DESERT KNOWLEDGE CRC

Student Compendium

2009

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Land tenure, rangeland condition and herder livelihoods <u>in the Gobi Desert</u> <u>University of South Australia</u>



Project description

Much of the Gobi Desert rangelands are currently open access. In areas where grazing lands have been privatised in an attempt to improve herder livelihoods and rangeland condition; however, there is some evidence that the reverse is true. On-ground, cross-border comparisons between different land tenure regimes throughout the region are limited. The overall objective of this research is to investigate which land tenure model in the Gobi Desert produces the best rangeland condition outcomes, while still ensuring that herders receive an adequate income. Rather than simply compare rangeland condition outcomes between different land tenure regimes, this work seeks to further investigate which of the characteristics of each model are contributing most significantly to rangeland condition.

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Bridging the gap: Meeting the needs of self-drive four-wheel drivers on desert tracks Charles Darwin University



Project description

The research conceptualises 4WD tourism on desert tracks as a form of drive tourism. The drive tourism literature is applied to desert tracks to determine the requirements of track users. This statement of requirement is modified by the literature on 4WD tourism and in particular the motivations of four-wheel drivers, and by interviews with lead users. This statement of need is 'matched' to conditions on two 4WD track destinations – the Gunbarrel Highway and the Oodnadatta Track. These tracks are treated as two case studies. The research gathered data from websites and from semi-structured interviews with tourism stakeholders connected to the tracks, direct observation, and document analysis. Interviews explored current conditions and future possibilities.

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Project description

This research examines the question: What are the reasons accountants establish their businesses in regional areas of Australia? Research into this question is important because it has been identified that clients of accounting businesses prefer close physical proximity and face-to-face communication with their accountants. Also, because there is a shortage of professional accountants, it can be difficult to attract and retain them to regional Australia. It is therefore important to understand the determinants of location choice for accounting businesses.

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Landscape-scale measurement and monitoring of biodiversity in the Australian rangelands **University of Adelaide**



Project description

For decades we have changed our environment and threatened biodiversity: clearing land and the introduction of foreign plants and animals have had devastating effects. Now that climate change threatens to put even greater pressure on already-stressed species, the need to monitor and conserve our biodiversity is greater than ever. However, we know little about the majority of species in the vast Australian rangelands, and conventional field surveys are not adequate given the size of the problem. This project aims to create a tool for monitoring biodiversity at the immense scale of Australia's interior by combining vegetation field survey data and remotely sensed satellite data.

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Resource flow and the power dynamic in value chains in the Australian bush foods industry University of Queensland



Jenny Cleary

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Project description

This research investigates inter-cultural complexity and its impact on participation and resource flows in bush food value chains in Australia, in relation to Aboriginal participation in the industry. Aboriginal people are marginalised in an industry that has always relied on Aboriginal knowledge and participation. With increasing demand for bush foods, it is economically and socially desirable to develop value chains that are inclusive of Aboriginal people. This study will contribute to a better understanding of inter-cultural complexity by examining the links between power and resource flows in bush food value chains in more detail, and considering them specifically in relation to Aboriginal participation in the industry.

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The effects of diet on the nutrition and production of Merino ewes in the arid shrublands of Western Australia curtin University



Project description

The project explores the nutritional value of a range of palatable plant species found on two stations near Yalgoo in the arid shrublands of Western Australia. The project also investigates the effects of diet on livestock (Merino sheep) production parameters including live weights, body condition scores, wool length, wool strength, and fibre diameter. In conjunction with RIRDC and CCWA, the project uses DNA fingerprinting and NIR (Near Infrared Reflectance) to detect the nutritional status of livestock using faecal samples. Additionally, the project attempts to relate NDVI (Normalised Difference Vegetation Index) satellite data to animal production.

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PhD scholars 3 Student Compendium 2009 Desert Knowledge CRC

Aboriginal senior officials in the Northern Territory Government

Project description

Australian National University



Elizabeth Ganter

This project concerns Aboriginal representation in the Northern Territory Government, asking how compelling are the Northern Territory Government's claims for its Aboriginal senior officials to be an increasingly representative bureaucracy. Representation is said to make something present which is absent. What is this absence, and how do Aboriginal senior officials individually and collectively participate in making it present in the Northern Territory bureaucracy? This is a study of Aboriginal representation in the administration of the Northern Territory before and since self-government. It draws upon historical material and interviews with 76 current and former Aboriginal senior officials, which were carried out in Darwin, Alice Springs and other Northern Territory locations in 2007.

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Project description

Understanding Aboriginal perceptions on housing and wellbeing in Dajarra

University of Queensland



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This research is an in-depth study of the relationships between lifestyle, housing, health, and environment, as perceived by Aboriginal community members in Dajarra and Urandangi. The study will seek to understand how well Aboriginal people can fit their culturally distinct lifestyles into the available housing structures within the climatic and geographic constraints of their environment, and whether stresses arise that affect their health. It will highlight distinctive levels of differences and links within these relationships, reflective of Aboriginal worldviews. This study will make known the significant issues relevant to past and current policy directions, and to what extent they have affected Aboriginal housing and



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highest, and when and how to best manage them.

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Project description

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Feral camels are perceived as an increasing threat as a pest species in the arid zone of Australia. Much remains unknown of their basic biology, potential impacts and effective means for managing them. Camels have a long history in Australia, but have not been on the radar as a major pest until recent times. With growing negative impacts on agriculture, biodiversity and cultural values, management actions are needed. Before effective management can be attempted, the important aspects of any species' ecology must be known. In the case of camels, their numbers, habitat use, social patterns, demographics and foraging ecology remain largely unknown. Filling in these knowledge gaps will allow an improved understanding of when and where camel impacts are likely to be at their

Sustainable freight logistics in desert Australia: Assessing options for freight using triple bottom line principles and metrics Curtin University of Technology



Project description

This project considers and evaluates the freight of a range of produce. Fresh supplies, refrigerated supplies, non-perishables, and bush produce are being considered and evaluated for their specific idiosyncratic requirements. Issues associated with freight both into and out of remote settlements were evaluated using an assessment model which extends theories of the Balanced Scorecard and integrated Triple Bottom Line to create a 'Sustainability Scorecard'. Metrics specific to the freight and transport logistics industry in central Australia is incorporated into this model to facilitate consistent analysis of various options for freight and transport logistics in desert Australia.

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Opportunities for desert Aboriginal people from domestic 4WD tourism activity

Charles Darwin University



Project description

This project investigates the experience that Australian tourists have while four-wheel driving in the desert, with a primary purpose to increase understanding of domestic tourist experiences and shed light on domestic market issues facing desert Aboriginal people involved in tourism. Because this area is poorly understood, this research engages a need to increase understanding and highlight directions for future research. This market-based research was carried out using a hermeneutic phenomenological approach to photographs and interviews generated from some participants of a desert 4WD tag-along tour.

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Aboriginal perspectives on services to remote desert communities

Southern Cross University



Project description

This project examines how Aboriginal staff, outstation leaders, and Resource Centre Management engage in the housing, training, and employment services delivered to remote outstations in the central desert. It describes the changes taking place in selected Aboriginal service arrangements over the period July 2006 – June 2008 and the ways Aboriginal people and Resource Centre staff understand, interpret, and respond to these changes.



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Industry advisor/s:



Inter-cultural, cross-cultural and inter-generational research, teaching and learning partnerships

University of Canberra



Project description

This PhD research describes and examines a learning process and its outcomes from cross-cultural and inter-cultural projects and field work. The form of the research reflects on outsider learning about the Arrernte lifeworld, and Arrernte teaching about it. It documents the use of creative expression, experiential and arts-based teaching and learning and Arrernte cultural knowledge. The research explores the inter-related nature of these forms to inter-generational and Arrernte knowledge transmission, within and across cultures, and seeks to position these in relation to current academic knowledge. Oral recording and story telling are central to developing a suitable methodological weave.

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Industry advisor/s:

The Board of Directors, Keringke Arts Aboriginal Corporation Kathleen Kemarre Wallace (Eastern Arrernte Custodian)

Creating spaces for negotiation at the environmental management and community development interface in Australia Australian National University



Project description

Ongoing debates about the environment and development regarding the role of scientific, local and Aboriginal participation in sustainable development initiatives have criticised the imperialism of western scientific knowledge in such initiatives. In response, local and Indigenous knowledge has been offered as a panacea for all environment and development problems. In Australia the meta-narrative of ecologically sustainable development is unsustainable as it perpetuates inequalities by dichotomising the world into self versus other and universal scientific knowledge versus place-based local knowledge. Equitable and sustainable ecologically sustainable development is dependent on moving beyond these dichotomies. The research questions what lies between the sets of knowledge of best practice environmental management at the local environmental management and community development interface in Australia.

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A critical analysis of the decision-making protocols used in approving a commercial mining license for Beverley Uranium Mine in Adnyamathanha Country University of Adelaide



Jillian Marsh

Academic supervisor/s:

Project description

The project looks at the approval of Beverley Mine and the ways that decisions are made before mining takes place in Adnyamathanha country. It looks at the extent to which Yuras (Adnyamathanha people) understand and take part in the Environmental Impact Assessment (EIA) in relation to land use in Adnyamathanha yarta (land). Work will be done in a respectful and non-threatening way, and people involved will have opportunities to better understand their own views as well as other peoples' views. This study identifies some of the ways of improving practices and policies relating to community engagement. Through an analysis of the EIA for Beverley Uranium Mine, this research examines the effectiveness of Aboriginal participation in managing and caring for Aboriginal cultural resources and heritage.

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The use of digital television technology to enable communication between remote Australian desert communities

Murdoch University



Project description

The project seeks to address current problems in sending effective messages to, between, and within remote Australian desert communities through culturally-appropriate use of digital television and information and communications technologies. The overall research project involves broadcast engineering, human-computer interaction, and ethnography.

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Identifying the forms of Aboriginal enterprise

University of Adelaide



Louise Moylan

Academic supervisor/s:

Project description

The project aims to identify the forms of Aboriginal enterprise. The findings are related to government policy and the SA mining industry. There are two forms of Aboriginal enterprise: social and commercial. The two forms of enterprise are built on five enterprise building blocks: culture; family/community; motivations, goals, aims, and priorities; decision-making; and commercial considerations. Mainstream society, family values, balance in life, and the pathways into enterprise affect the forms of enterprise and the enterprise building blocks. Every enterprise, regardless of form, can be identified along a moving scale between social and commercial values. Therefore, Aboriginal enterprise form changes according to who is defining form. As such, identifying enterprise form may assist relations between them.

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Characteristics and dynamics of the mulga-spinifex boundaries at Mt Denison Station in central Australia **Charles Darwin University**



Project description

This project describes the boundary between vegetation dominated by Acacia aneura (mulga) and that dominated by Triodia spp. (spinifex) as they stand today, and considers the factors that may be affecting the boundary dynamics. There are concerns that mulga is being burnt by wildfires from adjacent spinifex grasslands, reducing the overall area of mulga. The objectives of the project were to give definition to the boundary and to investigate the factors that control or contribute to the position, formation and possible dynamics of the boundary.

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A pedagogical framework for development, cultural identity and creative agency through Technacy education southern Cross University



Deborah Rockstroh

Project description

This project extends previous research into Technacy Theory through understanding the sociocultural interactions between people and technology, and how they relate to the development of cultural identity and creative agency through technological activity and education. The study analyses technological artefacts and activities, documents, and the Australian technology curriculum for its potential to support appropriate educational communities of practice. It crosses traditional disciplinary boundaries to theoretically examine the intercultural meanings of technology, particularly as they relate to concepts of 'dwelling' and interactions that transform creativity into agency. The study proposes that Technacy Learning Theory and 'learning by becoming' more appropriately enable development of capabilities that mediate opportunities afforded in the material and technological world.

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An ethnopharmacological approach to screening plants traditionally used as medicines by Aboriginal people University of Western Australia



Project description

This project will demonstrate how western science can work with Aboriginal medicinal knowledge of desert plants to empower Aboriginal communities, both culturally and economically, and will use ethnomedical knowledge as a guide to identify and develop plant compounds that may be useful in ameliorating or curing human diseases. The project focuses on validating some bioactive properties of a selected range of extracts of these desert plants. The scientific validation of existing Aboriginal medicinal knowledge should enhance the marketability of medicines traditionally used by Aboriginal people, leading to profits from the sale of products and/or intellectual property, and improvements in health and wellbeing of the communities involved.

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Harnessing innovation for remote self-drive tourism destinations: A case study of the Flinders Ranges James Cook University, Cairns



Project description

Drive tourism represents a significant economic activity for remote destinations. Nevertheless, the structure of tourism in remote Australia has become increasingly homogenous over the last years, which has stifled potential growth, particularly in high yield markets. The main purpose of this research is to identify new innovative strategies to stimulate growth in 'high end' self-drive tourism in remote destinations. The research will use a case study of the Flinders Ranges to identify what this destination is currently doing to attract the 'high end' self-drive market and what opportunities might exist for new strategies, including product development, distribution, market communications, business collaboration, and regional policies.

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ICT as a culturally appropriate, first-step pedagogical tool to empower, engage and enhance the capacity of Aboriginal enterprise Curtin University of Technology



Project description

This research project will generate, at a case-study level, data that will offer valuable insight into the holistic effects of incorporating information communication technology (ICT) into Australian Aboriginal community development and enterprise initiatives.

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Dr Fay Rola-Rubzen (Curtin University of Technology) Professor Louis Evans (Curtin University of Technology)



PhD scholars



Project description

This project provides an objective, continental perspective on fire regimes across the desert regions of Australia for the period 1998–2004, using data derived from NOAA/ANHRR satellite images. A fundamental aim is to describe the different spatial and temporal patterns of recent fire regimes. Increasing our understanding of their causes through statistical analyses will help explain these different patterns and may increase our predictive capability.

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The culture of conservation: valuing Aboriginal land management in arid Australia's protected areas Charles Darwin University



Project description

This PhD research examines whether Aboriginal participation in management enhances conservation outcomes within protected areas, in particular Indigenous Protected Areas (IPAs). Specifically, the project looks at values and objectives important to Aboriginal people involved in protected area management, participatory processes required for effective management, and regional and national priorities and standards for effective management. This research uses a case study approach, focusing on the Northern Tanami IPA in the northern Tanami Desert, Northern Territory.

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DESERT KNOWLEDGE

Martu people's uses and knowledge of country: co-management implications in Karlamilyi National Park and the Great Sandy Desert University of Western Australia



Project description

This ethnoecological study examines land uses by modern Martu Aboriginal people on their country. They occupy very remote settlements – Parnngurr, Punmu, and Kunawarritji – in the Great and Little Sandy Deserts. In 1990, their country included Crown Lands and Karlamilyi (Rudall River) National Park. The study investigates the proposition that the knowledge and practices of Martu were of direct relevance to ecosystem processes and national park management. There is potential for co-management in the National Park, but it remains contingent on many factors between both Martu and government, as well as external to them. The study suggests practical strategies to enhance co-management.

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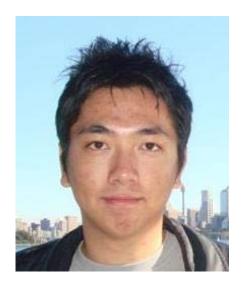
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Cognitive ad-hoc/mesh network: high efficient and robust communication networks for rural and desert regions

University of Wollongong



Project description

The focus of this PhD research is to identify the application of cognitive networking to improve the reliability, manageability, and performance of ad-hoc/mesh networks. New networking architectures and strategies will be developed to enable the melding of cognitive networking concepts with ad hoc/mesh networks.

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Project description

Understanding spatial and temporal patterns in land erodibility is essential for maintaining pastoral productivity and controlling potential land degradation, yet we currently have limited methods for mapping areas at risk of wind erosion at the landscape scale. This project developed methods for monitoring controls on wind erosion across western Queensland. A model to predict land susceptibility to wind erosion was developed and applied to map an historical time series of land erodibility change. Model output was then used to assess spatiotemporal patterns in land erodibility, and examine links between erodibility, climate variability, and land management.

Nicholas Webb

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Academic supervisor/s:

Associate Professor Hamish McGowan (The University of Queensland) Professor Stuart Phinn (The University of Queensland) Professor Grant McTainsh (The Griffith University)

Industry advisor/s:

Dr John Leys (Department of Environment and Climate Change)

Indigenous livelihoods and the emerging bush produce industries – recent experiences from Australia's arid zone University of South Australia



Project description

This research aims to improve the way socio-cultural issues around Aboriginal people's involvement in the emerging bush produce industries in Australia are understood, and to help identify fresh ways in which benefits can be maximised, and costs minimised, to ensure the development of a socio-culturally fair and equitable industry. This study looks at how and why Aboriginal people living in arid regions of south and central Australia are choosing to engage in these industries, identifying key contextual factors influencing their involvement and some of the effects this engagement is having on people's livelihoods and wellbeing.

Janelle White

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Academic supervisor/s:

Professor Bernard Guerin (University of South Australia) Professor Anthony Cunningham (Charles Darwin University) Josephine Douglas (Charles Darwin University) Rayleen Brown (Kungas Can Cook, Alice Springs)

Industry advisor/s:



Student Compendium 2009

The implementation and outcomes of The Granites mining agreement with Aboriginal landowners **University of Queensland**



Rodger Barnes

Academic supervisor/s:

Industry advisor/s:

Project description

Agreements between Aboriginal people and mining companies are an accepted means for managing issues around exploration and mining on land where Aboriginal people have an interest. Mining and exploration agreements generally recognise Aboriginal rights and interests in land and establish arrangements that allow development to proceed without objection or dispute. The broad aim is to minimise adverse impacts while maximising opportunities for Aboriginal stakeholders to benefit from development. While much effort and resources are invested in the drafting and negotiation of agreements, there is generally less consideration given as to how agreements are to be implemented once the agreement is signed. The research aims to increase understanding of how the implementation of agreements affects their outcomes.

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Prof Paul Memmot (University of Queensland) Prof David Brereton (University of Queensland)

Generating livelihood and environmental outcomes through Aboriginal land **Australian National University** management



Karissa Preuss

Academic supervisor/s:

Industry advisor/s:

Project description

Over the past few decades Aboriginal land management (ALM) has increasingly emerged as a potential strategy for both developing remote Australian Aboriginal settlements and preserving the nation's environmental resources. Is this possible, and if so, how should it be done? Research conducted internationally and in northern Australia suggests that ALM activities can achieve both environmental and livelihood outcomes, but its effectiveness in achieving these dual outcomes is dependent on the way such activities are implemented and conducted. Despite increased awareness of the relationship between ALM and improved livelihood outcomes, and substantial funding to simultaneously realise these outcomes through ALM activities, there are few Australian case studies examining the on-ground ways to accomplish both livelihood and environmental goals through ALM.

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Dr Richard Baker, Dr Jon Altman and Dr Valerie Brown (Australian National University)

Mr Matt Salmon (Department of Environment and Water Resources) Dr Jocelyn Davies (Desert Knowledge CRC) Warlpiri Reference Committee (comprised of Yuendumu community leaders)



Exploring engagement between Indigenous communities and government: lessons for country management **Australian National University**



Project description

This honours project explored how Aboriginal Australians are represented in negotiations with government/s regarding natural resource management. The thesis provides an overview of how Indigenous people have been represented historically and explores the current engagement processes used by different government NRM sectors. The focus of the thesis is an exploration of what is 'effective' representation. Fieldwork has been conducted in a community in settled Australia and interviews were conducted with a range of consultants and government agency staff with experience in representing Aboriginal NRM interests.

Bronwyn Anderson-Smith

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Academic supervisor/s:

Dr Richard Baker (The Australian National University)

Creating livelihoods through Indigenous Protected Areas: The Nantawarrina experience Flinders University



Project description

Conservation management of protected areas provides Aboriginal people with an opportunity to protect and enhance biodiversity, culture, and community capacity to sustain livelihoods. Recognition of the important role of Aboriginal people in protected area management has seen the Indigenous Protected Area (IPA) Program become the fastest growing sector of Australia's Natural Reserve System. Entering into an IPA agreement is one of few avenues through which many Aboriginal communities can pursue a viable social and economic enterprise with the assets and resources available to them. My research examined the success of the IPA program in creating livelihoods, using the Nantawarrina IPA's impact on Nepabunna community as a case study.

Kate Braham

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Academic supervisor/s: Dr Simon Benger

Industry advisor/s: Dr Jocelyn Davies (CSIRO, Alice Springs)

Student Compendium 2009



Making families and communities strong through small business

Murdoch University



Project description

The purpose of this study was to find out what were the key business success factors for existing remote businesses; what were the key linkages between social and commercial motivation and outcomes in the enterprises involving Aboriginal people; and what support was provided by service agencies, and how effective was this support.

Mara West

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Academic supervisor/s:

Dr Martin Anda (Murdoch University) Dr Laura Stoker (Murdoch University)



Honours scholars

Student line entries

Student	Adam Leavesley
Thesis level and title	PhD: The response of birds to the fire regimes of central Australian mulga woodland
University	Australian National University
Link to thesis	http://www.desertknowledgecrc.com.au/education/downloads/Adam-Leavesley-The-response-of-birds-to-the-fire-regimes-of-mulga-woodlands-in-central-Australia.pdf

Student	Lynette Liddle
Thesis level and title	PhD: Conservation of encrypted landscapes – a landscape ecology perspective of Aboriginal conservation goals
University	Australian National University

Student	Kado Muir
Thesis level and title	PhD: Knowledge and intellectual property in Ngalia enterprise development
University	Curtin University of Technology

Student	Raghunadh Palisetty
Thesis level and title	PhD: Effects of sheep, kangaroos and rabbits on the regeneration of trees and shrubs in the chenopod shrublands, South Australia
University	University of South Australia
Link to thesis	http://www.desertknowledgecrc.com.au/education/downloads/Raghunadh-Palisetty-PhD-thesis-2007.pdf

Student	Hannah Hueneke
Thesis level and title	Hons: What cultural and historical factors influence tourist behaviour at Uluru?
University	Australian National University
Link to thesis	http://www.desertknowledgecrc.com.au/education/downloads/HHthesis.pdf

Student	Dusty Severtson
Thesis level and title	Hons: Termite-based paper management project: a landfill of opportunity
University	Curtin University of Technology
Link to thesis	http://www.desertknowledgecrc.com.au/education/downloads/DKCRC-Student Dusty-SevertsonBioconversion-of-waste-paper-by-termites.pdf



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