



Alinytjara Wilurara

Natural Resource Management Region Over view of region and climate issues



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Over view of the AW NRM Region



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People Country Water

People

Prosperous and viable communities with the interest, power, capability and resources to care for their country

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Robust and resilient landscapes and ecological communities, self sustaining and minimally managed.

Water

Healthy water, sustainably managed to support the region's cultural, environmental, social and economic values.

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Major threats

- a lack or loss of traditional environmental management
- a lack of contemporary environmental management
- an increase in, or unsustainable pastoral activities and mining
- a lack of documented knowledge and information regarding the health and trend of the natural resources
- unsustainable use of groundwater, both now and in the future
- invasions of existing or new weeds eg buffel grass
- altered fire regimes
- the impact of feral animals camels, cattle, horses, donkeys, rabbits, foxes and cats

Climate change



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Rainfall

Temperature





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A literature review and modelling suggest that;

- Geology, fire, land practice and invasive species all interact to drive diversity.
- Shifts in rainfall or temperature may affect land management practice, or fire regime, which will drive the components of additive diversity
- Research is required to collate species data, along with site-specific measures of slope, elevation, aspect, fire history and feral densities and possible links to climate Lochran W. Traill^{1,2*}, Thomas C. Wanger ^{1,3} and Barry W. Brook¹ (unpub)
 Still need to look at the socio economic impacts

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Case study: threatened species



- Black-footed rock wallaby (*Petrogale lateralis*), or source: Natural wanders *Warru*
- IUCN-listed, MacDonnell race
- In decline since 1930s
- Cat and fox predation
- Presence data from SA, WA and the NT

Warru distribution



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Based on known parameters, starting at ~1100 individuals, no predation or drought





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Realistic models, population in decline

a) 1/20 year droughts with just 10 percent loss

b) 1/20 year droughts + joey predation at 20 percent



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Confined to rocky terrain (>450 masl) (Where do we invest)





Other initiatives

- Redoing and extending the Nullarbor survey (done over 25 yrs ago) to investigate any changes that may be linked to climate
- Developing with communities a regional climate strategy
- Monitoring the coastal Nullarbor daisy as climate change indicator
- Established monitoring sites in the Yalata coastal wetland as indicators of climate change
- Look at further modeling to support the community in investment decisions. (Also more BoM sites)
- Look at long term data is there any other indicator information (eg over 20 years of whale data)

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- Climate change will impact on people, country and water
- What may be the change and how rapid is what the community needs to know - in a way that is relevant and understandable
- Value Aboriginal science in decision making
- On this information where and how people live and their investment choices in NRM can be made



Thanks to: Lochran W. Traill^{1,2*}, Thomas C. Wanger ^{1,3} and Barry W. Brook¹ Doug Bardsley Karan Coombe-Smith Robin Family

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