

# Threatened species management: perspective of the Australian Wildlife Conservancy



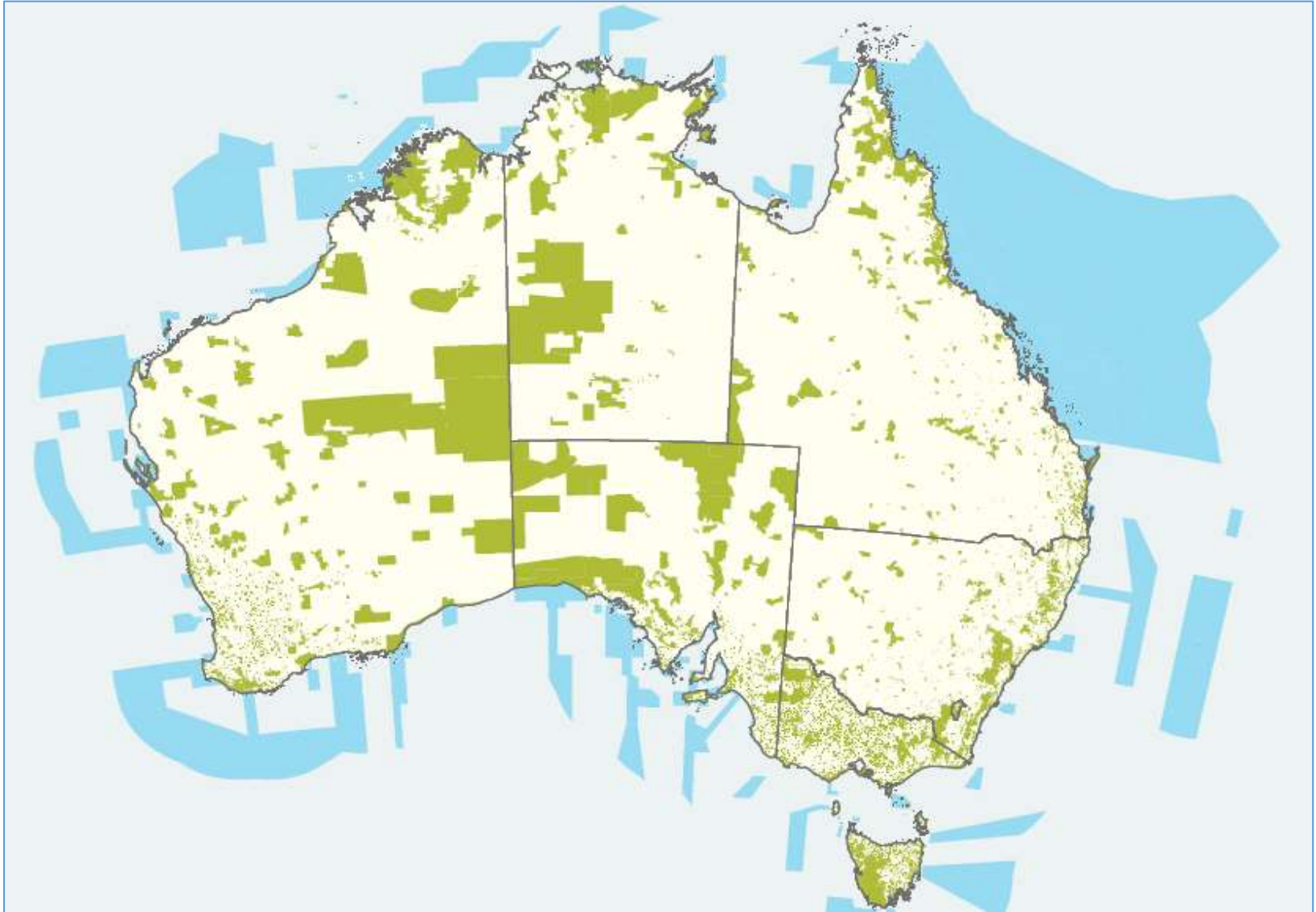
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AWC National Science and Conservation Manager

November 2015

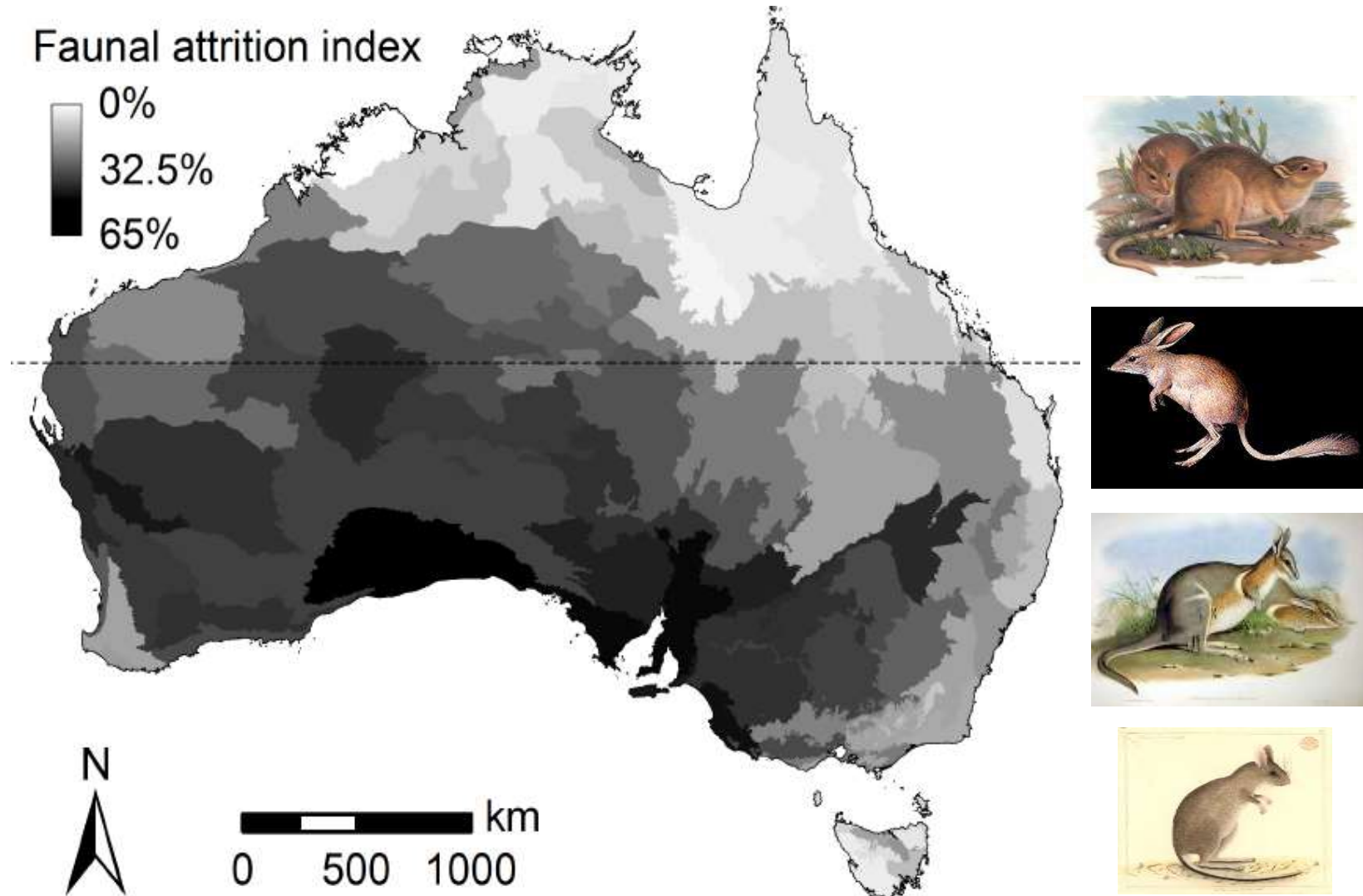
# Conservation in Australia – good news

## Increasing area reserved for conservation



# Conservation in Australia – bad news

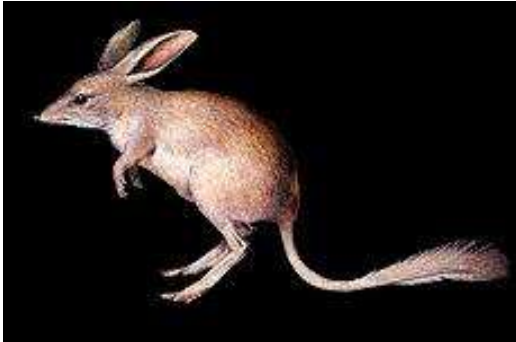
## Ongoing loss of biodiversity



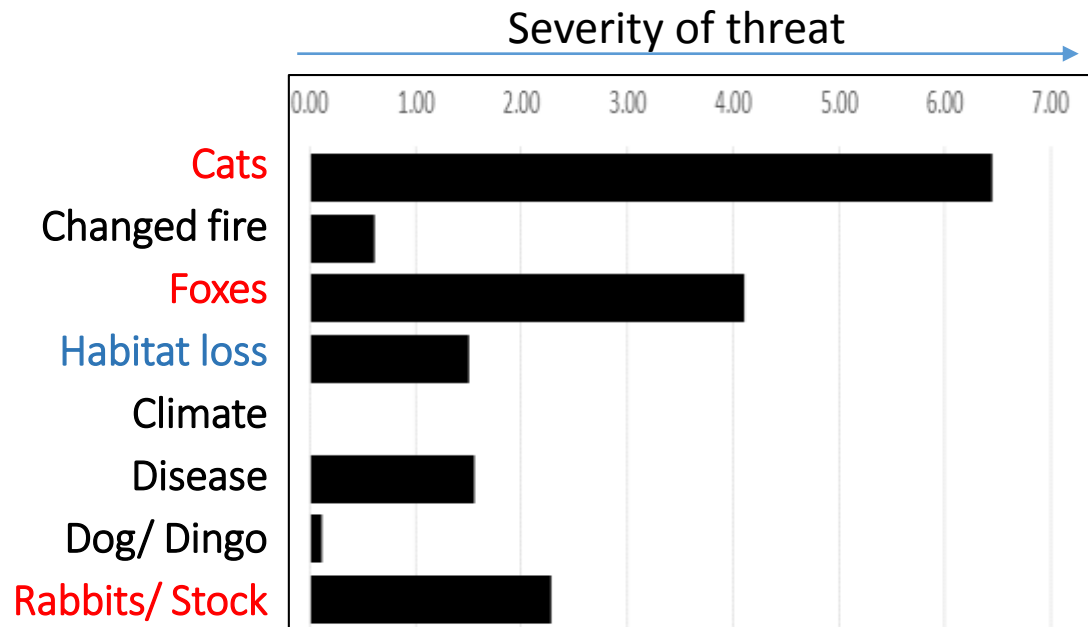
# Conservation in Australia – why the mismatch?

Key threats are not primarily to do with land tenure

## Extinct mammals



*Lesser Bilby*



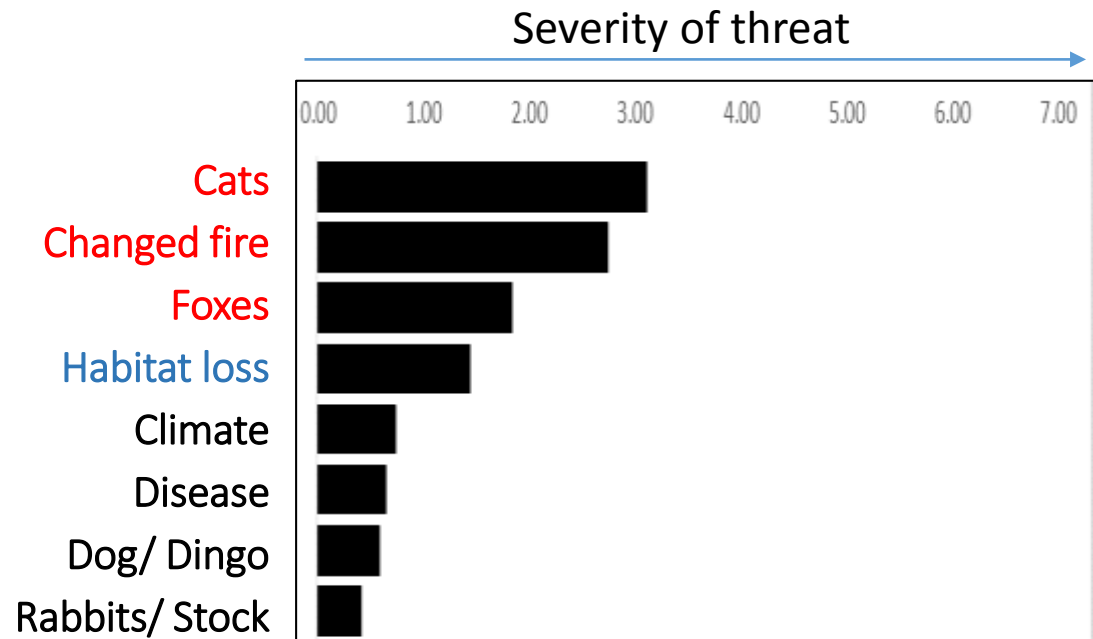
# Conservation in Australia – why the mismatch?

Key threats are not primarily to do with land tenure

## Threatened mammals



Greater Bilby



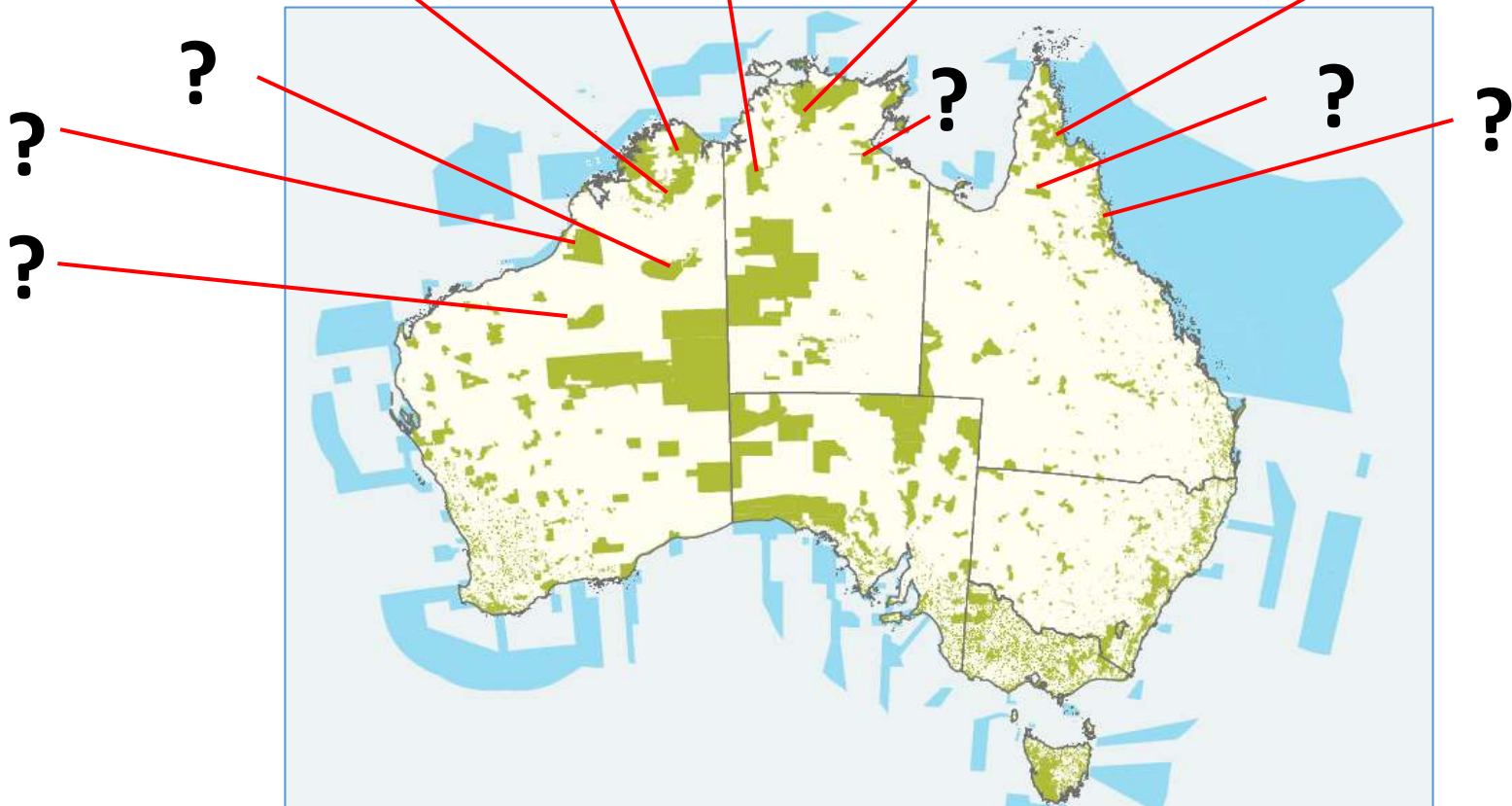
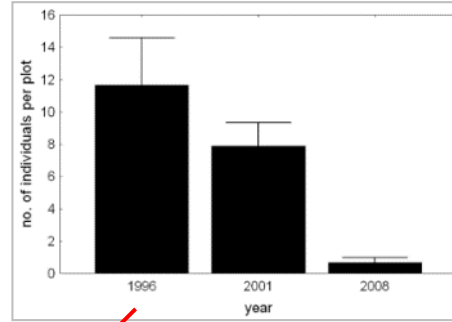
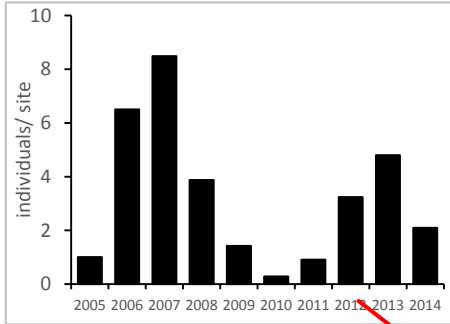
# Conservation requires management of key threats

– cats, foxes, fire, feral herbivores



# Monitoring conservation outcomes is uncommon

– limited accountability, no feedback to management



# Australian Wildlife Conservancy: our mission

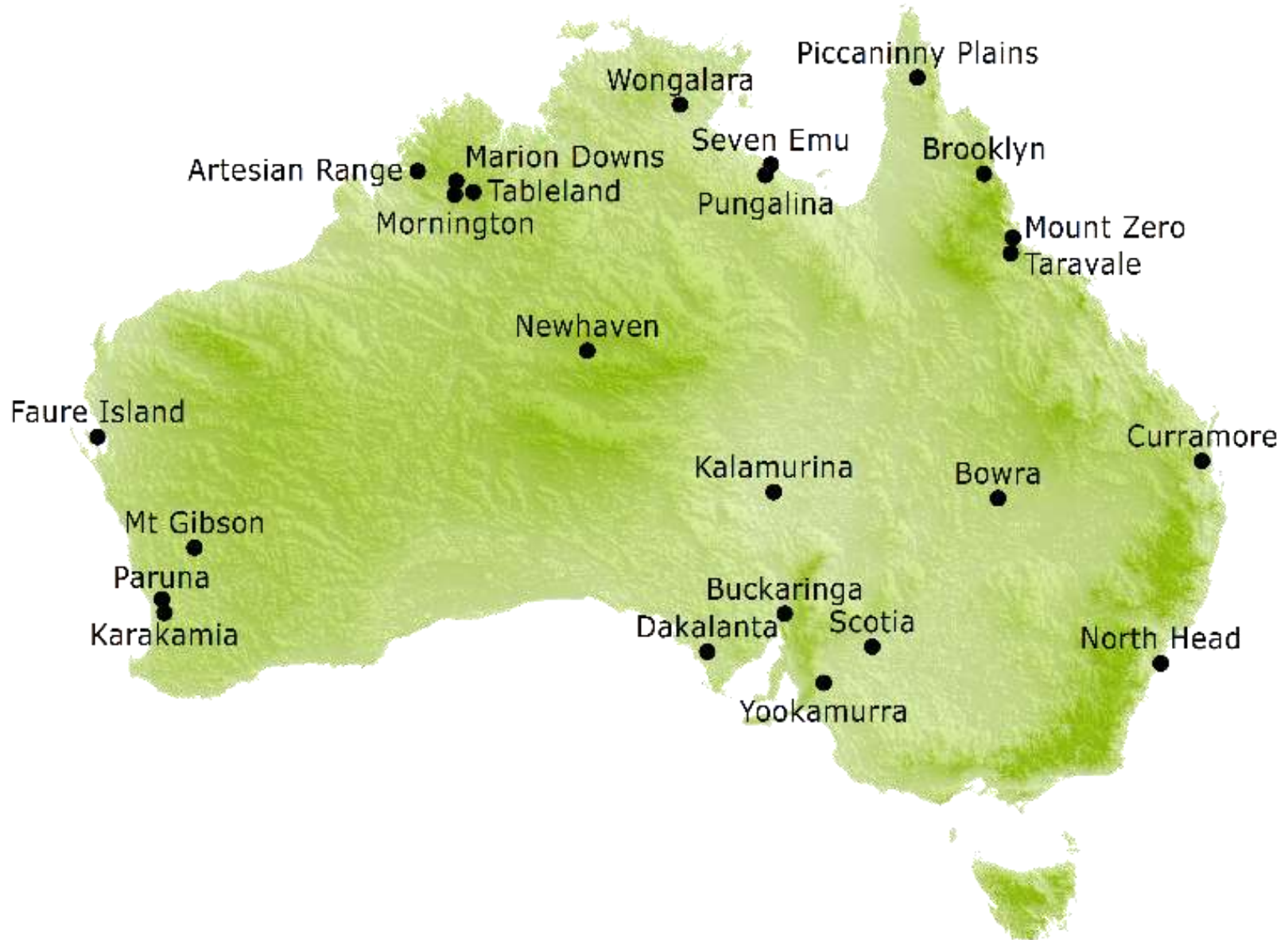
## Effective conservation of Australia's wildlife and their habitats





# Australian Wildlife Conservancy: our model

- **Establish wildlife sanctuaries**



# Australian Wildlife Conservancy: our model

- Establish wildlife sanctuaries
- **Active management of threats**

**Feral herbivore control**



**Fire management**



**Feral predator control  
(fenced areas & landscape)**



**Reintroductions**



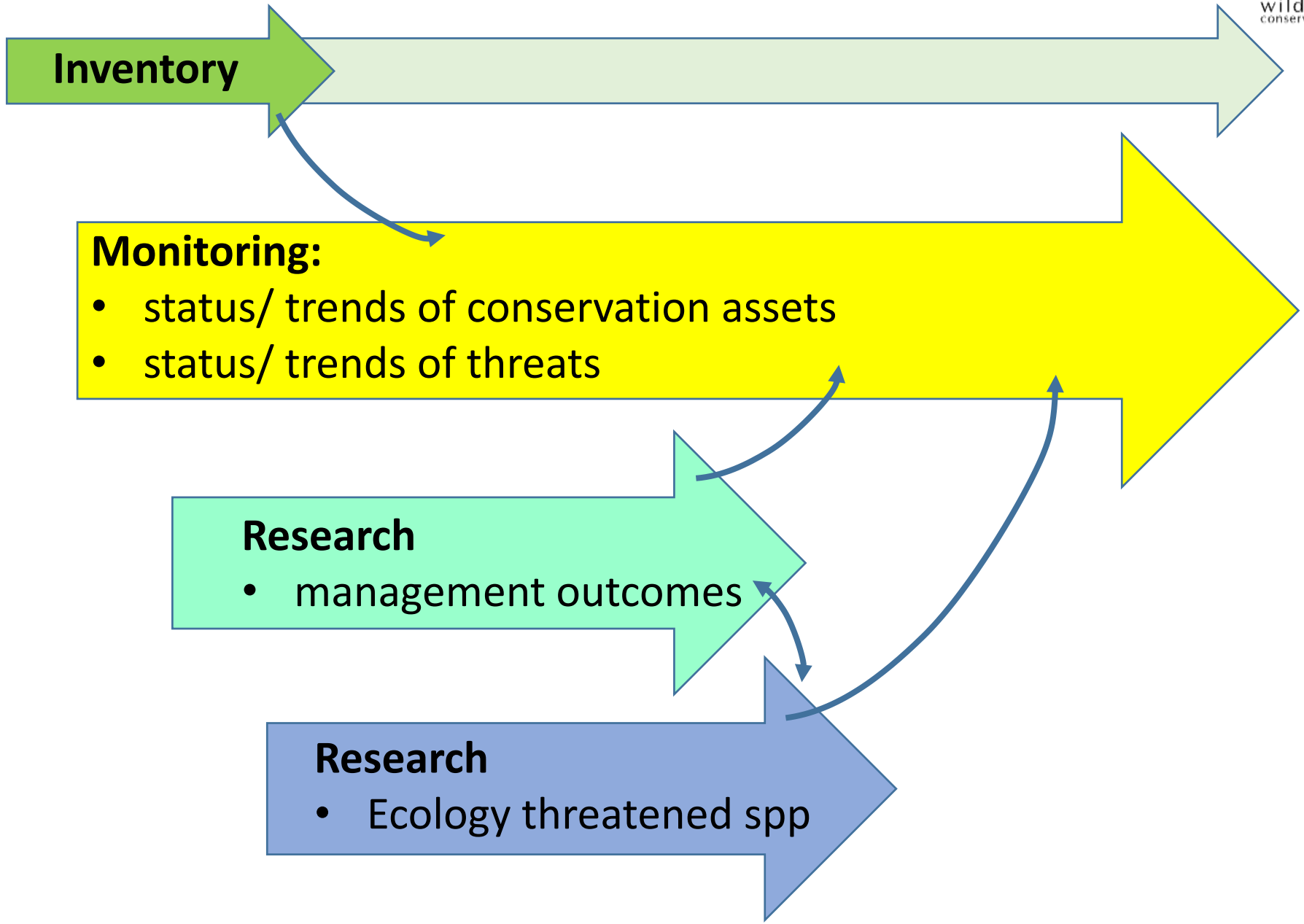
# Australian Wildlife Conservancy: our model



- Establish wildlife sanctuaries
- Active management of threats
- **Management informed by science/ local knowledge**



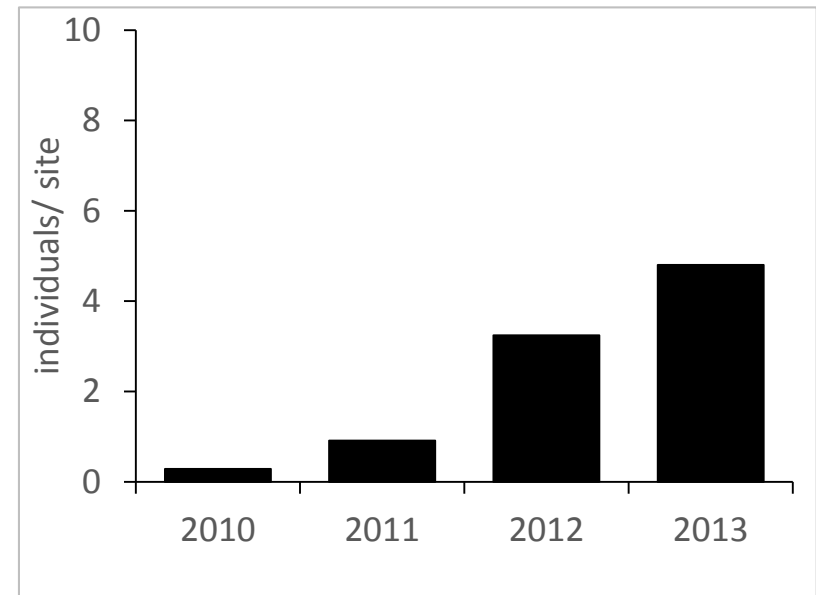
# AWC's science program



# AWC's monitoring framework

## 1. Status and trends of key conservation assets

- to know if we are meeting our mission - conserving species
- to take action if species/ ecosystems are in trouble

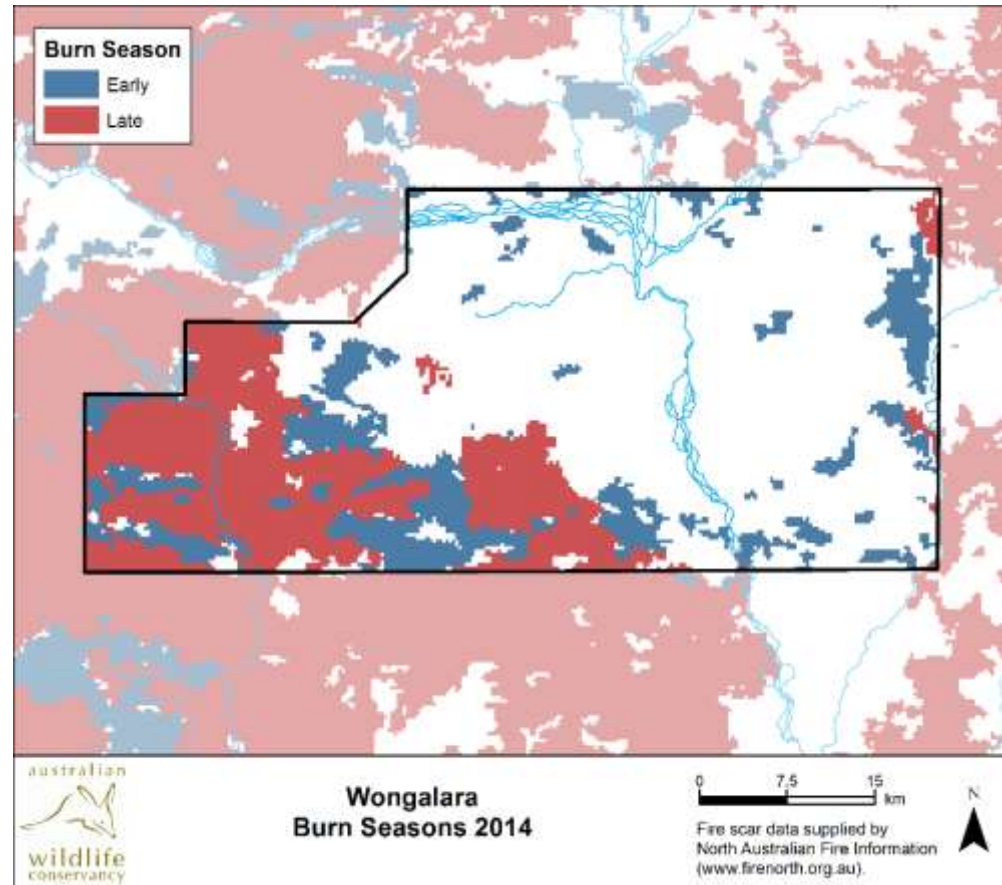


Mornington small mammals  
*AWC unpublished*

# AWC's monitoring framework

## 2. Status and trends of key threats

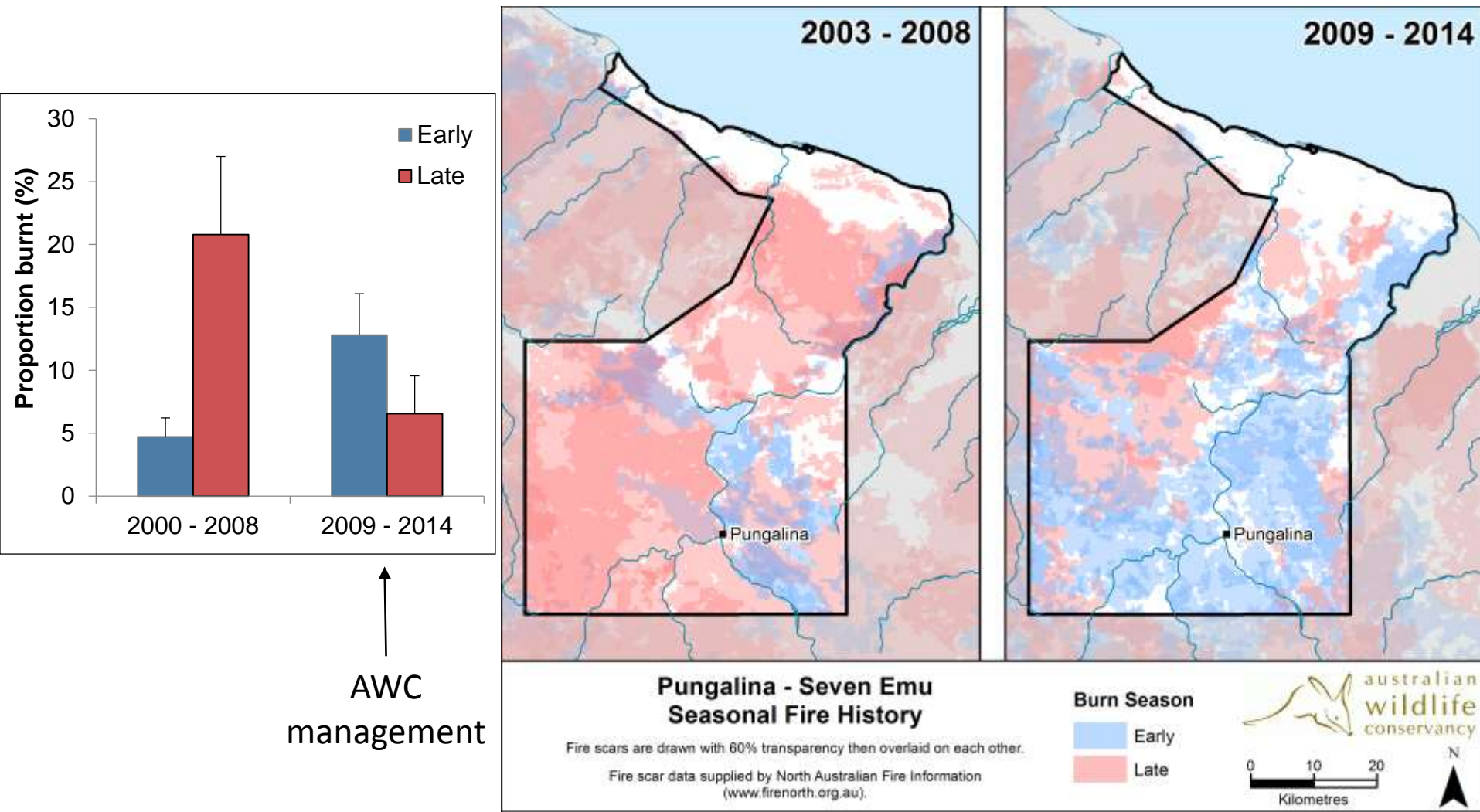
- to know if we are successfully managing threats
- to take action if outcomes are poor



# AWC's monitoring framework

## Annual 'scorecard' of performance against key metrics

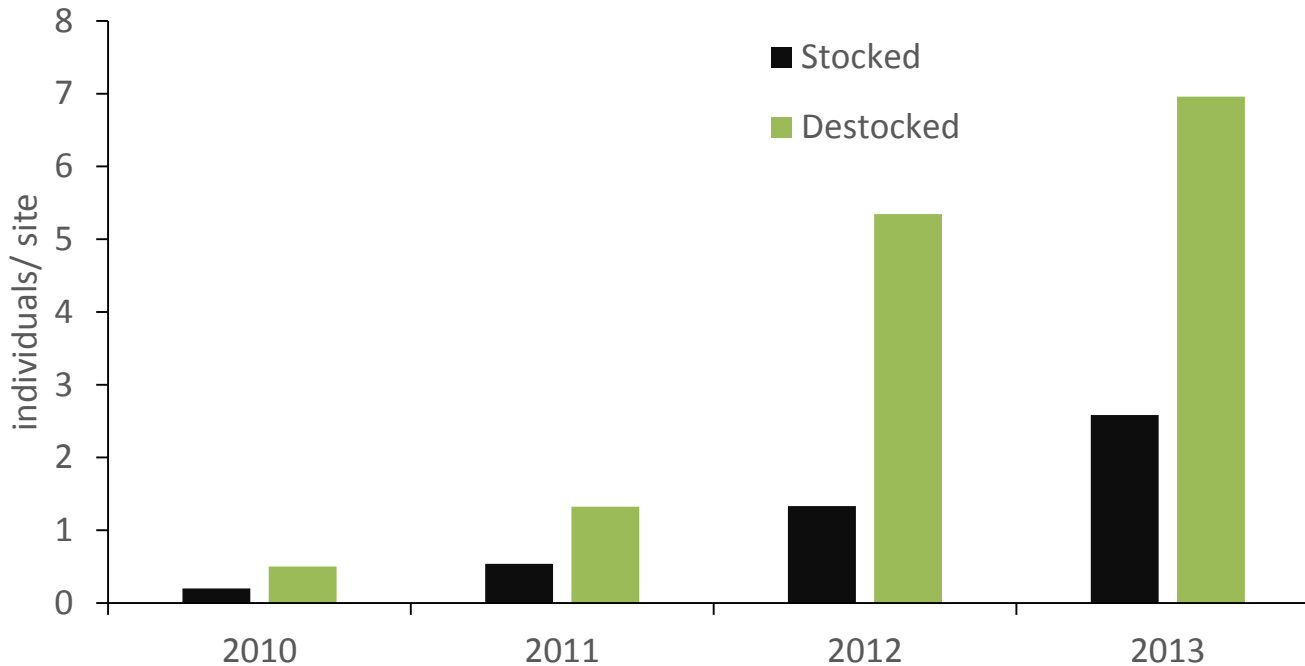
- eg fire metrics – extent of fire in early and late dry seasons



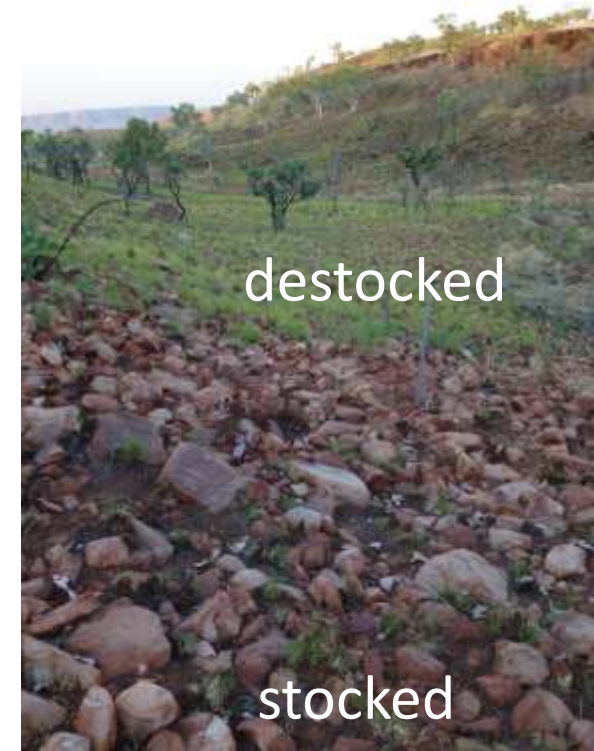
# AWC's research program

## 1. Outcomes of management actions

- to improve management



Mornington small mammals  
*AWC unpublished*





# AWC's research program

## 2. Ecology of threatened species and threats

- to address key knowledge gaps
- to inform management



RESEARCH ARTICLE

A Landscape-Scale, Applied Fire Management Experiment Promotes Recovery of a Population of the Threatened Gouldian Finch, *Erythrura gouldiae*, in Australia's Tropical Savannas

Sarah Legge<sup>1\*</sup>, Stephen Garnett<sup>2</sup>, Kim Maute<sup>1,3</sup>, Joanne Heathcote<sup>1</sup>, Steve Murphy<sup>1,4</sup>, John C. Z. Woinarski<sup>2</sup>, Lee Astheimer<sup>5</sup>

# AWC's research program

## 2. Ecology of threatened species and threats

- to address key knowledge gaps
- to inform management

OPEN ACCESS Freely available online

PLOS ONE

## Landscape Management of Fire and Grazing Regimes Alters the Fine-Scale Habitat Utilisation by Feral Cats

Hugh W. McGregor<sup>1,2\*</sup>, Sarah Legge<sup>3</sup>, Menna E. Jones<sup>1</sup>, Christopher N. Johnson<sup>1</sup>

<sup>1</sup> School of Biological Sciences, University of Tasmania, Hobart, Tasmania, Australia, <sup>2</sup> Australian Wildlife Conservancy, Derby, Western Australia, Australia, <sup>3</sup> Australian Wildlife Conservancy, Mornington Wildlife Sanctuary, Derby, Western Australia, Australia



# Australian Wildlife Conservancy:

## Newhaven reintroduction project



# Australian Wildlife Conservancy:

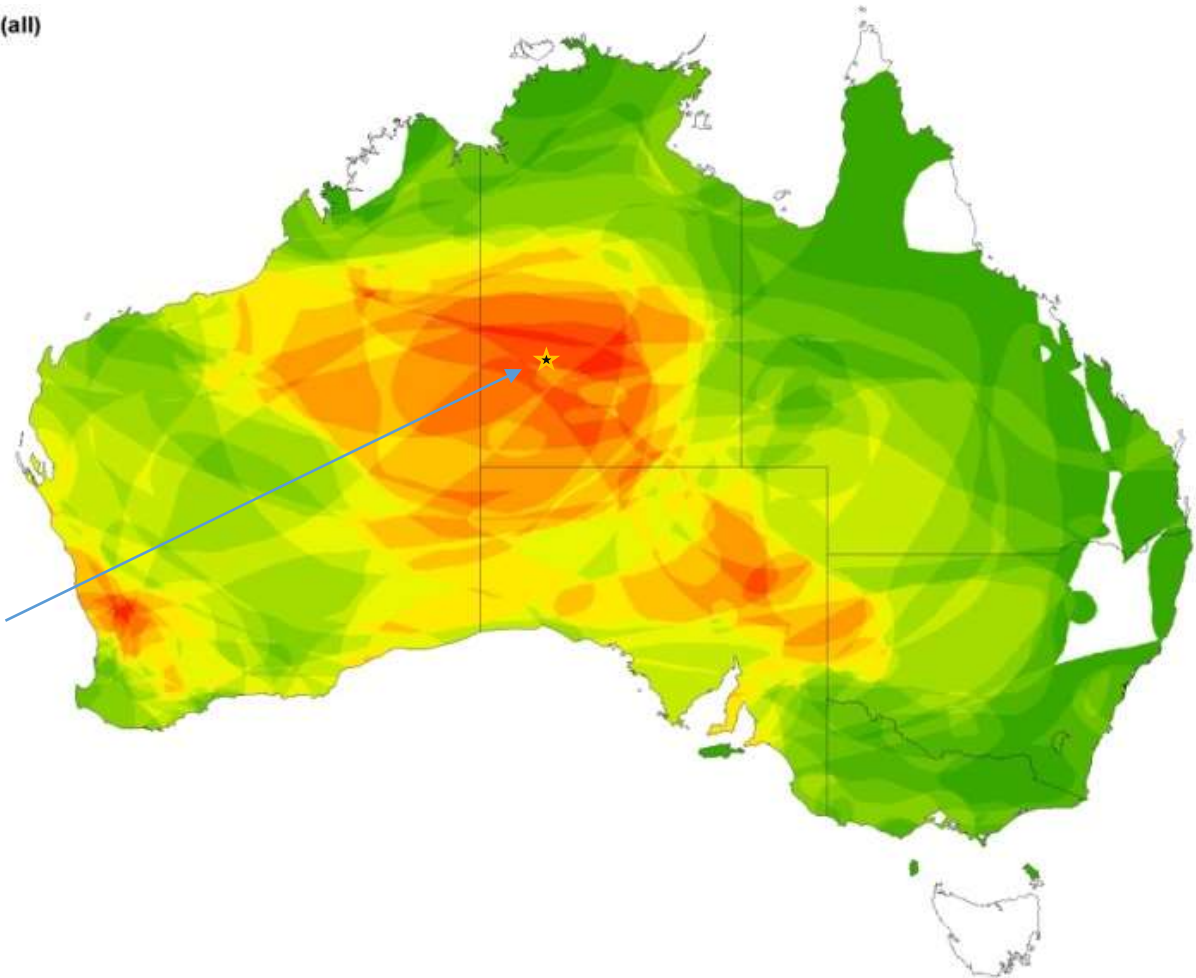
## Newhaven reintroduction project

- central Australia an 'epicentre' of mammal extinctions/ declines
- cats and foxes are primary drivers of extinctions/ declines

Richness of contractions (all)



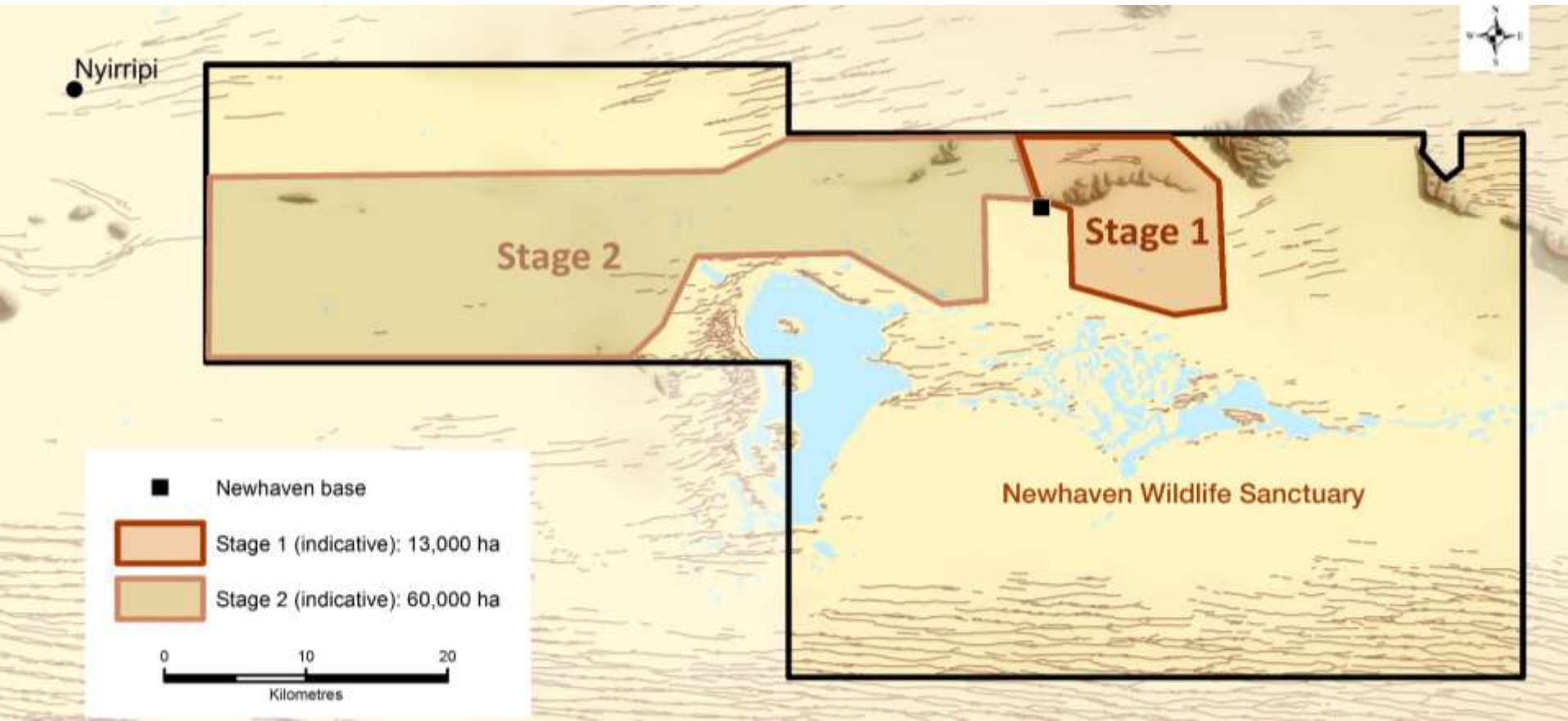
Newhaven



# Australian Wildlife Conservancy:

## Newhaven reintroduction project

- Feral predator-proof fence
  - Stage 1: c.13,000 ha; Stage 2: c. 60,000 ha
- Eradicate foxes and cats
- Reintroduce 10+ locally extinct threatened mammals



# Australian Wildlife Conservancy:

## Newhaven reintroduction project

- Projected to increase population sizes/ conservation status of 10+ species of threatened mammals

Species	Current global population	Population estimate Stage 1	% increase	Population estimate Stages 1&2	% increase
Mala	4,000	3,200	80%	18,000	450%
Black-footed Rock-wallaby	<10,000	750	8%	1,500	17%
Burrowing Bettong	15,000	4,000	27%	22,500	150%
Brush-tailed Bettong	<18,000	1,600	11%	9,000	60%
Golden Bandicoot	>10,000	6,500	26%	32,500	130%
Greater Bilby	<10,000	800	8%	4,500	45%
Central Rock-rat	<1000	1,250	139%	1,825	203%
Western Quoll	<15,000	130	1%	650	5%
Red-tailed Phascogale	<10,000	625	7%	2,500	28%
Numbat	<1000	260	29%	1,300	144%
Shark Bay Mouse	10,000	7,500	75%	48,750	488%
Brushtail Possum (Ctr Australia)	500	740	68%	1,600	320%