

PhD Opportunity: Pathways to nature-based enterprise: Enhancing biodiversity protection and livelihoods in Northern Australian rangelands



The Research Institute for Northern Agriculture ([RINA](#)) is seeking applicants for an exciting PhD project that will investigate practical ways northern beef producers can protect biodiversity on their properties and engage with nature-based markets such as the Nature Repair Market. This project is an exciting opportunity to inform practice change on-property and help producers to make more informed decisions around protecting biodiversity.

Scholarship and financial support:

- A stipend of \$44,190/year for 3 years (open to Australian citizens/residents or New Zealand citizens, for domestic students), tax exempt
- University relocation allowance of up to \$2,000 may be available

About the project:

The Australian Parliament passed the Nature Repair Act in 2024, opening the newest of a number of nature-based markets where landholders can potentially gain economic benefit for protecting biodiversity and other aspects of natural capital on their property. The rangelands make up over 80% of the Australian land area, and harbour important natural values, including biodiversity. In the northern rangelands, biodiversity values are particularly significant, and many producers are keen to continue to take advantage of nature-based economies to help protect them. However, it is not clear in the northern rangelands as to what management strategies would make most impact in terms of biodiversity or where these strategies should/could take place.

This project is a collaboration between CDU and CSIRO and the pastoral industry and focuses on rangelands of the Northern Territory and northern Western Australia. The PhD student will be supervised by an interdisciplinary team of agricultural scientists, economists and ecologists, giving exposure to the networks, knowledge and resources of both organisations. The PhD will use information about the impacts of cattle production on threatened species to identify strategies (e.g. exclusion fencing, waterpoint management, etc.) that are most effective at protecting and enhancing natural values, including biodiversity. The student will also conduct economic analyses to understand the cost and potential return from nature-based markets and any other economic benefits (e.g. increase in productivity).

About you:

- You have a research background (Honours or Masters) in environmental science, conservation biology, agricultural science or economics, or similar, and bring a high level of academic merit consistent with RTP stipend scholarship requirements
- Hold an Australian driving license or the capacity to obtain one
- Would ideally be based or willing to relocate to Darwin, other locations possible by negotiation
- Can work independently with a high level of initiative

Benefits to you:

- Receive a generous stipend and support for project costs
- Receive quality supervision by CDU and CSIRO
- Play an integral role in a highly collaborative multidisciplinary research team
- Contribute to research with real-world impact
- Access to Student Support Services and Wellbeing Support Program
- Work with a University committed to changing people's lives for the better through training, education, and research

Selection criteria:

- First Class Honours, MSc or equivalent containing a substantial research component in a relevant field such as environmental science, conservation biology, agriculture, animal science, economics/business or similar field
- Must meet the RTP stipend requirements, including being either an Australian permanent resident or citizen, or a New Zealand citizen, with intention to be a domestic student

How to apply:

Email an expression of interest to Beth Penrose (beth.penrose@cdu.edu.au), including:

- A curriculum vitae, including a list of any peer-reviewed publications, conference presentations and relevant work and/or research experience
- A brief statement, not exceeding 500 words, describing your background, research experience and interest in this research project/area
- Names and contact details of two academic referees

Application closing date: Midnight 7 November 2025

Commencement date: Early 2026

Supervisory and Advisory Team: Beth Penrose (CDU), Brett Murphy (CDU), Daniel Grainger (CSIRO)

Enquiries: Associate Professor Beth Penrose (beth.penrose@cdu.edu.au, 0436 839 662)

Diversity and Inclusion: At CDU, we actively celebrate our diversity. We innovate, embrace new ideas, and act with courage and kindness. We're about what we can give to the world rather than what we take, and we believe in the transformative power of education. We work hard to make sure every member of our university community feels that they truly belong. Understanding that it is through our focus on our people and leveraging our differences that will make CDU the most connected university in Australia, we are striving to ensure that our culture and our community are inclusive of all our staff, students and visitors. We are committed to maintaining a culture where everyone feels respected, safe, encouraged to speak up and supported in achieving their professional goals. You make CDU. And we want you to be exactly who you are.