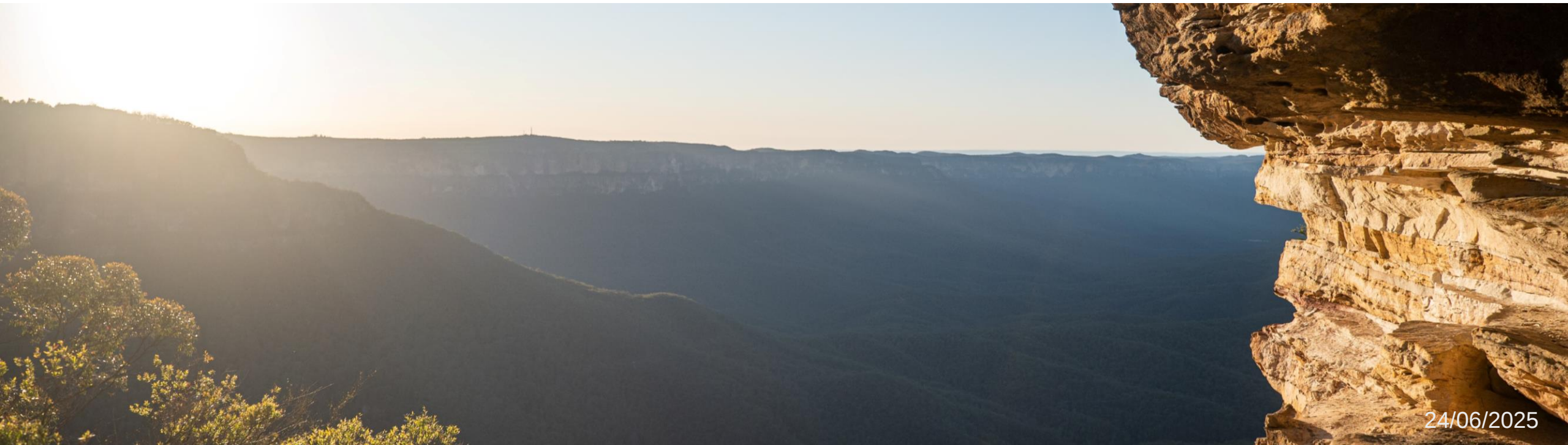
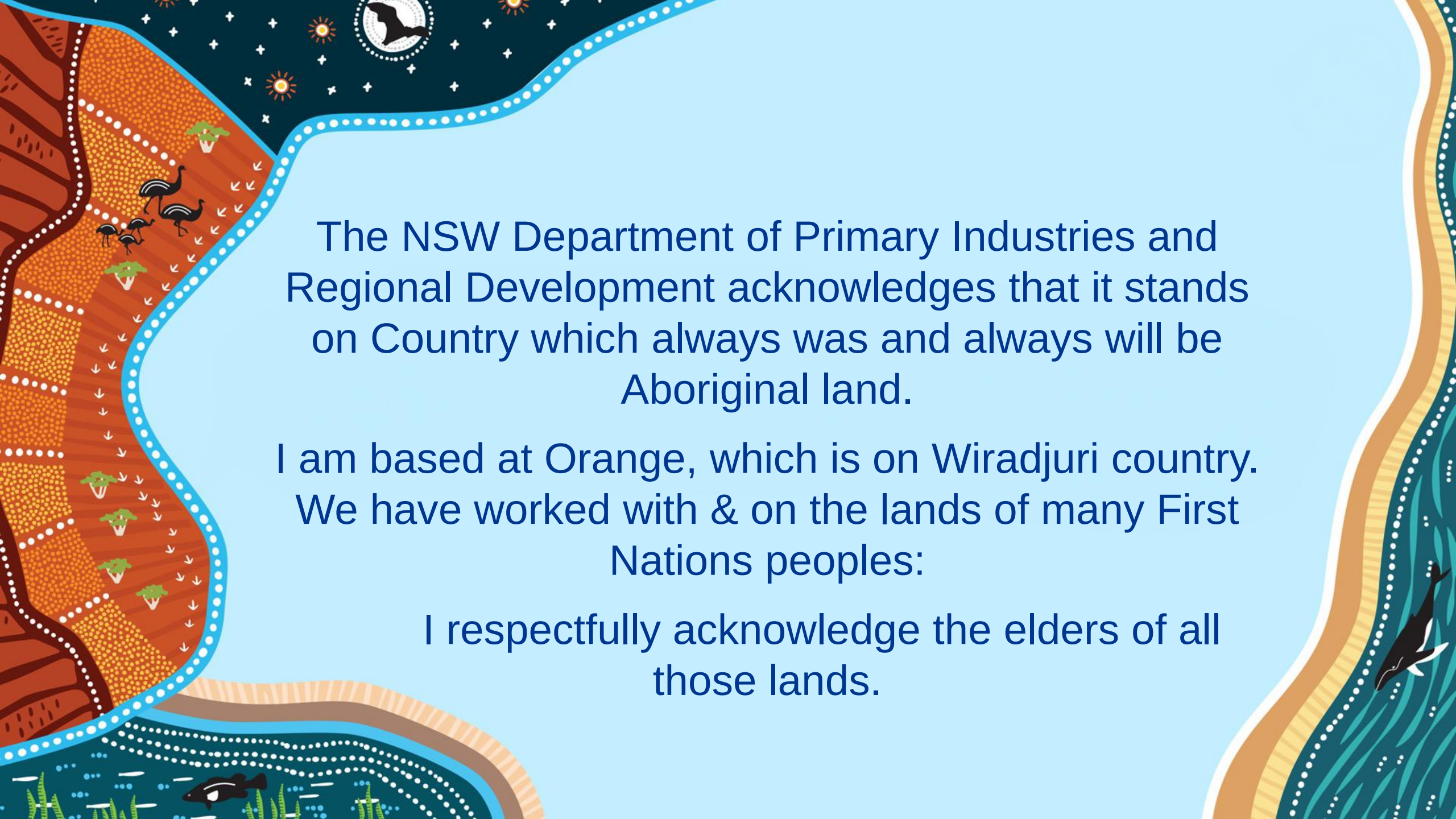


MANAGING TOTAL PREDATION PRESSURE AND TOTAL GRAZING PRESSURE FOR LANDSCAPE BENEFIT

Peter Fleming,

Guy Ballard, Andrew Claridge, Paul Meek and Greg Misfud



The slide features a decorative border in the Indigenous Australian art style. On the left, a winding path leads through a landscape with emus, kangaroos, and various plants. The top left corner shows a night sky with stars, a crescent moon, and a map of Australia. The bottom left corner depicts an underwater scene with a fish and seaweed. On the right, a wavy line represents the ocean with an orca swimming. The central text is set against a light blue background.

The NSW Department of Primary Industries and
Regional Development acknowledges that it stands
on Country which always was and always will be
Aboriginal land.

I am based at Orange, which is on Wiradjuri country.
We have worked with & on the lands of many First
Nations peoples:

I respectfully acknowledge the elders of all
those lands.

Managing predators for landscape benefit

- Situations, not species (Jarman 1990)
- Impacts, not pests (Braysher, Saunders, Hone, *et al.* since 1980s)
- Invasive describes what they do & is not a value judgement





Current Invasive Animal Management:

- Often targets individual species:
 - Herbivores (e.g. National Feral Pig Action Plan, Feral Goat Threat Abatement Plan)
 - Predators (e.g. National Wild Dog Action Plan, European Red Fox Threat Abatement Plan)
- Often ignores native animal impacts
 - Cockatoos
 - Kangaroos
 - Native rodents
 - Koalas
- Largely ignores interactions between species
- Largely ignores interactions between trophic levels



Total Predation Pressure (TPP)

- Combined predation pressure by all invasive mammalian predators on native fauna & livestock.
 - includes native, naturalised & invasive predators
 - concentrates on negative impacts
 - i.e. pressures on landscape values

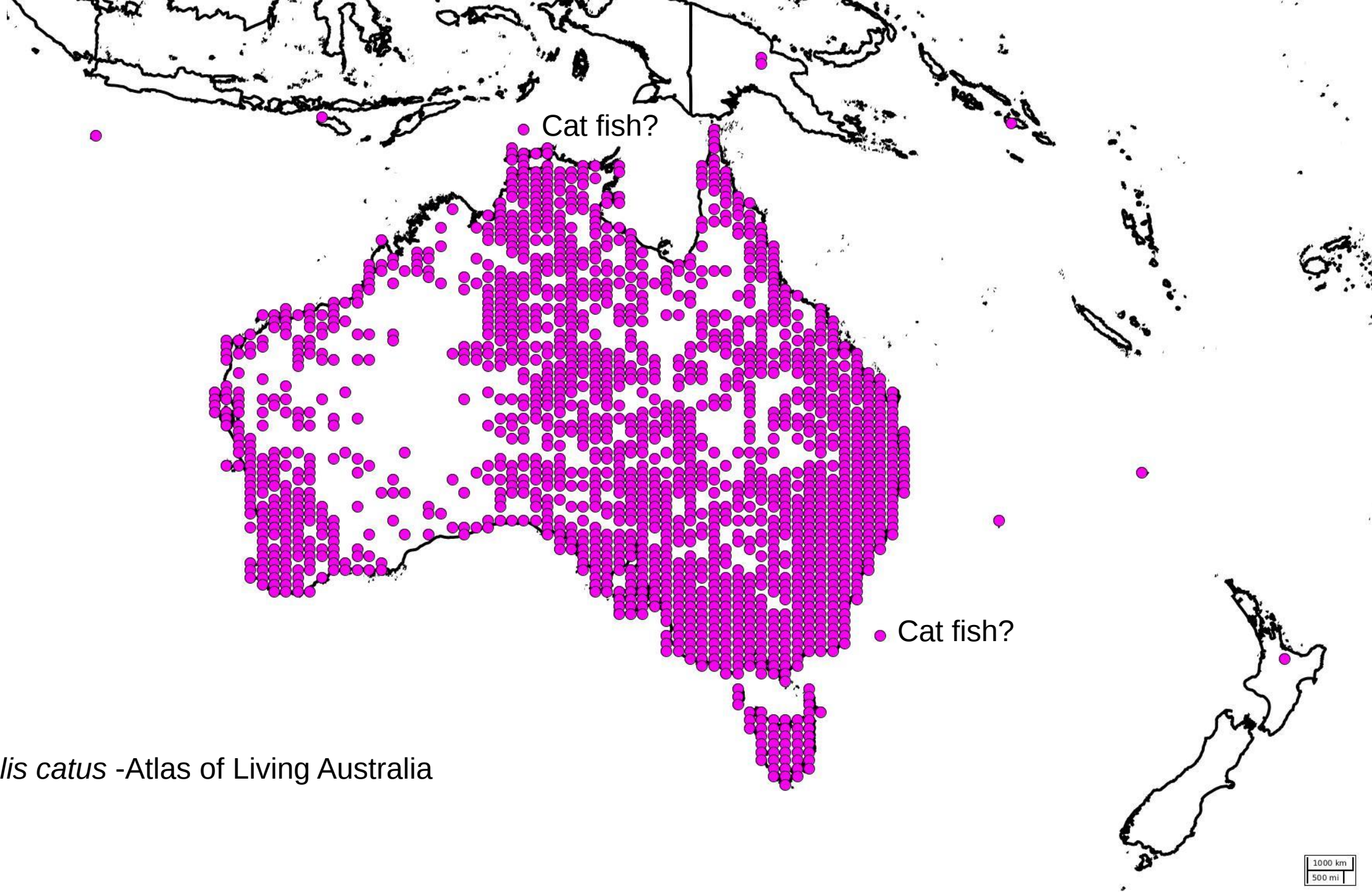


Why manage TPP?

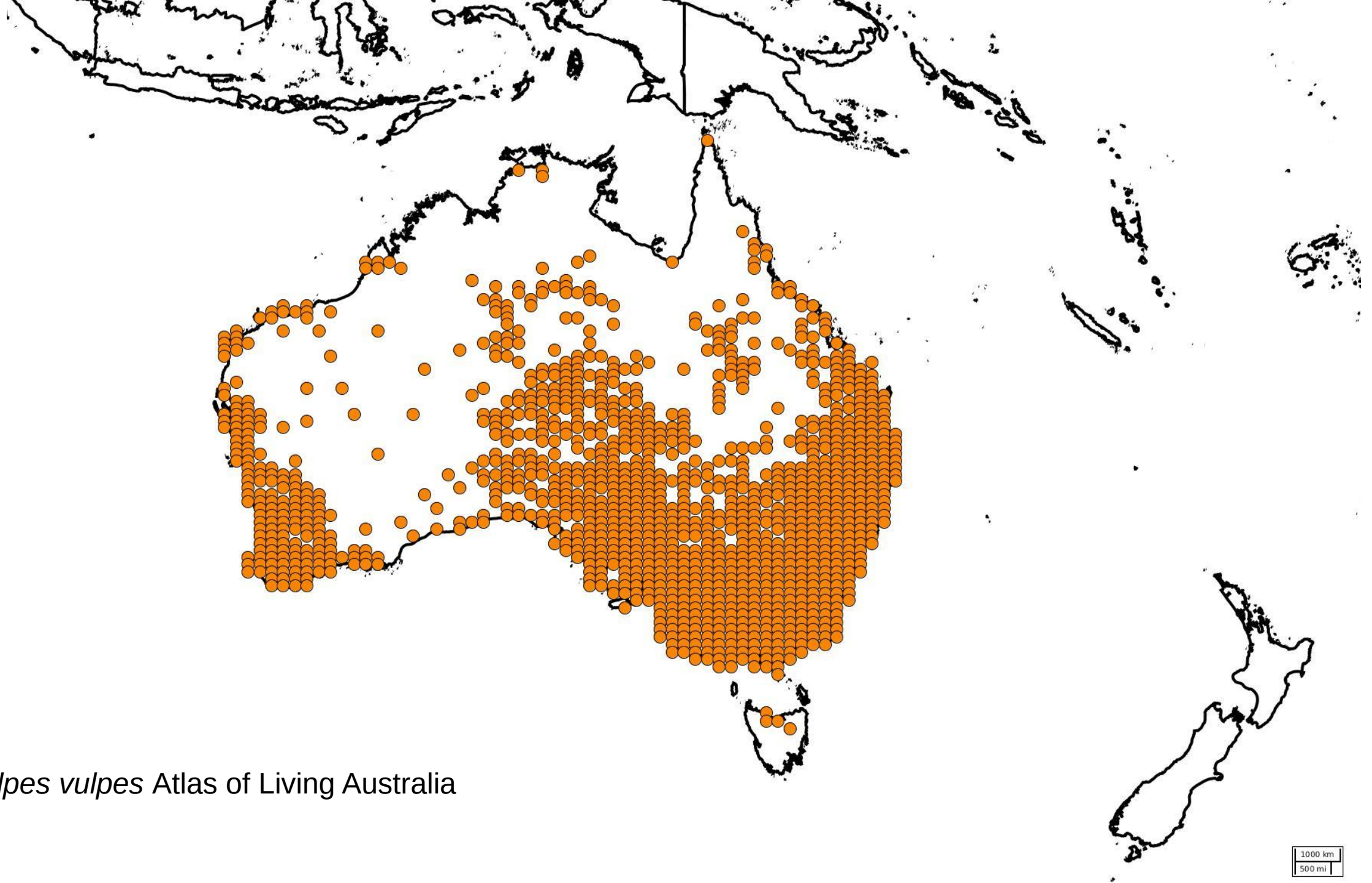
- Feral cat (*Felis catus*)
- European red fox (*Vulpes vulpes*)
- Dingoes & other wild-living dogs (*Canis familiaris*)



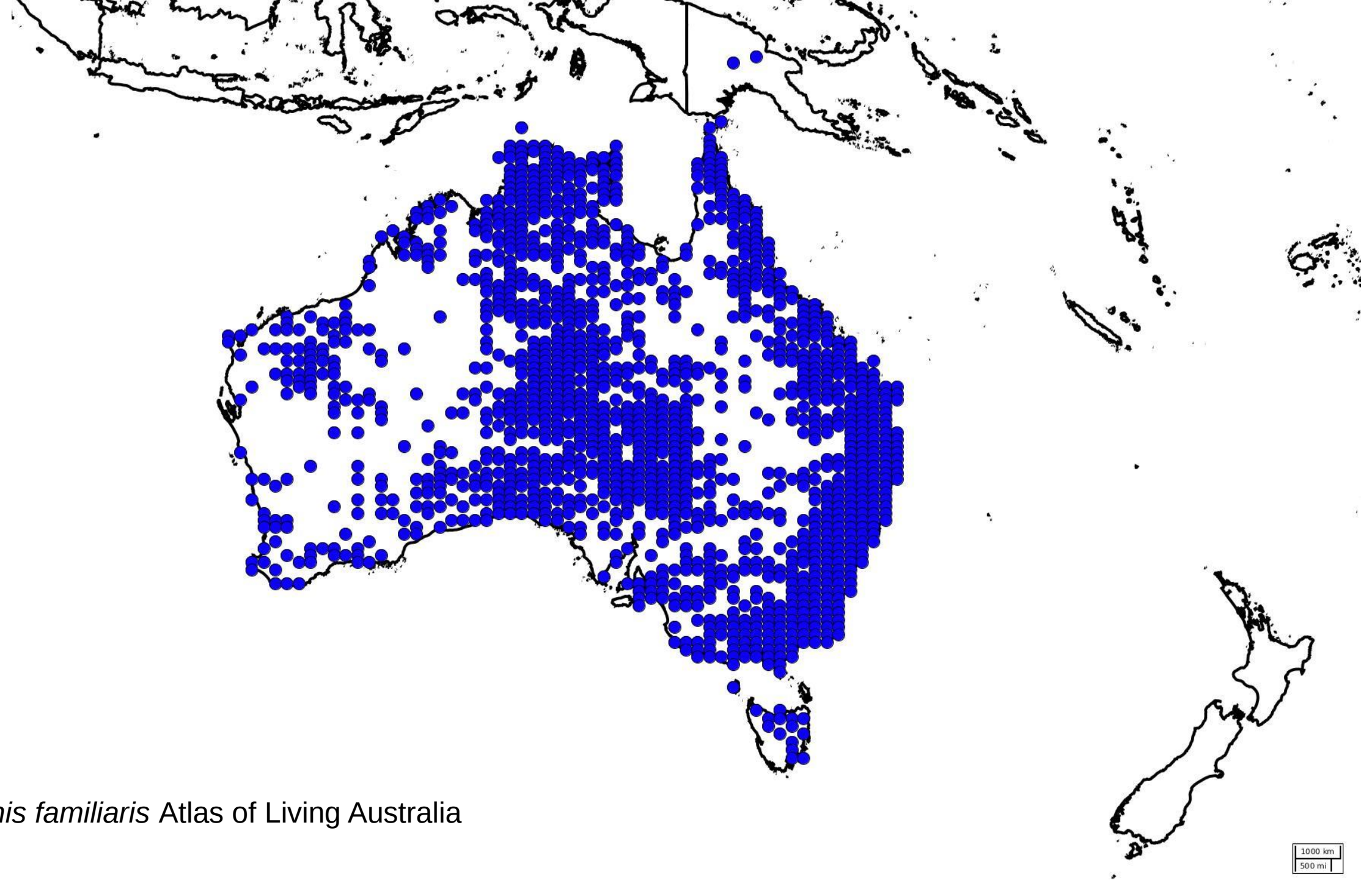
- Spotted-tailed quolls (*Dasyurus maculatus*)?



Felis catus -Atlas of Living Australia

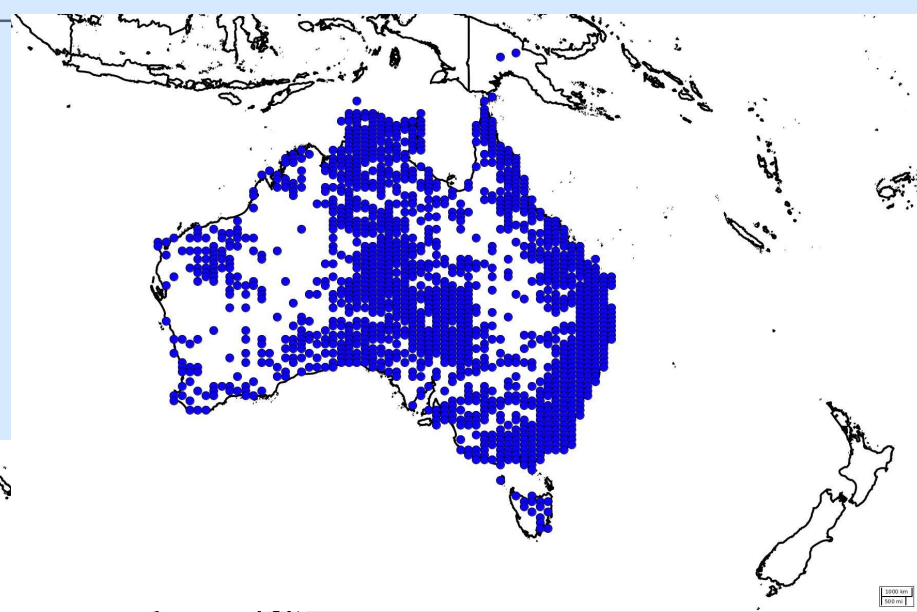


Vulpes vulpes Atlas of Living Australia

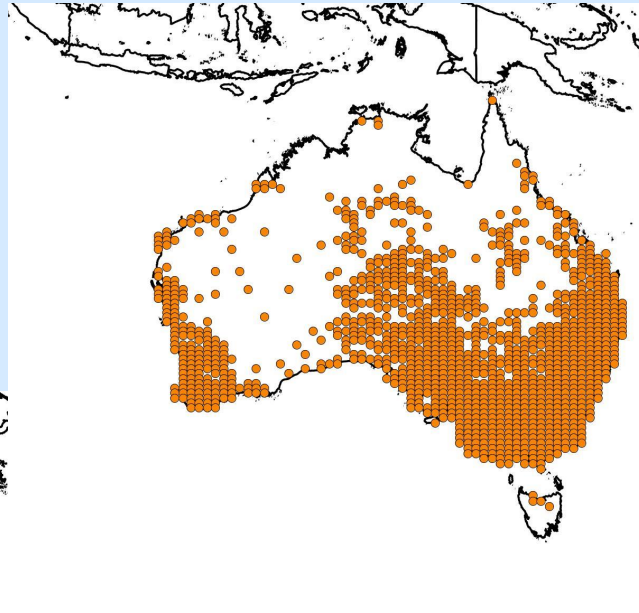


Canis familiaris Atlas of Living Australia

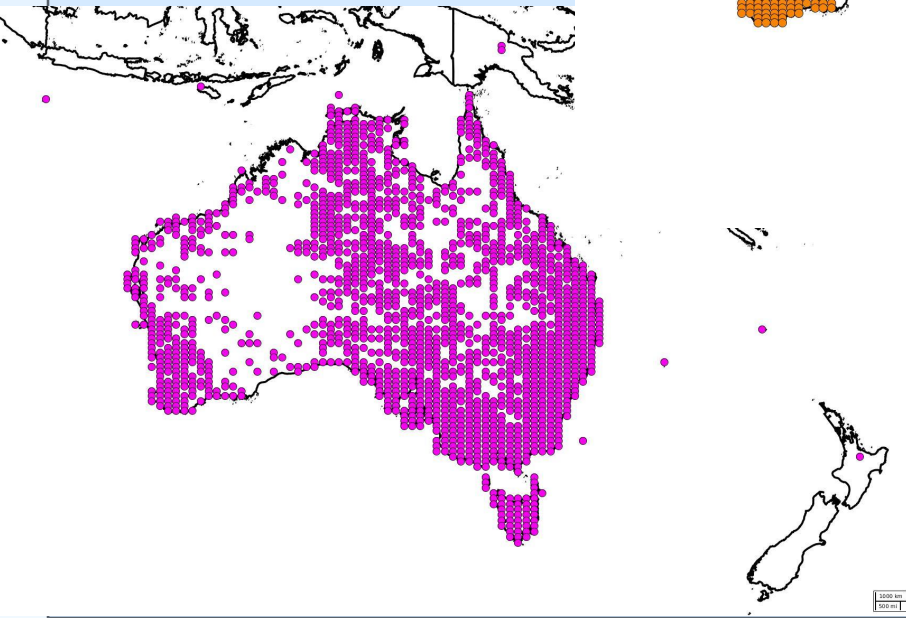
Dog



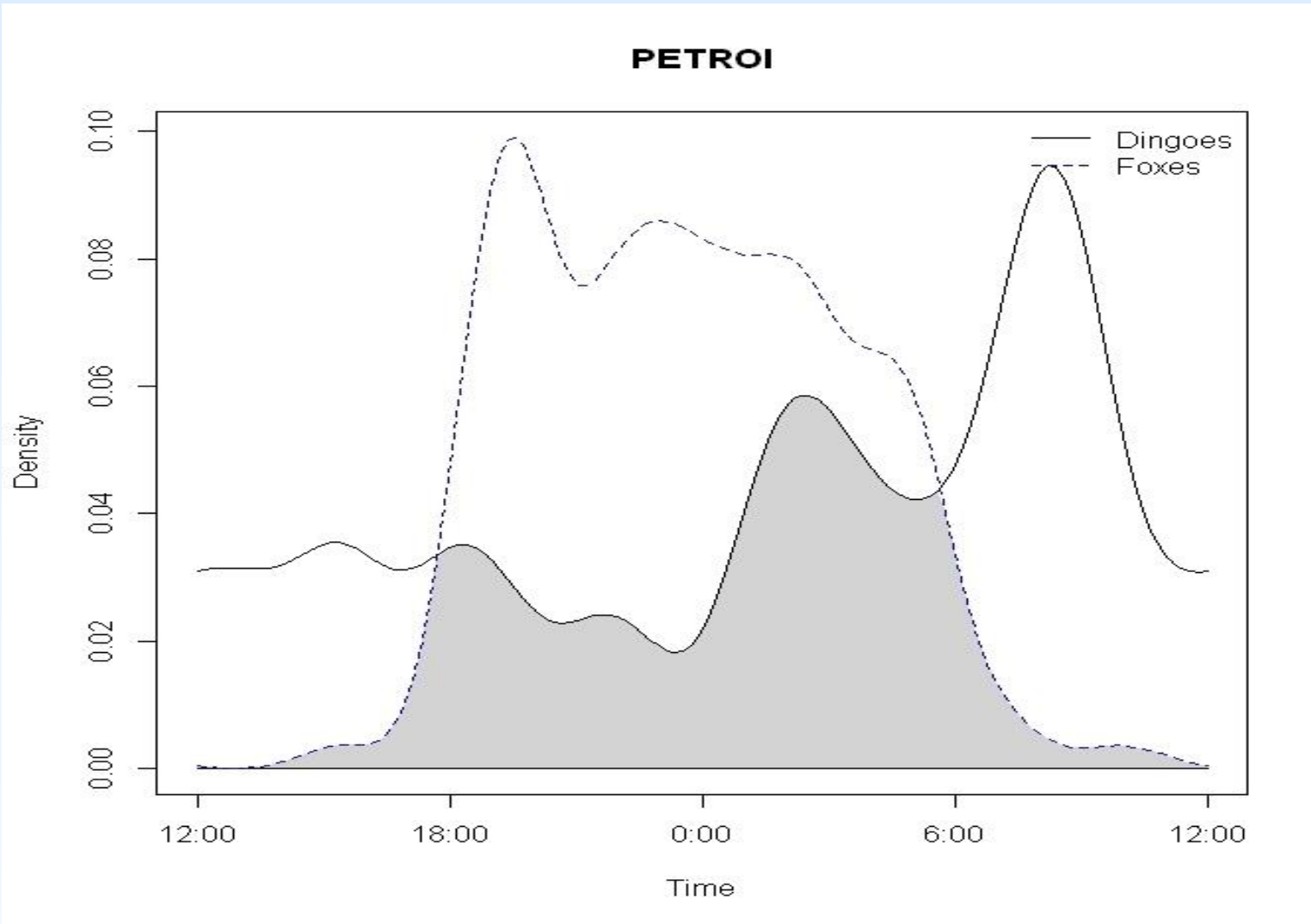
Fox



Cat



Suppression of introduced mesopredators doesn't happen



Managing TGP- acknowledges that Australian agroecosystems are bottom-up

- Increased vegetation cover & floristics
- Faunal biodiversity impacts are indirect
- e.g. (1995) RCV outbreak killed rabbits
 - Vegetation responses after rain
 - Fauna responses followed
- E.g. (1996) 91% control of NZ rabbits
 - 71% Decline in feral cats & ferrets
 - birds recovered

Managing TPP: Efficacious Control of all 3 invasive predators

- 90% dogs killed @ 40 baits/km
- 90% foxes killed @ 10 baits/km
- Some cats killed (not efficacious)
- NO Quolls killed

Managing TPP

- Managing wild dogs
 - Co-management of foxes
 - No-management of cats?
- Direct outcomes
 - Decreased livestock deaths
 - Increased lambing percentages
 - Increased livestock welfare
 - Improved stakeholder wellbeing
- Indirect outcomes:
 - Increased endangered macropods
 - Increased quolls
 - Increased small mammals?
 - Increased feral cat survival?
 - Increased goat fecundity?
 - Increased TGP?

Co-management of TGP & TPP



- Manage both
 - Manage TGP first
 - Manage TPP second
- Monitor vegetation responses
- Monitor faunal response

- Expect more resilient agri-ecosystems

Invasive animal management: Practically complex

- Human dimension is most complex
 - Social science questions



Take opportunities of the sunburnt country:
Drought, Fire & Flooding rains

Manage TGP & TPP together





Thank you for listening