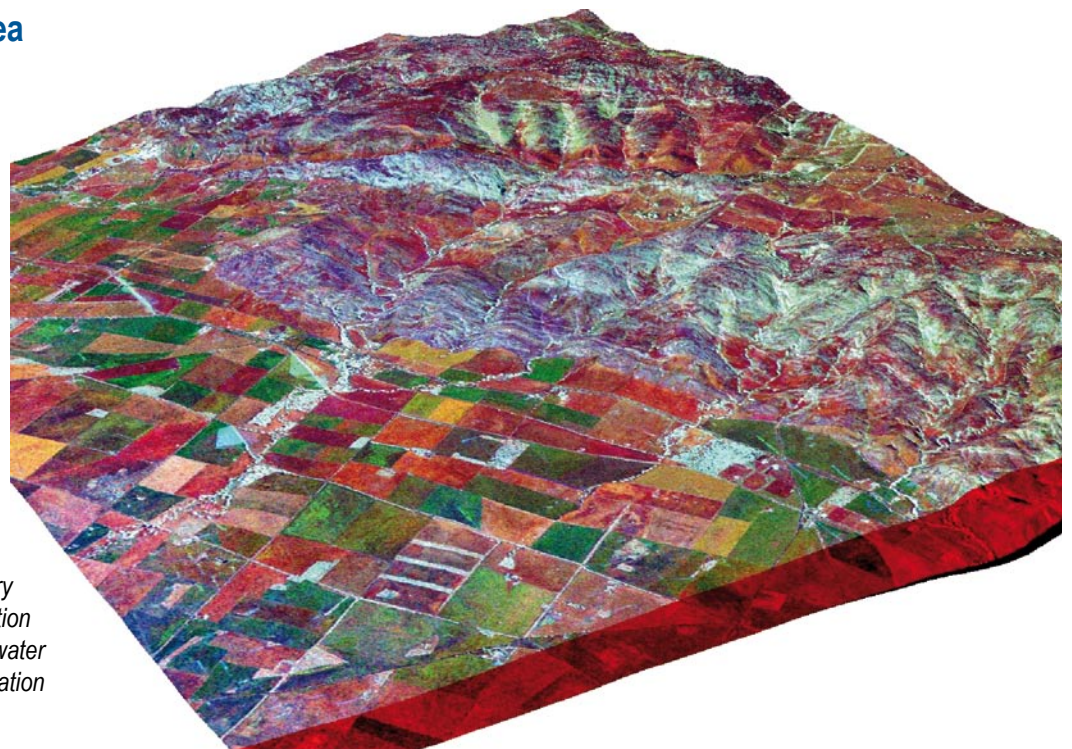


What's happening in water research at the University of Adelaide

The Water Research Cluster continues to evolve as research projects are developed with diverse partners, with a particular emphasis emerging on sustainability. This Newsletter updates current activities and features articles on recent water policy announcements.

In this issue:

- Water Research Cluster News
- Spatial Information and Water Research
- Water Research Cluster Postgraduate Corner: Evolving knowledge in managing stormwater
- Water News Updates
- Water Funding Opportunities
- Prizes and Awards
- Water Fact File: Aral Sea
- Water Conference & Seminar Diary
- Water Research Links –Funding Opportunities, Grants, Tenders, Jobs and Scholarships
- Water Organisation Links
- Water Information Links
- Who is the Water Research Cluster



Polarimetric, multifrequency RADAR imagery highlighting different crops and pastures overlain on digital terrain model derived from radar interferometry – illustrating the use of spatial information in natural resource management and water research (see article on Spatial Information and Water Research).

(Image supplied by Megan Lewis)



Water Research Cluster Welcomes Professor Mike Young

High-profile environmental economist Mike Young has recently taken up the position of Professorial Chair in Water Economics and Management in the School of Earth and Environmental Sciences. His position is jointly funded by CSIRO Water for a Healthy Country, Land and Water Australia and the University of Adelaide. Professor Young will be preparing discussion papers and policy options on water management in Australia, and aims to strengthen linkages between CSIRO and universities.

The State We Are In

The State Government has developed a range of strategic plans that it uses to assess new initiatives and co-investment opportunities. For researchers who want to seek funding or partnership from state government for new research ideas, it is important that they are fully aware of these plans, and can identify how their research will help deliver against the state's strategic objectives.

All of the Research Clusters and the Research Branch of the University of Adelaide jointly organised a Seminar that outlined the key strategic planning documents for the State Government of South Australia. The Seminar was held in the Margaret Murray Room, on Friday June 2nd and 130 people attended from across the University.

The speakers were

- Richard Hillis, Associate Dean Research, Science Faculty
- Tanya Smith, Department of Premier and Cabinet, State Strategic Plan
- Rachel Lucas, Office of Science and Technology ST110 (Science, Technology and Innovation)
- Dennis Mutton, Chair NRM Council, State Natural Resource Management Plan
- Irene Chumak, Food South Australia, State Food Plan
- Alan Yates, Dept Trade & Economic Development, Defense Industries Plans
- Anne Gale, Office of the Ageing, Improving with Age (State Plan).

Terrestrial Ecosystem Research Network

The National Collaborative Research Infrastructure Strategy (NCRIS) is a Program funded by the Commonwealth Government to provide researchers with access to the infrastructure and networks necessary to undertake world-class research. Under the NCRIS Investment Framework, a number of research capability areas have been identified for support, and one of these is a Terrestrial Ecosystem Research Network (TERN). This area has been identified for further scoping and development before a full investment plan is drafted.

Paul Dalby from the Water Cluster worked with members of the Water and Sustainability Clusters to prepare a response to NCRIS on the TERN, that identified the research capability within the University of Adelaide and made suggestions about how to implement the concept of a TERN.

NCRIS staff are currently analysing the submissions, with the intention of drafting a brief discussion paper setting out their understanding of the issues and possible options for moving the TERN concept to the next stage, which is full NCRIS facilitation. They aim to send the paper out for consideration by 22 June 2006. NCRIS will convene two national workshops to further develop the TERN proposal to give interested people a good opportunity to attend. A/Prof David Chittleborough will attend the Melbourne workshop on 6 July 2006 on behalf of the University of Adelaide.

Water Research Cluster International Travel Grants Awarded

Associate Professor Justin Brookes and Associate Professor Peter Gell have each been awarded Travel Grants from the Water Research Cluster.

A/Prof Brookes was supported by the Travel Fund Scheme of the Cluster to attend the Emerging Technologies in May in Rapperswill, Switzerland. The meeting, with 26 participants from 13 countries, was invitation only and designed to address water concepts for the future, new technologies and emerging contaminants of concern to the water industry.

A/Prof Brookes presented work on reservoir modelling tools that was undertaken in the CRC for Water Quality and Treatment as collaboration between AWQC and Adelaide University, Departments of Civil and Environmental Engineering and Environmental Biology. An outcome of this meeting is support for a project proposal in collaboration with the Global Water Research Coalition, TZW in Germany and the CRC for Water Quality and Treatment.

A/Prof Peter Gell has been awarded a grant to collaborate on a research project on Lake Caohu (u/s Nanjing) and Lake Honghu (u/s Wuhan) with the Chinese Academy of Science and Nanjing University and also attend the Earth System Science Partnership (ESSP) meeting in Beijing on Global Environmental Change: Regional Challenges.

The Water Research Cluster aims to foster international research cooperation by providing funding support for academics within the Cluster to travel overseas and for international visitors to travel to the University of Adelaide. Support is provided primarily to supplement other funding and so at least 50% of the travel costs must be met from other sources.

Priority will be given to travel missions that:

- are designed to develop collaboration that is cross-disciplinary in nature;
- involve more than one member of the Cluster;
- support an early career researcher within the Cluster to develop international linkages;
- will result in the submission of applications for funding for postgraduate scholarships, post-doctoral fellows, ARC Linkage or other research grants, new research centres and/or other collaborative research activities;
- have high scientific merit.

A maximum of \$2,500 is available per applicant (i.e. an application to support travel of two Cluster members can request \$5,000). An application form can be obtained from Paul Dalby.

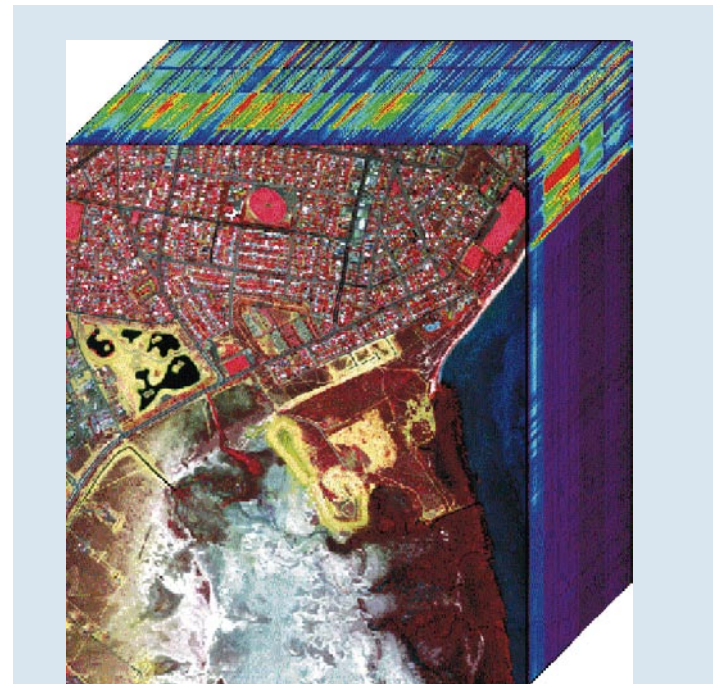
For more information, contact Paul Dalby.

Water Research Cluster Activities Spatial Information and Water Research

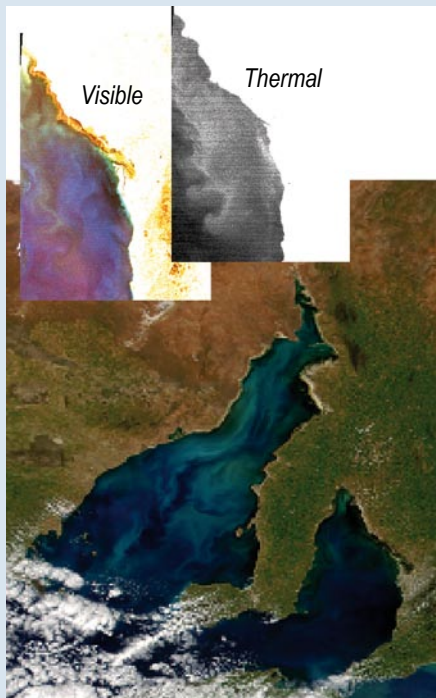
Dr Megan Lewis, Head, Soil and Land Systems Discipline, School of Earth & Environmental Sciences, Waite Campus, University of Adelaide

The Spatial Information Group within the School of Earth and Environmental Sciences conducts research and undergraduate and postgraduate education in remote sensing, geographic information systems and ecological modelling. A common theme to our work is spatial and temporal analysis of environmental patterns and processes, with areas of application ranging from arid land condition and assessment, to soil and vegetation analysis and marine ecosystems. The research group comprises two academics (Dr Megan Lewis and Dr Bertram Ostendorf), several research staff and around 15 postgraduates and Honours students, located at the Waite campus.

How does our research relate to the Water Cluster research themes and strengths? There are three areas where our research addresses problems, environmental components or processes that are potentially relevant to water research. The first is analysis of terrestrial landscape cover, composition, variation and dynamics, information that can be important in characterising catchments and monitoring responses to changing land management. While much of our research is based in arid land systems, it also extends to the use of new sensing technologies for mapping and monitoring soils, vegetation, salinity, crops and pastures. Current projects include the assessment of biodiversity and land condition in South Australian rangelands, and estimation of soil erosion in vegetated catchments after bushfires. We are evaluating a range of new sensing technologies (hyperspectral imagery (see Box 1), airborne gamma radiometrics, radar and lidar) for quantification of soil properties, vegetation composition and structure.



Hyperspectral imagery captures earth-surface reflectance in hundreds of wavebands, compared with the 4-6 broad bands of Landsat-type earth observation sensors. This detailed spectral information allows identification of mineral composition, plant condition and type and determination of their relative abundance and distribution in the landscape. We are using hyperspectral data for salinity monitoring, prediction of soil composition, vegetation species and vineyard variation and yield.



Imagery from new sensor MODIS is being used to monitor environmental condition and dynamics in marine and terrestrial ecosystems. The sensor has a very broad image swath, with images captured every day. This repeat frequency, combined with its spectral coverage in the visible, infra-red and thermal parts of the spectrum make it suitable for tracking rapidly changing environmental conditions over broad areas. We are using this data for monitoring soil erosion risk in SA's agricultural districts and for understanding water quality and dynamics in Spencer Gulf.

Some of our research is directly investigating components of the hydrological cycle, and could assist water balance modelling, climate change research and understanding of topographic influences on rainfall. For example, long sequences of weather radar records from Bureau of Meteorology stations are being evaluated to improve information about spatial variation in rainfall distribution for localised studies.

Finally, we are using various forms of remote sensing and spatial decision support systems to assist management of Southern Australian coastal and marine ecosystems.

New imaging technologies are being used to better monitor seagrass distribution and condition in sensitive coastal communities, while analysis of algal blooms, temperature and coloured dissolved organic matter in Spencer Gulf aims to better understand the marine environment in support of tuna aquaculture management (see Box 2).

Establishment of Marine Protected Areas is a South Australian Government priority, and our research is developing decision support tools to help identify the optimal areas for their location and size.

Much of our work is interdisciplinary, and we are interested in collaborative research on new problems. We have many opportunities for Honours and postgraduate research, some of which may be supported by scholarships and project funds.

For further information, contact Dr Megan Lewis
Ph: 8303 6522, megan.lewis@adelaide.edu.au

Australia Seen As World Water Leader

Professor Paul Perkins, Chairman of the Barton Group, has told the National Water Education Conference that it is both environmentally and economically beneficial to find innovative ways to manage water. He says Australians have the potential to lead the world – if they stop quibbling over who uses the most water and work on using it smarter.

“We should be saying, given climate change and given the world’s population growth - not Australia’s - how can we produce twice as much food for export ... with half as much water,” he said. “If we did that, we’d solve the environmental flow problems, we’d solve the growth of the cities problems and we’d have plenty of water shared equitably between the agriculture and the urban uses.”

According to Professor Perkins, Australia is already a world leader in some fields of water management, such as efficiency. But the nation lags behind in every category when institutional arrangements are considered. “If we do it well to suit our different things in this nation, we’ve got a lot of products to share with the rest of the world.”

(Source ABC online)

National Competition Policy Assessment Of Water Reform Progress

The Federal Government accepted recommendations from the National Water Commission and fined New South Wales, South Australia and Victoria \$26 million collectively in suspended National Competition Policy payments for failing to introduce inter-state water trading rules.

The sixth National Competition Policy assessment of governments’ progress with implementation of water-related reforms found that there was failure to meet specific COAG commitments to open up interstate trade in permanent water entitlements in the southern Murray-Darling Basin, where penalties are recommended for New South Wales, Victoria and South Australia, at \$13 million, \$10 million and \$3 million respectively, and failure by NSW in relation to water planning and addressing overallocated and/or overused systems.

The Commission’s priorities for the 2005 National Competition Policy assessment were to assess progress on: water access entitlements; water planning for secure ecological and resource outcomes; addressing overallocation and overuse of water systems; water trading, and water pricing.

The full report can be found at <http://www.nwc.gov.au/reform/docs/Findings.pdf>

(source *EnviroInfo Newsletter*)

NWC meets in Perth

National Water Commissioners have met in Perth, following Western Australia’s recent signing of the National Water Initiative. At the Commission meeting a number of items were considered including the Water Smart Australia and Raising National Water Standards Programmes and the development of the Commission’s first biennial assessment of progress in implementing the NWI.

The biennial assessments will be the primary vehicle for the Commission to report on progress in implementing the NWI and advise on actions required to better realise the objectives and outcomes of the Initiative.

The Commission will consult with governments and stakeholders on design of the assessment, with the 2006–07 biennial assessment due to be completed by June 2007.

(source *EnviroInfo Newsletter*)

River Flows Below Target

Slow progress towards the first step target of 500GL returned to the River Murray by 2009 is causing grave concern, particularly since scientists have been recommending a minimum of 1500GL to maintain river health. Water Research Cluster member and river ecologist Assoc Prof Keith Walker said that the time to act is now. ‘We’re really at a critical point if we’re serious about maintaining the Murray,’ he said. Assoc Prof David Paton said that urgent action is needed provide extra water to combat rising salinity in the Coorong. He reiterated that the need is for 1500GL, not 500GL. He suggested that all users should reduce demand by 15% to increase flows in the River. ‘The priority is to increase the flow’, he said.

Independent Murray-Darling Basin Commissioner John Scanlon released a minority report stating his concerns that there will be a shortfall of more than 40% in the minimum target of 500GL by 2009, and he called for immediate water purchases and urgent formulation of a plan for assignment of surplus flows. He also highlighted other factors which are reducing overall volumes of flows, including climate change, increased use of groundwater and reduced irrigation returns to the River, meaning that even more water will be required to maintain the health of the River.

South Australia is the first state to put water back into the Murray-Darling system through the Living Murray initiative, recently announcing the return of 35 Gigalitres (GL) of water to the River Murray. Premier Mike Rann says 13 GL of water will be immediately returned to the Murray, with the remainder to be returned before 2009. He says the water going back includes allocations already held by the state government, water purchased from willing sellers and water saved through innovative market options, farm efficiency measures and improved wetland management.

River Murray Minister Karlene Maywald has been arguing that water efficiencies cannot deliver the full 500GL by 2009, and that water purchases will be required as well. Federal Parliamentary Secretary Malcolm Turnbull has now proposed a tender system for water efficiency projects to return water to the River. Water offered for sale will have to be delivered by 2009.

(Sources: *Indaily Online news service of Independent Weekly, The Advertiser*)



Water donated from irrigators has been pumped into several wetlands on the Banrock Station floodplain to save river red gum saplings showing signs of stress from lack of water (Photo: Anne Jensen)

Water Research Cluster Postgraduate Corner

The Water Research Cluster Postgraduate Forum on 7 June continued the theme of 'evolving science and management of stormwater, including constructed wetlands'.

The guest speaker was **Mr Andrew Thomas**, Project Manager, Adelaide and Mt Lofty Ranges Natural Resources Management Board, who gave a very informative presentation on 'Evolving Knowledge in Stormwater Management'. The forum was held on-site at Urrbrae Wetlands, and **Dr Allin Hodson**, Coordinator of the Urrbrae Wetlands Complex and speaker at the March forum, provided a tour of the site.

Andrew provided a very useful overview of the management issues and priorities in urbanized catchments, and described the 'treatment train' required to deal with the mixed components of stormwater on its journey through the catchment. It was startling to learn that the highly visible litter component in stormwater is only 10% of the pollutant volume, and that organic material (70%) and silt (20%) are the major components requiring treatment and management. Leaf litter is the largest problem in urban catchments, with street sweeping removing only a small proportion of the problem.

The ideal treatment train includes a combination of trash racks, sedimentation basin, litter boom and wetland filtration basin, with adequate capacity to allow sufficient residence time in the system before discharge downstream. Andrew pointed out the difficulties of retro-fitting existing systems which were installed without sufficient features to include all of these steps.

Andrew's comments reinforced the points raised by Allin Hodson about inefficiencies in stormwater management at the March forum, and the group was able to view on-site the extensions to the Urrbrae Wetland which are attempting to increase its flexibility and capacity within the constraints of available land, local flood risk and outflow capacity. The CSIRO aquifer storage and recovery project was also inspected, where trials are being conducted to find methods to prevent clogging



Dr Allin Hodson showing Water Research Cluster postgraduates the Urrbrae Wetland (Photo: Anne Jensen)

by algal growth in fine sand aquifers so that stormwater can be stored effectively.

Postgraduate Young-Kil Kim also described his project, which is examining water quality issues in relation to stormwater management and re-use at the Parafield Wetlands, which the group visited during the December forum. Young-Kil is investigating several questions such as the relationship between the sediment and open water, and the effect of invading water plants on water quality, and anticipates making recommendations about residence time, plant harvesting and relative areas of open water for improved management of the wetlands.

The next Water Research Cluster Postgraduates Forum is scheduled for 11am-1:30pm on **6 September** at the Adelaide University Staff Club. The theme will be Coastal and Estuarine water management issues, with presentations from the Environmental Geography group and natural resource manager clients. Contact Paul Dalby to register attendance and a reservation for lunch on paul.dalby@adelaide.edu.au – all welcome!

Water Research Cluster postgraduates awarded SARDI Science Bursary



Kat Cheshire and Anne Jensen receiving their SARDI Womens Suffrage Centenary Science Bursary awards from Dr Pauline Mooney (centre), Director of Research and Development at SARDI (photo: Clair Greenock)

Anne's PhD Lower Murray Floodplain Seedbank: Status and Response to Flooding is investigating ecosystem responses to environmental flows, and the conditions required to ensure the recruitment and survival of seedlings from River Red Gum and Black Box trees and Lignum bushes. Anne will use her Bursary to employ assistants to help grow and count a staggering 625,000 seedlings that she is collecting over her 30-month project. Anne's project is supported by a postgraduate scholarship from Land and Water Australia.

Bursary selection panel members, Dr Barbara Hardy (Investigator Science and Technology Centre board member) and Dr Pauline Mooney, Dr Kathy Ophel-Keller and Ms Grace Taylor from SARDI said the two projects were of such a high standard that they both deserved the support of the Bursary, which is an on-going commemoration of the Women's Suffrage Centenary.

Water Fact File

Some quick water facts are again provided for the use of water researchers for inclusion in presentations, talks and papers.

The Saga of the Aral Sea

The story of the dramatic decline of the Aral Sea in Tajikistan is well known, with graphic photo series showing the reduction of the 4th largest inland lake in the world to two smaller lakes less than 30% of the original area. This occurred when inflow volumes to the lake were reduced by more than 50%. The ecological impacts were overshadowed by the social and economic impacts, as fishing villages were left high and dry, windblown salt contaminated soils and regional rainfall reduced.

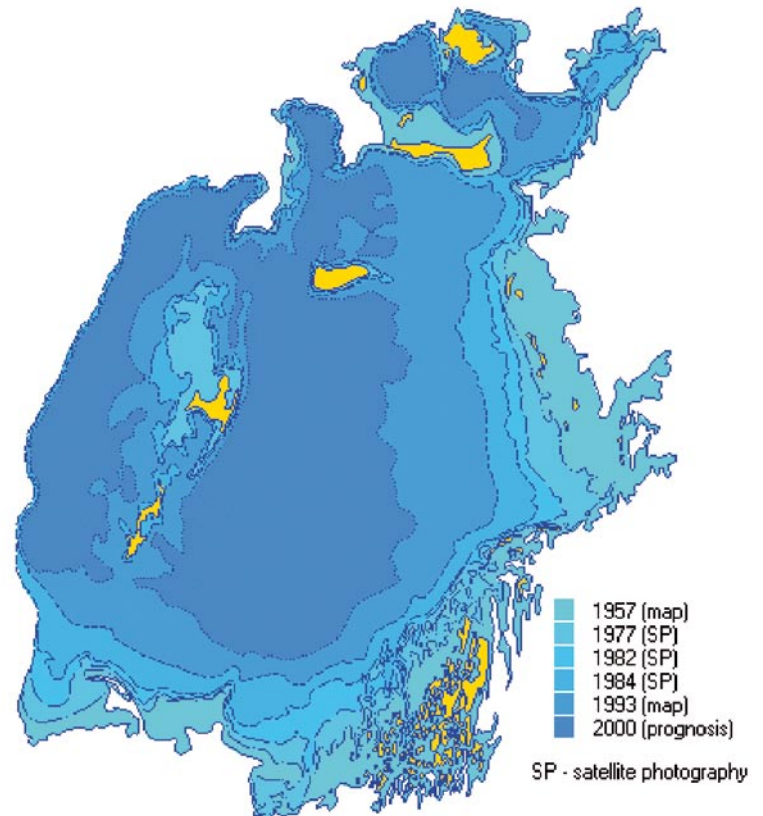
However, when considering the disaster of the Aral Sea, and the economically-driven management decisions which led to such serious environmental, social and economic losses, we should remind ourselves that in Australia we are removing more than 80% of the flows from the Murray-Darling Basin. The major difference in community perception of the impacts of this consumption is that we see a river kept permanently full by regulation, lined by currently prosperous irrigation communities. Most impacts are environmental, with dryland salinity and dying floodplain vegetation mostly out of sight, and the impact of lost discharges on marine ecosystems masked by the receiving waters of the Southern Ocean.

The example of the Aral Sea provides a powerful opportunity to learn to manage water better. Steps towards rehabilitation are gathering momentum, but it will be a very long slow process. It is much more effective to prevent disastrous impacts than to try to repair them.

For more information, see:

<http://enrin.grida.no/aral/aralsea/english/arsea/arsea.htm#Aral>

Aral Sea at Different Times



Source: <http://enrin.grida.no/aral/aralsea/english/arsea.htm>

Water Funding Opportunities

Strategies For Winning Research Grants

The Deputy Vice Chancellor (Research), Professor Alan Johnson, will be holding a series of information sessions entitled "Strategies for Winning Research Grants".

The first session will be held at the North Terrace Campus on **Tuesday 25th** July from 1:00 to 3:30pm in the Ira Raymond Room in the Barr Smith Library.

Speakers at this session will be:

- Professor Alan Johnson - Strategies for Winning ARC Grants
- Professor Valerie Linton - Industry Grants
- Professor Geoff Fincher - R & D Grants
- Associate Professor John Spoehr - State Government Grants
- Dr Sarah Robertson - NHMRC Grants
- Ms Lynette Kelly - Research Branch.

If you are interested in attending, please RSVP linda.knobben@adelaide.edu.au by Friday 14 July 2006.

Further sessions will be held later in the year at Waite, Roseworthy and the IMVS.

Federation Fellows

Members and supporters of the Water Research Cluster are encouraged to consider appropriate applications for Federation Fellowships in the area of water research management for submission to the University of Adelaide's internal assessment process. Support from the Cluster can be sought for developing a full submission if the initial application is approved internally.

The Australian Research Council's Federation Fellowships are innovative and highly prestigious awards designed to develop and retain Australian skills. Open to applications from outstanding international researchers, Federation Fellowships particularly encourages applications from Australian and non-Australian researchers currently working overseas.

The University of Adelaide will implement a new internal process for vetting Federation Fellow applications for the next round. Initial applicants will need to submit their CV which will be assessed internally and the best candidates will be asked to develop a full application. Expressions of Interest are due on **12 August 2006**, and full submissions are due in **October 2006**.

Prizes & Awards

Water Industry Alliance Awards

At the recent Water Industry Alliance Awards, the keynote speaker Dr John Radcliffe (Chairman of the Water Research Cluster Advisory Board) expressed concern about the lack of monitoring of groundwater resources and called for a better understanding of issues surrounding recycling, as two challenges facing the rapidly expanding water industry.

Dr Radcliffe also highlighted the contradiction between consumers happy to pay \$6,000/kL for bottled water but unhappy about paying \$1.20/kL for reticulated water (an issue highlighted in the April Water Research Cluster newsletter).

The Collaborative Teaming Award went to ICEWaRM for their new masters program in water resource management.

The Innovation Award went to Waterfind, for its work developing a web-based water-trading platform to match water buyers and sellers across state borders.

Who is the Water Cluster?

The Water Research Cluster coordinates water research across the University of Adelaide. The Water Research Cluster has a strong culture of collaboration and support of teams, and has a particular focus on supporting early career researchers.

Leadership Panel

A Panel of academics from across the disciplines and schools of the University provide strategic direction and management of the Cluster.

The current members of the Leadership Panel are:

- Graeme Dandy (Civil and Environmental Engineering) - Champion
- David Chittleborough (Geology and Geophysics) - Champion
- Angus Simpson (Civil and Environmental Engineering)
- Marcus Lane (Geography)
- David Jones (Architecture)
- Peng Bi (Health)
- David Lewis (Chemical Engineering)
- Mike Geddes (Environmental Biology)
- Justin Brookes (Environmental Biology)
- Peter Gell (Geography).

The Water Research Cluster has specific strengths in the following fields of research:

- Integrated Catchment Management
- Managing Water in Arid Areas
- Managing Wetlands and Rivers
- Sustainable Irrigation
- Wastewater Treatment and Management
- Water Management in Urban Areas

Cluster Coordinator

Dr Paul Dalby

If you would like to advertise or send material for the Newsletter of the University of Adelaide Water Research Cluster, please contact Paul Dalby on 0401 122 204 or pdalby@internode.on.net

Water Links

Water Organisation Links

The International Centre of Excellence in Water Resources Management produces the ICE WaRM eNewsletter. You can subscribe at <http://www.icewarm.com.au/mailman/listinfo/eneews>

Land & Water Australia

Land & Water Australia provide significant sources of water-related research information and funding for projects. Their website is www.rivers.gov.au and access to their many publications can be gained from there. Their regular publication RipRap presents very useful overviews of current projects and research findings.

Australian Water Association

AWA has a national coordinating committee under way now, to help in the areas of professional development, training and tertiary education for water. It is called WICD (Water Industry Capacity Development = 'wicked') -- visit <http://www.awa.asn.au/> and view the calendar and weekly newsletter there.

The Young Water Professionals network (YWP) has a special interest in students and graduates, and application forms are found on the website at www.awa.asn.au/SIGS/YWP.

Institute of Public Works Engineering Australia (SA Division)

IPWEA(SA) is the peak industry association for all people involved in the planning, delivery, management and maintenance of public facilities and infrastructure in Australia. They are keen to attract student members, and their areas of interest include environmental engineering, stormwater, water and waste management, and strategic planning. For more information, see their website www.ipwea.org.au

Natural Resources Management Council

The Council encourages members of the public to attend meetings, held on the first Friday of every month at the Plant Research Centre, Waite Campus. The agenda of coming meetings and minutes of previous ones are available at http://www.dwlbc.sa.gov.au/nrm/nrmcouncil/council_meetings.html

Water Information Links

Useful information on water-related topics can be found in the electronic sources listed below.

EnviroInfo Newsletter

EnviroInfo is a fortnightly eNewsletter for professionals in the natural resources and environment management fields. You can obtain a subscription by sending an email to info@envirocentre.com.au with the words 'Subscribe EnviroInfo' in the subject line.

Other publications from the same group include:

Enviro Jobs: <http://www.envirojobs.com.au>

Environment Business: <http://www.halledit.com.au/publications/envbiz.htm>

Land and Water News: <http://www.halledit.com.au/publications/lawn.htm>

EcoVoice environmental newspaper is available online at www.ecovoice.com.au

News Splash

News Splash is a regular information email from the Water Research Cluster with a series of short articles of a few lines with links to further information. To register, send an email to paul.dalby@adelaide.edu.au with the words Register News Splash in the subject heading. To Unsubscribe, enter the words Unsubscribe News Splash in the subject heading. Send any submissions for News Splash to Paul Dalby.

Dr Paul Dalby,
Facilitator,
Water Research Cluster,
University of Adelaide,
North Terrace,
Adelaide 5005.

Tel: 08 8303 6697
Fax: 08 8391 3148
Mob: 0401 122 204

paul.dalby@adelaide.edu.au
www.water.adelaide.edu.au

Water Research Links – Funding Opportunities

Watch for new funding opportunities on the ARI website <http://www.adelaide.edu.au/ari/researchers/grants/fundingopps.html>

The comprehensive Grant Opportunities page on the ARI 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.

George Alexander Foundation

<http://www.gafoundation.org.au/>

Closing Date: 1 August 2006

Areas of interest: Environment & Conservation -- projects to develop partnerships with communities, government and the private sector to prevent irreversible damage to the environment and to encourage the maintenance of biodiversity

Ian Potter Foundation

<http://www.ianpotter.org.au/>

Closing Date: 1 August 2006

Areas of interest: include Environment & Conservation, Science – innovative, cross-discipline projects encouraged.

Australian Research Council (ARC) Linkage – International Awards

Internal Closing Date: Continuous

http://www.adelaide.edu.au/ari/researchers/grants/ARC_LinkIntern.html

Purpose: Build links between research centres of excellence in Australia and overseas by funding extended collaborations

Macquarie Bank Foundation

Internal Closing Date: Apply any time

http://www.macquarie.com.au/au/about/macquarie/macquarie_in_the_community.htm

Areas of interest: education, the arts, health research and health care, welfare and the environment.

Myer Foundation

Internal Closing Date: Apply any time

<http://www.myerfoundation.org.au>

Areas of Focus: Arts and Humanities, "Beyond Australia", Water and Environment, Philanthropy, Social Justice

Grants for Field Research -- Earthwatch

Closing Date: Ongoing

Purpose: To create an opportunity for public involvement in significant research that addresses scientific, environmental and policy problems and issues.

<http://www.earthwatch.org/research/index.html>

Contact Details: Ms Jane Gilmour, Director Earthwatch Australia

Email: jgilmour@creativeaccess.com.au

Telephone: (03) 9682 6828

Tenders and Jobs

Tenders are posted on the NRMjobs website, which can be found at: <http://www.nrmjobs.com.au>

NRMjobs advertises jobs and other opportunities in the environment, water and natural resource management field in Australia and New Zealand. A separate service WaterJobs is also now available at the same website.

Water Jobs and Scholarships

Science and Innovation Awards

The 2006 Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry are now open!

\$10,000, ONE YEAR, 20 OPPORTUNITIES — APPLY NOW!

If you are aged between 18 and 35 years and employed or studying in an agricultural, fisheries, forestry, food or natural resource management related industry and you want to use science, technology and innovation to advance the future of that industry, then you may be eligible to apply.

Up to \$10,000 is available for each award winner to carry out an innovative project that will benefit rural industries. Applications close on 30 June 2006.

To find out more, visit the website at www.daff.gov.au/scienceawards or contact ScienceAwards@brs.gov.au or on (02) 6272 4197.

International Study Opportunities

Adelaide University is now eligible to participate in the Australian Development Scholarships (ADS) program, commencing in first semester 2007. The University is permitted to market for prospective students for the January 2007 intake as soon as we have advised AusAID of our intention to participate in the new ADS program, but we cannot accept these students until after the services agreement has been signed.

Information on international opportunities supplied by Dr Alan Collins of Geology & Geophysics, School of Earth and Environmental Sciences.

Graduate Entrepreneurial Program

Postgraduate students are invited to apply for the Graduate Entrepreneurial Program, design to help to prepare for an innovative, entrepreneurial career.

The highly regarded skills necessary for Idea/Opportunity Assessment, Innovative Thinking, Business Enterprise and Entrepreneurship can be learned and are essential to developing a capacity to turn opportunities into a commercial reality, either for an employer or within your own successful business enterprise.

The Graduate Entrepreneurial Program provides support with a package of training and assistance valued up to \$30,000.

For more information visit the website at:

http://www.adelaide.edu.au/OIL/business/grad_ent/

Applications close 3:00pm Friday 28th July 2006.

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 paul.dalby@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.