

## What's happening in water research at the University of Adelaide

Changes to water governance to deal with the crisis in water security and declining health of water-dependent ecosystems are becoming urgent, with autumn rains failing to renew water storages in the Murray-Darling Basin. Priorities in research are shifting to understanding of the impacts of the changing environment, and opportunities to manage water smarter. The Water Research Cluster continues to develop partnerships for research projects in water-related fields, and to promote knowledge of current water issues. This Newsletter provides a summary of current activities by the Water Research Cluster and related news items on the context for water management.

### In this issue:

- Water Research Cluster Activities
- Water News Updates
- Water Research Cluster Postgraduate Corner
- Prizes and Awards
- Water Conference & Seminar Diary
- Water Research Links –Funding Opportunities, Grants, Jobs and Scholarships

Information on Water Organisation Links, Water Information Links and the Water Research Cluster structure has been moved to the updated website [www.water.adelaide.edu.au](http://www.water.adelaide.edu.au)



*Citrus are the first crops disappearing in the Riverland due to severely restricted irrigation allocations, as they require more water than vines and are usually grown on sandy soils.  
Photo: Anne Jensen*

## Development of Water Research Centre

The Water Research Cluster is continuing to participate in discussions on the possible development of a Research Institute within the University of Adelaide to cover a range of sustainability and natural resources fields. The new Institute is expected to include a Water Research Centre. The new structure will embrace current Water Research Cluster activities and continue to develop creative partnerships and collaborations. The new structure is expected to include the current Research Institute for Climate Change and Sustainability and the current Integrated Landscape Science Research Cluster.

The Vision for the Water Research Centre is an entity that develops effective collaboration between water researchers in the University of Adelaide, and with researchers and research groups in other organizations, and that provides a focal point for internal and external links with organizations, water research groups and clients, and creates professional and community recognition of the water research strengths of the University.

The new Institute structure will provide a shopfront location, with Directors of the various Centres to be co-located with support staff. It has been proposed that there would be a similar management structure to the Cluster, with a Leadership Panel of University of Adelaide researchers, supported by an Advisory Board of external water representatives.

## Seminar on Climate Change Impacts on Public Health

This public seminar was coordinated by Dr Peng Bi as part of the Climate 2030 Series, and explored the likely health consequences of 'unwelcome' changes in climatic conditions. The predicted changes include an increase of summer days >35°C, up from the current average of 10 d per annum, to 11-16 d by 2030 and 20-28 d by 2070. Dr Monica Nitschke related the effects of heatwaves on hospital admissions, which increased for temperatures >34.7°C. The increased admissions included more ischemic heart disease patients aged 65-74 y, and mental and renal patients of all ages. Dr Nitschke noted that Adelaide has 84% air-conditioner usage, but electrical failure in a heat wave would significantly increase health risks. Dr Ying Zhang discussed the higher incidence of food- and water-borne diseases in higher temperatures. It is predicted that tropical mosquito-borne diseases are likely to migrate south into mainland Australia. These include malaria, dengue fever, Ross River virus and Japanese encephalitis. Dr Peng Bi concluded with a summary of adaptation measures that can be implemented. These include cooling systems in aged housing, neighbourhood support networks, climate-proofed housing, disaster-preparedness, and heatwave early-warning systems. The audience found these messages very sobering.

## 'Water Down Under 2008'

The 'Water Down Under 2008' Conference, held in Adelaide 15-17 April 2008, was co-hosted by ICE WaRM and Engineers Australia. More than 450 professionals from 100 countries with an interest in hydrology, water resources and the environment attended. The conference was opened by Minister Karlene Maywald, who gave a frank overview of the current water crisis in South Australia. Key note speakers included Prof Ezio Todini from Italy, Prof Peter Loucks from Cornell University, Dr Jim Gill from the WA Water Authority, and Prof Ghislain de Marsily from France. Assoc Prof Trevor Daniell gave the Munro Oration, on 'The Tao of Hydrology and Water Resources', which was very well received. High quality presentations covering a wide range of water-related topics were on offer, with up to 6 concurrent sessions.

Professor Graeme Dandy of the Water Research Cluster was Organising Committee Chair. Partners included ICE WaRM, Engineers Australia, SA Water, The University of Adelaide, the University of South Australia, Flinders University, Adelaide City Council, Tonkin Consulting and the Bureau of Meteorology. The proceedings are being published by Engineers Australia [www.engineersaustralia.org.au](http://www.engineersaustralia.org.au)

## Water Wednesday

The next Water Wednesday is on 2 July and the exciting program includes high profile speakers to continue our debate on water security issues.

Water Pitchfest with the Water Industry Alliance has been postponed from 3 July, and the new date will be advised shortly.

The next Water Wednesday will be on 15 October, in National Water Week, with a Water Pitchfest event scheduled for 16 October. Minister Karlene Maywald has been invited to address this seminar and has accepted, subject to travel plans. In her absence, the Commissioner for Water Security, Rob Lewis, would present.

Check through links on the Water Research Cluster website [www.water.adelaide.edu.au](http://www.water.adelaide.edu.au) or the Water Industry Alliance website [www.waterindustry.com.au](http://www.waterindustry.com.au) for more details.



# Water Wednesday

A special forum presented by the Water Research Cluster of the University of Adelaide

**When:** 5:30 – 6:45 pm, Wednesday 2 July 2008  
**Where:** Florey Lecture Theatre, Medical School North, Frome Road, University of Adelaide

### The Water Balance and Our Water Future

- How do we balance our options for water in the future?
- What choices do we have to make?
- What is the role of science in making these decisions?
- What is the role of government?
- What can individuals do?

### PROGRAM

- **Water Management Options for South Australia: Finding the Best Policy Mix**  
Mr Ian Kowalick, Independent Commissioner, Murray-Darling Basin Commission
- **Desalination Options in Australia: Finding the Best Technical Mix**  
Mr Rod Naylor, Executive Director, Veolia Water Australia
- **Desalination: Part of the Mix for South Australia**  
Mr John Ringham, Chief Operating Officer, SA Water
- **Managing Hidden Water: Looking for Water Efficiencies in Food Production and Consumption**  
Prof Randy Stringer, University of Adelaide
- **Your Views: Open Discussion**

Places limited. Please RSVP to:  
Kate Reinfeld  
[kate.reinfeld@adelaide.edu.au](mailto:kate.reinfeld@adelaide.edu.au)  
by Friday 27 June



CRICOS Provider Number 00223R

[www.adelaide.edu.au](http://www.adelaide.edu.au)

## Living Laboratories

Living Laboratories is a collaboration between the Department of Water Land and Biodiversity Conservation (DWLBC) and the International Centre of Excellence in Water Resource Management (ICE WaRM). The University of Adelaide is an active member of ICE WaRM.

The next Living Laboratories event will be on "Technical Innovation in Wetland Management" on Tuesday 24 June 2008.

The goal of the workshop is to begin a conversation around the use of irrigation technologies for wetland management.

For more information, visit

<http://www.icewarm.com.au/page.php?pld=312&ald=52>

or contact

Amber Welk on [awelk@icewarm.com.au](mailto:awelk@icewarm.com.au)

## Successful ARC Linkage Project

\$20 million has been allocated in funding for environmental projects under the latest Linkage Projects scheme by the Australian Research Council and 59 projects were approved under the Environmentally Sustainable Australia Research Priority Area.

Dr David Walker of the Water Research Cluster has been granted \$76,880 for 2008-2011 along with Dr J Davis for the project Sediment capture and deposition processes in coastal lagoons, which will focus on optimising dredging operations for the Murray Mouth and better management of river discharges to improved ecological conditions.

Their project partner is the Murray Darling Basin Commission.

## Water Quality Research Australia

Water Quality Research Australia takes over from the CRC for Water Quality Treatment on 1 July 2007.

The new CEO is Jodiann Dawe and the Board Chairman is Prof Michael R. Moore, currently Director of the National Research Centre for Environmental Toxicology. Advisory Committees are in the process of being appointed.

Further details are available on the website [www.waterquality.org.au](http://www.waterquality.org.au)

## Seminar on Climate Change Impacts on Food Production

Prof Randy Stringer coordinated this seminar in the Climate 2030 Series, which featured presentations in the new context for food production, taking into account a carbon-constrained economy, and rising consumer desire for carbon labelling and consideration of food miles in their consumer choices.

Dr Peter Hayman of PIRSA summarized the many factors to be considered in evaluating likely future rainfall and temperature scenarios for regions and crops. The capacity for carbon sequestration is dependent on soil type and rainfall, and may be quite limited.

Using predictions from the latest IPCC assessment ([www.climatechangeinaustralia.com.au](http://www.climatechangeinaustralia.com.au)), future scenarios for South

Australian regions suggest fewer very wet years, with drier and more variable conditions. Assoc Prof Peter Dry considered the possible effects of warmer, drier conditions on Riverland grape harvests. It is expected that ripening and harvesting may occur earlier in warmer temperatures, with potential for unbalanced flavours.

However, the 2000-01 and 2001-02 harvests in hot dry conditions produced very good quality. There will be many opportunities to continue wine production in Australia with adaptation, using varieties from drier climates, and clever use of watering techniques to maintain humidity at critical periods.

Dr Cassandra Collins is investigating the impact of poor fruit set on yield, and the impact of water stress during early development. Prof Kym Anderson is starting a new project on the likely impacts of climate change on yields and quality of food production. While there may be higher yields per hectare, this could be offset by lower quality and variable prices.

There has been a massive change in varieties of food crops, and rapid adaptation to changing climatic conditions will be critical. There has been a slow-down in R&D due to lower food prices, which needs to be turned around to address climate change, with a rapid increase in investment in R&D on adaptation opportunities.

(sources include EnviroInfo Newsletter)

## 11th International Riversymposium 1-4 September 2008, Brisbane Preparatory meeting for 5th World Water Forum 2009

The global future of rivers is threatened by too little or too much water. The Riversymposium will explore the challenges associated with the increased incidence of flooding and drought expected with climate change. What changes can we anticipate? How can we adapt?

The full detailed draft program, showcasing outstanding international speakers, is available at [www.riversymposium.com](http://www.riversymposium.com)

## 9th National Conference on Hydraulics in Water Engineering 23 - 26 September 2008 at Darwin Convention Centre The theme is "Hydraulics in the Environment."

The focus of the conference will be on the latest techniques and challenges in hydraulics reflecting the changes in public attitudes and variability in climate that drive innovation in hydraulics.

Within this overall theme the conference sub-themes are: Climate Change, Methods in Hydraulics, Applied Hydraulics, Geophysical Hydraulics and Coastal Hydraulics.

<http://www.hydraulics2008.com/>

## Affordable Low Emission Energy and Water 12 November 2008, Canberra, Australia

A roundtable organized by the Embassy of France in Australia and the Forum for European-Australian Science and Technology Cooperation

For registration details [www.feast.org/france](http://www.feast.org/france) or email: [science@ambafrance-au.org](mailto:science@ambafrance-au.org)

## H2009 – 32nd Hydrology and Water Resources Symposium 'Adapting to Change', 30 Nov-2 Dec 2009, Newcastle

Details at [www.h2009.org.au](http://www.h2009.org.au)

Water issues continue to dominate news, with constant changes and political announcements, so only brief summaries are given here.

## \$400 million for Murray-Darling basin brought forward

\$400 million in funding to accelerate water purchase and infrastructure projects in the Murray-Darling Basin has been brought forward in the recent Federal budget. The \$400 million forms part of the Rudd Government's \$12.9 billion Water for the Future package. Water for the Future focuses on four key priorities: taking action on climate change, using water wisely, securing water supplies and supporting healthy rivers.

The Government will bring forward \$177.2 million for water buybacks under the Restoring the Balance in the Murray-Darling Basin program. This will take the total allocation for this program to \$170.1 million in 2008-09 and \$482.7 million in 2009-10. A further \$222.8 million has been brought forward for the Sustainable Rural Water Use and Infrastructure program to fund urgent infrastructure projects in the Murray-Darling Basin, taking the total investment under this program to \$953.7 million for 2008-09 and 2009-2010.

*Enviroinfo 22 May  
Indaily 9 May*

## Analysis of Federal Government water buyback released

The Federal Government's \$12.9 billion rescue plan for the Murray-Darling Basin could take 47 years to complete, according to an independent expert report. The study by leading water brokers Waterfind has warned that the entire basin water market only trades about 106 GL a year, and the Government risks creating "price blowouts or market damage" if it tries to buy all of the water for more than a decade. It finds that the Government should limit the amount of water it can buy in any year to 30 per cent of the market, meaning it would take 47 years to reach the target of 1500 GL.

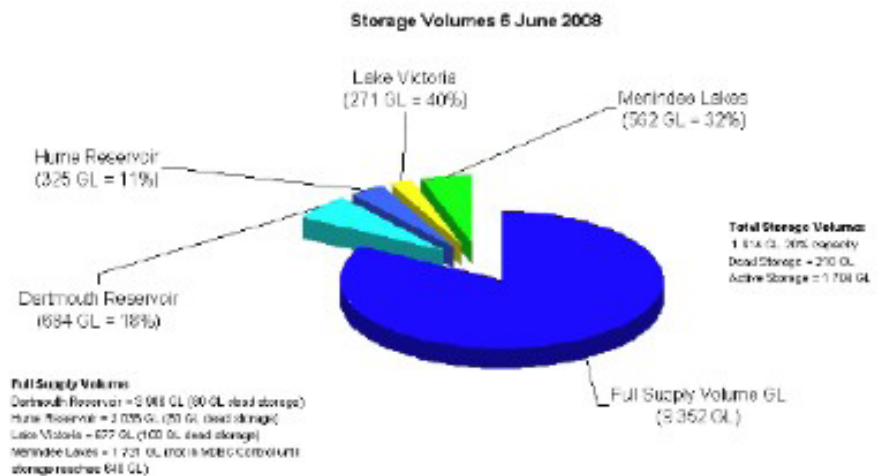
It predicts that the \$3.29 billion allocated to purchase water is expected to buy only about 540 GL over 17 years, leaving it nearly 1000 GL short of its proposed target to fix the basin. It also needs to be increased to cover an additional 2570 GL of water losses by 2023, as flagged by the Murray-Darling Basin Ministerial Council last month.

The full report is available at <http://www.waterfind.com.au/>

*Source: Enviroinfo 5 June*

## Water Availability

Water available for sharing at 7 March 2008 was 2460 GL, of which South Australia was allocated 720 GL.



*Source: River Murray Water Resources Report Issue 18 6 June 2008*

<http://www.dwlbc.sa.gov.au/murray/drought/index.html#ProjectionsfortheRiverMurrayinSA>

## Ministers Approve Buy-Back

Drought conditions in the Murray-Darling basin remain critical, as the Murray-Darling Basin Ministerial Council met in Adelaide to examine its continuing impact. Good rains to the north of the basin have all but stopped in recent months and the water flows in the south are again heading towards last year's record lows. Quentin Grafton, an expert on water pricing at the Australian National University, said the environmental crisis in South Australia's lower lakes was a key issue. The lakes are located at the end of the drought-stricken Murray-Darling system and are deteriorating rapidly. Soils newly exposed by the drought were generating sulphuric acid, damaging the surrounding wetlands, Professor Grafton said. The Federal Government confirmed that plans to buy back 35 GL of water formed the first part of a \$3.1 billion strategy to purchase more permanent water licences over the next decade. The meeting approved new water conservation projects, including installing pipelines instead of open channels at some farms, decommissioning a storage lake in Victoria and saving water on rice farms.

*Sources: Sydney Morning Herald, Marian Wilkinson and Ben Cubby, May 24, 2008;  
Indaily 22 May*

## Zero Irrigation Allocations from July 2008

Irrigators along the River Murray in South Australia are likely to start the new irrigation year in July with zero allocations. Allocations to South Australia for 2007-08 were only 1070 GL, the lowest in 50 years. South Australian River Murray Minister Karlene Maywald said all options were being investigated to make an allocation, with monthly updates.

"Over the past three months, rainfall in the upper River Murray catchment was below average and inflows are close previous historical minimal inflows," Ms Maywald said. Since the end of February there has been no improvement in the amount of water available to South Australia. Inflows during March were just 62 gigalitres (GL), compared with average 200 GL, and 60 GL in April. This was not enough to provide any extra water for sharing among NSW, Victoria and South Australia.

The Minister said some water would be available to users who carried over allocations for use in 2008-09, and South Australia was also guaranteed sufficient water to meet critical human needs. "Flows to South Australia have now remained below normal rates for the past 20 months," Ms Maywald said. – AAP

## Ministers approve guidelines for recycled water use in drinking water supplies

The 'Australian Guidelines for Water Recycling, Augmentation of Drinking Water Supplies' were endorsed by the ministers at a recent meeting of the Environment Protection and Heritage Council. The new guidelines form part of phase two of the development of national guidelines for water recycling under the National Water Quality Management Strategy (NWQMS). Public consultation on the draft guidelines for managed aquifer recharge and stormwater harvesting and reuse continues to June 2008. The draft guidelines are available on the Environment Protection and Heritage Council website, [www.ephc.gov.au](http://www.ephc.gov.au)

Source: *Enviroinfo* 24 April

## \$2.3 billion for climate change

The Federal budget included \$2.3 billion in funding to tackle climate change through initiatives across government over four years. \$1 billion has been committed to encourage solar hot water, solar panels and energy efficiency schemes, including insulation. Of this, \$300 million will be provided for the introduction of household "green loans" and a "one-stop-shop" website for people to access Government environment initiatives. \$260.0 million also has been allocated to Australian businesses to reduce their impact on the environment, most of which will be provided under the \$240 million Clean Business Australia initiative. Further information about the Clean Business Initiative is available at [www.ausindustry.gov.au](http://www.ausindustry.gov.au)

Source: *Enviroinfo* 22 May

## Banrock Station wetland refilled to save critical plant and animal life

The Murray-Darling Basin Commission (MDBC) allocated 617 megalitres (ML) to partially refill the Ramsar-listed Banrock Station Wetland in South Australia's Riverland, to prevent potentially irreversible damage from increasing salinity and to save critical plant and animal habitats. Banrock Station contributed an additional 215 ML to the site.

Banrock Station's Manager Mr Tony Sharley said, "The watering project is an excellent example of governments working in partnership with industry to protect a unique ecological system that is critically stressed due to the ongoing drought."

Dr Craik said Banrock Station wetland had been disconnected from the Murray River since January 2007 as a drought water saving measure, with more than 1600 ML saved during this time.

"The wetland has been completely dry since March 2007 and the surrounding vegetation has not been inundated since November 2005," Dr Craik said. "As a result, saline groundwater is rising to the surface and threatens the vegetation."

"This could seriously impact on a number of plant and animal species such as river red gums, lignum thickets, sedgeland and populations of southern bell frog and river snail. The river red gum community has already exceeded the limits of acceptable change with about 10 per cent dead and more than 30 per cent severely stressed."

"By watering in autumn and early winter we minimise evaporation and reduce the volume of water needed and make the most efficient use of our precious water resource," Dr Craik said.

MDBC 8 May, 2008

## Irrigation could save red gums

Dying river red gums along the River Murray in South Australia could be saved with clever irrigation technology, according to University of Adelaide researcher Anne Jensen.

Recent research suggests that a watering regime of just 5mm per week or 10mm per fortnight could be sufficient to keep germinating red gum seedlings alive through summer.

Mrs Jensen, a PhD candidate in the School of Earth and Environmental Sciences and Facilitator of the University's Water Research Cluster, said that the chances of river red gums getting flood flows had diminished. But already more than 75 per cent of the majestic red gums were stressed or dying.

"In the absence of floods to water the seedlings, precision irrigation techniques could be used to deliver water to priority areas, as an interim measure," said Mrs Jensen.

"These relatively low watering rates would be sufficient to keep seedlings alive through their first summer after germination."

These results were presented in a paper Smart Environmental Watering at the international conference Water Down Under 2008 in Adelaide. The paper discussed how the application of limited water can be timed to best effect for the Murray floodplain environment.

Source: *Science Alert* <http://www.sciencealert.com.au/news/20081504-17187-2.html>



Healthy Banrock red gum in 2005



Same red gum in 2008 is stressed



Banrock Lagoon is slowly filling with environmental water. Photos: Anne Jensen

### **\$254 million for water supply security**

The \$12.9 billion Water for the Future plan includes \$254.8 million to increase the security of water supplies in cities and towns. The Government will provide the funding over five years for projects including upgrades to treatment plants and infrastructure, stormwater re-use, and providing recycled water for use on community recreation areas under the National Water Security Plan for Cities and Towns.

The plan would be funded in two stages. In the first stage, the Government will commit \$104.5 million to 20 projects outlined in Labor's 2007 election commitments, including \$20 million for the Rockhampton to Gladstone pipeline; \$12 million for the Huon Valley water scheme in Tasmania; a \$10 million for reducing effluent discharges into the Derwent Estuary; and \$10 million for a new recycled water plant in Victoria. Details of the second stage of funding will be developed in consultation through the Council of Australian Governments.

*Source: Enviroinfo 22 May*

### **Drought could be permanent**

There is no end in sight to the drought afflicting the Murray-Darling Basin and the big dry could become a permanent feature of eastern Australia, experts warn. The latest Murray System Drought Update contains nothing but bad news for farmers and communities struggling to cope. Even grimmer news is that it could become worse next year.

Meteorologists have warned another dreaded El Nino weather pattern - which brings dry weather to eastern Australia - could be on the way.

Dr Wendy Craik, chief executive of the Murray-Darling Basin Commission, painted an ominous picture of the situation.

"Unfortunately there is no improvement in sight," she said. The prognosis for the future's not good. Is drought a permanent phase? Clearly we need to plan in case it is."-- AAP

*Indaily 16 April, 20 May*

### **Wentworth scientist doubts water buyback**

Farmers should be paid up front for the value of their water and be given three years to adjust to slimmer water sharing rules, rather than have the government buying allocations over 10 years, according to Wentworth Group economist, Prof Mike Young. Prof Young has major reservations about the Government's plan to spend more than \$3 billion buying back licences from farmers for the environment. He said it would only see rural communities "collapse, and collapse slowly over a decade".

He said many farmers would sell their water and move out, without any reinvestment in irrigation systems in country areas. Rather than investing in the water market, Prof Young said the Federal Government must drive change by paying farmers the value of their water entitlements and giving them three years to adjust to a new water sharing regime. He said while some may retire, he predicts many farmers will reinvest in their farms and irrigation systems.

"The alternative is to have a government gorilla in the market grabbing at every piece of water that comes on the market," Professor Young said.

*Source: Farmonline The Land, Lucy Skuthorp, 22 May 2008*

### **Wine could be doomed**

Australia could be forced to give up its place among the world's biggest wine exporters within 50 years and become a niche player, a new report predicts. Britain's oldest independent wine merchant, Berry Bros & Rudd, believe that hotter temperatures and water shortages will spell the end of mass wine production in Australia. It has also forecast China to become the world's top wine producer by 2058.

Berry's study of what the global industry will look like in 50 years paints a disturbing picture for Australia, which last year exported nearly \$3 billion worth of wine.

It says the effects of climate change will hit traditional wine growing regions in South Australia, Victoria and NSW and force producers to move to the cooler climes of Tasmania to focus on high-quality, boutique wines.—AAP

*Source: Indaily 22 May*

Prof Mike Young and Jim McColl continue to produce their series of Droplets, which are short discussion papers on water management issues. Droplets explore ideas and propositions which, if developed further, might improve water use. Ideas are explored from a fundamental perspective. They search for the building blocks and concepts that one might consider using if one was able to start without being constrained by prior decisions.

Droplet No 12, identifies four principles for the development of a Sustainable Cap. These are 1) managing water on the basis of shares of inflow volumes, 2) allocating an entitlement to the environment, 3) finding ways to manage environmental water to provide small floods, and 4) accounting for all water uses in the system.

Earlier Droplets on proposed new legislative arrangements, urban water trading, water governance, water interception, water accounting, water trading and stormwater management can be read at [www.myoung.net.au](http://www.myoung.net.au).

Comments are welcome. The aim is to encourage people to think differently about water management. If you would like to subscribe to the Droplet list, send an email to [droplets@adelaide.edu.au](mailto:droplets@adelaide.edu.au) or go to the website at [www.myoung.net.au](http://www.myoung.net.au)

*Mike Young is Professor of Water Economics and Management School of Earth & Environmental Sciences, University of Adelaide and CSIRO Water for a Healthy Country Flagship*



*Healthy pruned vineyard in Barmera  
Photo: Anne Jensen*

## National Water Commission News

### Changes at the Commission

The National Water Commission is now in the Environment, Water, Heritage and the Arts portfolio, reporting to the Minister for Climate Change and Water, Senator the Hon. Penny Wong. Responsibility for the Water Smart Australia Program was transferred from the Commission to the Department of Environment, Water, Heritage and the Arts (DEWHA).

As a result, the NWC now has nine key functions, including:

- Assist with the implementation of the NWI
- Promote and advocate the objectives and outcomes of the NWI
- Assess the water reform progress of NWI parties and advise COAG
- Report regularly and independently on opportunities to advance water reform
- Audit the effectiveness of the Murray–Darling Basin Plan and water resource plans
- Advise on NWI progress for the purposes of National Partnership Payments.

The initial three-year term of the National Water Commission's seven commissioners expired on 9 March 2008. The Minister approved acting appointments until 9 September 2008 to allow time for selection of new Commissioners.

### \$3.9 Million to measure river and wetland health

The Minister for Climate Change and Water, Senator Penny Wong, has announced funding of \$3.9 million for projects to improve the monitoring of river and wetland health. Senator Wong said the funding would be provided under the Raising National Water Standards program.

The projects are:

- \$1.9 million to advance river health monitoring in the wet and dry tropics of northern Australia.
- \$600,000 to align the monitoring of NSW wetlands with national requirements – including significant Murray-Darling Basin wetlands at Narran Lakes, Macquarie Marshes and Gwydir Wetlands, as well as the lower Murrumbidgee wetlands and the Paroo wetlands.
- \$210,000 to establish a high-level National Technical Steering Committee of independent scientific experts to guide the national Framework for Assessment of River and Wetland Health projects.

Further information on National Water Commission news is available in their Distilled newsletter at [http://www.nwc.gov.au/publications/newsletter/nwc\\_newsletter\\_28.html](http://www.nwc.gov.au/publications/newsletter/nwc_newsletter_28.html)

### NWC calls for better water planning

The National Water Commission has called on state authorities to step up efforts to improve the collection and sharing of data on water resources above and below ground in efforts to provide better information for planning decisions.

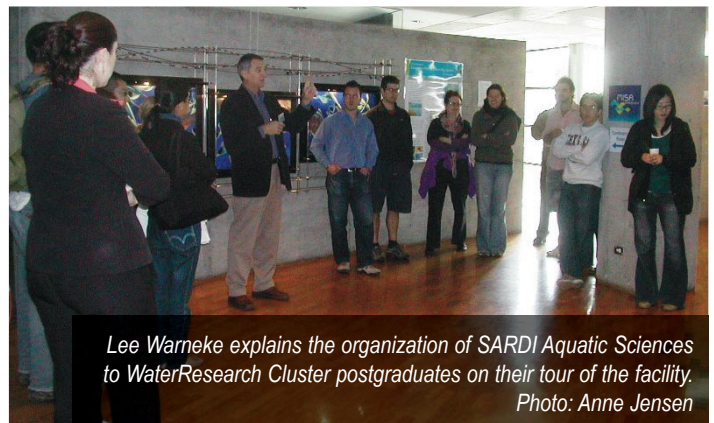
Chair of the National Water Commission, Ken Matthews, said "There is an urgent need to better manage the connectivity between surface and groundwater resources and to more effectively factor in the impacts of climate change and significant interception activities, such as farm dams and forestry, on future water availability."

The Commission released a report to share the lessons learnt by individual states and territories in relation to water planning, which is available at <http://www.nwc.gov.au/publications/docs/Water-Planning-Body.pdf>

Source: *Enviroinfo* 8 May

## Water Research Cluster Postgraduate Corner

The June forum visited SARDI Aquatic Sciences at West Beach to obtain an overview of the research programs conducted there. Acting Director Dr Qifeng Yi gave a summary of the applied science programs which support aquaculture and protect wild fisheries and habitat by innovative science. The science informs management decisions and provides codes of practice to reduce impacts of fisheries. Researchers presented a variety of topics, including aquatic biosecurity and invasive species, innovative monitoring techniques for application at tuna aquaculture farms, investigations of native fish communities in Chowilla floodplain creeks on the River Murray, garfish fishery management, and the interactions of Little Penguins with fish species. The visit included an extensive tour of the research facilities with the General Manager, viewing laboratory facilities and aquaculture tanks with mullocky and kingfish being tested for aquaculture in hypo-marine groundwater. Other tanks contained juvenile crayfish and abalone. The postgraduates found the visit very informative, and had many questions about the different projects. Thanks to Dr Marty Deveney, Dr Kathy Ophel Keller, Sandra Leigh, Dr Tony Fowler and AnneLise Wiebkin for their very interesting presentations, and to General Manager Lee Warneke for hosting our visit.



*Lee Warneke explains the organization of SARDI Aquatic Sciences to WaterResearch Cluster postgraduates on their tour of the facility.  
Photo: Anne Jensen*

## Next Water Research Cluster Postgraduate Forum

Proposed topic: current issues in the Murray-Darling Basin and the National Water Initiative

Venue to be confirmed (on North Terrace campus)

**Wednesday 5 September**  
**11:00am - 1:30pm**

includes informal lunch sponsored by Water Research Cluster

All Water Research Cluster postgraduates and other interested parties welcome

Bookings essential for catering!

RSVP 1 September to Anne Jensen

email: [anne.jensen@adelaide.edu.au](mailto:anne.jensen@adelaide.edu.au)

[www.water.adelaide.edu.au/postgraduateforum](http://www.water.adelaide.edu.au/postgraduateforum)

## Prizes and Awards

Assoc Prof David Paton has been awarded the Member of the Order of Australia 'for service to conservation and the environment through research into the ecology and behaviour of Australian birds, to the management and restoration of the natural environment, and to education.' Congratulations to David on this well-deserved recognition of his commitment to long term research to provide sound science for management of key ecosystems. David has become the science voice of the Coorong, based on his long dedication to this unique and irreplaceable asset.

### Endeavour Awards for Australian citizens or residents

Endeavour Research Fellowships provide financial support for postgraduate students and postdoctoral fellows from Australia to undertake short-term research (4-6 months), in any field of study, in participating Asia-Pacific countries. Aimed at building international linkages and networks, these Awards provide opportunities for award holders to further develop their knowledge and skills.

### Endeavour Awards for international applicants

The Endeavour Postgraduate Awards provide financial support for international students for up to 3 years to undertake a postgraduate qualification at a Masters or PhD level either by coursework or research in any field of study in Australia.

Applications close: 31 July 2008

For more information visit: <http://www.endeavour.dest.gov.au/>

### Fulbright Scholarships

Fulbright Scholarships can provide the opportunity for Australian citizens to undertake 8-12 months research in the United States related to their Australian PhD. Applications for the 2009 Fulbright Scholarships close 31 August 2008. Scholars can commence their Fulbright program any time between 1 July 2009 and the 30 June 2010.

See <http://www.fulbright.com.au> for more information.

### AusAID's Australian Leadership Award Scholarships 2009

Applications are considered annually on a regionally competitive basis. Selection is based on leadership qualities and academic merit. Australian High Commissions and Embassies consider applications and recommend short-listed candidates to a final inter-departmental selection committee in Canberra. AusAID prefers online applications. Applications can be submitted by 30 June 2008.

<http://www.ausaid.gov.au/scholar/ala.cfm>

## Water Research Links – Funding Opportunities

Watch for new funding opportunities on the Research Branch website <http://www.adelaide.edu.au/rb/funding/opps.html>

The comprehensive Grant Opportunities page on the Research Branch website provides access to all ARC and NHMRC opportunities as well as the rural and natural resources R&D corporations. In addition, you can also access the myriad of other funding opportunities. Applications should be submitted to the Research Branch before the sponsor's closing date (1 week for Australian funds and 2 weeks for international funds). Visit <http://www.adelaide.edu.au/rb/funding/> for instructions on submitting applications.

### 2009 Innovation Call - Land & Water Australia

Land and Water Australia invites innovative research proposals that address any of the following:

- Practical cost-effective techniques, suitable for emissions trading, for accounting for fluxes of greenhouse gases through agricultural and native terrestrial ecosystems, with a focus on soils.
- Impacts of climate and atmospheric change on vegetation water-use and recharge for the principal native vegetation classes of Australia.
- Improving the rigour and relevance of the metrics used in market-based instruments designed to allocate funds to natural resource outcomes.
- Social impacts of irrigation adjustment in the Murray Darling Basin in emerging policy and water markets.

Full guidelines and short application forms are available at [www.lwa.gov.au/funding](http://www.lwa.gov.au/funding) Applications close Friday 27 June 2008.

Administrative enquiries: [penny.worboys@lwa.gov.au](mailto:penny.worboys@lwa.gov.au) (02 62636017)

Technical enquiries: [stuart.pearson@lwa.gov.au](mailto:stuart.pearson@lwa.gov.au).

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## Water Organisation Links

A list of key organizational links is provided on the website <http://www.water.adelaide.edu.au/links/>

### Recent Newsletters

ICEWARM newsletter <http://www.icewarm.com.au/>

International Riverfoundation <http://www.riverfoundation.org.au/>

INTECOL e-Bulletin [http://www.intecol.net/info-esk/e-bulletin/INTECOL\\_e-Bulleing-May-2008.pdf](http://www.intecol.net/info-esk/e-bulletin/INTECOL_e-Bulleing-May-2008.pdf)

e-Water CRC have tool kits available from [www.tookit.net.au](http://www.tookit.net.au), including the Catchment Modelling Toolkit web-based distribution point for various models and tools. Training workshops are available.

The Water Research Cluster newsletter is published once every two months. The latest version is uploaded to the Water Research Cluster website (<http://water.adelaide.edu.au>).

To receive a copy of the newsletter in printed form, send an email to [anne.jensen@adelaide.edu.au](mailto:anne.jensen@adelaide.edu.au) with the words Subscribe Newsletter in the Subject heading.

To receive a notification that the newsletter has been uploaded to the website, write the words Subscribe e-Newsletter in the Subject heading.