



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

Challenge and response

Much of Australia's wealth is created in our remote regions, yet many of the people who live there are excluded from the economy. The impact of this on the Indigenous population in particular is acknowledged by the Council of Australian Governments (COAG) as a national policy priority through the National Indigenous Reform Agreement (Closing the Gap).

The CRC-REP will be a collaborative research platform that works with communities, businesses and people in remote regions of Australia to systemically investigate and provide practical responses to the complex issues that drive economic participation. It will use the Desert Knowledge CRC's (DKCRC) networks, unique and locally relevant methodologies, core knowledge and management systems.

Approach

CRC-REP is mainly a 'public good' CRC with a multidisciplinary research focus on social sciences.

There is very strong support across governments, industry and communities in remote Australia for tackling this problem, as CRC-REP's list of 60 partners shows. They include:

- COAG members (Australian, NT, Qld, WA and SA Governments)
- Aboriginal organisations and communities
- non-government organisations
- research providers
- private businesses and industries.

Impacts

Robust modelling estimates the impacts from CRC-REP's research will be transformative, with a return on investment of 1.71. Within 15 years the impacts will include:

- Over 2,295 jobs for Aboriginal people
- Savings in welfare payments of \$160 million
- Additional profitability in remote pastoral industry of \$292 million
- An additional \$500 million in economic benefit from higher education levels over the working life of remote students
- Improved educational and health standards of residents in remote regions
- Reduced social and economic disadvantage
- Increased health and wellbeing and decreased levels of crime and domestic violence

Research excellence and innovation will address all of the National Innovation Priorities by using cross-disciplinary, cross-cultural and inclusive teams, leading experts and soft-systems methods.

Research Program 1 – Regional Economies: strengthening the economy of remote regions

This research program will build robust regional economies throughout remote Australia through our partners in government, industry and communities. This will provide the sustainable employment and enterprise opportunities vital to increasing the level of economic participation for remote Australians.

Research Theme 1.1 – Mobility and labour markets

This project will address the statistical failure of ABS data to count highly mobile Aboriginal people. The first stage of the research will sample micro-scale mobility in settlements and visually present it in a predictive geographic information system, which will lead to improved service delivery. Training Aboriginal people living in remote locations to undertake this research will enhance future ABS data gathering. The second stage will focus on mining labour markets associated with at least four case study communities. The research will develop a model of employment associated with the mines.

Research Theme 1.2 – Maximising the regional impact of mining investment

This project will analyse benefits flowing from mining and how these can be translated into a flow of enduring benefits to communities and SMEs during and beyond the mine's life. It will generate strategies that remote communities can use to deal with sudden shocks and global changes. Firstly, we will develop a systems understanding of the size and flows of benefits and costs generated by mining (and related processing). Spatial and economic modelling will be used to develop a predictive model of the mines' impacts. Secondly, we will develop new methods and an evidence base to prepare communities affected by mining operations to manage risk and become more resilient.

Research Theme 1.3 – Climate and energy futures

This theme will develop regional strategic plans for dealing with climate change. These include health preparedness, infrastructure investment for lower greenhouse gas emissions, comfortable and healthy living conditions and more prosperous and sustainable settlements. The first research focus will be on strategies to manage climate change impacts, and the second research focus will be on energy security, which is critical in remote settlements, where reliance on fossil-fuel generation plants is normal. We will explore moves toward distributed energy generation built on hybrid fossil fuel and renewable power technologies (4).

Outputs

The outputs of the Regional Economies Program will include:

- Predictive model of remote area micro-level mobility for service delivery and labour planning
- Data on the size and flows of costs and benefits generated by mining operations
- Models on how to maximise the regional impact of mining
- Case studies and methods for communities to manage risks and become resilient over the lifecycle of a mining operation
- An input-output model of remote Australia
- Case studies and pathways to alternative climate change and energy futures
- At least 7 post-graduate students; 30 Aboriginal people trained as paid field researchers; 5 honours, VET or vacation students.

Research Program 2 – Enterprise Development: building remote enterprises to provide jobs and livelihoods for people living in remote regions

This program will create successful models for MSMEs that are appropriate to remote locations and inclusive of Aboriginal culture. It will facilitate their survival and growth in the long term so that they can employ more people in remote Australia, providing the 'engine room' for jobs and livelihoods. It will address barriers to growth, such as distance from markets, fragile or faulty supply chains and the scope for efficiencies to overcome high production costs. In consultation with our end-user partners, this program will focus on the following themes:

Research Theme 2.1 – Economic participation from cultural knowledge

This theme will provide Aboriginal communities and existing MSMEs with the knowledge, information and data to develop new business opportunities built around non-exploitative commercialisation of cultural knowledge (20). This theme will apply whole-of-value-chain research and market analysis to Aboriginal art and tourism within a sustainable livelihoods framework.

Research Theme 2.2 – Technology and innovation transforming remote businesses

Remote businesses can be slow to adopt technological innovations from outside. This theme will use two specific projects as case studies to map and address the economic, business and social issues that both hinder and assist technology adoption and innovation in remote regions:

- **Precision Pastoral Management Tools** – will develop new management tools that integrate precision animal data with precision spatial data to match livestock performance to environmental conditions for more efficient pastoral management.



- **Plant breeding** – will investigate the propagation of bush tomatoes in a culturally appropriate way as a model for other commercially valuable plant varieties such as Kakadu plums, bush bananas, desert yams and desert truffles.

Outputs

The outputs of the Enterprise Development Program will include:

- New management tools for more efficient and precise pastoral enterprise management.
- A model of the development of commercially valuable plants that are acceptable to Aboriginal people and culture that can be applied to a wide range of prospective plant species
- Effective value chain models for Aboriginal art and tourism, harnessing new market opportunities.
- Models of new business opportunities for remote Aboriginal people using cultural assets
- Training and mentoring packages
- At least 11 post-graduate students; 20 Aboriginal people trained as paid field researchers, 5 honours, VET or vacation students.

Research Program 3 – Investing in People: improving the education and training pathways for people living in remote regions

There are complex challenges in improving pathways for remote Australians through education and training to employment and enterprise development. Soft-systems approaches linked with the Sustainable Livelihoods Framework (SLF, as modified by Moran et al (18)) will be used to interpret the complex factors leading to chronic educational and employment disadvantage.

Research Theme 3.1 – The interplay between health, wellbeing, education and employment

Low education and poor health are linked to low rates of economic participation, particularly in remote Australia. Despite this, the impact of educational attainment on the health and wellbeing of Aboriginal people has received little research attention (12). Communities that differ in their resilience and vulnerability will be compared over time to examine what characteristics of education and employment achieve the greatest net gains for health and wellbeing.

Research Theme 3.2 – Pathways to work and enterprise

This project will build a picture of the system that supports pathways into work and enterprise, analysing the connections between parts of the system, the behaviours that influence its effectiveness and the areas where specific improvements could be made that enhance the system as a whole.

Research Theme 3.3 – Remote education

This research theme will identify how education systems can be redesigned to better suit the needs of the communities and stakeholders in remote regions by examining demand (what students, carers and the local economy need), supply (what systems need to provide, including better staff recruitment and retention), policy issues and alternative delivery models.

Outputs

The outputs of the Investing in People program will include:

- An assessment of the interrelationships and interplay between education, employment, health and wellbeing including the effectiveness of targeted interventions.
- Systemic understanding of effective pathways to work and enterprise.
- Education models that identify strategic interventions and strategies to improve the remote education system.
- At least 7 post-graduate students; 20 Aboriginal people trained as paid field researchers, 5 honours, VET or vacation students.

