



**Northern Australia
Environmental
Resources
Hub**

National Environmental Science Programme

Prioritising threatened species in northern Australia

Start-up factsheet

The Challenge

Northern Australia's rich biodiversity is both nationally and internationally significant. The tropical north is home to hundreds of thousands of plant and animal species, many of which are only found in the region and some of which are threatened with extinction. However limited knowledge of the current distributions of threatened species across the region is a major impediment to effective management.

Northern Australia's environments are also under increasing pressure from invasive species, overgrazing, climate change and altered water and fire patterns, all of which threaten the north's valuable biodiversity. Additional challenges are still to be faced with increasing development in the region. It is therefore essential to understand the spatial distribution of this wide range of threats to help minimise their impact on biodiversity and boost the recovery of threatened species.

How will this research help?

This project will guide improved management and investment to reduce the impact of threats on threatened species and to bolster their recovery in high-priority areas of northern Australia. The project team will draw

on knowledge, data and expertise from a wide range of people to produce maps and modelling that will help support land assessments for future development, guide investments in conservation efforts and inform many other stakeholder activities. Researchers will work with those likely to use the outputs, such as government agencies, Natural Resource Management bodies and Traditional Owners, to ensure the project meets specific and broader needs.



The northern quoll (above) and butler's dunnart (top image) are both threatened species. Photos: Alaric Fisher. Next Page. Inappropriate fire regimes (left) and invasive plants (right) are major threats to biodiversity. Photos: Jaana Dielenberg (left) and Glenn Campbell (right)



What will the research deliver?

This project will:

- Map and model the distribution of threatened species and potential threats to these species
- Interpret this information to help direct management and prioritise investment
- Provide practical guidelines that enable stakeholders to apply this research in their everyday activities
- Identify high-priority areas of northern Australia where threatened species are found and enable better targeted land management
- Provide training so that maps can continue to be updated after project completion.

Who is involved?

The project will be led by Associate Professor Jeremy VanDerWal from James Cook University. Dr VanDerWal will be supported by researchers from James Cook University, Environmental Resources Information Network, Northern Territory Department of Land Resource Management, Western Australia Department of Parks and Wildlife, University of Western Australia, Griffith University, University of Queensland, Queensland Department of Science, Information Technology and Innovation, Queensland Department of Environment and Heritage Protection, and the Wet Tropics Management Authority.

Strong links with the Threatened Species Recovery Hub have been formed to deliver this research. The project closely aligns with a series of TSR and NAER Hub projects, and promotes sharing of data and expertise among the Hubs.

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