Progress Report SP 2019-069

Structured decision making for optimal feral herbivore management for biodiversity conservation in the Kimberley

Animal Science

Project Core Team

Supervising Scientist	Megan D Barnes
Data Custodian	Megan D Barnes

Project status as of June 14, 2022, 9:12 a.m.

Approved and active

Document endorsements and approvals as of June 14, 2022, 9:12 a.m.

Project Team	granted
Program Leader	granted
Directorate	granted

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M Barnes, J Kinloch

Context

Threatened species have variable exposure and susceptibility to threats and responses to management. Feral herbivore control is a cost-effective threat management strategy for conserving many threatened and endemic species in the Kimberley, particularly its small mammal fauna. It comprises a large part of the Kimberley work program. However, the efficiency and cost-effectiveness of this program could be improved by impact-focused spatial action planning to identify efficient spatially explicit management strategies that balance the conservation needs of multiple species while accounting for other funds and opportunities in that timestep.

Aims

- Apply structured decision making approach to identify cost-effective feral herbivore control strategies.
- Evaluate the costs and benefits of existing and proposed herbivore control strategies.
- Understand and characterise synergies and trade-offs among alternative management strategies for herbivore control.

Progress

- Feral herbivore data have been sourced from the Kimberley Region for the Ord River and Kurriji Pa Yajula Nature Reserves, Walyarta, Miluwindi and Purnululu Conservation Parks, Mitchell River, Prince Regent and Drysdale River National Parks and the Ord River Regeneration Reserve.
- Objectives, relevant metrics, operational constraints were collaboratively developed with regional staff in a workshop for each park and relevant datasets identified and shared.
- Spatial modelling to identify feral herbivore hotspots has been undertaken for all six parks.

Management implications

- The project utilises information and knowledge from recent annual control programs. Identification of feral herbivore hotspots and their likely impacts on threatened species has informed the development of alternative novel management actions. The results of this evaluation will improve the efficiency of future feral herbivore control programs and maximise benefits to key conservation values.

Future directions

- Finalise outcomes from structured decision making.