TERRITORY NATURAL RESOURCE MANAGEMENT 2014 CONFERENCE

RANGELAND NRM alliance

The NRM Spatial Hub

Underpinning better management and decisions in the Rangelands.

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Northern Territory Government

NSW Government

mla MEAT & LIVESTOCK AUSTRALIA

SOUTH AUSTRALIA

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Stage 1 of the NRM Spatial Hub

A collaborative initiative funded in cash and in-kind by the Australian Government, Meat and Livestock Australia (MLA) , CRC for Spatial Information, Queensland Government and NRM Regional Bodies.

Stage 1 funded for 2yrs (Mar 2014-16).

$1.6m cash and 2.8M in-kind

A central element of the Rangelands NRM Alliance and 15 year blueprint of the Australian Rangelands Initiative.

Working directly will work with land owners and managers and NRM bodies to implement and demonstrate the benefits of next-generation spatial information systems, remote sensing, tools and data which may help land managers achieve sustainable production and ecosystem services outcomes.

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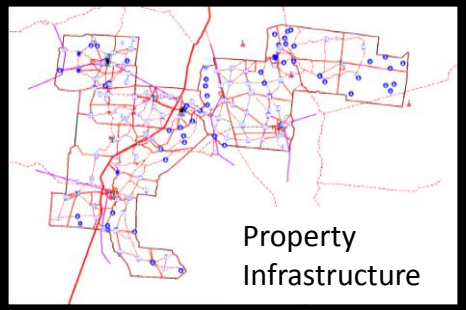
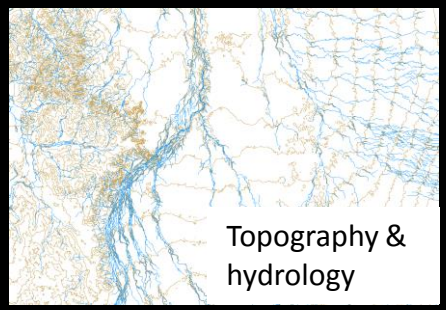
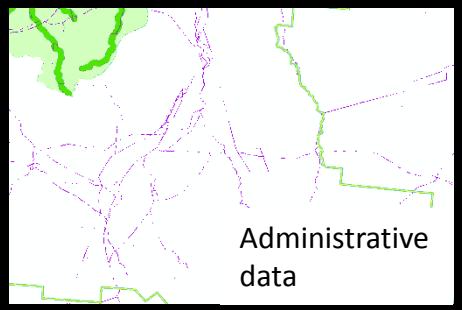


Property Infrastructure

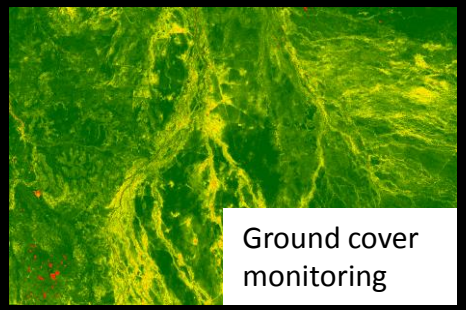


Topography & hydrology

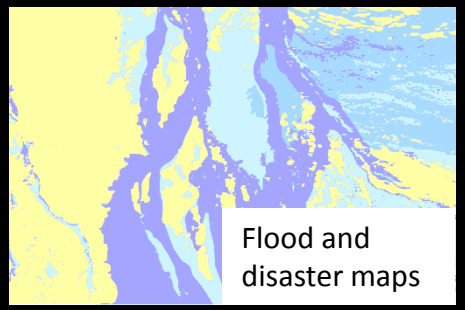


Administrative data

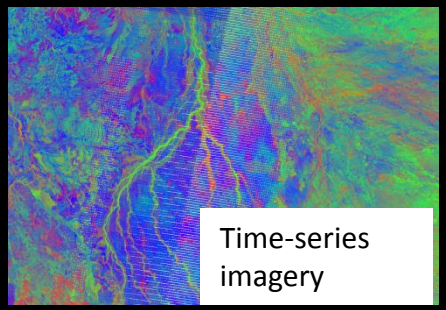
High Res' imagery



Ground cover monitoring



Flood and disaster maps



Time-series imagery

Enormous amounts of information within government, but how to landholders and managers take full advantage of the deluge in information?

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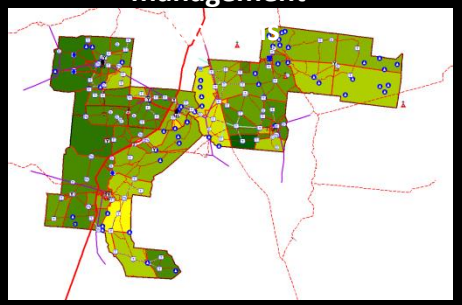
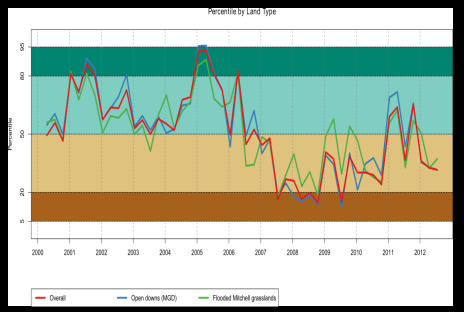
Very little interaction with Landholders Data

How do we give landholders the information tools they need?

Digital property plans and informed management



Tracking condition, productivity and reporting



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Stage 1. Major NRM Hub Components

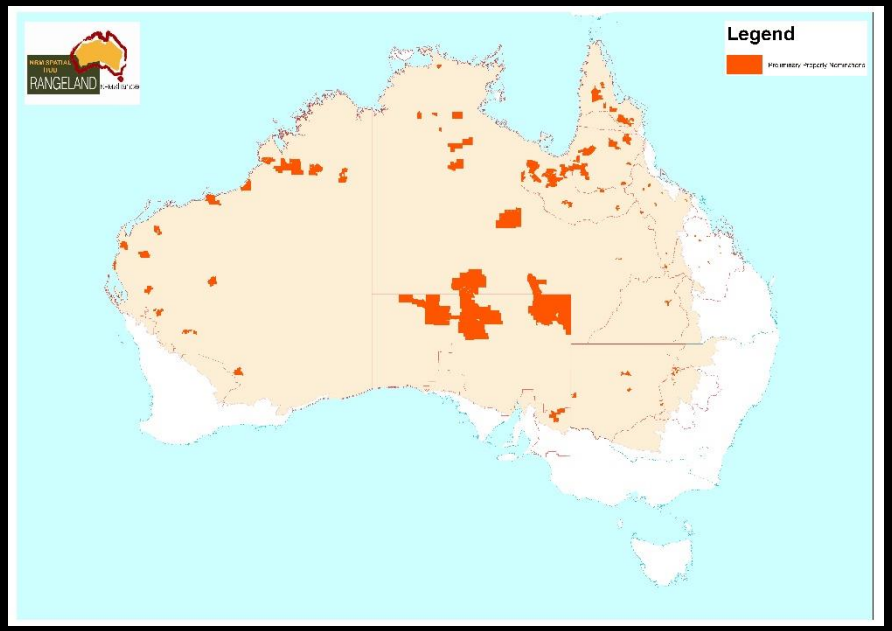
1. The development and demonstration of a scalable On-line Property Planning and Information System.

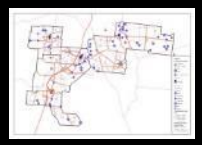
2. Demonstration and evaluation of current best-practice in the use of remote sensing for property planning and monitoring of productivity and land condition

3. Training and Extension, and coordination, information delivery, and support.

4. MLA funded review and assessment of the potential for utilising remote sensing of land condition data at a property scale – with the inclusion of fractional ground cover and also biomass, productivity, pasture growth models and grazing decision tools (eg safe carrying capacity) across the Australian rangelands ideally relative to the Land Types-Land Systems

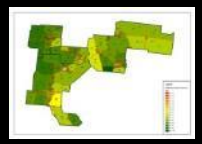
Demonstration Properties



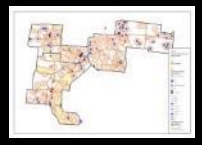


Infrastructure

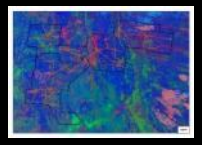
Land Types



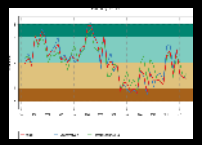
Ground Cover and Pasture Biomass Estimates



Water Distribution



Fractional Ground Cover



- 4+ large demonstration properties per region (min of 40 nationally) to have detailed digital property plans and grazing plans.
  - Inc. integration of remote sensing products into planning and management
  - Desktop estimation of Long-term CC
- On-property demonstration and evaluation of time-series remote sensing of land condition and productivity.
- property-level training program
- Sites established in each of the (14) regions will have the entire available Landsat/MODIS time-series processed to produce seasonal fractional cover products.
- Regional Extension Workshops Program
  - ~240 land managers

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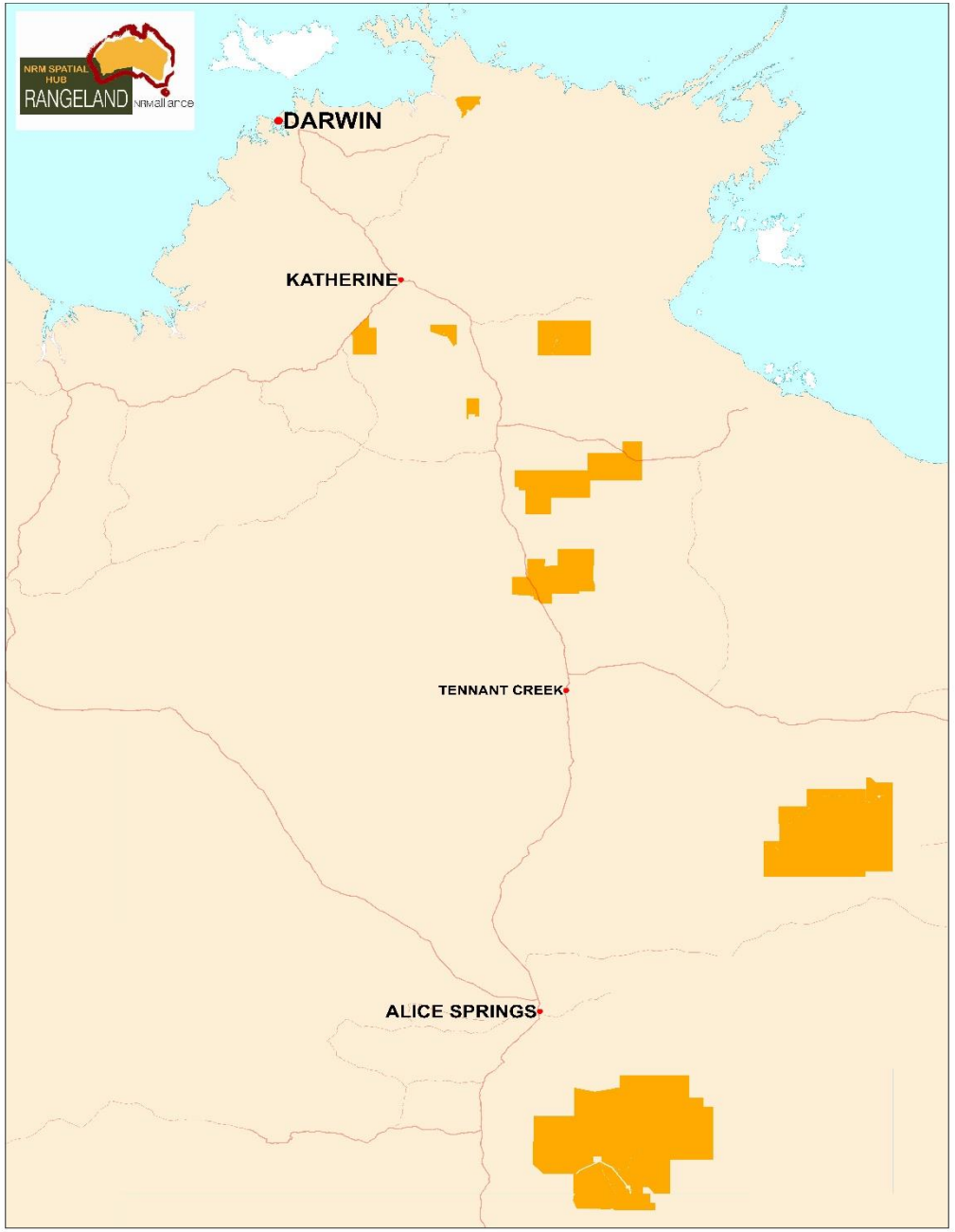

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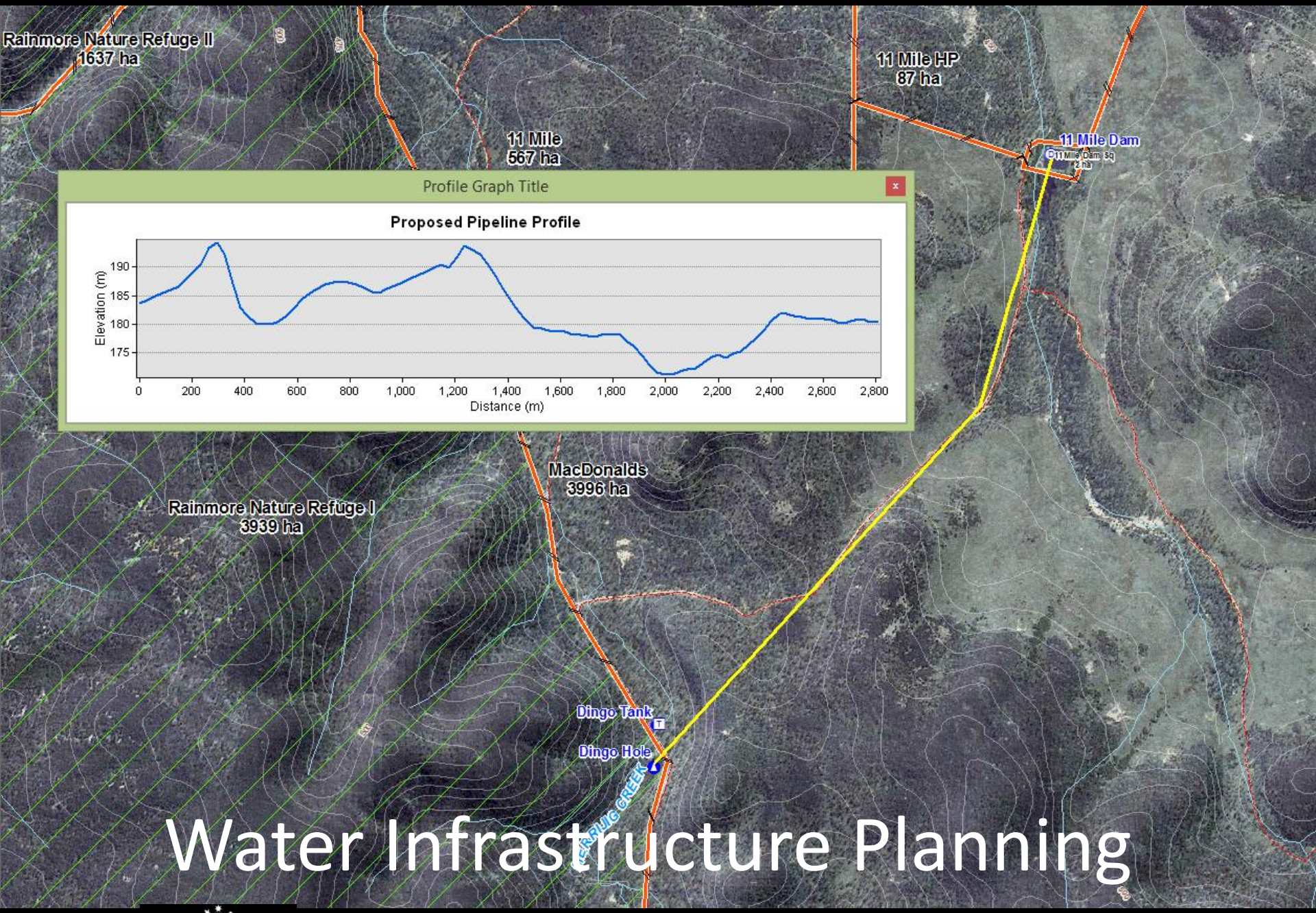

Water Infrastructure Planning

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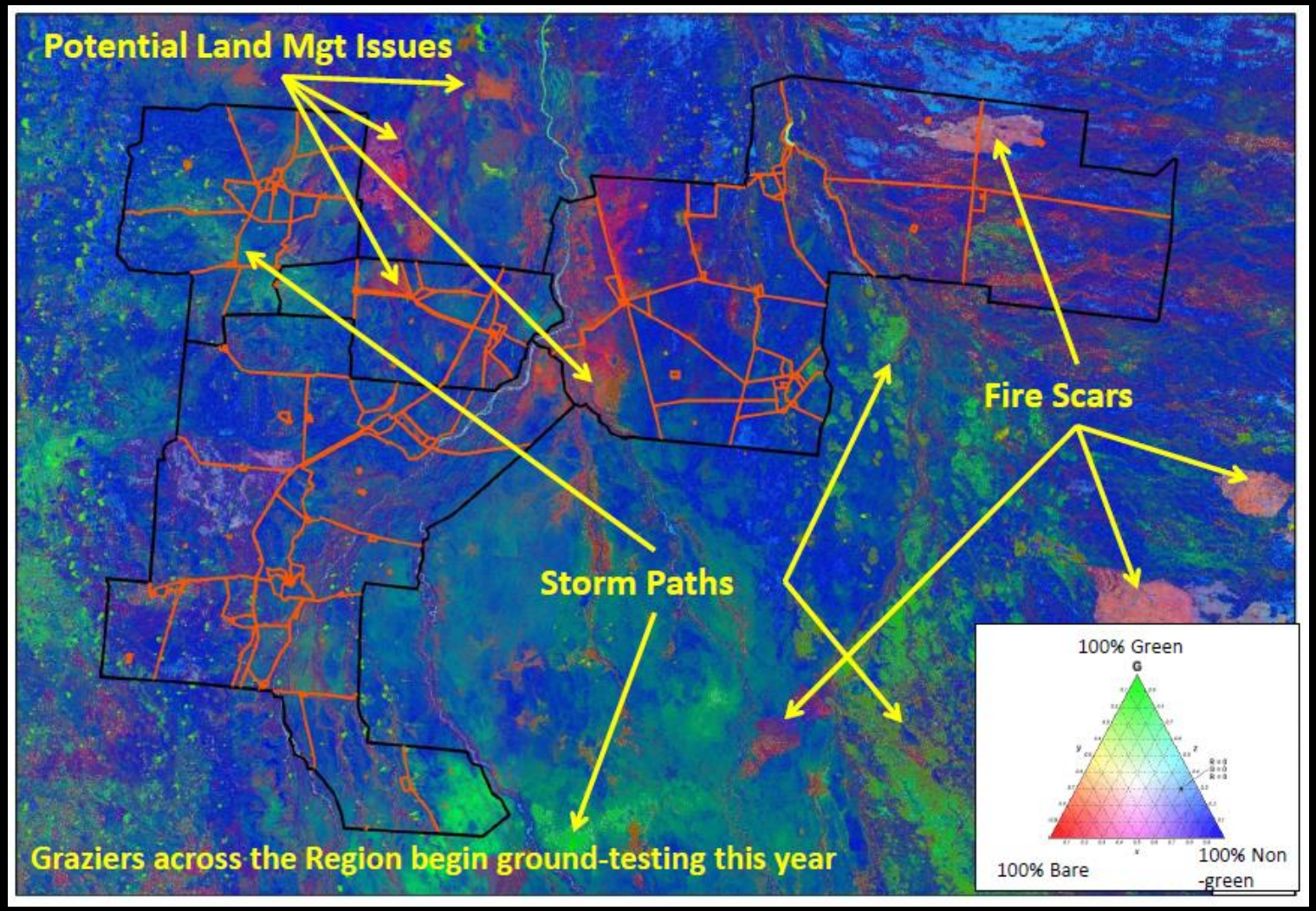
Monitoring Land Condition Through Time



Weekly, Monthly, Seasonal, Yearly – paddock level satellite monitoring of cover

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Monitoring Land Condition Through Time

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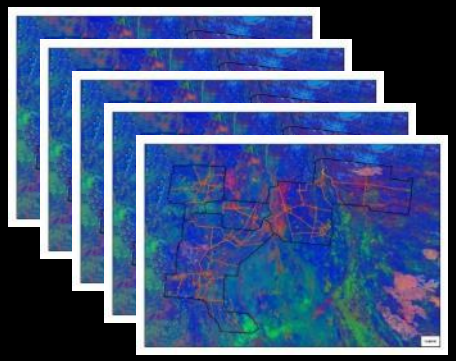

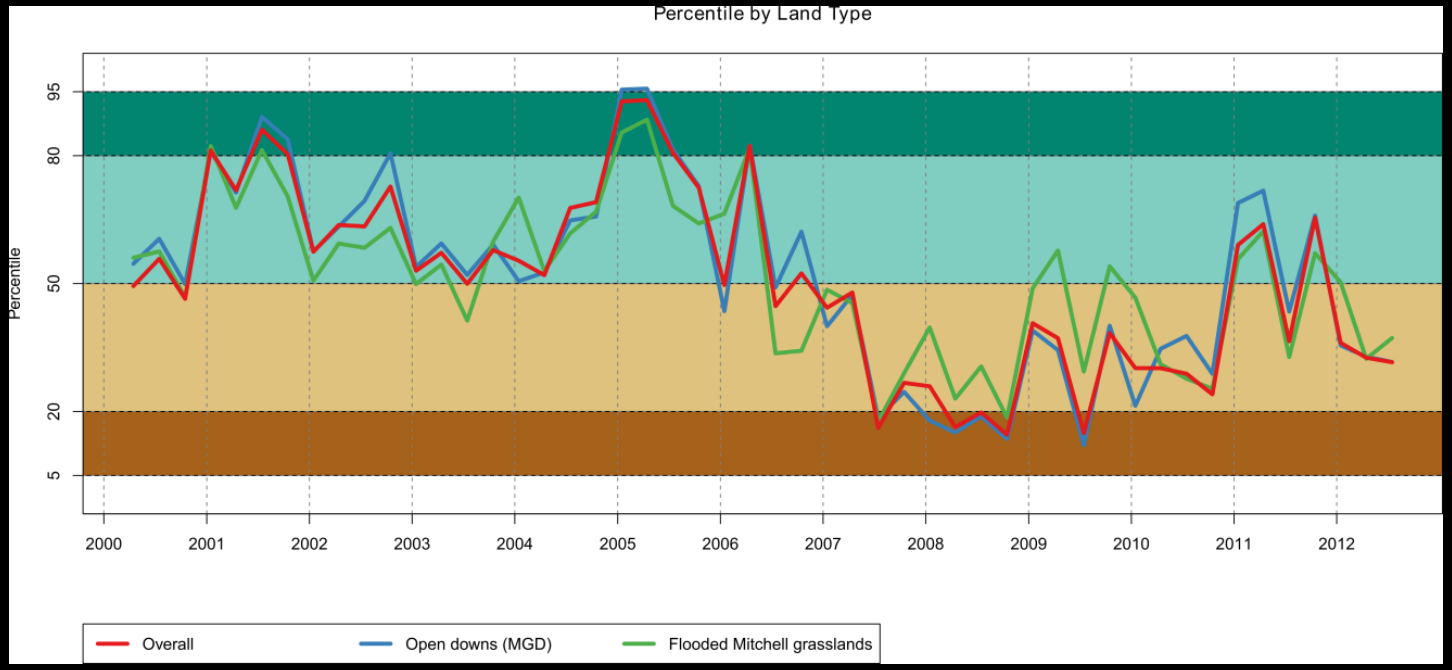

Comparing Ground Cover on one property to the surrounding properties over time. This property changed ownership in 2006.

Thank You

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*P*roudly supported by in-kind support by **RANGELAND NRM Alliance, NT Govt, NSW Govt, SA Govt, QLD Govt, WA Govt & CRCSI**

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