



## ***Living with our changing climate (SWWA)***

*Lessons of living through recent change.  
Challenges in moving forward.*

**An IOCI Seminar and Workshop  
Perth, Western Australia, August 15 to 17, 2005  
The University Club, University of Western Australia  
(Off Hackett Dr, south of Mounts Bay Rd, Crawley)**

*South West Australia is one of the areas in the world most affected by climate change. This change is starting to affect the lives of all in the community. Our region is at the national front-line of adaptation to changing, less certain, climate.*

*Together with other parts of Australia we are experiencing the world wide trends of warming and sea level rise. More uniquely, a sudden decrease in our winter rains since the 1970s has caused major impacts and concern. This appears to be driven by observed changes in large scale atmospheric systems.*

*Not all changes have been adverse. However, drought and water shortages, of various forms, have become more common. Consequent stresses are appearing in both natural and socio-economic systems.*

*Climate change means greater uncertainty and higher risk. There is need for adjustment not only by business and government but also by the community. Automatic adjustments in environmental systems and biodiversity will be inevitable and mostly unwelcome.*

*As Western Australians we have learned to adapt to the natural variability of our regional climate. Some re-learning is now necessary. Many past assumptions and practices used in practical decision-making are no longer reliable or adequate.*

*This Seminar and its associated workshop are an opportunity to better understand risks and to plan responses to observed and future climate variability and change.*

*Experts of local, national and international standing will join with participants from the community and business sectors to outline the state of our knowledge and to discuss practical issues and priorities.*

*The broad intent of the program is to help achieve better informed decisions in the community wherever it is affected by climate variability and change. Such decisions may be those made by individuals, businesses, government agencies, farmers or households.*

*Associated with the Seminar IOCI will release a series of public pamphlets describing observed change in our region's climate.*

*Seminar and Workshop  
Co-Sponsors*



**Australian Government**  
**Department of the Environment and Heritage**  
**Australian Greenhouse Office**



## Day 1, (Aug 15) – Public Seminar, Sessions 1-4

Registration 7:50 am

Seminar Commencement 8:30 am

<p><b>Session 1A: Opening and Launch Session</b> - Chair : Brian Sadler, Chair IOCIP</p> <p><i>The Hon Dr. Judy Edwards MLA, Minister for the Environment; Science</i></p> <ul style="list-style-type: none"><li>• Launch of "How our climate has changed" Folder and Pamphlets</li><li>• Open Seminar</li></ul> <p><a href="#">Tony Haymet, Chief CSIRO Marine and Atmospheric Research</a> –</p> <ul style="list-style-type: none"><li>• Phase 1 Research Report</li></ul> <p><b>Session 1B: Keynote speaker</b> <i>Dr. Geoff Love, Director of Meteorology</i> -</p> <ul style="list-style-type: none"><li>• Keeping Climate Science and Services up to date with change</li></ul>	<p><i>This opening session aims to commence the seminar with a strong statement of the reality of climate change as an observed and significant issue within our region and of the availability of information documenting that change.</i></p> <p><i>The session presents an opportunity to outline State Government initiatives supporting adaptation to the change.</i></p> <p><i>The session will help introduce the notion that this generation needs to adjust our former thinking, information bases and dialogue to the reality that climate is no longer stationary within practical decision time frames.</i></p>
<p>Morning Tea 9:45am – 10:15am</p>	
<p><b>Session 2A: Observed Change and its Causes</b> - Chair: Derek Carew-Hopkins, A/ Director General, Department of Environment</p> <ul style="list-style-type: none"><li>• How/why our climate has changed – <i>Dr. Neville Nicholls, Lynda Chambers, Pandora Hope &amp; Bertrand Timbal, BMRC</i></li><li>• How our region's ocean climate has changed - <a href="#">Prof. Chari Pattiaratchi UWA Centre for Water Research</a></li></ul> <p><b>Session 2B: Projection of Future Climate Risks</b></p> <ul style="list-style-type: none"><li>• Where is our SWWA climate headed? <a href="#">Dr. Bryson Bates, Director CSIRO climate program</a></li><li>• The Changing Ocean: Implications for the future. <a href="#">Dr. John Church, CSIRO</a></li></ul>	<p><i>This session provides current, state-of-the art knowledge of</i></p> <ul style="list-style-type: none"><li>• <i>the nature and causes of observed change in regional climate (means and variability)</i></li><li>• <i>the directions in which such change is headed in coming decades</i></li></ul> <p><i>The session will present a regionally focussed perspective which integrates international, national and regional investigation. They will underscore the inevitability of continued change and the consequent necessity for socio-economic adaptation at all decision time-scales.</i></p>
<p>Lunch 12:30pm – 1:15pm</p>	
<p><b>Session 3A: Living in Change 1</b> - Chair : Jim Gill, CEO Water Corporation <b>Keynote speaker - <a href="#">Dr. Wally Cox, Chairman EPA</a> -</b></p> <ul style="list-style-type: none"><li>• State of the WA Environment – Climate Change vulnerabilities and impacts, the unavoidable need for managing change</li></ul> <p><b>Session 3B: Living in Change 2</b></p> <ul style="list-style-type: none"><li>• Adaptation as an issue of reducing commercial risk – a view from the insurance industry – <a href="#">Elayne Grace, Insurance Australia Group Ltd</a></li><li>• Local lessons/challenges of living/adapting in a changing climate - <a href="#">Brian Sadler, Chair IOCIP</a></li></ul>	<p><i>This session begins with presentations illustrating the current and future environmental, social and economic relevance of the established and future climate change.</i></p> <p><i>It will also open up discussion of challenges in adapting to change and lessons from the past 25 years of living in a changed SWWA climate. This will include observations on varying sectoral vulnerabilities, thresholds, decision time-scales, responses to uncertainty, ownership and general needs for decision support; and the lack of a comprehensive picture on vulnerabilities and multi-sectoral adaptive priorities.</i></p>
<p>Afternoon Tea 2:55pm – 3:15pm</p>	
<p><b>Session 4 Living in Change 3 – Sector Issues, Priorities, Needs</b> - Chair : Alan Walker, Director Regional Services CALM, Chairman Tuart Response Group - <i>Cameos from Panel</i></p> <ul style="list-style-type: none"><li>• Public Health – <i>Jim Dodds, Director Environmental Health, Dept of Health</i></li><li>• Community Safety – <a href="#">Gary Gifford, SES Director Metro</a></li><li>• Agriculture/Forests – <a href="#">Gary English Chair, State Regional NRM Coordinating Group</a></li><li>• Infrastructure – <a href="#">Bill Grace, GHD Pty Ltd., Manager Sustainability Services</a></li><li>• Marine/Fisheries – <i>Dr. Barry Wilson, Chair Marine Parks Authority</i></li><li>• Natural Resources Management – <i>Libby Mattiske M. Dir. Mattiske Consulting</i></li><li>• Water Regulation – <i>Rob Hammond, A/ Dir. Water Resources, Dept. of Env.</i></li></ul> <ul style="list-style-type: none"><li>• PANEL Responses to Plenary Questions</li></ul>	<p><i>A set of quick-fire presentations from a representative group in sectoral front-lines, followed by panel discussion with the audience seeking to further illustrate –</i></p> <ul style="list-style-type: none"><li>• <i>the diverse range of community sectors affected</i></li><li>• <i>present and projected issues and vulnerabilities</i></li><li>• <i>some perceived action and support gaps</i></li><li>• <i>particular views on priority needs across the sectors</i></li></ul> <p><i>Rather than be comprehensive, the talks will help generate discussion, carrying through sessions 4,5 &amp;6 on -</i></p> <ol style="list-style-type: none"><li>1. <i>What information is useful, useable, and available NOW to assist in adaptive management? Is it used?</i></li><li>2. <i>What needs to be done to enhance the information and its use to stimulate and assist adaptive management?</i></li></ol>
<p>Social Gathering (Cocktails): 5:15pm – 6:15 pm</p>	

## **Day 2, (Aug 16) - Public Seminar Sessions 5-8**

### **Session 5: Living in Change 4 – Current Risks**

- Chair: Dr. Bruce Hobbs, Chief Scientist WA

- Defining the present climate? Why does it matter? What help exists?  
- [Dr. Pandora Hope BMRC \(in conjunction with Dr. Ian Foster\)](#)
- The character, origin and implications of natural multi-decadal variability  
- [Dr. Scott Power, BMRC](#)
- Making decisions for next season in a changing climate - examples of forecasting applications - Is there forecasting skill beyond basic climatology? - [Dr. Ian Foster, Dept. Ag; Miles Dracup, Water Corporation](#)
- What can we say about extremes?  
- [Dr. Eddy Campbell, CSIRO; John Ruprecht, Dept of Env.](#)
- Panel/Plenary discussion of practical opportunities, needs

*Many aspects of regional enterprise and natural resource management (example crop planting, water restrictions) involve explicit or implicit judgements on the coming season.*

*Such judgements are now affected by changes in climate averages and variability.*

*This session discusses the relevance of updated climatology as the primary basis for risk assessment and then discusses the overlaying use of forecasting applications based on El Nino, SSTs etc.*

**Morning Tea 10:15am – 10:40am**

### **Session 6: Living in Future Change - Constructing Scenarios for Future Planning**

- Chair: Jo Mummery, Assistant Secretary, Land Management and Science Branch, Australian Greenhouse Office, Department of Environment and Heritage

- Regional decision-making needs in climate scenarios, some user perceptions – [Ed Hauck IOCIP/ Dept. of Env.; Graeme Hughes, Water Corporation; Richard McKellar Dept of CALM](#)
- Regional approaches to risk management – [Dr. Roger Jones, CSIRO](#)
- Socio-political challenges of awareness, ownership, commitment – [Dr. Geoff Syme, CSIRO](#)
- Panel/Plenary discussion of practical opportunities, needs

*Many important planning and policy decisions (for individuals, enterprises and government) involve decisions on future climate.*

*Many established strategies, policies and regulations have been formulated under assumptions and expectations that climate is stationary.*

*Assessment of vulnerability to future change and reformulation of strategy, policy and regulation require adoption and use of future climate scenarios and adoption of appropriate risk management concepts.*

*This session is intended to open practical discussion of such practices in the South West and lead to their future development in the workshop.*

**Lunch 12:30pm – 1:15pm**

### **Session 7A: Living in Present and Future Change – Adaptation, and Initiatives supporting adaptation**

- Chair: Jan Starr, Natural Resources Management Council

- **National Initiatives** - Jo Mummery, Asst. Sec., Land Management and Sc. Branch, Australian Greenhouse Office, Dept. of Environment and Heritage
- **State Strategies** –  
- *Greenhouse Strategy*, [Rosh Ireland, Director, Env. Policy Unit](#)  
- *Office of Water Strategy*, [Jos Mensink, Director, Office of Water Policy](#)
- **State Science Program** – [Dr. Bruce Hobbs, Chief Scientist WA](#)
- **CSIRO Climate Research and IOC1** - [Dr. Greg Ayers, CSIRO Marine and Atmospheric Research](#)

### **Session 7B: Living in Present and Future Change - Let's discuss vulnerability assessment**

- Starter talk and discussion – [Richard McKellar, for State G/H Strategy](#)

*This session turns consideration of the seminar to practical challenges of adaptation and to science and policy mechanisms which have been put in place to assist that adaptation.*

*The session will begin by outlining key initiatives in policy and science which are designed to support informed adaptation.*

*The session will close with a presentation discussing the objectives and status of a State Greenhouse Strategy Initiative designed to identify vulnerabilities and priorities for adaptive response in the South West Region.*

**Afternoon Tea 3:30pm – 3:50pm**

### **Session 8: Workshop Pre-briefing Session – Seminar Plenary**

- Chair Hon. Louise Pratt MLC, Member for East Metropolitan Region

- Outline Questions and Process - [Ed Hauck](#)
- Summarise written responses by workshop participants - *Rapporteur Brian Ryan, CSIRO*
- Open Plenary allowing proposals for adaptive priorities to be offered from floor
- Closure - Hon. Louise Pratt MLC

*This session is designed to present the seminar with pre-workshop opinions on workshop issues from seminar papers and from those invited to the workshop and to create inter-action with seminar attendees.*

A dinner will be held at the University Club for invited workshop participants