

**IAG CONFERENCE 2011**

# **ABSTRACTS**

**3 – 6 JULY 2011**

**UNIVERSITY OF WOLLONGONG**

# Segmenting the coast – a tool for coastal vulnerability assessment

## Author

**Pamela Abuodha**

University of Wollongong

## Co Authors

Colin Woodroffe

University of Wollongong

## Summary

Applying three segmentation tools; the Smartline, the CVI and the DIVA, to the Illawarra coast to evaluate their relative strengths and weaknesses on the basis of several different criteria.

## Details

With the increasing awareness by governments and policy makers of the vulnerability of coastal environments to the impacts of climate change, there is a need for tools that provide an indication of the relative threats along different stretches of coast. Sea-level rise, in particular, is emerging as one of the most imminent of climate impacts, and low-lying coastal areas appear particularly threatened by anticipated rates of sea-level rise. Geographical Information Systems (GIS) provide a useful tool for visualising vulnerability of coastal systems and populations to sea-level rise, and other associated impacts resulting from climate change. GIS offers a means of storing and integrating a wide range of geospatial data as well as to incorporate GIS data on fundamental physical factors such as topography with socio-economic data- and to take this further through modelling and simulation. This paper explores some of the tools that have been used to assess vulnerability of coasts and considers their suitability for application to the Australian coastal zone. This paper will compare the strengths and weaknesses of three segmentation approaches applied on the Illawarra coast; the Smartline, the Coastal Vulnerability Index (CVI) and the Dynamic Interactive Vulnerability Assessment (DIVA) tool. Applying the three tools to the one case study enabled an evaluation of their relative strengths and weaknesses on the basis of several different criteria. The results from this study are useful to decision-makers and local councils in undertaking a more detailed, site-specific assessment for the Illawarra coast in the near future.

# Hunters Heart

## Author

**Michael Adams**

University of Wollongong

## Summary

Social and cultural dimensions of hunting in Australia

## Details

'Outside Eden, eating means also killing, directly or indirectly, and killing well is an obligation akin to eating well' (Donna Haraway 2008) Hunting is a controversial activity in Australia, and much debated in international research. Positions range from 'the first hunters were the first humans' to the 'meat is murder' argument. There is, however, very little research on hunting in Australia, particularly on the social aspects, but also on biological and ecological issues. Few geographers have engaged with research on non-Indigenous hunting in Australia (with the exception of Adrian Franklin). In contrast to a general lack of research on non-Indigenous hunting, there is extensive literature on Indigenous hunting. It is likely that there are as many hunters as there are bushwalkers in Australia. This paper reviews initial research exploring hunting participation and motivation in NSW, as a window into further understanding connections between humans, non-humans and place. I am currently carrying out scoping interviews with hunters and hunter organisations, and I plan to explore the connections between at least three areas of debate as they relate to hunting: conservation/biodiversity; animals rights/welfare; and food/nutrition. My focus is on an analysis of hunting as cultural involvement in nature. Is it a cruel, archaic and redundant practice; or a respectful relationship between and among humans and non-humans which can reorient us to our emerging recombinant ecologies?

# 3D relief models as interactive visual planning tools in Australian coastal communities

## Author

**Sarah Adams**

University of the Sunshine Coast

## Summary

This work-in-progress paper describes an innovative visual means of facilitating collaborative spatial planning and decision-making to address complex problems in coastal communities in Queensland, Australia.

## Details

This work-in-progress paper describes an innovative visual means of facilitating collaborative problem-solving and long-term decision-making to address complex problems in coastal communities in Queensland, Australia. The study is part of the CISRO's South East Queensland Climate Adaptation Research Initiative. Visual spatial tools such as maps and models can support integrated problem-solving, while participatory approaches that facilitate face-to-face communication can lead to better long-term decision outcomes. This study draws on participatory 3-dimensional modeling (P3DM), a practice that uses a physical 3D relief model of a landscape to facilitate collaborative learning, planning, decision-making, and conflict resolution. The key features of P3DM are the ability to more clearly visualize of landscapes, the ability to directly change features on the model (vs computer or technician-mediated changes), the facilitation of face-to-face communication, and the emphasis on communal decision-making. While P3DM applications tend to focus on boundaries and access to resources, this study uses P3DM as a tool for future planning in Australia's coastal regions, where the issues are population growth, development, climate change, and oil depletion. In a focus group setting, small groups of participants will be presented with a table-top 3D model of a coastal Queensland landscape and asked to envision a realistic desired future for 2100. The groups' discussions will be analyzed to explore the unfolding of integrated, future-focused decision-making, including what goals, priorities and trade-offs are identified and negotiated by participants, and how participants envision transitioning from today to the desired future.

# Rural youth migration in the Armidale (NSW) area

## Author

Neil Argent

University of New England

## Co Authors

Rae Duffy

University of Western Sydney

Fran Rolley

University of New England

Jim Walmsley

University of New England

Stephen Smith

University of New England

## Summary

The paper reports on a case study of the migration flows of youth in the Armidale (NSW) area, using an innovative Facebook-based methodology for sample selection.

## Details

The out-migration of 15-24 year olds from rural Australia is the highest of any age group and has increased over the past twenty years. The paper reports on a case study of the migration flows of youth in the Armidale (NSW) area, using an innovative Facebook-based methodology for sample selection. The survey instrument that was used focussed on the contextual, structural and behavioural factors underlying the tendency for youth to envisage their futures as lying outside their home communities. The focus was on the Year 10 cohort in 2001 and 2006 for six local high schools and the survey sought to establish precise migration pathways of respondents since 2001 and 2006 respectively. The research is part of a larger study, including in-depth semi-structured interviews and focus groups, aimed at investigating the nature of 'migration cultures' together with the impact of both out-migration and return migration on rural communities and the labour force.

# The Evolving Internet in Geographical Space and Time

## Author

**Robert Baker**

University of New England

## Summary

The growth of the internet between 1998 and 2004 is studied through changes in the nature of traffic within a global network, where connectivity can vary with geography, culture and economic structures.

## Details

The internet undertook a rapid evolution in capacity and connectivity from 1998 to 2004. This paper applies a model developed from a random walk problem to analyse traffic into component congestion waves, bias from the Earth's rotation, distance decay and network evolutions. A classification of traffic congestion is developed based on a matrix of the degree of packet loss from regional traffic and/or global traffic. Such a classification shows how the internet is evolving using the global network of the Stanford Linear Accelerator Centre (SLAC) between 1998 and 2004. Examples show that the nature of connectivity can vary with geography, culture and economic structures. Of particular interest is the comparison between Australian and New Zealand sites. As capacity improves in geographically remote monitoring sites, the character of traffic follows stages of technological 'osmosis', where most sites by 2004 have features of US sites in 1998. This leads to a collapse of significant periodic sites making subsequent analysis problematic.

# Methodological challenges for situating mobile policy knowledge

## Author

Tom Baker

University of Newcastle

## Summary

This paper draws on policy mobilities research to explore the methodological challenges that accompany attempts to situate mobile knowledge.

## Details

Seeing knowledge as inherently contextual and embodied, tied into place-bound formations but also linked into networks of varying reach, presents methodological challenges. If situated knowledge is made to move and becomes re-situated into other contexts through different embodied networks, we need to go about research in ways that provide insight into how knowledge can be both 'in place' and 'in motion'. Further, we need to understand the processes through which certain knowledges become detached from their context and inserted into new ones, and with what effect. Studies of policy mobility have begun grappling with such issues, providing a number of frameworks aimed at integrating the mobility of particular policy knowledges with the situated actors, places and sites that underlie those mobilities. This paper draws on policy mobilities research to explore the methodological challenges that accompany attempts to situate mobile knowledge. It argues for the importance of following connections and suggests that the concept of assemblage offers a usefully uncertain orientation towards this task. The paper also discusses the situated conceptual-methodological choices that get made when deciding which sites, which actors, and which connections to make visible.

# **VOICE and InSIGHT: seniors on infill development**

## **Author**

**Claudia Baldwin**

University of the Sunshine Coast

## **Co Authors**

Caroline Osborne

University of the Sunshine Coast

Laurie Buys

Queensland University of Technology

## **Summary**

This research uses photovoice to seek older people's perceptions of 'liveable' communities in infill development. Outcomes are compared with the characteristics of 'age friendly cities'.

## **Details**

Previous experience of using photovoice to elicit views on natural resource management issues have demonstrated its value in communicating deeper meaning, clarifying and enriching verbal messages through visualisation, and reaching consensus. Our current project uses photovoice to seek older people's perceptions of 'liveable' communities in infill development. Layers of analysis reveal a relationship with the characteristics of 'age friendly cities' (WHO 2007) and illustrate concerns with affordability and sustainability. The outcomes will be used as input to charrettes in case studies of infill areas in Brisbane and the Sunshine Coast, Queensland.

# The Unruly City: When Tall Buildings Came to Town

## Author

**Sarah Barns**

University of Technology, Sydney

## Summary

The Unruly City: When Tall Buildings Came to Town will present actuality recordings of Green Bans protests as part of a discussion of how different practices of radical urbanism have shaped Sydney.

## Details

My paper will deal with the BLF Green Bans as part of a period of global urban environmental crisis taking place in the late 1960s and early 1970s. Soja (2000: 97) has described the period of urban crisis that took place during this time as a “transformative moment in the geohistory of modernity”, a time of accelerated change when seemingly all that was solid and dependable in the recent past melted into the unsettling “air” of the present. The period saw the enunciation of alternate ‘visions of the city’, which sought progressive urban change not through abstract urban schemas but through a re-orientation towards the very conditions of spatial production and experience. My presentation on Unruly City: When Tall Buildings Came to Town will consider both the local and global factors that contributed to the eruption of the Green Bans movement. Remembering the Green Bans, I will argue, means more than respecting the role of radical unionism advanced in a unique way by the BLF at this time. It needs also to address competing visions of the city battling it out on the streets at this time, generated widespread unrest. Such tensions, which sought the rejection of fixed ‘myths of the city’ against conditions of connectedness to place, remain very much ‘co-present’ within the contemporary terrain of the city today. Remembering the Green Bans therefore also means continuing to engage with the material and symbolic imaginaries of the city, and their role in shaping ideas about the potentials of urban activism in achieving urban environmental reform. Soja, E. (2000) *Postmetropolis: Critical Studies of Cities and Regions*. Oxford: Blackwell

# In the presence of absence: Mapping historical geographies of place

## Author

**Sarah Barns**

University of Technology, Sydney

## Summary

This paper presents explores the opportunities and limitations of working with spatial technologies to encounter site-specific histories of place using sound and other media archives.

## Details

The ascendance of Google Maps as a platform for the publication of geographic data is, as *Wired* once proclaimed, 'changing the way we see the world'. While ease-of-publication enables increasing numbers of amateur geographers to geo-annotate small details of their lives, the 'democratic' nature of this activity also comes with its own limitations. How users are encouraged to interact with their spatial surrounds using map-based interfaces in particular raises questions about the kinds of data that can be effectively mapped, and in turn, how such data is used to augment a physical spatial experience. My paper presents two case studies that I have developed which have made use of spatial technologies for cultural research purposes. A major project I initiated with the ABC titled Sydney Sidetracks will be discussed here, as one that originated in an attempt to map sound-based cultural resources, as a means to enabling situated experiences of a site's 'invisible history'. I will present this project as one that used spatial technologies to reimagine the sound archives as 'landscapes of noisy events', enabling use of media-based archives to contribute to a recorded archaeology of place. Outcomes of this and another more recent spatial archive project will be discussed both in terms of the opportunities and also the limitations afforded by existing interfaces of spatial technologies. In particular the visualism inherent in the map, which encourages visual information at the expense of other modes of experiential interaction, will be dealt with here as a key issue impacting not only the way cultural data is used but also the way it impacts on site-specific experience.

# The geography of motivational postures to environmental law: compliance in Australian agriculture

## Author

Robyn Bartel

University of New England

## Co Authors

Elaine Barclay

University of New England

## Summary

This paper examines the different motivations towards compliance held by Australian farmers to land clearance legislation. The research provides an example of how geography can inform policy.

## Details

Making environmental law and policy work is a difficult task. Much is expected of environmental agencies who are under increasing pressure to meet a number of competing, and conflicting, priorities. The scientific evidence is overwhelming that the environment must be protected however public funds are limited. Resources and training are often less than necessary and agencies may also be faced with regulated communities and industries who are actively resistant to the imposition of environmental laws. They may also be disengaged completely from public policy debates, or more interested in complying with the letter of the law than its spirit. Traditional command and control approaches may be counter-productive to encouraging beyond compliance behaviour. This paper examines the different motivations towards compliance held by Australian farmers to land clearance legislation. These laws must be successful in order for Australia to meet its biodiversity, land degradation and greenhouse goals. Compliance is problematic for a number of contextual and relational reasons which are evaluated here in order to build recommendations for better implementation of environmental laws generally. The research provides an example of how geography can inform policy.

# TOWARD A RECONCILIATION ECOLOGY OF Ficus-HUMAN RELATIONSHIPS IN INDIA

## Author

Maan Barua

University of Oxford

## Summary

This paper draws from bio- and human geography to explore Ficus-human interactions at landscape and intimate scales in northeast India. Opportunities and tensions in connecting the two fields are discussed.

## Details

As ecological keystones and cultural emblems, the study of Ficus trees in Indian landscapes marks the point where the social and the ecological meet. In the midst of this shared phenomenon, versions of the social and the ecological hinge on relations between trees, seed dispersers, pollinators, and humans co-inhabiting these landscapes. Yet, grasping the hybrid nature of these geographies is fraught with challenges, and needs analytical maneuvers that draw from both bio- and human geography. Here, I use a conservation biogeography perspective to examine patterns of avian frugivory, modes of dispersal and recruitment of Ficus at a landscape scale in Assam, northeast India. Then, at an intimate scale of analysis, I examine how corporeal encounters between humans and trees contribute to an ecology of inhabitation. At landscape scales, fruiting tree visitation by frugivores are influenced by fruit and crop size, as well as the isolation and distance of a tree from the forest edge. Regeneration of trees is a co-product of dispersal by frugivores and 'gardening' by humans. At intimate scales, the corporeality of trees is generative of social processes. Ficus of a particular size become "thick" places: sites of property disputes, embodiments of memory, and bodies of worship. Whilst the social and ecological are inseparable and influence one another, attempts to synthesize the two may produce dissonant geographies as they involve multiple scales and divergent methods. I argue that such connections and tension is constructive. The gap between bio- and human geography may be a productive locus for developing a reconciliation ecology that rearticulates plant-human relationships.

# 'The Art of Not Been Governed': Street Children and Youth in Indonesia

## Author

Harriot Beazley

University of Sunshine Coast

## Summary

This paper explores how the formation of distinctive spatialised subcultures by street children and youth in Indonesia are a means for achieving freedom from their psychic alienation by State and society.

## Details

Street children and youth in Indonesia are perceived by the State and mainstream society to be upsetting ideological constructions based on middle-class values and to be committing a 'transgressive act' by violating the moral boundaries of the ideal family, school and community (Cresswell, 1996). By surviving outside parental control they are not conforming to the desired image of the 'ideal child', and their constant mobility represents a menace to the success of the State, which is based on sedentary lifestyles and the view that the family structure is irreplaceable, and the nation is modern and 'developing'. As a result of this perceived transgression, the Indonesian State and dominant groups attempt to stigmatise, oppress and conceal undesirable homeless children, and to limit the physical spaces in which they can operate. Drawing on Scott's (1990) concepts of 'hidden' and 'public transcripts', and 'the Art of Not Being Governed' (2010), this paper examines how the lives of street children and youth may be understood as a way of achieving mental and physical freedom from their psychic alienation from the State and society. The analysis of their subculture reveals how they have been able to construct alternative identities as a form of resistance to the outside world. Their subversive strategies provide a matrix within which they can regain feelings of belonging and self worth, contest their marginalisation, and counteract the overload of identities attributed to them. This can be recognised as their 'hidden transcript' and their 'articulated feelings of anger' at the way they have been consistently ignored and alienated from society and the 'public transcript' (see Scott, 1990:119).

# Visual methods as a rights-based approach with marginalised children in Southeast Asia and the Pacific

## Author

Harriot Beazley

University of Sunshine Coast

## Summary

This paper introduces recent rights-based research projects that utilised participatory visual methodologies with children and young people who are 'living on the edge' in Southeast Asia and the Pacific.

## Details

Increasingly it is acknowledged that the only way to fully comprehend the multiple and diverse experiences of children and young people, is for the inclusion of their own perceptions and perspectives in research (Punch, 2007; Young and Barrett, 2002; Van Blerk, 2004). In recent years, new styles of rights-based research with children have emerged, which have been shaped by the United Nations Convention on the Rights of the Child (UNCRC), and which have moved to transform children from being the objects of study into research participants whose human rights, dignity and opinions should be respected throughout the research process (see Beazley, Bessell, Ennew, & Waterson, 2009). In this way participatory research of children's lives in the majority world has increasingly focused on children's views and lived experiences (Beazley, 2003; Bessell, 2009; Chakraborty, 2009). This paper draws on over fifteen years of experience in rights based participatory research projects, utilizing a variety of participatory visual methodologies (spontaneous drawings, social mapping, mental mapping, body maps and photo voice) with children and young people in Southeast Asia and the Pacific who are 'living on the edge', including street children in Indonesia; children living in orphanages in Aceh; sexually exploited children and child labourers in Java, and children experiencing physical and emotional punishment in Indonesia and Vietnam. The paper stresses the imperative that when conducting this type of research local researchers must have a clear understanding and appreciation of children's rights, including the right to participate, and that both methodology and methods are undertaken in a systematic, scientific and ethical way.

# Mapping Aboriginal economy in northeastern New South Wales 1800-1850

## Author

Wendy Beck

University of New England

## Co Authors

Jane Balme

Heather Burke

John Appleton

## Summary

What is the nature of Aboriginal 'economy', or 'the social relations that people establish to control the production, consumption and circulation of goods and services' in northeastern NSW between 1800-1850?

## Details

What is the nature of Aboriginal 'economy', or 'the social relations that people establish to control the production, consumption and circulation of goods and services' in northeastern NSW between 1800-1850? Aboriginal sovereignty was complete within their hunter-gatherer production system. In northeast NSW, between 1800- 1850 Indigenous social relations changed, the economic output was lower than in 1788, and resources were redistributed from Aborigines to settlers. Aboriginal social relations changed most rapidly in 1830-1840. In their relationships with white people, Aborigines in northeastern NSW actively resisted white settlement by violence in some cases (especially during the period 1835-1840) and by choosing to use the full extent of their territories in others. Indigenous people actively negotiated with whites over employment, trade, material items and food during the period 1800-1850. We reviewed ethnohistoric observations about Aboriginal food getting and production, technology, and the social relations of consumption and circulation between 1800-1850. We looked for geographic trends and we reviewed contact data, and recorded the boundary of white settlement and instances of violent contact. Ethnohistoric information suggests some economic patterns in technology, food getting, and ceremonies were maintained, despite a great decline in the Indigenous population due to disease and warfare. The most rapid economic changes happened between 1830-1840, due to both alienation of land and resources and employment of Aboriginal people in the settler economy. They constructed their own identity 'as a people' during this period through shared experiences and new alliances within their existing environments.

# Up the Duff in Hyde Park: Storying pregnancy when you're homeless

## Author

**Lesa Beel**  
RMIT University

## Summary

This paper, based on interviews conducted with two twenty-year old homeless bisexual women living in inner city Sydney, raises questions around notions of pregnancy and motherhood whilst homeless.

## Details

In 2010 I interviewed two twenty-year old homeless bisexual women living in inner-city Sydney. One had developed a relationship with a homeless man with whom she was hoping to again fall pregnant, having recently miscarried. The other woman was in a volatile relationship, also with a homeless man, and was six months pregnant at the time of the interview. She was concerned that like her two-year old child, the child she carried may also be removed from her by the NSW Department of Community Services. Both women raised interesting questions in relation to the ways in which female sexuality is experienced and framed within the context of homelessness. How for example does female sexuality, and in particular, pregnancy, position the female homeless body in ways distinct from housed pregnant bodies and also from the rest of the homeless population? How might pregnancy be viewed as both a means of accessing and securing scarce goods and services, such as public housing, while also subjecting the female body to increased surveillance by government and non-government agencies serving the homeless population? And how might reflecting on these women's storying of pregnancy and homelessness create a space for considering broader notions of female sexuality?

# **“Adventure in Arnhem Land”: an analysis of Yolngu / Macassan Connections in popular geographic journals of the 19th and 20th Centuries**

## **Author**

**Rebecca Bilous**  
Macquarie University

## **Summary**

An analysis of Yolngu / Macassan stories of connection in popular geographic journals of the 19th and 20th centuries, including ‘Walkabout’, ‘Australian Geographic’ and ‘National Geographic’.

## **Details**

For over two centuries people from Makassar on the Indonesian island of Sulawesi came to northern Australia in search of trepang that, with the help of Indigenous Australians, they collected and traded on to China. Their impact on the Indigenous communities in Arnhem Land was considerable. Along with sharing language, technology and culture, they built relationships that are celebrated in Yolngu art, song and stories. Some of this history was written for popular geographic journals, such as ‘Walkabout’, ‘Australian Geographic’ and ‘National Geographic’, throughout the 19th and 20th centuries. This paper examines articles from these journals that focus on Yolngu / Macassan relationships. It pulls apart the discourses, stereotypes and ideologies in order to understand how they contribute towards the construction of a national Australian identity.

# Households and climate change: yes, they do believe!

## Author

Deanne Bird

Macquarie University

## Co Authors

Katharine Haynes

Macquarie University

Rob van den Honert

Macquarie University

John McAneney

Macquarie University

## Summary

Discussion of results from a national, online survey investigating people's opinions of climate change and energy futures in Australia

## Details

The issue of climate change is prominent in our everyday lives yet there is little research that shows what the Australian public think. To address this gap, a national, online survey investigating people's opinions of climate change and energy futures in Australia was conducted. 74% of respondents stated they thought the world's climate is changing, 41% of respondents stated they thought climate change is partly caused by natural processes and partly caused by human activity and a further 25% were of the opinion that climate change is mainly caused by human activity. The results indicate that younger generations rather older are more likely to think that climate change is mainly caused by human activity. In relation to education, however, there does not appear to be a discernable difference between the degree of education achieved and respondent's belief about the causes of climate change. Overall, 75% of respondents thought the best ways to tackle climate change were by expanding the use of renewable energy sources. Expanding the use of efficient energy technologies and changing people's behaviour so they reduce energy consumption, were favoured options by 60% and 58% of respondents, respectively. Also, more respondents stated that they would prefer to use nuclear power (20%) rather than continuing the use of fossil fuels but with capture and storage of carbon dioxide (9%) or reducing energy consumption through regulation and taxes (9%). In this paper, we provide discussion of these survey results and consider how they can be used to inform the current debate on climate change and energy futures in Australia.

# Rates and trends of historical shoreline changes around reef islands, Tarawa Atoll, Kiribati

## Author

Naomi Biribo

University of Wollongong

## Co Authors

Colin. D. Woodroffe

University of Wollongong

## Summary

This study uses shoreline position determined from time-series of aerial photography to examine historical trends in erosion and deposition on reef islands, Tarawa, Kiribati.

## Details

Low-lying reef islands on atolls such as Tarawa, Kiribati are threatened by climate change, particularly by impacts of observed and anticipated sea-level rise. Increased inundation appears inevitable, but there are conflicting views on whether shorelines directly exposed to increased wave action are likely to erode, or as a result of more prolific coral growth and enhanced sediment transport, undergo accretion. Study examines changes in shoreline positions on the majority of Tarawa reef islands, and explores links between both trend and rate of shoreline change. We used a time-series of shoreline positions determined by comparing 1968/1998 aerial photography. Analysis was undertaken using Geographical Information System with trends determined through application of Digital Shoreline Analysis System. Although Tarawa appears to have experienced a net rise of sea level over this period at an average rate of 1.4mm/yr, shoreline responses vary. Most ocean-facing beaches show little change detectable; elsewhere they show net erosion, with accretion apparent in a few geomorphological settings. Significant proportion of lagoon beaches show accretion, although discerning the foot of lagoonal beaches involves greater uncertainty. Major factors affecting responses are location and human influences. Substantial fluctuations in shoreline position occur in response to El Niño conditions. Results indicate that reef islands are resilient, but widespread evidence of eroding beaches, primarily on ocean shores, raises concern regarding their future. Further mapping of accreted and eroded areas, provides a foundation for appropriate management measures to reduce their vulnerability and policy initiatives on beach mining practices.

# Mobile lives and habits of proximity

## Author

David Bissell

The Australian National University

## Summary

Where 'neighbourhood' lends itself to the analysis of everyday routines, the more volatile force of habit opens up neighbourhood to other imaginations of proximate dwelling in time.

## Details

This paper takes as its starting point the idea of neighbourhood as a condition of dwelling close together. This gregariousness has often been unpacked in terms of spatial relations that translates into imaginations of localities and communities. Whilst sedentarist understandings of neighbourhood are being reimaged in light of the increasingly mobile lives of some, in this paper the focus is less on the spatial relations inherent in the idea of neighbourhood, than in the temporal dynamic it entails. However, where the idea of neighbourhood would seem to lend itself to the analysis of everyday routines, my focus on the more volatile force of habit will open up neighbourhood to other imaginations of proximate dwelling in time.

# Performing property: power, politics and the category

## Author

Nicholas Blomley

Simon Fraser University

## Summary

I explore the performance of property via the negotiations between the Canadian Crown and indigenous groups in British Columbia, with a focus on the performative work of the category.

## Details

Property regimes are performed, in part, through the production of categorical distinctions. Western, liberal property regimes rely upon a highly proscribed model, in which property is understood as essentially privately held, and clearly defined. Yet such categories are frequently overlooked or treated as merely empty vectors. In so doing, we miss the powerful performative work that categories do. We need to ask how property's categories are held together or contested, and the work that their materialization and spatialization achieves. The British Columbia Treaty process, involving negotiations between indigenous groups and the provincial and federal government in an attempt to reconcile Crown sovereignty with unextinguished aboriginal title, offers a fascinating window into the categorical geographies of property. The process has largely ground to a halt due to several sticking points, one of which concerns the way in which aboriginal property will be defined and categorized post-treaty. The Crown is insistent that such lands will be held as a form of fee simple, under provincial jurisdiction. Many First Nations resist what they characterize as a feudal relationship, and fear Crown oversight. In so doing, they have engaged in a creative exploration of forms of landholding that recognize indigenous title and local historical geographies. In this categorical conflict, competing geographies (of scale, place, and boundary) are deployed. The resulting conflict reveals important dimensions to property and its inclusionary possibilities in a settler society.

# Investigating concepts of resilience during natural disasters in newspapers in Australia

## Author

**Erin Bohensky**

research scientist of CSIRO

## Co Authors

Anne Leitch

CSIRO & James Cook University

## Summary

Through a media content analysis we consider insights on resilience which improves our understanding of how communities prepare for, cope with, and learn from natural disasters.

## Details

A community that is resilient to natural disasters would be one that is flexible in response to changing environmental and social contexts, is self-organizing, rather than controlled by external forces, and can build the capacity to learn and adapt. This paper looks at how the concept of resilience is constructed in the public discourse in the news media during, and immediately following, recent natural disasters in Australia. News media has considerable power in society through its ability to inform and shape public opinion. Media coverage of natural disasters helps to frame and shape the way that the community, both at the affected and broader scale, begins the psychological and physical recovery processes. During this time the media plays an agenda setting role which makes certain issues or attributes more salient and more likely to be accessed in forming opinions (Weaver 2007). In this study we undertook a content analysis of Australian news media articles to examine the concepts of resilience associated with natural disasters in Australia that occurred during 2005-2010. Articles analysed included those that mentioned resilience in conjunction with disasters such as bushfires, floods or drought, and discuss dealing with, recovering from, or preparing for such events. Preliminary analysis shows that the main themes articulated in the media following a natural disaster include the ability to return to a 'new normal', community spirit and cohesion, community preparedness, experience and learning. This research leads to new insights on resilience which improves our understanding of how communities prepare for, cope with, and learn from natural disasters.

# Assessment of fish passage over natural barriers at a catchment and site specific scale, Clarence River gorge, NSW, Australia

## Author

Rita Bonetti

University of Wollongong

## Co Authors

Ivars Reinfelds

NSW Office of Water

Laurie Chisholm

University of Wollongong

Gavin Butler

Fisheries Scientist of Industry and Investment NSW

Tony Broderick

Northern Rivers Catchment Management Authority

## Summary

This study assesses the magnitude, frequency and duration of flows required for migratory fish to traverse a series of waterfalls in the Clarence River gorge, New South Wales, Australia.

## Details

Natural barriers to fish passage such as waterfalls, cascades and rapids can affect spawning, dispersal and habitat availability for migratory fish species, particularly where major dams reduce the magnitude, frequency and duration of downstream flows. In a catchment-scale analysis, the gradient of the Clarence River and its two primary tributaries was quantified using Geographic Information Systems (GIS) to intersect 10 m contours with the river channel and calculate average channel gradients between each intersection. The first major natural barrier encountered by upstream migrating fish is a series of waterfalls in the Clarence River gorge that have an average gradient of 16.9 m/km, and lie approximately 150 km upstream of the river mouth at an elevation of 30 m above sea level. A combined HEC-RAS and River2D modelling approach was used to assess flow rates which facilitate upstream fish passage through the series of 2-8 m high waterfalls within the gorge. Fish passage is facilitated over the smallest 2 m waterfall by 1.1 year flood events (435 m<sup>3</sup>/s), and over the larger waterfalls when a secondary, bypass channel is formed during 1.25 year floods (887 m<sup>3</sup>/s). Independent fish tracking data verified that small floods of this magnitude facilitate upstream fish passage, with the 1.25 year flood event being associated with the largest number of tagged fish successfully migrating through the gorge. These small floods, which currently occur less than 2% of the time, are highly important for maintaining hundreds of kilometres of upstream habitat available to migratory fish and any reduction in their magnitude, frequency or duration will have detrimental effects on fish populations in the Clarence River.

# Shifting bodies

## Author

**Candice Boyd**

Department of Resource Management and Geography

## Co Authors

Michelle Duffy

Monash University

## Summary

In this paper, we present an experimental work focused on the sonic geographies of shifting bodies.

## Details

In this paper, we present an experimental work focused on the sonic geographies of shifting bodies. The purpose of this engagement is to push the boundaries of empirical work in non-representational geography as well as to theorise habit bodies through the concept of 'the bleed'. In so doing, we contemplate the role of sound in proprioception – the cumulative memory of skill, habit, and posture in the body's relation to earth.

# Future fire regimes of Australian ecosystems: new perspectives on enduring questions of management

## Author

**Ross Bradstock**

University of Wollongong

## Summary

The degree to which we can modify fire regimes to suit management needs remains uncertain. Managing fire regimes will depend on a significant transformation in relevant knowledge at multiple scales. Unprecedented opportunities now exist to achieve this.

## Details

There is heightened interest in fire management in Australia due to recent major fires in the south, new initiatives in the north and the influence of climatic change. Major inquiries, changes to land tenure and use, and the make-up of fire agencies have raised the level of interest in fire management and its scientific underpinnings. Management must address a more diverse range of needs (e.g. human protection, biodiversity conservation, water quality and amount, smoke, greenhouse gas emissions, carbon dynamics). New insights ranging from the evolutionary ecology of fire, connections between past climatic change and fire activity, to technologies for viewing and analysing large-scale fire patterns are altering the way we view and understand Australian fire regimes and their ecological consequences. New global perspectives on fire and the need to comprehend and mitigate the effects of rapid climate change are also transforming these disciplines. Nonetheless, the degree to which we can modify fire regimes to suit management needs remains uncertain (e.g. fire regimes may be only partially manipulated). Progress in managing fire regimes for multiple needs and benefits will depend on a significant transformation in relevant knowledge at multiple scales (local to global). Unprecedented opportunities now exist to achieve this.

# Cool places, creative places? Community perceptions of cultural vitality in the suburbs

## Author

Chris Brennan-Horley  
University of Wollongong

## Co Authors

Chris Gibson  
University of Wollongong

Andrew Warren  
University of Wollongong

Beth Laurenson  
University of Wollongong

## Summary

This paper documents community perceptions of cultural assets using mental maps and GIS. A range of affective engagements with place and relational linkages between suburbs resulted.

## Details

This paper stems from a project examining cultural assets in Wollongong –a medium-sized Australian city with a decentralized and linear suburban pattern that challenges orthodox binaries of inner-city bohemia/outer-suburban domesticity. In Wollongong we documented community perceptions of cultural assets across this unusual setting, through a simple public research method. At the city's largest annual festival we recruited the general public to nominate the city's most 'cool' and 'creative' places, by drawing on a map of Wollongong and telling their stories. Hand-drawn maps from 205 participants were combined in a Geographical Information System and 50 hours of stories transcribed for qualitative analysis. Over 2300 places were identified. Among them were some surprising results: although places known for the arts and bohemian creative industries figured prominently, these were not only in the inner-city but in beachside suburbs with unique cultural histories. Also, a range of affective engagements with place, including unconventional forms of creativity, were described in industrial and blue-collar suburbs. Network topology analysis by place of residence also revealed the extent of localism, as well as specializations and aggrandizements among suburbs. Our conclusions are threefold: first, that 'creativity' is relationally-situated and linked across all parts of the city; second, that decentralized forms of small-scale cultural infrastructure provision are vital for vernacular cultural pursuits; and third, that 'creativity' is a polysemic and contested category – only ever partially revealing the contours of cultural vitality in the suburbs.

# Australia's NRM Governance System\_ Foundations and Principles for Future Challenges

## Author

Kathleen Broderick  
NRM South

## Co Authors

Sarah Ryan  
ACT NRM

## Summary

56 community leaders, chairs of Natural Resource Management regional bodies across Australia provide guidance for capitalizing on previous and current investment.

## Details

The introduction of the Caring for Our Country Program in 2008 signaled a change in the management of Regional NRM bodies' Federally funded conservation and Natural Resource Management (NRM) efforts. The development of a National Business Plan and the development of National Targets re-centralised NRM and its governance. This caused significant disturbance to productive relationships between bottom up volunteers, the peak 'care' organisations, not-for-profit conservation organisations, business and industry, regional NRM bodies and state governments. It also had the potential to overly focus on specific targets without concern for their broader environmental and social contexts, factors which will affect the ultimate outcomes of this program. Subsequent adjustments to incorporate a regional base level allocation, community grants, and regional landcare facilitation have gone a long way to redressing the problems that arose in the change of programs. The National NRM Working Group, the working group comprised of representatives of the 56 regional NRM bodies sought to draw attention to the pre-requisites for successful NRM through its 2010 paper Australia's NRM Governance- Foundations and Principles for Future Challenges. Led by Sarah Ryan, ACT NRM Chair, the paper described the complex scalar and social and policy conditions which contribute to successful NRM. The paper distilled 10 key principles for successful NRM and subsequent discussions with Stakeholders lead to the development of 5 priority actions for improvement. Although a hefty report, the paper provided focus for discussion and debate about the future of NRM, putting us in a better place to meet current and future challenges.

# Modelling vs Measuring: have we got the balance right in understanding sediment production from Australia rivers

## Author

Andrew P Brooks  
Griffith University

## Summary

This talk argues the balance has tipped too far towards a desktop modelling approach for understanding sediment loads in Australia rivers, and consequently inappropriate management strategies are being derived.

## Details

The National Land and Water Resources Audit was an ambitious project undertaken in the dying days of the C20th to take a snapshot of the health of Australia's rivers. By necessity, the project utilised a modelling framework in an attempt to come to terms with the brief. From this process emerged a new national sediment budget modelling framework –known as Sed-Net - that has since become adopted (often in adapted form) by many state agencies as the basis for focusing and planning their land and river management activities. This is particularly so where there is concern with end of river sediment pollution to receiving waters (e.g. the Great Barrier Reef). An unfortunate by-product of this shift to a desktop modelling approach has been the downgrading of programs monitoring sediment loads and the deskilling of agencies tasked with mapping, measuring and understanding sediment sources and erosion processes. In this talk I will provide examples of how Sed-Net type modelling approaches can provide a grossly inaccurate picture of the sediment sources within catchments. When the approach is applied well outside the bounds for which it was originally designed, with no locally derived sediment source data, inappropriate management priorities can be arrived at. While there are clearly benefits in a modelling framework, these examples demonstrate that the balance has tipped too far towards modelling, and there is a pressing need to shift the balance back towards empirical data collection through a national network of sediment monitoring stations. This should be coupled with a greater investment in the gathering of data on a range of sediment sources (e.g. gully erosion mapping, measurement of bank and channel erosion).

# **Bamboo's unrealised potential: Cultural framing constraints for sustainable resource solutions**

## **Author**

**Kathleen Buckingham**  
University of Oxford

## **Summary**

This paper traces the history of bamboo resource development, considering the constraints of a combination of historical-cultural perceptions and bamboo's ambiguous institutional position.

## **Details**

The interplay between plants and economies is well known; plants have shaped civilisation and societies. The development of agricultural cultivation has been crucial in forming our notions of nature and our separation of the natural world into the wild and the domestic. Bamboo species are highly versatile and rapidly renewable, however to realise the potential of bamboos, old western framings as a poor man's timber and invasive weed need reassessing. Western policy is yet to embrace bamboo as an integral part of forestry; a forest is still predominately conceptualised as treed lands. Throughout history a critical driving force behind global economic development has been societies' response to scarcity of natural resources. Human society has thrived not necessarily through conserving resources, but by obtaining and developing more of them. Abundance alone however is inadequate; natural resources have to be created and their exploitation coupled with innovation. Sustainable development urges for the sustainable utilisation of resources. Although creating a platform for green consumerism, sustainable development discourse has not led to reduced consumption habits. With increasing populations, reduced available land for agriculture and an increasing consumerist trajectory, we need to fundamentally reassess the resources we consume. By reconceptualising bamboo and creating policy and mechanisms to address the challenges in bamboo management, the plant can go some way towards contributing to pressing issues of sustainable consumption.

# Regional development through redistribution of mining rent: Is 'Royalties for Region' the answer?

## Author

**Amma Buckley**  
Curtin University

## Summary

This paper investigates the redistribution of royalties in WA under the 'Royalties for Region' scheme by assessing whether it promotes sustainable investment or is a missed regional development opportunity.

## Details

Recent events in Australian politics highlight the emotive and controversial nature of mining taxation. A mineral resource rent is a tax on supernormal profits; the surplus value after all costs and normal returns have been calculated. Governments rarely identify that mining companies pay too much tax, mining companies rarely deem that they pay too little; and citizens rarely recognise tangibly benefits from such taxes. Theories and models about resources rent are located in economics and taxation policy, although royalty wealth is fundamentally a compensation for the social costs of exploiting non-renewable resources. An essential element of royalties, according to the Henry Tax Review, is the 'sustainable intergenerational distribution' of mineral endowment for the Australian community. Indeed, distribution of mining royalties decided the 2008 Western Australian State election. An independent National Party member holding the balance of power brokered a deal with the Liberals for a reallocation of annual royalties to the regions. Informing the 'Royalties for Regions' scheme is the perception that royalties benefit Perth, while the regions, particularly mining regions, experience ageing infrastructure and poor services. Now in its third year of implementation, the scheme has its political supporters and detractors, yet limited social analysis of regional level impacts. This paper overviews the scheme, the nature of funded projects and the regional distribution, with the Mid West, WA as a case example. Overall the study investigates if redistributed royalties are a sustainable investment of rent or the squandering of a significant regional development opportunity.

# Quaternary mountain building processes in the Mount Lofty and Flinders ranges, South Australia

## Author

Solomon Buckman

University of Wollongong

## Co Authors

Chulantha Jayawardena

University of Wollongong

Colin Murray-Wallace

University of Wollongong

Robert Bourman

University of Wollongong

## Summary

The origins and onset of mountain building activity that gave rise to the Mount Lofty and Flinders ranges in South Australia

## Details

The Mount Lofty and Flinders ranges represent a narrow, elongate zone of crustal deformation that extends some 700km inland from Fleurieu Peninsula. These ranges are bound by neotectonic fault systems which are rarely exposed due to the development of extensive alluvial fan systems draped across the range fronts. On a broad-scale the pattern of relief shows an en-echelon shape and range-bounding faults contain a predominantly reverse-component of movement although fieldwork at Sellicks Beach has shown evidence of a strong oblique (sinistral) sense of movement suggesting lateral movements may be an important factor. Ground-penetrating-radar is being used to identify subsurface faults and disrupted Quaternary units in order to better constrain the distribution of neotectonic faults. The origin of the ranges is difficult to constrain but observations of neotectonic features are increasingly pointing towards more recent (Cenozoic) origins rather than the traditional denuded core of an ancient (Delamerian) orogen. Sediments in regional depocentres may provide important clues as to the onset of intraplate deformation that gave rise to the mountains we see today. Extensive rift-related sedimentation (Eocene-Miocene) is interrupted by a regional unconformity spanning almost 10 million years before the sudden presence of marine units in the Pliocene (Hallet Cove Formation) and extensive alluvial fan deposits in the early Pleistocene (Seaford Formation). We propose that this marked unconformity may mark the onset of crustal deformation that gave rise to much of the topography now seen suggesting that the Quaternary was a period of extensive intraplate mountain building in South Australia which continues today.

# Distance and direction: analysing the spatial turnover of Myrtaceae species across eastern Australia

## Author

**Hugh Burley**

University of New South Wales

## Co Authors

Shawn Laffan

University of New South Wales

Kristen Williams

CSIRO Ecosystem Sciences

## Summary

Spatial turnover of Myrtaceae and environment was assessed for eastern Australia using spatially global and local Generalised Dissimilarity Models. Local models were more accurate for anisotropic relationships.

## Details

Mapping biodiversity is a geographic process that is central to both ecology and conservation. While the spatial turnover of biological composition between sites has long been considered a key component of overall diversity, less is known about how turnover values are affected by the inherent spatial dependencies in biological and environmental data. First, ecological theory suggests that spatial turnover between site-pairs should be a monotonically increasing, curvilinear function of those environmental components most relevant to a biotic group's physiology. Second, spatial analysis theory suggests that global models, calibrated using data from across the entire dataset extent, should have lower predictive performance than local models, drawn from specific transects chosen a-priori to sample known environmental gradients. The relationship between spatial turnover of Myrtaceae and environmental conditions was assessed for site-pairs across eastern Australia using Generalised Dissimilarity Models (GDM) on four spatial sub-sampling strategies: (1) global; (2) local east-west (using rectangular, coastal to inland transects); (3) local north-south (using rectangular coastal transects); and (4) local omnidirectional (using non-directional, symmetric local subsets). Results support both theories, but local models only produce more accurate predictions when there is clear directionality of spatial dependence. In light of these findings, analyses of spatial turnover, such as GDM, should ideally account for spatial anisotropy as well as environmental and geographic distance.

# **Decolonise or recolonise? The NSW Northern Region Local Aboriginal Land Councils assert their vision for an economic future**

## **Author**

**Judith Burns**

The University of New England

## **Summary**

Exploration of a postcolonial economic development planning process pursued by Land Councils in northern NSW, and negotiation of a Regional Partnership Agreement with governments pursuing a colonialist agenda

## **Details**

In 2006, the NSW Aboriginal Land Rights Act was amended to require each Local Aboriginal Land Council (LALC) in NSW to prepare a Community, Land and Business Plan, to secure a strategic approach to LALC sustainability. The Northern Region Forum, a grouping of fourteen LALCs extending from Singleton, in the Hunter Valley, to the Queensland border, and from Dorrigo to Coonabarabran, sought to add value to this legislated planning process by developing the Regional Economic Development Strategy and Implementation Plan for the Northern Region (REDSIP). This presentation briefly recounts the planning process, then discusses the events which transpired as the Forum sought to obtain government support to implement REDSIP through a Regional Partnership Agreement. While the Forum's approach to negotiations has been informed by a rights agenda based upon assertions of autonomy and sovereignty, the coercive regimes of practice adopted by the increasingly authoritarian and paternalistic Government partners characterise Aboriginal people, as represented in this case by the Forum, as passive, colonised 'others' whose role is to consume government services. The Forum has struggled to assert its counter-discourse, in the form of the rigorous, geographically-specific REDSIP, relative to the generic policy and programme prescriptions of the totalising National Indigenous Reform Agreement and the NSW Government's Two Ways Together policy framework.

# A novel approach to quantify the connectivity of flammable fuels combining remote sensing and graph theory

## Author

**Gabriele Caccamo**

University of Wollongong

## Co Authors

Laurie Chisholm

University of Wollongong

Marji Puotinen

University of Wollongong

Ross Bradstock

University of Wollongong

## Summary

The connectivity of flammable fuels has a major influence on the probability of large fires. We developed an innovative approach to quantify fuel connectivity combining remote sensing and graph theory.

## Details

Droughts have a major influence on the probability of large fires. During drought reduced water availability decreases the moisture content of dead and live fuels thereby contributing to an increase in the overall availability and spatial connectivity of fuel that is sufficiently dry to burn. Mapping of dynamic patterns of drought is therefore important to provide a basis for monitoring the state and connectivity of flammable fuels and predict the potential for propagation of fires. We developed an innovative approach to quantify and map the connectivity among flammable fuels combining remote sensing data and graph theory. Spectral information from MODIS sensor was used to produce spatially explicit maps of drought during drought affected and non-drought affected years in the Sydney Basin Bioregion. Drought maps were converted into networks (i.e., sets of nodes and edges) with nodes representing the distribution of fuel patches and edges reflecting the strength of the connectivity among fuel patches. A wide range of graph theory operations were then applied to assess the influence of drought on the networks and fire activity. Results showed that fuel connectivity is strongly influenced by drought conditions. During drought fuel networks were tightly connected and characterized by higher traversability and fewer clusters. Strong relationships were found between the severity of fire season and fuel connectivity. Good spatial agreement was also found between large fires distribution and maps of fuel connectivity. This study represents a key step towards the development of a cost-effective tool to be used by fire authorities for forecasting the probability of large wildfires.

# Capacity for freedom – a new way of looking at rural-urban differences

## Author

Emily Callander  
University of Sydney

## Co Authors

Deborah Schofield  
University of Sydney

Rupendra Shrestha  
University of Sydney

## Summary

Using a recently developed measure of multidimensional poverty, the Freedom poverty measure, the difference in poverty rates of rural, inner regional and major cities have been compared.

## Details

Using a recently developed measure of multidimensional poverty, the Freedom poverty measure, the difference in poverty rates of rural, inner regional and major cities have been compared. The freedom poverty measure includes measures of health and education alongside income – people in freedom poverty are those who have income below the 50% of the median income poverty line, and ALSO have ill health or insufficient levels of education. The population living in rural areas had the highest proportion of individuals living in Freedom poverty. This was followed by the population living in inner regional areas, with the population living in major cities having the lowest proportion of people living in poverty. However, after taking into consideration the age and sex characteristics of the three population groups, it was found that there was no significant difference in the chances of being in Freedom poverty between those in inner regional areas and those in rural areas ( $p=0.7321$ ). Those in major cities, however, were significantly less likely to be in Freedom poverty than those in other areas ( $p<.0001$ ). That those in rural areas are more likely to be in poverty than those in regional areas is unsurprising given the poor economic, health and education outcomes report for rural residents. However, that there is no difference in the likelihood of being in freedom poverty between those in inner regional and rural areas may indicate that the disadvantage experienced by those living in regional centres has been overlooked in the past and is an emerging contemporary issue for health and education equity as well as economic equality.

# Negotiating interdependence and building community economies

## Author

Jenny Cameron

University of Newcastle

## Summary

This paper focuses on the four coordinates of the community economy: necessity, surplus, commons and consumption. It explores how two community enterprises make ethical economic decisions about each coordinate.

## Details

Gibson-Graham's language of diverse economies has helped to redefine 'the economy' and given us a way of interrogating the range of economic practices that constitute our lives. But perhaps more importantly, the language of community economies gives us a way of interrogating how we can make decisions about these economic practices to act on our social and environmental concerns. In this paper, I focus on the four coordinates of the community economy—necessity, surplus, commons and consumption—and I explore how two community enterprises are acting on their social and environmental concerns by making ethical economic decisions about each of the coordinates. In so doing, I demonstrate how these enterprises (The Beanstalk Organic Food in the Newcastle region and Food Connect in South East Queensland) are developing economic practices that foster interdependence between humans, and between the human and non-human worlds.

# Indicators for Change: Developing performative indicators for gender equity in the Pacific

## Author

**Michelle Carnegie**  
Macquarie University

## Co Authors

Katharine McKinnon  
Macquarie University

Claire Rowland  
Macquarie University

## Summary

The paper presents work-in-progress on a project that aims to establish a process of developing community-based gender equality indicators with NGO research partners in the Solomon Islands and Fiji.

## Details

Indicators for gender equity are usually focused on national level data, which lack sensitivity to diverse local practices and culturally specific aspirations for equity. As a result, economic development program workers often have limited tools with which to understand and measure gender equity in the local contexts where they work. Likewise policy makers have limited information on the impact of national level development initiatives on local communities over time. This paper reports on a work-in-progress to develop indicators for gender equity with local communities in Fiji and the Solomon Islands. We are interested in a process of developing indicators with our NGO partners that not only tracks change in gender relations to inform policy and programming, but which simultaneously assists men and women to make desired changes for greater individual and social wellbeing, in their households and in the wider community. Using a feminist methodology and action research methods, the project involves trialling an indicator development process derived from the aspirations of local communities, rather than derived from externally defined parameters of equity. We aim to develop and trial indicators which lay the foundations for reflexive community-based engagement which in turn initiates a process of actively generating positive change in gender relations, in ways in which men and women have identified as important for themselves. The project thus aims to engage with the indicator development process as a performative process which can itself work towards greater equity as it facilitates men and women to define indicators appropriate to their lives.

# Quantifying the net benefit of Tropical Cyclone Yasi's cool wake to corals on the Great Barrier Reef – implications for global climate change

## Author

Adam Carrigan

University of Wollongong

## Co Authors

Marji Puotinen

University of Wollongong

## Summary

Cyclone Yasi demonstrates the net effect of a cyclone can be positive for reefs because heat stress relief in the cool wake spans a greater area than other associated stressors.

## Details

Category 5 Cyclone Yasi (TCY) crossed the Great Barrier Reef (GBR) on 2 February 2011. Given TCY's large radial extent of destructive (200 km) and gale force (400 km) winds, it was no surprise that widespread reef wave damage was reported. However, TCY also generated an extensive cool wake within which sea surface temperature (SST) dropped by up to 2.2 °C. This persisted across a broad area for weeks. Cold core eddies in the path of TCY (identified from sea surface height data) likely enhanced upwelling in these areas and increased duration of cooling. Although cyclone-forced upwelling can lead to harmful algal blooms, cyclone cool wakes have been shown to relieve thermal stress sufficiently to reduce coral bleaching severity. Following TCY, Coral Reef Watch hotspot images measuring how far SSTs exceed the bleaching threshold of corals showed a reduction in area of thermal stress (100s of kms) along the GBR. While TCY likely had a negative overall effect on areas that were damaged or subjected to algal blooms, corals outside those areas benefited from cooler water at a time when summer SSTs typically approach their maximums. We compared the areal extent of positive and negative effects using satellite (SST, Chlorophyll a concentration, sea surface height) and in-situ (reef damage surveys) data to assess the overall benefit of TCY's cool wake. With SSTs predicted to increase in the coming decades, this provides insight into how increased numbers of intense tropical cyclones (also predicted) might partially offset expected increases in thermal stress on corals.

# Labour migration and the new regional economies: operating “Beyond the Periphery”

## Author

Dean Carson

Charles Darwin University

## Co Authors

Andrew Taylor

Charles Darwin University

## Summary

Labour migration to remote Australia does not conform to the core-periphery models common in the literature. This presents challenges and opportunities for labour recruitment in different industries.

## Details

Patterns of labour migration reported in the literature tend to exhibit core-periphery structures. Cores are large population centres which generate migrants to a wide range of regions and draw migrants from a wide range of regions. Peripheries are smaller population centres which exhibit high dependence on cores and neighbouring peripheries both as sources of labour and as destinations for labour. Research in Europe and the United States has assumed that all regions are integrated into core-periphery relationships (i.e. they are all either cores or peripheries). Our research in Australia, however, shows that some regions cannot be readily classified as either cores or peripheries. Most of these regions are in 'remote' Australia including the Northern Territory. Here we have small population centres which interact only weakly with one another in terms of labour exchange, and there is no obvious 'core' at the centre of the labour migration system. Rather, different industries have different patterns of labour migration involving a large and ever changing number of near and distant source regions. With labour recruitment continuing to be one of the major challenges facing remote regions, understanding how labour migration patterns emerge and are sustained is important in practice as well as conceptually interesting. This paper uses GIS to model existing labour migration patterns for the Northern Territory and considers the challenges and opportunities that 'beyond periphery' labour migration presents for economic development.

# **It Would be Good to Know Where Our Food Goes: Information = power?**

## **Author**

**Jen Cleary**

University of South Australia

## **Summary**

Review of a PAR project involving Aboriginal bush harvesters of Australian Native Foods. Paper focuses on the participatory nature of the project and the multiple learnings that resulted.

## **Details**

The Australian Bush Foods industry is a complex fledgling industry where raw product inputs originate from both wild (bush) harvest and cultivated supply of multiple native fruits, nuts and seeds. In remote Australia, where much of the bush harvested supply of raw product originates, the industry spans the two socio-cultural worlds of western commerce and Aboriginal women's business. These two worlds come together in the supply chain associated with bush harvested produce, at the juncture where this is sold by remote Aboriginal women to (mostly) non-Aboriginal others. This paper examines a participatory action research (PAR) project undertaken with Aboriginal bush harvesters and growers of katyerr from central Australia. The project, called 'Information = Power: Walking the Bush Tomato Value Chain' enabled members of a component in the industry chain to physically follow the raw product through various stages of the chain from processing through manufacture to the retail sector. The paper focuses on the participatory nature of the project and the effectiveness of this as a methodological approach, and the multiple learnings that resulted. The paper highlights and illustrates the importance of relationship development in PAR approaches and discusses this particularly in the two-worlds paradigm. The paper concludes with recommendations around using PAR in future bush foods research with remote Aboriginal peoples.

# Cardiac ARIA: Using GIS to measure the nation's access to cardiac catheterisation laboratories

## Author

Neil Coffee

University of South Australia

## Co Authors

Robyn Clark - Queensland University of Technology

Dorothy Turner - University of Adelaide

Karena Eckert - SA Health

Simon Stewart - Baker IDI

Deborah van Gaans - University of Adelaide

David Wilkinson - University of Queensland

Andrew Tonkin - Monash University

## Summary

Cardiac ARIA modelled time/distance to all cardiac services along the road network and provides an objective, geographic, comparable index of potential access to cardiac services across Australia.

## Details

In a cardiovascular emergency every minute counts and access to appropriate health care following an acute event is important for positive health outcomes. Cardiac ARIA modelled time/distance to all cardiac services along the road network across Australia and provides an objective, geographic, comparable index of potential access to cardiac services across Australia. Distance along the road network was calculated from all population locations to the closest facility (closest/best medical facility, all catheterisation laboratories and 24 hour 7 day catheterisation laboratories). This was converted to time and added to the dispatch time and ambulance on-site time to create a time surface across Australia. GIS was used to link Australian Bureau of Statistics 2006 Population data with the accessibility values for Acute Cardiac ARIA, all catheterisation laboratories and 24 hour 7 day catheterisation laboratories. Results indicate that approximately 71% of the population (13.9 million) have good access to a medical facility and 65% of the population (12.9 million) were within 1 hour of 24 hour 7 day cardiac catheterisation laboratory. However, 34% or 6.8 million persons lived outside of this range and importantly those with poorer access to cardiac services include 3 million older Australians and 62% or 282,000 of the Aboriginal and Torres Strait Islander population. Cardiac ARIA provides a valuable tool for assessing population geographic accessibility to a range of Cardiac Services and the results of Cardiac ARIA or specific inputs such as modelled for this paper can be used to guide public policy and service delivery.

# **Informing strategic planning for sustainable coastal development: the case of the Great South West Regional Strategic Plan**

## **Author**

**Brian Coffey**  
Deakin University

## **Co Authors**

Kevin O'Toole  
Deakin University

## **Summary**

This paper will explore how different forms of knowledge interact in the development of regional economic development plans

## **Details**

The development of regional economic development plans provide an important means by which regions can create a vision of future success, and establish processes for achieving such a vision. Within the context of coastal zone management, such plans clearly have strong potential to improve or degrade the coastal zone depending upon the vision articulated. For example, understanding coastal processes and their implications for economic development, and the potential impacts of different land uses on the coastal zone is important. Clearly, the development of such plans should be informed by an appropriate evidence base in order that opportunities are maximised and problems avoided or minimised. Within this context, this paper explores the processes and mechanisms used to develop the Great South Coast Regional Strategic Plan (GSCSRP). In doing so, emphasis will be directed to the interplay between the policy and economic context shaping the development of such strategies and the particular circumstances, capabilities and priorities in regional areas. As part of this, the contribution of different forms of knowledge in informing the development of the plan will be given particular attention.

# Drought-induced river recovery in south-eastern Australia

## Author

Tim Cohen

University of Wollongong

## Summary

We present compelling evidence of landscape recovery in south-eastern Australia during a prolonged dry period that has lasted 30 years.

## Details

Eastern Australia has recently experienced multiple years of below average rainfall and streamflow conditions. We present evidence that rivers in south-eastern Australia have been subject to a reduced frequency of large magnitude flood events for a much longer time interval; since 1977/78. The pattern of reduced streamflow since then has coincided with positive mean sea level pressure (MSLP) anomalies over eastern Australia resulting in a decrease in east coastal low-pressure systems (east-coast lows) and accompanying rain. We present an analysis of daily discharge of rivers draining to the Tasman Sea from the south to the north coast of New South Wales (NSW). This regionally identifiable climatic shift has had profound implications for the biophysical characteristics of many river systems. Multiple examples are presented highlighting dramatic increases of in-channel and riparian vegetation since 1977/78. These increases in vegetation are the largest biogeomorphic changes the landscape has experienced since the original clearance of vegetation associated with European settlement. We suggest that the reduction in frequency of large flood events, accompanied by changes in land use and river management policy, have resulted in widespread river recovery with increases in early successional nitrogen-fixing vegetation, a dramatic increase of in-channel hydraulic roughness and resultant decreases in bedload transport. These biophysical changes are both locally ecologically important and also appear responsible for catchment-scale changes in flood hydrology. Such climatic phenomena, whilst having obvious immediate negative impacts, have had fundamental landscape-scale benefits.

# Towards a Theory of Regional Development

## Author

Paul Collits

RMIT University

## Summary

The paper explores the core questions of regional economic development: What is the problem (or how do we define “success”)? Who is responsible for regional development? What drives regional development?

## Details

Regional economies are open systems of varying geographical scale, influenced by a broad range of drivers. These drivers are local, regional, national and international, and economic, social, environmental, cultural and institutional in nature. They shift across space and over time. Arguably, they are becoming more complex. They also vary in the degree to which local actors such as businesses, economic development practitioners and regional leaders can influence or control them. Much current thinking and practice in economic development operates according to a model of regional competitive advantage, which, it is argued, can be created through the appropriate strategies, policies and actions. The paper explores what might be regarded as the core questions of regional economic development: What is the problem (or how do we define “success”)? Who is responsible for regional development? What drives regional development? And, what “works” in terms of strategy and practice? Unpacking these questions will help clarify the scope and likely success of economic development policy interventions at the regional scale. The absence of a single, widely accepted, powerful theory explaining why regions grow and decline makes life difficult, perhaps impossible, for those wishing to create regional competitive advantage. Two issues arise. First, can there be a reliable theory of regional development that satisfactorily accounts for growth and decline, and second, what would such a theory look like? If these questions cannot satisfactorily be answered, is it really possible to create regional competitive advantage or must attempted interventions largely be a matter of hit or miss?

# Country Style: Placing People in the New Country

## Author

John Connell

Sydney University

## Summary

Country Style has created a new vision of rurality and of good citizens of the country - the middle class in search of rural idyll - both nostalgia and modernity in gendered places- gentrification by media.

## Details

At one level much of rural and regional Australia is a troubled place with social and economic problems – hence the efforts of organisations such as Country Week to encourage in-migration. While Country Week has focused on functionality – the need for skilled workers and households- another strand has been to promote the country as a place to ‘live the dream’. That is even more evident in the magazine Country Style, where a new vision of rurality and of ‘good citizens’ of the country is promoted. Such new citizens of the country are middle class families benefiting from various components of the imagined rural idyll - virtue and simplicity, nature, environment and heritage, a sense of place/scale and safe belonging, and a place for children and family – that combine nostalgia, modernity and good food: that are European, anti-urban, timeless, untroubled and distinctively gendered – and represent an ultimately improbable gentrification by the media.

# City of Flows: Household Water Practices in Christchurch, New Zealand

## Author

David Conradson

University of Canterbury

## Summary

The paper discusses household water practices in Christchurch, NZ, comparing two suburbs located along a river. The context includes the recent earthquakes and concerns regarding water sustainability.

## Details

Wherever it flows, water has the capacity to sustain diverse forms of life. Yet in Canterbury, as in many other regions in Australasia, water resources are under pressure from population growth and intensive farming. Whilst considerable scientific research has been undertaken into agricultural and industrial water use in New Zealand, there is relatively little work on everyday water engagements amongst urban households. This paper reports upon an investigation of such water practices amongst residents in two different Christchurch suburbs, each located adjacent to the Avon River. Drawing on water diaries and semi-structured interviews, we discuss how households engage with water in everyday social reproductive, gardening and recreational activities. We examine the values and meanings ascribed to water in these activities. We also consider how household water practices are shaped by cultural narratives, including injunctions and encouragements regarding appropriate use, and constructions of hygiene and the sacred. A feature of our study is that the research period traverses two major earthquakes that impacted significantly upon Christchurch (September 2009 and February 2010), with the main city rivers declared contaminated and off-limits for recreation after each event. The findings thus offer some insight into the ways in which household water practices and understandings have been affected by post-quake water shortages and restrictions. With reference to climate change, we found significant variations amongst householders in terms of their capacity to imagine the broader hydrological and ecological systems within which residential water use can be situated.

# Green Bans: the interruption, disruption and reform of urban governance in NSW

## Author

Nicole Cook  
RMIT University

## Summary

This paper recovers the role of the Green Bans in shaping planning policy and practice in NSW. It emphasises the diverse non-planning and planning agents gathered in the achievement of these reforms.

## Details

From 1971-1974, the NSW Builders Labourers Federation joined forces with resident and community action groups to contest the planned destruction of affordable housing and greenspaces in Sydney and further afield. The event has been celebrated as a key moment in community-unionism in Australia (Burgmann & Burgmann, 1998) and as the contestation of publicity and privacy (Anderson & Jacobs, 1999). Drawing on historical materials documenting the interaction between resident action groups, non-government organisations, unions, planners and politicians from 1971-1979 this paper argues that the Green Bans also played a key role in planning reform. Specifically, it links the Green Bans to the development of third party objection and appeal in the NSW Environmental Planning and Assessment Act (1979). In recovering the radical potential of non-experts as agents of planning reform and innovation, it positions non-expertise as a driver of new planning processes that, in Deleuzian (1995) terms, comprise a new syntax. In this case the emergence of participatory planning legislation complicated and changed the methods through which planning policy and processes could be appropriated by political and economic elites through the remainder of the century.

# Visualography: Image + Place + Culture

## Author

**Cimarron Corpe**

University of the Sunshine Coast

## Summary

The Sunshine Coast Australia is a community in flux coping with a contested image/place identity brought on by the globalizing forces of sea change migration and residents' idealized sense of place.

## Details

Notions of place have been linked to sustainability and environmental concern and, if disrupted, can compromise community resilience and adaptive capacity. This study builds on the work of Carter et al (2007), which suggests that globalizing forces of development and tourism have projected an image/place identity that is inconsistent with Sunshine Coast residents' image/place identity. Photographs alter the way we see, remember, and imagine the world and can often evoke lived or imagined experiences of place. The study employs visualography as a multidisciplinary approach grounded in geography, phenomenology, and visual methods to frame an investigation of place. It focuses on lived experience of place – elicited through photographs, photographic moments, and the locale where photographs are made – to understand the ways image/place identity is constructed. Despite growing support that strong notions of place fosters climate change adaptation, very little original research has been undertaken to date to verify this assumption.

# Many Roads lead to Home: exploring socially and environmentally just housing

## Author

**Louise Crabtree**

University of Western Sydney

## Summary

This paper reflects on models of housing addressing social and/or environmental justice, as well as opportunities and challenges regarding implementation or 'mainstreaming'.

## Details

This paper reflects on 10 years of research into non-mainstream housing to discuss models that seek to embody ideas of social and/or environmental justice. These include various types of housing cooperatives, mutual housing associations, community land trusts, cohousing, 'resident-savers' and intentional communities, as well as combinations of these and similar, although often un-badged, interventions in the broader housing system. It will provide a typology of sorts, reflecting on the characteristics of each model, plus reflection on the potential and challenges of these models, especially with regard to 'mainstreaming'.

# Floodplain Construction in a Large Dry-Tropical Catchment: Evidence of a relict process on a drying Continent?

## Author

Jacky Croke

Australian Rivers Institute

## Summary

The timing of floodplain construction in the Fitzroy River Basin, northern Australia point to the general absence of significant floodplain construction since the LGM. Implications of this are discussed.

## Details

Floodplains preserve a valuable record of fluvial adjustment to changes in the discharge:sediment flux ( $q/q_s$ ) relationship. However, they are time-transgressive features and delineating 'contemporary' floodplains (cf Nanson and Croke, 1992) is problematic in environments where fluvial adjustment does not result in channel incision and terrace formation. Current understanding of geomorphic response to change suggests that channel pattern can alter on a decadal time-scale with a shift in the ratio of sediment transport capacity to sediment flux ( $q_c/q_s$ ), whereas major reorganization of floodplains requires persistent change and/or repeated perturbation over longer periods (Schumm, 1977). Using data from the Fitzroy River Basin in Queensland, evidence of floodplain construction is examined over a range of time-scales from the Late Quaternary through to the present-day. The data point to a general absence of significant floodplain construction since the Last Glacial Maximum and only slight 'modification' of floodplains by out-of-channel vertical accretion processes over the shorter decadal timeframe. Within channel benches now form the 'contemporary floodplain' in many valley settings. The implications of this are discussed within the context of existing studies on Australia's Quaternary climate regime and likely future implications as climate continues to dry. References Nanson, G and Croke, J. (1992). A Genetic Classification of Floodplains. *Geomorphology*, 4(6), 459-486. Schumm, S. (1977). *The Fluvial System*. Wiley-Interscience; New York, NY (USA), 338 p.

# Japan - A Geography on the Edge

## Author

Lesley Crowe-Delaney

Curtin University

## Summary

The recent Tohoku earthquake highlights the problematic issues that have become a feature to many coastal environments of Japan, namely ageing populations, concentrated development and coastal regionalisation.

## Details

The recent earthquake and disastrous tsunami in Eastern Japan have highlighted yet again the dangers of coastal development and settlement in countries with environmentally challenging interiors and thus a 'Geography on the Edge'. Australia is geologically stable and has large inland areas devoted to food and fibre production. It can therefore locate both hazardous utilities and habitation in relatively safe locations; Japan cannot. Nevertheless, developers in equally advanced economies could take note of the Japanese experience. This paper discusses the ramifications of coastal development and planning in Japan, where in a matter of hours, an entire country can be brought to a halt due to its vulnerability to natural hazards. Although the Great Hanshin Earthquake of 1995 led to a series of alternative strategies and policies to avert a 'slowdown' of the Japanese economy, decentralisation strategies mostly aiming for greater local government autonomy, have not adequately addressed the management of Japan's environment, which it can be argued is a topic still addressed by a centralised administration's top down approach. This paper discusses three problematic themes that have become a feature to many Japanese coastal environments, namely aging populations, concentrated development and coastal regionalisation.

# **Rethinking Ageing and Labour Supply in Rural Australia: Has the Crisis Already Been Averted?**

## **Author**

**Amanda Davies**  
Curtin University

## **Summary**

This paper considers spatial trends of ageing in rural Australia and implications for labour supply

## **Details**

Rural Australia is demographically divided. Some populations are growing rapidly, while others are shrinking. Some populations are growing older while others are not. In this paper, I am interested in the ageing of Australia's rural populations and the potential implications of this demographic shift for rural labour supply. The Australian Government has identified population ageing as a core threat to the stability of rural labour supply, with population ageing predicted to cause considerable labour shortage. In this paper, I argue that improvements in worker productivity (through higher rates of educational attainment) may compensate for fewer workers. I also consider the improving wealth and health status of the elderly and argue that perhaps it is time to reconsider the productive role of the rural elderly.

# “There’s Something About Subi”: Protecting and Creating Neighbourhood Character in Perth, WA

## Author

Dr Gethin Davison

University of New South Wales

## Co Authors

Emma Rowden

University of Melbourne

## Summary

This paper explores the factors underlying resident resistance to urban change, and considers the effects that urban renewal can have on resident understandings and experiences of 'place'.

## Details

Urban renewal is a key planning strategy in Australia, but one that is frequently resisted by local residents objecting to transformations of neighbourhood 'character'. In this paper, we explore the factors that underlie such resistance and consider the effects that renewal can have on resident understandings and experiences of place. The paper relates a case study of fierce resident resistance to a major renewal project in the inner-Perth suburb of Subiaco. Through a combination of semi-structured interviews, mapping and discourse analysis, we ask what motivated residents in Subiaco to resist proposals for renewal in defence of an existing character, what they feared about change and what they were trying to protect. Reflecting on this in relation to theoretical frameworks of place-identity and gentrification, we find that resistance was more about social change, histories and everyday experiences of place than it was about the effects of the proposed projects on the physical form and appearance of the neighbourhood.

# Everyday experiences of weather 'in the now': methodological insights from an ethnography of Australian weather

## Author

Eliza de Vet

University of Wollongong

## Summary

This paper investigates qualitative methodologies that enable the documentation and analysis of everyday weather experiences utilising three Australian case study areas.

## Details

This paper examines methodologies which aim to document and interpret everyday weather experiences of individuals in three Australian climates separated by latitude and cultural context (Darwin, Melbourne, Wollongong). While this PhD research draws upon work in relational geography, sociology and cultural studies, this paper specifically reflects upon methodological issues raised. In Sherratt's (2005) important Australian work, he distinguishes between cultural discourses of weather as 'immediate, local and personal' (p.2) – as opposed to climate - discursively constructed through science as an 'averaging' of longer-term trends. This distinction raises discrete methodological problems for cultural geographers interested in daily weather experiences: how do we capture weather experiences 'in the now'? Conventional research methods like surveys and focus groups rely on memory, dependant on past-tense weather reflections removing subjects from the 'here and now' of weather. Additionally, methodological problems arise from tensions between high-profile weather events including droughts, floods, cyclones and bushfires and mundane, daily weather interactions. It is these mundane interactions that can be less easy to precisely excavate from memory than those iconic events that shatter daily routines and capture public imagination. To respond to Sherratt's challenge of recording experiences 'in the now', this paper trials a sequence of complementary methods: (1) an autoethnographic weekly blog, (2) interviews, (3) weather diaries, photographs and an interactive GPS-tracking exercise documenting daily movements. I discuss these methods and what they can offer an epistemology of 'the now' in cultural geographical weather research.

# Responses to climate change in the Torres Strait

## Author

Annika Dean

University of Newcastle

## Summary

This paper develops understandings of responses to the impacts and threats of climate change in the Torres Strait, Australia. It also explores how legacies of colonialism influence these responses.

## Details

This paper develops understandings of responses to, and perceptions of, the impacts and threats of climate change in the Torres Strait. It uses a postcolonial theoretical framework to analyse how the ongoing legacies of colonialism influence responses at different governance scales. By conducting interviews with Torres Strait Islanders and Island councillors, and analysing government documents, the research demonstrates that, whilst Torres Strait communities are responding in a range of different ways to delay and, ideally, prevent relocation from their ancestral homelands, State and Federal Government responses are characterised by exclusion, negation and absence, exhibiting a comprehensive lack of action and an unwillingness to fund the adaptation initiatives that are urgently required. What little support has been offered has been blatantly contrary to the concerns and priorities of Torres Strait communities. At the local level, Torres Strait communities perceive climate change as a direct threat to land, local knowledge, language, culture and identity. In this sense, climate change itself is arguably furthering the project of colonialism, albeit indirectly. The continuing exclusion, despite repeated requests for help, generates a deep sense of frustration towards government within Torres Strait communities. This paper argues that adapting to climate change in the Torres Strait requires a holistic approach that acknowledges and challenges the historical disadvantages that result from the material and discursive legacies of colonialism and embraces 'ontological pluralism' and Indigenous perspectives on climate change.

# Infant toileting in China: 'holding out' against Westernisation

## Author

Kelly Dombroski

University of Western Sydney

## Summary

Through 'holding out' their infants to urinate, mothers in Northwest China 'hold out' against homogenising globalisation, with possibilities for different kinds of global futures.

## Details

Although the practice of using artificial formula to feed infants is popular all over China, the equally well-marketed practice of using disposable nappies is nowhere near as dominant. This paper looks at the Chinese practice of infant pottying or *ba niao* (literally 'to hold out to urinate'), particularly as it is practiced in the city of Xining, Qinghai Province. Through detailing the infant toileting and feeding practices of minority, migrant, and marginalised women around the city, I paint a picture of local beliefs about the bodies of mothers and infants. Drawing on Anna Tsing's methodology for doing ethnographies of global connections (Tsing, 2005) I examine the awkward engagements at hand: that between the spatial/separation understandings of hygiene in Qinghai and the understandings of Western-owned multinationals; and also between traditional Chinese medicine and Western biomedicine understandings of infant feeding. I hazard some explanations for the differential uptake of the practices of artificial feeding and disposable nappy use, and conclude that through 'holding out' their infants literally, mothers metaphorically 'hold out' against the so-called homogenising force of development. The future is not laid out and inevitable, but mediated by the decisions of individuals and families: globalisation is produced differentially in specific places through specific practices, in a two-way process whereby the local not only resists but also affects the global.

# Ecologies of the Car

## Author

Robyn Dowling

Macquarie University

## Co Authors

Catherine Simpson

Macquarie University

## Summary

This paper presents an ecological understanding of automobility. We use the example of car sharing to think through ways of establishing sustainable, car-oriented futures.

## Details

Australia is one of the most automobile-dependent countries in the world. This dependence on car travel is defined by scholars as 'automobility': a state in which the car is a central part of the fabric of everyday life and supported by a range of institutions and infrastructures: transport networks like highways, traffic rules and planning frameworks. This paper presents an ecological understanding of automobility that seeks to investigate the 'whole-organism-in-its-environment' and hence recognise the car's role in a less carbon-intensive future. In particular, using a cultural history approach we show that whilst conventions that support car dependence are still predominant, automobility is, in theory and practice, riven with cultures and practices that undermine car dependence. We use the example of car sharing to think through ways of establishing sustainable, car-oriented futures.

# Migration as a process: towards the embodied nature of migration

## Author

Hao Duan  
UNSW@ADFA

## Co Authors

Scott Sharpe  
UNSW@ADFA

Paul Tranter  
UNSW@ADFA

## Summary

Migration can be considered as a bodily process, which requires a historical perspective to investigate the dynamics of social structures and cultures.

## Details

Abstract: Two trends have been dominating migration studies: (1) treating migration as a one-off decision, such as in the human capital model of migration and in the gravity model of migration, and (2) focusing on specific aspects of migrants' lives, such as family relationships. Recent advancements of performative social science offer us an opportunity to re-consider migration theories in terms of migrants' bodies. By interviewing Chinese student migrants studying in Canberra, the paper argues that migration could be treated as a bodily process, in which series of bodily events direct migrants from origins to destinations. Although the interviewees exhibit diverse bodily processes in migration, in which there appears some "randomness", the paper argues that all the bodily processes of migration, including "random behaviour", have been influenced or even determined by preceding bodily events. The differences exhibiting in migration can thus be traced to migrants' economic statuses but also social relationships, cultures and sub-cultures and a wide range of bodily practices and states. Therefore, predicting future migration trends should include these bodily factors in considering both driving forces and inertia of social structure and cultural changes from a historical perspective, rather than simply model demographic factors without considering temporal changes of these factors.

# Disentangling the sensory moments of spatiality

## Author

Michelle Duffy

Monash University

## Summary

This paper presents argues that sound and listening offer innovative ways to examine the gap between experience and representation.

## Details

In 1979 Jean-Francois Augoyard argued that urban planning disregards everyday time, that there is a 'qualitative gap between lived practices and representations of these practices' (2005: 4). This still holds true today. Master planned estates are promoted as sources of 'real' community, offering a nostalgic view of neighbourhood while at the same time promising the latest in housing essentials and green credentials. Yet, less is known about the very messiness of daily life and how this affects perceptions, understanding and experiences of the human and non-human world. The turn in geographic research to the significance of the body and its role in how places are made provide an important means of understanding how these master planned estates impact on social connectedness, belonging and ideas of home. This paper presents theoretical and methodological approaches with which to examine the gap between experience and representation, arguing that sound and listening offer innovative ways to access these difficult to articulate aspects of being in the world.

# The correlation between bay characteristics and the shoreline curvature in embayed and pocket beaches

## Author

Arash Eisazadeh Moghaddam  
University of Canterbury

## Co Authors

Deirdre Hart  
University of Canterbury

## Summary

In this study, sixteen embayed and pocket beaches have been studied and relationships between bay characteristics and the shoreline curvature have been found.

## Details

The effect of natural headlands on shoreline curvature in embayed and pocket beaches is of great interest to coastal researchers and managers since this relationship affects shoreline stability. This paper describes how bay characteristics influence the shoreline curvature of headland-bay beaches exposed to swell wave climates. Sixteen different embayed and pocket beaches in New Zealand, the east coast of Australia, Spain and France were studied. Data on the lengths of the headlands and shoreline, on the space between the two headlands and on the shoreline curvature were extracted using Google Earth 5.2.1.1588 and tested for linear and non-linear correlations using the software programme R. As a local test of spatial data accuracy, the shoreline of one pocket beach in New Zealand was measured by GPS. The studied beaches were divided into two groups: (1) where the length of the shoreline was longer than that of the upcoast headland; and (2) where the length of the upcoast headland was longer than that of the shoreline. Results show that, for the first group, the downcoast, upcoast and entire shoreline curvature were found to be a linear function of the space between, and length of, the two headlands plus the length of the shoreline. However for the second group, only one significant non-linear relationship was found: that between the upcoast curvature and the length of both the shoreline and upcoast headland. Since artificial pocket beaches have recently been recommended in different coastal areas as a tool to stabilize the shoreline, the results of this study could be a useful guide for coastal managers.

# Knowing Fire: How Can the knowledge of park management staff of fire be used to achieve enhanced land management outcomes and enhanced community outcomes

## Author

**Anthony English**  
Parks Victoria

## Summary

Argues that the unrecorded knowledge of fire held by agency staff can be better utilised. Outcomes could include respect for community based knowledge and new conversations about fire in fire prone landscapes.

## Details

There are many bodies of knowledge about fire in the Australian community, some of which have been little explored and actively utilized in fire management. These include the knowledge held by Aboriginal people, and those who live and work in fire affected landscapes. One important knowledge set is that possessed by staff in park management agencies. This paper uses interviews with a range of staff to explore the “unrecorded” aspects of their knowledge that have been built up over many years of observation and practice. While individuals apply this knowledge in the field, its extent, form and value has been little considered in a formal sense by land management agencies. Staff knowledge about fire behavior in specific landscapes, environmental response to fire, working with local people’s knowledge of fire and historic trends in fire suppression and prescribed burning practice are all explored. It is argued that land management agencies should actively document and collect this knowledge and use it to enhance not only agency practice, but the potential outcomes for communities at risk from fire. There are many potential benefits from such an approach. These include recognition of staff knowledge, fostering an agency culture of knowledge sharing and refinement, and a respect for “local” knowledge about fire and landscapes that can be lost in the drive toward standardised approaches to fire planning and management. The author uses his own experience as an Operations Officer and Burn Officer in Charge to shape this discussion which includes a reflection on the importance of Aboriginal knowledge in joint managed parks.

# Engaging more women with bushfire safety issues

## Author

Christine Eriksen

University of Wollongong

## Summary

Gendered dimensions of bushfire resilience are analysed in the context of institutional patriarchal structures that have been accused of reinforcing gender roles and thus gender vulnerability to bushfire.

## Details

This paper examines institutional patriarchal structures that have been accused of being resistant to change whilst reinforcing the normalisation of patriarchal relations in changing wildland and rural landscapes. It considers the effect of such patriarchal structures on the ability of bushfire education initiatives to address gendered dimensions of vulnerability to bushfire risk. Interviews with landholders show that an important factor at play in many women's decision not to engage with bushfire safety issues is the lack of gender sensitivity and focus on gender issues within the language, culture and approach of bushfire education programs. These interview results are compared with the outcomes of surveys and workshops with NSW Rural Fire Service staff and volunteers, which focused on the perceived strengths and obstacles within the agency to engage women with bushfire safety issues. The paper concludes by contextualising the need for long-term political commitment to gender sensitive bushfire education initiatives with illustrative research examples.

# Traditional Ecological Knowledge and Indigenous responses to fire in New South Wales and Cape York

## Author

Robert Evitt

University of Wollongong

## Summary

This research explores government initiatives aimed at supporting Aboriginal land owners to utilise and promote traditional ecological knowledge of fire as a mechanism of cultural land management practices.

## Details

The way in which traditional ecological knowledge is utilised by government environmental agencies who recruit Indigenous people varies regionally across Australia. For instance the use of Aboriginal Fire Regimes to promote the health of biodiversity in northern Australia is far more established than in other parts of the continent. Opportunities for Indigenous communities in New South Wales to integrate their knowledge, such as Aboriginal fire regimes, into the management of Aboriginal owned land is minimal. Whilst debate exists as to the relevance of such traditional land stewardship techniques in their application to regional areas outside of northern Australia, the issue of climate change in environmental management planning may suggest that such forms of traditional ecological knowledge are in fact more applicable than ever to government land management agencies everywhere. In addition to this, the capacity for Aboriginal land owners in NSW to implement their own land management and climate change planning models remains relatively low and unsupported. This research follows current attempts by State government land managers and Aboriginal private land owners to increase the integration of traditional ecological knowledge into land management for biodiversity in NSW. The focus of this study will centre on a range of recent government initiatives to engage and support Aboriginal land owners in NSW to enable them to reinvigorate, utilise and promote the use of their traditional ecological knowledge in land management. These initiatives include new and innovative approaches toward fire management, protecting biodiversity, promoting cultural practices and understanding the impacts of climate change.

# City of Green and Monuments: Songs of the Green Bans

## Author

**Bob Fagan**

Macquarie University

## Co Authors

Margaret Fagan

## Summary

This presentation focuses on poems written in the 1970s by a member of the NSW BLF which capture eloquently motivations and place-specific contexts for the green bans movement.

## Details

City of Green and Monuments: Songs of the Green Bans Margaret and Bob Fagan In the 1970s poet Denis Kevans, in later life often referred to as Australia's 'poet lorikeet', wrote two poems specifically about the Green Bans, a distinctive form of direct environmental action introduced by the NSW Branch of the Builders' Labourers Federation (BLF). Denis, a builders' labourer in the 1960s, later joined others in the BLF who wrote songs, poems and stories about their experiences in the short-lived but highly influential green bans movement which followed imposition of the first green ban in 1971 on a proposed development at Kelly's Bush, Hunters Hill. As an introduction to the themed session "Remembering the Green Bans", this paper focuses on these writings which capture eloquently some of the motivations and place-specific contexts for the green bans movement.

# Keeping cool at home: experiences of air-conditioning and equitable access to cool air

## Author

Carol Farbotko

Australian Centre for Cultural Environmental Research

## Summary

Examines everyday practices of keeping cool in an effort to understand links between household air-conditioning and vulnerability.

## Details

There is a need for better understandings of how air-conditioning is bound up in differentiated risks of heat stress across different spaces and scales in a warming world. The aim of this paper is to explore how, starting with the scale of the household, tensions between air-conditioning as an emissions-intensive technology and as an adaptation tool unfold in daily life. Drawing on interviews with householders in Wollongong, Australia, I explore how environmental, health and financial concerns are influencing the use of household air-conditioning in the management of thermal comfort. As practices of keeping cool are bound up in social stratification, I link household air-conditioning use with the infrastructural, political and cultural systems in which they are materially and discursively situated, to highlight possibilities for, and barriers to, reductions in heat-related vulnerabilities.

# Long-term human-plant relations in north Queensland's rainforest region

## Author

Åsa Ferrier  
La Trobe University

## Co Authors

Anna Tuechler  
La Trobe University

Richard Cosgrove  
La Trobe University

Laurence May  
La Trobe University

## Summary

We present the results of experimental processing work on modern samples of black bean and yellow walnut, and consider the energy costs and benefits associated with these nuts within a prey selection model.

## Details

This paper presents ongoing research on long-term Aboriginal use of toxic rainforest plants in far north Queensland's Wet Tropics Bioregion. Ethnographic accounts from north Queensland's rainforest region, along with oral historical testimonies, show that Aboriginal rainforest people consumed a number of toxic rainforest plants at the time of Aboriginal/European contact. Two plants that recur in the historical records are the black bean (*Castanospermum australe*) and the yellow walnut (*Beilschmiedia bancroftii*) and it appears as if these toxic food plants were an important component within traditional Aboriginal rainforest diet. Traditional processing of toxic plant foods is usually considered a high energy, low return activity. Here we present the results of experimental processing work on modern samples of black bean and yellow walnut, and consider the energy costs and benefits associated with these nuts within a prey selection model.

Evidence of past Aboriginal plant use, in the form of charred endocarp fragments, has also been recovered from archaeological sites investigated across the rainforest region. The archaeobotanical evidence recovered from one site, the Urumbal Pocket open site, is presented. Radiocarbon dating on excavated diagnostic endocarps recovered from the site has revealed a date of 2,500 BP for toxic plant food processing in the rainforest. However, evidence from archaeological sites excavated across the region shows that a marked increase in plant remains only occur in the last 1000 years. Based on the evidence presented, we suggest that the increased use of toxic plants such as the black bean and yellow walnut played a significant role in the late-Holocene permanent occupation of Queensland's tropical rainforests.

# How strangers share spaces

## Author

Ruth Fincher

University of Melbourne

## Co Authors

Kate Shaw

University of Melbourne

## Summary

With higher density living, communal spaces in and outside buildings assume importance for facilitating or inhibiting social interactions. The paper presents illustrations of this, from central Melbourne.

## Details

High density housing may or may not be energy inefficient and inimical to the formation of certain kinds of community, depending in large part on its design and, more importantly, the thinking behind the design. The questions of for whom spaces are intended and who is recognised in planning and design processes are well established in place-making discourses, and apply also to the design of small spaces in and around buildings. High density living gives incentive for individuals often dwelling alone in small apartments to spill into the corridors and communal spaces of a building, and into the streets and public spaces of the city, and into unavoidable social interactions. The question then is what kinds of interactions are these? Are the communal and public places receiving city-dwellers alienating and counter-productive, sending people back into the safety of their isolated quarters, or are they welcoming and encouraging of convivial engagement? This paper draws on a range of case studies to illustrate ways in which the location, design, purpose and use of particular places can facilitate or inhibit social interactions.

# **Kitchen stories: An introduction to the Situated Knowledge Production Sessions**

## **Author**

**Karen Fisher**

University of Auckland

## **Co Authors**

SKCAN Situated Knowledge Collective Auckland Newcastle

## **Summary**

An introduction to the themed sessions presenting 4 stories emerging from the Enlivening Situated Knowledges Workshop (Auckland February 2011) and related insights into the doing of situated knowledge.

## **Details**

This paper recounts an encounter at the Enlivening Situated Knowledges Workshop held in Auckland in February 2011 involving academics and postgraduate geographers from Auckland and Newcastle. At this event participants were working through ideas about metaphors that would help us grapple with how we incorporate a commitment to situated knowledges into our research practices. We wanted more than a tool, more than a recipe. What we needed was a whole kitchen. Participants were then challenged to explore dimensions of kitchenality in response to the question “What habits of mind and embodied practices would we bring to ‘the kitchen’ to cook multiple meals?” In this introductory presentation to the Situated Knowledges Themed Sessions we tell 4 very different kitchen stories that emerged from these workshop sessions and discuss the insights they provide into the doing of situated knowledge. We present these kitchen stories as the collaborative work of SKCAN (Situated Knowledges Collective Auckland Newcastle).

# Doing research through ‘networked encounters’: action knowledge generation without research projects in Aotearoa.

## Author

Stephen FitzHerbert

The University of Auckland

## Co Authors

Nicolas Lewis

The University of Auckland

## Summary

Doing research through ‘networked encounters’: action knowledge generation without research projects in Aotearoa.

## Details

A ‘Project’ is always from somewhere, it is political, and it has consequence. Many geographers undertake participant action research (PAR) projects as a project to do some good for and with people and/or things. However the ‘what’ and the ‘how’ of such ‘Projects’ are often under-stated in ‘PAR’. Informed by a reading of situated knowledge and actor-networks we argue that research ‘projects’ impose themselves on the assemblage of intentions, categories, encounters, subjects, and objects of research that becomes knowledge. In this paper we explore a particular form of PAR that begins to erase the external framings brought to this assemblage by project intentionality. We present a different approach to ‘doing’ PAR that begins from ‘networked encounters’. We share three journeys that yielded ‘networked encounters’ of participatory action knowledge generation and prompted taking action and doing research. By ‘doing’ things differently, with much less of our own ‘project’ and far more ‘openness’ as a guiding ethics and politics, we put ourselves in circulation to be mobilised in the projects of others. Seeking to narrate and theorise this ‘insertion’ became our project of knowledge production. We have become actors in circulations that have put us into new places and before new people who are mobilising us in terms of a relationality that is not framed by our project. The terms of our encounters are emergent as our understandings of people and places and possibilities for action. In conclusion we discuss the situatedness of this knowledge production and reflect on its possibilities, the politics of field work, and the implications for PAR.

# Geographically Weighted Regression: An Overview and Recent Developments

## Author

**A Stewart Fotheringham**  
National University of Ireland

## Summary

This talk will describe the basic concept of Geographically Weighted Regression (GWR) and will discuss some recent developments including the release of new software GWR 4.0.

## Details

Geographically Weighted Regression (GWR) is a well-known technique to investigate spatial nonstationarity in relationships. It is part of a growing trend away from global 'one-size-fits-all' models and towards local models where relationships may vary over space. It is a quintessential geographical model because it uses locational information and produces geocoded outputs that can be mapped. The concept of GWR will be explained and some examples given of how it can be used to identify spatial variations in relationships. The talk will then describe some recent advances in GWR research including: 1. The development of semi-parametric GWR models 2. The development of new software for GWR, GWR 4.0 3. Inference in GWR 4. The transference of the concept of geographically weighting to other types of geographical models such as spatial interaction models.

# **A Sinking Culture: The effects of climate change on coastal heritage at Wreck Bay**

## **Author**

**Clive Freeman**  
BNAACS

## **Summary**

This paper discusses the impacts of climate change on Indigenous coastal heritage in Wreck Bay, New South Wales.

## **Details**

The Aboriginal community of Wreck Bay is situated within the Dharawal Language group area. In 1995 after several years of struggling for the recognition of customary rights to the land and sea the crown recognised the inherent rights and granted ownership back to the Wreck bay Aboriginal Community. This granted land today forms a part of the joint management structure for the federally run National Park system, which includes both Uluru and Kakadu.

# The geomorphic character and hydrological function of an upland swamp, Budderoo Plateau, Southern Highlands, NSW, Australia

## Author

Kirstie Fryirs  
Macquarie University

## Co Authors

Jessica Gough  
Macquarie University

Grant Hose  
Macquarie University

## Summary

The geomorphic character and hydrological function of an upland swamp, Budderoo Plateau, Southern Highlands, NSW, Australia

## Details

Upland swamps are a form of topogenous mire which occur on the plateau areas of southeastern Australia. These systems are well recognised for their ecological value and their functional role in the hydrodynamics of the catchments in which they occur. However, little is known about how the internal hydrological functioning of upland swamps relates to their geomorphic structure. The sedimentological, geomorphic and hydrological properties of an intact upland swamp on the Budderoo Plateau NSW are investigated. The geomorphic structure of the swamp is comprised of four distinct geomorphic zones: the central swamp, the headwater marginal swamp, the valley marginal swamp, and the hillslope zones. The sedimentological structure of the swamp is relatively consistent, and comprises of a basal layer of coarse sands, overlain by organic accumulations up to 3.3 m in thickness. Each of these sedimentary units has different hydrological behaviours (rates of water transfer and discharge) that drive the overall function of the swamp in response to rainfall of various magnitudes and duration. Three hydrological response regimes have been identified in the functioning of this swamp. These regimes are characterised by different peak and recession responses to rainfall. The form of the hydrograph produced is controlled by antecedent water table position and the amount, timing and duration of rainfall. Depending on antecedent moisture conditions, the swamp can be operating either as a store for water or as a rapid conduit for water throughflow and overland flow. It therefore has a dual function in terms of flow generation in response to rainfall.

# Landscape Scale Conservation: Design Principles for Green Corridor Planning

## Author

**Robert Gale**

Australian Government

## Summary

Design principles for landscape scale corridor planning are drawn from environmental-economic geography themes. The approach systematically involves people in addressing landscape scale conservation issues.

## Details

The biophysical design principles of wildlife corridor planning are largely established in ecological and bio-geographical literature. In addition to ecological knowledge, implementing wildlife corridor plans requires knowledge of socio-economic systems and institutional arrangements to overcome landscape-scale market and public policy failures. This paper applies environmental-economic geography analysis to draw out particularly relevant socio-economic design principles. Corridor planning for habitat connectivity and climate change adaptation is considered in terms of landscape-scale transformations, people-place relationships, regional and livelihood conflicts, and appropriate scales for sustainable development.

# Day and night: re-imagining the urban impossible

## Author

**Ben Gallan**

University of Wollongong

## Summary

Day/night remains a remarkably persistent binary, with implications for how we understand the city. I deconstruct day/night as a means to reimagine urban life.

## Details

A number of pervasive, seemingly 'natural', conceptual binaries (man/woman, black/white, nature/culture etc.) have been the subject of sustained critique in recent decades. Deconstructing these binaries has contributed to new ways of understanding urban space as well as address issues such as sustainability. This paper aims to introduce and discuss the possible implications of day/night as a binary. I argue that some scholarship on cities and urban development implicitly adheres to the inherent positive/negative dichotomy of day and night. Challenging understandings of day/night provides us with a chance to rethink urban lifestyles – increasingly structured by neoliberal agendas. The day/night binary continues to exert significant rhythmic and discursive influence on our cities and imaginations - even though much of how, as humans, we navigate day and night is shaped by the infrastructures, mobility patterns and expectations we have established for settled, urban existence (in other words, thoroughly 'human' material artefacts). Elsewhere in geography, there have been recent calls to engage with the concept of the urban impossible – an extension of the Right to the City debate - seeking innovative ways in which we might imagine the future of cities and sustainability beyond what seems possible right now. If, following these calls, we question the very binary of day and night underpinning contemporary human existence, how then might we develop new vocabularies and imaginations of urban life? In this paper I outline a conceptual critique of day and night and point towards some possibilities for rethinking daytime, as well as night-time, spaces in the city.

# Morphologies and spatial distributions of domestic gardens in residential developments

## Author

Sumita Ghosh

University of Technology, Sydney

## Summary

The morphologies and spatial distributions of domestic gardens analysed at two different spatial scales indicate that gardens can influence the sustainability performance of residential urban forms.

## Details

A domestic garden forms an integral part of a residential development that could provide multiple sustainability benefits. This paper builds on author's previous research on urban morphologies, sustainability performance assessment and cross-disciplinary sustainability model for domestic gardens with three basic factors: design and form, potential and technologies, and social processes. This paper focuses on exploring morphological characteristics and spatial distributions of domestic gardens at two different spatial scales. Firstly, morphologies of domestic gardens in a total of eleven local scale residential neighbourhood case studies from New Zealand and Australia using GIS are compared. The case studies were selected based on selection criteria (e.g. dwelling density and zoning etc). A spatial analysis is conducted to identify the specific garden typologies, dwelling types, land cover, front, rear and side garden spaces and related social and economic factors at local scales. Secondly, a two way matrix is formulated to interpret the morphological characteristics of these case studies from spatial planning policy and sustainability perspectives. Finally, a cluster analysis is conducted to examine the spatial patterns of dwelling types and their associated garden types at a larger spatial scale in Sydney. Research outcomes indicate that gardens can generate different types of urban forms at different spatial scales that can influence their sustainability performance. It is also crucial to understand how people live and use these built environments and connect to the wider urban fabric. Appropriate local level planning policies for these residential environments are vital to planning sustainable cities of future.

# The Fay Gale Memorial Lecture

## Author

Leah Gibbs

University of Wollongong

## Co Authors

Sarah Hamylton

University of Wollongong

## Summary

This lecture considers contemporary Australian geographies 'on the edge'. It examines three edges: the practice of working at the edges of our discipline; edge of empire; and the cutting edge.

## Details

This year the Fay Gale Memorial Lecture is presented by two early-career scholars, Leah Gibbs and Sarah Hamylton. This lecture takes as its point of departure contemporary Australian geographies 'on the edge'. The talk considers three such edges: first, the practice of working at the edges of our discipline and our methodologies; second, the 'edge of empire'; and third 'the cutting edge' in geography. We examine these edges by considering a recent collaborative arts-science project, and advances in cartographic method and changing motivations for map production in island mapping.

# Producing the Spaces of Professional Practice

## Author

Steven Gibbs

Charles Sturt University

## Summary

This paper shows how Lefebvrian theory and spatial discourse analysis, statistical analysis and critical GIS methods inform an investigation into the relationship between space, policy and professional practice

## Details

This paper presents preliminary findings from a doctoral project that is investigating the relationship between space, policy and professional practice, specifically in the fields of education, health and policing. The methodological scope of the project has been limited to two contexts. Firstly, the policy scope focuses on aspects of child well-being, with emphasis on the policies and practices of the above professional practice fields in contributing to child well-being. Secondly, the spatial scope is focused on a region of New South Wales, the 'Lithgow region', located 130 kilometres west of Sydney. This region includes the town of Lithgow (population of approximately 11,000) and surrounding localities and districts. Using Henri Lefebvre's trialectical conceptual framework as its basis, which seeks to understand how space is produced through a complex interplay of material, mental and social spaces, this project is investigating how child well-being policies and practices produce educational, health and policing spaces in the Lithgow region. Using spatial discourse analysis, descriptive statistical analysis and geographic information systems to analyse a variety of data sources (including interviews with parents and practitioners, policy documents and (spatial) statistical data), this paper will focus on specific spatio-policy issues through which broader issues of policy and space in child well-being are being explored. These specific issues include school zones, safe access to professional locations (e.g. schools), specifically-produced spaces for children, public surveillance and regional constructions of knowledge (such as statistical representations of health data at a regional scale).

# **Sustaining Places: Disclosing New Development Pathways**

## **Author**

**Katherine Gibson**

University of Western Sydney

## **Summary**

This paper reflects on ways of creating liveable and sustainable futures. It proposes an approach to development that respects the contributions of human communities and natural ecologies to well-being.

## **Details**

In light of challenges posed by the Anthropocene this lecture explores how we might transform economic practices by transforming our understandings of self and self-other relations. I ask, how might we act upon our interdependence with each other and our environment to create liveable and sustainable futures? I suggest we allow ourselves to be affected by our geographies, to resonate with the glimmers and hints of creativity whereby people on the ground are building economic and ecological resilience.

# Becoming differently modern: towards a generative climate politics in the city

## Author

Chris Gibson

University of Wollongong

## Co Authors

Lesley Head

University of Wollongong

## Summary

Can modernity solve the problems it created? Can a modern geographies be constructive as well as deconstructive? The city – site of generative cross-scalar imaginings and politics for climate change response.

## Details

Anthropogenic climate change is a quintessentially modern problem but how well does modernist thinking provide us with the tools to solve the problems it created? Even though anthropogenic climate change is argued to be a problem of human origins, solutions to which will require human actions and engagements, modernity separates people from climate change in a number of ways. While a modern or more-than-human concepts of relational agency are consistent with the empirical evidence of humans being deeply embedded in earth surface processes, these approaches have not sufficiently accounted for human power in climate change, nor articulated generative pathways forward. Recent human geography has much to offer because it routinely combines both deconstructive impulses and empirical compulsions. It has a rather unique possibility to be both deconstructive and generative/creative, as exemplified best in the work of Gibson-Graham. We bring together more-than-human geographies and cross scalar work on agency and governance to suggest how they can help reframe climate change and climate change response. We use the example of the city as a place where new ways to converse are being cracked open. It is a scale at which tangible reframings of climate change in policy and action have already been catalysed, the site of creative research in more-than-human natures and urban ecologies, and the subject of new imaginings in Left urban geography - the 'future impossible' city. It is also a space from which to conceptualise diverse cross-scalar links – 'up' to nation-state, and 'down' to household – within a context of contingency, friction and encounter.

# Beautiful Strife: Between the Concrete and the Ephemeral

## Author

**Jock Gilbert**  
RMIT University

## Summary

Narrative, economic, spatial and temporal effects of flooding in coastal Vietnam reveal spatial opportunities within the landscape, allowing a proposition which privileges people over architectural assets.

## Details

This paper attempts to explore the ways in which notions of cultural authenticity have contributed to the further marginalization of people already living on the economic edges of Vietnamese society. The site of my investigation is Hoi An, Vietnam. Situated five kilometres inland from the coast of central Vietnam on the Thu Bon River, it has a long and multicultural trading history entirely dependent on the proximity of the town to the river. A resultant rich and varied architectural legacy has been preserved by a UNESCO World Heritage preservation listing. Central Vietnam is subject to annual flooding.. This is cited by the UN as the 'single greatest cause of poverty' in the region and causes structural damage in the preservation area as well as economic disruption to the tourist trade. Flood mitigation efforts are largely focused in these two areas. I will argue that the preservation of Hoi An has fostered a tourist trade which relies on a narrative of authenticity from which those not deemed 'authentic' are excluded and therefore marginalized, creating and perpetuating a condition of poverty. Further I will argue that flooding exacerbates pre-existing conditions of poverty. I will then show how an understanding of the narrative, economic, spatial and temporal effects of flood might reveal spatial opportunities within the landscape, proposing an intervention which privileges people over architectural assets. With the potential to realign the river front under projected climate change scenarios, an opportunity opens for those currently marginalized to take a future place at the centre of society, both symbolically and geographically.

# Landowner Typologies and Invasive Plant Management in Amenity Landscapes

## Author

Nicholas Gill

University of Wollongong

## Co Authors

Erin Lake

University of Wollongong

Sara Dolnicar

University of Wollongong

Mohammed Alam

University of Wollongong

## Summary

We draw on survey and qualitative fieldwork material to identify and characterise different types of rural landholders and examine aspects of their management of invasive plants

## Details

Landowner Typologies and Invasive Plant Management in Amenity Landscapes This paper builds upon research that sought to differentiate stewardship ideals among amenity-oriented rural landholders (Gill, N. et al, 2010, Stewardship among lifestyle oriented rural landowners *J. Env. Pl. & Man.* 53) First, it presents selected results on management activities from a mail survey of rural landholders. We will use various survey results to explore the invasive plant management activities of different types of landholders and discuss what these results might mean for the ways in different landowners engage with invasive plants. Second we will present a segmentation analysis of landholders who responded to the survey and characterise the extent of their weed management in the context of the landholder typologies suggested by the analysis and the statistically significant background variables associated with the landholder types. Finally, based on a study of restoration activities on a rural residential subdivision south of Sydney we draw upon mapping of restoration activities as well as interviews and participant observation to examine the micro-geographies of restoration and the landowners' decisions about plants. These include decisions about where to work, how to relate gardens to forest, what to plant, what to pull out, and when to let plants be. The decisions made and the criteria that inform them reveal diverse ideals and demarcations that inform this putatively 'ecological' work and which are going into the creation of biogeographies in amenity landscapes.

# Green Ban Legal Legacies: The evolution of heritage conservation in Australia

## Author

Jo Gillespie

The University of Sydney

## Summary

This paper explores the Green Ban's legal legacy in heritage conservation through an examination of the role of the law in an environment where development is often pitted against conservation.

## Details

The preservation of our natural and built environment is a well-enshrined goal in heritage and environmental law in Australia. The role of the Green Ban movement in the evolution of Australia's heritage protection regulatory regimes is also well documented. Heritage legislation in NSW, and throughout the country, had its germination in the unlikely alliance of unions and urban residents in Sydney and beyond. This paper explores the response of law to these heritage crusaders – the legislative, institutional and litigious landscape that now shapes heritage conservation in this country. This legal legacy – heritage conservation writ large through our National, State and local planning laws – has a direct impact on the shape and form of our cities. Are the current controversies in urban planning – especially the controversial Part 3A in the NSW planning system – a reaction to the community consultation processes that emerged during the heyday of the Green Ban movement? Does Part 3A in effect undermine the legacy of consultation enshrined by Green Bans? This paper explores the changing face of heritage conservation through our legal system with an exposition of the role of legislation and court decisions in an environment where development is, or continues to be, pitted against conservation.

# **Privatisation and Heritage Protection: Questioning the sanctity of private property at Angkor, Cambodia.**

## **Author**

**Jo Gillespie**

The University of Sydney

## **Summary**

To what extent do, or should, legal obligations to protect World Heritage sites impinge on private property rights? This paper explores notions of private and public property at Angkor, Cambodia.

## **Details**

During the period from 1975 to 1979 when Cambodia was under the notorious rule of the Khmer Rouge all formal private property entitlements were abolished and records of land ownership were largely destroyed. In the preceding years, property entitlements for many Cambodians have gradually been, and continue to be, resurrected, albeit in an often piecemeal fashion. However, the World Heritage designation at Angkor in Cambodia has confused the nation-wide cadastre land titling process. Legislation brought in to protect the monuments of Angkor re-classifies this World Heritage site as State-owned and, technically, such land is excluded from the formal titling program. However, in the core zones of the World Heritage site there is a resident population in excess of 100,000 people in over 100 villages with pre-existing "ownership" entitlements. This paper questions the standard public/private property divide. In a World Heritage setting which, by definition, attempts to protect heritage for all of humanity, are we breaking down the public / private divide? There are seemingly inherent tensions between public and private interests in the context of heritage conservation for if the State regulates a site for conservation it must simultaneously impose restrictions on the uses of property. This creates a curious problem in the Cambodian context and prompts the question: to what extent are people willing to have their ownership or tenure rights curtailed by the rather onerous public obligations associated with heritage protection? Does heritage protection trump the sanctity of private property?

# Food Sovereignty: opportunities for negotiating surplus

## Author

Rhyall Gordon

The University of Newcastle

## Summary

This paper considers how the diverse economic practices of food sovereignty offer opportunities to repoliticise and resocialise economies through new ways of negotiating surplus

## Details

We are witnessing a new era of food economies that are spatially disparate, ethically diverse and employ practices that go beyond purely economic determinants. This era is being supplemented by an approach known as food sovereignty that is at once social movement, academic theory and community practice. Food sovereignty situates itself in the politics of oppose and propose. It opposes the hegemony and dominance of the neoliberal corporate food regime whilst proposing, fostering, championing and living forms of post-capitalist economies. The food sovereignty narrative seeks to create local food economies that are respectful of producers, consumers and the environment. It proposes a food economy that is directly linked to democracy and justice. It attempts to achieve this by (initially) putting the control of production, distribution and consumption directly in the hands of those that are interdependent, involved in and affected by the processes. Gibson-Graham argue that for an economy to take on a counter-hegemonic project the sociality and interdependence of the different people involved must be made explicit. It is the decision making process around surplus that has a social potentiating force and will determine the ethical character of the economy. How surplus is negotiated (or not) can repoliticise and resocialise a community and its economy (Gibson-Graham 2006). This paper considers how the diverse economic practices of food sovereignty offer opportunities to repoliticise and resocialise economies through new ways of negotiating surplus

# **Liminal subjects, marginal spaces and material legacies: older gay men, home and belonging(s)**

## **Author**

**Andrew Gorman-Murray**  
University of Wollongong

## **Summary**

This paper examines older gay men's synchronous spaces of presence/absence in Australian gay culture, focusing on experiences and meanings of emplacement, home and belonging, including domestic belongings.

## **Details**

This paper examines older gay men's synchronous spaces of presence and absence in Australian gay culture. Fieldwork involved men aged 55-75 living in 'gay' inner Sydney; in interviews, diaries and home tours they discussed community, home and belonging(s) from their intersecting social location as 'ageing-gay-men'. To analyse the data, and conceptualise older gay men's spatial inclusions and exclusions, I bring queer gerontology, geographical gerontology and geographies of sexualities into dialogue. I focus here on their experiences and meanings of emplacement, home and belonging, including the material belongings they live with at home. I contend that older gay men are liminal subjects – marginal in gay imaginaries, absent in 'scene' spaces – but that in their homes, they are present to themselves. Informants identified home as a space of belonging, and suggested their belongings – personal archives of meaningful possessions – materialise memories and subjectivities. This reflects notions of ageing-in-place – where older people's homes are sites of emplacement and identity – but the men also relayed concerns, specific to older gay folk, about coming out or self-closeting in aged-care facilities. While their homing could be conceived as closeting and absence, I suggest other possibilities also instil this spatial process and reveal the political potential of older gay men's homes. Their possessions constitute records of domestic material cultures that convey the collective (hi)stories of the gay past. Through these material legacies, older gay men become present to contemporary gay cultures, and this invokes the roles of their subjectivities and domestic material cultures in the constitutive politics of identity.

# Advocating for biodiversity in the Hawkesbury-Nepean River: critical research practices of visual communication design

## Author

Jacqueline Gothe

University of Technology, Sydney

## Co Authors

Teresa Leung

University of Technology, Sydney

Richard Lim

University of Technology, Sydney

Yin Phyu

University of Technology, Sydney

Roel Plant

University of Technology, Sydney

Scott Rayburg

University of Technology, Sydney

Jeremy Walker

University of Technology, Sydney

## Summary

This paper provides methodological insights and appropriate ways to integrate visual communication design in a multi-disciplinary research project.

## Details

This paper provides methodological insights and appropriate ways to introduce and integrate visual communication and design thinking in an ongoing research project. It uses as its starting point a current study into the combined toxicity effects of three pesticides on a range of freshwater species found in coastal rivers of NSW (including the Hawkesbury-Nepean River). The multi-disciplinary team comprises ecotoxicologists (who developed the methodology, carried out the field/laboratory work to generate results underpinning this component of the study); a social scientist, a geomorphologist, a geographer; the design team, and key stakeholders including scientists, policy makers and regulators. The design team used a participatory, user-based framework, which involved collaborative decision-making. The meta level questions for the design research team are: how to better develop integration practices through an examination of perceptions of design within a multi-disciplinary team; and how design might effectively engage with a team unfamiliar with design or design process, particularly in developing communication strategies. In this project, questions are also asked through practice – the practice of design, the practice of collaboration, the practice of multi-disciplinarity - about the possibility of transdisciplinary practices. The practice question for the research team is how do we communicate research findings to the relevant communities on the Hawkesbury-Nepean River to encourage changes in pesticide usage?

# And quietly flows the Pages: Coal mining, thoroughbred breeding and water

## Author

**Raewyn Graham**  
University of Sydney

## Co Authors

Phil McManus  
University of Sydney

Glenn Albrecht  
Murdoch University

## Summary

This presentation explores the construction of water discourses in relation to the Pages River, and the impacts of these discourses on environmental management in a highly politicized context.

## Details

In 2010 the proposed Bickham mine was the first coal mine to be rejected in the Upper Hunter region of NSW. While debates raged about climate change, the comparative economic value of coal mining and thoroughbred breeding, and the compatibility of various industries within spatial confines, the Bickham coal mine proposal was rejected because of its potentially deleterious impacts on hydrology. The proposed mine site is adjacent to the Pages River, and would have extended below the river level in places if the mine had proceeded. The site is upstream of the most valuable thoroughbred breeding region in Australia. While the Pages River is not the main water source for thoroughbred breeding farms in the area, the politics of water; including its quality, use and the compatibility of various industries to exist with rivers, became the focus of conflict for the Bickham mine proposal. This presentation explores the construction of water discourses and the impacts of these discourses on environmental management in a highly politicized context.

# Exploring the potential of speleothem palaeoclimate records from S.E Australia

## Author

Helen Green

The University of Melbourne

## Co Authors

Susan White

La Trobe University

Russell Drysdale

The University of Melbourne

Silvia Frisia

University of Newcastle

Jon Woodhead

The University of Melbourne

John Hellstrom

The University of Melbourne

Janet Hergt

The University of Melbourne

## Summary

Using palaeoclimatic records from Victorian speleothems to gain insights into S.E. Australia's response to the millennial scale events of the past 20kyr

## Details

Despite intense interest in the palaeoclimatic regime over the last 20 kyr, there remain large uncertainties regarding the exact origin, timing and spatial extent of the key events of this period. Many of the millennial scale climatic fluctuations characterising the last deglaciation are well established in records from the Northern Hemisphere, and to some extent at the high latitudes of the Southern Hemisphere, however, deciphering the global response to these events has been hampered by the scope of existing proxy records and the accuracy of the associated chronologies. High resolution, radiometrically dated records from the Southern Hemisphere are urgently required in this debate. Speleothems (cave deposits) are valuable archives of palaeoclimate variation, characterised by growth over long periods of time and large geographic extent. Host to a multitude of proxy records including those relating to temperature, humidity and local vegetation type, speleothems are capable of recording and preserving both large and small scale climatic variations over many millions of years. Paramount to their success is their amenability to radiometric dating, allowing the establishment of robust and reliable chronologies to which these multi-proxy climate records can be anchored. Utilising U-series dating methods alongside high resolution analysis of stable isotopes and a range of trace elements hosted in speleothem calcite, this study is examining samples from a variety of caves spanning the breadth of Victoria. These sites are sensitive to events in the Southern Ocean and should enable the construction of a reliable and detailed record of southeast Australia's response to palaeoclimatic fluctuations over the last 20 kyr.

# **“Know your catchment”: Situated knowledge perspectives of governance for sustainable river management**

## **Author**

**Claire Gregory**

University of Auckland

## **Summary**

This research critiques how situatedness has been revealed through three exemplar sustainable river management practices.

## **Details**

Situated knowledge perspectives have much to offer toward critical appraisals governance for sustainable river management. River catchments comprise several geographic layers, arising from environmental, social, cultural, economic and political contexts, producing a complex landscape of interacting values and attributes over a range of spatial and temporal scales. Consequently, goals for river management, and the governance frameworks which support such aspirations should be a reflection of their situated context. While this notion has been recognised in the river management literature, little effort has been concentrated on unpacking how situatedness has been revealed in river management practices. This research focuses upon the researchers experience interrogating three river management initiatives: Project Twin Streams (New Zealand), Grand River Conservation Authority (Canada), and the Mersey Basin Campaign (England). Experiences reveal river management practices within these catchments are performed in unique ways. This arises not only through the interacting environmental, social, cultural, economic and political contexts of the catchment, but as ideas and practices are continually mobilised and circulated, generating new sets of possibilities. Such insight has important implications for the river management literature through the emergence of multiple framings of ‘sustainable river management’. Caution is highlighted against developing a set trajectory or grand narrative for the governance of river management, as this could serve to preclude the very outcomes which are desired.

# The Fay Gale Memorial Lecture

## Author

Sarah Hamylton

University of Wollongong

## Co Authors

Leah Gibbs

University of Wollongong

## Summary

This lecture considers contemporary Australian geographies 'on the edge'. It examines three edges: the practice of working at the edges of our discipline; edge of empire; and the cutting edge.

## Details

This year the Fay Gale Memorial Lecture is presented by two early-career scholars, Leah Gibbs and Sarah Hamylton. This lecture takes as its point of departure contemporary Australian geographies 'on the edge'. The talk considers three such edges: first, the practice of working at the edges of our discipline and our methodologies; second, the 'edge of empire'; and third 'the cutting edge' in geography. We examine these edges by considering a recent collaborative arts-science project, and advances in cartographic method and changing motivations for map production in island mapping.

# Modelling the response of coral reef carbonate production to climate change at Lizard Island: a geospatial approach

## Author

Sarah Hamylton

University of Wollongong

## Summary

Geospatial techniques are used to model the carbonate budget of Lizard island using in-situ metabolic measurements, remote sensing and mathematical scaling.

## Details

Coral reef systems are unique in their ability to precipitate materials from seawater at a sufficient rate to keep pace with a rising sea, and to consolidate these materials into a three-dimensional structure. These reef structures underpin food security, tourism, employment and protection of the shoreline yet their integrity is threatened because of rising atmospheric CO<sub>2</sub> concentrations which induce sea-level rise, increased hydrodynamic forcing, coral bleaching and ocean acidification. This project will use a combination of remote sensing, in-situ measurement of biogeochemical parameters and mathematical scaling techniques to model the influence of these environmental changes on the carbonate budget of Lizard Island, Great Barrier Reef. In the first phase, satellite imagery and in-situ metabolic measurements of calcification for reef benthic assemblages are combined to estimate carbonate production for the fringing reef system. In the second phase environmental conditions that influence carbonate production (water depth and exposure to incident wave energy) will be quantified at the landscape scale. Localised measures of carbonate production and environmental conditions will then be interrogated along spatial gradients to establish relationships between the two with the intention of simulating how carbonate production might be effected given anticipated changes in sea level and wave energy at Lizard Island.

# Driving Dispositions

## Author

Theresa Harada

University of Wollongong

## Summary

Reducing car driving in relation to climate change presents challenges because of the material, economic, social, emotional and affective relationships forged through habitual driving practices.

## Details

This paper explores habituated car travel in the context of changing climates. Specifically, the paper provides a feminist interpretation of how particular dispositions fashioned through habitual car driving produce obdurate understandings of self in relation to the world. Drawing on ethnographic tools insights are provided to the material, economic, social, emotional and affective relationships that comprise the car-body spaces and help stabilise subjectivities. Empirical data from two participants is used to explore the implications arising from driving habits including emotional attachments imbued with relations of care and contextual ethical choices. In theory this supports arguments that ways of being in the world are fashioned by a combination of sensuous rhythms and bodily engagement with technologies that are naturalised through historical governance structures which privilege automobility. In practice this means that policies which aim to reduce car driving with the view to lessening environmental impacts can gain valuable insights into the complex ways that driving has become habituated through space. Relevance arises from how this approach provides an opportunity to rethink policies aimed to reduce carbon emissions associated with the fossil fuel private car.

# **Sediment and seed bank dynamics in river systems of southeastern Australia: Implications for vegetation-based river rehabilitation**

## **Author**

**Carla Harris**  
Macquarie University

## **Co Authors**

Jessica O'Donnell  
Macquarie University

Kirstie Fryirs  
Macquarie University

Michelle Leishman  
Macquarie University

## **Summary**

Sediment and seed bank dynamics in river systems of southeastern Australia:  
Implications for vegetation-based river rehabilitation

## **Details**

A riparian seed bank is a reserve of viable seeds and propagules in sediments of a river channel, channel bank and adjacent floodplain. Dispersal of seeds by water is termed hydrochory. Over the last 20 years, geomorphologists and ecologists have recognised the role of vegetation as an important control on the form and stability of river margins. There is now increasing recognition that these two areas of interest should be integrated in order to improve riparian management strategies that enhance the natural recovery mechanisms of river systems. However, our understanding of the dynamics of the riparian seed bank remains poor, particularly in an Australian context. Hydrochoric seeds are subject to the same forces as sediment in a river system. Sediment (and seeds) are sourced, transported and stored at various positions in a catchment. Hence, the mechanisms by which sediment is transported and deposited is a key control on the dispersal and storage mechanisms of seeds in the channel and riparian zone of rivers. In this presentation we will introduce background principles of riparian seedbank science and outline some of our research occurring in Wollombi Brook and Watagan Creek, eastern NSW. Through postdoctoral and PhD research we are designing experiments to:

- 1) Determine the type, volume, structure and viability of the soil seed bank within different geomorphic units and compare it to seed rain and extant vegetation associations.
- 2) Determine the relationship between hydrology, geomorphic structure and seedbank dynamics along intact riparian corridors.
- 3) Develop guidelines for best practice river rehabilitation based on an understanding of sediment transport and storage and seed bank dynamics.

# **Graffiti and Urban Space: A GIS Approach. Authors: Billy Haworth, Eleanor Bruce, & Kurt Iveson**

## **Author**

**Billy Haworth**  
University of Sydney

## **Summary**

Investigation of spatial patterns of graffiti removal and diversity in an inner city urban environment using GIS, offering a new approach beyond crime mapping.

## **Details**

Graffiti management often presents policy challenges for municipal authorities. However, the inherent diversity of graffiti culture and its role in defining urban space can be neglected when formulating response strategies. This study investigates spatial and temporal trends in graffiti across the City of Sydney to support alternative perspectives on graffiti and its role in urban landscapes. Records of graffiti removal incidences were geocoded using GIS to map graffiti distribution across the council area. Graffiti removal 'hotspots' were identified using density analysis and shifts in graffiti activity were examined through trend analysis. A hotspot area in the suburb Surry Hills was additionally mapped in greater detail using a hand-held GPS. Particular areas and locations within the Local Government Area were found to require repeated graffiti removal, presenting graffiti occurrence as a characteristic of the urban landscape. Results showed great spatial and temporal diversity in graffiti occurrence and highlighted the need to consider graffiti as a diverse urban phenomenon when attempting to understand its occurrence and formulate response strategies. An integrated approach, incorporating both quantitative GIS based analysis and qualitative methods, is required to provide insight on the processes underlying graffiti distribution patterns. This study extends the role of GIS beyond crime mapping through the representation of diversity in graffiti culture as an aspect of urban space. In providing alternative representations of graffiti across an inner city urban environment this study contributes to improved understanding of urban space and has important implications for the formulation of graffiti management policy.

# IAG Launch of National Discipline Standards for Geography

## Author

Iain Hay  
Flinders University

## Summary

This session will launch and discuss the first nationally endorsed Australian national Learning and Teaching Academic Standards Statement for Geography.

## Details

This session will launch and discuss the first nationally endorsed Australian national Learning and Teaching Academic Standards Statement for Geography. The Australian Government is developing a new Higher Education Quality and Regulatory Framework which includes the establishment of the Tertiary Education Quality and Standards Agency (TEQSA). TEQSA will be a national body for regulation and quality assurance against agreed standards. The Australian Learning and Teaching Council's (ALTC) Learning and Teaching Academic Standards Project was established to facilitate and coordinate discipline communities' definition and implementation of academic standards. The Geography Standards Statement, developed as part of that Project, offers a succinct description of the nature and extent of the discipline and distinguishes the threshold (i.e. minimum) level of achievement that can be expected of an Australian Bachelor level graduate with a major in Geography. The Statement also sets out careers Geography graduates might pursue. The Statement was developed in 2010, drawing first from the extensive and diverse disciplinary expertise of a small Reference Group as well as from relevant national and international benchmarks including the United Kingdom's Quality Assurance Agency benchmark statements, European Tuning descriptors, Dublin descriptors, and the evolving Australian Quality Framework. After extensive national consultation and revision, the Standards Statement was revised and finalised in October 2010. Since then it has been endorsed by all key geographical organisations across Australia.

# The use of child-centred participatory video in disaster risk reduction and climate change adaptation

## Author

**Katharine Haynes**  
Risk Frontiers

## Co Authors

Ladylyn Lim-Mangada  
University of the Philippines

Sapril Akhmady  
Mediaqita Foundation

Tom Tanner  
University of Sussex

## Summary

Discussion on the use of child-centred participatory video in the Philippines and Indonesia as a tool for engaging and empowering children in disaster risk reduction and climate change adaptation.

## Details

This paper documents the use of child-centred participatory video as a tool for engaging and empowering children in disaster risk reduction and climate change adaptation. The research was carried out in Indonesia and the Philippines. In developing countries, the exchange of knowledge and views between those who face disaster impacts and those who control policy is often challenging. Children, who are among the most vulnerable and marginalised, often face the greatest hurdle to get their voices heard. Children and young people are commonly represented in the disasters and climate change literature as passive victims, requiring protection. However, a growing body of evidence has shown that, with support, children can play a vital role in climate change adaptation and disaster risk reduction. The project was carried out in three stages. First, children attended a number of sessions to workshop issues related to climate change and disasters, as well as to learn about the filming process. Children decided upon issues that they felt needed to be communicated and addressed within their communities. By exploring these issues, the workshops and filming process enabled the children to increase their knowledge of the causes and consequences of disasters. Second, the films were screened within the communities and a workshop was facilitated enabling children and adults to discuss the issues raised by the films and possible solutions. Finally, the films were screened for local government officials, who participated in a workshop with the children. The project empowered children to raise important issues with decision-makers and advocate change on behalf of their communities.

# Encountering plantiness: materiality, agency, boundaries

## Author

Lesley Head

University of Wollongong

## Co Authors

Jenny Atchison

University of Wollongong

Catherine Phillips

University of Wollongong

## Summary

Human geography and biogeography have paid insufficient attention to plants and humans respectively. What prospects of collaboration when we take plantiness seriously, considering agency and encounter?

## Details

More-than-human geographies and related social sciences have paid more systematic recent attention to human relations with animals than plants. Within biogeography, where most scholars work on plants, there has been a converse gap on the question of humans. In this paper we push these discussions further by paying attention to the category 'plant', and by trying to take plants seriously on their own terms. Since what counts as a plant is contingent and has evolved over time, we consider first plantiness as the diverse material expression of five characteristics and capacities, collected in a living organism. Plantiness helps make humanness possible but it does not need humans. We then consider how plantiness structures plant agency, using the lenses of mobility and intelligence (plants are often incorrectly assumed to have neither). We argue for methodologies of encounter, both between humans and plants, and between human and bio-geographies. Biogeographic approaches most consistent with the empirical evidence of a human-saturated world are successful because of their inductive, bottom up methods. These have much in common with ethnographic approaches in human geography.

# Neighbourhood cohesion, health, and geography: A small area analysis

## Author

**Kerstin Hermes**  
Macquarie University

## Summary

The paper examines the relation between neighbourhood cohesion and the level of general health at a small area level using small area estimates from synthetic spatial microdata for Sydney.

## Details

Along with the natural and build environment, our social environment directly affects our personal health and well-being. Whereas the build and natural environment can be directly measured, the social environment in which we live is a relatively vague and not clearly defined concept. It can include our nuclear family as well as distant relatives, friends, colleagues, neighbours, the local or sometimes larger community, and so forth. This paper concentrates on a specific aspect of this social environment, namely the neighbourhood and the level of cohesion within a neighbourhood. The paper shows that neighbourhood cohesion varies spatially within Sydney and examines the relationship between neighbourhood cohesion and the level of general health within a neighbourhood. Because small area data are not directly available for neighbourhood cohesion or health, the analysis is based on small area estimates. These estimates have been derived from synthetic spatial microdata which can be created by linking geographically detailed census data with social survey microdata. Census data from 2006 and data from the Household, Income and Labour Dynamics in Australia (HILDA) have been used for this purpose. Hotspot analyses are applied to identify where areas (census collection districts) with high and low levels of neighbourhood cohesion and high and low levels of general health cluster.

# Maghemite depleted in Siberian loess and soils, pedogenesis or wind vigor?

## Author

Paul Hesse  
Macquarie University

## Co Authors

Xiuming Liu  
Lanzhou University

Deping Tang  
Fuzhou University

Bing Lu  
Lanzhou University

Xuelian Guo  
Lanzhou University

## Summary

Magnetic susceptibility measure from aeolian loess soil sequence used for paleoclimatic reconstruction. Maghemite produce with pedogenic development. Maghemite depleted in Siberia due to pedogenesis-gleying

## Details

The magnetic susceptibility of Chinese loess showing a general positive relation to pedogenic development, in-situ pedogenic enhancement of ferrimagnetic content is generally believed to be the main reason for the susceptibility enhancement in soil units. However, Alaskan and Siberian loess deposits display a completely opposite behavior: high values in loess and low values in palaeosols. This inverse relationship has been explained by 'wind vigor' hypothesis that magnetic susceptibility is reflecting the magnitude of an aeolian ferrimagnetic component of consistent mineralogy, the grain size of which is related to average wind velocity. Maghemite in both Alaska and Siberia sections is gradually destroyed (but produced in Chinese loess) with soil development. Magnetically depleted in Alaska and Siberia for both loess and soils is caused by produced rusty spots during pedogenesis. Xingjiang is a very arid inland area. Soil develops weakly. 'Wind vigor' model seems very suitable for such areas of physical weathering dominantly, but not applicable to Alaska and Siberia where chemical weathering obviously happened.

# **Drivers of rural land ownership change: a case study from the Central West region of NSW**

## **Author**

**Deanne Hickey**  
University of Sydney

## **Summary**

This research discusses the results of a farm survey conducted in the Central West of NSW, investigating the key factors that influence rural land owners in their decision to buy or sell rural land.

## **Details**

Demographic changes in rural landscapes are often associated with changes in land ownership. Investigation into land ownership transactions reveals a complex process that promotes the aggregation or fragmentation of rural land. Indeed there are various drivers that influence an individual's decision to acquire or sell rural land and these factors contribute to the complexity of rural land ownership dynamics. Influential factors include planning and policy, the environment and natural resources, infrastructure, location and finance. This research discusses the results of a farm survey conducted in the Central West region of NSW, investigating the key factors that influence rural land owners and their decision to buy or sell rural land, acquire additional lots, or sub-divide and downsize. These results reiterate the dynamic nature of rural land ownership transactions and the influence they project upon rural landscapes.

# “App-tion” research and digital doing of making the world

## Author

Ann Hill

Australian National University

## Co Authors

Jenny Cameron

University of Newcastle

Katherine Gibson

University of Western Sydney

Jamie Pomfrett

Newcastle University

## Summary

In this session we showcase some digital research outputs we have created and reflect on what digital media as methodology might yield for researchers interested in performative action research

## Details

Increasingly geographers are generating digital research outputs and working in varied modes of “new media” including YouTube, Facebook, WordPress, documentary films and websites. In the January 2011 editorial of *Geoforum*, Richard Le Heron and Nick Lewis call for researchers to embrace ‘the doing of making the world’ (4). In this session we consider what digital doing of making the world might entail. We showcase some digital research outputs we have created and reflect on what digital media as methodology might yield for researchers interested in performative action research. Using the Newcastle Community Gardens Project PlaceStories website (<http://ps3beta.com/project/7733>) and the Community Partnering for Local Development website ([www.communitypartnering.info](http://www.communitypartnering.info)), we will facilitate discussion on ‘co-experience, co-learning and co-production ... [and] the performance of the methodological’ (Le Heron & Lewis, 4) in relation to digital research tools.

# **A helping hand and many green thumbs: Local government, citizens and the growth of a community-based food economy**

## **Author**

**Ann Hill**

Australian National University

## **Summary**

In this paper I examine the ethical economic decision making of various actors within the Opol Food Project in Mindanao, the Philippines.

## **Details**

Minority world consumers are being asked to rethink their I-ness fixations and the individualism apparent in community food practice. Meanwhile poor and economically marginalised in the majority world are prioritising civic we-ness and taking collective responsibility for meeting local food needs. In Mindanao in the Philippines a municipality-wide communal gardening project is feeding malnourished children in schools, supporting poor families in self provisioning, and generating income and employment opportunities for volunteer gardeners. As such it is benefiting the individual household and the community simultaneously. Of interest is how different actors within this project 'successfully' negotiate I-ness and civic we-ness in ways that achieve desired outcomes such as reduced malnutrition. In this paper I examine the ethical economic decision making of various actors within the Opol Food Project in Mindanao. I reveal how economic decisions are generating social surplus, creating and sustaining commons and building a community-based food economy. I also demonstrate the valuable role local government can play in enabling and cultivating civic we-ness and in building a different food future.

# Challenging aid's competitive logic: a call for an ethics of care in aid relations, stories from Fiji and Australia

## Author

Paul Hodge

University of Newcastle

## Summary

The paper intends to provoke a heightened concern for 'the Other' in ways that call for a serious reappraisal of development relations, one that is committed, connected and genuinely collaborative.

## Details

Neoliberal market logic relies on a vision of autonomous competitive individuals. This central belief underpins donor intervention and state policies and deepens the extension of market relations into the development sphere. The privatisation of social goods as part of IMF austerity programs is one example of this intensification as essential services are placed into private hands. This logic places moral and ethical distance between those living in the Global North and those 'distant strangers' etching out livelihoods in the majority world. Taking a leaf from feminist theorising and postcolonial critique I argue for a radical new relationality in the aid industry one based on an ethics of care which foregrounds the connections that bind individuals and communities across space. Staeheli and Lawson's (2005) work is instructive here when they state that care ethic's concern lies with structuring relationships in ways that enhance mutuality and well-being. Such a shift though will require fundamentally different methodologies and ontological and epistemological viewpoints to those that currently hold sway in international aid relations and would represent a wholesale rebuke of the autonomous competitive ethos. To elaborate on these ideas and new forms of relationality I draw on empirical work undertaken in Fiji and Australia. The paper intends to provoke a heightened concern for 'the Other' in ways that call for a serious reappraisal of development relations, one that is committed, connected and genuinely collaborative. By forging an ethics of care we in the Global North can begin to counter, subvert and maybe even transform market logic and with it the distance that excludes.

# Securing the wellbeing of Country People in the face of social, economic and environmental change

## Author

Anthony Hogan  
NIRRA/ANU

## Summary

1. The wellbeing of Country Communities pivots on the extent to which community members are confident that they can secure their socio-economic futures, given a changing environmental context.

## Details

2. Country Australia is at a watershed in its existence. Its traditional agricultural economic base is in decline, large proportions of farmers report very low incomes, the population of country Australia is ageing, the climate (manifested in water shortages and heat events) is changing, the social licence to conduct forms of farming is being contested and Country Young People continually move to the city. Country People hold specific concerns for their socio-economic viability and this concern negatively impacts on their personal wellbeing. This project examines the thesis that in the face of constant change, the wellbeing of Country Communities pivots on the extent to which the people living in that community are confident that they can secure their socio-economic futures. Over the coming decades (in Australia and elsewhere), the government will implement a policy of localism – a policy which is designed to enable communities to secure their socio-economic futures through industry partnerships and infrastructure development. Since Localism offers an enormous opportunity for Country Australia to re-secure its socio-economic future, it is vital for national harmony and social wellbeing that Australia gets this change process right. Using well-established theory from economic sociology and social identity studies, this project will closely monitor the implementation of localism to ensure that communities are able to secure futures which meet their needs for wellbeing. It will track the relationship between economic, physical and subjective indicators of wellbeing.

# Critical urban sustainability in the world's most

## Author

**Meg Holden**

Simon Fraser University

## Co Authors

Andy Scerri

RMIT University

## Summary

Asking what difference it makes to frame urban developments as 'sustainable', we examine the tensions surrounding Vancouver's new sustainable neighbourhood, South East False Creek and Melbourne's Docklands.

## Details

Comparatively examining the political culture surrounding urban, ostensibly 'sustainable' developments, can help us to understand the outcomes of such model development projects: why what was eventually developed was developed, what might have been developed, and what might have been done differently. What difference does it make that new urban development projects are framed in terms of sustainability? What is the size and nature of the gap between the results of these developments and a state or process of Sustainable Development, understood as a quantitatively and qualitatively different development trajectory? The ultimate (ineffable) goal of this research project is to learn the distance and path that we have to travel, as Melbournians and Vancouverites, towards the achievement of Sustainable Development as an urban political culture, as a guide for making all kinds of judgments and decisions about our public lives and the common good. This means that we understand 'sustainability', aspirationally, as an order of worth, that is, as something that is valued because it contributes to the common good, but also because actors judge it to be valuable to themselves, as a source of economic gain, efficiency or prestige, for example. Adapting a critical pragmatist framework to a means of understanding urban sustainable development processes and outcomes, we are testing the promise of this approach on the ground in a comparative analysis of the latest large waterfront redevelopment project in Melbourne, Docklands, and Vancouver, South East False Creek. The examples are revealing of the political culture of urbanization and progress towards Sustainable Development in Melbourne and Vancouver.

# Vital cities, just cities: planning and urban life

## Author

Donna Houston  
Macquarie University

## Summary

This paper discusses themes of vitalism, materiality and justice in relation to present Australian urban planning practices.

## Details

This paper discusses themes of vitalism, materiality and justice in relation to present Australian urban planning practices. Drawing on examples from recent collaborative research that explore urban consolidation in Sydney and climate justice in urban contexts, I argue that these different cases can help us to imagine how planning theory and practice might productively attend to the ordinary, vital materialism of urban life and the politics that emerge from this. Paying attention to the ordinary life of cities offers fresh opportunities for thinking about contemporary urban struggles and the project of 'thinking the unthinkable' in relation to environmental change.

# Geographic accessibility to public open spaces and cardio-metabolic risk

## Author

**Natasha Howard**

University of South Australia

## Co Authors

Neil Coffee - University of South Australia

Catherine Paquet - University of South Australia

Thomas Orschulok - University of South Australia

Graeme Hugo - University of Adelaide

Anne Taylor - University of Adelaide

Robert Adams - University of Adelaide

Mark Daniel - University of South Australia

## Summary

The Place and Metabolic Syndrome (PAMS) study investigates the association between geographic accessibility to Public open space and the risk of cardio-metabolic diseases

## Details

**Purpose:** Studies have associated accessibility to public open spaces (POS) to a more active lifestyle and healthier weight. The Place and Metabolic Syndrome (PAMS) study investigates the association between POS accessibility and risk of cardio-metabolic diseases and whether this association differs by POS type. **Methods:** POS were identified from land use codes for parks, reserves and open space and validated using aerial imagery and Google Street View. Accessibility was defined as the number of POS in a 1000-m road distance buffer around participants' residence using a Geographic Information System. POS was defined as active if associated with a sporting land use (e.g., football, cricket, tennis) and passive otherwise. Adult participants (n=3636) recruited into the North West Adelaide Health Study completed a survey and provided blood samples. Cardio-metabolic risk was assessed as the sum of six standard anthropometric and biochemical risk markers. Associations were tested using Poisson regression models accounting for spatial clustering and individual and area-level socio-demographic variables. **Results/findings:** The number of POS was not statistically significantly related to cardio-metabolic risk. The number of active, but not passive, POS was statistically significantly and inversely associated with cardiometabolic risk. **Conclusions:** A protective effect of POS on cardio-metabolic risk may be restricted to POS specifically designed for sporting activities. This study highlighted a number of issues regarding the definitions of POS that warrant further investigation in the Australian context.

# Ethics as First Method: Rethinking ethical engagement in intercultural social research

## Author

Richie Howitt

Macquarie University

## Summary

Drawing on Levinas' idea of 'ethics as first philosophy', ethical choices are seen as foundational for methodological choices in intercultural research on resource and environmental governance.

## Details

Social research is always about some form of engagement with other people and in intercultural settings it inevitably raises important and difficult questions of ethics and practice. While ethical oversight is sometimes treated as an unnecessary burden on research, or in a perfunctory way that emphasizes risk management for governing institutions, this paper suggests a much more fundamental and constitutive role for ethics in social research. Drawing inspiration from Levinas' argument of 'ethics as first philosophy', the paper advocates developing the ethical frame of any research as the first set of methodological choices and explores how adopting an approach of ethics as first method might shape research practice, social theory and researcher accountability. The paper explores the application of such an approach in research in intercultural spaces of resource and environmental governance.

# Experiments in Lightness

## Author

**Maria Hynes**

Australian National University

## Co Authors

Scott Sharpe

University of New South Wales @ The Australian Defence Force Academy

## Summary

Extending our work on humour into the realm of disposition and habit, this paper opens up to a rethinking of the concept of lightness.

## Details

Extending our work on humour into the realm of disposition and habit, this paper opens up to a rethinking of the concept of lightness. Lightness has all too often been associated with postmodernity and thus denigrated as a frivolous, devil-may-care disposition and ultimately a relativist approach to ethics and politics. Against such constructions of lightness, we examine the preconditions for an experimental attitude that is responsive to contemporary problems, precisely because it refuses to cloak them in weightiness.

# Community resilience in the face of disaster

## Author

Valerie Ingham

Charles Sturt University

## Summary

A key component of building resilient communities involves deconstructing the commodification of risk and the community dependence upon emergency management professionals.

## Details

In January 2009 the Australian state of Victoria experienced the worst bushfires in the nation's history. The ensuing debates around the sufficiency of warning information and blame-laying for the tragedy was a prime motivation in the formation of the Bangladesh Australia Disaster Research Group. The group is primarily concerned with the focus of risk perception and the growing demand and expectation of Australian communities that they will be 'saved' in the face of encroaching disaster. As a multidisciplinary research group we examined a flood-prone third world country, which we hypothesised would be low in physical resources but strong in social capital, and a number of Australian communities also prone to flooding, which we hypothesised would be more dependent on others to rescue them in times of disaster. This paper presents the initial findings of the group after a recent field trip to Bangladesh and initial investigations in the flood-prone town of Molong in NSW Central West.

# Unruly grasses: human-native grass entanglements in urban park space

## Author

Lesley Instone

University of Newcastle

## Summary

This paper investigates three events of human-grass entanglement to trace the affective capacity of the grasses, to consider the 'thing-power' (Bennett) of native grass assemblages in inner urban space.

## Details

Native grasses are tall and unruly, they dry off and yellow in summer, require new park management practices of burning and slashing, harbour snakes, challenge the aesthetics of green park space, and resist conventional modes of park use such as picnics, dog-walking and carefree strolling. Native grasses enact distinct relations of entanglement between people, plants and park space provoking passions towards affirming the place of native grasses in the city on the one hand, and on the other viewing native grasslands with harsh disapproval. To explore the lively presence and disruptive potential of native grasses this paper investigates three events of human-grass entanglement. It aims to trace the affective capacity of the grasses, to consider the 'thing-power' (Bennett) of native grass assemblages in inner urban space, and to question the humanist tendency to consider park nature as a passive, tame and predictable backdrop for human action.

# The Green Bans and the Politics of Equality

## Author

Kurt Iveson

University of Sydney

## Summary

This paper asks: on what basis did the Green Ban activists in Sydney in the 1970s declare their right to decide the kinds of buildings that did and did not get built?

## Details

In the green bans during the 1970s in Sydney, extraordinary alliances of residents, building workers and others declared their right to decide the kinds of buildings that did and did not get built. Even those who agreed with the goals of individual green bans – such as the preservation of green space, architectural heritage, and affordable housing – often questioned the right of the green ban activists to take such action. This declaration of rights was among the most contentious aspects of the green bans, causing consternation among urban authorities, developers, media commentators and fellow unionists alike. So, what was the basis on which green ban activists declared this right? In this presentation, I draw on archival material and other sources to consider how the green ban activists themselves answered this question. I will argue that by asserting rights to which they had no right, by refusing the roles that residents and building workers had been assigned in the existing urban order, the green ban activists enacted a democratic politics of the city that had its basis in a radical declaration of equality. This political challenge to forms of authority rooted in parliamentary democracy and private property ownership is one of the most precious and important legacies of the green bans for urban politics today.

# **A living heritage: Aboriginal participation in land use planning, Sydney**

## **Author**

**Sarah James**

Macquarie University

## **Summary**

This paper examines Aboriginal participation in land use decision-making in peri-urban Sydney.

## **Details**

Recent plans for urban development on Sydney's western fringe have highlighted ongoing tensions around Indigenous claims to the cityscape. Official Aboriginal participation in land use planning continues to be focused on, and limited to, preservation of pre-contact heritage. This limited engagement threatens to effectively depoliticise and disempower the claims of contemporary urban Aboriginal groups as it does not acknowledge their ongoing cultural connection to place. The city has historically had an ambiguous role in Aboriginal land claims and identity politics as Aboriginal rights to land have been predominantly constructed as prior to, or outside of, the built form of the city. Recent government attempts to engage Aboriginal people more substantially in the protection of and planning for Aboriginal heritage within Sydney's urban growth have been lauded as a way to ensure greater access to and participation in land use decision-making for the city's Aboriginal people. The potential gap between rhetoric and practice, however, means that such policy changes may not necessarily achieve these aims. This paper examines this issue, analysing the extent to which the policy changes have served to challenge or perpetuate a national narrative that frames the relationship of Aboriginal people to the city to one of prior inhabitants.

# Planning post-colonial lands: Examples from Australia and New Zealand

## Author

**Louise Johnson**  
Deakin University

## Summary

This paper will seek to establish some principles which might underpin a post-colonial planning practice using the examples of the Ngai Tahu of New Zealand and the Gunditjmarra of Western Victoria.

## Details

Author: Dr Louise C. Johnson, Deakin University, Melbourne, Victoria, Australia  
Title: Planning post-colonial lands: Examples from Australia and New Zealand  
Fundamental to living as a non-Indigenous person in Australia or New Zealand is the issue of land; its history, ownership and meaning. At this historical juncture, there is a critical need to elaborate what it means to plan these post-colonial landscapes. This paper will seek to establish some principles which might underpin a post-colonial planning practice. It will do so by briefly outlining the tenure and planning histories of Australia and New Zealand before focusing on examples where land care has intersected with imperial legal systems to produce viable outcomes. I will argue that underpinning such alternatives has been recognition of the violence accompanying the imposition of "sovereignty", the ongoing co-existence of Native Title and the legal as well as ethical foundations for an alternative planning system provided. It is upon these foundations that a post-colonial planning theory and practice can be developed and implemented. The principles of prior and ongoing occupancy, acknowledging history, divergent cosmologies, intersecting tenure systems, shared futures and agreed outcomes can and have formed the basis of post-colonial planning for the Ngai Tahu of New Zealand and the Gunditjmarra of Western Victoria. While there is far more to realising a post-colonial reality, the possibilities revealed in at least these cases deserve wider dissemination.

# **A Political Ecology of multiscalar fisheries governance in the Western and Central Pacific Ocean**

## **Author**

**Victoria Jollands**

The University of Auckland

## **Summary**

This research explores how tuna resources within the WCPO are constructed discursively and how cross-scale linkages are shaped through power relations.

## **Details**

The Western and Central Pacific Ocean (WCPO) has the largest, most valuable tuna fishery in the world. In 2009, it had a value of approximately US\$4.9 billion dollars, with record catch estimates of 2,467,903 mt representing approximately 53% of global catch. Shifts towards the reconfiguration and rearticulation of the state across spatial scales have created new geographies of governance. Ascertaining whether this reconfiguration has built the resiliency of environmental management systems is of critical importance. Employing political ecology and concepts of scale as an epistemological framework I explore how tuna resources within the WCPO are constructed discursively, focussing specifically on a popular discursive regime, 'sustainable development'. Secondly, this research examines how cross-scale linkages within and beyond the Western and Central Pacific Fisheries Commission shape access and control of resources, and can be shaped by power relations within highly migratory tuna resource management systems. I argue that without the appropriate sensitivities to scalar relations, conflict mediation within cooperative regimes will remain stuck in the mud. This is attributed to an absence of allocation of rights within the WCPO. Underlying this conflict is a discourse of sustainable development tied to economic efficiency. This discourse spreads through policy and management of the fishery such that it is reinforced on a scientific scale and threatens the sustainability of tuna in the WCPO.

# Vulnerability to Sea level Rise in the Coastal Socio-ecological system of the Central Java region of Indonesia- a Qualitative System Dynamic Approach

## Author

Vijai Joseph  
UNSW@ADFA

## Co Authors

Brian Lees  
UNSW@ADFA

Stuart Pearson  
UNSW@ADFA

Alec Thornton  
UNSW@ADFA

David Paull  
UNSW@ADFA

## Summary

Qualitative System Dynamics approach has been adopted for delineating coastal socio-ecological system and understand its resilience when a disturbance occur to the system in the form of natural hazards

## Details

Socio-ecological systems are very complex and dynamic. Understanding their intricate dynamics can help researchers develop insights into their behaviour under perturbation. This paper reports a qualitative system dynamics model to represent the complex socio-ecological factors that are entangled together creating a 'system vulnerability' to a perturbation such as sea level rise. The contributing factors to the vulnerability of different occupational groups such as fishers, brackish pond farmers and labourers in the central Java region of Indonesia are mapped out in Causal Loop diagrams. Key variables which can steer the system behaviour are identified. These variables are natural assets such as fish stock, brackish pond farms, net income, social capital, structural measures such as dykes and wave barriers. The process of creating Causal Loop diagrams has provided adequate space for examining many important soft variables which would have been omitted in a hard simulation modelling endeavour. Dominant loops associated with the aforesaid factors are analysed in terms of system's equilibrium maintained through feed back mechanisms in the system. Close examination of these loops show the transitions happening in socio-ecological system states and the resilience of these systems. This qualitative System Dynamic model is communicated back to the community of occupational groups or primary stakeholders and cross matched with community narrative of the socio-ecological systems. This paper attempts to apply a systems perspective to the concept of vulnerability to sea level rise and forms a platform for understanding resilience and state transitions in a holistic way. Key Words: Resilience, Causal Loop Diagrams

# **Flood and Riverbank Erosion Displacees: Their Indigenous Survival Strategies in Two Coastal Villages in Bangladesh**

## **Author**

**Ahm Zehadul Karim**

IIUM

## **Summary**

This paper generates empirical data on two coastal villages located in two different regions of the country having evidences of displacement due to flood and riverbank erosion.

## **Details**

It is reported that flood and riverbank erosion together intensifies the process of pauperization in rural areas of Bangladesh. Riverbank erosion often destroys cultivable land, dislocates human settlements and also at the same time, it damages the growing crops massively; disrupts the road-linkages and communication infrastructure in the country. With this situation at the national level, this paper generates empirical data on two coastal villages located in two different regions of the country having evidences of displacement due to flood and riverbank erosion. Due to this natural calamity, the victims have to adapt to the changing environmental conditions, and consequently they adopt many socio-political, economic and cultural strategies in order to survive in the face of plethora of problems. The flood and river bank erosion displacees try to gain control over their environment through their multi-dimensional adaptation strategies. This paper thus locates the indigenous strategies and mechanisms that the displacees usually adopt to grapple with the catastrophic effects of flood and erosion in the coastal areas of rural Bangladesh.

# A cultivated nature: global and local patterns of diversity in urban gardens, parks and streetscapes

## Author

Dave Kendal

University of Melbourne

## Summary

We show that both physical and social variables influence the distribution of cultivated plants globally (temperature and cultural background) and within a city (education level and % turf).

## Details

It has been argued that with more than half the world population now living in urban areas, people are undergoing an “extinction of experience” of biological life. However, cities (especially in the west) are dominated by plants cultivated in gardens, parks and streetscapes. Studies show that green spaces can cover more than half of western cities, and residential gardens can cover one quarter to one third of urban areas. Patterns of diversity and distribution in these cultivated landscapes influence our experience of nature, yet have been relatively little explored. Globally, our meta-analysis of the similarity of 72 studies of garden, streetscape and park floras shows that temperature drives the global distribution of cultivated plants, and that social factors such as sharing a dominant language also increases the similarity of the cultivated floras of cities. Locally, our study of diversity in 128 gardens, 64 streetscapes and 25 parks in Ballarat, Australia and tree cover over the whole city shows that socioeconomic, political and physical drivers are related to patterns of diversity and distribution. Diversity in gardens was comparable with surrounding native vegetation at small scales. However species turnover between gardens was much higher than between quadrats of native vegetation. Over 500 species were recorded in 0.13 km of front gardens which is more than the 489 native species recorded in the Ballarat local government area of 740 km<sup>2</sup>. In contrast with findings from the USA, education level rather than household income was found to strongly influence tree cover, and socioeconomic factors were more evident in public landscapes than in private landscapes.

# Intimate relationships across ethnic boundaries: a barometer for prejudice in Australia?

## Author

Natascha Klocker

University of Wollongong

## Co Authors

Kevin Dunn

University of Western Sydney

## Summary

Inter-ethnic intimate relationships are increasingly common in Australia. This paper explores the extent to which Australians are prejudiced towards such ethnic 'mixing'.

## Details

The experiences of immigrants, and their descendents, are often characterised by intimate relationships (marriage, de facto, dating) across ethnic boundaries. With changes to the ethnic mix of the Australian population over recent decades, an increasingly diverse range of inter-ethnic couples are likely to become a feature of Australian life. Existing quantitative evidence suggests that many Australians are prejudiced towards certain 'types' of inter-ethnic couples. Intimacy with Muslim, African and Asian Australians appears to cause particular discomfort. On the basis of these data, and an analysis of Australian media portrayals of inter-ethnic couples, this paper explores the extent to which Australian society is 'ready' for (or prejudiced against) inter-ethnic coupling. It argues that we must better understand the existing patterns of racism that impact on people in inter-ethnic intimate relationships, and their children.

# Assemblages of E-Waste

## Author

Freyja Knapp

University of California

## Summary

This proposed research explores the emergence of a new, powerful, and dynamic 'global assemblage' that has articulated with e-waste.

## Details

Electronic waste (discarded electronics) is often framed as a global problem that threatens environmental and human health. In parallel, e-waste has been referred to as a global "open pit mine" by multi-national mining and refining corporations thus constructing e-waste as a business opportunity. This proposed research explores the emergence of a new, powerful, and dynamic 'global assemblage' that has articulated with e-waste. Each set of actors within the assemblage has defined a unique problem that has come to overlap with e-waste variously as risk and opportunity, as well as an amalgamation of diverse materials. These problems, while framed in terms of toxic pollutants, rare-earth metals, technology innovation, or poverty reduction, articulate with particular spaces according to contingent contextual circumstances, infrastructures, and conditions of possibility and bump up against one another. I am interested in exploring how the technocrats, scientists, government officials, recyclers, and activists negotiate the complex terrain that emerges from the articulation of their respective interests in e-waste in particular spaces and contexts.

# Multi-stemmed *Cyathea australis* in South East Queensland: Why You Should Take a Camera on Bushwalks

## Author

Laurence Knight

University of Tasmania

## Co Authors

Peter Bostock

Queensland Herbarium

## Summary

This paper will discuss an ongoing study of a population of unusual treeferns and show that observant geographers can spark research investigations well outside their areas of expertise.

## Details

*Cyathea australis* is a cold and fire tolerant treefern widely distributed throughout south-eastern Australia. It normally has a single trunk that grows to 12-15 metres in height and 40 centimetres in diameter. However, there is a population of at least 90 multi-stemmed *Cyathea Australis* situated in the neighbourhood of Cunningham's Gap on the Great Dividing Range in South East Queensland. They have 2-15 stems and range between 50 centimetres and 10 metres in height and from 57 centimetres to 221 centimetres in circumference. Is this an example of unusual circumstances acting on the normal range of genetic expression, a result of a mutation in a relatively isolated population, or expression of an epigenetic influence? This paper will discuss an ongoing study of an interesting phenomenon, and show that observant geographers can spark research investigations well outside their areas of expertise.

# **A socio-ecological investigation of the potential of community supported agriculture to contribute to sustainable agri-food systems**

## **Author**

**Robin Krabbe**

University of Tasmania

## **Summary**

This paper will analyse community supported agriculture using a socio-ecological framework, for its potential to achieve breadth and depth and therefore contribute to sustainability by preserving socio-ecological life support systems.

## **Details**

Community-based regional governance is emerging as an important contribution to adaptive governance, which in turn is proposed as vital for sustainability. Governance is enhanced by adaptive capacity to understand and monitor socio-ecological feedback and by institutional diversity, both of which by themselves are also considered as fundamental to sustainability efforts. This paper, primarily by focusing on the dynamic interplay of social and ecological (socio-ecological) systems, investigates the potential of community supported agriculture (CSA) to act as a flexible and adaptive 'adhocracy' movement and as a niche, that can work towards adaptive governance and redesign production-consumption systems according to socio-ecological sustainability principles. A important contribution of CSA is suggested as residing in facilitating collaborative learning-by-doing, closer producer-consumer and consumer-ecological relationships. The tendency however to neglect both connections to other institutions (recognizing the importance of the balance between centralization and decentralization) and to marginalised groups compromises somewhat the ability of CSA to contribute towards sustainability. Finally a dynamic is identified in the wider alternative food movement whereby the co-opting of alternatives, often considered problematic, can lead to both more transformative alternatives and increase overall diversity proposed as vital for sustainability.

# Interactive exploration of spatial turnover patterns

## Author

**Shawn Laffan**

University of New South Wales

## Summary

The interactive exploration of spatial turnover patterns allows researchers to more easily assess the spatial scale, non-stationarity, directionality and heterogeneity of the process under investigation.

## Details

Spatial turnover is the rate of change of a phenomenon or process with distance, and is an important component of many fields of geographic research. Examples include species turnover, environmental gradients such as rainfall, income census districts, language groups, and pedodiversity. Turnover is typically calculated as the degree of relatedness between pairs of sites, with the set of turnover between all sets of sites stored as a matrix. Turnover is then normally visualised as derived static plots, for example using correlograms of average turnover plotted against increasing geographic distance. Geographic plots allow an exploration of the spatial scale, non-stationarity, directionality and heterogeneity of the process under investigation. However, these are normally extracted for one matrix row or column at a time, making rapid exploration of data sets difficult. In this talk I will demonstrate the interactive exploration, or visualisation, of spatial turnover using functionality recently added to the Biodiverse software (<http://purl.org/biodiverse>). As an index location is clicked on the map is dynamically updated to show the degree of turnover from the index location to all other locations. Biodiverse supports more than 200 indices of relatedness, and is able to analyse both compositional and continuous data. This enables researchers to explore the spatial patterns of turnover across a broad range of phenomena.

# Dancing with the River

## Author

**Kuntala Lahiri Dutt**

The Australian National University

## Co Authors

Gopa Samanta

The University of Burdwan, India

## Summary

'Charlands' (river islands) are volatile places, much more than 'ecological edges'. We define them as 'hybrid environments' where transient men and women cope with uncertainties on everyday basis.

## Details

'Char' or 'charbhumi' in Bangla means small pieces of low-lying land that are formed by sandy alluvial deposits on river beds. There is no dearth of charlands in Bengal, a riverine land criss-crossed by innumerable rivers that built the land. Charlands are densely inhabited throughout Lower Bengal. Newly-formed chars are naturally transitory and fragile; they are subject to the twin geomorphological process of accretion and erosion at the same time. Ill-equipped to understand such disorderly lands and waters, the colonial land-based revenue collection system invented a category of wastelands, legally turning charlands into 'non-land'. Even today, most newly emerging chars, being on the borderlines of land and water, have no legal existence as legitimate and officially recognised pieces of land. As microcosm of volatile environments, charlands are much more than ecological 'edges'; they are also 'hybrid lands' where the borders of lands and waters shift continually. In such hybrid environments, transient men and women make a living, build transitory homes and cope with the uncertainties with knowledges that develop from the experience of everyday life. To live in the hostile environment of charlands, people take risks and cope with the river's moods, which we describe as 'dancing with the rivers'. To dance with the river means being able to make constant adjustments to understand the changing moods of the river as it rises and falls. While this coping is strategic, it is also contingent and temporary, and hence we are reluctant to conflate it with the ecological term, 'adaptation'.

# **The Waste Commons in an Emerging Regime of Waste Recovery : Contesting property and value in Melbourne's hard rubbish collections**

## **Author**

**Ruth Lane**  
Monash University

## **Co Author**

**Matt Watson**  
University of Sheffield

## **Summary**

Based on observations of embedded practices of stewardship in diverse situations of use, care and exchange we argue for systemic-level interventions capable of contributing to a more sustainable materials economy.

## **Details**

Progress towards visions of sustainability represented by ideas like the zero waste society requires more than technical innovations and end-of-pipe interventions. It also requires re-examination of fundamental ideas about how we relate to materials and to things, as individuals, groups, institutions and economies. We argue that the concept of product stewardship has as yet unrealised potential as a radical re-framing of our responsibilities and relations to products and the materials from which they are composed. To explore this potential we review historical understandings of stewardship then examine its application in natural resource management (NRM), focusing on issues of property, value and responsibility. To date, schemes for product stewardship and extended producer responsibility (EPR) have focused on the ongoing responsibilities of producers. However they also require participation by consumers who may have quite different understandings of their own responsibilities towards the same products. Drawing on research from Australia and the UK, we argue that understanding of embedded practices of material responsibility can be used to reinvigorate the concept of product stewardship as a potentially radical intervention. Rather than concentrating on optimising the recycling of end of life products, as under EPR, awareness of processes of stewardship in diverse situations of use, care and exchange opens the way to systemic-level interventions capable of contributing to a more sustainable materials economy.

# Enacting experimentation: Developing situated understandings of biological economies in, of and for the Hawkes Bay and Central Otago, New Zealand

## Author

Richard Le Heron

University of Auckland

## Co Authors

Nick Lewis

Matt Henry

Mike Roche

Eric Pawson

Harvey Perkins

Hugh Campbell

Chris Rosin

Erena Le Heron

## Summary

Situated empirics of biological economy actors are used to explore the proposition that experimentation is a methodology for knowing differently and ontogenetic in constituting different futures.

## Details

The paper poses five broad questions. First, why a focus on experimentation, especially the methodological move of locating practices as a point of entry into agri-food processes? Second, what kind of emergent qualities of 'doing' that might be called experimentation are to be found in the Hawkes Bay region around biological processes, if biological processes are interpreted broadly? Third, who is enlisting and mobilising what practices, what kinds of actors are being enrolled in such experimentation and how is experimentation being co-constituted, again interpreted broadly? Fourth, what capacities and capabilities are different economic and institutional actors bringing and not bringing to experimentation? And fifth, what relations and configurations in and beyond the Hawkes Bay are integral and go into the making of the experimentation? The paper provides a brief genealogy of thinking leading to a re-consideration of experimentation and its investigation, gives a situated overview of the Hawkes Bay as a site of contemporary experimentation, and provides preliminary details about the range and richness of biological economy experimentation in the region.

# Rising tide: local knowledge and its role in adaptation to sea level rise

## Author

Anne Leitch

James Cook University

## Summary

One challenge of adaptation planning for sea level rise is the need for local councils to balance the expectations, aspirations and values of vulnerable coastal communities.

## Details

One challenge of adaptation planning for sea level rise is the need for local councils to balance the expectations, aspirations and values of vulnerable coastal communities. This case study looks community discourse in one local community, Byron Shire Australia, which has had a policy of 'planned retreat' since 1988. This policy has been latent until May 2009 when erosion from a storm affected beachfront Belongil Spit and triggered the implementation of the 'planned retreat' policy. The focus of this paper is the community discourse on the planned retreat policy in the following 18 months in the two local newspapers. The news media plays a role in both reflecting and shaping public opinion in the public sphere through defining and limiting the discourse around key events. Through this discourse I examine the role of local knowledge and how it can contribute to an adaptation response. I also discuss the differences in local knowledge of recent vs. long term residents. Local knowledge has been shown to play an important role in adaptation to climate change more broadly but has received little attention with respect to sea level rise in either the academic or policy spheres.

# **‘Staka points’: Participatory 3D modeling as a planning tool for community-based climate change adaptation in Boe Boe village, Solomon Islands**

## **Author**

**Javier Leon**

University of Queensland

## **Co Authors**

Colin Woodroffe

University of Wollongong

James Hardcastle

The Nature Conservancy

## **Summary**

Application of P3DM as a tool for community-based climate change adaptation in a coastal community in Solomon Islands

## **Details**

Participatory 3D modeling (P3DM) is a fully collaborative exercise that combines community mapping with open discussions on land-use and land-use planning scenarios. It is a representation of spatial knowledge of the community, and a source of discussion and interpretation around key issues. This paper describes the application of P3DM as a community-based tool for planning and managing natural resources and for identifying potential issues arising from coastal hazards such as tsunamis and sea-level rise in a coastal community in Choiseul Province, Solomon Islands. Results have been integrated within a GIS framework together with a high-resolution DTM in order to complement the analysis across regional and local spatial scales.

# **Geographies of disability, resilience and social justice: the challenges and transformative potential of participatory action research**

## **Author**

**Lesley Lewis**

The University of Sydney

## **Summary**

This paper investigates the transformative potential and ethical challenges in the development of a PAR methodology for an inclusive research project investigating the lifeworlds of people with disability.

## **Details**

The research area 'geographies of 'disability' is emerging as an important and evolving sub-discipline in the field of human geography. Uniting disparate areas of inquiry, research in this field offers valuable contributions in the interrogation of the multifaceted processes of disablement; the experience of disability as a process of exclusion/inclusion; and the search for modes of empowerment in the lifeworld of people with disability. Representing a focal area of investigation in a current doctoral research project at the University of Sydney, this paper investigates the transformative potential, as well as the ethical challenges, inherent in the development of a participatory action research approach and methodology as an integral part of an innovative and inclusive research project.

# **Journeying towards propositions about situated knowledge practices**

## **Author**

**Nick Lewis**

The University of Auckland

## **Summary**

This paper examines the journeys taken by participants into and through an Auckland meeting of SKANC in 2011. It considers a set of propositions about the practices of situated knowledge production.

## **Details**

Over the last 28 months geographers in Auckland and Newcastle have engaged in conversations about the situatedness of knowledge across sub-disciplinary divides. Querying the situatedness of our approaches and understandings and what happens when we bring them together, we have asked about the possibilities that emerge from theorising from our parts of the world. In this paper we take some initial steps to representing our work and beginning the collective writing stage of our experiment. We detail the journeys embedded and embodied in our knowledge collective. We narrate the emergence of the collective as an experiment in knowledge production and the journeys associated with our recent meeting in Auckland. At this learning engagement, we shared an exploration of our recent scholarship, a day-long intensive co-reading of influential situated knowledge accounts and accounts of situated knowledge, and an experimental journey into a set of kitchens conjured up in small-group collective imaginaries. These imaginary kitchen experiences are being developed into a companion paper within the collective, but we draw here from one kitchen that served up a set of propositions about the practice of situated knowledge. We elaborate on these propositions by drawing on post-meeting exercises to elicit the embodied and intellectualised journeys taken by participants into and through the meeting. We argue, as we did among ourselves in the room, that bringing these journeys together is a generative exercise, which whilst itself clearly situated, incomplete, and premature tells us much about situated knowledge.

# Eolian deposits in China and possible link to uplift of Tibetan Plateau

## Author

Xiuming Liu  
Lanzhou University

## Co Authors

James Beget  
University of Alaska

Paul Hesse  
Macquarie University

Deping Tang  
Fuzhou University

Xuegang Mao  
Lanzhou University

Jiasheng Chen  
Lanzhou University

## Summary

Long trend of 22Ma aeolian Chinese loess records both cycle signal of climatic changes and non-cycle signal of tectonic uplift. The uplift rate of Tibetan Plateau can be estimated.

## Details

Aeolian Chinese loess sequence provided one of best records of climatic change as earlier as 22 Ma. Of which, particle size and magnetic susceptibility % are two most useful proxies for studying East Asian winter and summer monsoon variation. The two parameters show clear long term trends - notably increases in grain size and % from the bottom to the top, North China. This indicates that both winter and summer monsoons have become more intense over the last 8 Ma. These results suggest an increased temperature difference between the Asian continent and the ocean due to the gradual uplift of the Tibetan plateau during the period of eolian deposition. The cycle of climatic changes has been confirmed to be dominantly controlled by orbital periodicities. The trends in the loess records do not show a constant relationship to time but rather a series of increases in the ratio between grain-size changes and the passage of time. We attribute this to the accelerating uplift of the Tibetan Plateau.

# High density renewal at a micro scale: Sydney's family-driven urban renewal market

## Author

Edgar Liu

University of New South Wales

## Summary

This paper explores how multiple generations of related adults living together (i.e. multigenerational households) act as a motivation for and a form of urban renewal in Australian cities.

## Details

Recent changes in Australian living arrangements and household composition have seen a considerable increase in multiple generations of related adults cohabiting in the same household. ABS data (Pink 2009: 24) indicates that this rise in multigenerational living is partly due to higher proportions of young adults delaying their first home leaving and continuing to reside in the parental home since the mid-1980s. This trend in delayed first home leaving has also been observed in other countries, including Canada (Gee et al. 2003), Japan (Traphagan 2008), Italy and the Netherlands (Alessie et al. 2005). More recent Australian evidence from Judd et al. (2010) shows that the increase in multigenerational households can also be attributed to older parents moving in with their offspring for reasons of care and companionship, as well as older offspring returning to live in the parental home after relationship breakdowns. Much of the research thus far have, however, focused on the timing at which young adults first leave the parental home, particularly the economic (Cobb-Clark 2008) and cultural factors (Gee et al. 2003) which delay such first home leaving. A fundamental aspect of this 'new' multigenerational living, one which concerns the renewal of our cities, however, remains largely unexamined. The paper, using Sydney as a case study, draws on evidence from a Sydney-wide questionnaire survey as well as customised census data to reflect on multigenerational households as a motivation for and a form of urban renewal in Australia.

# **“We’re a part of it”~ knowledge making and cosmos nurturing with Bawaka country, North East Arnhem Land**

## **Author**

**Kate Lloyd**  
Macquarie University

## **Co Authors**

Sarah Wright  
The University of Newcastle

Sandie Suchet-Pearson  
Macquarie University

LakLak Burarrwanga  
Bawaka Cultural Experiences

Hon. Bawaka Country

## **Summary**

This paper looks at the way multiple agents, including Indigenous knowledge authorities, university academics and Bawaka country itself co-construct knowledge about Yolŋu mathematics in Northeast Arnhemland.

## **Details**

Yolŋu mathematics refers to the complex matrix of patterns, relationships, shapes, motions and rhythms of time and space that underpin the ways that Yolŋu nourish, and are nourished by, their country. The notion of Yolŋu mathematics engages with the active agency of country, including animals, plants, wind, spirit beings and other agents, in a way that is not solely human-centred. It also challenges many Western knowledges through its fundamental reliance on human and more-than-human connectivity and situatedness. Yolŋu mathematics is performative, in that it is constantly brought into being through story, song (manikay), being and doing. The performance of Yolŋu mathematics is essential for nurturing and (re)creating the cosmos. This paper explores one aspect of this performance through the methodological, conceptual and ethical challenges and opportunities confronted through the co-construction of knowledge, particularly through research for the co-authorship of a book on Yolŋu mathematics at Bawaka in North East Arnhem Land. This co-construction of knowledge is occurring between the authors of this paper: Indigenous knowledge authorities, university academics and Bawaka country itself. The challenges and opportunities that arise from this engagement involve an attentiveness and responsiveness to each others’ presence and intent, to the academics becoming part of the cosmos, and to the ethical obligations and responsibilities that are fundamental to this.

# Social sustainability and the challenge of living with ethnic diversity in the 21st century city

## Author

**Michele Lobo**  
Deakin University

## Co Authors

Fethi Mansouri  
Deakin University

## Summary

Addressing the challenges of living with ethnic diversity in cities with white majority cultures through partnerships between local government and community groups

## Details

Liveability and social sustainability have emerged as buzzwords within the urban policy arena, but the meanings, values and underlying principles of such concepts that drive programs and practices for positive change in cities is less clear. This paper argues that the relevance of these concepts in addressing the challenges of living with ethnic diversity in 21st century cities with white majority cultures can be enhanced by adopting a relational comparative approach in exploring partnerships between local governments and community groups. The paper draws on interviews conducted in three ethnically diverse urban areas, the City of Whittlesea, Melbourne, the City of St Denis, Paris and the City of Sheffield, where the arrival of migrants and the increasing visibility of 'ethnic' urban citizens elicit feelings of fear, anxiety and suspicion. While national governments have tried to engender feelings of safety and wellbeing among citizens by securitising national borders, implementing anti-immigration measures and supporting policies that focus on cultural assimilation, such responses are limited in enhancing liveability and social sustainability of cities. In contrast, this paper illustrates that fragile encounters at the local/urban scale have the potential to open up a democratic space of potential where intercultural tensions are recognised and begin to be addressed in ways that can unsettle technocratic and managerial responses to the governance of multicultural co-existence. Keywords: social sustainability, ethnic diversity, urban policy, Melbourne, Sheffield, Paris.

# **Building Community Resilience in an Uncertain Future: The Role of Australian Emergency Managers (ESOs)**

## **Author**

**Tom Lowe**

Department of Sustainability and the Environment

## **Summary**

Using evidence and experience from climate change, disaster and development research, this paper attempts to identify how ESOs should approach resilience from a community-centred perspective

## **Details**

Australian Emergency Service Organisations (ESOs) must ensure that they, and the communities they are charged with protecting, are flexible and adaptive enough to cope with emergencies and disasters in the future. To date, ESOs have placed emphasis upon the practical improvements that can be made to help communities prepare, respond and recover from disaster. These measures include ensuring robust chains of command, reinforcing emergency regulations and procedures, developing collaborative emergency management overlays and providing communities with information to help reduce their vulnerability to risks. However, the role of community within this resilience framework remains poorly understood and, as a result, poorly developed as a set of programs from which ESOs can confidently integrate social capacities into existing resilience strategies. The aim of this paper is to identify how ESOs should approach resilience from a community-centred perspective. Using evidence and experience from climate change, disaster and development research, the paper attempts to identify the current barriers that exist to ESOs connecting the 'hard' mechanisms of resilience (mentioned above) with the 'soft' social nuances of community connectedness and collective efficacy.

# Reflections from a Cultural Studies Researcher in the Geospatial Court: GIS in Media and Cultural Research

## Author

**Susan Luckman**

University of South Australia

## Summary

This paper explores the political and ethical issues arising from the use of GIS in a project examining the impact of media representation on the opportunities available to people from disadvantaged areas.

## Details

This paper offers some insights into early forays with GIS in media and cultural research by an interdisciplinary cultural studies scholar whose work is concerned with how place is an agent in cultural practice. I have been exploring the ways in which GIS technologies can be used to enhance ethnographic methodologies within a cultural research project, and, in particular, how they can broaden the scope of data available via engaging people visually and not just linguistically. This is coupled with an interest in the growth of digital map and GPS technologies as a basic sense-making tool of the moment, as well as the power of maps as a tool for research data visualisation, especially to wider audiences beyond the academy. So while being familiar with, and sympathetic to, the many ethical questions which have traditionally been associated with the growth of GIS within the geographic community, the visual modalities the use of GIS can give rise to I argue can actually render data collection processes more widely accessible. However, that said, in my own experience a number of different ethical issues have emerged around the politics of public dissemination of information generated within a research project, and age-old concerns about the research question pre-empting the answer and reinforcing the very kinds of prejudices the work may wish to ultimately overcome. Therefore, drawing upon the use of GIS in a research project examining the real-world impact of media representation on the opportunities available to people from Adelaide's disadvantaged northern suburbs, this paper will explore the particular affordances of politics and ethics these methodologies give rise to.

# Gayby booms and gaybourhoods: lesbian parenting in Sydney

## Author

**Karina Luzia**  
Macquarie University

## Summary

Drawing on data from a recent qualitative research project with Sydney families, this paper examines 'parenting places', focusing on the experience of mothers in same-sex relationships.

## Details

While there have always been lesbians who are also mothers, in the last three decades an increasing number of women have been opting to parent specifically from within the context of a non-heterosexual identity and/or same-sex partnership. However, while all parents must encounter new social networks and institutional contexts, accessing and maintaining functional links with these networks can be complicated by non-heterosexual identities and cultures. Becoming and being a parent while in a same-sex relationship for example, means having to voluntarily and sometimes involuntarily confront issues around one's sexuality in any number of ostensibly 'non-sexualised' family and child-centered spaces and contexts. Drawing on data generated within a recent qualitative research project with 18 Sydney families, this paper examines some of these 'parenting places', focusing on the experience of mothers in same-sex relationships and the particular dilemmas associated with having to negotiate heteronormative and discriminatory discourses and systems in the everyday spaces of family life. In doing so the paper interrogates not only contemporary understandings around family, sexuality, parenting, and mothering as they are materialised in the 'gaybourhoods' of Sydney, but also how these broad understandings are simultaneously confirmed and contested by same-sex parented families.

# Dealing with diaspora: Understanding the socio-spatial changes to a suburb recovering from fire

## Author

**Andrew MacKenzie**  
University of Canberra

## Summary

The western edge of suburban Canberra has been redeveloped since the 2003 fires. This paper reports on the socio-spatial shifts that have occurred in the last eight years.

## Details

In 2003, fires destroyed over 200 properties in the Canberra suburb of Duffy. The scale of damage and loss of property were unprecedented in the ACT. The community and the Territory government were completely unprepared for its impact and aftermath. In 2011, the socio-spatial change resulting from the fires is significant. These changes are not only a necessary part of the recovery from such a catastrophic event, but they are also a legacy of a planning system and community coping with large scale and rapid redevelopment. This paper examines the extent of the physical and demographic change to Duffy after the 2003 fires. The data reveals a story of profound reconfiguration of the physical structure to the suburb as houses and gardens were redeveloped. It also tells of a rapid change in population as 44 percent of fire affected property owners sold their land to incoming developers and new residents. The catastrophe of the fire and the subsequent diaspora created a new physical and social structure to the suburb. Hall (2005) suggests that such mobilisation creates diasporas that dismantle older notions of identity and put alternatives into play that resist traditional concepts of place. This is seen as a global phenomenon yet, in Duffy, this socio-spatial shift presents some insight into some of the conceptual challenges faced by recovering communities reframing their identity in the face of such change. It shows that the fires tested the resilience of a community adapting to new notions of identity and place.

# **Interrogating photovoice: an appropriate visual methodology to facilitate inclusive research between Aboriginal Australians and non-Aboriginal researchers?**

## **Author**

**Kirsten Maclean**

CSIRO Ecosystem Sciences

## **Co Authors**

Emma Woodward

CSIRO Ecosystem Sciences

## **Summary**

Photovoice can provide ways to incorporate Aboriginal voices and knowledges in co-research projects in northern Australia. Our research shows it also provides a forum to discuss and develop social livelihoods.

## **Details**

Methodologies in human geography are rapidly evolving to participatory approaches that incorporate other voices and knowledges. Central to these participatory methodologies is the co-evolution of research objectives, the co-production of knowledge and capacity-building of all those involved. Visual methodologies that use the media of photography, art and moving-image are gaining recognition as powerful participatory methods. In this paper we draw from two research projects, conducted in partnership with two different Aboriginal groups in northern Australia, to provide comment and critique of photovoice as an appropriate and useful visual methodology for working with Aboriginal Australians involved in environmental governance of their traditional country. The first project used photovoice as a way to engage school children from the Daly River region in the Northern Territory in discussions about water. The second project used the methodology with Kuku Nyungkal Elders and Youngers from the Wet Tropics region of far north Queensland, to facilitate documentation of their water knowledge, values and interests in management. Our comparative paper shows the value of this methodology to facilitate research between Aboriginal research partners and non-Aboriginal researchers, to generate discussion about social livelihood development outcomes and to provide a forum in which new ideas can evolve. We comment on how this methodology can be further improved via partnerships developed between geographers and their research partners who are often 'living on the edge'.

# Place matters for Indigenous engagement in water planning: a case study from the Wet Tropics

## Author

**Kirsten Maclean**

CSIRO Ecosystem Sciences

## Co Authors

Cathy Robinson

CSIRO Ecosystem Sciences

## Summary

1. This paper shows how place and discourse matter in the ways in which Indigenous water values are negotiated and contested in the Wet Tropics region of Queensland.

## Details

Indigenous Australians and the Australian Governments' National Water Initiative both state that successful water governance in northern Australia depends upon the integration of the beliefs, practices, values and knowledge of all interest groups from the region. This paper presents a case study developed from qualitative co-research conducted with Girringun Aboriginal Corporation, an Indigenous representative body located in the Australian Wet Tropics, to explore how Girringun engages with other natural resource managers to manage water on their traditional country. Similar to other Aboriginal land and sea managers across northern Australia, Traditional Owner members of Girringun Aboriginal Corporation seek planning mechanisms that enable them to manage their traditional fresh water country in a way that sustains cultural and environmental values, as well as strengthens local socio-economic development. The case study sheds light on the contemporary water resource planning landscape in the Wet Tropics. It examines the discursive strategies that Girringun Aboriginal Corporation use to ensure that Traditional Owner water values and socio-economic development aspirations are recognised in water management decision-making and supported via water allocations. The analysis draws upon cultural geography and political ecology to examine how place matters in the ways in which Indigenous water values are negotiated and contested in Australia.

# Master Planned Estates and the Re-formation of Cities: Can MPEs deliver Healthy Places, Healthy People?

## Author

Cecily Maller  
RMIT University

## Summary

Master planned estates are a common feature of modern cities. This research explores residents' social practices to reveal connections between spatial and social features, daily routines and health.

## Details

Master planned estates (MPEs) are a common feature of Australian city-scapes. They are designed to give residents a 'complete living experience' including access to educational facilities, shopping centres, parks and sport facilities and occasionally, employment. Historically MPEs have aspired to be suburban utopias; yet much research has focused on identifying the negative outcomes from these developments to reinforce the notion that dreams of utopian futures are rarely realised. Criticisms of MPEs include they are: sites of exclusivity/affluence; reliant on private modes of transport and, overall; result in reduced health and wellbeing. However, as a dynamic form of city re-formation MPEs provide an opportunity to 'get it right' by putting into practice lessons learnt from the past and notions of best practice planning. As Johnson (2010 p. 376) states "[MPEs] indeed have their limitations but also provide a framework within which a host of contemporary social and environmental problems can be, and are being, addressed. MPEs are therefore far from being pariahs but offer a range of valuable panaceas to urban Australia." In response to this challenge, the paper describes a project exploring the influence of best practice planning on the health and wellbeing of MPE residents. Using a social practice approach rather than taking an individual behavioural stance, the research focuses on households as a unit of study to reveal the connection between spatial and social features, daily routines and health and wellbeing. The paper describes the methodology, outlines progress to date, and reflects on potential implications of the research for policy and planning relating to 'living in cities'.

# Sites of Respect: Legal graffiti walls and the moral geographies of young people

## Author

Cameron McAuliffe

University of Western Sydney

## Summary

Legal graffiti walls as sites of respect suggest a situated urban moral geography built on a respectful mutuality that works in place to undermine the normally disparate moral politics of graffiti

## Details

The moral politics of respect is becoming increasingly important for Australian politicians and policy-makers searching beyond multiculturalism for ways of engaging with social and cultural complexity. There is nothing implicitly wrong with the idea of respect. However, respect is not a singular notion, with different regimes of respect often having contradictory concurrent manifestations. As such, its deployment by politicians in policy and programs begs the questions, respect of what, by whom, on whose terms, and for what benefit? This paper looks to a critical understanding of respect, drawing particularly on Sennett (2003) and Honneth (2007), and applying their insights to empirical work with creative young people in Western Sydney. For young graffiti writers living at the edges of inclusion, respect manifests itself in different and complex ways, as rights and recognition are variously extended and withdrawn by the state, and as writers accrue respect within graffiti subcultures through risk-taking behaviours. Legal graffiti walls challenge these seemingly incommensurable regimes of respect, as places where a more agonistic and contingent moral politics can be worked through. Following Ash Amin (2010), the legal graffiti wall becomes a site where a more-than-human engagement has the potential to facilitate inclusion. These sites of respect suggest a situated urban moral geography built around inclusion; a respectful mutuality that works in place to undermine the normally disparate moral politics surrounding graffiti.

# Situated knowledge on the move? Reflections on urban policy mobilities/immobilities

## Author

Eugene McCann

Simon Fraser University

## Summary

The idea of situated knowledge is used to reflect on paradoxes of fixity/mobility in urban policy, followed by consideration of how, why & with what consequences certain policies and policy actors are immobile.

## Details

Recent geographical literature suggests that urban policies should be understood as globally mobile and relationally constituted, while also situated in and identified with specific urban contexts. Notions like 'policy mobilities' help trace how the global influence and travels of policy 'transfer agents' help circulate abstracted, stylized, persuasive stories. Yet, this research also addresses the powerful role of place-specificity in this circulatory process: the credibility that comes with situated knowledge from and about exemplary places makes the stories persuasive. It is situated knowledge that is, paradoxically, on the move in policy circles. This paradox is productive analytically and practically, and is the focus of the first part of this paper. I then turn to the vexed question of immobilities: not all situated policy knowledge moves. There are different reasons why: not all policies are able to move (perhaps some are too situated, too place-specific), some policies are not considered to be worth moving (perhaps they are defined as 'behind the ideological times' – a point that speaks to the political nature of policy mobilities), or there are marked inequalities – economic, institutional, linguistic, 'cultural,' gendered, racialized etc. – in access to the resources needed to mobilize policy knowledge, which means that only certain policy actors become part of a global kinetic elite of policy transfer agents. These questions of immobility and exclusion have not been fully considered by those working with the notion of policy mobilities. This paper will attempt to remedy this through a sustained reflection on the paradoxical and complex character of situatedness/mobility in urban policy.

# Do Aboriginal middens support the rapid change Holocene sea-level model? A case study from the Macleay Delta NSW

## Author

Sarah McGowan

University of New England

## Co Authors

Robert Baker

University of New England

Deborah Vale

University of New England

Wendy Beck

University of New England

## Summary

Aboriginal middens, together with unpublished FIBI dates, provide evidence to support environmental change and sea-levels higher than present during the Holocene on the south-eastern Australian coastline.

## Details

There are a number of mechanisms proposed to explain the remnants of higher Holocene shorelines in southeastern Australia (tectonic, hydro-isostatic and eustatic). The hydro-isostatic rebound model postulates that sea-levels have been relatively stable over the last 6000 years and not higher than present subject to a small zone of uncertainty of  $\sim\pm 1$ m. The eustatic model hypothesises that sea-levels reached a high stand of  $\sim 2$ m above present 6000 yrs BP and that a number of oscillations of up to 1m occurred before reaching the present level. This paper seeks to present previously unpublished Fixed Intertidal Biological Indicator (FIBI) dates for the New South Wales north coast allowing for further evaluation of these models. Aboriginal midden deposits from Kempsey (Macleay delta) suggest that a significant environmental shift occurred between 4200 and 3600 yrs BP, when there was notable changes in midden species, followed by the abandonment of inland middens by 3300 years BP. This supports a rapid fall in sea-level at this time rather than gradual change and was accompanied by declining sea-surface temperatures, illustrated by the disappearance from the midden of *Platycephalus indicus*, a tropical fish species. More recent middens dated from between 1200 to 900 yrs BP, suggest a gradual fall in sea-level to present. Midden evaluation provides parallel lines of evidence to further evaluate Holocene sea-level models.

# Writing difference differently

## Author

**Pauline McGuirk**

University of Newcastle

## Co Authors

SKCAN Situated Knowledge Collective Auckland Newcastle

## Summary

A panel session bringing together 4 speakers with audience engagement to explore writing and communication styles for research that engages ideas of knowing as embodied, mobile and assembled.

## Details

A commitment to knowledge as situated often involves engagement with communities outside the academy (community groups, indigenous communities, policy communities), action research or methodologies that explore ideas of knowing as embodied, mobile and assembled. This raises issues about diverse styles of communication in 'writing up' and communicating the research. This session will involve a panel of 4 speakers who will explore these issues followed by an extended audience discussion. Panellists Sarah Wright (University of Newcastle) Michelle Duffy (Monash University) Eugene McCann (Simon Fraser University) Lesley Instone (University of Newcastle)

# Mining Projects in Rural Settings: Some Measures of the Demographic Mix

## Author

**Alison McIntosh**

Queensland University of Technology

## Co Authors

Kerry Carrington

Queensland Institute of Technology

## Summary

Paper identifies some impacts of FIFO/DIDO (non-resident) workers on Australian rural communities and highlights significant aspects including the potential magnitude of the resource sector transient workforce.

## Details

Global demand for Australia's mineral and energy products fuels the continuing resource boom and drives the development of mining projects not solely in remote the nation's locations but increasingly in more settled rural areas. In response to labour demands, recruitment of fly-in, fly-out and drive-in, drive-out (non-resident) workers accommodated in work camps has escalated. Alongside these employment practices, 12-hour shifts compressed into block rosters of several weeks have become the norm for industry workers with most employed by principal contractors rather than resource development companies. These workforce policies together with the cumulative effects of numerous resource projects are having identifiable and profound effects upon 'host' communities in rural Australia including some seriously dysfunctional criminological and sociological impacts. Workforce features including size, workplace location, place of usual residence, number of direct employees and of contractors, and turnover are difficult to quantify. Demand for Australia's mining and energy resources is predicted to continue for several decades and thus profound implications for rural communities and for the nation can be expected. This paper identifies some impacts of non-resident workers on Australian rural communities and highlights significant aspects including the potential magnitude of this transient workforce for the resource sector. By drawing attention to the scale of the non-resident workforce and its impacts on affected rural populations, the paper presents compelling reasons for immediately and earnestly addressing critical issues regarding the sourcing and accommodating workforces for resource development projects in rural Australia.

# Cold-climate deposits in low and mid-altitude Tasmania

## Author

**Peter McIntosh**

Forest Practices Authority

## Co Authors

Rolan Eberhard

Patrick Moss

Adrian Slee

Paul Donaldson

Richard Doyle

David Price

Jorge Martins

Chris Sharples

## Summary

The distribution of Tasmanian cold-climate deposits such as colluvium, aeolian deposits and landslides is described and related to environmental conditions in the last and earlier Glacial periods

## Details

One of the most extensive cold-climate deposits mapped in Tasmania is 'dolerite talus' which includes deposits formed from landslide debris, scree, slope colluvium, fan alluvium, rock glaciers, blockfields and moraines. These deposits have accumulated over long periods: on Mt Wellington and Ben Lomond weakly weathered very bouldery deposits have been dated from 500 to 22 ka; a landslide at 600 m altitude on the flanks of Mt Nicholas has been dated 80–90 ka. Deep stratified fine screes in the Huon and Styx valleys, similar to the ill-defined gréze litées described in European literature, have been dated 35–22 cal ka. Similar deposits occur in cave entrances near Hastings. These and related stony colluvial deposits dated 39–19 ka probably originated by freeze-thaw processes. The beginning of the dry conditions and land instability responsible for such deposits can be tentatively dated by the age of 43 cal ka obtained for the fan alluvium overlying laminated silts of possible Last Interglacial age at Blakes Opening on the Huon River, but this date is close to that for the oldest known habitation layer in Tasmania, and human influences (e.g. fire) may have exacerbated erosion. Deep aeolian deposits in the mid-Huon catchment and in southeast Tasmania dated 60–19 ka attest to a long period of semi-arid climate and winds from a westerly quarter. At Dunlin in northeast Tasmania dune deposits dated 29–14.5 ka contain a prominent palaeosol which developed between 21 ka and 16 ka, indicating that dry conditions favouring aeolian accumulation were interrupted by an interval of wetter conditions.

# **Rural Revival? Place marketing as a strategy to arrest rural decline**

## **Author**

**Phil McManus**  
University of Sydney

## **Co Authors**

John Connell  
University of Sydney

Phil McManus  
University of Sydney

## **Summary**

This presentation asks whether Country Week is successful. It highlights the strengths and weaknesses of the approach to changing the demography of inland Australia in the early twenty first century.

## **Details**

Many small inland towns beyond about three hours drive from a capital city are experiencing an aging and declining of their non-indigenous population. This presentation highlights an initiative that has been operating in NSW and Queensland for a number of years to arrest this decline. Originally called Country Week, and now called the Country and Regional Living Expo, this unique approach brings together many local councils (and potential employers) to market their place to city people as a destination to visit, and perhaps ultimately relocate to. Is this initiative successful? Our presentation addresses this important question by highlighting the strengths and weaknesses of Country Week as an approach to changing the demography of inland Australia in the early twenty first century.

# Mining, Income distribution and Gender in Australia

## Author

Tom Measham

CSIRO Ecosystem Sciences

## Co Authors

Andrew Reeson

CSIRO Ecosystem Sciences

## Summary

Mining has been a significant driver of income and employment in parts of regional Australia. However, the high incomes associated with the mining sector may also lead to greater income inequality.

## Details

Mining has been a significant driver of income and employment in parts of regional Australia. However, while income growth is an economic benefit, the high incomes associated with the mining sector may also lead to greater inequality. This paper describes an empirical analysis of mining activity and income inequality in regional Australia. The Gini coefficient (a measure of inequality) for personal income is found to have a statistically significant relationship with degree of mining employment. However, this relationship does not follow a straight line. Rather, income inequality initially increases with mining activity, before decreasing at medium to high levels of mining employment, following a Kuznets curve pattern. Segregating data for males and females reveals very different patterns. Among males inequality initially increases as mining employment in a region increases, but then sharply decreases; at high levels of mining activity income inequality among men is much lower than is typically observed in non-mining areas. Among females, income inequality increases with mining activity throughout its range. This suggests that income inequality is most likely to be a problem in locales with mixed economies including intermediate levels of mining activity, and that it impacts men and women quite differently.

# The Spatial data analysis project: Performing situated knowledge

## Author

**Kathy Mee**

University of Newcastle

## Co Authors

Pauline McGuirk

University of Newcastle

## Summary

The paper deals with the implications of understanding knowledge as situated for the performative nature of collaborative encounters involved in the conduct of ARC Linkage projects.

## Details

ARC Linkage grant projects involve university academics in networks of collaboration with organisations outside the academy. Little has been written about the performative nature of these encounters. This paper draws on an ARC Linkage project—the Spatial Data Analysis Project (SDAP)—a project conducted by UoN and UWS geographers with state government agencies in the Hunter. We will argue that understanding knowledge as situated influenced the conduct of the project, for example through decisions about how we brought our commitments and research politics to the project, about the production and circulation of project outputs, as well as embodied performances in both the day-to-day research interactions with partners, and at key events or moments. We argue that understanding knowledge as situated shifts the ground on which more productive conversations around research ‘relevance’ and policy can be held.

# The implications of demographic change in rural Australia for natural resource management

## Author

**Emily Mendham**

Institute for Land, Water and Society

## Summary

This paper explores the impact of changing rural demographics on natural resource management, revealing the diversity of landscapes in transition and dynamic nature of NRM as newcomers develop as land managers

## Details

In this paper we explore the impact of changing rural demographics on natural resource management (NRM) through an examination of the implications of property turnover. This involved a multi-scale study combining property sales records, regional survey data and semi-structured interviews. We present two case studies (the Corangamite and Wimmera regions in Victoria) which encompass the contrasting demographic trends apparent in rural Australia. Given private landholders manage most of the continent, changes to the types of people managing the land have important implications for NRM. Research results predict unprecedented rates of ownership change of up to 50% (double previous rates) associated with two main trends: subdivision and amalgamation. Findings highlight that a substantial proportion of newer property owners are absentee and amenity buyers. In some areas land management is becoming increasingly disconnected from making a living as a growing proportion of people purchase rural properties for reasons other than income. In other areas property turnover is associated with the continued dominance of production values. This research illustrates the complexity of responses occurring at regional and sub-regional scales. The trends in ownership identified are resulting in an increasingly differentiated rural space, supporting Holmes' (2006) multifunctional rural transition framework and associated concept of new forms of rural occupation. The increasing complexity of rural landscapes is highlighted by findings showing differences in property size, occupation and enterprise mix within the regions. The study suggests that the reconfiguration of rural space is occurring faster than anticipated.

# Reflected in Water: exploring the nexus between social disadvantage and urban water

## Author

Fiona Miller

University of Melbourne

## Summary

By taking an holistic view of the social dimensions of water this paper identifies existing and emergent, actual and potential, axes by which social disadvantage is associated with urban water.

## Details

How significant is the connection between social disadvantage and water in urban contexts in Australia? In what ways is this connection apparent? This paper seeks to contribute to answering these questions. It recognizes that whilst water is certainly not a determinant of social disadvantage or inequality in Australian cities, unlike in other urban settings around the world, it does nonetheless reflect important social differences. The paper argues that with near universal access to clean, reliable and relatively cheap water in Australian cities the diverse ways social difference and disadvantage are tied to urban water is often hidden or neglected in water planning and management. By taking an holistic view of the social dimensions of water this paper identifies existing and emergent, actual and potential, axes by which social disadvantage is associated with urban water planning, management and practice. The paper draws upon key concepts elaborated on in urban political ecology, namely equity, justice and vulnerability, as well as recent work on the socio-cultural aspects of water in Melbourne, to explore the nexus between water and social disadvantage in the context of advanced neo-liberal urban water management.

# Seachange and Landscape Change

## Author

Philip Morley

University of New England

## Summary

Through visual and quantitative analysis the Alternative Landscape Futures project created spatial models of future landscape change in northern NSW based on past trends of land use and population growth.

## Details

Past policies and landscape changes influence future directions. Human society tooled with powerful machines since the industrial revolution have become the major altering force on landscapes and regions. The affluence of some recent generations in developed countries adds further social expectations for change, particularly urban development in naturally aesthetic places. Rapid large scale change is affecting many rural coastal regions of Australia. Faced with enormous "Sea Change" migration many of these regions are heading towards landscapes of "concrete jungles", less productive land and degraded ecosystems. The enormous challenge is how to accommodate these social needs while protecting our natural areas and agricultural production needs in the long term. The Alternative Landscape Futures approach presented contributes new tools, knowledge and options to guide long-term policy and planning of regions. Building on Carl Steinitz's methodology and integrating past-trend future trajectory analysis with landscape ecology and design principles, a multi-scaled hybrid approach applicable to landscapes of large regions was developed. Spatial modelling of the essential elements of a very complex debate about regional development and sustainability is used to produce a number of future scenarios that geographically represent potential and plausible changes that might occur or may be applied (through planned design) to regional landscapes in the medium to long term. The outcomes of visual and quantitative analysis and assessment provide a clear understanding of the future consequences of present day decisions.

# **New versus traditional methods: Measuring post-fire erosion using terrestrial laser scanning and digital close range photogrammetry**

## **Author**

**Rowena Morris**

University of Adelaide

## **Co Authors**

Bertram Ostendorf

University of Adelaide

Ross Bradstock

University of Wollongong

Sol Buckman

University of Wollongong

Meredith Henderson

Department of Environment and Natural Resources

Deirdre Dragovich

University of Sydney

Paul Connelly

Tafe SA

James Moncrieff

Maptek Pty Ltd

## **Summary**

Post-fire erosion case studies from the Mount Lofty Ranges, SA are used to compare recent advances with traditional monitoring techniques.

## **Details**

Over the past twenty years research into post-fire erosion has experienced enormous advances in methodology. New technologies such as terrestrial laser scanning and digital close range photogrammetry are enabling geographers to collect accurate topographic data at multiple temporal scales. Comparison between the traditional techniques and new technologies is warranted to ensure accurate, well informed post-fire assessments are made. A wildfire and ten prescribed burns in the Mount Lofty Ranges, South Australia are used as various case studies to compare traditional survey techniques including erosion pins, sediment traps, and visual observation, with recent advances including terrestrial laser scanning and digital close range photogrammetry. The spatial and temporal coverage of each technique becomes the deciding factor in the usefulness for measuring post-fire erosion. We conclude that with a good understanding of the potential limitations the new technologies have the ability to produce reliable results, but there is still an important role for the traditional survey techniques.

# **Auckland Super-city: Agency, Agendas and Aspirations shaping the sustainable/competitive city dilemma**

## **Author**

**Laurence Murphy**  
University of Auckland

## **Co Authors**

Nick Lewis  
University of Auckland

Richard Le Heron  
University of Auckland

Brad Jackson  
University of Auckland

Charlotte Sunde  
University of Auckland

## **Summary**

This paper examines regulatory and policy trajectories that have shaped the new Auckland super-city council and explores the emergent tensions in implementing 'sustainable city' and 'competitive city' visions.

## **Details**

In 2010, the Auckland metropolitan region underwent a profound restructuring of its local governance systems following the amalgamation of seven local authorities and a regional authority into a single unitary authority. The resultant 'super-city' houses a population of 1.4 million people and the new council has an annual budget in excess of NZ\$3 billion, and assets of NZ\$29 billion. The new regulatory arrangement is a product of on-going central and local government engagements concerning the transformation of Auckland as a city. Underpinning the reforms is a set of complex agendas, aspirations and agents that are actively envisioning Auckland's future within various discourses and imaginaries of 'sustainability', 'liveability' and 'competitiveness'. In this paper we examine the regulatory and policy trajectories that have shaped the nascent council and explore the emergent tensions in implementing 'sustainable city' and 'competitive city' vision.

# Why are Australian rivers so unusual?

## Author

Gerald Nanson

University of Wollongong

## Summary

This paper sets up a framework for understanding and explaining Australian fluvial systems identifying ten key factors that have controlled their evolution.

## Details

Over the past several decades, evidence for an unusual or distinctive fluvial geomorphology of Australia has arisen from several sources. From a North American perspective, Miall states: The distinctive climate of Australia has led to the development of several unusual, or even unique, fluvial styles within that continent. However, the unusual character of Australia's rivers was not always been seen to be so. Innovative research on a wide range of riverine landscapes has meant the gradual replacement of European and later North American models of fluvial change. The aim in this paper is to set up a framework for understanding and explaining Australian fluvial systems. The main contribution is the identification of ten key factors that have controlled the evolution of what is now recognised to be a highly unusual and in some aspects a unique collection of river styles. These are: 1 Prolonged tectonic stability; 2 Limited headwater upland erosion; 3 Extensive unconfined low-gradient plains; 4 Limited Quaternary glacial activity, but major flow regime changes; 5 Low sediment yields; 6 Weathering and induration of alluvium; 7 Flood and drought dominated regimes; 8 Declining downstream discharges; 9 Co-evolution with riparian vegetation; 10 Fluvial-aeolian interactions.

# A Hydrogeological Landscapes Framework for Planning and Understanding in Urban Landscapes

## Author

Allan Nicholson  
DECCW

## Summary

Understanding of urban landscapes, implementation and planning urban management actions has been significantly advanced with the advent of a Hydrogeological Landscape ( HGL) framework approach

## Details

Understanding of urban landscapes, implementation and planning urban management actions has been significantly advanced with the advent of a Hydrogeological Landscape ( HGL) framework approach. Urban salinity is a significant development risk to most rural towns ,and to the large scale development of the North West & South West Growth Centres of Sydney. In some urban areas, large scale salinity damage has occurred to housing and urban infrastructure due to both the natural landscape and the impacts of development. There has been a number of innovative projects implemented to understand and communicate the dynamics of urban salinity processes, as well as activities targeted at specific training. The development of Hydrogeological Landscape Frameworks for Urban Salinity Management has led to significant advances in the sustainability of urban landscapes. A Hydrogeological Landscape (HGL) framework is a “landscape understanding tool”. Hydrogeological Landscapes ( HGL’s) use a standardised report format to describe the differences in salinity development and impacts in different landscapes. Each management unit in a HGL is a unique combination of landscape factors, such as soil, groundwater, geology slope and climate that shows the source, transportation and expression of salinity in the landscape. A land manager (or local government body) is then able to identify where action should be taken that will give the most efficient and effective result. The format of the reports – with maps, cross-sections and graphs allows information to be easily transferred to local government staff, CMA and community to affect landscape change and provide relevant information regarding development.

# Vertical suburbs: How waterfront apartment living is changing Australian cities

## Author

**Susan Oakley**  
University of Adelaide

## Co Authors

Louise Johnson  
Deakin University

## Summary

Using the examples of the renewal of Melbourne Docklands and Port Adelaide waterfronts this paper examines a shift from being a suburban nation to high-rise and medium density urban spaces.

## Details

The Australian city of today is confronting two major challenges – unregulated growth and the threat of climate change. The solution to both problems adopted since the 1980s has been densification and urban containment. Accompanying such policies has been a demonisation of the suburb and the active encouragement of infill medium and high rise housing. High density building forms have burgeoned in the inner city areas of the major metropolises, often close to their CBDs and in waterfront precincts. While the scale of such developments overall is limited, their visual and social impacts are significant and presage a revolution in the ways in which Australians live. For the suburban nation is changing into one of apartments and medium density living. Elaborating on this change, contextualising its significance and outlining just what it means for those involved and more generally for the Australian urban landscape is the subject of this paper using the examples of the renewal of Melbourne's Docklands and Port Adelaide waterfronts.

# Field observations of storm waves on a sub-horizontal shore platform

## Author

Hiroki Ogawa

University of Auckland

## Co Authors

Mark Dickson

University of Auckland

Paul Kench

University of Auckland

## Summary

The paper will describe results from a hydrodynamic experiment conducted on a sub-horizontal shore platform.

## Details

Detailed studies of nearshore wave transformation on rock shore platforms are required to improve estimates of cliff recession rates and further develop understanding of the evolution of shore platforms. Wave transformation processes under high energy storm conditions on shore platforms are yet to be described in detail. A field experiment was conducted on a sub-horizontal shore platform on the East Coast of Auckland, New Zealand. An array of wave gauges was deployed across the platform surface to acquire high frequency sea-surface motions. Results reveal the existence of a number of hydrodynamic thresholds. In particular, relative water depth at the edge of the platform was found to be an important control on wave height transmission. Wave height observed on the inner platform surface was independent of near-shore wave height due to the depth constraint forced by platform topography. Infragravity waves were observed and their magnitude at the cliff toe was found to be linearly dependent on near-shore gravity wave height. The paper will describe results from this field experiment and comment upon the potential geomorphic implications for coastal cliff recession and shore platform development.

# **Rice Growing on the Murrumbidgee River: Food and Water Security in Australia, 1930s to the Present**

## **Author**

**Emily O'Gorman**

University of Wollongong

## **Summary**

This paper examines the expansion of rice growing, a traditionally high water use crop, in the Murrumbidgee River catchment area, Australia, a region that intermittently experiences intense droughts.

## **Details**

This paper examines changing practices of food production in relation to water use in the Murray-Darling Basin, eastern Australia, from 1939 to the present. It particularly focuses on the expansion of rice growing in the Murrumbidgee River catchment area, a historically and currently significant agricultural region in Australia. Today, the Murrumbidgee region produces most of Australia's rice crop, much of which is exported, for example to Japan. This traditionally high water use farming is at odds with the intermittent droughts that occur in the region and contemporary rice cultivation has come under increasing criticism from environmentalists, economists, and other groups. Yet, rice cultivation has been experimented with in the area since at least 1915 and has been farmed in quantities in designated irrigation areas from the 1930s. This paper examines how and why this high water use crop was established in this droughty region, focusing on the role of dams, government and private investment, networks of expertise, and international markets. It particularly explores the changes brought by war-time concerns over food security and post-war national development. Many dams, as well as smaller works, are physical legacies of particular ideas about how to achieve water and food security during, and following, the two world wars. This paper therefore also asks: How do physical remnants and cultural legacies such as these create or limit possibilities for sustainable food production now? How have they shaped environments and conflicts over water? How are new farming techniques and agribusinesses shaped by these histories, and more recent discourses about sustainability?

# Can the leviathan ever be decentred? The importance of a politics of the corporation

## Author

Phillip O'Neill

University of Wollongong

## Summary

The paper resuscitates J.K. Gibson-Graham's arguments for a decentred corporation, surveys the work that builds on these, and assesses future possibilities. The paper uses BHP Billiton as illustration.

## Details

In Chapter 8 of *The End of Capitalism*, J.K. Gibson-Graham grabbed Resnick and Wolff's decentred analysis of the enterprise and its distributive politics and brought it to life. Two subsequent developments of the argument for opening the corporation as a site of "potentialities and flows" appeared as 'Enterprise discourse and executive talk' (with O'Neill) in *Transactions* (24, 11-22), and 'Exploring a New Class Politics of the Enterprise' (with O'Neill) in J.K. Gibson-Graham, S. Resnick, and R. Wolff, eds, *Re/Presenting Class: Essays in Postmodern Marxism* (Duke University Press). However, further work on the corporation by J.K. Gibson-Graham within the post-capitalism project stalled. Not everything can be done. But take-up of the ideas elsewhere has been limited. Perhaps prosperity and then crisis overwhelmed thoughts about alternatives. Interested still in the leviathan and its place in capitalism, and carrying a hope that Julie Graham inspired, this paper resuscitates the key propositions in J.K. Gibson-Graham's arguments for a decentred corporation, surveys the academic work that builds on these arguments, and assesses future possibilities. The paper (re)turns to the world's largest mining company, BHP Billiton, a key venue for J.K. Gibson-Graham's imaginations, to ground its thoughts.

# **Social dimensions of climate change adaptation for Indigenous communities**

## **Author**

**Meg Parsons**

University of Melbourne

## **Summary**

In this paper I will discuss preliminary research into the use of traditional ecological knowledge to enable and inform community-based adaptation in Australian Indigenous communities.

## **Details**

In this paper I will discuss preliminary research into the use of traditional ecological knowledge to enable and inform community-based adaptation in Australian Indigenous communities. At present traditional ecological knowledge is typically used in Australia as a engagement tool to inform and educate Indigenous communities about climate change and other environmental issues. However I argue that traditional ecological knowledge is more than just an engagement tool, and is fundamental to the development of successful community-based adaptation for many Indigenous communities in Australia. Traditional ecological knowledge is a critical component of the social capital of Indigenous communities in many areas of Northern and Central Australia and can be mobilised through Indigenous institutional and governance structures to inform community-based adaptation plans and strategies.

# **‘Exploring the potential of story-telling in climate change adaptation’**

## **Author**

**Jana-Axinja Paschen**  
Monash University

## **Summary**

Explores the potential of narratives for the development of enabling adaptation strategies on the household level.

## **Details**

This conceptual paper emerges from my current research on local narratives of adaptation in Victoria. It is part of a larger VCCCAR study of how adaptation is ‘framed’ on a variety of levels and by multiple adaptation actors. In my research, I ask how narratives of place, change and adaptation can be utilised to better understand what drives a community’s adaptive capacity. I aim to explore how narratives can be used in governance contexts, particularly through schemes that build trust, encourage community participation and foster ‘ownership’ of risk and change. Story-telling is a subjective way of knowing and making sense of individual experience. Individual stories, however, are deeply embedded in socio-cultural systems at various scales and resound with a range of narratives. Understanding individual, family or household narratives of change therefore contributes significantly to understanding complex adaptation issues on the community level. It is now recognised that successful adaptation must be context-specific, place-based and cognisant of the various non-quantifiable factors, diverse experiences and emotions that influence adaptive capacity. While this realisation leads to an increased interest in narrative data by policy makers and adaptation planners, the perceived post-positivist ‘slipperiness’ of interpretative data also poses great challenges to the actors involved. Aiming to provide an overview of existing research on narratives in climate change contexts, this paper starts an exploration of how the full potential of narratives can be tapped for the various tasks of adaptation, while navigating the challenges of multilevel, trans-disciplinary collaboration.

# Seed Saving Encounters: acting, learning and changing with seeds

## Author

Catherine Phillips

University of Wollongong

## Summary

How is seed saving practiced and perceived as situated knowledge production? What are the ethico-political implications of these practices?

## Details

Practices of seed saving communities are increasingly constrained by state-facilitated enclosures of seed through commodification, privatisation, and technologisation. These related trends have received growing attention in recent years, particularly in reference to genetic engineering. Seeds and growers are increasingly enrolled in the processes of (re)creating bio-devices, and the knowledges that underpin them; however, this is not the only possibility for seeds, growers, or their related others. In this paper I explore the practices and perceptions of (Canadian) seed savers as an example of evolving, partial, situated knowledge (re)productions. Using concepts of situated knowledge (Haraway 1991) and focal practices (Borgmann 1984) I argue that seed savers engage with seeds and related others through embodying, embedding, enskilling, and everyday practices. It is through these practices that seed savers “learn to become affected” (Latour 2004) in relation to seeds, forming meaningful relations and knowledges. Seed saving is, in this way, argued to be one way of (re)creating possibilities of living better within our shared worlds.

# Adapting culturally to eco-housing and climate change

## Author

Jenny Pickerill

University of Leicester

## Summary

Examines how adapting to climate change requires shifts in cultural and social understandings of how we live and what we expect houses to do for us

## Details

Adapting housing for climate change involves considerably more than technical changes to construction; it involves cultural shifts in how we consider our house and home. For many, a house is foremost about security – both the physical act of having somewhere safe to live and sleep, and financially as an investment – and comfort. There is a deeply felt sense that our homes are our refuge. These values shape not just how households operate but how houses themselves are perceived. Yet adapting to climate change requires changes at the household level in the dynamic relationships between physical structures and individual behavioural practices. It is this complex interface which is often ignored in climate change research – how changing structures of houses are received, negotiated, and rejected by householders. Using examples from recent fieldwork of over thirty case studies of eco-housing in Britain, Spain, Thailand, Argentina and the USA this paper examines the ways in which radical changes to our houses (such as potentially making them more temporary, using natural materials, or relying on manual heating and ventilation systems) requires social changes in how we live. As such it argues that it is not technology, or even politics, which is holding us back in mitigating or adapting to climate change, it is deep rooted cultural and social understandings of how we live and what we expect houses to do for us..

# 'Here home' / 'there home': two locations of home for gay Londoners

## Author

**Brent Pilkey**

University College London

## Summary

This paper looks at two specific locations of home – the parental home and the home established in adulthood – to argue that both sites play an important role in the formation of identity for gay Londoners.

## Details

An established body of literature argues that home is a key site for the formation of sexual identity. This paper seeks to complicate this work while simultaneously expanding on the literature that focuses on the multiple locations and meanings of home. Looking closely at two separate locations of home, the parental home and the home established in adulthood, the paper argues that, for gay Londoners, identity is shaped through the tension or push-and-pull of these two locations. For gay people the parental home can be an isolated space where one's sexual identity remains, if not closeted, then modified. Often one flees the home in the process of coming-out and identity is expressed very differently in the new home. Given this departure, arrival and return (to visit), how does the parental home relate to one's current identity and homemaking practices? How does this differ between younger adults and older adults? The research for the paper draws on semi-structured interviews conducted with gay Londoners between ages 21 to 69, from varying socio-economic backgrounds and diverse nationalities. An additional methodology includes the pairing of an architectural approach to ethnography – through the spatial analysis of interior design, furniture layout, and art of the current home – with participant memories of the childhood home; these methods will substantiate the argument that these two locations play a key role in the formation of identity. The paper – part of a larger project on domesticity and identity among gay Londoners – has a social objective in mind: to work towards the queering of both 'normalised' notions of home, as well as stereotypes about the dwellings of gay people.

# Pointless spinifex? A review of Indigenous spinifex use throughout Australia

## Author

Heidi Pitman  
Flinders University

## Co Authors

Lynley Wallis  
University of Queensland

## Summary

With spinifex-dominated communities extending over almost 1/4 of Australia, spinifex played a significant role in the lives of many Indigenous peoples. This paper explores the numerous uses of these plants.

## Details

Avoided by the explorer, cursed by the surveyor and generally only used as a drought reserve by the pastoralist, it is difficult to find a favourable colonial reference to prickly spinifex. It has, however, many useful properties and was an important resource for Indigenous Australians. Also commonly known as porcupine grass or hummock grass, spinifex is considered to be the most common plant in Australia, with spinifex-dominated communities covering >22% of the landmass. Spinifex is represented in all mainland states, being absent only from cold-temperate south-eastern Australia and Tasmania. Yet despite its wide distribution and use by Indigenous peoples, relatively little research has been undertaken on Indigenous spinifex use and its associated technologies. Thus contemporary knowledge about this widely used resource is limited in extent, general in nature and consequently limited in value. Traditionally the two dominant and most widely known uses of spinifex were the production of resin (which was primarily employed for hafting stone artefacts onto wooden handles and repairing storage vessels and wooden objects), and as cladding in shelter construction. However, spinifex has numerous other uses including resin for the manufacture of ornaments, ceremonial and sorcery objects, fishing and trapping, fibre-work, medicinal purposes, as a food source, in games, fuel for fire and hunting, light, heat and communication, and miscellaneous other uses including minimising water loss in water carriers, wrapping objects and shoring wells. In this paper I discuss some of these uses, and conclude with a narrative exploring the production of, and the significant role spinifex resin played within an Indigenous Australian context.

# The 'Social Life of Pesticides': How Organised Irresponsibility in the Greater Sydney Basin Threatens the Biodiversity of the Hawkesbury-Nepean River

## Author

Roelof Plant

University of Technology, Sydney

## Co Authors

Jeremy Walker

University of Technology, Sydney

Scott Rayburg

University of Technology, Sydney

Jacqueline Gothe

University of Technology, Sydney

Teresa Leung

Yin Phyu

University of Technology, Sydney

Richard Lim

University of Technology, Sydney

## Summary

This paper outlines sociological factors contributing to institutionalized underinvestment in the future of farming in the Greater Sydney Basin.

## Details

Agricultural chemicals are a notorious source of environmental pollution. While enhancing productivity, agrochemicals ultimately degrade the very ecological basis upon which agriculture depends: biodiversity and its role in ecosystem functioning. This paper addresses the 'social life' of pesticides in the Hawkesbury region at Sydney's western fringe, where land use is dominated by small-scale horticulture that we will refer to as market gardening. The paper builds on a recent ecotoxicological study into the combined toxicity effects of three pesticides (chlorothalonil, atrazine and permethrin) on a range of freshwater species found in coastal rivers of NSW including the Hawkesbury-Nepean River as well as previous social research on the Hawkesbury's ethnic farming communities from a social justice perspective. This paper presents a systematic, interdisciplinary enquiry into the range, complexity, and multiplicity of the causes of pesticide pollution, using document review, influence mapping and stakeholder interviews as key methods. The paper outlines key sociological factors contributing to 'institutionalized underinvestment' in the long-term future of farming in the Greater Sydney Basin, and subsequently places the presence of pesticides in the Hawkesbury-Nepean River and the on-farm pesticide practices in a broader institutional context. Based on the snapshot that emerged from our research, this paper provides preliminary findings and summarises what we believe are the key institutional factors contributing to the aforementioned 'institutionalized underinvestment' in the long-term future of farming in the Sydney Basin and ecological wellbeing of the Hawkesbury-Nepean River.

# Diverse Economies: Enabling Ethical and Healthy Economies

## Author

**Jamie Pomfrett**  
Newcastle University

## Summary

This presentation uses J.K. Gibson-Graham's Diverse Economic Framework in a community garden setting to explore the relationship between diverse economic practices and health.

## Details

One of the tools that Gibson-Graham has introduced to scholars and activists is the Diverse Economies Framework (DEF). This tool can help us uncover, inventory and inspire a host of economic practices that constitute our lives. In this presentation I will expand on the DEF and explore the ethical dimensions that inform the economic practices which constitute a community garden. I illustrate how diverse economic practices in the garden reflect a commitment to gifting, to openness and to the interdependence between humans and between human and nonhumans, and, how these diverse economic practices in the garden are instrumental in producing positive health outcomes. I also show how this kind of epistemological stand point enables us to identify a range of health benefits from community gardening in a way that overturns usual understandings of health as an individually-focused and human-centred outcome.

# **Migrant Residential Assimilation in Sydney: Human Capital, Social Capital, Attitudes and Actions**

## **Author**

**Michael Poulsen**  
Macquarie University

## **Summary**

This paper examines the role of human capital, social capital and attitudes as they relate to the action of residential assimilation in Sydney.

## **Details**

It has always been very difficult to link a person's attitudes to their behaviour when it comes to the residential location decisions people make. Instead the usual approach is to associate the development of a person's human capital as the key explanation, along with matters of accessibility. Hence when we seek to promote the residential assimilation of ethnic groups by means of them moving out of ethnic concentrations we focus on ways to achieve the development of human capital. However, since Putnam's work on generalised trust the focus has again returned to seeking to understand the role of attitudes in this process. As a result this paper examines the role of human capital, social capital and attitudes as they relate to the action of residential assimilation in Sydney.

# More-than-human neighbouring in Sydney

## Author

**Emma Power**

University of Western Sydney

## Co Authors

Pauline McGuirk

University of Newcastle

Robyn Dowling

Macquarie University

## Summary

In this paper we use a focus on the involvement of non-human animals in practices of neighbouring to explore the myriad ways in which social collectivities and fissures are forged through the more-than-human.

## Details

The social relations and practices of neighbouring can cement social antagonisms, but can also strengthen social cohesion across differences. In this paper we engage with recent scholarship on neighbouring and neighbourhoods, and in particular its emphasis on the ways neighbouring practices are being shaped, and narrowed, by new forms of urban governance. In this paper we use a focus on the involvement of non-human animals in practices of neighbouring to reconsider taken-for-granted assumptions about contemporary neighbouring. Using interviews with residents in Sydney master-planned estates (both high and low density), we explore the myriad ways in which social collectivities and fissures are forged through the non-human, specifically pets. The paper hence provides a case study of the simultaneity of the policed and convivial city.

# Stripping experience bare. How can experience be used to encourage bushfire preparation?

## Author

Tim Prior

University of Technology, Sydney

## Co Authors

Dr Christine Eriksen

University of Wollongong

## Summary

Through the psychological processes of bushfire experience, we consider how positive experiences may be recreated to assist in greater levels of bushfire preparation through education and risk communication.

## Details

Bushfire experience plays a very important role in bushfire preparation. However, whether experience yields benefits in terms of encouraging preparation, or actually discourages preparation depends on many factors. Whether positive or negative, bushfire experience contributes to an individuals' environmental learning, which also informs their ability to make the best decisions about preparing their properties for bushfire, and about whether to stay and defend their well prepared property, or leave before bushfire actually threatens. In this paper we dissect the psychological processes that are associated with bushfire experience. Following previous research on the role of engagement and assisted learning to encourage better preparation, we use this deeper understanding of bushfire experience to consider ways that positive experiences with bushfire might be recreated to assist in encouraging greater levels of bushfire preparation through education and risk communication.

# Geographies of Il/legal Sexualities

## Author

Jason Prior

University of Technology, Sydney

## Co Authors

Andrew Gorman-Murray

University of Wollongong

## Summary

This paper examines the nuanced connections between 'law', 'sexuality' and 'geography' in Australia by exploring the politico-legal imperatives converging on sexual citizenship in a range of everyday spaces.

## Details

This paper is exploratory in purpose, through which we seek to open a conversation about the nuanced connections between 'law', 'sexuality' and 'geography' in Australia. At a broad conceptual level, we investigate the intersections of 'legal geographies' and 'geographies of sexualities' in this context. To do so, we locate 'the sexual citizen' – a politico-legal subject whose regulated embodiment draws together the geographical imperatives of sexuality and the geographical effects of law, and thus demonstrates where and how legal imperatives and sexual subjectivities impinge upon each other in everyday spaces and lived experiences. While extant studies of sexual citizenship tend to consider political and legal processes at national and international scales, recent work has shown the significance of the local scale of 'citizenship constitution', offering two critical interventions. First, the local demonstrates the complex multiscale of legal-regulatory processes that converge upon subjects and fabricate their status as sexual citizens – networks that are not rendered at just national and international horizons, but include laws, formal regulations and informal rules emanating from local and sub-national scales. Second, this multiscale convergence at the local scale configures a multiplicity of sexual citizens. We deploy an inventory of the politico-legal imperatives converging within the City of Sydney LGA to demonstrate this multiplicity and multiscale, locating sexual citizenship in a range of spaces – domestic, work, semi-public and public – identifying the different legal exigencies and sexual citizens thus produced, including heterosexuals, gay men, lesbians, sex workers, and sex workers' clients.

# Impact of past catastrophic disturbance events on mangrove forest composition in Northeast Queensland

## Author

Ulrike Proske

Australian National University

## Co Authors

Simon Haberle

Australian National University

## Summary

Pollen and sand layers in a sediment sequence on Lizard Island, Queensland, show that a past catastrophic flooding event (cyclone) caused the reconfiguration of the mangrove species composition on the island.

## Details

A 4.75 m long sediment core collected at the landward fringe of the modern mangrove forest on Watson Bay, Lizard Island (QLD) has been analysed with sedimentological and palynological techniques. The core covers the last ca. 8070 years and contains two major very coarse, non-calcareous sand layers with sharp boundary contacts. In this presentation we mainly focus on the uppermost part of the core that includes one of these sand layers. Below the coarse interval mangrove genera dominate the pollen signal documenting a diverse, thriving forest at the site. The sandy layer itself, however, contains pollen predominantly from the hinterland's freshwater taxa implying the input of allochthonous material. We hypothesize that the sandy interval documents a catastrophic flooding event that followed the landfall of a cyclone. The pollen signal subsequent to the event shows the recovery of the mangrove system with a completely different mangrove assemblage. Species of the genus *Sonneratia* are dominant and indicate either an increased freshwater run-off or/and a mangrove forest at the colonizing stage. This dominance is striking since *Sonneratia* is not part of the island's modern mangrove community, which implies that past mangrove communities could have been much more diverse than the present forests along QLD's coast.

# Are we there yet? Journeys of Reconnection

## Author

Phillip Purcell  
NSW DECCW

## Summary

The growth of the NSW mining industry is viewed as an opportunity to explore new opportunities for developing Aboriginal reconnection to affected landscapes that has social and economic benefits.

## Details

On the edge of current debates about Indigenous sovereignty sits Environmental Regulation and the conservation of Aboriginal culture and heritage. The growth of the mining industry is being viewed as an opportunity for new planning frameworks that can explore means for Indigenous reconnection to affected landscapes that go beyond the protection of Indigenous sites. Previously, in 2002 I was involved in a Western Regional Forestry Assessment that assisted the NSW state government identify resource potential, land-use and conservation targets for the Brigalow Belt South Bioregion. The contested interests of conservation, forestry, mining, agriculture and rural urban expansion formed a political and economic backdrop in which Aboriginal people staged their interest and interpretation of landscape. Underpinning this debate was the issue of land ownership and the rights of access and decision-making. In this presentation I will explore and assess the meaning of Indigenous Sovereignty in NSW and how the notion of sense of place was expressed by a predominantly landless Aboriginal community engaged in a land transfer debate. I will re-evaluate the project results to discuss Aboriginal people's achievements in landscape reconnection and present ideas for extending those results to the landscapes affected by major development.

# Green space (garden) land use changes and sustainable development in the Jahrom city of Iran

## Author

Mohammad Rahim Rahnama  
Ferdowsi University

## Summary

Analyzing the changes of garden land use show near 190.8 hectares of garden lands have changed in Jahrom during 1996-2006.

## Details

Green spaces, especially urban gardens have long been subject of study in many countries, but the subject has been mostly overlooked in Iran. Therefore, this study tries to analyze the changes in land use and how we can protect green spaces (gardens) in Jahrom in line with sustainable development in 1996-2006. The data in this study were collected through local investigations and field studies in Jahrom County, questionnaires, collecting data and statistics, and we have also used Arc GIS software for data analysis. The study results show that in 1996-2006, due to extension in the urban area, 644.45 hectares were added to total green spaces and 190.8 hectares of garden lands have suffered changes in land use. Changing to barren land (46.2%) and housing land (35.44%) were the main changes in land use. Furthermore, 70.6 per cent of garden owners consider economic motivations (value added of housing and housing land) as the main reason of change in land use. Lack of irrigation water and entering the urban area were also among the reasons of changing land use. To test the differences between price of garden land before and after change in land use, we carried out a T-test by SPSS software, which revealed that the price of garden lands has increased 2.1 times after change in land use. The original price of garden land was 47% of land price after change in land use. Therefore, we propose supplying irrigation water needed for gardens, and making use of barren lands within the urban area for housing and other related needs so that we can protect and maintain urban gardens in line with sustainable development. Key words: change in land use, Preserving, Green Space (Gardens), Jahrom City, Sustainable Development.

# Geographically branding knowledge and the role that protocols play in brand equity

## Author

Margaret Raven  
Murdoch University

## Summary

'Desert knowledge' is geographically branded knowledge. Protocols for ethically accessing indigenous knowledge were utilised in the DK brand as part of a marketing strategy for brand equity.

## Details

Geographically branding goods and services is not new. For the French, through the notion of 'terroir', the idea that a product gains its brand equity through locale is a large factor in the success of its wine industry and localised food industries. Through the association of a 'locale' brands gain attributes such as value for money, quality assurance, and environmental sustainability. The 'desert knowledge' brand, as was utilised through the Desert Knowledge Cooperative Research Centre (DKCRC), is a branding which places knowledge in a distinct geographic region. Through this, Indigenous knowledge, local knowledge and scientific knowledge were subsumed as sub-sets of desert knowledge. In the context of a call for ethical research standards in Indigenous research, the DKCRC implemented the use of a bureaucratic protocol to ensure ethical standards. This protocol also became part of its branding strategy and to create brand equity which attempted to give the image of ethically secured Indigenous knowledge. This paper examines the way in which protocols are utilised not just for ethical research standards but also how they can, and do, form part of a larger strategy for branding knowledge and brand equity to create competitive advantage in the market place of knowledge.

# Large scale coastal inundation events, inferred from microfauna – a review and case study

## Author

Naomi Riggs

University of Wollongong

## Co Authors

Brian Jones

University of Wollongong

Craig Sloss

Queensland University of Technology

Colin Murray-Wallace

University of Wollongong

## Summary

This presentation will focus on microfaunal evidence for high-energy marine inundation in coastal environments, in particular foraminifera.

## Details

A tsunami is characterised by long period waves generated by a sudden displacement of the water surface that is commonly produced by a seismic disturbance on the sea floor. This presentation will focus on microfaunal evidence for high-energy marine inundation in coastal environments, in particular foraminifera. Foraminifera are single celled, heterotrophic protists with a mineralised shell, called a test. The composition and morphology of the test is used to classify foraminifera. They are abundant in all marine conditions and preserve well after death, and hence are very useful for analysis of palaeoenvironments. Many foraminiferal species are restricted to specific environmental niches, which makes them extremely useful for palaeoenvironmental reconstruction. Changes in assemblage composition within a sedimentary sequence indicate changing marine environmental conditions at the location where the tests are preserved. Such changes can also reflect large-scale inundation events. Preservation (in terms of crushed or broken tests) and taphonomy of tests may reveal the velocity, turbidity, abrasion and post-depositional environmental processes of a tsunami. Tests are also useful for dating tsunami deposits. Evidence from a case study at Eden, NSW, will be provided to test the concept of utilising microfauna to determine marine inundation events.

# Legal Geographies of the Nagoya Protocol on Access and Benefit Sharing: Towards Bio-cultural Rights over Indigenous and Traditional Knowledge

## Author

Daniel Robinson

University of New South Wales

## Co Authors

Kabir Bavikatte

Natural Justice

## Summary

The Nagoya Protocol on Access and Benefit Sharing and its impact for indigenous communities

## Details

Critical legal geography typically focuses on a depiction of law as social and spatial, as well as challenging claims of legal closure and all they imply (Blomley, 1994, p36). This paper focuses on recent international legal developments and negotiations, reflecting upon law as a site of struggle. With the momentous finalization of a UNDRIP text, there have since been additional important developments for the rights of indigenous peoples and local communities. The 2010 Nagoya Protocol on Access and Benefit Sharing adopted by the Conference of Parties to the Convention on Biological Diversity has made some significant rights gains for communities vis-à-vis their traditional knowledge and genetic resources. The article highlights the struggles of indigenous peoples and local communities in setting up the inclusion of important elements in the Protocol, in addition to and sometimes in spite of the role played by State Parties. We note the emergence of a discourse of biocultural rights that advocates for legal protection of the stewardship role played by indigenous peoples and local communities with regard to their ecosystems. Last, we explore the potential implications for Australian indigenous communities with a hypothetical exploring an attempt to access and patent extracts of Kakadu Plum.

# Environmental Degradation as a Site of Ethical-Political Action

## Author

Gerda Roelvink

University of Western Sydney

## Co Authors

Magdalena Zolkos

University of Wollongong

## Summary

This paper stages a conversation on how new possibilities of political-ethical action might emerge from within the current environmental catastrophe.

## Details

Dubbed a “wicked problem”, climate change is exceeding our ability to agree upon any of the modern repertoire of responses available to us, perhaps most notably a market for carbon trading. Scientists are calling on social scientists and humanities scholars for radical approaches to social transformation. Responding to this call, in this paper we stage a conversation between two scholars across the humanities and social sciences on how new possibilities of political-ethical action might emerge from within the current environmental catastrophe. The site of our philosophical exploration is an agricultural assemblage in New South Wales, Australia, which we examine through the story of a farmer affected by landscape degradation. We are particularly interested in an encounter between a farmer, the landscape, and other species from which new possibilities for agricultural action emerged. Our conversation focuses on the affective formations and fluctuations accompanying this farmer’s experience of “rapid [environmental] degeneration and collapse” in the here and now. Extending from this case study, we develop a way to theorise the profound sense of sorrow experienced by those confronted with the direct and immediate manifestations of environmental degradation and how this sorrow can become a source of political-ethical action. Through the conversational style of our paper we offer an experimental approach to collaboration that aims to create and maintain space from which new thinking can emerge. Such an approach may be exactly what is needed in response to the wicked problem of our time, climate change.

# Tomato journeys from farm to fruit shop

## Author

**Kate Roggeveen**

University of Wollongong

## Summary

This presentation explores relations between tomato plants and people who grow and trade tomatoes. Plant knowledge, crop- and climate-control, weather and seasonality, and everyday activities are discussed.

## Details

This presentation explores relations between tomato plants and people who grow and trade tomatoes. Hydroponic tomatoes grown in greenhouses are industrial plants, growing up to forty metres long and requiring precision farming techniques. Some tomato farms incorporate very high-tech infrastructure to best control the growing climate and maximise crop yields. At the same time, plant knowledge is valued and is an essential complement to the technology. At least until the crop is over, some respect is shown to the plant as a living thing that interacts with its environment. A range of people-tomato connections were found during a Masters project following tomato journeys from farms through wholesalers to fruit shops. These included everyday physical connections, such as picking, packing and eating, and led to broader discussions of seasonality and scale. Post-farm participants focused on the fruit commodity, and marketing terms blurred understandings of plant management. Yet there was substantial knowledge of weather impacts on supply and by implication on the plants. The presentation also includes an overview of broader results from the tomato journey project, which combined quantitative accounting of greenhouse gas emissions with qualitative analysis of interview texts to assess the feasibility of 'food miles' in this fresh food supply chain.

# Indigenous Sovereignty in Place: Keynote Address

## Author

**Geoff Scott**

NSW Aboriginal Land Council

## Summary

Geoff Scott's keynote presentation will address the meanings of Indigenous sovereignty, and will touch on the nexus between sovereignty and a number of critical issues of interest to geographers

## Details

Geoff Scott is a Wiradjuri man from central NSW. His experience working in a senior role in the public sector in a variety of Commonwealth and NSW Government agencies spans the period from the early 1980s to the present. Geoff is now CEO of NSW Aboriginal Land Council, and was formerly NSW State Manager and, later, Deputy CEO of ATSIC, and Director-General of the NSW Department of Aboriginal Affairs. He is also a former Chair of the Australian Indigenous Leadership Centre, is an Adjunct Professor at UTS, and represents Indigenous Australian interests to the United Nations Committee for the Elimination of All Forms of Racial Discrimination. Geoff's keynote presentation will address the meanings of Indigenous sovereignty, and will touch on the nexus between sovereignty and a number of critical issues of interest to geographers, such as land rights, natural and cultural resources, reconciliation, governmentality, and Indigenous affairs policy and programme development and delivery.

# ASSESSMENT OF MULTIPLE APPROACHES TO FOREST VEGETATION CLASSIFICATION

## Author

Xiao Shang

University of Wollongong

## Co Authors

Laurie A. Chisholm

Bisun Datt

## Summary

This research compared the performance and limitations of four common classification methods to investigate the best classification method for forest classification using Hyperspectral remote sensing.

## Details

Accurate mapping of vegetation is very important for forest manager to detect and trace invasive vegetation species, monitor physiological disturbance in vegetation species, investigate change of species richness and biodiversity due to ecological disturbance such as bush fire and cyclone. Hyperspectral remote sensing data have stronger capability to discriminate vegetation species than conventional multi-spectral data. However, existing methods still need improvement to reach a satisfactory level of discrimination accuracy. This research compared the performance and limitations of four common classification methods of remote sensing: Maximum Likelihood (ML), Linear Discriminant Analysis (LDA), Artificial Neural Network (ANN) and Support Vector Machine (SVM), based on six eucalyptus species and one non-eucalyptus species commonly found in NSW. The objective of this study was to investigate the best classification method for forest classification using Hyperspectral remote sensing. Leaf sampling was carried out to collect 100 leaf samples for each species from several sites of study area selected based historical mapping in addition to physical parameters such as topography. Spectral measurements were performed over the 350-2500nm range using a Field Spec Pro spectroradiometer. Our result show that SVM achieves the best classification accuracy, which indicates SVM has a great potential for forest classification. Research outcomes are expected to improve the potential of industry adoption of methods for mapping species or species-dominant vegetation communities, and will bring the remote sensing world much closer to meeting the needs of the ecologist and modeller.

# Resource development in a changing climate: an examination of potential vulnerabilities and opportunities

## Author

Vigya Sharma

University of Queensland

## Co Authors

Daniel Franks

University of Queensland

## Summary

Initial thoughts on the dynamics of interaction between climate variability and resource development and how this interaction might influence the long-term sustainability of resource communities worldwide.

## Details

Communities based in and around mining regions often face several context-specific socio-economic, ecological and institutional challenges. With growing awareness, and acceptance of climate variability due to a combination of natural, geological and global warming-related processes, existing challenges associated with resource development are expected to further intensify. Currently, there is a clear gap in knowledge on transdisciplinary research that couples changes in climatic conditions with impacts, resilience and adaptive capacities in the resources sector. This paper provides some initial thoughts on the dynamics of interaction between climate variability and resource development and how this interaction might influence the long-term sustainability of resource communities in Australia. The paper begins with a systematic review of the large volume of empirical work that exists on the meaning and principles of sustainability as relevant to the mining industry. It then provides an overview of the types of challenges that resource development sector is often exposed to, temporally and spatially. Further, we examine how climate variability might exacerbate some or all of these challenges and what this might mean for the relevant community, industry and governments. We draw upon Queensland's recent floods and cyclone experience and its impact on resource development to further our argument for the need of an in-depth examination of the complex, but important link between climate variability and the mining industry. Finally, the paper makes recommendations on how climate variability might be usefully incorporated into existing responses to the challenge of sustainable and equitable development in the resources sector.

# Disjunctive Synthesis in the Work of J.K. Gibson-Graham

## Author

Scott Sharpe  
UNSW@ADFA

## Summary

The paper examines the notion of disjunctive synthesis as it operates in the work of JK Gibson-Graham.

## Details

The paper examines the notion of disjunctive synthesis as it operates in the work of JK Gibson-Graham. In its etymology, the notion of disjunction implies separation and thus the idea of a disjunctive synthesis already implies a tension. In the way that Deleuze uses the notion of the disjunctive synthesis it suggests a process of affirming and redistributing series that would ordinarily diverge, synthesizing them so as to actualize something new. I suggest that the concept of the disjunctive synthesis can help to understand Gibson-Graham's work at three levels – at the level of their argument formation, their research practices and their portmanteau authorial subject. In their refusal to accept the 'hard reality' that capitalism is an all-pervasive demon, Gibson-Graham do not perform a gesture of cynical anti-realism, proposing the construct of hopeful economic practices in place of exhaustive and exhausting constructs of capitalism. Rather, I suggest that Gibson-Graham shift the territory from this opposition between reality and construct, operating much more at the level of the virtual. By isolating and synthesizing singularities that would otherwise be denied reality, they actualize potentials – virtualities – in order to think something new. Their thinking is thus an affirmation in two senses. It is, firstly, an affirmation of the capacities of actors who are always more than victims of power. Yet more than this, their thought is an affirmation of the openness that attends the virtual. By letting potentials hum, often without knowing where their vibrations would lead, Gibson-Graham affirm thinking as an opening onto the world that is, by nature, unpredictable.

# ENTITLEMENT: BEYOND PRIVILEGE AND (NEW) CULTURES OF NARCISSISM

## Author

Wendy Shaw

University of New South Wales

## Summary

Recent writings on 'entitlement' link to an emergent epoch of individualised narcissistic tendencies. This paper opens a critical dialogue about entitlement using examples of 'geographies of entitlement'.

## Details

"I love me" captures the take-home message of recent writings on 'entitlement' within popular psychology. Much of this work links the notion of 'entitlement' to an emergent epoch of self satisfaction based on individualised narcissistic tendencies. This paper considers a range of ideas around the notion of 'entitlement' that draw also from earlier considerations in critical 'race' studies and rights (to the city). It seeks to open a more critical dialogue about entitlement using various examples of 'geographies of entitlement'.

# Urban renewal in the 21st century

## Author

Kate Shaw

University of Melbourne

## Summary

This paper grapples with the tensions between increasing housing densities in the name of urban consolidation, maintaining the lingering inner-city industrial base, and alternative uses of inner urban land.

## Details

Urban renewal on a large scale is currently being justified in Victoria through a dialogue of increasing housing supply and affordability, and limiting urban sprawl. While there are serious qualifications to the supply-affordability relationship, there are good reasons for limiting development on the agricultural lands surrounding metropolitan Melbourne. Inner city industrial lands and greyfields are increasingly the subject of research and government attention. This paper grapples with the tensions between increasing housing densities in the name of urban consolidation, maintaining the lingering inner-city industrial base, and allocating land to alternative uses such as low cost creative and start-up spaces, environmental initiatives, public space and recognition of Melbourne's industrial and immigration and indigenous heritage.

# **'Drought and more' hindering barriers to development in rural Victorian towns**

## **Author**

**Meg Sherval**

University of Newcastle

## **Summary**

This paper focuses on the rural Victorian towns of Mildura and Donald and discusses some of the barriers that exist to developing new economies in these regions.

## **Details**

While recent floods have brought some relief to small, rural towns along the Murray, the Bureau of Meteorology suggests that the drought has not ended in this region. This paper focuses on the rural Victorian towns of Mildura and Donald and discusses some of the barriers that exist to developing new economies in these places. This paper utilises qualitative data collected from a study carried out in 2010 by myself and colleagues at the University of Newcastle which was sponsored by the National Climate Change Adaptation Research Facility (NCCCARF).

# Forging effective partnership for sustainable NRM: The changing role and relationship between landcare groups and CMAs in NSW

## Author

Krishna K Shrestha

The University of Sydney

## Summary

Assessing the relationship between Landcare and Catchment Management Authorities in the management of natural resources in NSW with a view to understand the issues and potentials for forging effective partnership.

## Details

Community groups play a critical role to deliver sustainable natural resource management (NRM). In NSW, however, despite a raft of NRM policy changes in the past fifteen years, the changing role and relations between landcare groups and government agencies remain largely unclear. The aim of this study is, therefore, to investigate the evolving role and status of Landcare groups in NSW, and their relationship with Catchment Management Authorities (CMAs). Its ultimate purpose is to understand the issues and potential for forging effective partnership to deliver sustainable NRM. The study analyses a set of survey data of NSW landcare groups collected in 2009/10 by Landcare NSW Incorporated (LNSW) – a peak body representing the landcare groups across NSW. Participant observation was conducted in the bi-monthly meetings of LNSW over two years to gather insights about changing roles and relations of landcare groups in NSW. The result indicates that the number and size of Landcare and other community NRM groups in NSW are increasing, but there are evidences of recently closed or temporarily inactive groups. The result also indicates that the landcare groups are concerned with the regional NRM because the previous productive partnership between Landcare and the government has broken down in many areas of the State. The study highlights a need for government agencies to genuinely recognise and support community groups as they are crucial for sustainable planning and management of natural resources. The study clearly indicates that forging new, effective partnership between landcare groups and CMAs is required to realise mutual benefits of collaboration of sustainable NRM. It is concluded that building of effective partnerships between CMAs and the Landcare should be facilitated through the organisations such as LNSW who are the representatives of, and are accountable to, the local communities.

# The Dynamically Stable Channel as a “Reference” Condition for Stream Restoration

## Author

Andrew Simon  
USDA-ARS

## Summary

The term reference stream has become widely used, but poorly defined in stream restoration practice. An approach that assumes geomorphic dynamic equilibrium is discussed as a means of clarifying the concept.

## Details

The term “reference” as applied to rivers has become widely used in stream restoration practice to denote a desirable or target condition for restoration. It is a concept that requires evaluation when quantifying the degree of “departure” or “impact” from the assumed target condition and, therefore, the magnitude of change that is required to restore a stream to its reference state. Complicating this, stream restoration is undertaken for a broad range of purposes including, channel stabilization, reducing erosion and sediment loads, or improving aquatic habitat. The “reference” condition may need to be applicable to all of these desired targets and implies that some non-disturbed or “natural” state exists. In geomorphic terms this signifies stability or the equilibrium condition where the amount and size of the hydraulically-controlled sediment being delivered from upstream is in balance with the transporting power of the stream such that there is no net change in channel dimensions over time. This process-based definition of “reference” is used to develop consistent field and analytic procedures for identifying stable alluvial channels. Because this definition does not rely on a specific channel shape or form, it is flexible for the diverse range of fluvial environments that are encountered. These working definitions of “reference” conditions have been used successfully to define “background”, sediment-transport rates for streams across the United States. The process-based stable channel definition of “reference” enables deterministic numerical models to be used to establish stable-bank configurations and sustainable channel designs, without implying a static condition, even under assumed climate scenarios.

# Relative Sea-Level Histories in the Pacific Islands: Evidence from Past Changes for Future Scenarios

## Author

**Preetika Jyoti Singh**  
University of New England

## Co Authors

Patrick Nunn  
University of New England

Robert Baker  
University of New England

## Summary

An overview of past sea-level and environmental evidence around the Pacific Islands is discussed to help predict possible future sea-level scenarios in the Pacific.

## Details

The climatic and environmental histories of the Pacific Islands, contained in various proxy records, are reviewed. This paper gives an overview of past sea level and environmental evidence available in the Pacific Islands, such as, elevated coral platforms, notches, and sub-fossil records. The tectonic histories for the various locations are reviewed. Previous research conducted to gauge the recent changes in sea-level around the Pacific is also summarized. This overview of climatic and environmental data is important for climate change research and policy-making in the Pacific Islands. The understanding of past climatic and environmental change can be used for predicting possible future scenarios for planning and managing sea-level changes in the Pacific.

# Wild Rivers, Wild Ideas

## Author

Lisa Slater

University of South Australia

## Summary

In 2005 the QLD Government passed the Wild Rivers Act. I ask, what is a wild river? What effect is (post)colonial Australia's 'imaginary Aborigine' having on determining wild rivers?

## Details

In 2005 the QLD Government passed the Wild Rivers Act. According to the government: 'Queensland has a number of river systems, which have been almost untouched by development and are therefore in near natural condition. One way of preserving the natural heritage is to designate them as 'declared wild rivers''. In April 2009 the state government declared three rivers in Cape York as wild rivers: Archer, Lockhart and Stewart. Some traditional owners, the Cape York Institute and the Cape York Land Council have campaigned vigorously against the declaration: threatening legal action on the grounds that the declaration is invalid, and a violation of the Racial Discrimination and Native Title Acts. Notably there have been prolonged development debates on Cape York. This paper asks, what is a wild river? To respond to this question, I first ask how are Aboriginal rights to land imagined by the non-Indigenous stakeholders? Following Moira Gatens (1996), my concern is with the often unconscious imaginaries that are brought to bear upon economic and conservation debates: those ready made images and symbols through which we make sense of social bodies and determine, in part, their value, status and treatment. Importantly, what effect is (post)colonial Australia's 'imaginary Aborigine' having on determining what is a wild river?

# Holocene sea-level change and the geomorphological evolution of barrier estuaries on the southeast coast of Australia

## Author

**Craig Sloss**

Queensland University of Technology

## Co Authors

Colin Murray-Wallace

University of Wollongong

Brian Jones

University of Wollongong

## Summary

Holocene sea level change for the southeast coast of Australia and its influence on estuarine evolution.

## Details

A revised Holocene sea-level curve for the southeast coast of Australia show that sea-level during the Holocene marine transgression rose to between -15 and -11 m at 9400 – 9000 cal yr BP. Sea level then rose to -5 m by 8500 cal yr BP and -3.5 m between 8300 and 8000 cal yr. Present sea-level was attained between 7900 and 7700 cal yr BP, ca. 700 – 900 years earlier than previously proposed. Sea-level continued to rise to between +1 and +1.5 m between 7700 and 7400 cal. yr BP, followed by a highstand until about 2000 cal yr BP and then a gradual fall to present. This revised sea-level history has enabled more detailed conceptual models for the geomorphologic evolution of barrier estuaries to be established. These revised models differ from previous models with a greater emphasis on the palaeo-morphology of the antecedent Late Pleistocene landsurface represented by dense estuarine clays within the central receiving basins, or remnant OIS5e barrier systems at the mouth of the incised valleys. Results have also shown that the early stage of Holocene sedimentary infill of the incised palaeo-valleys consists of a near basin-wide transgressive sandsheet that were deposited when sea-level breached remnants of OIS5e barriers during the most recent postglacial marine transgression. These results provide more detail on the history of the sedimentary infill and geomorphological evolution of barrier estuaries on the southeast coast of Australia.

# The Processes of New Urban Development: What is the meaning of success?

## Author

Paul Smith

University of Sydney

## Summary

This paper considers how new urban developments in the form of master planned estates are framed as being more suitable for people. It examines particular criteria for defining success in such developments.

## Details

There has been a love-hate attitude to the suburbs of Australian cities. They are the places where the majority of Australians live and yet there is also a perception that they are the source of many urban problems. There is nevertheless a desire to create suburban spaces that are more suitable for people and able to overcome problems such as congestion, resource use, infrastructure provision, unemployment and housing needs. At the same time these spaces are expected to also play a role in providing a stage upon which desired economic performances can occur. Master planned estates have been championed as the key to successful suburban development for because they are regarded as an efficient means of providing new suburbs by both the public and private sectors. This paper is concerned with exploring the varied and highly contextualised meanings of “success” and how it is deployed in the development of master planned estates. The methodology employed content analysis of the criterion for awards of excellence from the three peak bodies of the development industry (Urban Development Institute of Australia, Property Council and Housing Industry of Australia) and planning and urban design guidelines developed by the NSW Government. The preliminary results suggest that “success” is currently deployed in a way to demonstrate how it is possible for economic development and environmental responsiveness to co-exist in new urban developments.

# **Social Vulnerability at the Urban Bush Interface in Sydney: A Case Study of the Blue Mountains and Ku-ring-gai Local Council Areas**

## **Author**

**Daminda Solangaarachchi**  
UNSW@ADFA

## **Co Authors**

Amy Griffin  
UNSW@ADFA

Michael Doherty  
CSIRO Sustainable Ecosystems

## **Summary**

This study characterizes and assesses the social vulnerability of residents to bush-fires at the urban-bush interface in Sydney using an index that can be used to locate the area's most vulnerable populations.

## **Details**

In the recent past Australia has experienced several catastrophic hazard events. The frequency and intensity of such hazards is expected to increase in the future. Natural hazards can often not be prevented, yet their losses can be minimized if the necessary preparedness and mitigation actions are taken before an event occurs. Identification of vulnerable groups is an important first step in any preparedness and emergency management planning process. Social vulnerability refers to population characteristics that influence the capacity of a community to prepare for, respond to and recover from hazards and disasters. Factors that contribute to social vulnerability are often hidden and difficult to capture. This study attempts to analyse the relative levels of social vulnerability of communities at the urban bush interface in the Blue Mountains and Ku-ring-gai city council areas. We tested whether a standardised social vulnerability index could be developed using a pre-tested set of indicators. We created an exploratory factor analysis model using Australian Bureau of Statistics (ABS) 2006 census data at the Census Collection District (CCD) level. We identified variables contributing to social vulnerability and used the factor scores to calculate a social vulnerability index. The social vulnerability index was then mapped at the CCD level. Our results indicate that both contributors to and the level of social vulnerability are sensitive to the study area location. The social vulnerability index also shows different spatial patterns across the two study areas, and provides a useful tool for identifying communities that are most likely to experience negative disaster impacts due to their socio-demographic characteristics.

# **More questions than answers in rural demography: Towards a research agenda for the twenty-first century**

## **Author**

**Aileen Stockdale**

Queen's University Belfast

## **Summary**

The messiness associated with rural migration is initially debated in relation to geographic variations and linkages between urban and rural processes, before moving on to focus on demographic ageing, life course migration and the consequences for rural areas.

## **Details**

In many respects rural areas are unrecognisable from those of fifty, thirty, or even ten, years ago. Evolving demographic processes and trends have contributed to the significant transformation of rural areas. However, the spatial variability of the associated processes and trends has given rise to a multitude of 'rurals' and a contemporary 'messiness' to migration. The messiness associated with rural migration is initially debated in relation to geographic variations and linkages between urban and rural processes, before moving on to focus on demographic ageing, life course migration and the consequences for rural areas. Throughout a series of research questions are posed representing a rich vein of rural research opportunities.

# Adapting to heat: historical practices as a source of adaptive capacity in households

## Author

Yolande Strengers  
RMIT University

## Co Authors

Cecily Maller  
RMIT University

Ralph Horne  
RMIT University

## Summary

The paper examines how household cooling practices in two Australian case studies 'travel' between cultures, generations and living arrangements to inform adaptive capacity in responding to heat.

## Details

Climate change has been linked to significant household morbidity and mortality caused by heat-related events. In Australia this issue is exacerbated by the rapid increase in air-conditioning and peak electricity demand, which can lead to blackouts during heat waves. In response, Australian policy makers have focused on informing and educating householders on the best ways to moderate the effects of heat. However, this approach fails to acknowledge the significant adaptive capacity householders already possess to maintain thermal comfort. Drawing on social practice theory, we argue that householders 'carry' practices of cooling the body and home as these practices 'travel' between and across cultures, generations and living arrangements, thereby providing householders with a historical wealth of adaptive strategies and capacity. We demonstrate how householders draw on their past practices and experiences to moderate the effects of heat through two Australian qualitative studies investigating the thermal comfort practices of (1) migrant households living in Victoria and New South Wales, and (2) households participating in a dynamic peak pricing trial in New South Wales, where the price of electricity spikes 20-40 times above the off-peak rate during a 'peak event'. We find that house design and infrastructure, past experiences, and common understandings are critical elements of householders' cooling practices which represent significant existing adaptive capacity. The paper concludes by calling for policy efforts to refocus their efforts on understanding and supporting this adaptive capacity and the historical composition of practices, particularly in households most vulnerable to the effects of climate change and heat.

# 'Brimstone, devils and battlefields; social construction of the public response to three Victorian bushfires through metaphors'

## Author

**Samantha Strong**

Charles Sturt University

## Co Authors

Catherine Allan

Charles Sturt University

## Summary

By exploring the dominant discourses present in newspaper reports of major Victorian bushfires we contribute to ongoing discussions around the disconnect that has arisen between communities and environment.

## Details

Bushfires capture considerable public attention, and the emotional response to bushfires is reflected and enhanced in public media. We have explored the public response to three major Victorian bushfires (1851, 1939 and 1983) by reflecting on the dominant discourses present in newspaper reports of the time. By focusing on the use of metaphor and allegory we revealed a complex layering of language, imagery, values and economic influences; part of the story that has shaped public perceptions of natural disasters and our place within the Australian landscape between 1851 and 1983 in Victoria. Our analysis of the dominant metaphorical frameworks revealed how perceptions of fire are associated with powerful, ferocious and unsettling religious and war imagery that has formed part of an European-Australian cultural subconsciousness. These often terrifying metaphoric narratives were found in both visual and descriptive forms in the media, acting as influential archetypal cues from which public responses to fire are based. These findings contribute to ongoing discussions around the fundamental disconnect that has arisen between communities and environment, and help us understand from where some of our profoundly influential cultural perspectives and accepted norms towards the local landscape have derived.

# **“Nature, the land, can understand”: Yolŋu country, more-than-human agency and situated engagement in natural resource management the land, can understand”: Yolngu country, more-than-human agency and situated engagement in natural resource management**

## **Author**

**Sandie Suchet-Pearson**  
Macquarie University

## **Co Authors**

Kate Lloyd  
Macquarie University

Sarah Wright  
University of Newcastle

Laklak Burarrwanga  
Bawaka Cultural Programs

Hon Bawaka Country

## **Summary**

Drawing upon Yolngu ontologies that recognise the active agency of country, we call for a , more-than-human approach to situated engagement that goes beyond the anthropocentrism of contemporary NRM

## **Details**

Natural resource management (NRM) is about relationships; relationships between people, between people and places, and between people and ‘resources’. The notion of situated engagement reminds us that how we engage in these relationships in place is critical to achieving a more just and sustainable NRM. Situated engagement requires attention to ontological pluralism, to the fundamentally different ways people know. Through this approach, people and organisations strive to recognise and unsettle their situated differences at multiple scales. While understanding NRM through situated engagement opens the possibility of the co-construction of knowledges and understandings, we argue that its anthropocentric focus unnecessarily ignores non-human agency. We contend that non-human agency has been denigrated and ignored by dominant, industrial resource management practices and discourses, and also sidelined by more progressive and inclusive understandings such as situated engagement. This paper engages with the active agency of Yolŋu country in North East Arnhem Land, Australia, to illustrate the importance of a multi-directional engagement in NRM. Rather than limit the notion of situated engagement to people in place, we look to an Indigenous Australian ontology, within which people sit alongside animals, winds, spirit-beings, plants and country itself, all as active, sapient beings. To recognise the role country plays in actively co-constructing knowledges we include Bawaka as an author in this paper. Multi-directional engagements such as this can foreground the agency of the more-than-human in ways that can lead NRM beyond its anthropocentric focus.

# Spatio-temporal aspects of surface air temperature variability patterns

## Author

Cristian Suteanu

Saint Mary's University

## Summary

Using two multiscale approaches, the paper characterizes temporal changes in surface air temperature variability, and highlights spatial correlations among patterns of change.

## Details

Studies regarding the quantitative characterization of surface air temperature (SAT) patterns in time and space significantly contribute to our understanding of climate variability. At the same time, they are important for practical reasons, given the implications of temperature variability for health, agriculture, and ecosystems. However, SAT pattern studies are subject to notable constraints: most importantly, they offer a limited window towards a complex system involving processes that interact on many scales, and any pattern evaluation methodology can grasp only some aspects of the underlying system dynamics. One way of addressing these limitations consists of applying more than one single analysis method and considering a range of different scales. Starting from the above premises, this paper presents a study of SAT patterns using two multiscale approaches. The first approach is based on detrended fluctuation analysis, and involves scanning the temporal scale, from days to years and decades. The second approach relies on the evaluation of the scale space information flux, assessing variability as a function of different temperature intervals. The presented approaches characterize the way pattern variability changes over time, and show that spatial correlations can be established among patterns of change. Application examples concern daily minimum and maximum SAT recordings from meteorological stations in Canada. The paper is meant to contribute to the assessment of pattern change on different time scales and the identification of regions undergoing similar transformations regarding pattern variability.

# Strength of weak ties and social relations of emotion: understanding women's migration through marriage

## Author

Elissa Sutherland  
Monash University

## Summary

What insights are offered by geographies of affect and Granovetter's 'strength of weak ties' to understand women's migration through marriage?

## Details

This paper focuses on Italian men and women's memories of proxy marriage migration to Australia in the post war era. Proxy marriage migration saw young women, not usually allowed to stray far from local villages or home, suddenly encouraged by family, friends, the state and the Church, to travel unaccompanied to the other side of the world to be with husbands they'd often not yet met. By drawing on insights offered by both new geographies of the 'social relations of emotion' (Pile 2005), alongside Granovetter's 'strength of weak ties' (1985), one of the aims of this paper is to begin to retheorise push and pull factors and notions of 'who stays and who moves' in our broader understandings of migration, but particularly women's migration. In so doing, the paper highlights the role of neighbourhood and village social connectedness (alongside family cohesion) in directing young women's movement to far flung places in order to 'settle-down' or la sistemazione, rather than to closer (northern Italian) places of prosperity.

# Measure, model, optimise: understanding reductionist concepts of value in freshwater governance

## Author

Marc Tadaki

University of Auckland

## Co Authors

Jim Sinner

Cawthron Institute

## Summary

The River Values Assessment System is a reductionist management tool which is gaining policy traction in New Zealand. Its foundations are situated in scientific, political and institutional trajectories.

## Details

Approaches to freshwater governance frequently focus on the identification, elicitation and negotiation of diverse and competing stakeholder 'values' relating to water resources. The categorisation of 'values' has politics— it defines the stakeholders involved, legitimises particular 'ways of knowing' and empowers certain developmental trajectories over others. This paper examines the emergence of the River Values Assessment System (RiVAS) in New Zealand, placing it within its epistemic, political and institutional trajectories. RiVAS was conceived as a scalar tool to help local authorities assess and rank rivers according to their ability to provide for a given 'value' such as swimming, birdlife or irrigation. Its structural foundations emerged from 1) regional authorities' need for an 'objective' metric to defend water allocation decisions, 2) the need to protect 'nationally significant' conservation assets and to support strategic economic and infrastructural developments, and 3) national-scale environmental monitoring projects and habitat modelling from the ecological sciences. So far, nine 'values' have been assessed in one or more regions, using a number of prescribed environmental attributes to rank the capacity of a river to provide for that 'value'. A reductionist framework of value carries implications for governance, including issues around representation (whose values matter?) and a rejection of emergent concepts of place in biophysical and sociocultural dimensions. While categorisation of values can simplify management and serve as a rallying point for otherwise diffuse interests, a more pluralistic approach to values could be built on participatory approaches and based on holistic, biophysical templates.

# Are satellites the solution? The challenge of regional population imbalances for managing growth

## Author

Andrew Taylor

Charles Darwin University

## Co Authors

Dean Carson

Charles Darwin University

## Summary

Addressing policy and planning challenges for regional jurisdictions struggling to deal with population growth by the creation of satellite cities.

## Details

While the regional and remote share of the national population has declined, some jurisdictions are straining to meet housing and infrastructure demands from sustained population growth. Dotted around regional Australia, satellite cities are demonstrative as perceived discrete solutions to population pressures. Often overlooked is knowledge about the broader population system for establishing satellite cities and understanding their potential to influence regional population dynamics. In Darwin and surrounds, population growth from 2004 to 2009 was high by both historic and national standards. With continued economic and wages growth, housing costs are thought to now be amongst the highest in the nation such that anecdotes of people 'not coming' because of it are common. As a tailored solution, the Northern Territory Government has earmarked a number of green-field sites as residential developments. The biggest of these is the proposed satellite city of Weddell which may host x residents. Touted as the new model for city design and functionality, great expectations are being placed on Weddell. But 'imbalances' in the adjacent populations mean that particular attention must be paid to the complex and multi-faceted elements of design and purpose. Lessons from elsewhere forward that Weddell's evolution as a community which interacts in specific ways with the surrounding regions and not as a discrete residential enclave is the critical challenge facing policy makers and planners.

# Power trips: status spaces of airports

## Author

Peter Thomas

Australian National University

## Co Authors

David Bissell

Australian National University

## Summary

Airlines are splintering the experience of waiting in airports for economic gain. This segregation of space is not only emblematic of status but is at the heart of its reproduction in everyday life.

## Details

Recent developments in the new mobilities literature have highlighted the critical importance of researching transient spaces and spaces of flow within an increasingly globalised and shrinking world (Adey 2004, 2008; Bissell 2010; Cresswell and Merriman 2010; Urry 2007). Exploring these in-between spaces, such as the car, the train station, the aeroplane, a particular road or shipping path have started to shed new light and render more visible some of the processes of social and spatial segregation and sorting that are symptomatic of late-capitalism. This article seeks to take one of these important spaces and explore how power-geometries and spatial practices that constitute a significant part of the more abstract processes of globalisation (Sheller and Urry 2006) are working at the site of the body to create economic, cultural and political capital for different actors and for different means. This paper explores how aeromobility systems work to produce different spaces and experiences for different passengers. The question that paper is quite simply: how are different passengers brought into being through different movements through the airport, and what economic and political consequences might this have? In answering this question of how can we get beyond a passenger that is always-already disciplined, controlled and submissive, ethnographic fieldwork was undertaken at a number of private airport lounges in Australia. The outcomes of this fieldwork are explored in this paper, and they show much about how the processes of power, politics and decision making are concentrated amongst an influential elite affecting decision making in Australian society.

# Effects of hydrological connectivity change on a dryland river: the recent ecological history of floodplain lakes (billabongs), Macintyre River, Australia

## Author

**Martin Thoms**

University of New England

## Co Authors

Stephen Chilcott

University of New England

Michael Reid

University of New England

## Summary

This study investigates the impact of land use change and hydrological alterations on a floodplain billabong.

## Details

Australia's river ecosystems have undergone dramatic changes since European occupation. Water resource development is one of the main contributors to impacts on riverine ecosystems by reducing flood frequency and hydrological connectivity of aquatic habitats, such as billabongs, on the floodplain. This study investigates the recent environmental history of billabongs on the Macintyre River, focusing on the effects of recent hydrological change, through examination of stratigraphic changes in pollen, diatoms, sediment texture and geochemistry in the sediments of four billabongs of varying flood frequency, hydrological connectivity and depth. Radiocarbon dating along with the stratigraphy of exotic pollen types indicates that the records range in length from 210 to 660 years and hence incorporate significant pre-European phases. Pollen records suggest a regional decline in *Casuarina* and increases in *Eucalyptus* associated with European settlement, but few other consistent or substantial changes in vegetation communities over time. Sediment geochemistry varied between frequently connected and less frequently connected billabongs, but there was no apparent influence from European settlement. In contrast, diatom assemblages varied substantially both spatially and temporally. This variation in response did not correlate with hydrological connectivity, suggesting that there is another critical factor influencing diatom assemblages and hence the structure of billabong ecosystems.

# Longitudinal connectivity of stream networks at a catchment scale – ecological implications and quantification of anthropogenic alterations

## Author

**Martin Thoms**

University of New England

## Co Authors

Nena Bulovic

University of New England

## Summary

This study investigates the fragmentation of river networks by artificial barriers and using optimising theory for their restoration.

## Details

Longitudinal connectivity within a stream network is important to biological communities, most noticeably to migratory fish. The landscape of many stream networks has been extensively modified with the construction of artificial barriers, such as road crossings, weirs, dams and floodgates. This has altered the natural connectivity of stream networks, with the various barriers inducing different degrees of fragmentation. With the use of GIS tools, a desktop approach is presented that will improve our understanding of the state of ecological connectivity within stream networks at a catchment scale. It provides an objective management tool for informed decision-making for the restoration of stream network connectivity. Artificial modifications to longitudinal network connectivity are made evident by the quantification of both natural and artificial states of connectivity, in terms of stream lengths and the classification of various River Types within a stream network with the use of various geomorphological parameters. Ecological values of each river type are assessed with the use of fish distribution data, and ranked according to preference. The applicability of the approach taken is demonstrated in the Hunter River Basin, New South Wales, Australia.

# The Ecohydrology of a large river basin

## Author

**Martin Thoms**

University of New England

## Co Authors

Murray Scown

University of New England

## Summary

This study presents an innovative approach to characterising stream networks using a GIS approach

## Details

Studies of the physical structure or habitat of entire stream networks tend to rely upon stream ordering approaches. These relatively simple approaches can only provide a crude estimation of the physical make of stream networks. Most physical characterizations of rivers fail to acknowledge the importance of their hierarchical organisation and as a consequence use incorrect variables in their attempt to characterise stream networks. An alternative typology for characterizing the physical structure of rivers is provided. It focuses on a specific level within the geomorphic river hierarchy and employs a set of regional, catchment and valley criteria for developing a quantitative river characterisation scheme. Fifteen geomorphic variables are used in this desktop based taxonomic river typing scheme. These variables are extracted from digital data using a series of automated GIS modules which are analysed using a series of multivariate analyses. The approach allows for distinct river types within a stream network to self emerge. The applicability of the approach is demonstrated in the Murray Darling Basin, Australia. The physical structure of the river network of the Murray Darling Basin is further analyzed using a series of community metrics, specifically the richness, composition and diversity of river types present within the stream network.

# Complicating the glocal nature of tourism development in rural Melanesian communities

## Author

Adam Trau

University of Western Sydney

## Summary

This paper challenges popular assumptions within the international development industry in relation to pro-poor tourism development through a case study of two landowning communities from Vanuatu.

## Details

While it is abundantly clear that tourism is a major global economic force, the degree to which it can be harnessed by people in poverty is of long-standing contention. Yet relatively little is currently known about the way in which tourism development is mediated at the local community level to relieve economic hardship. Through long-term engagement with the two landowning communities of Vanuatu's first World Heritage site – Chief Roi Mata's Domain – this paper shows how Western value-laden tourism development processes are being infused with local traditional and communal values in a way that challenges typical and pervasive notions and measures of capitalist business success. The communities of Mangaliliu and Lelepa Island developed a co-owned and managed (pro-poor) tour enterprise named 'Roi Mata Cultural Tours' in 2005 in an attempt to increase both household income and community revenue. While the functionality and indeed profitability of pro-poor tourism enterprises are obviously critical, this paper reveals that equally so, in a rural Melanesian context, is the ability of businesses to satisfy and even strengthen local customs and notions of community. Customised modes and measures of development based on local social and cultural values are, however, invisible to (and undervalued by) contemporary mainstream economic and development indicators.

# Ecotourism projects: Are proper environmental impacts assessment made?

## Author

**Diego Valencia**

University of Wollongong

## Summary

I compare social and environmental impact assessment procedures for ecotourism in Mexico and Australia.

## Details

Ecotourism is flourishing as a sustainable mechanism for recreation activities within national parks and yet its potential to alleviate poverty, promote environmental conservation and provide the means to improve socio-economic involvement remains uncertain in most cases. Little research has been done in analysing mechanisms such as Environmental and Social Impact Assessment procedures (EIAs and SIAs respectively) for ecotourism activities, and in ensuring proper planning and assessment processes to address the perceived outcomes. This study aims to discuss EIA and SIA practices in the Australian and Mexican environmental legislation in regards to ecotourism, looking to address problems in its implementation at a local level. Environmental and social impact statements of four case studies, two in Australia and two in Mexico, are being evaluated in terms of their capacities to establish impact management and mitigation techniques. Interviews with government, academia and NGO representatives to determine current problems with ecotourism impact assessments, are being undertaken. A preliminary analysis has shown that EIA and SIA are mandatory requirements in the environmental legislation of both countries; however, scientific and social base knowledge requirements are poorly applied and are being subjected to political interests. Case specific EIS and SIS, in general, provide good theoretical information in relation to the measures for impact management, however in practice, monitoring programs are still vague and not sufficiently established. Therefore, this paper will present results from the Mexican case studies. Key words: sustainable development, ecotourism, EIAs, SIAs, environmental legislation, national parks

# **Sustainable and efficient organizations: The case of handcrafts micro-business in Southern San Sebastian**

## **Author**

**Jose Vargas-Hernandez**

University Center for Economic and Managerial Sciences

## **Summary**

This paper analyzes sustainability and efficiency of organizations committed to the exploitation' activities of tule *Thypha* spp at the Zapotlán's Lake

## **Details**

This paper analyzes sustainability and efficiency of organizations committed to the exploitation' activities of tule *Thypha* spp at the Zapotlán's Lake taking into consideration the socioeconomic and environmental impact in the municipalities of Gómez Farías and Zapotlán el Grande. The initial hypothesis departs from the consideration of the scarce social capital of organizations that limits development's sustainability. The research method employed is the ethnographic complemented with field work supported by informal interviews, documental and bibliographic research. The hypothesis of this research is proved empirically and confirms similar findings by the research conducted on the mainstream theory of social capital and its implications on economic development. The outcomes of the application demonstrate that the drama of economic efficiency and sustainable development of micro-business is tied to constrain of social capital. This finding has implications for the design and implementation of economic and social policies oriented towards the improvement of economic growth and sustainable development. Keywords – Economic efficiency, organizational social capital, organizational sustainability. JEL: D20, L200, L230, O100, O120, O130, Q010, Q500, Q560, Q570, R300, Z100

# Spatial trends in Australian population growth and movement

## Author

**Karen Wade**

Department of Infrastructure and Transport

## Co Authors

Geoff Frost

Department of Infrastructure and Transport

Lucy Williams

Jan Anderson-Muir

## Summary

This report provides a summary of key trends in population growth and decline across Australia's regions.

## Details

BITRE's report focuses on the key trends in population growth and decline across Australia's regions, primarily between 2001 and 2009. The report highlights the role of internal and external migration in shaping Australia's settlement patterns and briefly discusses some of the underlying drivers. Population change is considered within six classifications that divides Australia into Capital cities, Coastal cities, Inland cities, Coastal country areas, Inland country areas and Remote areas. This geographical scale enables the report to draw attention to some of the identifiable drivers of population change operating throughout the country that are shaping regional economies. These drivers include the attraction of coastal, high amenity and urban lifestyles; life stages—particularly the aspirations of younger and older age groups; and economic considerations. In addition, the report illustrates that while most address changes are local, inter-regional migration is significant enough to alter the spatial population footprint.

# COMBINING QUANTITATIVE REMOTE SENSING DATA WITH QUALITATIVE DATA TO EXAMINE LANDSCAPE CHANGE AT THE ANGKOR WORLD HERITAGE SITE

## Author

**Nathan Wales**

University of Sydney

## Co Authors

Eleanor Bruce

University of Sydney

Richard Murphy

University of Sydney

## Summary

This research combines quantitative remote sensing data with qualitative data to examine landscape change at the Angkor World Heritage site

## Details

To examine landscape change within the Angkor World Heritage site, this research brings together two very disparate types of data: qualitative social science data and quantitative remote sensing data, as a mixed methods approach (Creswell and Plano-Clark, 2007; Fox et al., 2003; Jiang, 2003; Philip, 1998). Major challenges to studies of landscape change include linking data from social sciences with that from natural sciences, and integrating the cultural dimension into studies of landscape change (Burgi et al., 2004). However, qualitative data and quantitative remote sensing data can also complement one another as a basis for understanding spatial and temporal patterns of change, and contributing to vegetation change monitoring. A purely numerical approach would not adequately do this in the context of this research. By adopting the mixed method approach this research attempts to address such challenges. The approach involves identifying patterns of change from remote sensing imagery, and interpreting the patterns using both qualitative and quantitative methods. Many remote sensing methods are theoretically focussed, having no connection to conditions on the ground. This research relates theoretical remote sensing Multivariate Alteration Detection (MAD; Canty and Nielsen, 2008) outputs to field observation. To fully appreciate change identified from remote sensing analysis, cultural processes (i.e. people and the environment) must be understood. This research also attempts to extend existing mixed methods frameworks by tying change in land cover to management

# Understanding & Implementing the Qualities of Home in Urban Aboriginal Housing

## Author

Ryan Walker

University of Saskatchewan

## Co Authors

Nicholas Fraser

University of Saskatchewan

## Summary

The research presents qualities of home valued by Aboriginal households in housing provided by Aboriginal organisations in Canadian cities.

## Details

The cultural diversity in many Canadian cities includes a growing young Aboriginal population. There is capacity and desire within urban Aboriginal communities and their organisations to design and deliver culturally relevant programming that helps create a place for their peoples in the city. One of the longest entrenched areas of Aboriginal urban self-determination is in the delivery of social housing. We know from studies in other sectors of social policy, such as youth suicide prevention in First Nations communities, that community self-determination in services, culture and governance has strong links to improved community wellbeing. Yet to this day virtually nothing, except for some statements made to the Royal Commission on Aboriginal Peoples (1996), has been written about the qualities of home for Aboriginal peoples living in housing developed by Aboriginal urban housing organisations. The conceptual basis has three pillars: (a) the interactions among housing, home, culture and wellbeing in the city; (b) the development of Aboriginal urban self-determination; and (c) transformations in state disposition toward social investment in housing. Centred on two Aboriginal housing organisations in large Canadian cities, M'akola Housing Society in Victoria and Sasknative Rentals in Saskatoon, the research results provide new knowledge about 1) the qualities of home that are valued by Aboriginal households in social housing provided by urban Aboriginal organisations; and 2) the ability of those organisations to respond to the aspirations of residents given the disposition of the state toward social investment in housing.

# Ray's Outback mail run: Tracking rural mobility and the materialities of remoteness

## Author

Andrew Warren

University of Wollongong

## Co Authors

Lisa Andersen

University of Technology, Sydney

Chris Brennan-Horley

University of Wollongong

Chris Gibson

University of Wollongong

## Summary

rural, remoteness, geographic information technologies, mobility, materiality, Central Darling region.

## Details

Twice a week Ray Longfellow, a local postman, completes a 340km, seven hour round trip on dirt tracks to deliver mail for sheep stations across Australia's remote Central Darling region. As part of a major project mapping cultural assets in rural, regional and remote areas, this paper follows Ray's mail run to reflect on methodologies and concepts necessary to understand mobility and the materialities of remoteness. More than simply delivering the post, Ray is responsible for providing basic services and activities: groceries, education, government and creativity. He is a vital point of contact for isolated farmers and their families who are part of the 16 million hectare West Darling pastoral industry, updating them on town life and maintaining connections to the outside world. But delivering the mail is not simply a matter of miles on the road: Ray's story also reveals experiences of isolation and the affective influence of physical landscape on mobility, as he negotiates impending floods, vehicle breakdowns and deadly fauna. In this paper we follow Ray via a GPS track and photographs (as part of the research, Ray agreed to map and photograph his twice-weekly journey). We share from his interviews some reminiscences about his many journeys and more broadly insights on remote community and cultural life. Ray's mail run illustrates the materialities and cultural meaning of movement in rural Australia, the need for a peculiar understanding of geographic scale and of how physical space is negotiated in remote Australian contexts.

# Remote sensing for calibrating and validating landuse change models

## Author

**Rohan Wickramasuriya**  
University of Wollongong

## Co Authors

Laurie Chisholm  
University of Wollongong

Nicholas Gill  
University of Wollongong

Marji Puotinen  
University of Wollongong

Peter Klepeis  
Colgate University

## Summary

Calibration and validation of LULC models are essential modelling practices. We demonstrate how remote sensing could fill the data gap that is often encountered when calibrating and validating LULC models.

## Details

Popular landuse-landcover change (LULC) models are computer simulations that generate snapshots of landuse/landcover status of the modelled area at specified time steps, thus, producing a time series of landuse/landcover maps. These models enhance modellers' understanding of elements and processes in the modelled system, improve communication between stakeholders when multiple parties involved in a modelling project, and act as decision support systems for urban and regional planning. When a LULC model is used to evaluate potential outcomes of alternative decisions in a planning exercise, the user must have a sufficient trust in the behaviour of the model. Proper calibration and validation of the model is the key to achieve a higher user-trust. A major issue encountered by modellers when calibrating and validating of LULC models is the inadequacy of historical landuse/landcover data. Landuse/landcover data produced from remotely sensed images are commonly used in such situations to supplement the existing data. Selecting an appropriate satellite sensor, accuracy of landcover classification and the spatial scale at which the LULC model best operates, all play a role in the degree of success achieved in calibration and validation. In this study, we demonstrate and discuss how an agent-based LULC model developed for amenity landscapes in Australia is calibrated and validated using satellite-derived landuse/landcover data.

# Green-changing: a research-based collaboration with a tree-changed rural community

## Author

Rachel Williams  
CSIRO

## Co Authors

Toni Darbas  
CSIRO

Sonia Graham  
CSIRO

## Summary

A case-study of tree-changing leading to rural renewal through green-changing; the renegotiation and re-articulation of desirable futures in terms of economic activity (production) and lifestyles (consumption).

## Details

The small township of Natimuk, 300 km north-west of Melbourne, provides a counter example to the familiar 'wheat and sheep belt' narrative, of youth out-migration, decreased economic viability of family farming and centripetal migration to regional 'hubs', able to provide a wider range of employment and services. Natimuk is distinctive in its revitalisation by tree-change migrants and the subsequent emergence of an ambition to become a zero-waste and -green-house emissions community. Climbers began visiting Mount Arapiles in the 1960s, with 'full-time climbers' beginning to take advantage of the cheap housing and settle in Natimuk in the 1980s. An art community has also joined rock climbers to settle in Natimuk with 25 residents employed in the arts (performance, visual arts, music, animation, film) on an occasional, full- or part-time basis. Over the past twenty years, the newcomers have established cultural outlets (the Goat Gallery and Natimuk Frinj Festival) as well as tourism-based businesses. This paper provides a case study concerning a research-based collaboration with the community of Natimuk. The case study demonstrates that amenity-oriented in-migrants to rural settlements are capable of disrupting old understandings of what constitutes a desirable future so as to refocus attention on the sustainability of rural development. It provides evidence that tree-changing can lead to rural renewal through green-changing, through the renegotiation and re-articulation of desirable futures in terms of economic activity (production) and lifestyles (consumption).

# Representations of time and space in a land use conflict: differences in the Brighton bypass case (and why they matter!)

## Author

**Stewart Williams**

University of Tasmania

## Summary

Critical differences in representations of time and space in the Brighton bypass land use conflict are noted for their significance in planning policy and practice.

## Details

The Brighton bypass roadworks development in Tasmania has seen protracted legal proceedings but remains in dispute. Construction was briefly halted in 2010 but has since continued despite the site's archaeological significance then being proven. State government has revised its plans and aims now to build a long span bridge over the site but still faces opposition from the Aboriginal community in a conflict figured by history as well as geography. This paper therefore draws on fieldwork and document analysis to comment on the temporal and spatial representations in this dispute. First it looks at documents submitted to state government that focus on the project's timing and spatial layout, especially their accuracy and propriety, resonating with those chorological and chronological notions of space and time that dominate the land use and heritage planning arena. Second is an examination of the main image used by the Aboriginal community in its public campaign recognizable as the 1835 John Glover landscape 'Aborigines Dancing at Brighton, Tasmania' overlain with a visualisation of the proposed new highway development. It provokes thinking in topological and kairological terms which offer another perspective on the dispute but then also invite a more sophisticated ethical response relevant to planning policy and practice.

# **Situating everyday practices of care and justice in inner city community organisations**

## **Author**

**Miriam Williams**

University of Newcastle

## **Summary**

Explores the diverse theoretical conceptualisations of the ethics of care and justice and how they are revealed in the situated everyday contexts of inner city community organisations.

## **Details**

Situating everyday practices of care and justice in inner city community organisations  
The ethics of care and justice are foundational ethics in philosophy and human geography. Often theorised as ideals and aspirations, the practice or achievement of these two ethics often remains illusive. This paper draws upon PhD research that seeks to uncover sites where these ethics may be revealed in the situated everyday contexts of the inner city. Drawing on diverse theoretical conceptions of justice and care this paper begins by outlining what can be gained by a situated conceptual approach to justice and care practice in the everyday. I reflect on practice within three inner city community organisations which are the focus of my PhD. I argue that the habits, practices and routines that constitute the organisations play a key role in how these ethics are revealed and enabled. I do this by thinking through the connections between the justice logics proposed by Fincher and Iveson (2008)- redistribution, recognition and encounter- and those that are cited by feminist scholars- taking care of, attentiveness to and caring about. I argue that this situated understanding of care and justice practice adds weight to somewhat abstracted theories, allowing for the tensions and complexity to be negotiated and brought into view.

# Water, culture and climate change: Indigenous connection to the Daly River, NT and the potential for 'culture' to inform climate change

## Author

Emma Woodward

CSIRO

## Summary

The connection of Aboriginal groups to the Daly River NT is evident in their language, stories, oral histories and their extensive ecological knowledge. How might this cultural connection inform climate change?

## Details

Australia's northern rivers support a rich array of cultural values. Indigenous people's socio-cultural attachment to tropical rivers and wetlands is particularly diverse and complex. The connection of Aboriginal groups to the Daly River, NT, is evident in their language, their stories, oral histories, cosmology and their extensive ecological knowledge. How might this cultural connection inform climate change? This paper draws on three years of participatory research with Ngan'gi Aboriginal language speakers living by the Daly River. The aim of the research was to document Aboriginal socio-cultural attachment to the Daly River and surrounding wetlands, so that Aboriginal values might be incorporated in regional water planning. A range of participatory methodologies were adopted as the research progressed in an attempt to capture a story that might demonstrate peoples' connection with the River within a political process that was familiar with allocating water to tangible uses. What emerged was a diversity of Indigenous phenological knowledge that revealed the holistic and systemic nature of Ngan'gi understanding of ecological, meteorological, spiritual and 'social' drivers and indicators for behaviour, particularly the harvest of wild resources. This paper questions how Ngan'gi peoples' intricate knowledge of the cyclical patterns of weather, water flow, animal behaviour and seasonal availability of resources might inform both the management of water and climate change.

# Amid hope, despair, joy and anger: Emotional experiences of land reform in the Philippines

## Author

Sarah Wright

University of Newcastle

## Summary

This paper draws on empirical work from the Philippines to explore the role of emotions in understanding people's experience with development and the ways they build development alternatives.

## Details

As a quintessential child of modernism, it's no surprise that mainstream development has avoided emotions. Indeed, the idea that emotions might have a role to play in life, in the creation and development of people and places, is somewhat of an anathema to modern, development thinking in its quest to create developed (rational, non-emotional, modern) people and developed (rational, non-emotional, modern) places. Yet, emotions and their geographies are fundamental to the workings of development. Emotions can propel us to act, can and do motivate and give meaning to our ethical and political landscapes and can help close or, indeed open, pathways to alternative futures. Important too, is the work emotions can do in helping move beyond a textual, Cartesian understanding of the world to one that is more ethical and more inclusive. In this paper, I'll look to the question of emotions in development, to the emotional geographies of development. I draw on empirical work on land reform in the Philippines to conclude that it is important to explore the role of emotions in understanding people's experience with development and the ways they work to build development alternatives.

# Relic intertidal assemblages as indicators of Holocene sea-levels and environmental change on the Great Barrier Reef coast, Queensland

## Author

Shelley Wright

University of New England

## Co Authors

Robert Baker

University of New England

## Summary

New time-elevation data from relic in situ intertidal assemblages on the Great Barrier Reef coast suggests mid to late-Holocene sea-level changes that were accompanied by changing environmental conditions.

## Details

Relic intertidal assemblages as indicators of Holocene sea-levels and environmental change on the Great Barrier Reef coast, Queensland Shelley Wright and Robert Baker Geography and Planning, BCSS, University of New England, Armidale Relic intertidal assemblages of sessile marine organisms can be found preserved in situ within fissures and caverns of rocky shores along the Great Barrier Reef coast and offshore islands. Radiocarbon dates from relic assemblages of oyster, barnacle and calcareous tubeworm, provide evidence of changes in relative sea-level since the mid Holocene. Surveying the current rocky intertidal zone to identify densities and living requirements of the key marker species allows a more accurate interpretation of past environmental conditions. Here we present the first evidence of emergence from new locations along 1200 km of the Great Barrier Reef coast and offshore islands from Cooktown (15.48°) in the north to Great Keppel Island (23.18°S) on the Tropic of Capricorn. Time-elevation data from these locations supports a model of higher than present mid Holocene sea-level with a sharp fall between 3800 and 3600 cal. yr BP. In addition, changes in species dominance appear in the sub-fossil record just prior to this 3800-3600 event horizon, and again after 3000 cal. yr BP, suggesting changing environmental conditions such as sea-surface temperatures and/or salinity at these times. The relic intertidal formations from locations along 1200 km of coast suggest mid to late Holocene sea-level changes were accompanied by changing environmental conditions.

# **Gambling Venues, Race-relations, and the Remote Periphery: An Application of an Exploratory GIS Methodology in Alice Springs**

## **Author**

**Martin Young**

Southern Cross University

## **Co Authors**

Bruce Doran

Australian National University

## **Summary**

We investigate use of the Alice Springs casino by Aboriginal people through a GIS-based cognitive mapping exercise designed to measure the spatial extent of the casino catchment.

## **Details**

Evidence suggests that gambling venues in northern Australia, particularly casinos, play a particularly important role in the social and economic life of Aboriginal people from urban centres and remote communities alike. These venues play contradictory roles. On one hand they derive a large proportion of their revenue from economically marginalised Aboriginal gamblers (largely via poker machines), while on the other they provide one of the most socially-inclusive public spaces available to Aboriginal people. To explore this dynamic we recently conducted a GIS-based cognitive mapping exercise to assess the spatial extent of the Alice Springs casino. We will present the results of this exploratory study, one that revealed a vast spatial catchment that covered most of central Australia. We subsequently draw on the interviews generated as part of the sketch-mapping exercise to explain why the casino is so important to Aboriginal mobility and social life in central Australia.

# **Building resilience to flood hazards through community-based disaster risk reduction and social enterprise initiatives: the case of BUKLOD TAO PHILIPPINES**

## **Author**

**Doracie Zoleta-Nantes**

Australian National University

## **Co Authors**

Margaret Ann Hill

Australian National University

Perfecto Rom

BT-Philippines

## **Summary**

This paper evaluates the successes and weaknesses of the community-based initiatives of Buklod Tao Philippines on DRR and livelihood restoration using social enterprises .

## **Details**

The flood disasters brought about by 2009 TS Ondoy/Ketsana devastated urban poor communities in Metro Manila. Many neighborhoods were left on their own to respond to emergency needs. They alone attended to the restoration of their pre-disaster lives amidst the challenges of ruined living spaces and livelihood systems. The unavoidable dislocation and relocation of people disintegrated the social and economic support systems in inundated communities and led to slow restoration of livelihood activities and loss of sense of community. This paper looks at experiences of members of the people's organization - Buklod Tao Philippines in dealing with the devastation of Ondoy floods. They resorted to creative community-based approaches, such as developing their own initiatives on disaster risk reduction and restoring their livelihood systems through a social enterprise which highlights neighborhood-based food production and small-scale entrepreneurial activities. The paper lays out the initial successes of Buklod Tao in its needs-based community initiatives. At the same time, it critically evaluates the progression of these grassroots initiatives. It identifies the constraints and ways by which they can be overcome by gathering the support of, and working collaboratively with, local government units, research institutions, non-government organizations and humanitarian agencies within their reach.