

You can't manage what you can't measure

A rangeland drought planning tool to estimate and anticipate the grazing pressure from unmanaged herbivores



Image: Cory Stenhouse

An innovative Western Local Land Services project aims to develop a tool to predict kangaroo movement and grazing pressure. This tool will be critical in allowing timely management of kangaroos for environmental health and farm productivity.

Grazing pressure and drought

Managing total grazing pressure is simultaneously one of the biggest challenges and most significant tools for land managers in building drought resilience and improving the condition of the property's resource base.

Grazing pressure from kangaroo populations is a key factor in the semi-arid rangelands of Australia.

Unsustainable kangaroo numbers can lead to overgrazing, damaged landscapes and may even accelerate the onset of drought.

During prolonged droughts there are mass die-offs of kangaroos due to thirst, starvation, disease and vehicle collisions, as starving kangaroos seek feed on table drains.

As part of the You can't manage what you can't measure project we are developing a model for a tool which would help landholders predict kangaroo populations at the property level and manage accordingly.

This project is supported by Local Land Services, through funding from the Australian Government's Future Drought Fund.



Australian Government
**Department of Agriculture,
Fisheries and Forestry**



You can't manage what you can't measure

Sustainable land management in Western NSW focuses on maintaining critical levels of groundcover to prevent soil erosion and maintain the diversity of annual and perennial species for landscape health, biodiversity and sustainable production.

Managing total grazing pressure is simultaneously one of the biggest challenges and most significant tools for land managers in building drought resilience and improving the condition of the property's resource base.

Understanding and managing total grazing pressure is the key influence on groundcover and sustainable land management, including both domestic stock and unmanaged herbivores like kangaroos.

Approaches to herbivore management are changing. Rather than relying on ad-hoc harvest approaches to manage kangaroo and rangeland goat populations, progressive landholders are implementing water-point control and fencing to better manage grazing pressure from herbivores to improve pasture condition.

However, the key drought planning issue remains a lack of knowledge of the density and location of unmanaged herbivores within management areas.

About the predictive tool project

Understanding and planning for grazing pressure at the property or paddock scale is key to managing semi-arid rangelands in preparation for drought and long-term landscape and economic resilience.

To help landholders address this issue, Western Local Land Services is leading a project to develop a prototype tool to help understand local kangaroo populations and better manage them.

The project is aimed at helping landholders better understand the movement and density of kangaroos at the local scale, as population estimates are currently only available at the harvest zone level.

The key work in this project involves:

- contracting researchers from the NSW Department of Primary Industries to develop a proof-of-concept model for predicting kangaroo density and resource use by kangaroos at a property or paddock scale
- testing the predictions of the models on a minimum of five properties in the Western region of NSW
- developing a range of communication tools to share the results of this work.

The proof-of-concept model could be further developed into a tool that primary producers could use to predict the movement and local density of kangaroos (and potentially other generalist herbivores).

We are working closely with landholders on five properties in Western NSW to develop the tool's concept. We hope that the tool will provide landholders with improved information which will help them manage the impact of kangaroo grazing at the paddock and property level.

It could mean a difference in days, or even weeks of kangaroos grazing pressure, better enabling land managers to maintain groundcover and improve long-term landscape, economic and drought resilience.

No single entity or individual has landscape scale management influence but primary producers as a collective do. However, they need tools that help them understand both the supply and demand aspects of grazing systems and support decision making in maintaining available and future resources.

For further information, visit www.lls.nsw.gov.au/kangaroos.



Working with the community

We are working closely with the Western NSW community to make sure that this work is relevant to their land management needs.

Landholders are represented on the project's advisory group and we are working with the community to test the model's predictions on five Western NSW properties.

Find out more

If you are interested in finding out more please contact Fiona Garland, Team Leader — Kangaroo Management (0467 731 824 or fiona.garland@lls.nsw.gov.au) or see the latest project update resources below.

Kangaroo management advice

www.lls.nsw.gov.au/help-and-advice/growing,-grazing-and-land/kangaroo-management

Kangaroo Management Taskforce website

www.kangaroomanagementtaskforce.com.au

Kangaroo management in NSW

www.environment.nsw.gov.au/Topics/Animals-and-plants/Wildlife-management/Kangaroo-management

www.lls.nsw.gov.au/kangaroos

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