications for climate change mitigation and adaptation' from an Australian viewpoint. For more Network news visit www.nccarf.edu.au/settlements-infrastructure.



Human Health

Climate change and health: rural Australia
Interest is developing around the adaptation issues facing rural Australia in the face of climate change and the implications for

human health. Conferences which addressed this issue have included Creating Futures in Cairns, 20-23 September 2010 <http://www.crrmh.com.au/> and the National Centre for Farmer Health Conference in Hamilton 11-13 October 2010 <http://www.farmerhealth.org.au/>. There is also growing interest in the development of the pilot national drought policy and its implications for farmer adaptation and health in the face of climate change. To learn more, contact Dr Anthony Hogan at Anthony.Hogan@anu.edu.au

2010 AAS Fenner Conference

On 23-24 June 2010, the Network hosted the Australian Academy of Science's annual Fenner Conference on the Environment. The theme was 'Co-Benefits for Health from Action on Climate Change'. Speakers included Professor Kirk Smith, UC Berkeley; Professor Sir Andy Haines, London School of Hygiene and Tropical Medicine; Professor Billie Giles-Corti, University of Western Australia; and Professor Philippa Howden-Chapman, University of Otago, Wellington. The conference attracted more than 150 participants from research, policy, and the wider community. More information is available from: <http://nceph.anu.edu.au/Fenner2010/index.php>

For more Network news visit

<http://www.nccarf.edu.au/humanhealth/>



Primary Industries

The Primary Industries Adaptation Research Network (PIARN) provides a gateway to climate change adaptation research in primary industries. It aims to improve the coordination,

salience, development and accessibility of climate change adaptation research in the sector. Activities over the past months include:

Working with the expert theme leaders to identify opportunities for events, coordination and communication of research within the seven program themes (Farming Systems, Soil Management, Water Management, Plant Adaptation to Climate Change, Animal Health, Production and Biosecurity, Regional, Social and Economic Adaptation and Assessment, and Forestry), which includes developing a paper for presentation at the 15th Australian Agronomy Conference in Lincoln, New Zealand in November 2010;

Launching the website www.piarn.org.au the portal for information for primary industries and adaptation research;

Representation at the Climate Adaptation Futures Conference on the Gold Coast. The conference covered much research of relevance to PIARN members, with the 'Adapting Agriculture to Climate Change' topic receiving more abstracts than any other. There were two sessions on the topic convened by Mark Howden (CSIRO and PIARN co-convenor) and Cynthia Rosenzweig (NASA-GISS) plus a social event held for members to meet others, the PIARN co-convenors and theme leaders. PIARN scholarships enabled 13 PhD and Honours students to attend the Conference;

Representation at the Australia's Farming Future Climate Change Research Program (CCRP) meeting in Sydney on 18-19 August 2010 to increase understanding and linkages between PIARN and the supported projects being sponsored by CCRP;

Linking with the National Climate Change Research Strategy for Primary Industries (CCRSPI), also hosted by University of Melbourne, to promote cross-collaboration between the two relevant programs;

Extending the PIARN team to include PIARN Coordinator Alison Turnbull, Communications Coordinator Lauren Hull, and Research Fellow Lauren Rickards (who was acting coordinator during May-July 2010).



Emergency Management

Regional Implications workshop

On 7 September the Network held a pre-conference Workshop 'Network Regional Implications of Climate Change for Emergency Management' as part of the professional development program at the AFAC, (Australian Fire Authorities Council), Conference in Darwin. AFAC is the peak body for public sector fire, land management and emergency service organisations in Australia and NZ. Led by Professor John Handmer, the Workshop featured a series of brief talks covering areas such as: learning from the region, policy frameworks for adaptation and social and economic sustainability of regions and the implications for emergency management, followed by breakout group discussion. Speakers included researchers and agency personnel representing various regions of Australia. It attracted representatives from the various emergency management agencies as well as policy makers from government bodies.

Emergency management challenges workshops

In September the Network hosted workshops in Perth and

Melbourne featuring Dr Lisa Schipper of the Stockholm Environment Institute. The Perth symposium was supported by FESA and the University of Western Australia. Russell Stevens, FESA Director of Research and Liaison spoke on the Challenges of Climate Change for Emergency Management from a WA perspective. Lisa also presented the keynote presentation at the Melbourne seminar and joined a panel including John Handmer and emergency service organisation personnel for a broader discussion on the issues raised in the keynote. For more information and Network news visit www.nccarf.edu.au/emergency-management/



Water Resources and Freshwater Biodiversity

Water Governance

The network's Water Governance theme is now active and plans a number of events in the next two years. The theme aims to strengthen networks and build synergies of researchers and research users at the national level. The initiative builds on, and extends, three earlier workshops on water governance focused mainly at Victorian State level. Theme coordinators are preparing a briefing paper based on the outcomes of these workshops to feed into further conversations around water governance nationally. The next step is to conduct an online survey of network members to produce a synthesis of issues and opportunities in this area. It will canvass members' research interests and activities, perspectives on Australian water governance and input into the direction of the network. Two further workshops are planned this year including a planning workshop in Victoria in October, followed by a National Water Governance Workshop in Canberra in mid-November. For more information email Phil.Wallis@msi.monash.edu.au

Membership survey

The Network is conducting a membership survey, and invites members to share their thoughts on important issues relating to water and climate change adaptation. Responses will help develop our focus and activities over the next year. The survey can be completed online at www.surveymonkey.com/s/PNF792M
For more Network news visit www.nccarf.edu.au/water



Terrestrial Biodiversity

The Terrestrial Biodiversity Network has continued to carry out the core network activity of awarding research student support grants. Nine Honours/Masters grants have been awarded for 2010 and 9 PhD collaborative travel grants. It has now received 4 completed reports for honours/masters projects and 4 from PhD travel grants. The network continues to publish quarterly TRE-bulletins and information sheets which can be found on the website.

National 'Roadshow'

Over the next 12 months the Network will significantly increase interaction with local stakeholder groups, eg., management agencies, policy makers and local government, to identify specific research needs and major challenges to climate change adaptation.

To facilitate this process, the Network will run a national "roadshow" consisting of a one-day workshop in all states and territories. Each workshop is aimed at identifying the most significant local research needs and challenges and help put these into a national context. The first roadshows were held in Brisbane on 14 September and Melbourne on 5 October. Roadshows will be held in Perth on 11 November and Canberra on 8 December

2010. For information visit <http://hosting2.arcs.org.au/terrestrialbiodiversity/index.php/roadshows.html>

Research noticeboard

The network is also providing a noticeboard forum for stakeholders to advertise research needs and associated funding (if relevant) to researchers within the network. The Network hopes this information will facilitate collaboration between stakeholders and researchers, and a way of transferring this information. The noticeboard will also provide job opportunities and student research project information. For more Network news visit <http://hosting2.arcs.org.au/terrestrialbiodiversity>



Marine Biodiversity and Resources

Oyster industry study released

The Network's Policy Theme has published the first in a series of sectoral case studies into climate change adaptation policy; '*Climate Change Adaptation in the Australian Edible Oyster Industry: an analysis of policy and practice*'. The report is a review and synthesis of current knowledge about climate impacts on the industry, the potential to build adaptive capacity and resilience, and to define adaptation options within the Australian edible oyster industry. It focussed on the main oyster growing states – NSW, SA and Tas, and involved extensive workshops with oyster growers, industry representatives, local and state government stakeholders, NRM bodies and scientists. The report identifies key actions and opportunities for adaptation and makes recommendations to decrease sensitivity and build adaptive capacity in the sector.

Network links with Australian Ocean Data Network

The Marine Adaptation Network has linked with the Australian Ocean Data Network (AODN) to facilitate the sharing of marine related data and encourage a philosophy of data sharing within an interdisciplinary and collaborative framework. To access AODN and Network news and publications visit www.arnbr.org.au



Social, Economic and Institutional Dimensions

Adaptation College

Many Adaptation College fellows attended the NCCARF Conference on the Gold Coast, which included a lunch with some of the key thinkers in climate adaptation. The Fellows met with international researchers Diana Liverman (University of Arizona), Steve Dovers (ANU), Neil Adger and Declan Conway (Tyndall Centre) and Emma Tompkins (University of Leeds) for some thought-provoking discussions on the social dimensions of climate adaptation. The next Adaptation College event will be held in Sydney in November 2010, hosted by UNSW.

Climate adaptation and governance workshop

The SEI Network has announced a workshop, '*Climate change adaptation and governance*' to be hosted by the Institute of Environmental Studies, UNSW from 16-19 November. The objective is to explore the issue of climate change adaptation and governance through the presentation of a range of case studies from Australia and the Asia Pacific region. It is intended that an edited collection of these papers will form the basis of a publication planned for 2011. For further information or to submit abstracts for the workshop contact John Merson j.merson@unsw.edu.au or Sarah Terkes s.terkes@unsw.edu.au. For more Network news visit www.nccarf.edu.au/social-economic-and-institutional-dimensions/

New at NCCARF



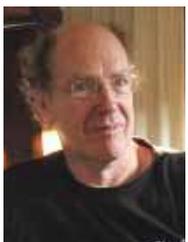
David Rissik Deputy Director (General Manager)

Dave is an environmental scientist with 20 years experience in water quality, estuarine and marine ecology, and natural resource management. He has a

strong interest in the use of science to inform management and policy and works hard to ensure that this occurs. Dave has a PhD in biological sciences from the University of NSW.

He has experience in overseeing large research projects that are integrative in nature, and continues to be part of ARC Linkage Project teams. He has worked in NSW and Queensland governments and held adjunct positions at UNSW, Sydney University and Griffith University.

Dave is President of the Australasian Chapter of the Society of Wetland Scientists. NCCARF provides an opportunity for Dave to use his experience and skills to ensure the work we do with our partners contributes strongly to the capacity of Australians to adapt to climate change and to assist researchers to build skills in the area of synthesis and integration.



Richard McKellar Deputy Director (Research Manager)

Richard has worked in climate change research, policy, planning and communication for more than 20 years.

He has worked in a variety of roles in government in transport, regional and environmental planning and policy, carbon sequestration and bio-prospecting.



Newsletter invitation

The Queensland Office of Climate Change (OCC) would like to add NCCARF subscribers to the distribution list of its newsletter - *OCC Weather*.

OCC Weather is a bi-monthly news bulletin that covers a broad range of climate change policy and science topics at both a state and national level.

Readers are also kept informed of climate

change programs in Queensland, across all sectors, including the latest developments in mitigation and adaptation.

The newsletter is distributed to OCC's internal and external stakeholders, including representatives from business and industry.

Please advise if you would like to receive copies of future newsletters by *OCC Weather* by emailing kelly.bird@derm.qld.gov.au

The current edition is available [here](#) For previous editions of *OCC Weather* please visit the OCC website www.climatechange.qld.gov.au

Prior to taking up the Research Manager position, Richard worked with NCCARF as a consultant developing and implementing the thematic National Climate Change Adaptation Research Plans.

He is a keen sea-kayaker in his spare time.

Nova Mieszkowska, Visiting Fellow



NCCARF has awarded the first of its visiting fellowships to Dr Nova Mieszkowska, Marine Biodiversity & Climate Change Research Fellow at the Marine Biological Association, UK.

Nova will work to develop a climate change adaptation framework for Australian marine ecosystems. Her international research programme focuses on the impacts of global climate change and ocean acidification on coastal marine biodiversity and the consequences for ecosystem structure and functioning, and spans the UK, Europe, USA and NZ. Her research has been highlighted in the IPCC 4th Assessment Report and the 2010 ICES Position Paper on Climate Change. Nova has a science-policy knowledge transfer role as the Marine Environmental Change Network Science Coordinator, and is a lead author and editor on UK marine status and climate impacts assessments.

Nova will be working with NCCARF and Drs Elvira Poloczanska (CSIRO Climate Adaptation Flagship and Anthony Richardson (University of Queensland/CSIRO Climate Adaptation Flagship). The project will involve a consultation process with policymakers, stakeholders, managers and scientists to identify and prioritise major threats and management options.

Collaborative links with Australian marine researchers working on marine climate change will use the results to develop adaptation options and develop a risk-feasibility framework for Australian marine systems.

- **Seminar:** Nova will present a seminar on her work at James Cook University, Townsville on Thursday 21 October at 12pm. **RSVP:** <http://nova21october.eventbrite.com/>

Upcoming NCCARF Seminars:

NCCARF hosts regular climate change adaptation seminars and networking events. To suggest speakers or host a seminar at your organisation, email j.langan@griffith.edu.au. Slides and audio from most past seminars can be viewed online at www.nccarf.edu.au.

- **Thursday 21 October (Townsville)**
'The value of time-series data to track climate-driven changes to intertidal systems & provide policy-relevant evidence & advice'
Guest speaker: Nova Mieszkowska, Marine Biological Association, UK, NCCARF Visiting Fellow. **Venue:** James Cook University. **Time:** 12pm **RSVP:** <http://nova21october.eventbrite.com/>
- **Wednesday 27 October (Brisbane)**
'Regionalising global climate projections: the role of the ARC Centre of Excellence for Climate System Science 2011-2017.' **Guest speaker:** Professor Andrew Pitman, Director of the newly-announced Australian Research Council Centre of Excellence for Climate System Science, UNSW. **Venue:** Griffith University South Bank Brisbane, QCA Theatre (s05_2.04) **Time:** 5.30pm-6.30pm **RSVP:** <http://nccarf27October2010.eventbrite.com>
- **Friday 12 November (Sydney)**
'Local adaptation as a constraint on species' range change under climate change' **Guest Speaker:** Assoc Professor Jessica Hellmann, University of Notre Dame, Indiana, USA **Venue:** Building E6a_102, Macquarie University Sydney **Time:** 1pm **RSVP:** www.mq.edu.au/climatefutures
- **Thursday 18 November (Gold Coast)**
'Planning for Climate Adaptation: the 'swarm thing' helps' **Guest Speaker:** Rob Roggema, **Venue:** Gold Coast City Council, Nerang, Gold Coast **Time:** 11.30am **RSVP:** <http://nccarf-roggema.eventbrite.com>
- **Friday 19 November (Perth)**
'Local adaptation as a constraint on species' range change under climate change' **Guest Speaker:** Assoc Professor Jessica Hellmann, University of Notre Dame, Indiana, USA **Venue:** Zoology Building, University of Western Australia, Perth WA **Time:** 1pm **RSVP:** <http://hellmannperth.eventbrite.com>

Other events

Greenhouse 2011 - Abstracts close November 18

The next event in the Greenhouse conference series, *Greenhouse 2011: The Science of Climate Change* will be held in Cairns, Qld from April 4-8, 2011. For more information and to submit an abstract see <http://www.greenhouse2011.com>

Conference proceedings online

Miss something at the NCCARF CSIRO 2010 *Climate Adaptation Futures* Conference in June? Conference proceedings including audio and video of selected keynote sessions and slides from parallel sessions are available online at www.nccarf.edu.au/



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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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