The topics differ, but some key questions arise about whether we can or should articulate effectively the value of research and its outcomes? These issues are at the centre of the mission of the ILWS.

My personal research concern is how we respond to the “health” of our inland ecosystems and societies. What are the drivers and the responses? My preference is for a rethink of the ecological and social basis behind our agricultural and water infrastructures. This may require greater integration of research and research outcomes. In talking about this I have picked up some wider thoughts. A few are listed below.

• How do we deal with problems when the facts are uncertain, the values in dispute, the stakes high, and the decisions urgent?

• Do we need to deal more with alternate hypotheses or multiple hypotheses; how do we relate hypothesis-based approaches with those that are not based on hypotheses?

• How do we integrate information from multiple knowledge sources when dealing with systems that are non-linear, multi-directional, multi-scaled, and observer-dependent?

• Can we separate the consequences of climate change from climate variability and from wider anthropogenic impacts?

These statements are abbreviated and I doubt there are single answers to the questions that we can all pose in response. I suggest that to achieve our mission we could do worse than place these and others on the table with our partners and jointly frame the research and the integration that is the core of our remit.

Ecosystem services can include carbon storage by vegetation to help regulate climate, pollination of crops by native insects, waste decomposition by bacteria and flood mitigation by forests. Regional and global estimates of the economic value of these services range from Billions to Trillions of dollars. The Millennium Ecosystem Assessment, a major undertaking by the world’s scientists, acknowledged the importance of ecosystem services, but concluded that most were poorly understood and under substantial threat. ‘Service-speak’ increasingly permeates policy documents, yet we lack fundamental information about how services are generated, what affects their delivery, who the beneficiaries are (and how they benefit) and how services should be valued. In particular, we have little knowledge of the cost-benefit trade-offs of different land management strategies relative to production and conservation outcomes.

A handful of studies have begun to address one of society’s most crucial research agendas. Case studies in Europe have demonstrated the importance of native birds in effecting waste decomposition in rice fields and dispersing seeds in urban parks. In North America and the tropics, native bees play a critical role in pollinating a variety of crops including watermelon, sunflower and coffee. However, many more local case studies are needed in a variety of environments across the globe that focus on a diversity of organisms and services. We then need to synthesise this information to start developing general theories about how services are generated and what impacts their delivery. However, time is short and management decisions need to be made now before a comprehensive set of case studies can be assembled.
At regional levels, management of ecosystem services may be facilitated by focussing on the ecological characteristics of species and how these might contribute to service provision. For example, in orchards that might benefit from insect pest control by birds, we need to ensure that insect-eating bird species that are likely to forage in orchards are provided with the necessary resources to facilitate the delivery of this service. A case study in Europe has already demonstrated that certain birds control insects in apple orchards if provided with nest boxes for breeding. We need to ensure that the right types of species occur in the areas where they are most needed. We could also change land uses to take advantage of potential available services. Service potential could be ascertained from species' ecological characteristics. Particular land uses would occur in regions where species already exist that have the greatest potential for providing desired services.

The concept of ecosystem services offers a fantastic opportunity to link research and land management agendas across disciplines, as it can incorporate ecological assessment of service-providing organisms, economic and social valuation, and cost-benefit trade-offs of different land management strategies for both the landholder and society. What we need now is a large, national-level, interdisciplinary research effort to fast-track our understanding and protection of the services that support human life. A/Prof Luck’s views on Nature’s Services appeared in Science Alert on June 3.

ILWS RESEARCH IMPACTS

Research for Development: Improving upland livelihoods and land use in Laos

Over the last six years, social research conducted by Dr Joanne Millar and colleagues from the Lao National Agriculture and Forestry Extension Service has contributed to significant improvements in the lives of farming households in the uplands of Laos. Working with local extension staff, the research has trialled, evaluated and improved a range of extension methods to engage farmers in better livestock management. Small scale livestock production provides good returns with less labour input than traditional slash and burn agriculture which is damaging the fragile mountain environment.

Over 3,000 farmers are now using their own forages to fatten pigs, goats, cattle and buffalo for local and export markets. Income is used to educate children, treat the sick and elderly, improve living conditions, fund cultural events or save for the future. Some farmers have been able to accumulate wealth by progressing from small to large animals. For women, the labour saving has enabled them to spend more time in other income generating activities such as handicrafts, non-timber forest products and retail. Many families are now reducing forest clearing to grow upland rice as they have the means to buy rice and other goods.

Another major impact of the research has been the capacity building of 40 government staff in participatory research and extension methods to the point where they are now training and mentoring new staff across five provinces. National staff have also gained skills in action research methodologies and a greater understanding of how to gain impacts from livestock production. For more information and list of publications, go to http://www.csu.edu.au/research/ilws/about/members/millar.htm

The team met with researchers from the College of Hydrology and Water Resources, the State Key Laboratory of Hydrology-Water Resources and Hydraulic Engineering, the National Research Centre for Resettlement as well as the Bureau of Hydrology and Water Resources of the Yangtze River (CWRC). Key contacts include Prof Liliang Ren (Dean), Prof Qiongfang Li (ecohydrology), Assoc Prof Ruan Renzong (GIS and remote sensing), Prof Shi (social impacts of displacement), Prof Yiqing Guan (Vice Director International office) Mr Li Shu Ming (Chief Engineer CWRC). “Because all students at Hohai need to speak English to be accepted into the university, we found it easy to communicate and were able to have good, in-depth discussions,” says Robyn.

Hohai and CSU have very similar research interests as the catchments and river systems in China are affected by many of the same issues that CSU researchers are examining, such as the hydrological, ecological, social and operational impacts of river regulation. Research was discussed in: GIS and remote sensing and its role in water related research; effects of regulated systems on the ecological function of the river and associated wetlands; social impacts of water resource management; and hydrological modelling of these systems.

“Researchers from Hohai have been involved in studies of the Three Gorges Dam on the Yangtze River that was built to provide hydropower, control flooding and improve navigation,” says Robyn. “The project has had negative impacts on the ecological function of the river system and social impacts on the people that were living in the region (over 1.3 million people have been relocated as a result of the dam).”

“The meeting was excellent with lively discussion and a real willingness to collaborate in the future. In particular, there are immediate opportunities for staff and research student exchanges, co-authored papers, and co-supervision of PhD students. We also discussed opportunities to develop a joint bid for large multi-disciplinary research project in the future.”

The CSU delegation with their Chinese hosts

A/Prof Robyn Watts with Profs Li and Chen and their PhD students involved in ecohydrology research
WORKING TOGETHER

“Ways that we can work together” was the informal theme of a meeting between the Institute’s director Prof Max Finlayson, associate director A/Prof Robyn Watts and a delegation from the International Centre of Water for Food Security which is based at the University’s Wagga campus. IC Water acting director Dr Mohsin Hafeez, business manager Richard Pillow and Dr Masond Edraki met with Max and Robyn on May 29 at Thurgoona to brainstorm ideas for future collaborative research projects.

Some of these were:

- a project that synthesised all knowledge relating to the Murrumbidgee system as the basis for a “catchment” wide reference
- a project that looked at water accounting in the Lower Bidgee where there is 400 GL of “missing” water.
- a comparative study with the Sudd wetland in the Sudan on water evaporation and water for nature and food
- a project that identified when water releases can have multiple benefits with wins both for irrigators (productivity) and the environment (ecosystem services)
- an institutional and policy analysis around water management.

The meeting helped reinforce the strong links the Institute has with the Centre, many of whose members were previously in the Institute’s Water Systems discipline group. “Whilst the IC Water Centre is now separate from the ILWS this is no reason we should not collaborate,” says Max. “In fact, we should be building on our combined strengths and working together on the many water problems that we face nationally and internationally. We have many skills and a lot of experience.”

Mohsin says he is keen to develop joint projects with the Institute utilising the specialist skills of the two centres. Ways he sees that happening include joint supervision of PhD and Honours students and joint applications for ARC Discovery Grants.

HILLSLOPE EROSION

Adjunct A/Prof Peter Kinnell from the University of Canberra’s Institute of Applied Ecology presented a seminar on “Rainfall erosion processes and prediction on hillslopes in catchments” as part of the School of Environmental Sciences’ Seminar Series on May 28 at the Thurgoona campus. A/Prof Kinnell talked about the forms of erosion on hillslopes and the erosion mechanisms associated with them. He discussed the Universal Soil Loss Equation approach, a modelling tool used to predict hillslope erosion at the catchment scale.

VC VISIT

The leader of the Institute’s Communication, Arts and Education group, Dr John Rafferty had plenty of opportunity to discuss his plans for an “inland living experience” at Thurgoona with the University’s Vice-Chancellor Prof Ian Goulter and Head of the Albury-Wodonga campus, Prof Gail Whiteford on July 15 during a two hour meeting. “There is excellent potential for CSU to expand its outdoor learning environment at Thurgoona,” says John who took Ian, Gail and research assistant Angela Baker, on a tour around the wetlands and bush setting. Of particular interest was the “bush furniture” seating and tables made from timber from the site – that Facilities staff at Thurgoona, Ian Hume, Laurie Till and Brenton Polkinghorne – have been creating and installing. “The Vice-chancellor was very impressed with the concept and endorsed efforts already made toward the project,” says John. “The concept will develop to be an asset for CSU and the community.”

SSP LEAVE

While on SSP in the first half of this year, Dr Paul Humphries spent six weeks in the US, visiting two zooarchaeologists (Ken Gobael at California State University, Bakersfield and Virginia Butler, Portland State University, Portland) learning techniques and philosophies behind reconstructing historic fish faunas using archaeological remains. He also visited David Lyle and his group at Oregon State University, Corvallis to give a seminar and discuss his research. He also spent some time with Kirk Winemiller at Texas A&M University, College Station, formulating ideas for a review paper on ‘overfishing and shifting baselines’. Paul then travelled to Austria, where he collaborated with Hubert Keckeis and colleagues from the University of Vienna, conducting research in the River Danube, investigating the dispersal of fish larvae from spawning grounds to settlement habitat. This included a short-term study releasing Chondrostoma nasus larvae from known spawning grounds and tracking them as they moved down through nearby juvenile habitat, and a 10-week investigation of the lateral distribution of fish larvae in relation to near-shore hydraulics. The work at the University of Vienna has, up to this date, concentrated on settlement and habitat use, rather than movement. Paul gave six seminars during his time overseas.

IN THE NEWS

Institute members are continuing to receive excellent regional and national media coverage. For a full list of media hits over the past three months please go to the Institute’s web site at http://www.csu.edu.au/research/ilws/news/index.htm and click on ‘In the News.’
Tony comes across as an intense man, able to break into a smile every now and then but “driven” when it comes to helping his fellow human beings wherever he can, and doing whatever he does as well as he can. This drive has led him to a life where he has worked in 17 countries over the last 18 years. He chuckles when he muses that "for over 20 years either a personal computer or a trusty laptop have seldom been more than two and a half metres from my head" when he sleeps, and you know he isn’t exaggerating for the sake of the story.

Tony has worked for such organisations as the World Bank, AusAID, Asia Development Bank, CARE, the ACF and World Vision Australia, professional consultancy companies, and “NGOs from every colour and complexity including environmental organisations like Greening Australia, the politically correct and the Christian humanitarians.” In development and emergency situations. “Development work has predominantly been one of short-term contracts with a high turn-over in staff,” he says.

The real “turning point” for Tony was in 1983 after he worked as a horticulturist in Saudi Arabia. It was long hours and as Tony says, he made a “fistful of dollars”. But I never quite before had seen how bad the conditions were for third world people working in that situation,” he says. “It was a real struggle for me to understand how an overtly religious country like Saudi, could tolerate such extraordinary inequities and a hierarchy of brutality towards people, most particularly the unskilled at the bottom of an explicit pile.”

On his return to Australia from Saudi Arabia, Tony did a Bachelor of Social Science (Socio-Environmental Assessment & Policy) at RMIT and then a Masters of Landscape Architecture (Environmental Planning) at the University of Melbourne. After completing his Masters he took on a position in 1990 as an environmental planner working with 16 Aboriginal communities in Central Australia “doing the very same things every new Government trumpets, building housing for Aboriginal people, with myself and the team asking how can how can we make this more environmentally and culturally appropriate.”

When that contract ended, he “started the regional office of Greening Australia in Central Australia.” The biggest project he worked on in his three years with Greening Australia was a management plan for a 60ha remnant Coolibah Swamp within the urban area of Alice Springs. This was the impetus for his doing a PhD with Charles Sturt University which, after he took up a two year position as an environmental program planner with the Eritrean Environmental Agency in Eritrea, evolved to research that focused on desertification issues. For various reasons, including consultancy work he undertook in various countries and in Australia, renovating two ranges from capacity building to project design, monitoring and evaluation.

The frustrating thing is you can only give advice, people don’t have to take it,” says Tony. “I’m a very practically orientated person. Indeed my link with the University is awkward because I’m not a born academic. I’m much more fascinated with how to make ideas work on the ground. I’m always quietly impressed and enthusiastic about the sort of activities that go on within the Institute, but I’ve always got a keen eye that looks for the ‘so what, what’s making a difference’ not to the research organisation but to people’s lives.”

Last year Tony spent two months on Kirimitati Island, in the Republic of Kiribati just south of Hawaii working on a project design for a water supply and sanitation project for the island. “It is a fascinating place – one of the epicentres for trans-migratory birds that travel from Alaska to Tasmania and the South Pole; a stunning seasonal bird colony,” says Tony. “James Cook landed there in 1777 and it’s also where the atom and hydrogen bombs were tested in the 1950s and 1960s.” Also in 2007 he spent two months on a World Bank project in Vietnam as a member of a team designing an agricultural diversification project covering 12 different provinces in the south and centre of the country, looking at the second phase of a five year project.

But in between his work in Indonesia and other countries, he has managed some collaborative work with ILWS researchers. In 2006 he completed the field work on a climate change project with Dr Rik Thwaites - “Climate change impacts and adaptation in North Central Victoria: Landholders’ Perspective” and with Dr Digby Race in Bali last year on an ACIAR project - “Delivery of Social and Community Training Workshops in PNG and Indonesia.”

At 53 years of age, Tony says he is constantly looking for more balance in his life and possibly less travel. He is keen to do more work with the Institute and ultimately relocate to around Albury-Wodonga because he enjoys the “richness of the [the Institute] environment...the breadth and the ideas.” “Charles Sturt University, from what I understand, is one the universities that is locked into the regional community’s needs, probably because of its location,” says Tony. He describes his work overseas as “challenging but very draining and disorientating from the society I live in, so I have to work at maintaining balance in my life.” One way he does that is by playing golf. “I’m a golf tragic,” he laughs.

TRAVEL GRANTS

The Ecology and Biodiversity Group has awarded travel grants to members to present papers at conferences. They were:

 Ian Lunt (Joint International grassland Conference & International Rangelands Conference); Rachel O’Brien (Spatial Accuracy 2008); R. Keller Kopf ( Australian Marine Sciences Association and New Zealand Marine Science Society Joint Conference); Nicole McCasker (American Fisheries Society –32nd Larval Fish Conference); Anna Burns (International Congress of Entomology); Maggie Watson (2008 & ARC/NHMRC Research Network for Parasitology Annual Conference); Robyn Watts (International conference on Implementing Environmental Water Allocations); Cathy Car (Australian Entomological Society’s 39th AGM and Scientific Conference) and Gary Luck (Quantifying the contribution of organisms to the provision of ecosystem services).
Dr Laura McFarland may well describe her goals as "idealistic" but they are goals that fit snugly within the Institute’s ideals.

Laura, a lecturer in early childhood education with the Murray School of Education, is a new member of the Institute’s Communications, Arts and Education discipline group. For the future she would like to focus her research more on environmental/nature education of young children. Laura says she became a CAE member to make connections with others interested in the environment and educational environment.

“I am really interested in research in environmental education with young children,” says Laura. “I think it is really important to start with children as young as possible, not waiting until they start school. Even two years old is not too young to start teaching children about their environment.” One of the ways Laura advocates doing this is by including gardening and nature studies into an outdoors curriculum for young children. "Far too often the outdoors environment gets overlooked,” says Laura who has written two journal articles focussed on more use of the outdoor environment with young children. "Children are just sent out to play but I think the outdoors environment should be used carefully to construct learning experiences with as much effort put into the outdoors environment as the indoor one. Children can learn just as much outdoors as indoors, if not more. For example, they can get gardening experience and nature learning which lead to other things such as cooking."

Laura says many children today don’t get those experiences at home. “A lot of the time children don’t know where their food comes from, that much of it starts from a seed,” she says. “And there are many pre-school and childhood centres who don’t even have dirt and grass....” Laura has plenty of experience when it comes to understanding how young children learn. Not only has she an academic background career in this area, at 34 years of age she has four children - Lainy, 14, Foster, 12, Nolan, 8 and Wendell, 6. “Given that academia is quite stressful and busy at times, the thing that is driving me is that I feel I am having some input into the future teachers of my children, that I am making some kind of difference,” says Laura who grew up in Houston, Texas.

She did her undergraduate studies - Bachelor Degree in Psychology - at the University of Texas, Austin. Her graduate work was in human development and family sciences with her doctorate the development of father/infant attachment. While at graduate school she specialized in the Murray School of Education, and is a new member of the Institute’s Communications, Arts and Education discipline group. For the future she would like to focus her research more on environmental/nature education of young children. Laura says she became a CAE member to make connections with others interested in the environment and educational environment.

The team has identified a number of key features for beneficial and enduring forestry partnerships. These included:

- Growers contracting experienced ‘middeners’ as brokers to act on their behalf
- Growers being aware of the realistic costs of forest management
- Industry being aware of how forests contribute to the resilience of rural livelihoods
- Industry being aware of how forest benefits can be accessed by paying the local community for tree management activities
- Both partners being transparent during the negotiation process and after a contract had been agreed.

"If fair and beneficial contracts are negotiated, then both partners are more likely to be committed to their relationships, place a greater value on Indonesia forests, and therefore reduce the appeal of exploitative and illegal forestry,” says Digby. He says while the team were pleased with the results achieved during the project there were still many unanswered questions in terms of the details of beneficial, fair and secure partnerships for a specific district and different partners. CSU researcher Hugh Stewart was also part of the research team, and expects to complete his PhD in October this year. “We are exploring how further research on this topic can be undertaken,” says Digby. The project’s six newsletters are on the Institute’s web site at www.csu.edu/research/ilws/research/.

**SUSTAINABLE FORESTRY**

**OVERSEAS RESEARCH**

**LIVESTOCK DEVELOPMENT**

Dr Joanne Millar and Anne Stelling are conducting research on the effectiveness of government and non-government partnerships for rural development by evaluating a livestock development alliance in Laos. Program managers and field staff from World Vision, German Agro-Action and Christian Relief Services were interviewed in July 2008 along with government staff involved in the ACIAR project, “Forage legumes for supplementing village pigs in Lao PDR.”
PRO FILE

You wouldn’t want to make the mistake of putting Dr Parikshit Kumar Basu (or PK as he is known) into the economist ‘box’.

He may be a member of the Institute’s Economic and Regional Development group and have started his career as an economist but as he says, he “came out of the box of economics” a long time ago. Accordingly he has diversified greatly and now his areas of research interest include finance, economics, socio-economic development and management.

PK, who is based at the University’s Bathurst campus where he is a senior lecturer in finance and economics with the School of Marketing and Management, is delightfully open and charming. He and his family have lived in Australia since 1995 and return regularly to their homeland of India. “In spirit I am an Indian and I don’t deny that,” says PK who did his Bachelor of Economics (Honors) and Masters in Economics at Calcutta University, India and PhD in Financial Economics at Mumbai University.

PK worked in the corporate sector for 18 years. He spent 13 years with India’s largest financial institution, the ICICI Ltd. (Industrial Credit and Investment Corporation of India); four years as Investment Advisor with the Tourism Promotion Authority in Papua New Guinea; and one year with Brisbane Tourism as Manager of Development and Planning. “I didn’t plan on coming to Australia – it just happened,” says PK. “I enjoy travelling and when the opportunity presented itself I took it.”

His introduction to the academic world came in 1997 when, as a community activity, he organised a large symposium, jointly sponsored by the Queensland Government, Queensland University and the India-Australia Society, commemorating 50 years of Indian economic development since its independence. As a result of the successful symposium, PK was invited to lecture on a casual basis in the economics department at Queensland University. The following year he got a two year contract lecturing position with Griffith University and in 2001 took on a position as a lecturer with CSU. Since September last year he has been Associate Head of School, and acted as Head of Bathurst Campus on several occasions during 2007-08.

PK, who has a number of research projects on the go, says he does research “for fun. I do it because I like it. If I like something I do it. If I don’t, I won’t.” For many of his research projects he is part of a team that includes colleagues Dr Richard Sappey and Prof John Hicks. These projects include:

- Regional Australian’s labor market
- The shortage of nurses in regional Australia and the associated problems (also includes Heather Leatham from CSUs School of Nursing)
- China-Australia relationships (an on-going study)
- Regional sports focussing on soccer

PK is involved in research on India’s financial systems with colleagues from other universities. He is also doing a study on the relationship between HSC results and first year level performance of CSU students and its impact on retention rates. He also did research on leadership management.

The projects are at various stages. A number of papers have been done for the regional labor market project (which was funded by a CSU Small grant) and the team are about to do a quantitative study so they can target a better journal. “Our focus was on older people and we found that, there are more older people still active in the regional labor markets compared with urban areas,” says PK. “This is mostly because of the farmers that are still working. This has policy implications for aged care facilities and related matters.”

Research on the project on the shortage of nurses, funded by the ERD group is moving well. Recently a questionnaire survey of nurses from Dubbo Base Hospital was completed. Results need to be analysed and compared with results from similar surveys conducted earlier. PK says the research on regional sports, a non-funded project, is being done because participation in team sports is declining in Australia in favour of individual sports such as the gym and tennis. Hundreds of players, coaches and managers involved in soccer in Bathurst were surveyed and interviewed last June/July and that data is now being analysed. “We are interested in knowing the possible reasons of such decline and what effect this decline could have on the social fabric of communities,” says PK.

Data has already been collected for the student retention project. PK is also part of a team that includes Prof Mark Morrison, A/Prof Geoff Bambery, Dr Branka Krivokapic-Skoko and Prof Jock Collins from the University of Technology Sydney that are putting together a large multi-disciplinary project looking at Indigenous business operations in Australia. In February this year the vice-chancellor launched an edited book of PKs (jointly with A/Prof Grant O’Neill and Prof Tony Travaglione) ‘Engagement &Change: Exploring Management, Economic and Finance Implications of a Globalising Environment’ which came about as a result of the 3rd International Conference on Contemporary Business at Luera in the Blue Mountains in 2006.

PK, who is 54 years of age, says his goal in life is to “enjoy the life and remain happy”. He has a son, Anindo, 22, who is in his fifth year of aeronautical engineering degree with the Australia Defence Force Academy (ADFA), and a daughter Avantika, 19, who is doing engineering in photovoltaic and solar energy at the University of NSW. His wife Saswati is doing her PhD on the role of leadership in engineering in photovoltaic and solar energy at the University of NSW. His wife Saswati is doing her PhD on the role of leadership in engineering in photovoltaic and solar energy at the University of NSW. His wife Saswati is doing her PhD on the role of leadership in creating social capital in voluntary organisations in India at UTS, Sydney. PK acknowledges, for him, community is all-important. It is one of the reasons he particularly values his association with the ERD group and the Institute.

“I like being involved in, and being part of, a well-run organisation like the Institute, in being part of the group,” says PK. “I think being part of a community is one of the basics of life. I don’t need big funding for the kind of research I do, but there is a sense of security in knowing that resources are available if needed. My focus on ILWS is mainly through the lens of ERD and I’m totally satisfied with it so far.”

PO STG RA DUA TES

Neil Ward

New Masters student Neil Ward is focussing his work and his study on what he sees as a “really serious gap” between policy and practice when it comes to Indigenous people being involved in the management of public lands in south eastern Australia.

“The problem I see is that lots of the policy statements and high level decisions talk about involving Indigenous people in a more meaningful way that reflects their spiritual, cultural, social and economic interests in the land,” says Neil who is manager of the Murray Darling Basin Commission’s Living Murray Indigenous Partnership Project.

Institute for Land, Water and Society connections.

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“But in reality most land managers involve Indigenous people pri-
mally in the management of archaeological sites (burials, fire
hearth, scar trees); the ‘sticks, stones and bones’ kind of manage-
ment.” Neil agreed there were some exceptions.

“We often involve Indigenous people in advisory committees but
usually they are outnumbered quite heavily and under resourced.
NSW has also made forays into jointly owned parks which is a pro-
gressive step,” he says. “However I believe Indigenous people are
marginalised compared to what is written into policies and strate-
gies. Generally managers of public lands manage the landscape
without thinking and understanding that Indigenous people are an
integral part of that landscape and still have significant connections
to their Country.”

Neil has a strong background in natural resource management with
a focus on conservation. After graduating with a Bachelor of agri-
culture, he started off in National Parks in Victoria and by the mid
1980s was a senior policy officer in pest plants and animals based
in Melbourne.

However, deciding he would like to try a regionally based role in
natural resource management, he took on the position of regional
conservation and recreation planner for the Yarram region of Victo-
ria for five years. While in that position he first became acquainted with
and interested in Indigenous involvement in natural resource
management, initially in the management of a burial site at Jack’s
Lake, a nature conservation reserve on the coast east of Yarram in
Gippsland. In the late 1980s, he organised an Indigenous employ-
ment scheme at Wilson’s Promontory, the first formal Indigenous
involvement in the park since it was gazetted. In 1993 he headed to
the Northern Territory and Kakadu National Park as an operations
manager for what was then the Australian Nature Conservation
Agency. In 1995 he came back south to be regional director for the
NSW National Parks and Wildlife’s Western Region. Based in
Dubbo, Neil was responsible for a district covering 70% of the state.
60 national parks and reserves, a staff of 120 and the Kangaroo
Management Program in NSW.

“The Indigenous element was integral to my role since the NSW
National Parks and Wildlife Act also covered cultural heritage man-
gagement,” says Neil. In 2000 he left the department and worked as
a consultant for a few years on projects including the wine interpre-
tation centre at Rutherglen and a scoping study on Indigenous in-
volvelement in natural resource management for the MDBC. He then
worked for Adelaide City Council as manager of its parklands and
sustainability program. In 2005 he took on his current role for the
MDBC which seeks to involve Indigenous communities in the man-
agement of The Living Murray, focussing on the icon sites and the
river itself. He has recruited five Indigenous facilitators and works
very closely with the Murray Lower Darling Rivers Indigenous Na-
tions (MLDRIN) a confederation of Traditional Owner groups along
the Murray.

“Our program hopes to act as the conduit between the land man-
agement bureaucracy, the Traditional Owners and broader Indige-
nous community,” says Neil. “I looked around and thought why is
we always stuck in this cultural site management paradigm? Site
management doesn’t really take care of Indigenous social and eco-
nomic interests. It is certainly an important part of managing their
community,” says Neil. “I looked around and thought why are we
always stuck in this cultural site management paradigm? Site
management doesn’t really take care of Indigenous social and eco-
nomic interests. It is certainly an important part of managing their
culture, but Indigenous people’s connection to their Country is much
richer and more complex than is reflected in site management
alone.”

In Canada, Neil came across the discipline of Use and Occupancy
Mapping which is often a pre-requisite for Land Title and resource
management negotiations for First Nations people in that country.
What he liked about the process was that it focussed on Indigenous
people’s contemporary connection to the land and didn’t rely on
what had happened in the past. “If you understand what is important
to people now, you have something to build on and incorporate into
planning for the future,” says Neil who describes the mapping proc-
есс, at its most basic level, as a survey technique that looks at a
range of categories that illustrate how an Indigenous community
uses the land i.e. the different types of fish caught, where they hunt
kangaroos, collect turtle eggs, collect firewood or wood for construc-
tion, their camping sites etc.

“You can get an idea, spatially, of how people are using the land.
The Indigenous community can then take this information to land
managers and start negotiating on how to manage the land eg.
when areas need to be flooded and when they need to be left dry
for people to have access. It opens the way for a more meaningful
dialogue between land managers and Indigenous Traditional Own-
ers of that Country.” As the process is a “brand new approach,” Neil
and MLDRIN have introduced it slowly to Indigenous communities
over the last year and a half. Some of the leaders of communities
which had strong concerns about the process were taken to Can-
ada to meet with First Nations people, one on one, to discuss what
participating in a Use and Occupancy mapping process was like and
how the outcomes were used for their purposes. Pre-tests of the
methodology were conducted with individuals from two communities
along the River Murray before a pilot mapping project was under-
taken with one group of Traditional Owners.

“The idea is that if people are still concerned about the Use and
Occupancy mapping process, they can now talk to people locally
who were part of the pilot group,” says Neil. Currently the data de-
rivered from the pilot is in Canada being digitised. When the maps
return, they will be tangible evidence of these individuals’ connec-
tions to their Country. “This will be a powerful message to natural
resource managers about how land is currently used by Indigenous
people,” says Neil. There are indications that the maps will also
have a role for Indigenous communities in recording family histories
and traditional knowledge sharing.

The next step is the training of local Indigenous people as data col-
lectors so Use and Occupancy mapping can be undertaken by Tra-
ditional Owner groups in all of the icon sites. Neil sees Use and
Occupancy mapping giving the broader Murray-Darling Basin com-
munity a much better understand IND of Indigenous people’s connec-
tion to the land. “It is a connection based on ancient activities but it is
real and now….Indigenous people have a unique value system that
will help us manage the land better and through working together
we contribute to the reconciliation process,” says Neil.

“Fundamentally I believe a reconciled Australia will be a much better
place for us all,” says Neil. “An Indigenous elder once told me that a
reconciled Australia will only come out of respect for each other’s
cultures. I am optimistic that Use and Occupancy mapping can play a
role in developing mutual understanding and respect as well as
being an excellent tool for Indigenous communities in negotiating
management of natural resources in the Murray-Darling Basin.”

Neil says he decided to do his Masters (with supervisors Dr Rik
Thwaites, Prof Allan Curtis and Dr Jim Birckhead) as a way of re-
viewing Use and Occupancy mapping in Australia with objective
“academic rigor”. “Because it is a new way of involving Indigenous
people in natural resource management, I am keen to know if it
really does make a difference. Then we will be in a tenable position
to recommend it be used elsewhere in Australia.” Neil hopes that
demonstrating that the methodology is effective may help give In-
digenous communities the confidence to use the tool, as well as
providing practical support to community efforts to undertake their
own Use and Occupancy mapping.

ILWS SUPPORT
A number of NSW and Queensland community, research, gov-
ernment and NGO groups have recently formed the Stock
Route Coalition, an organisation aimed at promoting greater
awareness of the grazing, biodiversity, cultural heritage, re-
creation and other values of Travelling Stock routes and Re-
serves. The TSR network is considered a critical asset to as-
sist species dispersal in relation to predicted climate change
impacts in agricultural areas of south-eastern Australia. Of
concern are comments in a recent review of Rural Land Pro-
tection Boards in NSW with suggestion some TSRs be trans-
ferred to the NSW Department of Lands for potential sale. For
more info contact Dr Peter Spooner or A/Prof Dave Watson.
After 34 years as a dairy farmer in north-east Victoria, Ian Coldwell swapped milk for academia, setting out to explore some of the questions that he had mulled over during his years in the paddock.

His questions of how farmers construct their identities and how that shapes their farming practices with respect to sustainability were the foundation for his PhD, which he is about to submit. With a wealth of research behind him Ian can now answer the questions and says debt, education, succession plans and the unknown twists and turns of life all contribute to shaping farmers’ identities.

Ian says his interviews with 32 farmers across the Riverina showed that debt, more than any other factor, determines the style of farming practiced. “Debt levels which have been exacerbated by this long drought have a lot to do with what farmers can and can’t do on their farms,” he says. Ian found that those who can successfully farm in sustainable (often labelled “alternative”) ways are almost always debt free. “They have more scope to experiment,” says Ian, “but those with big debt are locked into production targets, in order to generate the necessary income to finance bank repayments. The drought has placed enormous pressure on many farmers who are unable to service their debts and many are in a dire situation.”

Two very different styles of farming emerged in the course of Ian’s research. He labels the first ‘productivist’ which is characterised by high inputs, maximum productivity and efficiency. The second he calls ‘relational’ and describes it as a style of farming where farmers practice, or try to find, alternative farming ways that are more in tune with the environment, the land and other species. He says the differences between the farming systems were not so much in masculine identity or the way farmers see themselves but more about the differences in the knowledge and education that they draw on.

“The productivist farmers tend to look at a much narrower range that’s founded on economic rationalist principles – this knowledge comes from agribusiness firms, extension and it has built up over time as inter-generational knowledge transfer,” Ian says. “Whereas those concerned with sustainable principles tend to be more open to new knowledge possibilities and embrace a wider range to come up with alternative practices.”

The often thorny issue of succession raised its head in the study with Ian concluding that part of the reason many young people don’t return to take on the farm is because their fathers still want to have control. “Rather than having the input they crave, in many instances the young blokes are returning to carry out their fathers’ wishes,” Ian says. Other research backs Ian’s findings that there are lots of farms in their last generation and that it is difficult to find farmers in their twenties in the Riverina. However there are examples where the opposite is the case, where farmers are allowing their sons scope to follow their own paths. Ian found three such farms. “The fathers are still there being involved, but the knowledge and discourse these younger guys have brought to the farm has actually helped to change the old traditional identities of their fathers,” he says. This highlights that masculine identities are capable of being changed, they are not as fixed and rigid as older theories of identity might have thought. “People do change over their life course very much,” Ian says.

Ian contends that ‘relational’ farmers (described as open to ideas, who are prepared to listen to and be interested in other people’s views) are much more settled on farms and enthusiastic. Those that have a closed sense of masculinity (always want to be the boss and tell others what to do) tend to be more uptight, more worried and more inclined to see gloom. Ian is quick to say this is not based on analysis of personality types but the evidence is often that their businesses are teetering on the brink because they’ve gone with the “get bigger or get out” philosophy and are often debt ridden.

During the course of his research Ian says one experience turned his thesis on its head, and “it’s ended up quite different to what I first expected”. “On a visit to a farm I came across the farmer finding ways to let his sheep tell him how, and when, they were ready to be moved to another paddock,” he says. “That surprised me, how anyone can even think about what their animals were thinking, showed a passion for sustainable practices and was poles apart from the practices of other farmers.” But he says it’s the personal events, which can have a huge impact on farmers when they least expect it. “For example, divorce, sexuality which is hardly thought about, suicide, going broke, health problems, or children not returning to take it over,” he says. “I’ve searched out and looked for different situations and particular circumstances that men find themselves in.”

There are no universal laws for why men farm in certain ways. Rather Ian believes we need to look at the partial incidents in farmers’ lives, which come along and change life unexpectedly and even cause farmers to question whether their farms are sustainable any more. Ian did his PhD with the assistance of an Australian Postgraduate Award scholarship and is supervised by A/Prof Ian Gray, Ingrid Muenstermann and Tony Dunn. After a three year stint in Wagga, Ian has returned to live in Shepparton to put the finishing touches on his PhD and to teach distance education students with Charles Sturt University – by Kate Roberts

ALISON MATTHEWS
Wombats may well look slow and cumbersome but PhD student Alison Matthews is finding out that appearances can be deceiving.

Not only are they able to move very quickly over short distances, Alison has discovered that they can cover large distances, up to 4kms, at night. “They are a surprisingly challenging species to trap,” says Alison who is in her second year of a project supervised by Dr Peter Spooner, Prof Nick Klomp, and ecologist Dr Ken Green and principal research scientist Dr Dan Lunney from NSWs Department of Environment and Climate Change. For her project Alison is looking at the influence of climate change on the distribution and resource use of grazing mammals in the Australian Alps. For part of her research she has trapped and collared five wombats (Common Wombats- Vombatus ursinus) at Perisher Valley and Guthega in Kosciusko National Park.

Alison who was assisted by volunteer community members and environmental officers, caught the wombats using a combination of cage traps at the entrance to burrows and netting. The wombats were fitted with special collars so their movements can be GPS data logged and radio tracked, and ear tagged with a fluorescent tag so they can be identified at night. As wombats are nocturnal, netting was done at night, from 9pm to 1 or 2 am, and the traps checked between 4 and 5am. “For netting there were three of us,” says Alison. “One person to drive and spotlight, and two to go after the wombats who can run really fast over short distances. We’ve missed heaps… you have to use stealth.”

Alison with a collared wombat
Alison didn’t find the wombats aggressive “they just want to escape” but when they were caught and given an anaesthetic before the collar was put on, at up to 32kgs in weight, they are too heavy for her to lift on her own. Alison is back in the mountains tracking the wombats’ movements to discover how far they roam along and above the snowline (1500m) Last time she was out in the field in autumn, one male wombat was moving at night to the top of Mt Perisher at 2000m. Over a three week period that particular wombat covered 500ha and Alison was able to track him through four kilometres at “That’s about 10 times larger an area than we expected,” says Alison. “It’s a really exciting discovery.” The wombats also used at least six different burrows during the day over the three weeks.

Last year for her preliminary research to investigate how snow influences population distribution Alison monitored 42 plots at different altitudes along the snow line in summer and winter, checking for signs such as burrows, and tracks and droppings of grazing animals such as wombats, kangaroos, wallabies, rabbits, hares and deer. “The idea is that a lot of these animals are currently limited by snow with the deeper the snow the fewer the animals,” says Alison who stays out at the department’s research accommodation at Waste Point when she is out in the field. “So I’m trying to find out if it is just snow depth or if there other variables.”

She chose wombats because they are one of the few species that are active during winter above the snow line; and, from her population surveys, found there were many more at lower altitudes than at higher altitudes so therefore a good model species. This is the first time that Alison has worked on wombats, a species she finds fascinating. Before commencing her PhD with CSU (she has a science degree from Sydney University) Alison spent 10 years with NSW National Parks and Wildlife Service in a research group at head office in Sydney. There her focus was on terrestrial ecology studying bush rats, antechinus, koalas, brush-tailed rock wallabies and bats mostly in coastal forests.

She sees her current project as a wonderful mix of her love of the Alpine environment, cross-country skiing and her research work on mammals. She is hoping her project will lead to a better understanding of the affects of climate change on the Alpine environment. “The alpine ecosystem is pretty fragile and if climate warming causes the snow to recede we might see some of these grazing animals moving up the mountain which could impact on alpine flora,” she says.

PHD NEWS

Congratulations to Sue Hughes (principal supervisor A/Prof lan Lunt, A/Prof Dirk Spennemann) who successfully achieved her PhD titled ‘Remnants form the past: An exploration of historic planning policies and their effects on native vegetation cover in NSW (1824-1913). Sue is now working in Melbourne with ‘Context’ as a Heritage and Environment Consultant.


PhD student Maggie Watson presented a talk entitled "Exploring the real cost of parasites: a meta-analysis of experimental studies" at the ASP & ARC/NHMRC (Australian Society for Parasitology & Australian Research Council/ National Health and Medical Research Council) Research Network for Parasitology Annual Conference on July 8 in Adelaide, SA.

PhD student Emily Sharp gave a talk ‘Components of citizen-agency trust in bushfire response and recovery: Community member perspectives’ to Bushfire CRC researchers and fire management agency staff at RMIT on May 15. She also presented ‘Citizen-agency trust: Expectations, outcomes and experiences’ to a CFA Community Development workshop at CFA Headquarters in Melbourne on July 22.

Jodie Kleinschafer (supervisors Prof Mark Morrison & Dr Rod Duncan) has completed focus groups on household energy use in Port Macquarie and Wagga Wagga for her PhD.

Welcome to new PhD student Binod Prasad Devkota from Nepal. Binod is the recipient of one of CSUs two International Post Graduate Research Scholarships. He is on study leave from his position with the Ministry of Forests and Soil Conservation in Nepal where he was most recently based at District Forest Office Chitwan, adjoining the world-reknowledged Chitwan National Park in the southern part of Nepal. Binod (supervised by Drs Digby Race, Joanne Millar and Rik Thwaites) will be looking at whether or not a long term community forestry project in Nepal, operating during 1978 to 2006, has improved the livelihoods of rural people in the project area. This builds on his Masters Degree at the Australian National University seven years ago.

Congratulations to Julie Collins who has recently been awarded a Ph.D. for her thesis Caring for Country in NSW: Connection, Identity, Belonging (Supervisor, Dr. Jim Birchhead, Associate Supervisor, Dr. Johannes Bauer.) Julie completed her honours in the school in 1995.

VIBRANT RURAL AND REGIONAL COMMUNITIES

A two day workshop for the Institute’s third integration program—Vibrant Rural and Regional Communities—was held in Wagga, July 14-15. Twenty researchers attended and seminars were presented on a range of topics including social aspects of regional communities, climate change in regional Australia, and aging and social capital in regional Australia. The second day focussed on strategic planning with recommendations for the three sub-theme areas (social sustainability and quality of life; competitive regional business; and international development) with priorities recommended for project areas. A follow-up workshop by video conference will be held August 15.

RIVERINE ENVIRONMENTAL ASSETS INTEGRATION PROGRAM

There is a range of research projects underway within this integration program. Some are multi-disciplinary projects and others are discipline-based research projects that will provide knowledge to underpin future integrated research in this field.

Robyn Watts, Catherine Allen, Kathleen Bowmer, Ken Page, Darren Ryder and Andrea Wilson recently submitted a review of the environmental costs and benefits of pulsed flows to the National Water Commission (NWC). The report summarised current practice of pulsing flows, and discussed prospective best practice and areas for future research. This report was commissioned to provide a discussion starter for the NWC and the wider community to consider whether pulsed flows achieve environmental benefits, and if so, how they might be best implemented in river management.

Program members have received a CSU Program Development Grant ($4775) to write a research proposal “Developing strategies for improving the operation of dams and weirs” that will build on the outcomes of prior research. A workshop to develop this proposal will be held later in the year and researchers from IC-Water and partner organisations will be invited to collaborate on this project. Andrea Wilson, Max Finlayson, Remy Dehaan, Catherine Allan and Rod Rumbachs along with researchers from the EH Graham Centre have submitted a ‘Caring for Country’ grant application entitled “Integrating sustainable wetland management into agricultural landscapes”.

(Cont next page)
This project aims to raise land managers' awareness of wetlands on private properties, the role of wetlands in supporting landscape resiliency and biodiversity, the need for sustainable wetland management and how this can be integrated into agricultural systems.

Robyn Watts has been invited to lead a multidisciplinary team to write a chapter on ecosystem responses to river regulation in the Murrumbidgee River for the book "Ecosystem Response Modeling in the Murray-Darling Basin" to be published by CSIRO Publishing. Skye Wassens has also been invited to write a chapter on modelling of amphibian populations.

Congratulations to Anna Lukasiewicz (recipient of an ILWS integration PhD scholarship) for winning the best presentation at the Faculty of Science Postgraduate Seminar Day for her presentation “Social justice in Australian water institutions: how are principles of distributive and procedural justice incorporated into water allocation decision-making?” Anna’s supervisors are Penny Davidson, Kathleen Bowmer and Geoff Syme (CSIRO).

TRAVELLING STOCK ROUTES
Dr Peter Spooner presented a keynote address titled ‘Changing values of travelling stock routes (TSRs) in the 21st century’ at the Travelling Stock Networks: Biodiversity Highway of the Eastern Inland conference, held at the Australian Museum, Sydney, April 9.

INDIGENOUS CONNECTIONS
Dr Jim Birckhead was the guest of the Dept of Anthropology & First Nations Studies Centre at the University of Western Ontario, London, Canada, April 14 -23 where he collaborated with the University’s ‘Distinguished Professor of Anthropology’, Dr Regna Darnell, and other scholars with respect to their ‘Nomadic Legacies’ and ‘Ecosystem Health’ research projects. He gave presentations on his work on Indigenous values of water in Australia, native title, and Indigenous people and the resources boom, comparing and contrasting situations in Australia and Canada. He met informally with post doctoral fellows and graduate students working on similar issues in Canada, Norway and in South America.

REGIONAL DEVELOPMENT
Prof Mark Morrison gave an after dinner presentation on “Sustainable Regional Development” to a group of local government managers at a workshop run by the Professional Development Unit at CSU (Bathurst) on May 12.

IN CHINA
Institute adjunct research fellow Daryl McGregor (left) presented a paper entitled “Environmental Management in the Murray Darling Basin, Australia”, at the International Ecological Civilization Forum held at Wuyi University, Nanping City, Fujian Province, China on May 13.

While in China Daryl gave a lecture to students on “Your Challenge for the Future of China’s Environment”, on May 15.

PRESENTING RESULTS
Prof Mark Morrison and Jenni Greig have presented results of the ‘Constraints to the adoption of Market Based Incentives’ project to key research partners, including Northern Rivers CMA on May 15, Condamine Alliance Regional Body on June 12 and the Central West CMA on July 30.

SCIENCE IN THE BUSH
Dr Andrea Wilson presented a talk on Scientific Thinking in a Crazy World, and Dr Skye Wassens on The Search for the Smoking Gun at the Science in the Bush high school program at Wagga, June 24.

SPATIAL DECISIONS
Dr Rachel O’Brien gave a conference presentation “Visualising uncertainty in spatial decision support” at “Spatial Accuracy 2008”, held in Shanghai, China, June 25-27.

ATTITUDES
Findings from a national survey of attitudes to regionalism and federalism were released by Dr A. J Brown of Griffith University and A/Prof Ian Gray at an international conference on ‘The Future of Federalism’ held in Brisbane in July. During recent months, Ian has spoken at a workshop on the past and future of the National Party at The Australian National University; delivered a paper entitled ‘An Argument for Greater Priority to be Given to Spatial Analysis in Regional Rail Policy-Making’ at the annual conference of the Institute of Australian Geographers, and delivered a keynote address on rural social and demographic change to the annual conference of the NSW Farmers’ Association.

AGED CARE
A workshop was conducted with aged care providers in Bathurst on July 25. At the workshop, Prof Mark Morrison, Zelma Bone and Dr Rhonda Shaw (Centre for Inland Health) facilitated the establishment of a Peak Planning Body, “Bathurst Aged and Community Care”.

ENVIRONMENTAL SERVICES
Dr Joanne Millar attended an Australian Farming Institute seminar on “Estimating the Value of Environmental Services Provided by Australian Farmers” which showcased results of research conducted by Jeff Bennett (ANU), Rob Gillespie (Gillespie Economics) on July 28 in Canberra.

WAGGA ARTISTS ON SHOW
Two members of the Community, Arts and Education group have staged exhibitions at the Wagga Art Gallery during winter. Dr Andrew Keen, A/Prof at the School of Visual and Performing Arts (SVPA), held an exhibition of his work, Concrete Poetry. The stark white capital letters were placed on a white background in rows of four by four to spell out words, the visual to the verbal experience. The exhibition will also be shown at Queensland University of Technology and RMIT University, Melbourne, before heading overseas to the University of Westminster in London and the Museum of Modern Art in Ljubljana, Slovenia.

Julie Montgarrett also from SVPA has an exhibition of drawings and embroideries entitled ‘guessing games in borrowed spaces’ at the Wagga Wagga Art Gallery until Aug 17. Ms Montgarrett said, “The ideas and experiences that have informed the works have been partly shaped by close observations of local communities and the fragile regional landscape beset by cyclic drought; the vagaries of climate in crisis and the attendant social and economic impact of these changes.”

(Left) Julie’s piece “Slow Shift"


### BOOKS


Deforestation in the tropics is a major issue of global concern because of the value tropical forests have in limiting the greenhouse effect and in conserving biodiversity. Deforestation has also many ecological and socio-economic effects at local and global levels. This book provides two perspectives: (1) an informed account of the causes of deforestation at different levels of economy and reviews and discussions of certain non-forest sector policies, global environmental markets and biodiversity conservation; (2) this book analyses the direct, intermediate and underlying and/or policy-oriented causes for deforestation using data from regions from Latin America, Africa and Asia. The contents in this book will be useful also for analysing deforestation in temperate regions.

### CONFERENCE PAPERS


### REPORTS


**Birckhead, Jim, Greiner, Romy , Hemming, Steve, Rigney, Matt, Trevorrow, George, Trevorrow, Tom, & Rigney, Darlye (2008). Economic and Cultural Values of Water to the Ngarrindjeri People of the Lower Lakes, Coorong and Murray Mouth. Final Report prepared as part of the CSIRO’s Water for a Healthy Country Flagship Project.**

This collaboration combined research approaches from anthropology, cultural studies, economics, and drew heavily on Ngarrindjeri Indigenous knowledge to critically focus on the Murray River system water crisis and impact on the Ngarrindjeri community at its mouth and on the now environmentally degraded Coorong. CSIRO are now assessing the report and its recommendations with respect to developing environmental policies that better reflect Indigenous needs and interests in the Murray River system.

### REVIEW PAPER


### CONFERENCE POSTER


### NEWSLETTERS

The 2nd project newsletter (June 2008) on an ACIAR project “Extension Approaches for Scaling Out Livestock Production in Northern Lao PDR (EASLP)” has been published. View at [http://www.csu.edu.au/research/ilws/about/members/millar.htm](http://www.csu.edu.au/research/ilws/about/members/millar.htm)

### OTHER

**Prof Max Finlayson’s article on Impact Assessment and Wetlands featured in INFOWETLAND Vol 3 Issue 1, pages 6-10. English and Spanish versions available.** The newsletter is from the Ramsar Regional Center for Training and Research on Wetlands for the Western Hemisphere (CREHO), based in Panama City, Panama.

David Gilbey’s first full collection of poems *Death and the Motorway* has been published by Interactive Publications of Brisbane with had launches in Melbourne, Brisbane, Armidale, Tamworth, Albany and Wagga. The book is 105 pages and selects work from the last 25 years. The manuscript was completed while David was on SSP in 2006, when he travelled to UK, Europe, USA, Japan and China, travelling and writing. The poems are written in a free verse, vernacular style and the subjects range from family, Wagga, CSU, international travelling, love, music, art and ceaseless wordplay.
**RESEARCH GRANTS**

*The ecology and conservation management of the endangered Regent Parrot along the Murray River in NSW and Victoria, NSW Department of Environment & Conservation.* Dr Peter Spooner, A/Prof Dave Watson, A/Prof Gary Luck and Dr Damon Oliver (NSW DECC) $150 000 for postdoctoral student to compliment related ARC project (below) (2008-11)

**Managing agricultural landscapes to maximise biodiversity gains: the case for the regent parrot.** Australian Research Council (ARC) Linkage grant; Dr Peter Spooner, A/Prof Dave Watson, A/Prof Gary Luck, Mr David Valentine (Select Harvests) and Dr Ian Temby (Victorian Department of Primary Industries) $255 000. Select Harvests ARC industry partner contribution – $96 000. Funding will support two APAI PhD scholarships and other research activities in the Robinvale area, Victoria. (2008-11)


**Sustainable Management of Murray Spiny Crayfish.** MDBC. A/Prof Robyn Watts and Sylvia Zukowski $50,000. (2008 - 10) Grant is funding a top-up scholarship for Sylvia's PhD and also a study comparing Murray Spiny Crayfish populations in Talbingo Reservoir and Jounama Pondage (both closed to recreational fishing) with the population in Blowering Dam (opening to fishing).

**INTERNAL GRANTS**

*Investigating drinking water quality available to rural Australians in NSW not connected to regulated water.* Faculty of Science Seed Grant – Andrea Crampston, Angela Ragusa & Natalie Milic $5920 (2008-9)

**COMING UP**

**AUSTRALIAN FOREST GROWERS NATIONAL CONFERENCE**
Forestry for a better future: Climate, Commerce and Communities Albury Wodonga, 19th to 22nd October 2008. For further details contact the conference coordinator Bradley Hayden on 02 6023 6300 or email afg@ccem.com.au or visit www.afg.asn.au

**DEMOGRAPHIC CHANGE FORUM**
The changing nature of our rural neighbourhoods is the topic of the *Demographic Change* Integration group’s first public forum planned for Wednesday, November 26, 2008. Leader of the integration group Gary Luck said the purposes of the forum are to inform stakeholders of current research on the changing nature of rural neighbourhoods (e.g. tree change, population loss, change in land use); to share experiences of changes and the implications of these changes; and to gain feedback from stakeholders on future challenges raised by key demographic and land-use changes. Speakers will include Prof Jim Walmsley (UNE), Dr Neil Argent (UNE), Prof Allan Curtis (CSU) and rural consultant Cathy McGowan. The forum will be held from 9am to 4pm at the CD Blake Theatre at CSU Thurgoona. Contact Kate Roberts on kroberts@csu.edu.au for more information.

**ECHOES OF THE PAST, VOICES OF THE FUTURE**
In the mid 1860s many hard-working German farmers left South Australia to select cheap farming land in the fertile Southern Riverina. Through photographs (taken by A/Prof Dirk Spennemann), this exhibit traces the extant remnants of German communities like Jindera, Gerogery, Walla Walla and Edgehill and examines what role their past may play in the future. *Echoes of the Past.* Voices of the Future is an exhibit of 20 sepia images of German sites, and homesteads in the Southern Riverina. Dates: September 10 to October 5, Lane Gallery, Albury Library and Museum. Public lecture Saturday, September 13 at 11am

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