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FIRE MANAGEMENT FOR NORTHERN AUSTRALIA

Landscape Scale Risk Assessment

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An Australian Government Initiative

THE NORTH AUSTRALIAN BNH CONTEXT

360,000 People
+ Communities from ‘outer regional’ to ‘very remote’.
+ Remote communities mostly inhabited by indigenous Australians (% rises with remoteness)
+ Poor infrastructure
+ Disconnect with emergency management paradigm
+ Poor infrastructure
+ Low population densities
+ Poor communications
+ Low levels of formal education and training
+ Limited labour market experience
+ Poor health

} The "Gap"

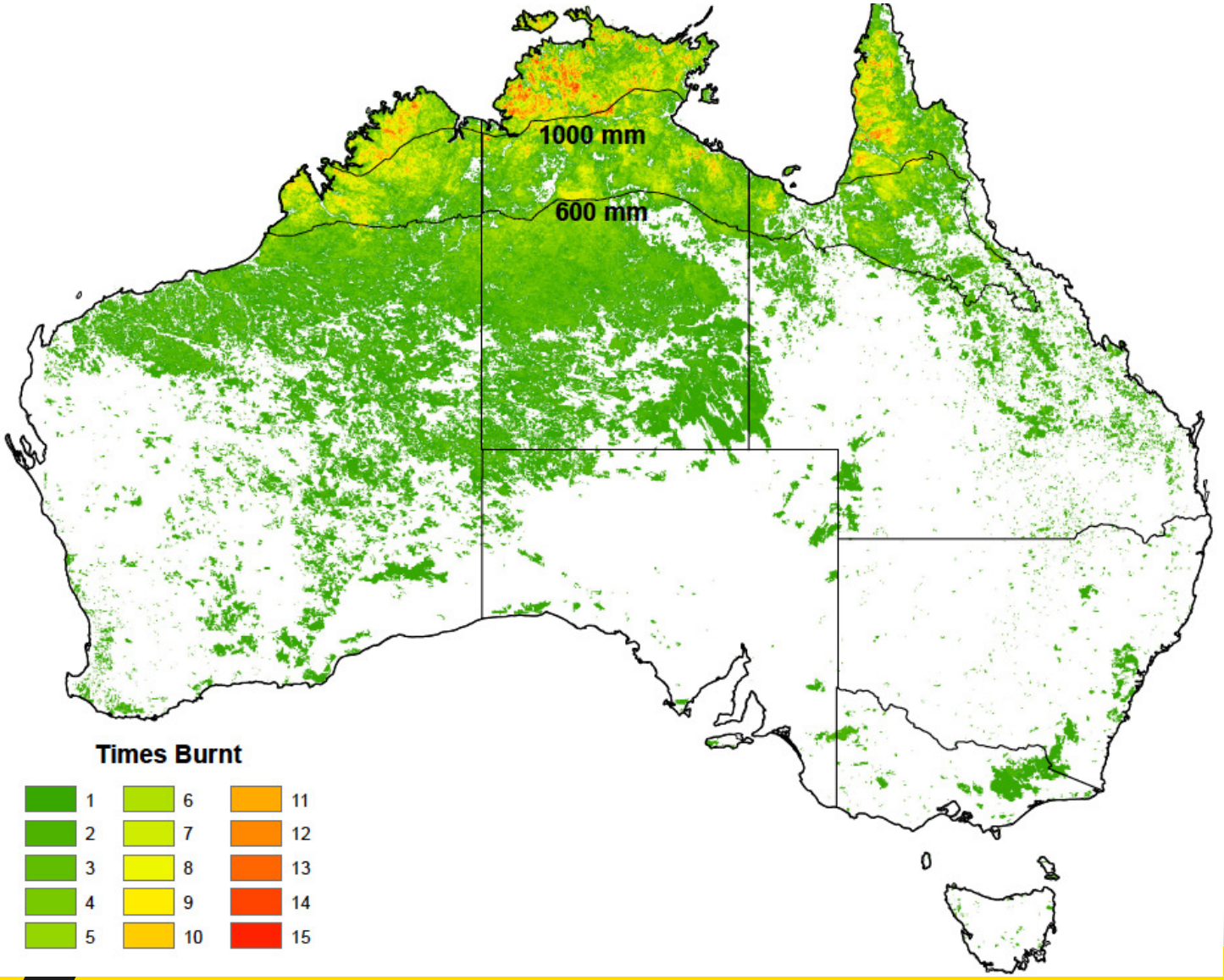
= Almost no formal emergency management capacity
= No spare capacity to fall back on
= No “Plan B”
= Very limited community resilience

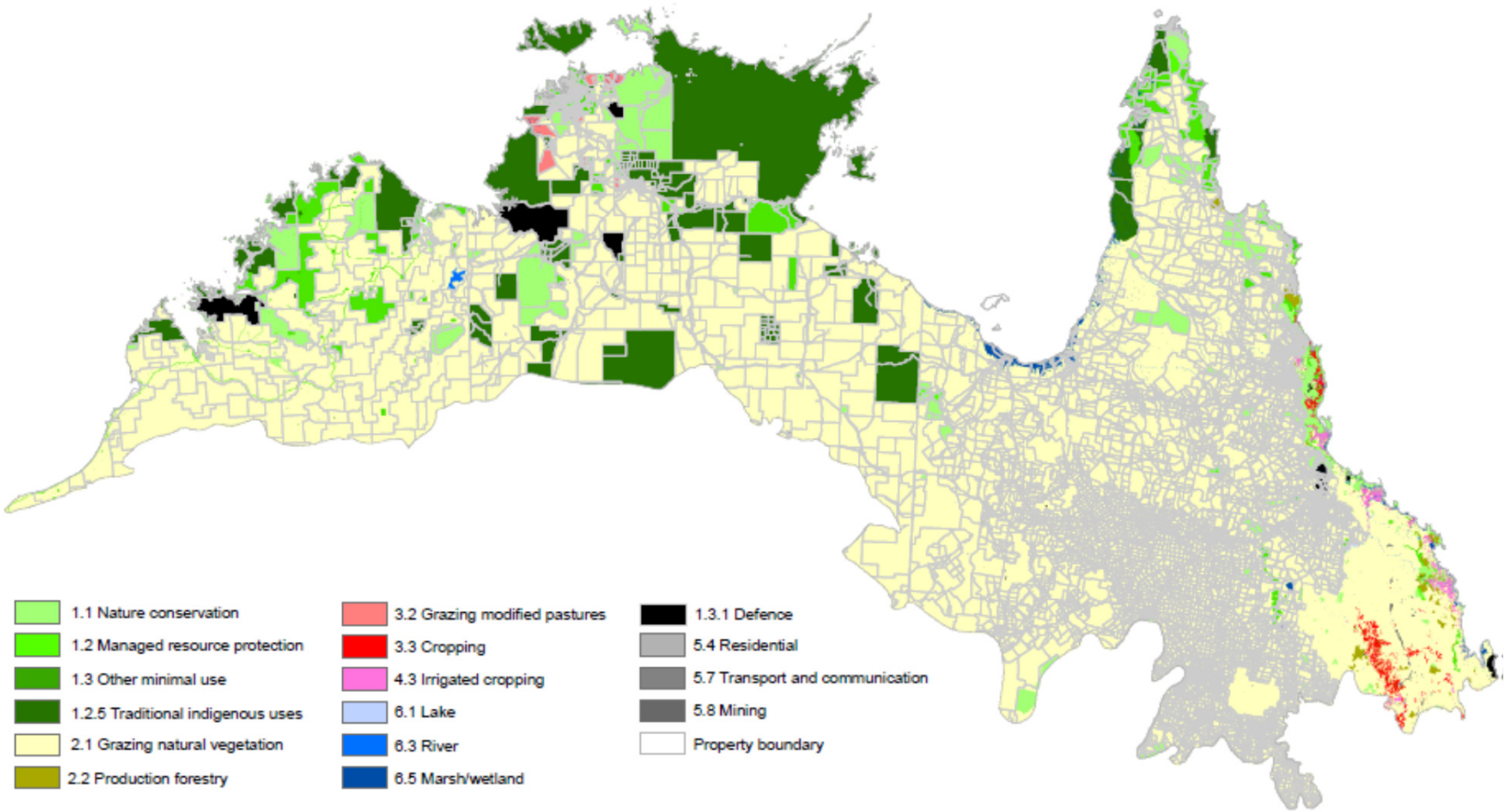
NORTH AUSTRALIAN BNH

1) An annual cycle
   a) Cyclones
   b) Floods

   c) Fire
      - 430,000km^2 burnt in north Australia annually
      - Impacts on Community Safety, assets, major contributor to greenhouse emissions, biodiversity, water and air quality, cultural practices, tourism and agriculture

Fire frequency 1997 – 2011




1.1 Nature conservation
1.2 Managed resource protection
1.3 Other minimal use
1.2.5 Traditional indigenous uses
2.1 Grazing natural vegetation
2.2 Production forestry
3.2 Grazing modified pastures
3.3 Cropping
4.3 Irrigated cropping
6.1 Lake
6.3 River
6.5 Marsh/wetland
1.3.1 Defence
5.4 Residential
5.7 Transport and communication
5.8 Mining
Property boundary

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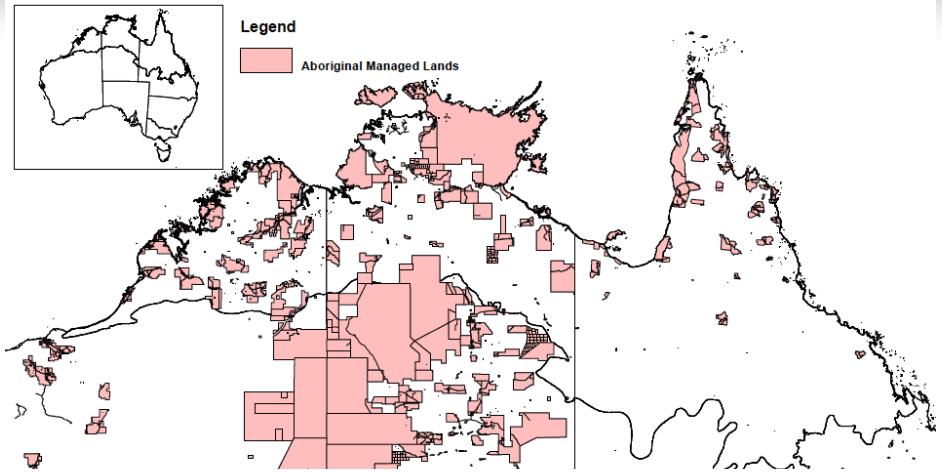
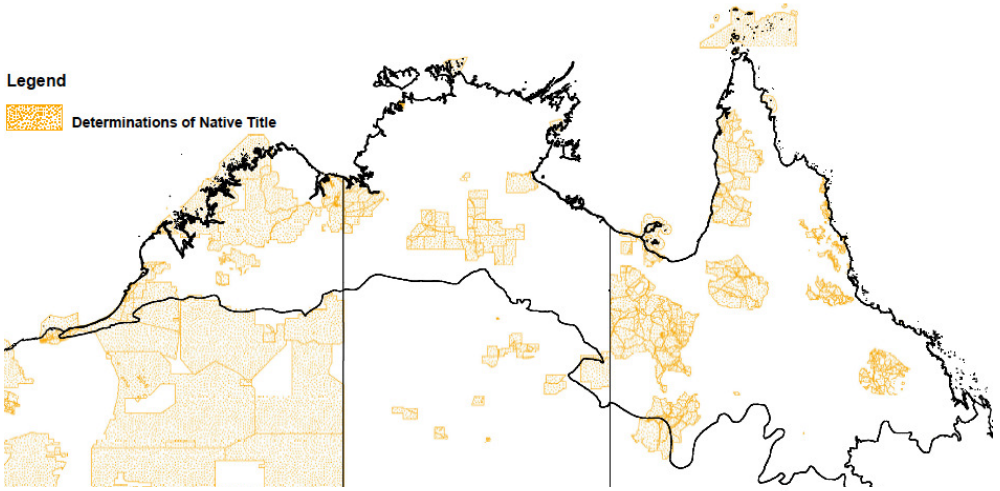
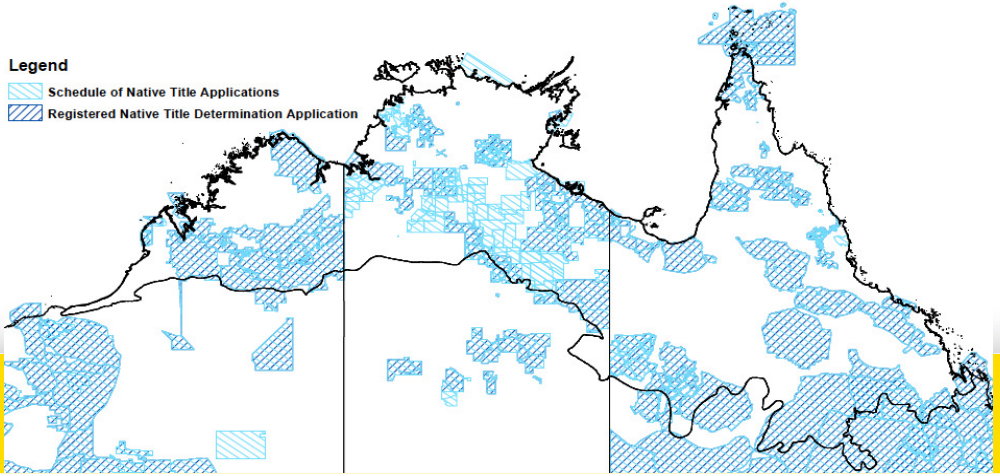
(a) Aboriginal managed lands



(b) Determinations of Native Title



(c) Native Title Applications



Slide 6

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BUSHFIRE MANAGEMENT - OPPORTUNITIES FOR BUILDING REMOTE COMMUNITY RESILIENCE

1) Objective:

Provide robust decision support information and tools to help turn recurrent fire management problems where feasible into sustainable land management solutions.

3 Key Component Projects:

1) Savanna Fire Management
2) Management of flammable high biomass grassy weeds
3) Fire management in central Australian spinifex and mulga landscapes

Direct links to north Australian resilience and PES projects

SAVANNA FIRE MANAGEMENT

1) Objectives:

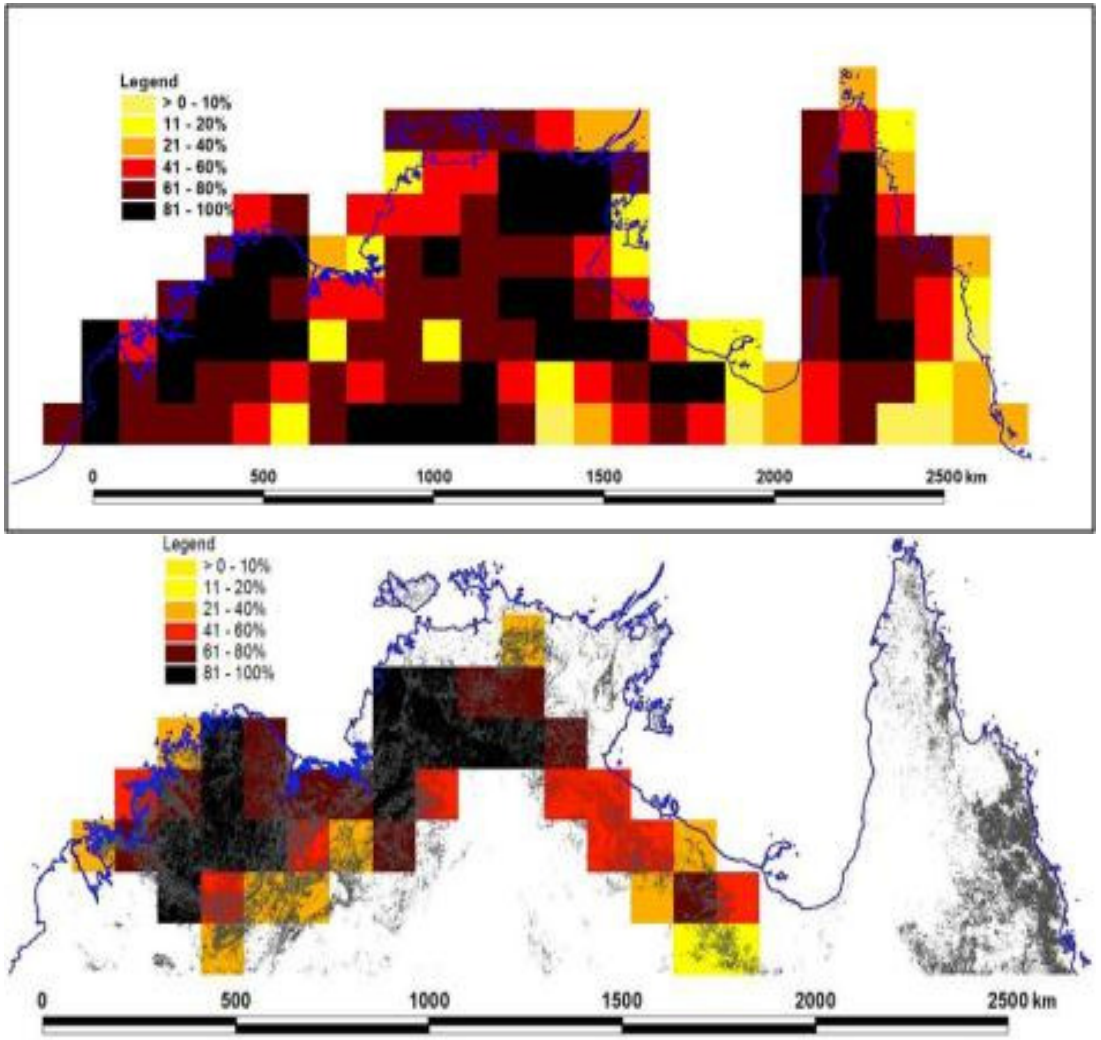
- Broad-scale bushfire risk assessments in previously determined high risk regions using higher resolution spatial analyses
- Assess the utility and efficacy of implementing savanna-wide fire severity / fire regime metric
- Develop an algorithm to provide fire managers with mapping describing the potential risk of the occurrence of fire

Extrapolation of risk models to savanna-wide scale, 1997-2011

Proportion of respective one degree cells:

(a) affected by 3 or more Late Dry Season fires…e.g. *Callitris* stands

(b) In topographically rugged landscapes (indicated in grey) affected by 4 or fires…e.g. sandstone heaths



SAVANNA FIRE MANAGEMENT

Major Outcomes

- Better targeting of investment in north Australian fire management in those areas of highest risk
- Marked improvements in remote community PPRR, particularly prevention and preparedness

MANAGEMENT OF FLAMMABLE HIGH BIOMASS GRASSY WEEDS

Objectives

- Assess the likelihood, magnitude and distribution of risk of high biomass invasive grasses to fire regimes in the tropical savanna region

- Provide critical information for Government policy and planning, particularly prioritisation of weed risk for fire-regime changing species, and for fire management planning

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MANAGEMENT OF FLAMMABLE HIGH BIOMASS GRASSY WEEDS

Major Outcomes

- Rigorous assessment of risks to environmental, community and pastoral enterprise assets posed by altered fire regimes due to high-biomass grasses

- Decision support tools, processes and models to allow the assessment of benefits and costs of risk reduction measures for high biomass grasses

- Baseline mapping of the current and predicted future distribution of high biomass grasses, areas of current altered fire regimes and predicted areas at greatest risk based on the fire- risk and the spread pattern of the grassy weeds

FIRE MANAGEMENT IN SPINIFEX AND MULGA LANDSCAPES

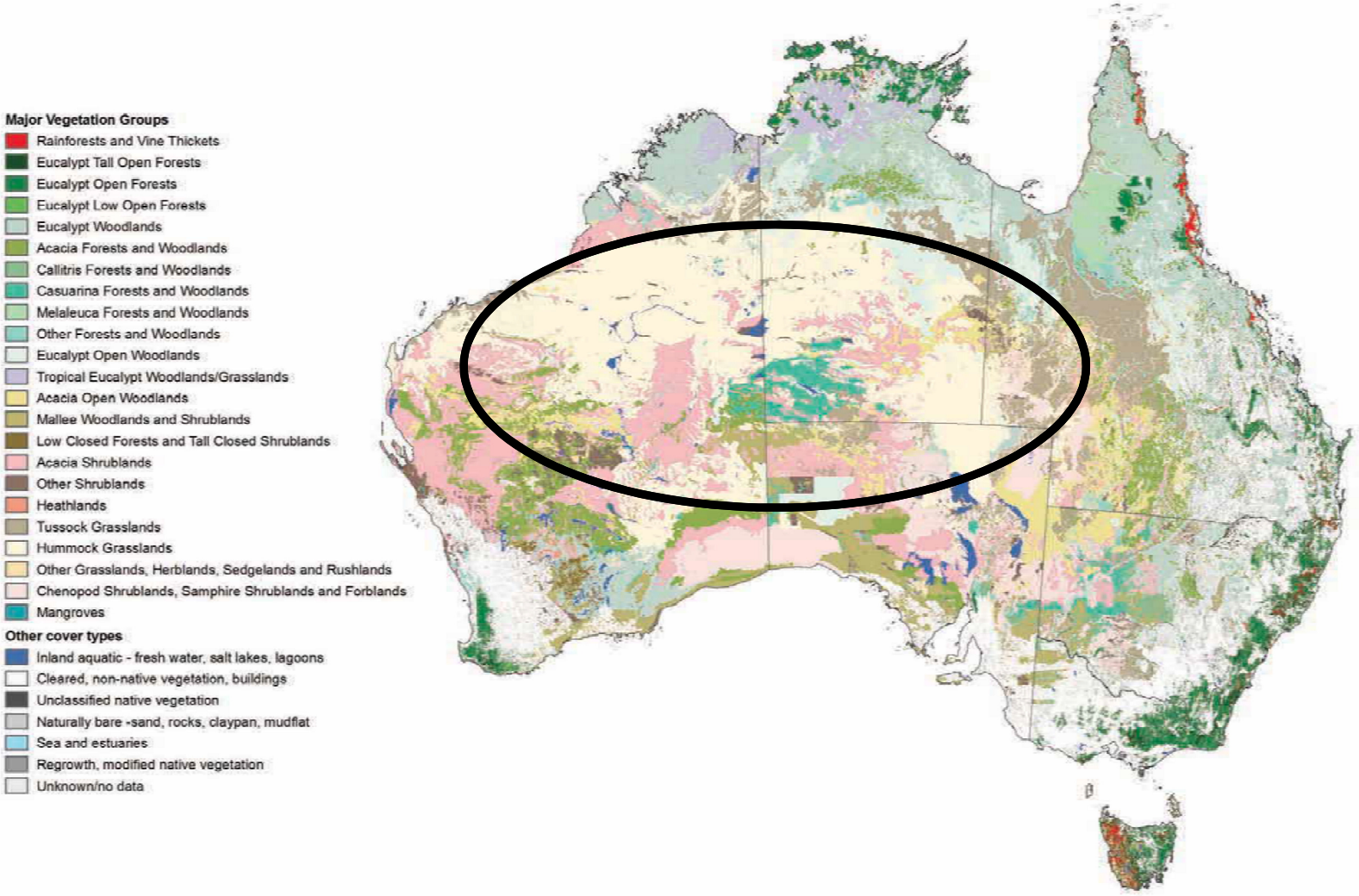
Objectives

- Provide a sustainable basis for developing stronger and more resilient communities by:

- Addressing improved central Australian fire management to contribute to the development of an approved Carbon Farming type initiative and;

- Providing an economic and employment foundation for remote central Australian communities derived from and building land management enterprises / undertakings

Spinifex and Mulga landscapes



FIRE MANAGEMENT IN SPINIFEX AND MULGA LANDSCAPES

Major Outcomes

- Development of a new approved CFI methodology based on enhanced fire management in central Australian settings

- Enhanced understanding by remote central Australian communities of sustainable enterprise opportunities afforded through novel climate change mitigation, and biodiversity management activities

- Potential development of a new central Australian fire management industry with positive benefits for enhancing community resilience

BUSHFIRE MANAGEMENT - OPPORTUNITIES FOR BUILDING REMOTE COMMUNITY RESILIENCE

Project Team

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