New Projects

Institute researchers are involved in a new project which aims to increase community resilience. The **B SAFE - Blue Mountains Sustainable Approaches to Fire and Emergencies - A Community Action Model Building Resilience, Improving Preparedness and Enhancing Self Responsibility** project, with Dr Val Ingham and Dr Sarah Redshaw, has been funded by the Ministry of Police & Emergency Services’ Community Resilience Innovation Program. More on page 2.

SSP leave in Africa

Associate Professor Rosemary Black has recently returned from six months Special Study Program (SSP) leave in Africa and had lots of adventures and amazing experiences.

Her SSP leave comprised of two parts - the first involved research for the African Wildlife Foundation (AWF) in Botswana and Rwanda, the second part collaboration with staff from the University of Botswana and NGO Birdlife Botswana. One her study sites was Sabyinyo Silverback Lodge from which she had the opportunity to see the famous mountain gorillas. More on page 10.

Events

The official launch of the Institute’s two major environmental water monitoring projects funded by the Commonwealth Environmental Water Office (CEWO) was held on Wednesday, February 18 at the Albury-Wodonga Campus. Presentations were made by CSU’s Vice Chancellor Professor Andrew Vann, Mr Ben Docker, from CEWO, and the leaders of the two five year projects - Associate Professor Robyn Watts, for the Long-Term Intervention Monitoring Project in the Edward-Wakool River System, and Dr Skye Wassens, for the Long Term Intervention Monitoring Project in the Murrumbidgee River System.

Professor Vann said the projects “ticked all the boxes” in terms of what research he would like the University to be delivering. More on page 6.
From the Associate Director

As incoming Associate Director of ILWS I will draw on a range of life experiences; many of you will not have heard of me, so below I outline some of my past by way of introduction.

My undergraduate degree in agricultural science facilitated the creation of Cathy the Government Agency Extension Officer, a role I revelled in for about 14 years until I heard the siren call of academia.

As public servant I ‘delivered’ programs designed to protect soils, water, vegetation and biodiversity, and the only way this ever seemed possible was to facilitate community participation and shared learning activities. Despite involvement in some excellent community based learning and action projects I developed doubts over the efficacy and equity of the institutional arrangements in my field.

Morphing to Catherine the Academic provided the privilege and responsibility to explore those and other institutional arrangements in a rigorous way, framed by theories related to adaptive management, systems thinking and participatory processes.

Since 2004 I have been a teaching and research academic in the School of Environmental Sciences on the Albury Wodonga Campus, and a member of the Johnstone Centre/ILWS. As a researcher interested in social and institutional arrangements I have worked with public and private managers of land, water and biodiversity, mostly in south eastern Australia. My post modernist, constructivist ideology constantly drives me to explore below the superficially solid ground of rural and regional environmental and community practice. I seek better understanding, and better practices, to help humans and our environments cope with uncertain futures.

I think the ILWS is exciting. I see it as a system that is actively facilitating synergies among researchers, and between researchers and the wider communities to which they belong. Great things have emerged ILWS system interactions, and part of my role in 2015 is to ensure some of the exciting systems stories are retold in the Centre re-accreditation documentation. It is not just retelling to celebrate; we have lessons to share regarding integrating and collaborating that may provide other groups with guidance for navigating the uncertainties and complexities of the Anthropocene. In various ways around the Institute we are integrating discipline areas, institutional boundaries, cultural boundaries, researcher ranks, and research paradigms, and by doing all this we are beginning to model and test systems thinking.

I look forward to hearing your stories of how this modelling and testing is advancing knowledge, understanding and above all, wisdom.

Dr Catherine Allan
B AgrSci (Melb), MNat Res (UNE), PhD (CSU)
http://csusap.csu.edu.au/~callan/

New Projects

New Grants

B SAFE - Blue Mountains Sustainable Approaches to Fire and Emergencies - A Community Action Model Building Resilience, Improving Preparedness and Enhancing Self Responsibility.

This $88,867 project, funded by the Ministry of Police & Emergency Services’ Community Resilience Innovation Program, was awarded to the Katoomba Neighbourhood Centre. CSU is being subcontracted ($63,847) to deliver the majority of the project. Other partners are the Springwood, Lower Mountains and Mid Mountains Neighbourhood Centres, and Mountains Outreach Community Services.

Researchers/investigators are ILWS member Dr Val Ingham and Dr Sarah Redshaw, ILWS research associate.

The project builds on the stand alone preparedness programs delivered in the Blue Mountains Local Government Area since the 2013 Blue Mountains bushfires. It will develop improved tools and indicators based on the most successful components of the existing programs. It will also draw on the Community Connections project (2014-2015) which involved a survey of Blue Mountains residents last year.

The major project outcome will be implementation of the proposed Blue Mountains Neighbourhood Community Action Framework for Natural Disaster and Emergency Preparedness.
Sustainable Business Development in Regional Australia

Project Update
A major three year project on Indigenous business undertaken by members of this SRA was completed in 2014. The $454,682 project, ‘Determining the Factors Influencing the Success of Private and Community-owned Indigenous Businesses across Remote, Regional and Urban Australia’ was funded by an Australian Research Council Linkage Grant. A final report has been submitted to the ARC. (Details).

The results from the study suggest that community/cooperative owned enterprises are outperforming privately owned businesses in terms of the Growth Index, sales revenue and employment. However like urban businesses, a higher proportion of privately-owned businesses are reporting increased sales and profit. Interestingly, remote enterprises are achieving the highest levels of business performance, though a higher proportion of urban businesses are reporting increased sales and profit.

Almost all businesses expressed overall satisfaction with their achievements in running the business although not all of them are making a profit. Indigenous culture both enables and constrains Indigenous business success. Indigenous entrepreneurs who operate private enterprises, community-owned enterprises or co-operatives are motivated to achieve income and opportunity not only for themselves, but for their family and their community.

Indigenous entrepreneurs also put a high value on serving community needs. Business networks are very important for growth of Indigenous businesses; however their importance differs according to the type of network, the age of the business and the gender of the entrepreneur. Access to finance was one of two perceived challenges related to business activities (the other was promotions and marketing) - many Indigenous entrepreneurs are not seeking loans because of a perceived likely lack of success. Past and existing policy support for Indigenous entrepreneurs serves the needs of already large and successful Indigenous enterprises. Indigenous entrepreneurs in remote regions face the biggest constraints. Two specific disadvantaged groups of businesses identified in this research are female-run businesses and those located in remote areas.

Research Activities
Labour market projects
Prof John Hicks and A/Prof P.K. Basu, together with Dr Girijasankar Mallik from the University of Western Sydney, are working on a major research project comparing labour markets in regional Australia with metropolitan labour markets. The project is indicating that regional labour markets behave differently to metropolitan labour markets and that these differences call for labour market policies that are place specific if adverse labour market outcomes in regional areas are to be reversed.

Complementary to the above, work on regional employment issues is continuing with one completed project indicating that policies to enhance employment growth in regional areas should focus on increasing a region’s employment specialisation, rather than focusing on employment diversity, if improving the region’s employment outcomes is the objective. The researchers are now looking at different aspects of labour market changes across the regions.

Work on regional issues for women in employment has commenced with early results suggesting that women are particularly disadvantaged with respect to income generation because of fewer appropriate employment opportunities and lack of ownership of income generating assets. The researchers’ findings suggest this disadvantage is much greater than is the case for women in metropolitan areas.

Another new project, based on previous work, is an analysis of regional employment and employment growth, using shift-share analysis and input-output analysis. Another new project is underway looking at internal migration between regions and the likely explanation of these movements. The project is utilizing an experimental ABS data set to look at sea/tree-change versus labour market adjustments.

Disaster Management research
Two of the most important recent outcomes from the ‘Strategies to promote community resilience in disaster management: The case of flooding in selected communities in Bangladesh and Australia’ project are:

• the demonstration of the need to enhance social capital for disaster management in Australia as a means of increasing community resilience. The research found that Australians tended to rely on institutional capital unlike the people of Bangladesh who were forced to rely on social capital to maintain their resilience to flooding because of the clearly inadequate and inefficient (often the result of corruption) delivery of institutional capital in that country.

• that cultural issues in Bangladesh, which restricted the role Muslim women were able to play in responding to disaster, were gradually being overcome – especially in communities where men were largely absent and the women had to take on non-traditional roles in order to ensure survival.

Integrated research
Researchers from this SRA are analysing social bench-marking data for Wimmera gathered by Prof Allan Curtis and Dr Emily Mendham from the Social Research for Natural Resource Management research area for an integrated research project.

The data is being used to widen the research area to establish links between economic activities in the region.

In particular, research is conducted on factors including succession planning and whether that is linked to profitability and the impact of drought (comparing 2002 – a normal year, 2007 – a drought, and 2011- a flood).
Fish Ecology

Three of the Institute’s fish ecologists, Drs Paul Humphries, Nicole McCasker and Keller Kopf have joined forces to formalise a new Fish Ecology Collaborative Research Unit (FECRU) with external researchers and government agencies.

The model is based loosely on the Cooperative Fish & Wildlife Unit structure in universities across the United States. The collaboration is led by Dr Humphries who has more than 30 years fish ecology experience. Both Dr Kopf and Dr McCasker have 12 and 13 years fish ecology experience, respectively.

Recent members of the new unit include:

• ILWS Adjunct Dr Kevin Warburton whose research interests are in fish behaviour and stream ecology. Dr Warburton also produces Freshwater Research News

• Dr Nick Bond, Principal Research Fellow, Griffith University. His research interests are ecological modelling, effects of hydro-climate variability on river ecosystems, river ecology and restoration

• Dr Rick Stoffels, Senior Scientist, CSIRO Land and Water, Murray-Darling Freshwater Research Centre. His interests are ecology of riverine animals; ecological modelling; physiological ecology.

Dr Kopf, an ILWS post-doctoral research fellow, says the unit has three main aims.

One is to establish relationships with government Natural Resource Management agencies that have an interest in the management, conservation or restoration of fish, or the ecosystems they live in. “The intention is for most of the research to be in the Murray-Darling Basin but it isn’t limited to just the Basin,” says Dr Kopf.

Two is to build projects involving students and post-docs. Students (Honours, Masters and PhD) will be supervised by one or more of the CSU researchers and someone from an NRM agency. “The idea is to develop projects of mutual interests to both the University and a government agency which can generate fundamental science and applied management outcomes,” says Dr Kopf.

Three is to use quality science to influence public awareness, management and conservation of fish populations. “With regards to the public awareness issue, we are writing articles for The Conversation on a range of topics,” says Dr Kopf. For example a recent article discusses why there are no true freshwater protected areas in Australia. https://theconversation.com/why-are-there-no-true-freshwater-protected-areas-in-australia-32966

Another example of helping to raise public awareness is the CSU media release “Head to the pub and help researchers track Basin history” which went out February 12 this year. The release calling on public’s help in tracking down stuffed cods displayed as trophy fish in local pubs in the Murray-Darling Basin certainly generated plenty of media interest with Dr Humphries speaking about the subject on nine radio and TV outlets. The story was also picked up by The Australian’s Higher Education supplement. Response from the public has also been excellent with the project’s facebook page having some 171 members so far.

“Some of the impetus for forming the unit comes from, in our view, a need for quality science informing what people and government agencies are doing, particularly with regard to fish,” says Dr Humphries. “We are trying to bring scientific rigor to the work that is being used to manage fish populations and the ecosystems they inhabit. This includes restoration activities, targeted use of environmental flows, fisheries management regulations ... and things like that."

The collaboration is starting small. Members have begun talking to Catchment Management Authorities to scope potential projects to start mid-2015. One project underway is an Honours project funded by DEPI Fisheries Victoria on dusky flathead. “The government has a vested interest in sustainable management of dusky flathead fisheries but have little information on the reproductive biology of the species,” says Dr Kopf.

“We are trying to change that and add to fundamental knowledge on the conservation value of large fish to fisheries.”

Dr Kopf says the intention is to build on student-based projects. “We have had success with the model of developing post-graduate projects where the students are supervised by Early Career Researchers and more Senior Researchers across research areas at CSU; this arrangement seems to work well for everyone involved,” says Dr Kopf.

The Unit has submitted an Expression of Interest to the Murray-Darling Basin Environmental Water Knowledge and Research (MDB EWKR) program (managed by the Murray-Darling Freshwater Research Centre) on fish-related research projects. An application has also been submitted for a research fellowship to the Rachel Carson Centre, in Munich, Germany. In addition the Unit is planning to host an international conference late 2015 or early 2016 focussed broadly on how freshwater fish populations have changed in rivers world-wide.

Dr Humphries says the response to the new unit has been very positive and he welcomes enquiries from anyone interested in becoming involved. Contacts: Dr Paul Humphries phumphries@csu.edu.au Dr Keller Kopf rkopf@csu.edu.au

Web page
Opinion

He’s been at CSU for 18 years and a member of the Institute from the start but ecologist Associate Professor Ian Lunt has decided it’s time to move on….not to another University or research organisation or even retire… but to a possible new career as a science communicator.

As Ian says, for the last couple of years he has been experimenting with online ‘science communication’ – i.e. writing regular essays and interactive stories on the web – and he’s keen to work out how to extend this field further in the future. His blog Ecology for Australia is now one of the most popular ecological blogs in Australia.

To that end, Ian will resign from CSU later this year and has begun a Postgraduate Masters course on media and journalism at the University of Melbourne. However he will continue to be associated with the Institute in an Adjunct status and he and his wife Dr Gill Earl will continue to live in Albury.

But before Ian leaves, we asked him to share some of what he has learnt about using social media as a researcher...

Five reasons why you – yes you – are so appallingly bad at sharing your research

When I joined CSU, I chucked out most of the outdated lecture notes I was given, and replaced them with new, accurate, high-quality materials. Like everyone else, I quickly learned that providing accurate, up-to-date content had little to do with good communication, and even less to do with good teaching. So I focussed instead on communicating, engaging and teaching, rather than just providing better “stuff”.

On leaving CSU, nearly 20 years later, it strikes me that I’ve belatedly relearned the same lesson, but this time about how we communicate our research to the broader community. Many of us fixate on detailed content and fail to identify point of engagements with that large, unseen audience.

Not surprisingly, many of our messages tank or get little traction. There’s nothing new in my belated awareness; the “curse of knowledge” has long been recognised as a key impediment to good communication in many fields. It’s just that this lesson is increasingly important for researchers in an era in which social media is increasingly dominating media and communication.

Random fact #1: did you know that over half of all views of news articles in the prestigious New York Times are from mobile devices? That’s from readers on phones and tablets, not web pages and certainly not printed newspapers (or pdf files). Have you ever considered what your latest “popular article” looks like on a mobile phone screen?

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**Key to spreading messages**

The key to spreading a message via social media isn’t, “how can we present an argument in a way that engages readers”, but, “how can we present it so that readers want to share it”? What can we do to make our messages more “shareable”?

Take this newsletter, for example. Would you share any of the articles with your friends or colleagues: by social media, email or even an old fashioned photocopy? Why not? When was the last time you shared any formal communication that came from your employer? And what was it about that piece that made it shareable? Perhaps it stirred your emotions.

These aren’t just issues for media and PR officers. They are questions that we researchers must face up to if we want the public to continue to support and fund our work.

Traditional research extension and lots of university media and PR is a dead-end street for information flows. Researcher A writes article B or conducts interview C that reaches audience D. The audience may expand if the exercise is repeated, but that’s it.

Social media extends this process ad infinitum. Researcher A sends out post B and reaches audience C. A proportion of audience C shares the post with colleagues and friends, reaching audience D. A proportion of audience D repeats the exercise, providing a cascading, expanding audience, with lots of interaction along the way. Of course, our messages have to be good if we want them to “go viral”, as everyone has heaps of competing messages to read.

ILWS’s research taps into topics that concern many in the community. But many of our messages don’t capitalise on that latent interest as well as they could. At worst we flick bits of stuff to the media section for someone else to work on (instant fail). At best we carefully re-draft a media release to improve its readability or the opening hook. But how often do we researchers sit back and ask, “How can I package my research so that readers feel compelled to share my messages with their colleagues and friends?”

Answer this question and the level of support for our research will undoubtedly increase; no matter what the topic. And, as a tangential side-benefit, I bet our teaching evaluation scores will go through the roof too.
LTIM projects launch

The Institute’s two new environmental water monitoring projects “tick all the boxes” according to CSU’s Vice Chancellor Professor Andrew Vann.

Professor Vann, who was speaking at the official launch of Commonwealth Environmental Water Office (CEWO)-funded projects on Wednesday, February 18 at the Albury-Wodonga campus, went on to say that the two projects were around what were really critical issues for the community, not only for Indigenous communities but also agricultural communities and people who use the rivers for recreational use as well.

“I think they are just great examples of projects CSU is involved in that tick all the boxes in terms of what I’d like this university to be delivering,” he said. “Sometimes there is criticism of universities for not being collaborative enough, for not working with industry, for not working with communities and being too self-centred, for not working well with government and that what we do is overly academic and doesn’t contribute to practical outcomes.

“These projects refute everyone of those criticisms.... these projects in particular are great examples of projects that are collaborative across universities, collaborative with government, with industry, and with communities...they’re absolutely focused on real practical and tangible outcomes for the environment and the community. They’re great from every perspective. They’re ‘poster children’ of where I’d like research at CSU to be at.”

Forty-four people attended the launch which began with a Welcome to Country by Yalmambirra. These included research team members, the Executive Dean of CSUs Faculty of Science, Professor Tim Wess, representatives from partner agencies including Dr Bob Creese, Director of Fisheries Research, NSW Department of Primary Industries, Mr Gary Rodda, General Manager of Murray Local Land Services, and ILWS members.

Presentations were then given by Professor Vann, Mr Ben Docker, from CEWO, and the leaders of the two five year projects - Associate Professor Robyn Watts, for the Long-Term Intervention Monitoring Project in the Edward-Wakool River System, and Dr Skye Wassens, for the Long Term Intervention Monitoring Project in the Murrumbidgee River System.

The two projects are part of CEWO’s $30 Million Long Term Intervention Monitoring (LTIM) Project, an investment in understanding the role environmental water plays in the outcomes from the implementation of the Commonwealth Water Act and the Murray-Darling Basin Plan. “We’re talking in education now about Big Data [a term used to describe the exponential growth and availability of data, both structured and unstructured] and using it to make judgements about things,” said Professor Vann. “And again these projects are a really great example of using a lot of data together with really sophisticated models to be able to produce great ecological and community outcomes.”

Mr Ben Docker, who attended the launch on behalf of the CEWO and the Commonwealth Environmental Water Holder, Mr David Papps, said the launch was a celebration of the continued success of environmental water use in the Murrumbidgee and Edward-Wakool River systems, and the collaborative scientific monitoring program led by CSU but involving many other partner organisations.

“Monitoring and evaluation is clearly critical to understanding the watering needs of the environment and helping us improve how we undertake environmental water use,” he said. CEWO has been working closely with partner organisations – state governments, research institutions, community members, landholders – to deliver environmental water and contribute to healthy rivers and wetlands throughout the Murray-Darling Basin since 2009. Since 2010 it has worked with CSU and its partners to monitor environmental water use
in the Murrumbidgee and Edward-Wakool River systems.

"From 2010 to 2014 the focus has been on monitoring short term (annual) responses and the results we have started to see in that monitoring are really quite positive," said Mr Docker. "We are seeing good outcomes for fish, vegetation, water birds, frogs, and water quality right across the Basin. But it’s not just about short-term outcomes.

“What we are trying to get with this water reform in the Basin is longer term and lasting improvements in the health of the ecosystems which is why we are investing in a five year Long Term intervention monitoring to evaluate those outcomes.”

He said all evaluation reports and monitoring data related to the LTIM Project will be made available to the public. “Our success won’t only be judged by the outcomes we get; success will be judged by the community’s awareness and acceptance of these outcomes as well,” he said.

Associate Professor Robyn Watts spoke about the Edward-Wakool River system, history of projects and partnerships, and the current project.

"Evaluation of responses to environmental watering is complex which is why we are using three approaches,” said A/Prof Watts. “In the Edward-Wakool system with its multiple creeks and rivers we have a unique study design that will enable us to determine the responses to different components of the flow regime. It is complex and challenging which is why we are really interested in being part of this project.”

She then outlined five reasons why she was excited about the project, namely that it was a long-term field based project; it involved partnerships and engagement; it provided opportunities for science to underpin management decisions and improve ecosystem outcomes; the multidisciplinary/transdisciplinary aspect of the project was challenging and exciting; and the project was ‘cutting edge.

creating new knowledge

“Through these partnerships we have an opportunity to make a major contribution to the disciplines of river restoration and ecohydrology,” said A/Prof Watts. “Environmental flows have been developing over the last 20, 30 years; researchers have undertaken assessments of how much water we need in different systems and developed the methodology for designing environmental flow regimes. While some countries have been developing new policies and guidelines for environmental flows – a good example is South Africa which introduced a new Water Act in 1998 that was considered one of the most progressive pieces of water legislation in the world – I think Australia is definitely leading the pack in taking a really bold step to implement a project like the LTIM on a large scale like the Murray-Darling Basin. So many eyes internationally are on these two projects and the whole LTIM program. To be part of that program and to be in a position where we can share our knowledge and influence the international environmental flows programs as well is a really exciting aspect of this project.”

In her talk Dr Skye Wassens described the Murrumbidgee River system and its historic and cultural significance to various Indigenous people; its economic importance; and its significance environmentally.

“It is also, environmentally, a really key system,” said Dr Wassens. “It has the mid-Murrumbidgee wetlands which are nationally important wetlands.”

The system also contains the Lowbidgee floodplains which cover an area of about 300,000 ha. The system supports a great diversity of vegetation communities and aquatic species. It is also particularly important for waterbird breeding. “These systems are amazing,” said Dr Wassens. “How we preserve and manage these systems, while still maintaining their economic value, is so important...if we lose these systems, if we lose these species, we’ve lost a huge amount that is of huge importance to our national heritage. So it matters that we get this right.”
The Institute of Wetland Research is one of the foremost research institutes in Beijing, dedicated to wetland research and providing scientific directions for wetland conservation and management in China. Internationally, the Institute has served as a member of the STRP (Scientific Technical Review Panel) of the Ramsar Convention participating in the revision and formulation of the standards and guidelines for the protection and conservation of internationally important wetlands.

Following the visit of the Institute’s director Prof Cui in November 2013 to ILWS, and as part of the Murray-Darling Basin Futures Collaborative Research Network project “Conserving biodiversity: Analysis of Ramsar site information in the Murray-Darling Basin” that Dr Bellio is working on, Dr Bellio was invited to give a series of lectures to the staff of the Institute as part of their professional development. They were on:
1. Statistical analysis of data for monitoring wetlands and water-bird populations
2. Bio-indicators: their use and limitations when monitoring wetlands
3. The psychology of effective communication: delivering a conservation message using techniques of positive psychology

“We visited two great examples (Hanshigiao (Health Wetland) and Cuihu) of wetland restoration in urban areas created and managed thanks to the scientific support and direction of the IWR researchers.

“Prof Cui is playing a fundamental role in assuring that all of the Institute’s research reaches all levels of society. Thus, her interest in exploring tools for science communication.”

Prof Cui is the author of two popular science books for the general public, Knowing the Wetlands and Wetlands of Beijing and was instrumental in the design of the wetland information centre at Hanshigiao. Her broad vision of how to communicate science includes the use of elements of the visual arts and poetry taken directly from the cultural heritage of China. This approach is shared by Maria whose lecture on communication explored how the brain remembers a message.

“If you need to deliver your message to someone who knows nothing about science, engaging the emotional centres (using art and cultural elements) of your brain concurrently with the cognitive centres, will help to consolidate and store that message in their long-term memory,” says Maria.

“In urban areas such as Beijing the majority of people have completely lost connection with the natural world so recreating that connection is a challenge. I believe that the research carried out at the Institute of Wetland Research and Prof Cui’s commitment to environmental education and innovative ways of science dissemination may well become a world example for urban areas.”

IUCN World Parks Congress

Professor Max Finlayson (and Institute member Dr Rik Thwaites) attended the IUCN World Parks Congress 2014 – a global event that takes place once every 10 years.
This time, it was held in Sydney Olympic Park from November 12-19, 2014. Australia welcomed heads of state, ministers, and international organizations alongside social entrepreneurs, businesses executives, indigenous leaders, park rangers and renowned conservationists at the IUCN World Parks Congress. Some 6,000 delegates from 147 nations attended this once in a decade event. Max gave an oral presentation at a Climate Change session. To learn more about WPC, go to http://www.worldparkscongress.org/about/what_is_the_iucn_world_parks_congress.html

Ramsar Wetlands Forum
In addition to his involvement in the main events of WPC, Max gave an oral presentation at a parallel event on Ramsar wetlands in Australia. This event was jointly organised on November 12 by Wetland Care Australia and the WET Program of Sydney Olympic Park Authority. This Forum on Ramsar Convention took the opportunity to engage with Australia’s wetland leaders to work towards its overall mission to reverse the global and local loss of wetlands.


Forum on Regional and Higher Education
The Albury-Wodonga Forum on Regional and Higher Education, held February 2, at La Trobe University’s Albury-Wodonga campus certainly generated plenty of discussion and interest in where Regional and Rural Higher Education sits in the scheme of things and what needs to be done to ensure a viable future.

CSU’s Vice Chancellor Professor Andrew Vann facilitated a discussion in the morning session and was on the panel for the discussion on ‘Central considerations in planning for higher education in regional and rural communities’ in the afternoon. As he said: “Innovation is the key thing we need - both in terms of graduates who can innovate and helping our industries and communities to improve their practise.”

Professor Vann said that regional Australia was thriving, with the populations of Australia’s regional centres growing as more people, who are already Australian, moving to the regions. “Migration tends to be to the major cities,” he said. “Australia is not Singapore and we can’t simply move everyone to the cities. Even Singapore couldn’t be Singapore without Malaysia - there is a symbiosis between the capital cities and regional Australia and it is important that both are allowed to thrive.”

Professor Vann said it was nonsense that innovation only happens in the major cities and gave various examples such as the programmable computer, powered flight, and the theories of optics, differential calculus and gravity which Newton developed whilst hiding in rural Lincolnshire from the plague in Cambridge. “So let’s do away with this nonsense that Australia must concentrate all resources in Melbourne and Sydney’s CBD to be innovative and internationally competitive,” he said. “Regional Australia HAS to be innovative because of the scale and the distance - important that we don’t forget this in terms of setting innovation policy.”

Professor Vann said the best way to get people to work in the regions is to train them there. “In relation to what I call metro-snobbery I always like to quote Emo Philips – ‘I used to think the brain was the most important organ in the body, but then I thought, uh-oh, what’s telling me this.’ The fact that capital city CBD think tanks advocate concentration of resources in the CBDs of capital cities should surprise no-one, but it doesn’t make it right.”

Institute Director Professor Max Finlayson was one of three discussion leaders of a session on ‘Higher education and building sustainable regional communities.’ His main points were:

• We need research with a focus on and for regional communities and then need to make sure we deliver on this with timely and relevant information.

• ‘Fly in fly out’ research is needed (we cannot expect to keep all expertise in all locations where it is needed) but is not everything. For research to be successful it needs local involvement, and an information flow from communities to researchers.

• More co-operative rather than competitive models needed for research

• Learning from and with communities is what is needed; not research just for academic purposes

• We need quality research in regional Australia that supports education and teaching

• Regional communities need a ‘fair go.’ To do this the research model needs to be changed, with a greater emphasis on what is delivered to communities.

“If we were serious about supporting our local communities and their livelihoods and wellbeing we would have more researchers living alongside them, learning with and from them, and solving things together,” said Professor Finlayson. “Over my research career I’ve seen regional research bases cut along with their heritage, and knowledge, and the future of the communities they supported.”

The discussion that concluded the Forum was animated with some political representatives presenting views very different from the reforms being proposed by the Government. Representatives from student bodies also expressed concerns about the outcomes of the reforms. The convenor of the Forum, Cathy McGowan MHR, and former ILWS Advisory Board member, was asked to take the views expressed at the Forum back to Canberra.
Feature Story

An African adventure

Associate Professor Rosemary Black has recently returned from six months study leave in Africa and had lots of adventures and amazing experiences.

Her study leave comprised of two parts - the first part involved research for the African Wildlife Foundation (AWF) in Botswana and Rwanda and in the second part she collaborated with staff from the University of Botswana and NGO Birdlife Botswana.

Her research for the AWF focused on looking at the social and economic impacts of two high end ecotourism lodges, one in Botswana and the other in Rwanda. Both the lodges were set up with the assistance of AWF who helped negotiate an agreement between the private investors and local community trusts. As part of the agreement the trusts receive a percentage of the lodge’s profits that are then distributed to the local community by the trust.

The AWF was keen to know what the social and economic impacts of the lodges were, both positive and negative and whether in fact tourism offers an alternative livelihood option to local people. Following a month in Botswana Rosemary travelled to Rwanda and spent a month based in Musanze close to Volcanoes National Park. Her second study site was Sabyinyo Silverback Lodge. The lodge is adjacent to the National Park and mainly attracts tourists visiting the famous mountain gorillas. The lodge is high up on the boundary of the national park and offers expansive views down into the valleys below and across to the Virunga Range.

The landscape in Rwanda is very different from Botswana – it is mountainous and lush, green, quite different from northern Botswana where it is dry, dusty and sandy with sparse vegetation except along the rivers. Rwanda is an intense patchwork of small fields cultivated with sorghum, chillies, and beans and at higher altitudes Irish potatoes (as they are known here). This intense cultivation reflects Rwanda’s high population density of 477 people per square kilometre. Compare that with the USA of 35 and Australia of 3.

local survey in Rwanda

During her time in Rwanda Rosemary surveyed all the lodge staff and 50 randomly selected households in the local community. She collected demographic data and information on household income and expenditure and people’s views on tourism, conservation and the lodge, as well as experiences of human-wildlife conflict.

A meeting with the local community trust revealed they have funded many projects from revenue from the lodge including building classrooms, providing computers to local schools, houses for the very poor, one cow one family project, contribution to a rural electrification project, the construction and maintenance of local roads, building of homes for refugees from the genocide, and construction of water tanks and water collection points for the community. They have also built a beautiful cultural centre that replicates the King of Rwanda’s house.

On her days off Rosemary had the opportunity to visit different parts of Volcanoes National Park including a visit to see the endangered golden monkeys. Most tourists only go and see the mountain gorillas but the park offers a wide range of other visitor experiences to see wildlife and the park. After a short trek through fields planted with Irish potatoes and beans with a stunning backdrop of volcanoes they reached a small clearing where they left their bags (you are not allowed to take any food or water when you visit the monkeys).

They entered the park through a narrow entrance in the rock wall that was built through community trust funds to keep the cape buffalo out. Rosemary surveying a member of the local community
from raiding locals’ fields. They soon came across a group of golden monkeys that had been partially habituated to humans. They are a beautiful monkey with a golden-orange patch on their upper flanks and back. Estimates suggest that there are only 3,000 left in the wild and they are listed as endangered on the IUCN Red List.

One of the main reasons for the limited numbers is the loss of bamboo habitat that they are highly dependent on - unlike the mountain gorillas that can eat a wider range of food. Rosemary said: “I felt so privileged and lucky to be so close to these endangered monkeys that frequently came down to the ground to pull out the tender young bamboo shoots before climbing back up the bamboo trunks to strip and eat the fleshy shoots. These young shoots are their favourite food!”

She was also very fortunate to visit the mountain gorillas twice. There are estimated to be less than 900 left in the wild across Rwanda, Uganda and the Democratic Republic of Congo. The Sabyinyo group was the first she visited – it has Guhonda, the largest and oldest silverback and the second group was the Titus group – one of the groups studied by Dian Fossey.

She said “It was truly amazing to see the gorillas – they seemed unperturbed by our presence and just got on with life which is mainly eating, grooming, sleeping and playing. The baby gorillas are incredibly sweet and playful. “The trips are very well planned and organised by the staff at Volcanoes National Park, with detailed briefings, trackers who find the gorilla groups and well trained and informative guides”.

She also visited the newly opened lava tube caves in the National Park which were fascinating and climbed one of the extinct volcanoes Mount Bisoke (3711m), a hard climb with muddy and slippery conditions, but offers expansive views from the top.

Rosemary is now back in Albury and analysing her survey data that will be written up into journal articles and a report for the AWF.

Adjunct News

Improving Landscape Scale Biodiversity Planning

Institute Adjunct Dr Michael Mitchell, who has been a Post Doctoral Research Fellow with the University of Tasmania for the past two and a half years, is wrapping up work on a project that has involved using social science theories and methods to improve landscape-scale biodiversity conservation planning.

The project, which focussed on two case study sites – the Australian Alps (covering ACT, NSW & Vic) and the Tasmanian Midlands – was part of the Landscapes and Policy Hub led by Professor Ted Lefroy from the University of Tasmania. The Hub was one of five research hubs funded by the National Environment Research Program for four years (2011-2014) to improve Australia’s capacity for biodiversity conservation. The aim of the Hub was to integrate tools and techniques developed from combining ecological and social science expertise to provide guidance on planning, managing and governing biodiversity at a regional scale.

Dr Mitchell was a member of the Social and Institutional Futures team led by Associate Professor Michael Lockwood, from the University of Tasmania, and Professor Susan Moore from Murdoch University, WA.

expertise related to things like water, climate, fire, wildlife and vegetation for practical application with land managers in the two case study regions, but also, as a team, we were interested in the broader question of how decisions are made, by whom, for whom, and in whose interests...the governance questions.”

He described the case study areas as “contrasting.” The Tasmanian Midlands, a biodiversity hotspot, is predominantly an agricultural area with very few remnants left of the particular native grassland ecological communities listed as threatened by the Commonwealth. The researchers worked with stakeholders, including landholders and conservation NGOs working together on some very innovative biodiversity conservation projects. The Australian Alps case study involved all public land, predominantly national park. As it crosses from the ACT, through NSW to Victoria, it is also a transboundary area involving multiple jurisdictions, including the Australian Government, which has its own additional responsibilities.

“But both areas are confronting climate change,” said Dr Mitchell. “With the Australian Alps there is a ‘disappearing climate’ in the upper peaks and plains so the plants and animals that exist in these areas don’t really have anywhere to go, whereas in the Midlands there are potential opportunities.” (more next page)
While the lowland grassland ecological communities probably won’t be able to survive where they are located currently given the effects of climate change, they may be able to “relocate” to the foothills. And because these areas are less likely to be useful for irrigated agriculture, they may not be under as much pressure, and native grassland restoration in these areas could prove suitable for high quality wool that can be accredited for its agri-environmental production methods.

“Our overall objective in both case studies was to find out if there was a better way to govern for biodiversity. We wanted to find a better way through which people can make decisions about biodiversity in a way that improves engagement with the land managers – the private landholders in the Midlands, and the local and regional level parks agency staff in the Alps,” said Dr Mitchell.

The first step was to undertake a systems analysis to understand how the social and ecological systems interacted in each area. This was modelled conceptually and taken to workshops. Step two was to develop future scenarios “constructed from the systems model so that they ranged from a very worst case scenario to the very best case scenario.”

“Our focus was the future in 2030 in terms of each scenario’s impact on biodiversity outcomes,” said Dr Mitchell. “In terms of the Australian Alps, the two things driving change about which people felt most uncertain for the future were invasive species (or invasive processes as they chose to call it) and, community values and attitudes…..environmental concern has increased in society but at the same time there are also huge pressures on national parks to allow greater use.

“So we ended up, as our worst case scenario – high impacts from invasive species and negative attitudes towards achievement of conservation outcomes from the community – compared with our best case scenario – native species no worse than they are today with very positive community attitudes.”

Step three was to come up with governance reforms, to reform the system of decision making and to then see if those reforms would make any difference to future biodiversity outcomes across these diverse range of scenarios.

“To do that we had to first consult the experts to determine what the biodiversity outcomes would be like for the different scenarios, and, not surprisingly, in both case studies the biodiversity outcomes were assessed to be getting worse even under the best case scenario, particularly for the Australian Alps,” said Dr Mitchell.

**reform options**

The researchers then presented the stakeholders in the two case studies with two governance reform options each at workshops so that the participants could determine if the reforms would make any difference to the future scenarios.

In developing the reform options, the researchers built on strengths identified in the existing governance arrangements using an institutional diagnostic framework developed by the PhD student involved in the project, Sarah Clement.

“There’s some very good things happening in the Alps with the cross-border Australian Alps Co-operative Program which has a good network approach which we wanted to build on,” said Dr Mitchell.

The two governance reform options presented for the Alps were:

- To focus the collaborative effort around one plan for the whole of the Australian Alps (a more informal network approach)
- To establish an Australian Alps Transboundary Authority (like the Murray Darling Basin Authority) established through federal legislation (a more formal approach)

The two governance reform options presented for the Midlands were:

- For relevant government agencies, NGOs, landholders and other stakeholder to work together to develop a contract that they would jointly sign for a 10 year period. This contract would involve the development of an adaptive plan aiming to combine biodiversity conservation with rural sustainable economic development.
- To have landholder-led and controlled governance arrangements enabling them to meet international and national obligations to biodiversity in their own way. This would involve some kind of co-ordinating body, initially set up through the Tasmanian Farmers and Graziers’ Association.

As a result of the project, the researchers have come up with a new process to identify and test options for improving governance arrangements for biodiversity conservation.

“Essentially there is agreement that this is a process that could be applied elsewhere,” said Dr Mitchell. “This process was presented to the Federal Government at the launch of our Life at Large web site and we think this process can be promoted for use in other contexts – and we are of course looking for opportunities to further develop these methods in different contexts.”

As to the outcomes for the two case studies, Dr Mitchell said the Australian Alps’ stakeholders were very interested in what was done and the Australian Alps Liaison Committee were keen to explore pathways towards those reforms.
From March 7 to 8, he took part in a workshop on Eremaea-eBird at the University of Queensland in Brisbane and gave a short talk on the Saturday morning. Eremaea-eBird is a growing international system for recording bird observations.

It feeds into existing Atlas projects such as Bird Data (Birdlife Australia). Eremaea was started by Richard & Margaret Alcorn in Victoria, and now they have teamed up with a group from Cornell Laboratory of Ornithology who started eBird as an international venture.

Richard has also been busy on several consultancies, including research projects on effects of weed removal on birds on the Mornington Peninsula and effects of environmental flows on birds in Black Box woodlands in Hattah-Kulkyne National Park (NW Vic).

Awards & Appointments

Institute adjunct Richard Loyn was awarded the D.L. Serventy Medal (for outstanding published work on birds in the Australasian region) at the BirdLife Australia Congress at Portland, Victoria in October 4-5 last year.

Dr Maggie Watson is now working for the Institute as a post-doctoral research officer (commencing 8 December 2014) with supervisor Professor Max Finlayson. Maggie is working on the ARC Discovery project Bio-Acoustic Observatory: Engaging Birdwatchers to Monitor Biodiversity by Collaboratively Collecting and Analysing Big Audio Data on seabirds. That work will take her to Montague Island, NSW; Five Islands, NSW; islands in the Great Barrier Reef Marine Park; and Groote Eylandt in the Gulf of Carpentaria where she will be collecting and analysing acoustic data as a way of monitoring species in remote locations.

Professor David Watson has been appointed by the NSW Minister for the Environment, Rob Stokes, MP, to the NSW Scientific Committee. This committee has various functions under the Threatened Species Conservation Act 1995.

Members’ News

Professor Jim Briskie (University of Canterbury, NZ) and the Institute’s Dr Melanie Massaro have received funding from the “Brian Mason Science and Technical Trust” to study the “Use of artificial nest-boxes as a non-lethal method to protect the endangered Chatham Island black robin from invasive European starlings.”

Director’s Activities

Planning for SEGRA

On February 12 and 13, Professor Max Finlayson met with Institute Adjunct Peter Waterman and Kate Charters, Chair of the 2015 SEGRA (Sustainable Economic growth for Regional Australia) committee, in Albury to discuss preparations for the SEGRA conference, October 20-22, which CSU is hosting. Professor Finlayson is on the program committee.

“ILWS is keen for members to attend and/or present at this conference,” said Prof Finlayson. “Please discuss with me if interested.”

While here they also met with the National President of the Murray Darling Association, Cr Greg Toll, and the MDA’s Interim CEO, Ms Emma Bradbury.

More Director’s Engagement Activities.

In the News

Check out the latest ILWS media hits at http://www.csu.edu.au/research/ilws/news/in-the-news
Community Engagement

TRY

A CSU partnership grant of $2,250 has been awarded to the Totally Renewable Yackandandah Association (TRY) to conduct research in 2015 on community attitudes to renewable energy options for the town of Yackandandah and surrounds. Dr Joanne Millar assisted TRY President Matt Charles-Jones with design of an online survey which attracted 108 responses from community members during January 2015. The survey will be followed by indepth interviews of 25 people in April 2015 to explore perspectives from a broader cross section of the community.

Wild Pollinator Count

by Dr Manu Saunders

Australian wild pollinators can be easily overlooked, partly because the naturalised European honey bee gets most of the attention in farms and gardens. The honey bee is ubiquitous, easy to manage and easily recognised by anyone without entomological knowledge. Although many people appreciate the pollinating prowess of our native bees, some farmers and gardeners are unaware of how many other native insects contribute to pollination of their crops and garden plants.

Last November, I ran a trial for a new community-based pollinator awareness project with the help of Karen Retra, a local naturalist and native bee fan. Similar pollinator counts are becoming popular overseas, such as the UK’s Big Butterfly Count and the Great Sunflower Project in the US. In Australia, there are very few of these national, online biodiversity counts. Nature-based citizen science events have traditionally been local and field-based.

The educational power of these hands-on events, with experts often present to answer questions, is invaluable. But clashes with the event time, location or travel costs may not suit everyone who is interested. There are also permanent citizen science-based sites that allow people to record sightings of plant and animal species all year around, like Bowerbird (www.bowerbird.org.au) and the Atlas of Living Australia (www.ala.org.au). These are great resources if you have a photo of your sighting and know what species group you are looking for, but they can be frustrating if not.

Creating an annual event around an online portal, rather than a physical time-and-place, combines the best of both of these approaches and can be more inclusive. This approach provides a permanent online resource for taxonomic and ecological information, and it allows participants to contribute at a time that suits them. Having never done anything like this, we weren’t really sure what would happen, so we started small, limiting it to the Albury-Wodonga region in southern NSW and north-east Victoria. The results were limited (only 33 respondents), but we didn’t set out to collect data for rigorous analysis so this wasn’t a setback. Our goal was simply to boost interest and awareness in the community, and we achieved this.

We received great feedback and a lot of comments on the potential for the activity to be incorporated into group projects in school or community groups. Most participants enjoyed having an excuse to ‘stop and smell the roses’ and were surprised at what they found. Many people also told us that their interest in pollinators and native insects was often frustrated by their inability to identify them on the wing – this is a common frustration, even for experienced naturalists! Some feedback also suggested that very small native bees were often mistaken for flies.

We identified two types of interest groups – those people who have naturalist skills and knowledge and are willing to spend the time outdoors getting macro photographs and chasing up IDs; and those who have ecological and conservation interest and want to understand what they see, but don’t have time or interest to get a clear photo (much harder than it sounds!) and follow up on IDs. This latter group are extremely valuable to conservation and community engagement efforts, but are often overlooked.

We will be updating the website to include more resources, photos and links. The count will also run again this year, in April (12th-18th) and November. The rules are simple – 1 plant, 10 minutes, any day of the event week. It’s a great excuse to take a break from the world and reconnect with nature. So please have a look at the website for more information and pass on the counting bug!

http://wildpollinatorcount.com

Contact: Manu Saunders masaunders@csu.edu.au or Karen Retra karenretra@gmail.com for feedback or more information

Native bees, like this Halictid bee, love visiting garden weeds like dandelion flowers - pic. M. Saunders

Native blue-banded bees (Amegilla sp.) have a distinctive flight pattern and blue stripes on the abdomen -pic M. Saunders
Science on Air

From January 20 this year, Dr John Rafferty has been on air every fortnight on ABC Goulburn Murray Morning Radio on Tuesdays from 9.30am discussing the latest science news, particularly related to sustainability and its environmental and social impacts. The premise of the show “Science and Stuff” is twofold. Firstly to build levels of science literacy among the broader community; to promote thinking scientifically. Secondly, to build genuine excitement about science and highlight the omnipresence of science phenomena in our daily lives. Topics covered so far include:

- How are fire ratings established?
- What is UV light and how does “sun block” work?
- Evaporative cooling how does it work?
- What is thunder and lightning?
- How does hail form?

These topics and questions provide a platform to explore science phenomena in plain English within common experiences. The discussion in the program also extends to current scientific news and events (that is what ever is in the newspapers). Therefore, the research activities of SES and ILWS researchers is of interest. Dr Rafferty is keen to involve other ILWS members who are interested in the opportunity to take part in the fortnightly science chat. Contact him on jrafferty@csu.edu.au

Visitors

Professor Victor Marin

Visitors to the Institute in January were Professor Victor Marin, his wife Professor Luisa Delgado, both of whom are from the University of Chile, Santiago, in South America, and their son Ignacio Marin, 16.

Professor Marin and his wife, who were in Albury for four days, are writing a paper with Institute Director Professor Max Finlayson, on the complexities and uncertainties in socio-ecological systems based on the example of the Rio Cruces wetland in Chile.

The visit was the family's first to mainland Australia. However Professor Marin, as the Chilean Government's advisor on the Convention for the Conservation of Antarctic Marine Living Resource, had been to Hobart, Tasmania on many occasions.

While here Professor Marin gave a talk on his research at a special morning tea attended by ILWS members working in related research areas. Professor Marin has a background in oceanography, numerical modelling and ecosystem ecology. His wife's is in ecology, sociology, and political sciences.

Since 2008, Professors Finlayson and Marin have been involved in an investigation of Rio Cruces wetlands which had a massive dieback of aquatic plants initially thought to be caused by a local paper mill. The dieback of the aquatic plants coincided with the sudden disappearance of the black necked swan, an iconic bird for the Valdivia region in southern Chile, over a six month period in 2004. “Part of trying to find an answer to why that had occurred was to invite Professor Finlayson for his multi-disciplinary knowledge of wetlands,” said Professor Marin.

A report giving the explanation for the disappearance of the birds was produced and presented to the Chilean Government who, according to Professor Marin, did not accept the explanation as it went against what others were thinking at the time.

From 2008 to 2010, Professors Marin and Finlayson generated scientific articles based on their explanation which was that natural causes in the ecosystem had generated the change. In 2010, Professor Marin submitted a successful proposal to test their hypothesis for a four year project (2011-2014) to the Chilean Conicyt, a Government science funding organisation, which included funding for Professor Finlayson to travel to again Chile in 2013, and a visit to Australia.

“But this time we looked at what had happened using the only way you have to study an ecosystem when you don’t have the information i.e. satellite images that allows you to look back in time; numerical modelling that allows you to run experiments; and monitoring data that answers the question “How is the ecosystem doing today?””

Running side-by-side with this project is a three year project, also funded by the Chilean Conicyt, led by Professor Delgado who is looking at the social issues related to the wetland.

“The most important result from our research is that the changes that occurred in 2004, that is the disappearance of the swans, had actually started way before then,” said Professor Marin.

(More next page)
Dr Sonny Domingo, Economic modelling of optimal strategic production options and welfare impacts subject to resource constraints and risk aversion among smallholder farmers in the southern Philippines. Principal Supervisor Professor Kevin Parton

Dr Popular Gentle, Equipping poor people for climate change: Local institutions and pro-poor adaptation for rural communities in Nepal. Principal Supervisor Dr Digby Race (Dr Gentle is now an Adjunct Research Fellow with the Institute)

Dr Angela Keys, Industrialised Cotton Production: From California to Australia’s Namoi Valley. Principal Supervisor, Adjunct Associate Professor Ian Gray

Dr Jim Longworth, ‘Countrymindless’ Rural Railway Closure: Destabilising a social exchange relationship between country and city in New South Wales. Adjunct Associate Professor Ian Gray

Dr Kuenga Namgay, Transhumant Agro-Pastoralism in Bhutan: Does it have a place in the 21st century? Principal Supervisor Dr Joanne Millar (Dr Namgay is now an Adjunct Research Fellow with the Institute)

Dr Karolina Petrovic, Herbivory of common Brushtail Possum (Trichosurus Vulpecula, Marsupialia: Phalangeridae) at different scales of resource heterogeneity. Principal Supervisor Associate Professor David Watson

Dr Jane Roots, The future of farming in rural amenity landscapes: The role of planning and governance in a changing landscape. Principal Supervisor Dr Joanne Millar

Dr Manu Saunders, Wild pollinator communities of native woodlands and commercial almond plantations in a semi-arid Australian landscape: Implications for conservation of insects and ecosystem services. Principal Supervisor Professor Gary Luck

Dr Katrina Sinclair, Transformative change in contemporary Australian agriculture. Principal Supervisor Professor Allan Curtis

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**Post-graduates**

2014 Graduations

The end of 2014 saw 15 ILWS PhD and Masters students graduate – our second largest contingent of graduates in any one year. Most were able to attend the University’s graduation ceremonies in Albury or Wagga held in December. This included our international students Dr Karolina Petrovic who travelled from Poland, and Dr Popular Gentle who travelled from Nepal. The list of graduates included two recipients of ILWS PhD scholarships, Dr Manu Saunders and Dr Jane Roots. Students who graduated were:

**Dr Patrick Cobbinah**, Towards poverty reduction in developing countries: An analysis of ecotourism implementation in the Kakum Conservation Area, Ghana. Principal Supervisor A/Prof Rosemary Black (Dr Cobbinah is now an ILWS Adjunct Research Fellow)

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**U.K. Social Researchers**

Dr Tom Wengraf, Honorary Senior Research Fellow at the Birkbeck Institute for Social Research, London University and Dr Prue Chamberlayne Visiting Senior Research Fellow, Open University, United Kingdom were in Australia in February to run a five day intensive workshop (February 20-25) in Wagga Wagga for nine CSU researchers.

The pair are experts in a social research technique called Biographic Narrative Interpretive Method.

“This was a wonderful opportunity to hear from leaders in the field and is an example of how the University is working to develop new research skills and the capacity of our researchers with the help of world class trainers,” said workshop organiser, Professor Manohar Pawar said.

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**Dr Katrina Sinclair**, Transformative change in contemporary Australian agriculture. Principal Supervisor Professor Allan Curtis
Dr Lisa Smallbone, Understanding bird responses in regenerating agricultural landscapes. Principal Supervisor Associate Professor Ian Lunt

Dr Fleur Stelling, Perceptions and management of shrubby regrowth in South-Eastern Australia. Principal Supervisor Dr Catherine Allan

Dr Kristiana Tri Wahyudiayati, Forest Community Development: Enhancing corporate social responsibility in Indonesia’s forestry sector. Principal Supervisor Dr Digby Race

Mellesa Schroder (Masters), Processing explaining exotic plant occurrence in Australian mountain systems. Principal Supervisor Associate Professor Ian Lunt

Michelle Smith (Masters), Balancing conservation and development in protected areas: A case study from Laos. Principal Supervisor Dr Joanne Millar

PhD News

Student Conference on Conservation Science – January 2015 by Carmen Amos
In January 2015 I attended the Student Conference on Conservation Science at the University of Queensland. It is one of a series that occur across the globe, the original beginning at Cambridge University, UK. There was over 60 talks focused on the Asia-Oceania region and these ranged from trends in the Elephant ivory trade in China to the role of plant anatomy in invasion ecology in Australia. I was lucky enough to be able to present my work on the Spotted marsh frogs microhabitat use in the Lachlan catchment of NSW. The conference also included several excursions to surrounding tourist attractions such as Australia Zoo, and four days of training workshops which allowed students to expand their skills in areas such as R, Marxan and species distribution modelling.

It was a fantastic conference with talks from keynote speakers Dr Erik Meijaard, Professor Lei Cao and Professor Hugh Possingham stirring the thoughts of the many attending students. For those PhD students who are thinking of attending this conference in the future, I would highly recommend it.

Ethnic Communities
Towards the end of last year Vijay Kuttappan was appointed to the inaugural board of the Albury Wodonga Ethnic Communities Council. A story on Vijay is featured in the Council’s newsletter “ethnicvoice” Summer 2015.

New PhDs
Welcome to our new PhD students this year.

They are:

Dena Paris, who has been awarded an APA scholarship to start her PhD in March 2015 on foraging behaviour, habitat use and density-related reproductive performance and dispersal in the endangered Chatham Island black robin. Dena, who did her honors last year on, will be supervised by Dr Melanie Massaro, Dr Andrew Hall and CSU adjunct DR A.O. (Nick) Nicholls.

Liz Znidersic, who graduated with a Masters in Natural Resource Management from CSU in 2013, will be joining ILWS as an ILWS PhD scholarship recipient in June this year.

Liz will be a DE student from Tasmania, supervised by Professor David Watson (Principal) and Prof John Woinarski from Charles Darwin University as co-supervisor.

Her research will be contributing to the ARC Discovery project Bio-Acoustic Observatory: Engaging Birdwatchers to Monitor Biodiversity by Collaboratively Collecting and Analysing Big Audio Data. She intends to look at the detectability of cryptic birds- (Lewin’s rail, Cocos Buff-banded rail and other rail species) to assist with conservation/management options (including reintroductions/translocated populations).

“Rails are generally cryptic ground dwelling birds that are particularly vulnerable to population declines without notice due to the limitations of current survey/detection methodologies,” says Liz whose methodologies will include acoustic monitoring, camera traps, call playback and passive call surveys. (more next page)

Liz and a Red-footed Booby juvenile. Cocos Keeling Islands.
Environmental flows are delivered under different flows. In-channel as river benches and backwaters) to determine the extent of inundation of important geomorphic features (such as river benches and backwaters) under different flows. In-channel environmental flows are delivered to the Edward-Wakool system to increase the movement, condition, reproduction and recruitment of fish, increase hydrological connectivity and improve water quality and the condition of fringing and aquatic vegetation.

Models that predict the extent of inundation of river features under different discharges and options will help managers better predict the ecological outcomes of their management decisions with DSS. The DSS framework will be capable of supporting and providing information for the project stakeholders. The DSS framework can also support alternatives analysis and verification of project goals. Upon implementation the project may have an operations component allowing real-time and online decision making. Configurable GIS, advanced graphics, online access, custom rules and interpretations can be embedded into the DSS to provide assistance for decision makers to make timely and well-informed decisions.

At 36, Inam, who is from Bangladesh, worked for the Institute of Water Modelling in Bangladesh for six years before doing his Masters in Water Management (2010-2012) at the Cologne University of Applied Science, Germany, on an International Post Graduate Scholarship in Water Technology (IPSWaT) from the German Ministry of Education & Research. His thesis was selected as being in the top five of the theses produced by 150 International students that year. Recently, Inam has been appointed as ambassador (Mentor) by the Cologne University of Applied Science to assist with information and advice to future scholarship holders.

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Three and a half years ago Inam migrated to Australia with his family. His first job here was with the Gold Coast City Council as a senior hydraulic engineer in its waterways and flood management department. After nine months the family moved to Melbourne (Inam’s wife, Dr Atia Khanom, is a doctor and had to attend a training course there) where he worked for a year as a research assistant at RMIT on urban water management particularly in water sensitive urban design.

Inam says he has found working on an Australian river system “totally different” to working on river systems in Bangladesh.

The Institute’s latest recipient of an ILWS PhD scholarship, Inam Ahmed, will be “value-adding” to the research being done as part of the Long Term Intervention Monitoring Project- Edward-Wakool River Area with his skills in hydraulic and hydrologic modelling.

Inam, a Water Resources engineer, began his PhD in February this year with principal supervisor A/Prof Robyn Watts and co-supervisor Dr Andrew Hall.

Inam will undertake in-channel hydraulic modelling for the Edward-Wakool River System for his PhD using mathematical modelling tools and develop a Decision Support System (DSS) using model result and Geographic Information System (GIS). In particular, Inam will focus his PhD on modelling the flows that remain within-river channel (i.e. not overbank flows) to determine the extent of inundation of important geomorphic features (such as river benches and backwaters) under different flows. In-channel environmental flows are delivered to the Edward-Wakool system to increase the movement, condition, reproduction and recruitment of fish, increase hydrological connectivity and improve water quality and the condition of fringing and aquatic vegetation.

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Three and a half years ago Inam migrated to Australia with his family. His first job here was with the Gold Coast City Council as a senior hydraulic engineer in its waterways and flood management department. After nine months the family moved to Melbourne (Inam’s wife, Dr Atia Khanom, is a doctor and had to attend a training course there) where he worked for a year as a research assistant at RMIT on urban water management particularly in water sensitive urban design.

Inam says he has found working on an Australian river system “totally different” to working on river systems in Bangladesh.

The Institute’s latest recipient of an ILWS PhD scholarship, Inam Ahmed, will be “value-adding” to the research being done as part of the Long Term Intervention Monitoring Project- Edward-Wakool River Area with his skills in hydraulic and hydrologic modelling.

Inam, a Water Resources engineer, began his PhD in February this year with principal supervisor A/Prof Robyn Watts and co-supervisor Dr Andrew Hall.

Inam will undertake in-channel hydraulic modelling for the Edward-Wakool River System for his PhD using mathematical modelling tools and develop a Decision Support System (DSS) using model result and Geographic Information System (GIS). In particular, Inam will focus his PhD on modelling the flows that remain within-river channel (i.e. not overbank flows) to determine the extent of inundation of important geomorphic features (such as river benches and backwaters) under different flows. In-channel environmental flows are delivered to the Edward-Wakool system to increase the movement, condition, reproduction and recruitment of fish, increase hydrological connectivity and improve water quality and the condition of fringing and aquatic vegetation.

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very large number of them. All up, they produce around seven times more egg than other bird families."

Professor Watson and his colleagues drew data on body mass, egg volume and clutch size on bird families that they found in past academic books and journal articles as well from as museum specimens. An offshoot of this research is that Professor Watson and colleagues have developed a tool for discovering more about the reproductive capacity of prehistoric birds and dinosaurs.


Social exclusion from the loss of train services

Institute adjunct Associate Professor Ian Gray and Dr Merrilyn Crichton are the authors of a new paper which examines the effect of replacing trains with coaches on people’s mobility and social inclusion.

With the future of New South Wales (NSW) regional train services under question, concern has been expressed that replacement of trains with coaches will diminish levels of mobility and raise social exclusion for some people. Provision has been made on coaches for people considered to be disabled, but without recognition of the needs of people who do not fit either able or disabled categorisation.

All train services offer better accessibility and therefore mobility to all people. The issue of regional train service cessation and replacement raises questions regarding the reliability of existing Australian studies about train service replacement, the degree to which health and illness are affected, as well as the potential for the exacerbation of existing social exclusion.

A/Prof Gray and Dr Crichton highlight these limitations amid the ableism/disablism dualism in existing research and rural transport policy. Their paper suggests that the absence of Australian evidence of mobility loss should not be taken to indicate the reality of regional mobility and social inclusion. Instead it argues that further independent mobility loss and social exclusion may occur if coaches are further substituted for regional train services.

**Journal Papers**


