

## PhD opportunity: Impacts of feral animals on wetland and river health in Arnhem Land



The Research Institute for the Environment and Livelihoods (RIEL) is seeking applicants for an exciting PhD project that will examine the influence of feral animals on water quality and carbon export in riverine and wetland ecosystems across Arnhem Land. This project is a rare opportunity to conduct research with the potential to inform environmental management, while working in one of the world's most ecologically and culturally significant landscapes.

### Scholarship and financial support:

- An [Australian Government Research Training Program \(RTP\) scholarship](#) valued at \$34,190/yr (from 2025, indexed annually and tax exempt) for 3 years full time from commencement (open to Australian citizens/residents or New Zealand citizens, for domestic students).
- A top-up scholarship of \$10,000/yr (tax exempt) for 3 years full time.
- University relocation allowance of up to \$2,000 may be available.
- Generous research support for project costs through ARC Linkage grant.

### About the project:

Feral animals, including buffalo and pigs, are causing significant damage to freshwater ecosystems across Arnhem Land, a growing concern for local Indigenous groups. However, there are limited data on how feral animal activity affects water quality and carbon cycling in these ecosystems. It is expected that feral animals reduce dissolved oxygen, increase turbidity and nutrient levels, alter primary and secondary production, and cause carbon loss due to increased greenhouse gas emissions and downstream export.

The candidate will quantify the impact of feral animals on water quality and carbon cycling in a range of riverine and freshwater wetland ecosystems across Arnhem Land, with a particular focus on the lateral and longitudinal connectivity between impacted wetlands and rivers. The findings from this project are expected to contribute to the development of monitoring and assessment methods applicable to a range of nature-based market instruments.

The research will form part of a broader project funded by the Australian Research Council—*Transforming cultural and natural resource management workforce capabilities in Arnhem Land*—led by Charles Darwin University (CDU). The candidate will work within a multidisciplinary team that includes senior Indigenous advisors from the region, as well as researchers from CDU, the Australian Government’s Office of the Supervising Scientist, and other partner organisations. The project will include a team of local Indigenous co-researchers with whom the candidate will be working closely.

**About you:**

- You bring a high level of academic merit consistent with RTP stipend scholarship requirements.
- A research background in Environmental Science or similar field.
- Willingness and ability to conduct remote fieldwork.
- Ability to work independently with a high level of initiative.
- Interest in working closely and respectfully with Indigenous people, and willingness to actively participate in collaborative cross-cultural research.

**Benefits to you:**

- Generous stipend and support for project costs.
- Opportunity to work and travel to the remote and spectacular regions of the Northern Territory.
- Extensive training in sensor and database management, statistical modelling, water quality and carbon science.
- Develop skills in stakeholder engagement, working closely with land management organisations and Indigenous groups.
- Play an integral role in a highly collaborative multidisciplinary research team.
- Contribute to research with real-world impact, by helping to improve land management.
- 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 in environmental science, ecology, hydrology, or similar field.
- Prior experience in water quality monitoring, GIS and/or programming (e.g. R), or a willingness to learn.
- Demonstrated experience undertaking remote fieldwork beneficial.
- Cultural sensitivity and cross-cultural communication skills.
- 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 Dr Clem Duvert ([clem.duvert@cdu.edu.au](mailto:clem.duvert@cdu.edu.au)), including:

- A brief statement describing your background, research experience and interest in this project.
- A detailed CV, including details of publications (if any).
- Names and contact details of two academic referees.

**Application closing date:** 30 November 2024

**Commencement date:** Early 2025

**About the research environment:** RIEL is a Tier One institute that consolidates CDU's environmental research and postgraduate training. RIEL brings together around 50 scientists and as many PhD students (roughly one-third international) and provides a vibrant, multidisciplinary research environment with high-quality training opportunities.

**Supervisory Team:** The supervisory team will include Dr Clem Duvert, Dr Kaline de Mello and Prof Jeremy Russell-Smith, as well as external advisors from partner organisations.

**Enquiries:** Dr Clem Duvert ([clem.duvert@cdu.edu.au](mailto:clem.duvert@cdu.edu.au), 0424 631 059) or Prof Jeremy Russell-Smith ([jeremy.russell-smith@cdu.edu.au](mailto:jeremy.russell-smith@cdu.edu.au), 0447 200 927).

**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.