VicCI Science Day

Date	**12th February 2015**, 9.30am to 5.30pm
Location	BoM Docklands, 700 Collins street, 6th Floor, Meeting room 1-2
Registration	Registration is free, an email should be sent to Val Jemmeson (v.jemmeson@bom.gov.au)

Agenda

Time	Presenter and content
9.00-9.30:	Coffee on arrival (provided)
9.30-9.50: Meeting introduction Chair: B. Timbal	**Graham Hawke** (Bureau of Meteorology, Deputy Director Environment and Research Division) **Geoff Steendam** (Department of Environment, Land, Water and Planning – DELWP, Victoria)
9.50 – 12.00 **Theme 2** **Improved understanding of past climate variability and change** Chair: B. Timbal	**Richard Seager** (LDEO, USA, recorded presentation) ***Cause and Predictability of the 2011-14 California Drought*** 1) Methodology: ensemble of SST forced simulation 2) Results and relevance to water manager in California 3) Discussion: lesson for South-Eastern Australia & avenue for future collaboration 9.50-10.20
	Hanh Nguyen (Bureau of Meteorology, E&R Division, VicCI) ***Longitudinal computation of indices of the Mean Meridional Circulation: particularities of the Australian sector*** 1) Outlining newly developed methods: streamfunction and other indices 2) Results for different longitude bands 3) Implications and future work 10.20-10.40
	Benjamin Henley (Melbourne University, Australia) ***Utilising palaeoclimate data in water resource planning*** 1) Extending the observed record with rainfall and streamflow reconstructions 2) Tracking and reconstructing the Interdecadal Pacific Oscillation 3) Proposed ARC Linkage Project incorporating palaeoclimate and climate model data into water supply 10.40-11.00

	Chris Lucas (Bureau of Meteorology, E&R Division, VicCI)
	
	 Attribution of observed tropical expansion
	   1) Review of evidence s of tropical expansion
	   2) Investigations of likely forcings
	   3) Implications and future work
	
	 11.00-11.20

	Matt England (UNSW, Sydney, Australia)
	
	 Oceanic circulation role in the ongoing warming hiatus
	   1) Decadal variability of wind driven ocean circulation
	   2) Impact on global temperature, implication for the decades ahead
	   3) Implications (if any) for on-going tropical expansion
	
	 11.20-11.40

	Open discussion: Improved understanding of past climate variability and change
	   1) What have we learnt?
	   2) Where are the key scientific issues?
	   3) What are the implications for VicCI workplans?
	
	 11.40-12.00

12.00-13.00:	Lunch

13.00– 15.00
 	
 Theme 3
 	
 Improved understanding of future climate and associated risks to water resources
 	
 Chair:
 	
 M. Ekström
	Marie Ekström (CSIRO, Land and Water flagship, VicCI)
	
	 Moving to very fine resolution downscaling, motivation and hesitation.
	   1) Why pursue fine resolution models –what added information is gained?
	   2) What are the main challenges going to fine resolution?
	   3) Relevance of findings in a climate change context?
	
	 13.00-13.20

	Aurora Bell (Bureau of Meteorology, Services branch)
	
	 High resolution modelling: insight from the forecast demonstration project
	   1) Convective rainfall event in high resolution models –what does it looks like?
	   2) Verification, validation of these events
	   3) Relevance of findings in a climate change context?
	
	 13.20-13.40

	Nick Potter (CSIRO, Land and Water flagship, VicCI)
	
	 Using information about climate change in real word applications
	   1) The downscaling concept
	   2) Bias correction
	   3) Case study – first results
	
	 13.40-14.00

	Bertrand Timbal (Bureau of Meteorology, E&R Division, VicCI)
	
	 Can we circumnavigate the hydrological model for stream flow projections?
	   1) Outlining method concept and demonstrate skill
	   2) Strength/weaknesses of method in a climate change context
	   3) Main purpose (added value to existing resources)
	
	 14.00-14.20

	Jai Vaze (CSIRO, Land and Water flagship)
	
	 Introducing the AWRA model – a method for regional streamflow projections?
	   1) What is AWRA (purpose)?
	   2) Strength/weaknesses versus other hydrological models
	   3) Can AWRA be used in a climate change context?

		14.20-14.40
	Open discussion: Improved understanding of future climate and associated risks to water resources 1) What have we learnt? 2) Where are the key scientific issues? 3) What are the implications for VicCI workplans?	
		14.40-15.00
15.00-15.30:	Coffee break (provided)	
15.30– 17.30 **Theme 1** **Improved seasonal prediction** Chair: H. Hendon	**Christine Chung** (Bureau of Meteorology, E&R Division) *ENSO and climate change: what to expect?* 1) CMIP5 projections of ENSO 2) ENSO impact on Australia: how does it work? 3) Shall we expect ENSO impact to Australia to change?	
		15.30-15.50
	Eun-Pa Lim (Bureau of Meteorology, E&R Division, VicCI) *Disentangling inter-annual variability and global warming: the case of La Nina of 2010-11* 1) Interplay between different modes of climate variability 2) Role of background SST trends 3) Lesson learn and way forward	
		15.50-16.10
	Jing-Jia Luo (Bureau of Meteorology, E&R Division, VicCI) *Multi-year predictions:* 1) Existing methodology and modelling tool 2) Results and implications for water management 3) Lesson learn and way forward	
		16.10-16.30
	Harry Hendon (Bureau of Meteorology, E&R Division, VicCI) *Decadal variability of Predictability: a curse or a blessing?* 1) Validation of POAMA 2) Results and understanding 3) Lesson learn and way forward	
		16.30-16.50
	Scott Power (Bureau of Meteorology, E&R Division) *Decadal variability: understanding and physical mechanisms* 1) What do we know of the climate system on decadal timescale 2) What are the oceanic processes driving decadal variability 3) Are decadal predictions are dream?	
		16.50-17.10
	Open discussion: Improved understanding of future climate and associated risks to water resources 1) What have we learnt? 2) Where are the key scientific issues? 3) What are the implications for VicCI workplans?	
		17.10-17.30