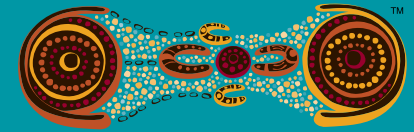


CRC-REP

EXIT REPORT



NINTI ONE REMOTE ECONOMIC PARTICIPATION

Cooperative Research Centre for Remote Economic Participation (CRC-REP) Exit Report



 Australian Government
Department of Industry,
Innovation and Science

Business
Cooperative Research
Centres Programme

PARTICIPANTS OF CRC-REP



TABLE OF CONTENTS

1	EXECUTIVE SUMMARY	02
1.1	Introduction	03
1.2	Research overview	04
1.3	Education and training.....	08
1.4	Engagement and collaboration.....	09
2	OUR IMPACTS	11
2.1	Key research outputs.....	12
2.2	Communications and engagement	18
	<i>Case study: Remote Australia Online</i>	22
2.3	Economic and social benefits to end users	23
2.4	Commercialisation <i>Case study: Precision Pastoral Management Tools project</i>	24
2.5	Direct non-monetary benefits for end users	26
	<i>Case study: Plant Business</i>	27
2.6	Influencing policy and providing advice	28
	<i>Case study: Aboriginal and Torres Strait Islander Art Economies project</i>	29
3	EDUCATION AND TRAINING	30
3.1	Students and qualifications.....	32
3.2	Graduate employment post-CRC <i>Case study: Aboriginal Community Researcher Program</i>	33
3.3	Student profile <i>Case study: Dr Kylie Lingard</i>	34
4	COLLABORATION	35
4.1	SME collaboration <i>Case study: Aboriginal and Torres Strait Islander Tourism Product project</i>	36
	APPENDIX	38
	Major achievements	39
	Research	39
	End notes	44



1 EXECUTIVE SUMMARY

The CRC-REP delivered significant economic and social benefits to remote Australia. It developed a unique collaborative research program to systematically investigate and provide practical responses to the complex social, economic, health and education issues that affect economic participation, particularly with respect to Aboriginal and Torres Strait Islander peoples living in remote areas.

The CRC-REP was a collaborative research platform that worked with 59 partners including Australian, state and territory governments; universities; and communities, businesses and people in remote regions of Australia. Our industry partners included mining, agribusiness and tourism businesses and organisations. Thirty per cent of our partners were from Aboriginal and Torres Strait Islander businesses, organisations and communities. This ensured genuine and strong local Aboriginal and Torres Strait Islander engagement and collaboration in our research.

The CRC-REP was funded through the Australian Government’s Cooperative Research Centres Programme and through cash and in-kind contributions by partners, to a value of approximately \$120 million, including monetised in-kind. It operated from 1 July 2010 to 30 June 2017.

Ninti One Limited, a national not-for-profit company that builds opportunities for people in remote Australia through research, innovation and community development, was the CRC-REP’s Centre Agency. CRC-REP was governed by the Ninti One Limited Board, chaired by Professor Tom Calma AO. The Board included members drawn from industry, academia, small business, community organisations and government. The Board’s responsibilities included managing legal and financial matters, research and collaboration activities, intellectual property, research impacts and end-user application. The Board met face to face on a quarterly basis with at least one Board meeting per year being held in a remote location. This enabled the Board to engage directly with partners and stakeholders in remote regions, while upholding the CRC-REP’s value of working on the ground in local communities to enable change.

CRC-REP was mainly a public good CRC with a multidisciplinary research focus on social sciences strongly aligned with Government priorities including, at the time of the bid, the National Indigenous Reform Agreement (Closing the Gap) and Stronger Futures and, later on, the Northern Australia Development agenda, the Indigenous Advancement Strategy and the promotion of science and innovation. Most of the knowledge and other outputs from the CRC-REP’s research are freely available in the public domain and have been made available to end users and other stakeholders. Some projects produced significant intellectual property, with commercial benefit or application that has been, or will be, licensed to CRC-REP or other end-user partners to commercialise.

This exit report outlines the research highlights and impacts of the CRC-REP, which are aligned with the objectives and outputs described in the Commonwealth Agreement signed by all our partners.

59 PARTNERS

including Australian, state and territory governments; universities; and communities, businesses and people in remote regions of Australia

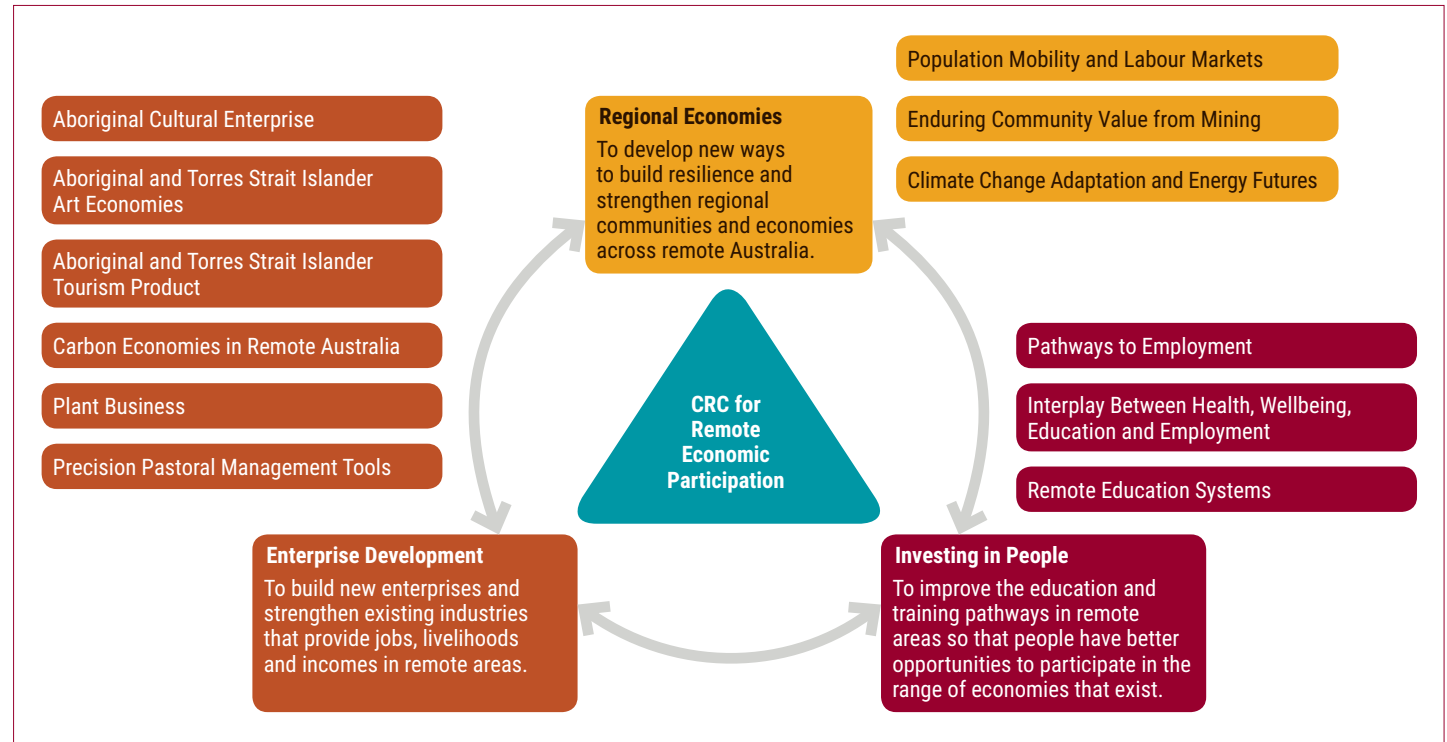
The CRC-REP was funded to a value of approximately **\$120 MILLION**

1.2 RESEARCH OVERVIEW



“The review panel concluded that, overall, the CRC-REP is conducting substantial research that offers applied approaches to addressing the social and economic disadvantage in remote Australia, in particular, the impact of economic exclusion on the Indigenous population.

Mid-term Review Panel June 2014



CRC-REP used a whole-of-system approach to deliver solutions to the economic challenges that affect remote Australia. CRC-REP operated under three key research program areas:

- Regional Economies – strengthening the economy of remote regions

- Enterprise Development – building remote enterprises to provide jobs and livelihoods for people
- Investing in People – improving the education and training pathways for people living in remote regions.

This approach enabled CRC-REP researchers to develop practical approaches and tools to build resilience and strengthen regional and remote communities and economies. The following short overview of the research programs illustrates the breadth of our research and its applications.



RESEARCH PROGRAM 1

REGIONAL ECONOMIES

To develop new ways to build resilience and strengthen regional communities and economies across remote Australia

In remote Australia, population mobility, major resources investments and climate change have significant economic and social impacts on local communities and their future. The Regional Economies Program developed modelling tools that enabled researchers to analyse and forecast remote demographics and mobility, analyse the flows of costs and benefits generated by mining operations and assist with planning of a mine's impacts on local communities to manage risks. Through case studies, it also developed solutions that can be implemented by households, communities and businesses to increase their ability to adapt to climate change, reduce energy costs and access transport in remote areas.

Our research on population mobility addressed the statistical gap in ABS counts of mobile Aboriginal and Torres Strait Islander people. It revealed that remote communities are not disappearing; instead, they are growing. Our research challenged the common Western view of mobility as a barrier to economic participation, finding that barriers to mobility are actually what limit employment outcomes for people in these remote communities. Importantly, the modelling tool for predicting population shifts developed by CRC-REP has potential to improve service delivery and strategy development by all tiers of government to increase employment rates in very remote communities across Australia through an understanding of micro-level mobility.

Our case study work with communities and mining companies led to the development of practical scenario-planning tools for end users, including a Remote Community Mining Toolkit designed to enable communities to prepare and plan for the social, cultural and economic risks and impacts of major resource developments, from start-up through to closure stages. The research outputs and tools are assisting

communities to obtain long-term benefits from new resource extraction and helping companies to better understand and meet their community social responsibility targets.

The Climate and Energy Futures project focused on mapping pathways to alternative futures. Scenario planning looked at future energy and transport provision under a changing climate. Energy research on remote enterprise infrastructure produced recommendations that households, enterprises and energy utilities across the remote regions can use to adapt to future climates and that communities and businesses can implement to reduce energy costs and better access transport in remote areas.

“The Regional Economies Program has delivered tangible and far-reaching insights for the mining industry, governments and citizens of Australia. CSIRO has used these insights to guide and inform our own research and engagement agenda with state and Commonwealth government departments and in our work with mining companies to inform their social-economic approaches and frameworks.”

Dr Kieren Moffat
CSIRO Mineral Resources

“The outcomes of the CRC Aboriginal and Torres Strait Islander Art Economies project has been invaluable to IACA and our members. The results have provided an understanding of where the Far North Queensland art centres sit in the national picture, identified specific areas of weakness to address with training and support and provided base data against which to measure any progress.

Pamela Bigelow,
Indigenous Art Centre Alliance Manager

RESEARCH PROGRAM 2

ENTERPRISE DEVELOPMENT

To build new enterprises and strengthen existing industries that provide jobs, livelihoods and incomes in remote areas

The Enterprise Development Program developed successful models for remote enterprises to provide jobs, livelihoods and incomes in remote areas using approaches that are inclusive of Aboriginal and Torres Strait Islander culture. We developed a commercial-ready Precision Pastoral Management System (PPMS) through on-site research with local pastoralists that has the potential to transform the profitability of the northern beef industry. The PPMS has been licensed to a CRC-REP partner to commercialise.

In the Plant Business project, we used bush tomato (*Solanum centrale*) to create a strategy for the development of commercially valuable plants acceptable

to Aboriginal and Torres Strait Islander peoples. Multiple horticultural plots have been developed at Aboriginal businesses and communities based on plants propagated in Alice Springs. Multiple non-CRC projects and national initiatives were also supported using this strategic expertise. Additionally, we investigated legal options for the protection of Aboriginal and Torres Strait Islander peoples' intellectual property and provided recommendations for governments and individuals to consider in future culture-based industries.

The most comprehensive value chain study of the Aboriginal and Torres Strait Islander art sector was conducted, complemented by studies on art centre management and staffing, e-commerce and consumer preferences. The findings were used by CRC-REP partners and other stakeholders to develop new financial management and marketing tools to improve value chain efficiencies. Art centre staff participated in the research as students and have returned to the sector to deliver findings.

Aboriginal and Torres Strait Islander tourism markets were researched and

recommendations developed for operators to implement findings. Clustering theory was used to investigate value chain structures with operators, and new business models were developed based on Aboriginal and Torres Strait Islander principles of enterprise clustering. Uniquely, the students and Principal Research Leader who conducted these two activities were Aboriginal and Torres Strait Islander, and the study involved multiple Aboriginal tourism micro and small to medium enterprises across remote Australia in research and training phases.

Overall, we found that many successful Aboriginal and Torres Strait Islander small businesses exist in remote locations, with highly committed owners and workforces. Through development of more Aboriginal and Torres Strait Islander managers, networks and clustering of business owners, as well as improvement of normal business inputs such as energy, communications and marketing, these businesses have the potential to contribute greatly to the diversification and resilience of the remote and national economy.



RESEARCH PROGRAM 3

INVESTING IN PEOPLE

To improve the education and training pathways in remote areas so that people have better opportunities to participate in the range of economies that exist

The Investing in People Program focused on understanding the interrelationships between education, employment, health and wellbeing and developing strategies to improve the education outcomes for remote Australians. To better understand, measure and strengthen wellbeing in remote Aboriginal and Torres Strait Islander communities, we conducted a study of health, wellbeing, education and employment in multiple communities. This was used to develop a holistic Interplay Wellbeing Framework and survey tool for remote communities. The Wellbeing Framework can quantitatively monitor and analyse the impact of policy, programs and strategies on

overall community wellbeing. Furthermore, it assists in identifying the most effective policy interventions for a particular community and in finding practical pathways to improve outcomes across education, employment and health through building empowerment and strengthening culture.

Our study on Aboriginal job seekers' perspectives about effective supports for successful pathways to work contributed to building knowledge for improving remote Aboriginal and Torres Strait Islander vocational education, training and employment, and/or enterprise development outcomes. Case studies comparing various enterprises and approaches created findings that were provided to training organisations and employers to adjust their current training packages.

The Remote Education Systems project developed the Red Dirt Curriculum and articulated models and strategies to improve how education is delivered in remote Australia. Three jurisdictions and parts of the Catholic, Independent and Government sectors are seeking to implement learnings from the project to improve the remote

education system. The project actively engaged over 1,200 stakeholders and had a particular focus on disseminating findings to our key partners, universities and state and federal education departments. Over 75 peer-reviewed research outputs were produced by the project.

“The research coming from CRC-REP has put the experiences and needs of remote communities in clear terms

Australian Education Union

1.3 EDUCATION AND TRAINING

CRC-REP's education program has resulted in the graduation of **36 STUDENTS** to date, with **ALL HONOURS STUDENTS** completed with First Class Honours degrees.

We surpassed our commitment to train and employ at least 70 Aboriginal Community Researchers (ACRs) over the life of CRC-REP with **OVER 200 ACRs** trained and employed in research projects across the three CRC-REP research programs.

My research project contributed to furthering my academic and professional career. I am currently able to apply my learnings at my workplace, an art centre in Central Australia. My research findings regularly inform decisions in regards to Aboriginal art e-commerce at the art centre.

Iris Bendor, former CRC-REP Honours student

CRC-REP's education program focused on building research capacity in and about remote Australia as well as providing education and training opportunities at all levels. We targeted students working in industries present in remote regions to build workforce capabilities and expertise in remote Australia. We deliberately offered opportunities to gain qualifications at various levels to meet remote industries' demands and needs. This has resulted in the graduation of 36 students to date: 16 PhDs, 3 Masters, 5 Honours, 5 VET and 7 Vacation students. The quality of our students' work was very high, with five students receiving First Class Honours degrees.

A unique feature of CRC-REP has been the training and employment of local Aboriginal Community Researchers (ACRs) in our research projects. We surpassed our

commitment to train and employ at least 70 ACRs over the life of CRC-REP with over 200 ACRs trained and employed in research projects across the three CRC-REP research programs. A direct flow-on benefit of the

program has been that many ACRs, after completing their work with the CRC-REP, secured employment in the government, research and service delivery sectors.



Photo: Dan Couritsa

1.4 ENGAGEMENT AND COLLABORATION



Photo: John Guenther



Photo: John Guenther

The CRC is characterised by strong end-user engagement which is driving the CRC's research agenda, and all its participants are involved in the research and research outcomes.

Mid-term Review Panel June 2014

All CRC-REP's projects engaged extensively with partners, end users and other stakeholders through formal engagement on projects, participation on research Advisory Groups, regular workshops, forums and symposia. The key collaboration lesson from CRC-REP was that co-designed, genuinely participatory on-ground research with end-user partners yields the most appropriate findings and outputs and the most sustainable outcomes and impacts for the peoples of remote Australia.

There are more SMEs per capita in remote Australia than in non-remote areas and SMEs were a key end user group for CRC-REP research. SME engagement occurred continually with project consultations and research activities and was a distinctive strength of the organisation. Over the life of CRC-REP, we collaborated with 135 SMEs to ensure that our research met the needs

and expectations of local organisations and businesses. To share our learnings, ensure uptake of our research and build further opportunities for collaborations, 406 events were organised which were attended by 11,493 end users during the life of the CRC.

CRC-REP's large number of publications developed for end users (over 523) reflected its aim to develop practical solutions for businesses and people based in remote locations. All the CRC's publications – reports, journal articles, policy briefs, presentations, posters and short films – are available online at www.nintione.com.au. As part of our efforts to build and share knowledge about remote Australia, we created Remote Australia Online (RAO), an online one-stop shop to access authoritative research on topics that impact on remote Australia and its people.

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TOWN
PLACE
TUNE PEOPLE





2 OUR IMPACTS



Through co-designed, genuinely participatory on-ground research with end-user partners, the CRC-REP has delivered significant impact by providing relevant, timely and actionable advice and practical solutions to policymakers, businesses, community organisations and industry stakeholders working in or with remote communities.

As a mainly public good CRC, we continuously sought new and innovative ways to communicate our research outcomes to maximise the uptake of our work by end users. To ensure uptake at the policy level, we proactively engaged with relevant government departments and parliamentary offices and made regular public submissions to government inquiries.

2.1 KEY RESEARCH OUTPUTS



The following section contains a selection of key research outputs by the CRC-REP's three research programs: Regional Economies, Enterprise Development and Investing in People.

REGIONAL ECONOMIES RESEARCH PROGRAM

- We built an evidence base on population mobility and barriers to mobility in remote Aboriginal and Torres Strait Islander communities.¹
- We produced a population modelling tool for remote communities and established that very remote communities are actually growing rapidly. This improved basis for enumerating Aboriginal people in remote areas can enable more accurate allocation of government funding.
- We developed an Input–Output model of remote Australia, which can help remote people and local and state governments transition to alternative futures as reductions in the mining labour force continue to affect regional and remote communities.
- We produced a Remote Community Mining Toolkit designed to enable communities to prepare and plan for the social, cultural and economic impacts of major resource developments, from start-up through to closure stages.
- We built an evidence base on the socio-economic impacts of long distance commuting (LDC) on source communities.²
- We developed strategies and advice for community-based enterprises to improve energy management in enterprise buildings and reducing costs for businesses.³



CASE STUDY

POPULATION MOBILITY AND LABOUR MARKETS AND TRANSPORT FUTURES RESEARCH PROJECTS

Evidence base on population mobility and barriers to mobility in remote Aboriginal and Torres Strait Islander communities

The Population Mobility project contributed to a better understanding of the factors driving temporary mobility of Aboriginal and Torres Strait Islander peoples in remote Australia. It also provided empirical estimates of the extent and patterns of temporary mobility. We conducted the largest ever survey of Aboriginal and Torres Strait Islander mobility through a series of extensive surveys undertaken in a sample of 25 remote Aboriginal communities where residents access Alice Springs as their regional service centre. We trained and employed 83 local ACRs on this project to assist in the development of the survey

instruments, to conduct the surveys and to provide feedback to communities about the research findings.

We established that people undertook on average 19 trips per year, driving on average 865 km per month to access services, especially for shopping but also for banking, health and accessing Centrelink. Another key driver of mobility is visiting friends and family. Overall, we found that kinship, culture and country remain central to mobility. Our research found that barriers to mobility, such as the lack of driver's licences and low vehicle access, are what limit employment outcomes for people in these remote communities. Indeed, people with a driver's licence were more than twice as likely to have a job than those without a licence.¹ Our findings suggest that moves to rationalise smaller and more remote communities are likely to negatively affect the wellbeing and socio-economic outcomes of the people displaced. Legitimising mobility would actually enable improved planning and decision-making by communities, service providers and employers.

Our Transport Futures research highlighted that the main barriers to mobility are the cost of travel but also poor road conditions, cost of car registration and the unaffordability of public transport. Indeed, our research in Central Australia reveals that 30% of household expenditure is on travel, compared to the national average of 16%. We found that transport issues of access, safety and affordability impact negatively on remote communities and enterprises. Practical measures – including effective collaboration platforms, appropriate planning and regulation and more integrated and affordable long-distance public transport – can immediately improve transport. Understanding the requirements and implications of new radical innovations, such as solar-powered electric vehicles and automated transport, could accelerate the sustainable development of remote Australia in the next 50 years.⁴

This evidence base can be used to improve planning and decision-making by communities themselves, service providers, policymakers and employers.

We conducted the **LARGEST EVER SURVEY**

of Aboriginal and
Torres Strait Islander mobility

People undertook on average
19 trips per year, driving on average

865 KM

per month to access services

30%

of household expenditure in Central
Australia is on travel, compared to
the national average of 16%

2.1 KEY RESEARCH OUTPUTS



Photo: Tim Ackler



ENTERPRISE DEVELOPMENT RESEARCH PROGRAM

- We built an evidence base about the Aboriginal and Torres Strait Islander art sector with the first national analysis on the production and sale of Aboriginal art, in particular from remote art centres.⁵
- We developed new tools to aid financial management and marketing of Aboriginal art for remote art centres.⁶
- We developed 10 principles of enterprise clustering to help Aboriginal and Torres Strait Islander tourism enterprises develop and benefit from culturally appropriate clusters.⁷
- We developed policy recommendations to support and safeguard the interests of Aboriginal and Torres Strait Islander peoples in the commercialisation of their bush foods through the identification of possible legal and institutional interventions.⁸
- We identified improved bush tomato varieties as a model for bush food crop development and protection of the intellectual property of Aboriginal and Torres Strait Islander peoples.⁹
- We developed the Precision Pastoral Management System (PPMS) software that allows pastoralists to integrate precision animal data with precision spatial data to match livestock performance to environmental conditions, leading to more efficient and profitable pastoral enterprises.¹⁰
- We produced a database of sacred sites which is providing a very effective vehicle for the Pila Nguru community to store, build on and manage cultural information relating to the Spinifex Native Title Area.¹¹



CASE STUDY

ABORIGINAL AND TORRES STRAIT ISLANDER ART ECONOMIES RESEARCH PROJECT

Value chain analysis of the Aboriginal and Torres Strait Islander art sector

We undertook the most comprehensive study ever done on the Aboriginal and Torres Strait Islander art sector. We completed the first national data on the production and sale of Aboriginal art, in particular from remote art centres. Participants in the study included more than 170 art businesses, 82 out of Australia's 87 art centres, 4 of the 5 peak bodies, all 8 government agencies involved in the sector, plus 900 art buyers at 3 national art fairs. The research revealed an increase in production of art from remote Australia over the decade to 2012, with paintings comprising 90% of the market share.

Arts sales increased significantly in the mid-2000s before falling again around 2008. At present, the art market is focused on smaller, lower priced artworks with nearly 90% of all artworks sold for under \$1,000. We found that less than 10% of buyers spend more than \$2,000 – most spend less than \$500.

Our research shows that the overwhelming majority of artists receive irregular income and, over the course of their arts practice, small returns. Nearly three-quarters of artists make only limited income from art sales. Only 5.4% of artists receive what could be called a wage – \$100,000 or more over their entire careers.¹²

We confirmed that arts centres represent a rare, long-term success in remote Aboriginal and Torres Strait Islander Australia. They have been a feature of remote communities since the 1970s and have made a major contribution to Australia's cultural and creative landscape. However, the financial circumstances of many art centres are fragile, with falling profitability.

We also undertook the first research focusing on the relationships and transactions between remote area freelance Aboriginal artists and private art businesses. The results challenge the common rhetoric which portrays independent artists as passive, disempowered and/or victims of unethical agents. Indeed, our findings reveal that these artists are largely confident in their professional choices and are able to navigate the risks.¹³

These insights about the Aboriginal and Torres Strait Islander art sector – combined with sub-projects looking at e-commerce,¹⁴ governance and staffing in art centres, funding mechanisms and marketing opportunities – have led to the development of new tools to aid financial management and marketing in art centres as well as informing policy directions and funding programs. With over 14,000 Aboriginal and Torres Strait Islander artists¹⁵ in remote Australia, the economic and social benefits of implementing the Art Economies project findings cannot be overestimated.

NEARLY 90%
of all artworks sold for
UNDER \$1,000

ONLY 5.4%
of artists receive what could be
called a wage – \$100,000 or more
over their entire careers¹²

OVER 14,000
Aboriginal and Torres Strait Islander
artists in remote Australia

2.1 KEY RESEARCH OUTPUTS



INVESTING IN PEOPLE RESEARCH PROGRAM

- We developed and validated the Interplay Wellbeing Framework to measure the interplay between culture, community, empowerment, education, employment, health and wellbeing in remote Aboriginal communities and to evaluate the impact of interventions and inform policy in these areas.¹⁶
- We documented Aboriginal job seekers' perspectives about effective supports for successful employment transitions.¹⁷
- We built an evidence base about how to improve remote Aboriginal and Torres Strait Islander vocational education, training and employment outcomes.¹⁸
- Based on our findings about the purpose of education from Aboriginal and Torres Strait Islander perspectives, we developed strategies and recommendations to improve the remote education system.¹⁹



CASE STUDY

REMOTE EDUCATION SYSTEMS

Red Dirt Curriculum

Over five years, we engaged directly with more than 1,250 remote education stakeholders and developed models and strategies to improve education outcomes in remote Aboriginal and Torres Strait Islander communities. Key findings that informed our policy recommendations and the development of the Red Dirt Curriculum are:

1. The premise of 'remote Indigenous disadvantage' is not supported by remote community members.
2. Contrary to popular belief, there are plenty of jobs in remote communities for school graduates, but the pathway from school to work is unclear.
3. Quick-fix solutions (such as attendance strategies) do not work in remote community contexts, which are highly

complex – remote education needs to be treated as a complex system.

4. Education should support local aspirations for culture, land, language and identity.
5. 'Success' is defined as parent and community involvement in school.
6. Teacher quality is not the main issue for remote schools, but ensuring teachers have the right qualities is fundamentally important.
7. Schools with higher proportions of non-teaching staff get better results.
8. Too little is known about the impact of boarding schools – policies developed in an evidence-base vacuum are potentially harmful for students and communities.
9. Schools with more resources tend to get better outcomes.
10. Community engagement is important, but engagement must have benefit for parents and students in order to be effective.

The Red Dirt Curriculum proposes strategies for improved outcomes as well as a variation in the Australian Curriculum to include red dirt history, red dirt politics and red dirt economics to increase relevance in the remote community context. In particular, topics such as land rights and local histories and subjects such as digital literacy and grammar are foundationally important. Strategies for improved outcomes include employing, training and developing a local workforce as red dirt educators; creating a credentialing system for a range of positions that are filled by non-Aboriginal and Torres Strait Islander people in communities; establishing local governance structures; and developing explicit pathway through school to economic participation.²⁰

One of the senior researchers on this project, Sam Osborne, received the award for the most outstanding contribution to Aboriginal education in the NT in 2014.

Over five years, we engaged directly with more than

1,250

remote education stakeholders

Schools with higher proportions of

NON-TEACHING STAFF

get better results

One of the senior researchers on this project, Sam Osborne, received the award for the

MOST OUTSTANDING

contribution to Aboriginal education in the NT in 2014

2.2 COMMUNICATIONS AND ENGAGEMENT

We produced
OVER 523
end-user publications

Our research also featured in
OVER 155
academic publications,
including in ERA A-level journals

2.2.1 PUBLICATIONS

CRC-REP researchers were prolific in their published outputs, with CRC-REP totalling over 750 publications in seven years of operations.

One of the strengths of the CRC-REP was the translation of our research results and design of communications products for different audiences, including policymakers, businesses, our stakeholders and community end users. We produced over 523 end-user publications in a variety of formats to reach our diverse audiences, including remote Aboriginal and Torres Strait Islander stakeholders. These end-user publications included policy briefings, research reports, handbooks, big books, research summaries, working papers, submissions, media releases, films, project updates, infographics and visual abstracts and presentations. For example, the Interplay project produced over 30 short

videos showcasing key messages from this research, which are part of the interactive Interplay Wellbeing Framework resource.²¹

Our research also featured in over 155 academic publications, including in ERA A-level journals such as *International Journal of Cultural Property*, *Climatic Change* and *Tourism Analysis*. CRC-REP also published an A* ranked publication in the prestigious journal *Tourism Management*.

Our Principal Research Leader on the Enduring Community Value from Mining project, Dr Blackwell, and his colleagues were awarded the Best Paper Award at the *Conference on Business and Social Sciences 2015: Towards Research Excellence in Business and Social Sciences* with their paper on employment leakage by Local Government Area in the Northern Territory.²² The Interplay Between Health, Wellbeing, Education and

Employment project's literature review rated in the top 10 research papers for Aboriginal and Torres Strait Islander research on Australian Policy Online for 2013.²³

The Remote Educations Systems project Principal Research Leader, John Guenther, was the Guest Editor on a Special Issue of *Australian Journal of Indigenous Education* and put together a series of papers from across the CRC research under the 'Red Dirt Thinking' theme. To bring together common themes arising from the research across our 12 projects, we produced a special issue of *Learning Communities: International Journal of Learning in Social Contexts* titled 'Synthesis & Integration writing from the Cooperative Research Centre for Remote Economic Participation'.



	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17*
Books	0	0	1	0	0	0	1
Book chapters	0	1	2	4	4	2	10
Journal articles	0	5	6	18	30	36	25
Conference proceedings	0	3	2	4	6	1	2
End-user publications	6	23	57	108	106	135	88

CRC-REP publications to date (February 2017) number 688;
by end of the CRC-REP, the total number of publications is anticipated to be 750.

* Three research projects concluded in December 2016.

The Interplay Between Health, Wellbeing, Education and Employment project's literature review rated in the

TOP 10 RESEARCH PAPERS

for Aboriginal and Torres Strait Islander research on Australian Policy Online for 2013.

2.2 COMMUNICATIONS AND ENGAGEMENT

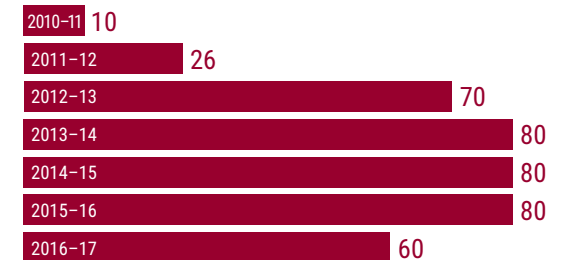
2.2.2 OUR REACH

We were proactive in engaging with our stakeholders and increasing our reach to wider audiences by using multiple social media platforms. We greatly increased our social media presence over the life of CRC-REP, both in activity and level of engagement. We regularly published presentations on SlideShare, with the most popular being *Aboriginal and Torres Strait Islander Tourism Product project* which has received 1,062 views to date. We featured stories and regular research updates in our email newsletter *NintiNews*, which was sent to over 3,800 regular subscribers. Stakeholder engagement through participation was strong throughout the life of the CRC-REP, with 11,493 end users attending 406 events over seven years.

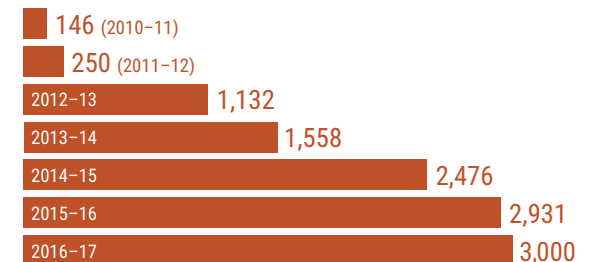
Our research outputs have been reported extensively in national and international media outlets, including the front page of the Wall Street Journal.

We also reached international audiences, with researchers being invited to present at prominent international conferences and fora. For example, the Aboriginal and Torres Strait Islander Tourism Product project presented research findings on Aboriginal tourism to international audiences, with participation in the *6th International Colloquium on Tourism and Leisure* in Bangkok in 2013 and at the Native American Indigenous Studies Association (NAISA) annual conference held at the University of Hawai'i in Honolulu in 2016.

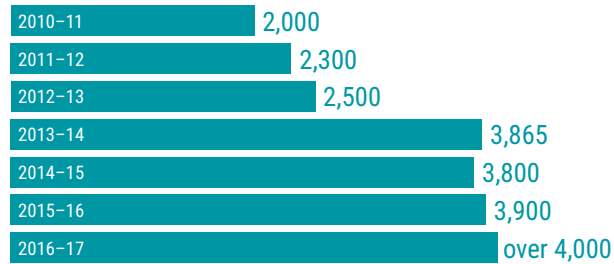
STAKEHOLDER ENGAGEMENT EVENTS NO. OF EVENTS



STAKEHOLDER ENGAGEMENT EVENTS NO. OF ATTENDEES



NEWSLETTER SUBSCRIPTIONS



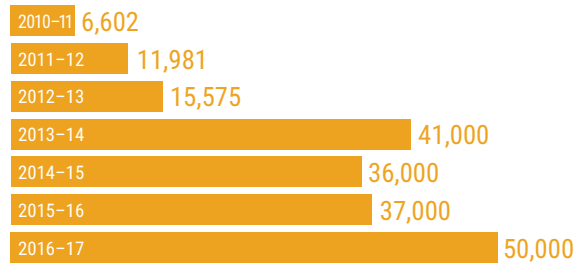
FACEBOOK NO. OF LIKES



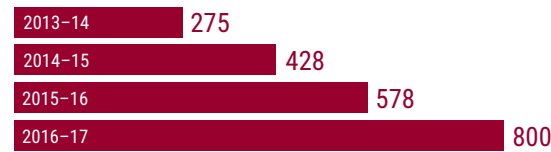
YOUTUBE CHANNEL NO. OF VIEWS



WEBSITE NO. OF VISITS



TWITTER NO. OF FOLLOWERS



Other communication statistics over the life of the CRC-REP: total number of presentations available on SlideShare is 133, with over 220,00 views; 46 films loaded onto our YouTube channel; number of submissions to government is 12; number of evidence-based publications on RAO is 3,200 with over 50,000 users; number of SMEs collaborated with is 135.

2.2 COMMUNICATIONS AND ENGAGEMENT

I have found Remote Australia Online an essential tool for the Synthesis and Integration project. It captures and provides access to a wide-ranging multidisciplinary cross-section of resources which has been fundamental to this project.

*Dr Judith Lovell, CRC-REP,
CDU, Northern Institute Researcher*

OVER 50,000

people have visited the RAO since its inception, and it now contains

OVER 3,200

references

CASE STUDY

REMOTE AUSTRALIA ONLINE

Transforming remote knowledge into remote opportunity

As part of the CRC-REP commitment to advance knowledge and innovation in and of remote Australia, in August 2013 we launched Remote Australia Online (RAO), an online resource where people can access authoritative research on topics that affect remote Australia and its people. RAO is the first and only web-based navigation tool for accessing knowledge about remote Australia. The resources populating RAO include frequently cited journal articles, highly regarded book chapters, published project reports and proceedings datasets and databases. RAO is continuously updated and constantly scrutinised for quality. Target user groups include remote Australian stakeholders, people and

organisations involved in or impacted by issues of relevance to remote Australia as well as decision-makers, lobbyists, academics and journalists. Over 50,000 people have visited this resource since its inception, and it now contains over 3,200 references. Building on RAO, in May 2014 we launched Remote Australia Online Atlas (RAOA), an online tool that provides detailed data about remote Australia in an attractive and visual form. These new resources increase all Australians' accessibility to knowledge about remote Australia and the people who live there.

[www.nintione.com.au/
remote-australia-online/](http://www.nintione.com.au/remote-australia-online/)



2.3 ECONOMIC AND SOCIAL BENEFITS TO END USERS

The following examples illustrate the many ways our research is already bringing social and economic benefits to people living and working in remote Australia.

The Precision Pastoral Management System (PPMS) we developed provides significant economic benefits for beef producers. It allows better matching of stocking rates to available pasture, improves liveweight gain and calving rates, improves land conditions and increases pastoralists' ability to make strategic decisions. For each cattle station in northern Australia, it is estimated that the net value of the full application of the PPMS is \$89,094 per year. The net benefit of the technology on a breeding herd of 1,000 head (increased fertility rates and decreased mortality rates) can be \$40/head. Assuming an adoption rate of 50% after 10 years, the net benefit of the PPMS to the northern beef industry would be up to \$243.9 million per year.

The work on population mobility led to an improved basis for enumerating Aboriginal people in remote areas, which enables more accurate allocation of government funding and strengthens current and emerging remote communities through the delivery of more appropriate services in a more cost effective manner. The estimated cost savings

for government through more accurate allocation of funding is at least \$62.7 million annually, assuming a 1% efficiency dividend across government services delivered to Aboriginal and Torres Strait Islander peoples living in remote Australia.

The study in the hot arid and hot humid climate zones in northern Australia of enterprise buildings and their associated electricity consumption led to a series of recommendations and strategies that could enable electricity consumption savings of up to 40%.

The research on developing strategies to reduce energy costs and improve comfort and liveability of eight art centre buildings in northern Australia could provide significant economic benefits to the art centres involved in the study. The value of electricity savings could average \$2,500 per art centre per year. The increased use that arts workers can get from the buildings may result in 15% increase in productivity, and the improved amenity for visiting tourists could result in increased on-site sale of artworks valued at \$52,000 per year.¹² The total value of

improvements per art centre was estimated at \$62,000 per year for those based in Far North Queensland and \$59,500 for the ones based in Central Australia. These strategies can benefit the entire Aboriginal and Torres Strait Islander art centre sector, which comprises 90 art centres. Given that art centres recorded an average loss of \$2,644 in 2014–15,¹² implementing these strategies would immediately result in some art centres recording a profit rather than a loss at the end of their financial year.

Desart, the peak industry body for Central Australian Aboriginal art centres, has used the CRC-REP Art Economies value chain reports^{24,12} in its Stories, Art, Money (SAM) database that is being rolled out nationally across 75 art centres. The database centrally generates annual reports that use data fields identified through the Art Economies project, and it aligns with national reporting frameworks (such as Art Nation). The Art Economies project has effectively established the key performance indicators that will be used to monitor the industry. Our work on developing new market and product opportunities for the Aboriginal art industry led to new enterprise collaboration between CRC-REP partner Keringke Arts and Pullman Espresso Accessories to produce original hand-painted coffee tampers.

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for the ones based in Central Australia

2.4 COMMERCIALISATION

CASE STUDY

PRECISION PASTORAL MANAGEMENT TOOLS PROJECT

Development and commercialisation of the Precision Pastoral Management System

The Precision Pastoral Management Tools project aimed to improve the productivity and profitability of beef production by using advanced technologies to monitor and analyse the performance of individual cattle and pastures remotely without labour input. This led to the development of the Precision Pastoral Management System (PPMS).

The PPMS is a software system that is based online via a cloud-based network. It draws in multiple data products that have been customised for individual cattle stations. Data reported from PPMS include cattle liveweight, NDVI (the 'Greenness Index'), pasture yield and the weather. The power of PPMS is not in one data stream but in the interaction between the key data measures. The PPMS software is used to monitor trends in the cattle liveweight, NDVI and pasture yield data to determine when to consider undertaking management decisions relating to supplementation, stocking rates, marketing or joining. With this data, beef producers can better time their decisions to reduce costs and increase beef production and profitability.

Consultations with beef producers and industry stakeholders were central to the development of the PPMS. The research team trialled PPMS on five cattle stations across remote Australia to validate the data products to the on-ground conditions. Feedback from trial sites enabled the research team to update PPMS to improve its functionality and useability. The end-user engagement throughout the project ensured the development of a product that graziers and pastoralists want and need, leading to a ready domestic market for the technology. The research team also engaged with potential international stakeholders, including the USA Department of Agriculture and USA ranchers who were impressed by and interested in the technology being developed.

The commercialisation strategy for the PPMS focused on delivering the highest quality outcome for the pastoral industry. By delivering the PPMS as a commercial product through a licensee, the ongoing maintenance costs and development needs of the software are funded by the users themselves and are sustainably kept in alignment with the users' changing needs. Market forces ensure that the product delivered is the one the end users want and use. The CRC-REP Board considered that offering the PPMS through a government-supported body could mean that updating, maintenance and support may fail to compete with other government priorities over time.





2.5 DIRECT NON-MONETARY BENEFITS FOR END USERS

Spinifex Country Traditional Owners through the Aboriginal Cultural Enterprise project were able to visit and, at times,

REDISCOVER

traditional lands that had not been accessed since contact days.

CRC-REP research findings and key learnings informed the writing of

12 SUBMISSIONS

to government inquiries and consultations

A number of projects provided direct non-monetary benefits for end users. Notably:

- Spinifex Country Traditional Owners through the Aboriginal Cultural Enterprise project were able to visit and, at times, rediscover traditional lands that had not been accessed since contact days. Through the mapping of their country and development of a database, community elders are now better equipped to pass on to the next generation important knowledge for managing their land and access to it.
- In response to CRC-REP partners' and stakeholders' concerns with lack of adequate telecommunication infrastructure and digital capacity building programs available in remote areas, we supported the establishment of Broadband for the Bush Alliance (B4BA). B4BA is an alliance of organisations that seek to advance the digital capacity and capability of remote Australians. B4BA does this through a range of activities, including policy formulation, lobbying actions and the sharing of knowledge. It actively builds expertise through its annual forum, research projects and networking. CRC-REP supported B4BA activities such as its annual forum, which benefited end users across all of remote Australia.
- CRC-REP assisted partners and stakeholders in developing new capacity to undertake research and projects in remote Australia. One example is the assistance given to CSIRO, which, as part of the Indigenous Advancement Strategy, was negotiating and conducting field trials and training at Ntaria community near Alice Springs. CRC-REP was able to provide the introduction to the remote-based community organisations and ranger groups, as well as other practical assistance.
- CRC-REP assisted partners and other stakeholders with the organisation of conferences and research symposia.

This includes CRC-REP researchers participating in the organising committees of prominent conferences such as the *2015 Australian Rangeland Society Conference* in Alice Springs and the *2015 Australian New Zealand Society for Ecological Economics Conference* in Armidale.

- CRC-REP research findings and key learnings informed the writing of 12 submissions to government inquiries and consultations. CRC-REP representatives appeared as witnesses on a number of committee inquiries, including the Joint Committee on the National Broadband Network (2011) and the Joint Committee on Developing Northern Australia (2014). CRC-REP advocacy work has benefited end users across remote Australia by ensuring that the issues, challenges and opportunities faced by remote Australians were better known and understood by governments and the wider population.



Photo: DKA

CASE STUDY

PLANT BUSINESS

Spreading awareness and promoting the rights and interests of traditional custodians in bush foods

The Plant Business project had a strong focus on recognising and safeguarding the interests of traditional custodians in bush foods. We focused on promoting and spreading awareness of the rights and interests of traditional custodians through our membership of Australian Native Foods Industry Limited (ANFIL) and organising the Seeds Colloquium.

Within the ANFIL membership, we promoted the interests of Aboriginal and Torres Strait Islander people as they relate to the commercial exploitation of traditional bush foods that have been consumed traditionally for millennia and that carry spiritual value

and cultural significance. We encouraged the formation of the ANFIL Aboriginal Advisory Committee, contributed to industry discussions about acknowledgement of Aboriginal cultural interests in bush food marketing, and facilitated the participation of Aboriginal and Torres Strait Islander people in the native foods industry.

Plant Business researchers recognised that a significant disservice is done to global Indigenous peoples through non-acknowledgement in the collection, removal and utilisation of plant genetic resources (most notably, but not exclusively, as seed catalogues stored in seedbanks/biobanks worldwide). A responsibility for Indigenous knowledge stewardship rests with the managers of plant genetic resource collections, and this can only be achieved through sound relationships between hereditary custodians and genetic resource managers. Awareness of this issue and defined approaches to achieving responsible stewardship have not been priorities of

plant genetic resource managers. CRC-REP hosted two Seeds Colloquia and a series of meetings of Australian and international experts in botany, anthropology and law to successfully elevate the discussion of this problem. This has resulted in an ongoing dialogue, publications, and a genuine improvement among the international plant resources management community in appreciation of this significant issue. There is now greater commitment to acknowledgement of traditional custodians' interests and the importance of ethical stewardship of Indigenous knowledge about plants.

Plant Business also produced numerous publications and policy briefings that provide a framework for the native foods industry to use as guidelines on how to include the interests of Aboriginal and Torres Strait Islander people in the bush food commercialisation process.



2.6 INFLUENCING POLICY AND PROVIDING ADVICE

“In my opinion the CRC-REP showed foresight in observing the cyclical nature of the sector generally, and the predictable decline of a brown coal mine in particular. I can confirm that your engagement in Leigh Creek has both effected Government policy and supported remote communities.

Hon Dr Jane Lomax-Smith

CRC research impacts, in a policy sense, are commonly realised in the order of 9–10 years after the commencement of the project. Therefore, CRC-REP impacts on policy are only starting to be realised and will continue beyond the life of the CRC-REP. Our research outputs from Program 3 – Investing in People – have major policy implications, especially in the area of remote Aboriginal and Torres Strait Islander education and training.

We provided valuable inputs into a number of Senate and Parliamentary inquiries and were invited to provide evidence on a number of occasions. This included an invitation to participate in the Productivity Commission Round Table regarding Geographic Labour Force Mobility and making several invited submissions into the Productivity Commission’s analysis.²⁵

We provided advice to governments, service providers and Leigh Creek locals when the closure of Alinta Energy’s coal mine at Leigh Creek in South Australia was announced in July 2015. The Enduring Community Value from Mining project research team had been investigating the socio-economic costs and benefits of mining in this area and was able to share its knowledge about developing strategies to mitigate the impacts of the closure and improve beyond-life-of-mine planning processes.



Photo: Tim Acker



Photo: Gabrielle Sullivan



CASE STUDY

ABORIGINAL AND TORRES STRAIT ISLANDER ART ECONOMIES PROJECT

Evidence base for arts funding

The Art Economies project has positively influenced program policies and funding at state and federal government levels for Aboriginal and Torres Strait Islander arts centres. The project looked at employment, operational issues and sales and demonstrated issues with jobs funding. The research has been used as evidence at federal level to introduce more flexibility into

jobs funding and better align this funding with art centre operations. In Western Australia, the research has influenced the state government's Future Focus for Aboriginal Art Centres program by providing evidence that art centres need to have flexibility to find niches in a range of areas rather than having a single model focused on art production. The project also provided evidence for Arts Queensland to make a case for the continuation of the Queensland Government's Backing Indigenous Arts program. The project has also provided important information for policymakers and the sector through its use by the Australia Council in their reports and initiatives.²⁶





3 EDUCATION AND TRAINING





3.1 STUDENTS AND QUALIFICATIONS

At the CRC-REP's closure,

16 PHD CANDIDATES

had completed their research, and an additional two were on track to complete their PhD

All Honours students completed with

FIRST CLASS HONOURS

CRC-REP has made a significant contribution in the training of scholars specialised in building our knowledge and understandings of the economic and social drivers of remote Australia.

At the CRC-REP's closure, 16 PhD candidates had completed their research, and an additional two were on track to complete their PhD. At least one of each student's supervisors was from an end-user stakeholder group. This ensured SME, community and policymaker engagement in our research projects.

The table to the right showing CRC-REP students' completions demonstrates our strong commitment to provide education opportunities at all levels. Of note, all Honours students completed with First Class Honours, and one student was awarded a Chancellor's Doctoral Research Medal. One student was awarded an Aurora Indigenous Scholars Scholarship to undertake an international study tour to meet with scholars working in Indigenous research fields to learn more

about how to improve her research skills and the parallels between Indigenous populations around the world. Two students had the opportunity to attend Columbia University's Indigenous Studies Summer Program.

One student was awarded the best paper award at the 2016 mLearn conferences organised by the International Association for Mobile Learning (IAmLearn).

Education	Completed
PhD	16
Masters	3
Honours	5
VET	5
Vacation	7



Photo: Ian Ferguson

3.2 GRADUATE EMPLOYMENT POST-CRC

Most CRC-REP graduate students secured employment in academia, the Aboriginal and Torres Strait Islander art sector, the community development sector or as consultants. Three PhD students were awarded post-doctoral positions and another two research fellow positions. Importantly, the CRC-REP Education program enabled five students to secure work in remote Australia, which contributes to strengthening the knowledge capital and economies of remote regions.

CASE STUDY

ABORIGINAL COMMUNITY RESEARCHER PROGRAM

Building research capacity and employment opportunities in remote communities

Over the life of the CRC-REP, we employed and trained over 200 ACRs to work on our research projects. We provided training in qualitative and quantitative research methods to all new recruits as well as training in using digital technology to gather and analyse data. We provided ongoing technical support on the ground to ACRs and offered further training opportunities as required through workshops. ACRs made

an outstanding contribution to our research by bringing critical skills to our research teams, including local knowledge, language and cultural competencies. Through the program, ACRs gained new skills, expertise and valuable work experience and built their confidence in their ability to apply for and win other jobs. A direct flow-on benefit of the program is that ACRs have often moved on to other full-time and near-full-time employment elsewhere, including in the public service and not-for-profit sector. Importantly, the program has created an employment market opportunity based upon management of knowledge and information that was previously the realm of outside agencies and consultants from major cities, but has now been made accessible to local Aboriginal people.

The engagement process is what's important. As an Aboriginal person myself, it's not good practice to go in blind; CRC-REP understands this.

Amunda Gorey,
ACR working on CRC-REP projects

Working for CRC-REP has opened doors for me; I am now employed full time in a government job.

Mark Inkamala,
former ACR on CRC-REP projects



3.3 STUDENT PROFILE

“*Being a CRC-REP postgraduate student was the experience of a lifetime. CRC-REP provided a bridge between theory and practice that connected me with people in communities and industry. These connections allowed me to work beyond theoretical ideas and to develop practical strategies of real benefit to remote Aboriginal peoples. CRC-REP’s research methods have formed the ethical foundations for my career and paved the way for many ongoing professional opportunities.*”

Kylie Lingard

CASE STUDY

DR KYLIE LINGARD

Contributing to support the interests of Aboriginal and Torres Strait Islander peoples in bush food commercialisation

The Plant Business project recognised early on the need to investigate and identify options to strengthen the position of Aboriginal and Torres Strait Islander peoples in the development and commercialisation of their traditional foods. Kylie joined the Plant Business team in 2012 with her PhD project ‘Legal and institutional strategies to support the interests of Aboriginal and Torres Strait Islander peoples in bush food commercialisation’ and was based at the School of Law at UNE.

Kylie made an outstanding contribution to the Plant Business project. Her

PhD explored practical strategies and opportunities, including some possible legal options for bush food stakeholders and policymakers to consider. For example, existing legal arrangements provide very limited support for Aboriginal and Torres Strait Islander peoples to benefit from their plant knowledge. To address this issue, she suggested that a possible way to improve the situation would be to amend all the laws regulating bush food development to prohibit the unauthorised use of culturally sensitive and non-public Aboriginal and Torres Strait Islander knowledge.

A huge amount of information has been documented in Kylie’s thesis,²⁷ which has appeared in a series of scholarly journal papers.^{28,29} To expand the reach and impact of her research, she also produced a series of policy briefings that summarised key findings and recommendations.⁹ Her work has attracted great interest from IP Australia, the Australian Government’s intellectual property agency.

She graduated in April 2016 and was awarded the UNE Chancellor’s Doctoral Research Medal. She moved on to be a research fellow at UNE where she continues her research, which is contributing to developments at the Convention on Biological Diversity, World Intellectual Property Organisation and United Nations Permanent Forum on Indigenous Issues.




4 COLLABORATION



One of the strengths of the CRC-REP was the breadth and diversity of our partnerships and resulting on-ground collaborative activities. All major projects had at least one end-user participant collaborating in the research planning and implementation. SMEs were a key end-user and

stakeholder group for CRC-REP, particularly for Program 2: Enterprise Development. SME engagement occurred continually with project consultations and research activities and was a distinctive strength of the organisation. SMEs actively participated in project workshops

and other consultations, as well as being represented on project advisory groups. This ensured the needs of SMEs were met when tools and products were developed. Over the life of the CRC-REP, we collaborated with 135 domestic SMEs.



4.1 SME COLLABORATION



CASE STUDY

ABORIGINAL AND TORRES STRAIT ISLANDER TOURISM PRODUCT

Collaborating with SMEs to develop appropriate resources about Aboriginal and Torres Strait Islander enterprise clustering

An important part of the Aboriginal and Torres Strait Islander Tourism Product project was to create resources for the Aboriginal tourism industry that are based on the expertise, experience and knowledge of Aboriginal and Torres Strait Islander people already involved in the industry. Knowing that Aboriginal and Torres Strait Islander people operating tourism enterprises in remote Australia have increasingly recognised the benefits of working with each other and forming enterprise clusters in the bush, the research team sought to work with SMEs to develop business resources that meet their needs. Based on a research approach grounded by culture, the research team brought together 21 Aboriginal and Torres Strait Islander tourism operators from remote WA, Qld,

the NT and SA to build expertise in Aboriginal and Torres Strait Islander ways of enterprise clustering. Through a dedicated forum held in remote WA in October 2014, tourist operators actively collaborated to identify issues and perspectives of enterprise clustering. Forum participants reviewed Western knowledge about enterprise clustering and then held group discussions to consider how these practices could be carried out according to Aboriginal ways. Participants generated 141 possibilities, but later reduced that list to 44 that they considered most important in Aboriginal and Torres Strait Islander ways of enterprise clustering. Bulgun Warra Aboriginal man and CRC-REP's Principal Research Leader Dr Damien Jacobsen analysed the outcomes in the months after the forum and proposed a collection of Aboriginal and Torres Strait Islander principles of enterprise clustering. The principles integrate Aboriginal ways of doing business with Western knowledge about enterprise clustering and highlight actions and considerations useful for coordinating an existing cluster or starting a new one. These principles were reviewed by forum participants, whose insight allowed 10 principles to be summarised as a guide for Aboriginal enterprise clustering in the future.

The 10 principles are:

1. structured grass roots representation
2. coequal enterprise community
3. culturally fluent business
4. culturally grounded objectives
5. localised domain of trade
6. tourism system linkages
7. fusion of cultural diversity
8. culturally appropriate governance
9. centralised cluster management
10. funding towards capacity.

The 10 Aboriginal and Torres Strait Islander principles of enterprise clustering have been released as 10 papers, a compilation booklet and three films.³⁰

“Our ancestors have been sharing culture and, you know, trading, and that’s how our ancestors, that’s how they run a business, by trading. And it’s really good you know, clustering with other Aboriginal tourism, you just make that one highway from one end to another.

Kimberley ‘Bo’ Watson,
Kimberley Dreamtime Adventure Tours

“I believe that the only way we’re going to move forward is to be one voice. You know when you’re just one person you’re just a little voice. The more people you put together the louder the voice becomes and the more power you have to change anything and everything.”

Neville Poelina,
Uptuyu Aboriginal Adventures



Photo: Damien Jacobsen



APPENDIX



MAJOR ACHIEVEMENTS

- 750 overall publications
- 523 end-user publications
- Collaboration with 135 SMEs
- 406 events to share our learnings attendees by 11,493 stakeholders
- 2013 CRCA Excellence in Innovation Award
- Created Remote Australia Online
- Created Remote Australia Online Atlas
- Trained and employed over 200 ACRs
- Development of the world-leading PPMS
- Most comprehensive study ever done on Aboriginal and Torres Strait Islander art sector
- Largest and most comprehensive study ever done on remote Aboriginal and Torres Strait Islander mobility
- 36 Graduate students

RESEARCH



KEY FACTS AND FINDINGS FROM CRC-REP RESEARCH THAT CONTRIBUTE TO A BETTER UNDERSTANDING OF THE ECONOMIC PARTICIPATION DRIVERS IN REMOTE AUSTRALIA:

Aboriginal and Torres Strait Islander art sector

- Only 10% of total art centre sales were online.
- Nearly 90% of all artworks sold for under \$1,000.
- The average price of paintings has halved since the peak in 2005.
- About 70% of funding for small art centres comes from grants.
- Over 14,000 Aboriginal and Torres Strait Islander people are working as artists.
- Around 70% of Aboriginal and Torres Strait Islander artists are women.
- Only 5.4% of artists receive what could be called a wage – around \$100,000 or more over their careers.
- Art centre leaders are confident about the future – expecting sales to increase 15% over the next five years.
- Three-quarters of Aboriginal art sales are to Australian buyers.
- The largest foreign sales of Aboriginal art are to Europeans and North Americans.
- 'Finding new markets' was identified as a major roadblock to product development.
- Incentives to reinstate art in Self-Managed Super Funds would stimulate demand.

Transport in remote Australia

- People in remote areas travel 30,000–40,000 km per year locally, more than double the national average of 12,000–16,000 km per year.
- On average, 30% of household expenditure goes on transport in very remote communities, compared to a national average of about 16%.
- Transport issues of access, safety and affordability impact negatively on remote communities and enterprises.
- In very remote communities, 18% of people do not have access to regular transport.
- In very remote communities, the road casualty rate is almost eight times the national rate.
- For the most disadvantaged families in very remote communities, the transport weekly budget can be up to four times the national average.
- Aboriginal and Torres Strait Islander people represent 90% of people affected by transport inequalities.
- In remote Australia, there is one registered vehicle for every 13 people compared to one for every 1.2 people in non-remote areas.

Population and labour mobility

- In Central Australia, people undertook an average of 19 trips per year, driving on average 865 km per month to access services.
- Employment opportunity falls off with remoteness.
- Aboriginal and Torres Strait Islander people living in remote communities are very unlikely to be employed if they do not have a current driver's licence. Of persons aged 17 and over, only 41% have a driver's licence.

- 54% of people with a driver's licence are employed, compared to just 23% for those without a licence.

Remote Australia job market

- There are real jobs in remote Australia.
- 90% of more than 50,000 jobs in remote Australia are taken by non-Aboriginal and Torres Strait Islander people.
- Qualifications are not pre-requisite to engagement in employment in remote Australia.
- 44% of all employees have not completed a Certificate or higher qualification.
- Similarly, 41% of all employees had not gone beyond Year 10 at school.

- The mining industry has a large pool of workers (36%) with no more than Year 10 qualifications.
- Long-distance commuting (LDC) is an important mechanism to provide employment in remote Australia.

Remote Aboriginal and Torres Strait Islander education

- Schools with attendance rates below 60% attract less funding than those with higher attendance rates.
- Schools with higher proportions of non-teaching staff get better results.
- Schools with more resources get better outcomes. Money matters.
- Money is a factor in the sum of inputs that contribute to higher levels of attendance.
- Remote communities lack the delegated authority to make decisions about how education might strengthen local aspirations and, by and large, resources remain controlled by the institutions of government.
- Allowing bilingual education would make schooling more culturally sensitive.

- Data shows that remote schools are failing and that in some cases, the gap is widening.
- Culturally relevant curriculum and learning styles improve education outcomes.
- Education outcomes are much better for those who learn about their own culture at school and who learn literacy in their own language as a stepping stone to English literacy.

Aboriginal and Torres Strait Islander tourism

- Aboriginal people often feel marginalised in the tourism industry.
- There is no national representation for Aboriginal and Torres Strait Islander people in tourism, nor in any state/territory except for Western Australia.
- Seventy-three per cent of Aboriginal and Torres Strait Islander tourism enterprises are part of cooperating enterprise groups.
- Around 69% of enterprises belong to a group of non-Aboriginal and Torres Strait Islander tourism enterprises.
- For 92% of survey participants, cooperation is either very important or important for the competitiveness of their enterprises.

- The top three most commonly cited challenges faced by remote tourism enterprises were 'seasonality', 'high costs of business' and 'improving business revenue', each experienced by three-quarters or more of the enterprises interviewed.
- Eighty per cent of enterprises cooperate with other Aboriginal and Torres Strait Islander tourism operators; 75% want to cooperate more.
- For 66% of respondents, cultural relationships are important for building their business relationships.

Aboriginal and Torres Strait Islander wellbeing

- Aboriginal and Torres Strait Islander people with stronger attachment to their culture fare better on a range of outcomes.
- Aboriginal priority areas of culture, empowerment and community play key roles in education, employment and health through a series of direct and indirect pathways.
- Practising culture builds empowerment and strengthens spirituality, both of which in turn improve wellbeing.

- Optimal wellbeing occurs when there is strong cultural identity in combination with control and achievement at a wider societal level, such as through successful engagement in education, employment and health.
- Recommendations for wellbeing improvements: involve Aboriginal people in research; operate on a strengths-based model rather than focusing on deficits; and focus on interrelationships.
- Kinship, family, land and spirituality are cultural themes critical to wellbeing.
- Culture, community and empowerment are more closely related to health and wellbeing than education, work and money.
- Strengthening culture and building empowerment underpin success in education, employment and health and strengthen wellbeing.
- Integrating services for physical and mental health problems improves wellbeing.
- A holistic approach to health services is needed.

Commercialisation of bushfoods and traditional custodians interests

- A national register of traditional land custodians is required, so that prospective agribusinesses will know whom to contact to negotiate terms.
- There is currently no legal requirement for commercial growers to consider the interests of Aboriginal and Torres Strait Islander peoples.
- Most bush food developers are private enterprises not subject to research ethics conditions.
- In Aboriginal culture, gathering and consumption of bush foods occurs within a holistic context of social structures, belief systems and survival strategies.
- Aboriginal Traditional Knowledge has played a significant role in informing the development of the commercial bush tomato industry.
- Market interest in bush tomato presents an opportunity for enterprise development in remote regions of Australia, and in particular for small business opportunities that will benefit the custodians of traditional knowledge about the plant.

Energy

- Households that adopted subsidised solar hot water and photovoltaic systems reduced their electricity usage immediately after adoption by 10% and 34% respectively.
- Users of remote enterprise buildings can save up to 40% in energy consumption by adopting simple strategies.
- As the cost of conventional cooling increases, community infrastructure is expected to become more important for maintaining liveability in remote Aboriginal communities.

Impact of resource sector on local communities

- The wealth generated from mining is not distributed evenly back to or within the regions where mining occurs.
- Early community planning is needed to deliver enduring community value from mining.
- Considerable LDC income is flowing into source communities, but potential economic benefits are not being fully realised.
- Fly-in/fly-out workers engage in the resident community to different degrees; increasing reliance on LDC may increase longer term vulnerabilities.

Pathways to employment for remote Aboriginal and Torres Strait peoples

- Need to support learning opportunities that are voluntary and are facilitated rather than delivered.
- Increase the availability of opportunities that support individuals to make informed choices about the economy and their own economic engagement and participation.
- Support learning experiences and work roles that recognise the value of both local traditional and contemporary knowledge and build on the inherent strengths of individuals.
- More support is needed for enterprise growth stages through financial capital or loan opportunities and less restrictive funding criteria models.
- More opportunities for information sharing will support Aboriginal entrepreneurs to make informed decisions.

Utilisation and Commercialisation

- Contribution to a House of Representatives inquiry on fly-in, fly-out working.
- Contribution to the Productivity Commission's analysis of Geographic Labour Force Mobility.

- Utilisation of findings from the Enduring Community Value from Mining project by the ABC in their television series, Flying miners.
- Traditional owners of Spinifex Country visited and documented over 650 sites through the Aboriginal Cultural Enterprise project.
- Facilitation of establishment of a partnership to develop a new bushfood retail business.
- Provision of advice to governments, service providers and Leigh Creek locals when the closure of Alinta Energy's coal mine was announced.
- Utilisation by partners of research findings from the Aboriginal and Torres Strait Islander Art Economies to develop new tools to aid financial management and marketing.
- Use of PPMS technology by a cattle station to minimise weight loss from their cattle and adjust stocking rates.
- Thousands of new bush tomato plants grown on Aboriginal country and on commercial farms.
- Three jurisdictions and parts of the Catholic, Independent and Government sectors seeking to implement learnings from the Remote Education systems project.

Education and training

- 36 graduate students.
- 5 Honours students completed with First Class honours.
- Student awarded prestigious Aurora Indigenous Scholars Scholarship.
- Over 200 ACRs trained.
- ACRs securing work after being trained and employed by CRC-REP.

SME engagement

- 135 SMEs directly engaged in our research projects through Advisory Groups, supervision of students, etc.

Inventions

- Cloud-based precision pastoral management decision-making software was developed and licenced to a pastoral technology supplier.

International engagement


- Collaborations with countries: Canada, India, New Zealand, South Africa, Thailand, Vietnam, United Kingdom, United States, South American countries and the Sami nations of northern Europe.





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