



Savanna, photo Michael Douglasses



Northern Australia  
Environmental  
Resources  
Hub

National Environmental Science Programme

## Identifying high-priority areas in northern Australia for threat abatement and species recovery

Wrap-up factsheet

### Key points

- This project coordinated a series of discussions to scope out and refine the objectives and methods for a multi-year project proposal on threatened species and ecosystems in northern Australia.
- A three year project *Prioritising Threatened Species in northern Australia* is based on this research and runs from July 2016 to June 2019, led by James Cook University's Associate Professor Jeremey VanderWal.

### Why is this research important?

Threat abatement and recovery planning, environmental impact assessment, and systematic conservation planning in northern Australia are among the processes inhibited by lack of information and explicit procedures to assist decision-making. Information on current species distributions is often not known or not described with the precision required for properly targeted management. We also have only a rudimentary understanding of the effects of specific threats on particular ecosystems and species, and of the relative effectiveness of actions in mitigating these threats. Consequently, it is presently difficult to confidently identify strategic priorities for mitigation of threats across northern Australia, and difficult to understand the impacts of new developments on the region's biodiversity at landscape scale. This project addressed this challenge by identifying how to best synthesise and model existing spatial information from disparate sources, including the experience of experts, and how to use this information in a structured way to guide future management and development decisions.



Feral buffalo, photo Sam Setterfield



## How did we undertake the study?

Two one-day meetings were held with the Department of the Environment and Energy in Canberra to canvass needs and views from diverse departmental units including the Terrestrial Threatened Species Section, Office of Threatened Species Commissioner, Parks Australia and ERIN. Representatives from CSIRO and the Atlas of Living Australia were also consulted. The first of these meetings was at the inception of the project in September 2015. The second, on 2 December 2015, briefed departmental officers of the outcomes of consultation workshops held in Darwin and sought their feedback on topics.

The two consultation workshops in Darwin were attended by diverse end-user organisations and technical experts with a broad range of expertise. Discussions included:

- Available data and models and their confidence levels
- Applications of raw data and priorities in environmental impact assessment and evaluation of development applications

- Potential users of raw and processed data, and required formats and accessibility
- Approaches for access to appropriate Indigenous knowledge and transfer of information from the research to Indigenous managers for the longer-term project
- How to best identify spatially-explicit priorities (hotspots) for investment to protect and restore threatened species and ecosystems
- How to best cross-reference threats and biodiversity features to identify portfolios of specific actions to benefit individual or grouped species and ecosystems
- How to best assess the adequacy of protected areas and other spatial management for conservation

All four meetings provided a comprehensive set of objectives, ideas and methods, in total providing a road map that has been incorporated into the proposal for a multi-year project.



Northern waterhole, photo NAER Hub

## Further information

This project was led by James Cook University's Professor Bob Pressey. Professor Pressey was supported by Jorge Alvarez-Romero (JCU), Sam Setterfield (UWA), Alaric Fisher (DLRM), Dave Pannell (UWA), Vanessa Adams (UQ), Mark Kennard (Griffith University), and Jeremy VanDerWal (JCU).

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