



# ENVIRONOMICS

DECEMBER 2010

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## Director's Note

With many Hub projects nearing completion, more and more outputs are emerging. The Hub Research Report series is growing every day and reports from RePEC show a strong history downloading and citing. This is a good indicator that the work of the Hub is having an impact on both the research sector and policy making. Interactions with the policy world are also expanding. A sequence of high level briefing sessions with SEWPAC staff planned for the New Year will further stimulate that exchange.

I'm pleased to announce that SEWPAC has agreed to extend the life of the EERH until 31 March 2011. This extension of time will enable the completion of the transition projects and the emerging issues projects as well as providing the opportunity for other project leaders to achieve even greater results and outcome leverage from the data they have collected.

As I will be taking sabbatical leave in 2011, I will be handing the reins of the Hub to Tom Kompas as of 1 January 2011. It's been a great privilege to be the EERH Director and I  
*cont'd Page 2*

## Hub Symposium attracts 160 registrants

A very successful Environment and Economics Network Symposium was held in the Molonglo Theatre at the Crawford School, ANU on 22nd to 24th November.

Delegates from around Australia and Overseas attended including Hub Project staff, invited speakers, government agency staff and the general public.

The Symposium enabled Hub Project Leaders and other researchers in the field of Environmental Economics to come together and share outcomes of their research in what will be remembered as a legacy of the Environmental Economics

Research Hub.

As Dr Jill Windle from Central Queensland University noted at the conclusion of her presentation at the EEN Symposium, the EERH provided a rare opportunity to focus on one area for three years with significant impacts being generated.

Presentations from the Symposium can be found on the Hub Website at [http://www.crawford.anu.edu.au/research\\_units/eerh/workshops/network\\_symposium/program.php](http://www.crawford.anu.edu.au/research_units/eerh/workshops/network_symposium/program.php)

Economics and  
Environment Network  
Symposium 2010





*Director's Note continued from Page 1*

would like to thank SEWPAC for providing that opportunity. Working with the members of Hub has shown me the strength of the environmental and resource economics profession in Australia. And the Hub has provided a considerable boost to that capacity, especially through the training of early career researchers. Links between researchers and policy makers have also been established and strengthened through the applied nature of the project work done under the Hub's banner.

The challenge facing the profession and policy makers now is to ensure that the advances made under the Hub are continued and enhanced in the future.

Jeff Bennett



*Jeff Bennett,  
Professor,  
Crawford School  
of Economics and  
Government, ANU  
e: jeff.bennett@  
anu.edu.au*

## PhD's Graduate at ANU



*Professor Jeff Bennett, Director of the Environmental Economics Research Hub with his graduating students following their graduation on Friday 10 December at ANU, Mia Amalia, and Sonia Akter and Marit Kragt, PhD student successes from the Hub.*



55th Annual AARES National Conference will be held in Melbourne from 8-11 February, 2011. A number of Hub participants will be presenting, including the Mini Symposium on Using Benefit Transfer with Prof Jeff Bennett.

Full program at:  
<http://www.alloccasionsgroup.com/aares2011-program>

## Promising results from Hub Project leads to successful funding bid

By Jonelle Cleland and Michael Burton, UWA

Calling on industry to be a part of the next phase of research on 'expert vs. public preferences' has proved to be a strategic move for UWA researchers, with a successful ARC Linkage project announced recently.

The Linkage project sees hub researchers John Rolfe, Michael Burton, Jonelle Cleland and Abbie McCartney teaming up with David Pannell, who directs the Centre for Environmental Economics and Policy at UWA and Jessica Meeuwig, who directs the Centre for Marine Futures at UWA.

Both Pannell and Meeuwig have high profiles in NRM policy circles, which helped to secure the Swan River Trust as an industry partner.

The Swan River Trust commands a prominent position on WA's environmental agenda – it is charged with protecting and managing the iconic Swan-Canning river system.

According to Professor David Pannell, lead investigator on the Linkage project, the Trust relies on a mix of public consultation and expert advice, and became interested in the project for a variety of reasons.

'Management of the river system must serve the public interest, but what constitutes the greatest public benefit has been extremely difficult for the Swan River Trust to determine', says Pannell.

'We can help the Trust by eliciting community preferences for the various ecological, recreational and aesthetic outcomes from alternative management actions. By incorporating scientists into the same valuation study, the Trust can also gain insights into the appropriate integration of community values and expert knowledge', says Pannell.

The project will also be looking at advancing methodological issues raised by previous hub research on 'expert vs. public preferences'.

According to Professor John Rolfe, a chief investigator on the Linkage project, the project will help to fill gaps regarding appropriate ways to frame choice modeling experiments for both expert and public respondents.

'Of particular interest is the payment vehicle, the mechanism *cont'd on Page 3*



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by which respondents are told that management actions will be funded', says Rolfe.

'Although some form of personal contribution, typically through a tax, is the norm in valuation studies, it is not very easy to make this personally relevant to experts in a policy setting where they are more familiar with reallocating government funding!'

The project will identify alternative definitions of the payment vehicle, and explore the implications of their use in both expert and public samples.

The project will begin in January 2011 and will continue over an 18 month period.

Project updates can be accessed via <http://www.ere.uwa.edu.au/research/projects/swan-river/>



*The Swan Canning river system provides residents and visitors with many recreational and scenic opportunities. The ecological health of the river system has changed dramatically over the last 40 years with declines in prawns and fish, increases in algal blooms, and a much publicized spate of dolphin deaths in 2009-2010.*

### Collaborative Work with National Pingtung University of Science and Technology By Lisa Lee, UNSW

Trafficking is the second largest form of illegal trade, estimated to be worth \$7-\$20 billion annually. Australia's unique wildlife is not exempt, being highly sought after overseas and drawing traders to the lucrative and growing markets in Asia, leading to significant social costs domestically and abroad. I recently received a travel grant to Taiwan from the Australian Academy of Science, under the International Science Linkages – Science Academics Program. The objective of the visit was to investigate the trade in wildlife goods in the south-east Asian region and its implications for Australian wildlife, and possible economic

approaches to improving the legality and sustainability of such trade.

The collaborative research was hosted by National Pingtung University of Science and Technology, working in close partnership with IUCN conservation specialists and TRAFFIC Taipei. I also had the cooperation of the implementation arm of the Wildlife Conservation Law under the Republic of China Ministry of Agriculture, and attended a symposium held by the National Dong Hua University in Hualien on Indigenous rights which closely relates to the issue of sustainable harvest of natural resources.

In the past, Taiwan had been deemed a smuggler's paradise – there was very little concern and management of traded wildlife products. In contrast, Taiwan today heavily regulates such trade. This has contributed to the demise of markets for endangered animal parts such as tiger or rhino. However, consumer awareness of other types of other protected species is less widespread, for example the use of pangolins for Chinese medicine and human consumption. In another interesting development, there is a strongly growing exotic pet industry and Taiwan is building up a significant captive-bred parrot capacity for export. There appears to be little direct smuggling of Australian species to Taiwan, although breeding stock imported to Taiwan come from the Philippines, US, and Singapore, most of which are Australian, South American and African species.

Sustainable harvesting is being considered as an alternative to regulation. It is increasingly recognized that the role of the Convention on International Trade in Endangered Species (CITES) as a trade measure to eliminate trade in endangered species via trade barriers is limited. A holistic approach which gives incentives for the conservation of a species may better ensure the species' survival than an out-right ban – which can instead drive the trade underground. By the same token, the success of such sustainable harvests would require effective law enforcement and capacity to limit access to replicate private-ownership over the resource. This is an area of on-going research with the National Pingtung University of Science and Technology.



*The Tiger – endangered because of its use in traditional medicines.*



## Expert vs. Public preferences has ramifications for environmental policy and extension strategies



		SCALE	
		Specific system	Broad scale system
SETTING	Urban & agricultural	Further research - Swan River	Southwest Australia Ecoregion
	Remote	Ningaloo Marine Park	Kimberley Tropical Waterways

Figure 2. Case studies arranged according to scale and setting parameters.

Figure 1. Location of case studies. Black boundaries indicate case studies undertaken as part of CERF-funded research. Red boundary indicates case study to be undertaken as part of ARC Linkage-funded research.

The project 'Divergence between expert and public valuation of environmental assets' has delivered a series of important findings under the hub theme, 'Evaluating environmental goods and services'. Project manager, Dr Jonelle Cleland, says that from the outset the project was well-placed in terms of policy relevance.

According to Cleland, science and technology-related policy has, historically, been expert-based with the dual claim that: experts are knowledgeable, credible and lacking in vested interests; and the public lacks the time, information and inclination to take part in complex problem solving. 'More recently, the interest neutrality of scientists has come under scrutiny. The suggestion that there is an 'eccentricity' in expert preferences has seen a real push for public consultation

### HUB THEME LEADER CONTACTS

**Theme A.**  
Establishing viable markets to achieve environmental goals  
Prof Quentin Grafton,  
Crawford School ANU  
Ph: 6125 6558  
quentin.grafton@anu.edu.au

**Theme B.**  
Climate change analysis  
Dr Frank Jotzo  
Research School of Asia and Pacific Studies ANU  
Ph: 6125 4367  
frank.jotzo@anu.edu.au

**Theme C.**  
Advancing Australia's capability for social and economic analysis of environmental issues at the regional scale  
Prof Tom Kompas,  
Crawford School ANU  
Ph: 6125 6566  
Tom.Kompas@anu.edu.au

**Theme D.**  
Valuing environmental goods and services  
Prof John Rolfe, Central Queensland University  
Ph: 07 4923 2132,  
j.rolfe@cqu.edu.au

## CONTACT

Ms Meredith Bacon  
Manager, EERH  
Crawford School of Economics and Government  
Rm 212, Building 13, ANU College of Asia and The Pacific  
Australian National University, ACT 0200  
Tel: 612 50556 Fax: 612 58448  
Web: [http://www.crawford.anu.edu.au/research\\_units/eerh/](http://www.crawford.anu.edu.au/research_units/eerh/)

in science and technology-related policy' says Cleland. However the question remains as to the best way to integrate the value-judgments of experts and the public. 'In our view, the first step in resolving this issue is to systematically test for divergence in scientist and public preferences', says Cleland.

Using a series of choice modeling experiments, the project tested for divergence in preferences for the conservation of key environmental assets in Western Australia. To take into account the potential impact of scale and setting on preferences, research effort was divided across three case studies (figures 1 and 2). Research associate, Abbie McCartney, says the case study approach has revealed that divergence is context-specific. The Ningaloo case study indicates that scientists and members of the public are similarly aligned in the positive values they assign to the conservation of coral, sea turtles, whale sharks and fish stocks. It is thought that public awareness factors played a role in this convergence of public and scientist preferences: Ningaloo is the iconic marine park of Western Australia, and has had many publicity campaigns targeted specifically at its environmental assets, enhancing the level of public awareness.

The environmental assets used at Ningaloo also had significant overlap between being ecologically important and also aesthetically pleasing – so it is possible that both the scientists and public were valuing them similarly but for different reasons. For example, the coral asset – which plays a crucial role in ecosystem maintenance but is also colourful and vibrant – was valued the most highly by both groups. In contrast to the Ningaloo results, the Kimberley case study indicates that scientists and members of the public are not aligned in the values they assign to the conservation of threatened species, iconic species, representative ecosystems, wild rivers, and iconic places. The public were most interested in conserving the iconic assets, while the scientists had a stronger focus on protecting threatened species, representative ecosystems and wild rivers.

This result may also be explained by the general nature of publicity campaigns – publicity about the Kimberley is strongly pitched towards the region's remoteness and specific water-related images draw attention to iconic species, such as the barramundi, as well as iconic sites, such as Geike Gorge. At the time of publication, surveys from the South West case study were being analysed. According to McCartney, once the results of the South West case study are available, the impact of scale and setting on preferences will be better understood. 'However, already we can see important implications for policy and extension at a case-study level' says McCartney. Authorities should be encouraged by the results from the Ningaloo case study – scientists and the public are on the same page in terms of the conservation preferences. For the Kimberley waterways and wetlands, publicity around the ecological importance of key environmental assets would be well-placed. This would be a necessary pre-cursor to any management interventions regarding the conservation of threatened species, representative ecosystems and wild rivers.

Contact with the researchers can be made via email:

Dr Jonelle Cleland [jonelle.cleland@uwa.edu.au](mailto:jonelle.cleland@uwa.edu.au)  
Abbie McCartney [abbie.mccartney@uwa.edu.au](mailto:abbie.mccartney@uwa.edu.au)

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