

Backing Territory Research

Research Priorities for the Northern Territory
2009 - 2015



EXECUTIVE SUMMARY

Backing Territory Research

Research priorities for the Northern Territory to guide government investment and decision making in research and innovation

During 2007 the Northern Territory Research and Innovation Board, an advisory board of government, facilitated the development of *Backing Territory Research* based on written and oral submissions to the discussion paper, *A Research Framework for a Better Territory* and feedback from forums held in Alice Springs and Darwin. The full report *Backing Territory Research* is available at www.research-innovation.nt.gov.au.

Vision

Northern Territory research priorities will promote research and innovation that draw upon our strengths to build a prosperous and sustainable future where wealth and opportunity are shared by all Territorians.

Northern Territory research priority objectives

The objectives for the development of research priorities for the Northern Territory guide government investment and decision making in research and innovation by:

1. ensuring a strategic basis for decisions in research investment based on areas of comparative advantage, emerging priorities, opportunities and threats;
2. driving the development of research and innovation critical mass and collaboration both within the Northern Territory and with other Australian jurisdictions and with international neighbours;
3. maximising the efficiency and effectiveness of research investment in driving economic growth, environmental sustainability and social welfare; and
4. leveraging co-investment from the Federal Government, industry and other sources of funding by aligning priorities where appropriate.

Comparative advantages

The Northern Territory enjoys the following comparative advantages, which support opportunities for the active involvement and benefit of Territorians in quality research and innovation:

- Tropical and Desert knowledge and expertise
- Indigenous knowledge, culture and expertise
- A healthy natural environment
- Proximity to South East Asia
- A culture of collaboration.

These can be built on and promoted when designing research projects, attracting expertise, research partners and co-investors to the Territory.

Theme 1 STRONG COMMUNITIES

Understand the interplay between culture, health, education, employment and economic development in order to build strong communities and enable families and individuals to lead productive and fulfilling lives.

Priority 1.1

Achieving and maintaining good health

Good health underpins the well being and quality of life of all Territorians. Preventing ill health and improving mental and physical health leads to more productive fulfilling lives.

While Indigenous population numbers are increasing in the Northern Territory, Indigenous health, despite gains made in some areas, continues to lag behind the remainder of the population. The life expectancy and quality of life for Indigenous Territorians will be improved by research that reflects health, equity and social justice.

Our stable political climate, developed economy and proximity to neighbouring tropical regions invites innovative research focused on infectious diseases and tropical health issues.

Priority goals

- *Achieve healthy and safe early years*
- *Improve Indigenous health*
- *Improve social and emotional wellbeing*
- *Prevent and better manage chronic disease*
- *Prevent and better manage the treatment of substance abuse*
- *Anticipate, plan for and respond to emerging infectious diseases and address tropical health issues in northern Australia and other regions.*

Priority 1.2

Creating an effective learning environment

Indigenous Territorians represent almost 30 per cent of the Northern Territory's population, with Indigenous youth the fastest growing age cohort. Improving literacy, numeracy and job readiness to address the need for a more highly skilled and

stable workforce, including assisting Indigenous Territorians from education and training to paid employment, are essential outcomes.

Priority goals

- *Improve capacity and quality of education delivery*
- *Improve outcomes in Indigenous education*
- *Identify pathways from education and training to employment.*

Priority 1.3

Understanding and supporting community development

Supporting community development involves improving our understanding of how social contexts, social processes and economic, educational and other opportunities impact the stability and health of communities. It encapsulates issues such as housing, personal safety, integration of service delivery, governance structures and developing livelihoods and enterprises that take advantage of place-based resources and Indigenous knowledge.

Priority goals

- *Identify and manage the social determinants of a healthy, strong community*
- *Develop efficient and effective community governance structures*
- *Improve and integrate service delivery*
- *Sustain and maximise benefit from cultural and artistic heritage and knowledge*
- *Develop innovative approaches to economic development in remote Indigenous communities.*



Theme 2 ECONOMIC DEVELOPMENT

Forecasting the economic outlook, maximising the benefits from innovation and enhancing our ability to anticipate and respond to challenges and opportunities in our regional, international and physical environment that lead to sustainable economic growth and capacity in the Northern Territory.

Priority 2.1

Understanding economic opportunities and constraints

Sustainable, long term economic growth is vital to keep the Territory moving ahead and to support continued improvement in our quality of life. Understanding our economy includes working closely with industry to identify the key drivers of success, future growth potential and opportunities, as well as the extra investment required such as training, staff retention and infrastructure.

Priority goals

- *Understand our economy including demographic implications*
- *Improve our ability to forecast opportunities and constraints in developed and emerging industries*
- *Enhance Indigenous livelihoods and enterprise*
- *Understand the existing economic opportunities and constraints in Indigenous communities, in order to align outcomes more closely to mainstream economy*
- *Understand the capacity and potential for small and medium sized enterprises to engage in research and development.*

Priority 2.2

Developing enabling technologies and frontier industries

Developing enabling technologies and fostering frontier industries will require a focus on improving existing industry efficiency and the development of new industries, which capitalise on our comparative advantages. Areas where the Territory might expect results include information and communication technology, transport links, housing construction, renewable energy systems, biobased industries and biotechnology applications, and growth of world class niche industries using innovative technologies.



Priority goals

- *Improve enabling technologies and infrastructure for connecting urban, regional and remote areas*
- *Develop appropriate construction technologies for our tropical and desert climates*
- *Identify and forecast opportunities in areas of defence and biotechnology*
- *Develop clean, renewable energy systems suitable for tropical and desert centres and communities.*

Priority 2.3

Developing sustainable industries based on natural resources

The Northern Territory is rich in natural resources embedded in a healthy environment, giving the opportunity to establish sustainable industries that use and market natural resources and increase opportunities for Indigenous employment. Primary industry, mining and tourism are well established in the Northern Territory and research will focus on continual improvement in addition to developing new industries. Research will ensure our unique flora, fauna and marine environments are managed sustainably to meet the needs of tourism, recreation, bioprospecting and industry.

Priority goals

- *Identify and develop optimal processes for primary production and marketing*
- *Identify and develop systems for sustainable production through aquaculture and tropical fisheries*
- *Identify and develop systems and markets for sustainable use of native plants, animals and ecosystems*
- *Identify new crops and varieties suitable for our desert and tropical climates*
- *Identify and develop optimal processes for mining and mineral exploration and marketing.*



Theme 3 SUSTAINABLE ENVIRONMENT

Transforming the way we use our land, water, mineral and energy resources through a better understanding of human and environmental systems and the use of new technologies to achieve sustainability.

Priority 3.1

Achieving an environmentally sustainable Territory

The Northern Territory's natural landscapes are largely undisturbed, with the world's largest intact savanna woodland extending across its borders. It provides a basis for industry whose sustainability will depend on a better understanding of this environment and on application of new technologies to manage and protect its components. We need to develop more sustainable land and water management practices, protect our fragile soils, respond to climate change, and understand how these measures are likely to affect production systems and communities in both the short and long term.

Priority goals

- *Understand the diversity, distribution, status, management needs and potential of the Northern Territory's terrestrial and aquatic biological resources*
- *Ensure the maintenance of ecosystem services and*

healthy environments including water use and allocation

- *Record and integrate Indigenous knowledge systems into conservation and management practices*
- *Anticipate, plan and respond to the impact of climate change.*

Priority 3.2

Safeguarding the Territory

This priority focuses on a range of research activities relevant to protecting the Northern Territory from pest and disease and to plan and respond to natural disasters.

Priority goals

- *Protect the Northern Territory from invasive pests and disease*
- *Anticipate, plan and respond effectively and efficiently to natural disasters.*

Criteria to determine priority

Research addressing these priorities will be cross-checked against the following criteria to further ensure the Territory gains maximum benefit from its research investment.

1. The capacity of the Northern Territory to capture benefits of the research
2. The potential of the research to contribute to the long term vision of *Backing Territory Research*
3. The potential of the research to contribute to stability through the development of stronger communities
4. The effect of research on Indigenous livelihoods and wellbeing
5. The potential of SME to contribute to research priorities
6. The degree to which appropriate partnerships/collaborations are formed
7. Realise the potential to address more than one priority by crossing disciplinary boundaries and actively developing pathways to application.

It is acknowledged that not all research reflects all of the criteria listed above.





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