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Organisation: *University of NSW, UNSW Water Research Centre*

Research Area: Infrastructure

Title: *Adapting water resources and infrastructure to Climate Change*

There are significant challenges confronting the water industry in relation to how it will ultimately adapt to the suite of anticipated future climate change impacts. Many of the predicted climate change-related impacts facing the industry are well known; however, there remain many gaps in current adaptation understanding and also numerous areas of uncertainty regarding how this adaptation outcome might best be achieved. As part of ACCARNSI Node 4 activities, a literature review was conducted in order to identify these knowledge gaps and also to highlight the pressing water-related climate change adaptation research needs specifically in the areas of water and wastewater infrastructure as well as water resource and supply management. This presentation contains a concise summary of these findings.

Australian Climate Change Adaptation Research Network for Settlements and Infrastructure Early Career Researchers' Forum and Workshop
9, 10, 11 November @ UNSW



PROGRAM

Day 1: Monday 9 November 2009

Venue: The Design Studio Room 501, Level 5, Civil Engineering Building (H20), UNSW

Time	Event	Name	Comment
8:30:00 AM	Tea & Coffee on arrival		
9:00:00 AM	Welcome	Ron Cox	
9:00:00 AM 9:30:00 AM	Research Area - Coastal Settlements Presentations	Rodger Tomlinson, Convenor, Node 1 - Coastal Settlements	Node 1: introduction to session
9:30:00 AM	<i>Climate Change & Education: A preliminary case study</i>	Sally Kirkpatrick	Griffith U
9:45:00 AM	<i>Holding back the tide: what can past policies for coastal management tell us about the adaptive capacities of Australian local governments?</i>	Johanna Mustelin	Griffith U
10:00:00 AM	<i>Estimating Storm-surge Risks to Coastal Settlements in Port Adelaide</i>	Dandong Zheng	Adelaide U
10:15:00 AM	<i>Climate Change and impacts on population mobility in Bangladesh: policy lessons for coastal settlements</i>	Vigya Sharma	Adelaide U
10:30:00 AM	Break coffee/tea/discussion		
11:00:00 AM	<i>Promoting Resilience to Climate Change and Disasters in Coastal Cities in Indonesia</i>	Riyanti Djalante	Macquarie U
11:15:00 AM	<i>Climate adaptation for exposed jetties</i>	Matthew Harry	Griffith U
11:45:00 AM	<i>Pilot Study and Critique: Social Vulnerability and Community Adaptation - perceptions of, and willingness to adapt to, climate change</i>	Christopher Button	Adelaide U
12:00:00 PM	DISCUSSION	Coastal Settlements	Chaired by Rodger Tomlinson
12:30:00 PM	LUNCH		
1:30:00 PM 1:45:00 PM	Research Area - Infrastructure Presentations:	Bill Peirson or Richard Stuetz, Co-convenors, Node 4 - Infrastructure	Node 4: introduction to session
1:45:00 PM	<i>Water Infrastructure under Climate Change - Coping with Variability</i>	Dominic Skinner	Adelaide U
2:00:00 PM	Overcoming technical knowledge barriers to community energy projects in Australia	Nicky Ison	UNSW
2:15:00 PM	<i>Fill in the Dams?</i>	Alexandra Bennett	Hyder Consulting
2:30:00 PM	<i>Sewer mining as a climate-independent water resource for urban areas</i>	Stewart Dallas	Murdoch U
2:45:00 PM	Decision making considering climate change uncertainty	Eytan Rocheta	UNSW
3:00:00 PM	DISCUSSION	Infrastructure	Chaired by Bill P/Richard S
3:30:00 PM	Break coffee/tea/discussion		
3:45:00 PM	Theories of Change workshop	Nicky Ison	for early career researchers only
5:00:00 PM	Return to hotel and then on to Restaurant		
6:00:00 PM	DINNER - CHAO PRAYA (BYO) 33 Perouse Rd, Randwick Ph: 02 9399 5509		Booked under Ron Cox for 37 + 1 people

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9, 10, 11 November 2009 @ UNSW



PROGRAM

Day 2: Tuesday 10 November 2009

Venue: The Design Studio Room 501, Level 5, Civil Engineering Building (H20), UNSW

Time	Event	Name	Comment
8:30:00 AM	Tea & Coffee on arrival		
9:00:00 AM 9:30:00 AM	Research Area - Built Environment Presentations:	Peter Graham/Bill Randolph, Convenors, Node 3 - Built Environment	Node 3: introduction to session
9:30:00 AM	<i>Use of Constructed wetlands as Climate Change Proof wastewater/stormwater treatment systems</i>	Sergio Domingos	Murdoch U
9:45:00 AM	<i>Improving the Energy Efficiency of Mine Site Village Accommodation and its Role in Promote Carbon Minimization in Mining itself</i>	David Goodfield	Murdoch U
10:00:00 AM	<i>The climatic variation in the Hume Dam areas</i>	Mohammad Kamruzzaman	U South Australia
10:15:00 AM	<i>WHERE TO NEXT? Promoting trans-sectoral change across the professions in tertiary education</i>	Trevor Nottle	Adelaide U
10:30:00 AM	Break coffee/tea/discussion		
11:00:00 AM	<i>The role of the urban forest in adaptation to climate change</i>	Martin Ely	Adelaide U
11:15:00 AM	<i>Vulnerability of houses to Windstorms</i>	Nandana Jayasinghe	James Cook U
11:30:00 AM	DISCUSSION	Built Environment	Chaired by Peter Graham
12:00:00 PM	LUNCH		
1:00:00 PM	Bus to the Water Research Lab (WRL) Manly Vale - 110 King St Manly Vale		Pick up point: Gate 11 Botany St UNSW
2:00:00 PM	Energy and Water	Bill Peirson	Node 4: introduction to WRL
2:30:00 PM	Coastal Adaptation options	James Carley	
3:00:00 PM	Break coffee/tea/discussion		
3:30:00 PM	WRL lab tour	Bill Peirson	Sally must leave for flight DJ965 @ 1700
4:30:00 PM	Bus return to UNSW		
5:30:00 PM	Return to hotel - free evening		

Australian Climate Change, Adaptation, Research Network for Settlements and Infrastructure Early Career Researchers Forum and Workshop
9, 10, 11 November 2009 @ UNSW



PROGRAM

Day 3: Wednesday 11 November 2009

Venue: The Design Studion 501, Level 5, Civil Engineering Building (H20), UNSW

Time	Event	Name	Comment
8:30:00 AM	Tea & Coffee on arrival		
9:00:00 AM 9:30:00 AM	Research Area - Urban Management Presentations:	Michael Taylor, Co-convenor, Node 2 - Urban Planning, Transport and Inclusion	Node 2: introduction to session
9:30:00 AM	<i>Anaerobic digestion of putrescible solid waste as a response to climate change adaptation in waste management</i>	Xian Lou	Murdoch U
9:45:00 AM	<i>Transport network vulnerability approach for climate change adaptation</i>	Susilawati	U South Australia
10:00:00 AM	<i>Modeling Cold Start Effect on Vehicle Tailpipe Emissions</i>	Ivan Iankov	U South Australia
10:15:00 AM	<i>Introducing a simple and robust neural network technique for forecasting purposes</i>	Gusri Yaldi	U South Australia
10:30:00 AM	Break coffee/tea/discussion		
11:00:00 AM	<i>Introducing MCDM (Multi-Criteria Decision Making) Techniques as a New Approach in Climate Change Adaptation</i>	Razieh Mosadeghi	Griffith U
11:15:00 AM	<i>Infrastructure Planning System for Climate Resilient Settlements</i>	Martin Anda presented by David Goodfield	Murdoch U
11:30:00 AM	DISCUSSION	Urban Management	Chaired by Michael Taylor
12:00:00 PM	LUNCH	Stakeholders join for lunch	Stakeholders join for session
1:00:00 PM 1:30:00 PM	WELCOME TO STAKEHOLDERS Research Area: People safety, education, warning and evacuation as an adaptation option	Ron Cox, ACCARNSI Convenor	introduction to broad policy issues - abstracts that address more than one research area
1:30:00 PM	<i>Assessing the suitability of climate models for water resources impact assessments</i>	Fiona Johnson	UNSW
1:45:00 PM	<i>The Modelling of Urban Water Supply, Harvesting and Recycling Systems using Network Linear Programs</i>	Andrew Graddon	U Newcastle
2:00:00 PM	<i>Identifying Adaptation Strategies through the analysis of Community Preferences</i>	Anne Weckert	Adelaide U
2:15:00 PM	<i>Principles and Problems of Shoreline Law under Climate Change</i>	John Corkill	Southern Cross U
2:30:00 PM	<i>Adaptating water resources and infrastructure to Climate Change</i>	Michael Short	UNSW
3:00:00 PM	DISCUSSION and Wrap up/Thank you	Broad policy issues	Chaired by Ron
3:30:00 PM	Break coffee/tea/discussion		
4:15:00 PM	Air travellers need to leave for the airport		