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Climate Change  
& Water



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THE UNIVERSITY OF NEW SOUTH WALES  
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ENVIRONMENT  
INSTITUTE OF  
AUSTRALIA AND  
NEW ZEALAND



# » Learning to Adapt: The Climate of the Future

PROFESSIONAL DEVELOPMENT ON CLIMATE CHANGE  
ADAPTATION FOR BUSINESS

8AM – 6PM FRIDAY 30TH APRIL 2010  
UNIVERSITY OF NEW SOUTH WALES SCIENTIA COMPLEX

# foreword »

There are two main categories of human responses to climate change: mitigation and adaptation. Both types of response help to reduce the risks of climate change. As Governments around the world struggle with this ‘inconvenient truth’, business efforts to reduce emissions show leadership. However, it seems certain that this is not going to be enough - businesses now need to learn to adapt to the climate of the future.

Climate change will affect a broad array of human and natural systems, with consequences for human health, food production, water supplies, and many other areas vital to our economic and social well being. Adaptation consists of actions undertaken to reduce the adverse consequences of climate change, as well as to harness any beneficial opportunities. Adaptation actions aim to reduce the impacts of climate stresses on human and natural systems. Business leaders in built environment, infrastructure and natural resource management will be needed to prepare our society and economy for the climate of the future. To adapt these leaders will need knowledge and support.

NCCARF and the EIANZ recognise a responsibility to prepare environment professionals to help businesses adapt. This professional development event will heighten the awareness of business and environmental leaders dealing with climate change, it will identify gaps in understanding and provide the tools and techniques required to help business adapt to the climate of the future. An outstanding line up of speakers and facilitators from across the sciences, the public and the private sector offer you a rare opportunity to get to the forefront of climate change adaptation.

## Event Partners



A handwritten signature in black ink, appearing to read "Tom Davies".

Tom Davies  
EIANZ NSW Division President

A handwritten signature in black ink, appearing to read "Fabian Sack".

Dr. Fabian Sack  
Chair Organising Committee

A handwritten signature in black ink, appearing to read "Ron Cox".

Prof. Ron Cox  
UNSW, NCCARF

## » sponsors

» **Platinum Sponsor DECCW** is the lead NSW Government department with responsibility for protecting and caring for our environment, managing water resources and developing and coordinating programs to address the impacts of climate change in NSW. DECCW employs over 4000 staff, many working in regional areas. These staff bring an exceptional range of expertise to DECCW's work, including policy, science, education, regulation, planning, communication, land management and fire fighting. We respect Aboriginal culture, both traditional and contemporary, and the special relationship that Aboriginal people have with Country. We seek to incorporate their knowledge, insights, values and involvement in our efforts to conserve and protect the environment. DECCW works in partnership with people in government, business and the community to develop and deliver sustainable environmental and conservation solutions.



Environment,  
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Globally, Zurich is an insurance-based financial services provider with a global network of subsidiaries. Founded in 1872, the Group is headquartered in Zurich, Switzerland. It employs approximately 60,000 people serving customers in more than 170 countries. Zurich Financial Services Australia Ltd (ZFSA) is the only global financial services company operating in Australia in our core lines of business - general insurance, life risk, investment and superannuation products.



Today, ZFSA employs over 1000 people and has offices in every Australian state and is headquartered in Sydney. David Smith is the Chief Executive, and Terry Paradine is Chair of the board of directors. Zurich Australian Insurance Limited and Zurich Australia Limited - the organisation's general insurance and life risk arms - both currently have a Standard & Poor's A+ rating for their claims paying ability. This rating reflects a strong capacity to meet claims.

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» **Gold Plenary Sponsor MANIDIS ROBERTS** is a leading

Australian consultancy specialising in the challenges of urban growth. For more than 21 years, we have worked successfully with clients on a broad spectrum of environmental and sustainability issues pertaining to government- and private-sector projects. More recently we have been committed to providing our clients with effective solutions for climate change adaptation.



A core strength Manidis Roberts brings to the challenges of climate change is our ability to translate science and policy into project delivery. Our approach assists our clients to increase their capacity to adapt to risk, enabling them to make informed decisions in the present, avoid increased operation and maintenance costs in the future, improve their understanding of climate change and its relationship with socio-economic scenarios, and avoid early retirement of their infrastructure and services.

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» **Gold Infrastructure Stream Sponsor WORLEY PARSONS** As one of the world's largest global engineering and project delivery firms, WorleyParsons is uniquely positioned to help our clients manage the risks and maximise the opportunities of the emerging low-carbon economy. We believe that in order to develop an effective climate change, carbon management strategy, business will need to draw on and integrate skills from the planning, environmental, engineering, financial and societal disciplines.



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WorleyParsons provides a broad range of technological, engineering and management solutions to meet this carbon challenge. Each provides a component of a complete carbon management strategy for our clients in the hydrocarbons, power, mining and metals, and infrastructure sectors. Our Carbon Consulting Practice provides the front end solution, underpinned by our strong technical excellence delivering long term profitability for our clients.

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and Energy Efficiency

This professional development event is supported by financial assistance from the Australian Government



**Ian Kiernan**  
» MC

Ian was born on the shores of Sydney Harbour and became a builder specialising in historic restorations. Ian is also a passionate yachtsman, and through this passion whilst representing Australia in the BOC challenge, became appalled at the amount of rubbish choking the world's oceans. The rest of the story is familiar; Clean Up Australia was born in 1989 as a simple community based action focused NGO. Ian has since pioneered Clean Up the World, which has now evolved a "Fix Up" aspect. Ian has been well, including the Order of Australia medal, Communicator of the Year by the Public Relations Institute of Australia and a series of awards from UNEP. Ian has been described as a National Living Treasure is now concerned about the need to adapt to the unavoidable consequences of climate change.



**Tony Westmore**  
» Breakfast Panellist

Tony Westmore is the Senior Policy Officer - Energy and Climate Change for the Australian Council of Social Service. Tony's work at ACOSS is focused on issues affecting low income households in the national energy markets, including regulation of retail customer matters, affordability, energy efficiency and amenity, the roll-out of smart meters and climate change and related policy responses. Tony has worked for non-government, not-for-profit organisations for twenty-five years, mostly in legal services, public policy and research.



**Lisa Corbyn**  
» Plenary Platform Speaker

Ms Lisa Corbyn is the Director General of the NSW Department of Environment, Climate Change and Water. The Department brings together a range of climate change, environment protection, water resources, coastal, biodiversity, conservation and natural resources agencies and programs, including the National Parks and Wildlife Service, Environment Protection Authority, the Botanic Gardens Trust, the NSW Office of Water. Ms Corbyn has had a varied career as a senior manager in both the public and private sectors in Australia where she has also worked with AWA Limited, the Sydney Water Board and the Department of Planning and was a Commissioner of the Murray Darling Basin Commission. She currently chairs the NSW Climate Change Science Network which advises on science priorities for adaptation to climate change.



**David Smith**  
» Breakfast Key Note Speaker

David Smith is Chief Executive of Zurich Financial Services Australia, which has businesses in general insurance, life risk and investment and superannuation products. Mr Smith has been with Zurich since May 2006. He has over 30 years experience and an MBA from the Massachusetts Institute of Technology. He has a passion for corporate responsibility and sustainability and has been a leader in the insurance industry in this area. Previously David was CEO, IAG NZ Limited and President Insurance Council of NZ. David is a Fellow of both the Australian and the New Zealand of Institute of Management.



**Amanda McCluskey**  
» Breakfast Panellist

As Head of Sustainability and Responsible Investment Amanda focuses on developing and delivering Colonial First State Global Asset Management's strategy on sustainability and climate change issues. Amanda is the founding Deputy Chair of the Investor Group on Climate Change, a non-executive director of the Great Barrier Reef Foundation and a non-executive director of the Climate Change and Business Centre. Previously Amanda was at Portfolio Partners as Investment Manager Sustainability and has also worked at BT Financial Group as Manager Investment Governance. Amanda has a Bachelor of Economics with Honours in International Relations and is undertaking a Graduate Diploma in Finance Markets and Investments.



**John McAneney**  
» Plenary Platform Speaker

Professor John McAneney is the Director of Risk Frontiers, an independent research centre at Macquarie University. Risk Frontiers helps insurers, reinsurers and their broking intermediaries better understand and price catastrophe risks in the Asia-Pacific region. Risk Frontiers is also increasingly involved in research devoted to emergency management. John's specialist expertise is in quantitative risk assessment and decision analysis. His research background includes environmental physics, weather risk and financial risk modelling. He recently led the NCCARF study assessing the lessons learned from Cyclone Tracy, the engineering and institutional responses it invoked and the relevance of these lessons to a world threatened by global climate change.



**Andy Pittman**  
» Breakfast Panellist

Andy Pittman is a Professor in climate science and co-director of the Climate Change Research Centre at the UNSW. His expertise is in climate modelling, with broad interests extending across climate change, climate impacts and land cover change. He has been a lead author on the Intergovernmental Panel on Climate Change, national lead of the International Geosphere Biosphere Program, Chair of a major committee of the World Climate Research Program and the convener of the ARC Research Network for Earth System Science. He is a member of the advisory board of Risk Frontiers - an industry funded centre that explores questions of climate, volcanic and hydrological risk for the insurance industry.



**Veena Sahajwalla**  
» Breakfast Moderator

Scientia Professor Veena Sahajwalla is the leader of research into Sustainable Materials as the Director of Sustainable Materials Research & Technology at the UNSW. Veena's research interests are in sustainability of materials and processes with an emphasis on environmental and community benefits. She has invented an environmentally friendly process of recycling plastics and rubber tyres in steelmaking. She has collaborated with Australian companies and overseas companies/institutions. She has published in excess of 190 papers in journals and conference proceedings. She was elected as a Fellow of the Australian Academy of Technological Sciences and Engineering (ATSE) in 2007.



**Brendon Baker**  
» Plenary Platform Speaker

Brendon Baker is the Acting Director Planning Approvals at Sydney Metro, focused on obtaining the necessary government approvals for the Sydney Metro Network. Brendon joined the NSW Department of Planning in 2004, undertaking independent assessments and compliance roles for major infrastructure, including the Epping to Chatswood Rail Link. Brendon moved from a regulatory role to the delivery focused Transport Infrastructure Development Corporation in 2006. In 2007, Brendon began working on the planning for the North West Rail Link. Since joining Sydney Metro 2008, Brendon has been largely focused on obtaining and managing the planning approval for Stage 1 of the Metro Network.



**John Williams**  
» Chair Breakout Stream 1

John is one of Australia's most respected scientists, and has led the national debate about sustainable land management. Prior to joining the Natural Resource Commission in 2006, he was Chief Scientist and Chair of the Department of Natural Resources' Science and Information Board and Adjunct Professor in Agriculture and Natural Resource Management at Charles Sturt University. He retired from CSIRO as Chief of Land and Water in 2004. In 2005, he was awarded the prestigious Farrer Memorial Medal for achievement and excellence in agricultural science. John has extensive experience in providing national and international thought leadership in natural resource management, particularly in agriculture production and its environmental impact.



**Peter Graham**  
» Co-Chair Breakout Stream 2

Peter Graham is a senior lecturer in Architecture at the University of New South Wales, Australia, coordinator of the built environment node of NCARF – Settlements & Infrastructure network and Technical Coordinator for the United Nations Environment Programme's Sustainable Building and Construction Initiative ([www.unep.org/sbci](http://www.unep.org/sbci)). In these roles Peter works closely with the public, civil, research and private sectors to assist the global transition to a sustainable building and construction industry. His PhD focused on sustainable design education in Architecture. He is author of the book "Building Ecology: First Principles for a sustainable built environment" published in 2003 by Blackwell, U.K. which is now available in Mandarin.



**Greg Johnson**  
» Co-Chair Breakout Stream 2

Greg Johnson is the National Environment Manager, Stockland. With 30 years of experience in the property industry in building services and asset management, Greg has been responsible for the development and implementation of sustainability policy and strategy over the last 8 years, and at Stockland since February 2007. Greg has a comprehensive understanding of the issues of measuring the performance of buildings and the integration of sustainability into operations for existing buildings and in design for new developments. Greg and his team are in the very early stages of determining what climate change adaptation means for Stockland's Commercial Property business in the years to come and how buildings may be made more resilient.



**Ron Cox**  
» Co-Chair Breakout Stream 3

Ron Cox has been associated with the Water Research Laboratory and UNSW for over 35 years. He has a long history of worldwide research in water, coastal and environmental engineering including the early development of Australian Guidelines for Responding to the Effects of Climate Change in Coastal and Ocean Engineering. Ron took up his present position at UNSW in January 2009 as the National Convenor for the Federal Government funded Australian Climate Change Adaptation Research Network for Settlements and Infrastructure ACCARNSI. Ron has been a member of the team that has prepared the National (Climate Change) Adaptation Research Plan for Settlements and Infrastructure which is scheduled for release early in 2010.



**Rick Walters**  
» Co-Chair Breakout Stream 3

Rick graduated in science and engineering at Monash University in 1991, worked for Rio Tinto and then Port Kembla Copper, moving into the role of Environment Manager. Along the way, Rick completed an MBA through Deakin University. In 2004 Rick took up the role of Environment Operations Manager on the Lane Cove Tunnel, setting new benchmarks in environmental management of road projects. Two years ago Rick joined WorleyParsons, to lead the Sustainability and Climate Change business across NSW, Vic, SA and Tas. Rick has been involved with the Australian Green Infrastructure Council since its inception in 2007. He was a founding Board Director and leads the Product Design and Development Working Group, overseeing the development of a new rating tool for sustainable infrastructure in Australia.



**Robyn Williams**  
» Closing Speaker

Science journalist and broadcaster, Robyn Williams, presents Radio National's Science Show, Ockham's Razor and In Conversation. Although he graduated with a Bachelor of Science (Honours) in England, Robyn admits to spending as much time acting as studying. Early in his career he made guest appearances in The Goodies, Monty Python's Flying Circus and Dr Who and stood in for Tom Jones for four months in his TV series. He has conducted countless interviews with scientists on ABC TV on programs such as Quantum and Catalyst, narrated the Nature of Australia series and appeared in World Safari with David Attenborough. Outside the ABC, Robyn has served in various capacities, including President of the Australian Museum Trust, Chairman of the Commission for the Future, and President of the Australian Science Communicators. In 1987, he was proclaimed a National Living Treasure.



**Tom Davies**  
» Breakfast Chair

Tom is President of NSW EIANZ and a director of Edge Environment. He holds a Masters in Environmental Management from UNSW, and a BSc in Chemistry from Bristol (UK). Tom left the British Army in 2003 to turn his hand to the environment agenda. Tom founded the Environmental Professionals Forum and has contributed to EIANZ to promote and build the profession. Tom project managed the House of the Future for the Timber industry in 2004, contributed to "Your Home", "Your Development", Residential Mandatory Disclosure for the Federal Government, as well as sitting on advisory committees for Adaptation to Climate Change (NCCARF). Tom is a founding member of Australasian Industrial Ecology Network. As an Eco Diver and surfer Tom understands the need to adapt now.



**Nick Thomas**  
» Plenary Chair

Nick Thomas is a highly regarded expert in environment, planning, water, government and climate change law. He has extensive experience in climate change law and policy, renewable energy, green buildings and infrastructure, and the full spectrum of environment, planning and government laws. He has been advising on sustainability issues for almost a decade. Nick works with clients on transactions, assessment and approvals processes, operations and compliance, and incident management. He advises on corporate governance and risk management. He also has a strong background in dispute resolution. Nick's clients include major corporations in the resources, energy, construction, transport, property development, manufacturing and finance sectors, as well as Commonwealth, State and Local government agencies.



**Fabian Sack**  
» Closing Chair

Fabian has been a thought leader in corporate responsibility, environmental governance and sustainability over 15 years. He led Sydney Water's sustainability change management program for a decade and also served on their business ethics committee. Fabian has held senior private and public sector roles working on climate change and stakeholder engagement in the infrastructure and energy sectors. He has a PhD in corporate environmental ethics and has contributed to a number of journal articles on ecological footprinting. Fabian is a member of the St Vincent's Human Research Ethics Committee and has been a member of the EIANZ for many years, sitting on the Policy and Practice and NSW Divisional committees.

# Programme

7.45 am	Registrations for breakfast	
<b>Executive Breakfast</b>		
8.00 am	MC's opening	Ian Kiernan Executive Chairman of Clean Up Australia Ltd
	Welcome to country	Charles Madden – Gadigal Aboriginal Elder
	President's Welcome & Breakfast	Tom Davies President EIANZ NSW
8.30 am	<b>KEYNOTE PRESENTATION:</b> The business case for climate change adaptation	David Smith, Chief Executive of Zurich Financial Services Australia
9.00 am	<b>EXPERT PANEL DISCUSSION</b> Moderated by Professor Veena Sahajwalla, Director of the UNSW Centre for Sustainable Materials Research & Technology	
Implications of climate change for our environments Prof Andy Pitman, Co-Director Climate Change Research Centre, UNSW	Social implications of climate change Tony Westmore, ACOSS Senior Policy Officer for Climate Change and Utilities	Economic implications of climate change Amanda McCluskey, Head of Sustainability and Responsible Investment Colonial First State Global Asset Management
10.00 am	Registration for plenary and workshop	
<b>Plenary Session: The business context for climate change adaptation</b>		
10.30 am	MC's opening comment	Ian Kiernan Executive Chairman of Clean Up Australia Ltd
10.35 am	<b>Regulatory context for climate change adaptation</b>	Lisa Corbyn, Director-General of NSW Department of Environment, Climate Change and Water
11.15 am	<b>Climate change &amp; property damage – risks for business to adapt</b>	Professor John McAneney, Director Risk Frontiers, Macquarie University
11.50 am	<b>Climate change adaptation in business planning</b>	Brendon Baker Director – Project Approvals, Sydney Metro
12.30 pm	Chairs closing comments	Nick Thomas EIANZ NSW
12.45 pm	<b>LUNCH</b>	
<b>Workshops</b>		
Stream 1 – Learning to adapt: Natural Resource Management Chaired by Dr John Williams, NSW Natural Resources Commissioner	Stream 2 – Learning to adapt: Built Environment Chaired by Dr Peter Graham UNSW and Greg Johnson, National Corporate Responsibility & Sustainability Manager Stocklands Commercial Property	Stream 3 – Learning to adapt: Infrastructure Chaired by Professor Ron Cox ACCARNSI and Rick Walters, Australian Green Infrastructure Council
1.45 pm	Chairs' introductory comments	
2.00 pm	Case studies and issues	
2.30pm	Prioritisation of adaption pathways	
3.30 pm	<b>AFTERNOON TEA</b>	
4.00 pm	Report back on prioritised adaption pathways	Moderated by Ian Kiernan Executive Chairman of Clean Up Australia Ltd
4.15 pm	Day's wrap up & thanks	Dr. Fabian Sack EIANZ NSW
4.25 pm	Closing remarks	Robyn Williams, Science journalist and broadcaster
4.45 pm	<b>DRINKS</b>	





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- Green energy has been sourced from Origin Energy's green energy program to power the event.
- All carbon produced by this event is to be offset via the Climate Reduction Institutes carbon offset program.
- All products sourced for the event are recyclable including banners and welcome pack.
- All waste will be composted or recycled post event.
- All food supplied is certified organic with coffees and teas being fair trade.
- All untouched, left over food is to be given to the OZHarvest Food Program which assists Sydney's homeless with meals