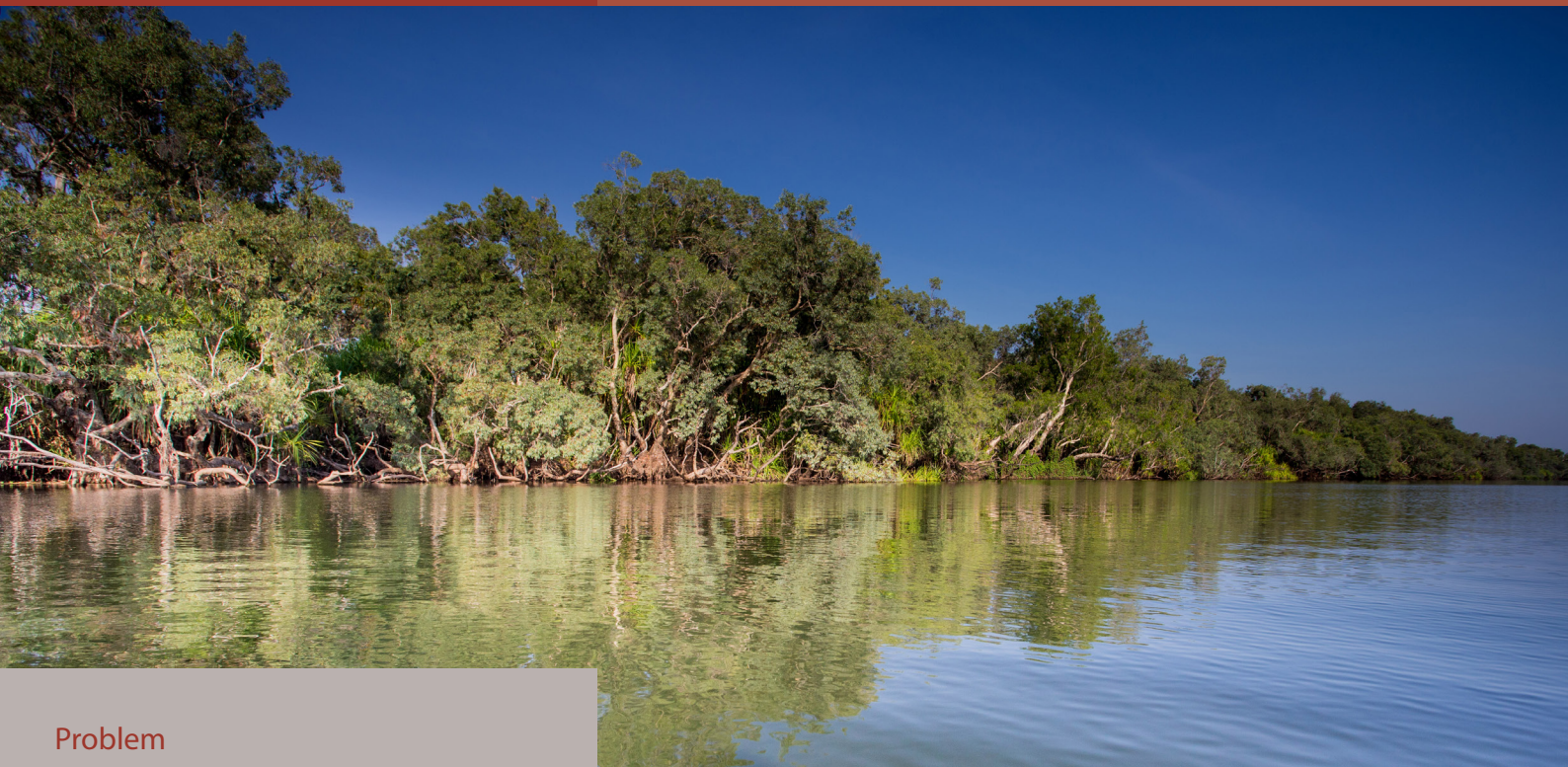


Identifying high priority areas in northern Australia for threatened species recovery



Problem

Northern Australia's biodiversity is significant nationally and globally, and provides important ecosystem services. However the north's biodiversity is in decline and continues to be threatened by many factors, including invasive animals, weeds, overgrazing, climate change, modified fire regimes and development uses of land and water.

It is essential to manage these diverse threats to minimise their impacts on species and ecosystems and promote the recovery of biodiversity. Management of threats is currently impeded, however, by patchy and uncoordinated data on threats, ecosystems and species.

We only have 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. Information on current species distribution is often not known or not described with the precision required for properly targeted management.

Consequently, it is presently not possible to confidently identify strategic priorities for mitigation of threats across northern Australia, nor to understand the impacts of new developments on the region's biodiversity.

What managers need

Threat abatement and recovery planning, environmental impact assessment, and systematic conservation planning are among the processes inhibited by lack of information and explicit procedures to enable decision-making by the Australian Government, state and territory agencies, Natural Resource Management bodies. Progress could be made by synthesising existing information from disparate sources, including the experience of experts, and using this information in a structured way to guide future management and development decisions.

Project objectives

A key goal of the project is to source data, expertise and methods to identify gaps in knowledge of threatened ecosystems and species, and of their interactions with threatening processes, that can be filled by subsequent research.

The project plans to produce a "road map" to develop a best-practice approach that will guide management actions across northern Australia to abate threats to, and promote recovery of, biodiversity.

This longer term objective aims to implement activities that will produce comprehensive data, models and guidelines for threat abatement and restoration of northern biodiversity.

Consultation

Consultation with the Australian Government (the Department of the Environment (including ERIN) and CSIRO), other research providers, State and Territory governments and Indigenous land management agencies will inform the project.



Key stakeholder discussions will cover project expectations and available data and models that could include:

- Spatially-explicit priorities (hotspots) for investment to protect and restore threatened species and ecosystems
- Cross-referencing of threats and biodiversity features to identify portfolios of specific actions to benefit individual or grouped species and ecosystems
- Assessment of the adequacy of protected areas and other spatial management for conservation
- 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 Indigenous knowledge and transfer of information from the research to Indigenous managers for the longer-term project

Outputs

A final report will be prepared that scopes potential future research opportunities and activities covering:

- Spatial analysis and modelling of existing threat, in terms of current and potential future distributions;
- Spatial definition of northern Australian ecosystems
- Spatial analysis and modelling of threatened species
- Profiles of ecosystems and threatened species according to the threats they face
- Review of approaches to interpreting project outputs for prioritisation, policy, and day-to-day decision-making.

National Threatened Species Strategy

The Australian Government's Threatened Species Strategy outlines an action-based approach to protecting and recovering our nation's threatened plants and animals.

The first five-year Australian Government sponsored Action Plan identifies key priorities including:

- Tackling feral cats
- Safe havens for species most at risk
- Improving habitat
- Emergency intervention to avert extinctions

This project will support the strategy's approach of science, action and partnership to achieve the long-term goal of reversing species declines and supporting species recovery. More information is available at: <http://www.environment.gov.au/biodiversity/threatened/publications/strategy-home>

Threatened Species Recovery Hub

The project also has strong links to the Threatened Species Recovery Hub. Vanessa Adams, based at the University of Queensland, will work as a co-investigator. The project will also establish collaborative links with other Threatened Species Recovery Hub researchers working in northern Australia.

This project is funded under the Australian Government's National Environmental Science Programme.

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