

Biodiversity in Queensland's Rangelands
Status and Condition

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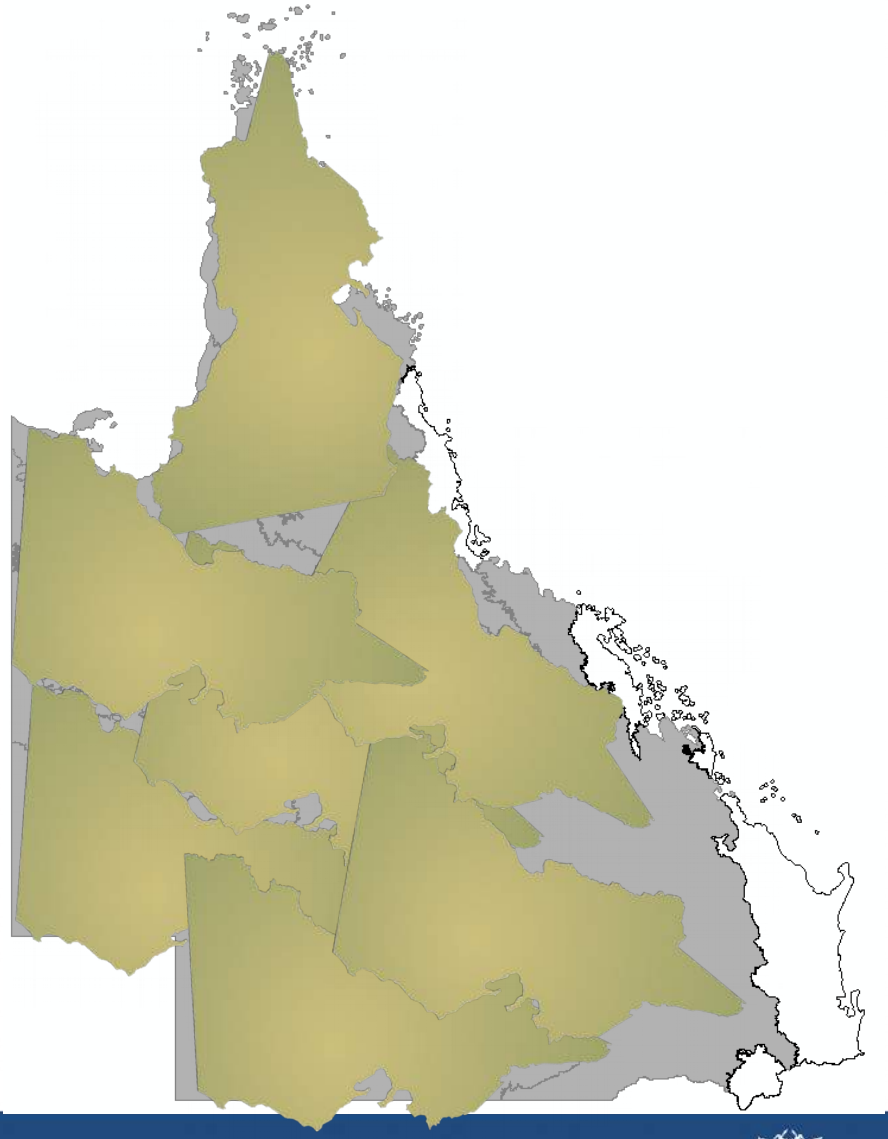
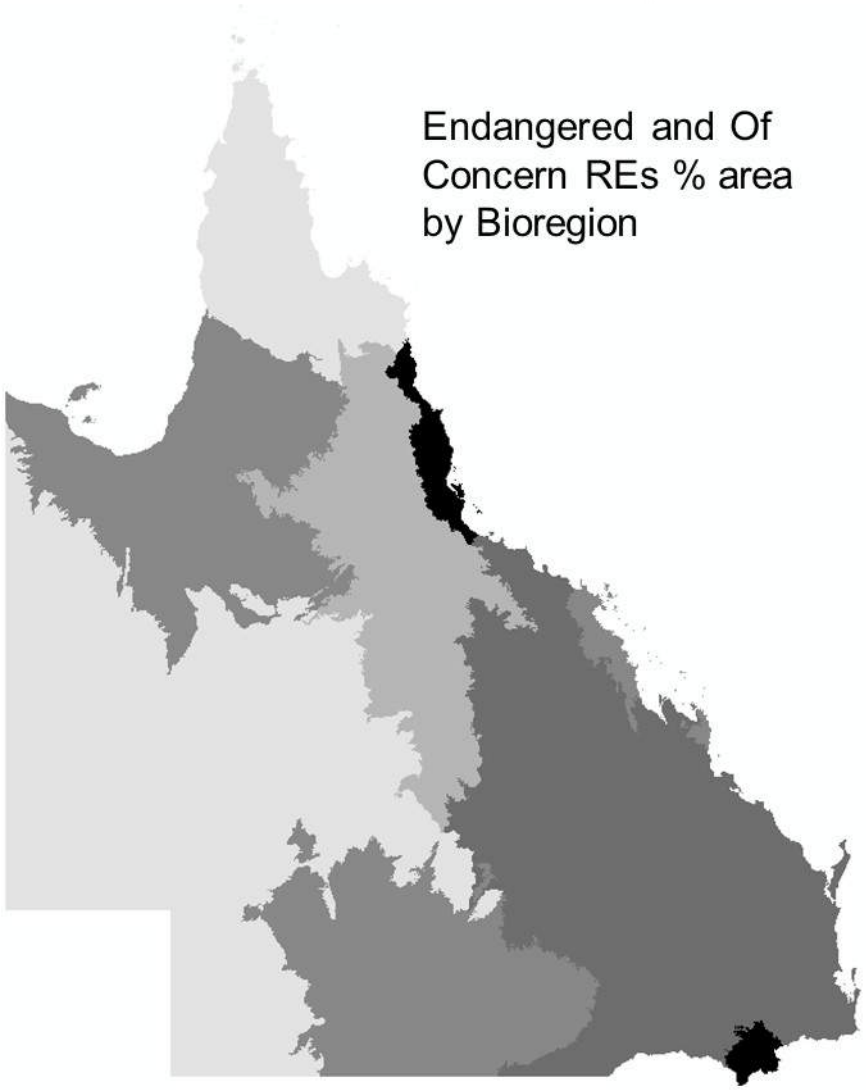
Rangeland biodiversity status

- 94% of Queensland is ‘rangeland’
- Huge
- Diverse, > 1000 described regional ecosystems



Rangeland biodiversity status

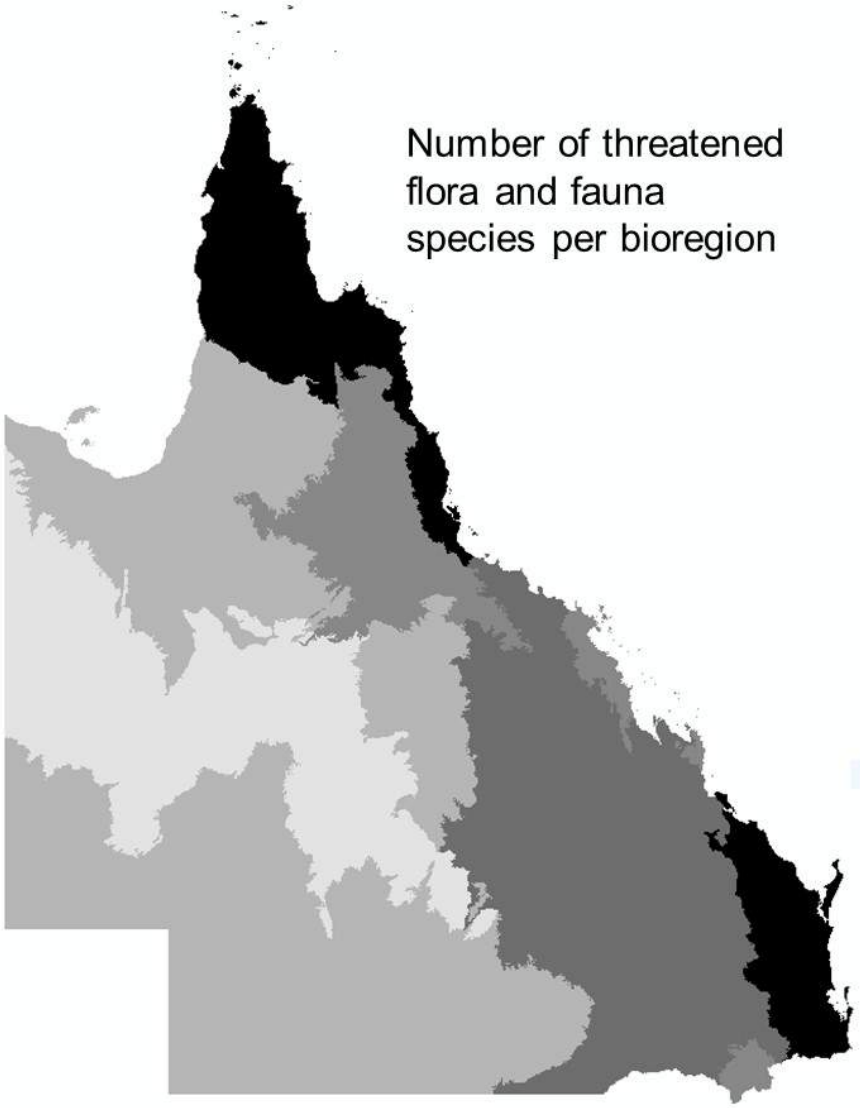
- Endangered and Of Concern remnant ecosystems:
  - cover 9.5% of Qld
  - cover 8.5% of the rangelands (mostly in Mulga, Brigalow and Gulf Plains)
  - x2 Tasmania



Light grey <5% area; Black >30% area

Rangeland biodiversity status

- Threatened flora and fauna species:
  - High numbers in SEQ and WET, but also Brigalow and Cape York
  - Low numbers in MGD and NWH

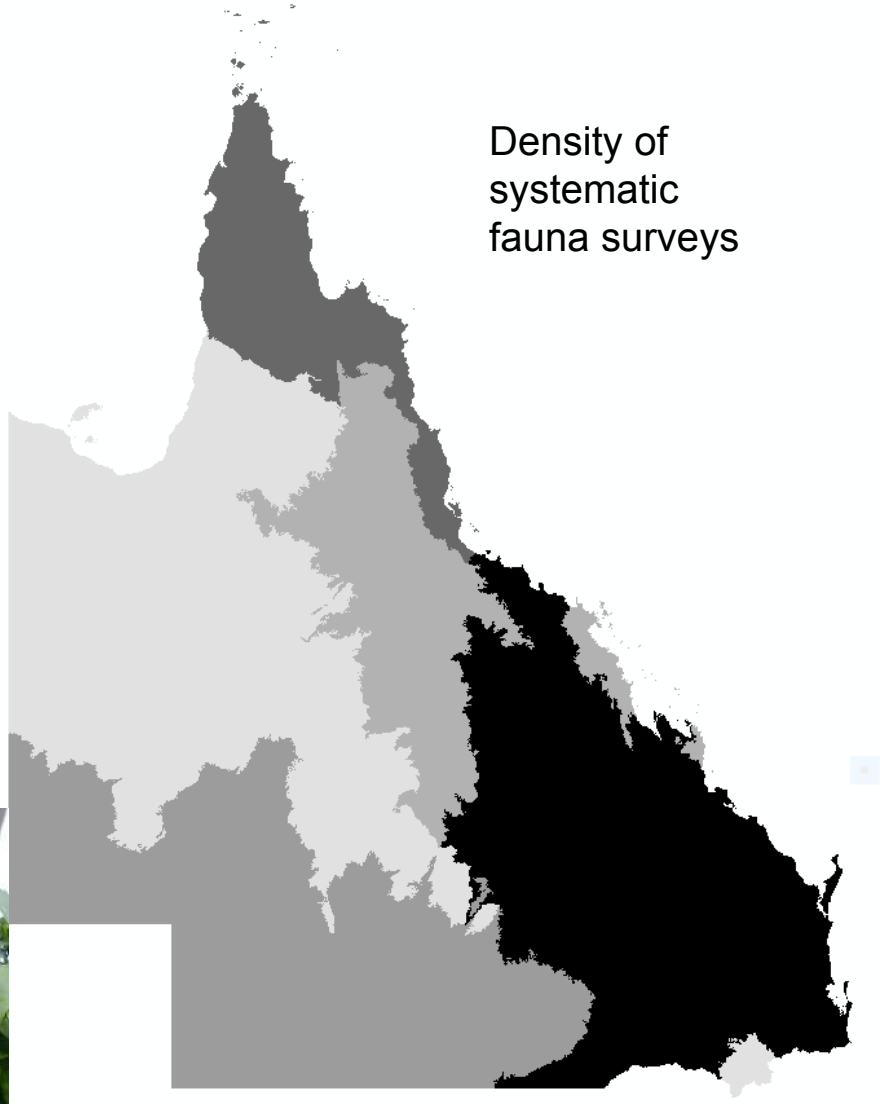


Light grey <50 species; Black >300 species

Survey effort in the rangelands

- Highest concentration of biodiversity survey effort in SEQ, then Brigalow

- Collectively, Cape York, NWH, MGD, GUP, DEU, EIU, CHC, Mulga:
  - less (by 25%) of effort gone into SEQ
  - 1/3 of effort in SEQ and Brigalow



Vs ??

Light grey <300 surveys; Black >2000 surveys

Condition – why do we care?

Knowledge of rangeland condition enhances our capacity to:

- Understand the drivers of condition states
- Identify priority areas for management interventions
- Assists with environmental accounting and reporting

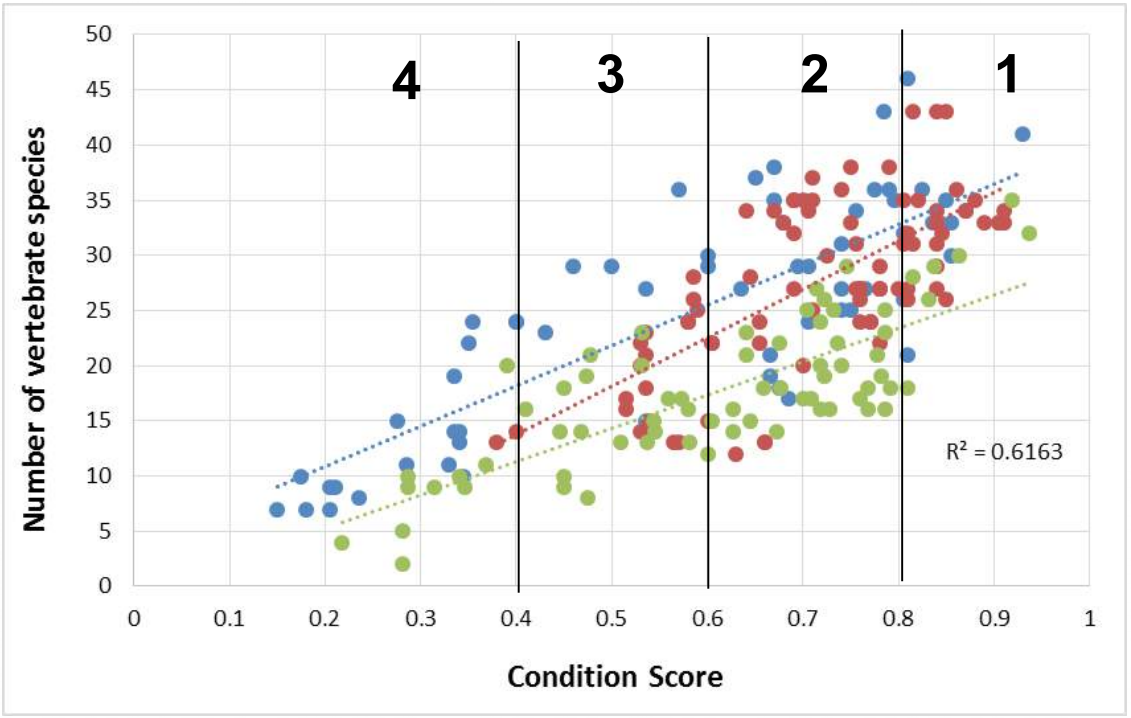
Condition assessments:

- Based on pressure-state-response conceptual frameworks
- Forces acknowledgement of important attributes that:
  - respond to change and;
  - are direct and/or surrogate measures of the condition objective
- Uses a scoring or rating system that provides a condition metric that is comparable between and within ecosystems over space and time

BioCondition

- Provides a final condition metric between 0-1, which can be classified into 1,2,3,4 classes

- The intent is the closer the score is to 1, the more flora and fauna species the ecosystem will support relative to its *type*



1234 and ABCD

Grazing Land Condition: A = Good to D = needs help

BioCondition class: 1 = Great to 4 = Dysfunctional

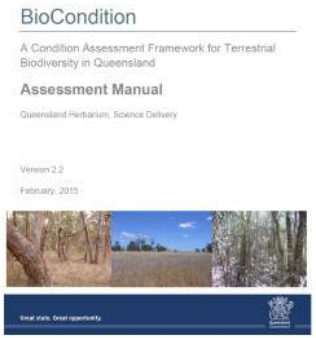
A / 1

B / 2

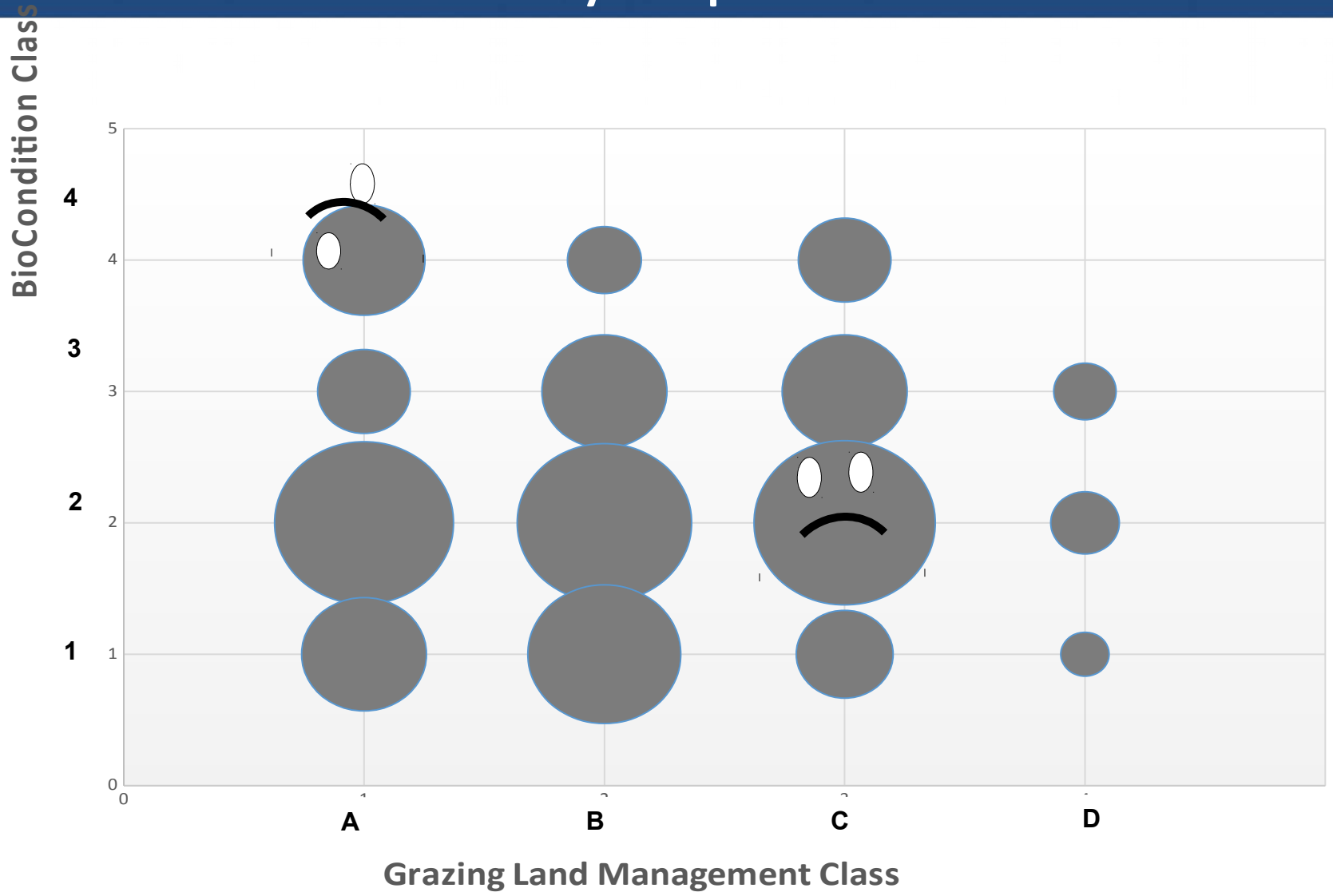
C / 3

??

D / 4



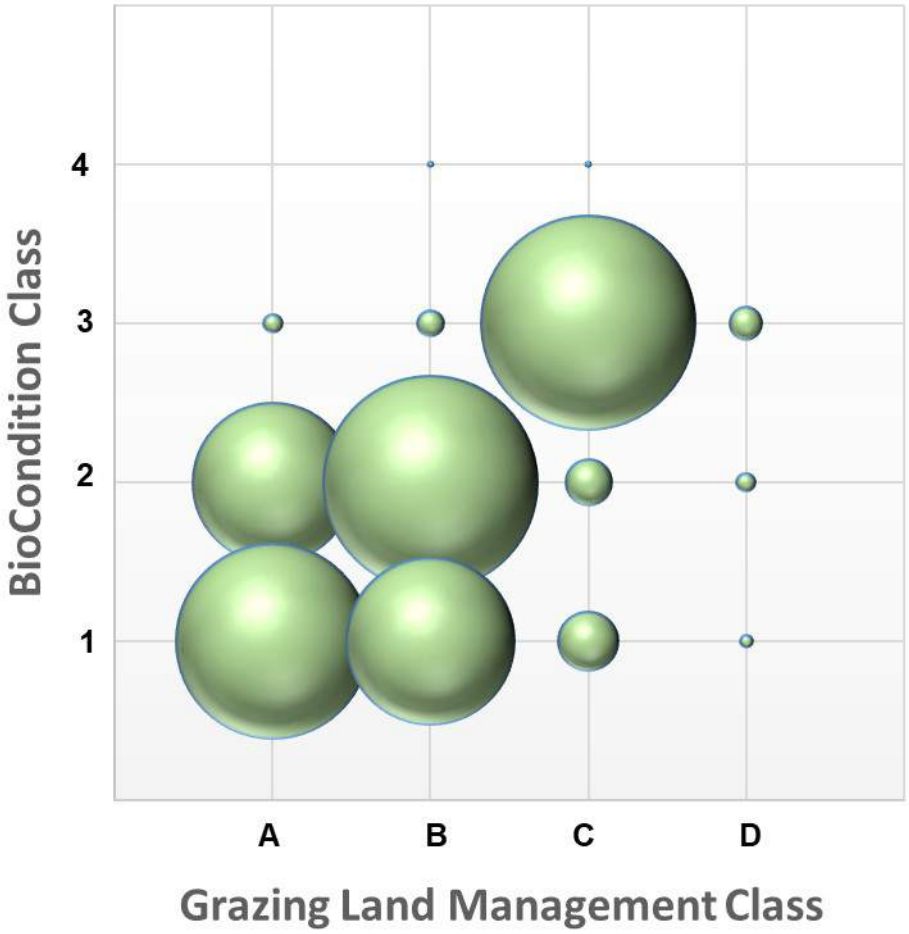
1234 and ABCD – how do they compare?



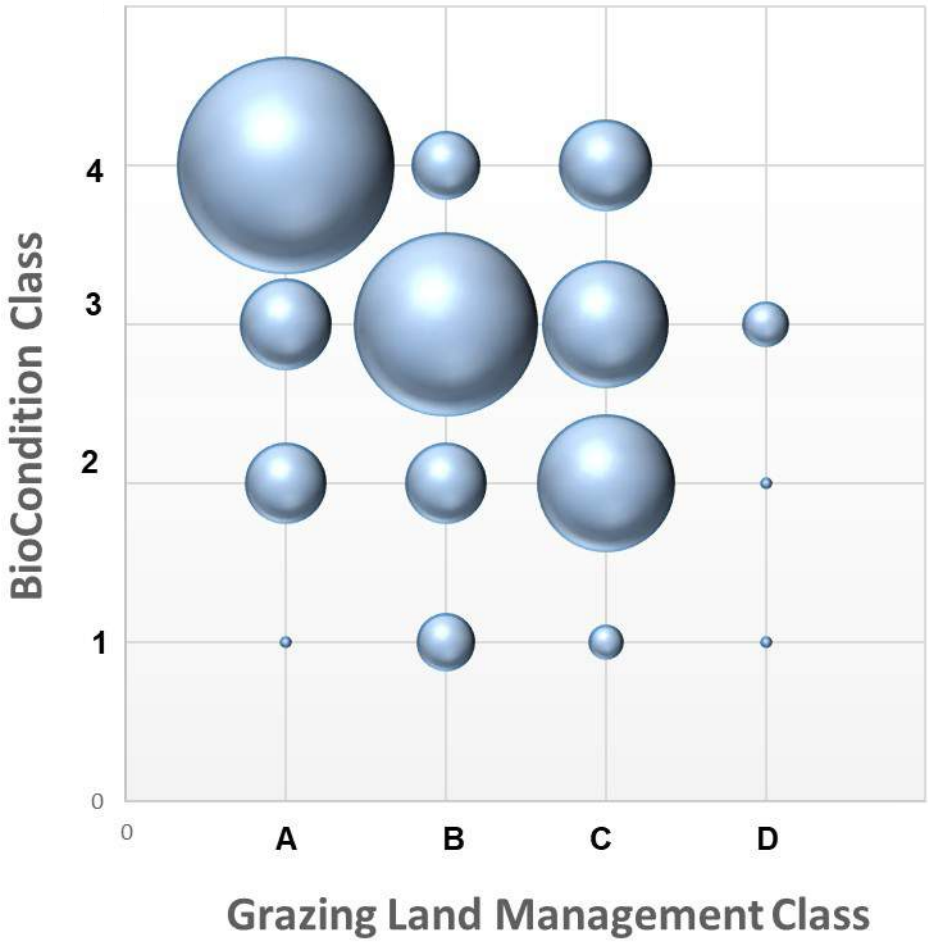
n = 342 sites

1234 and ABCD – how do they compare?

Remnant vegetation



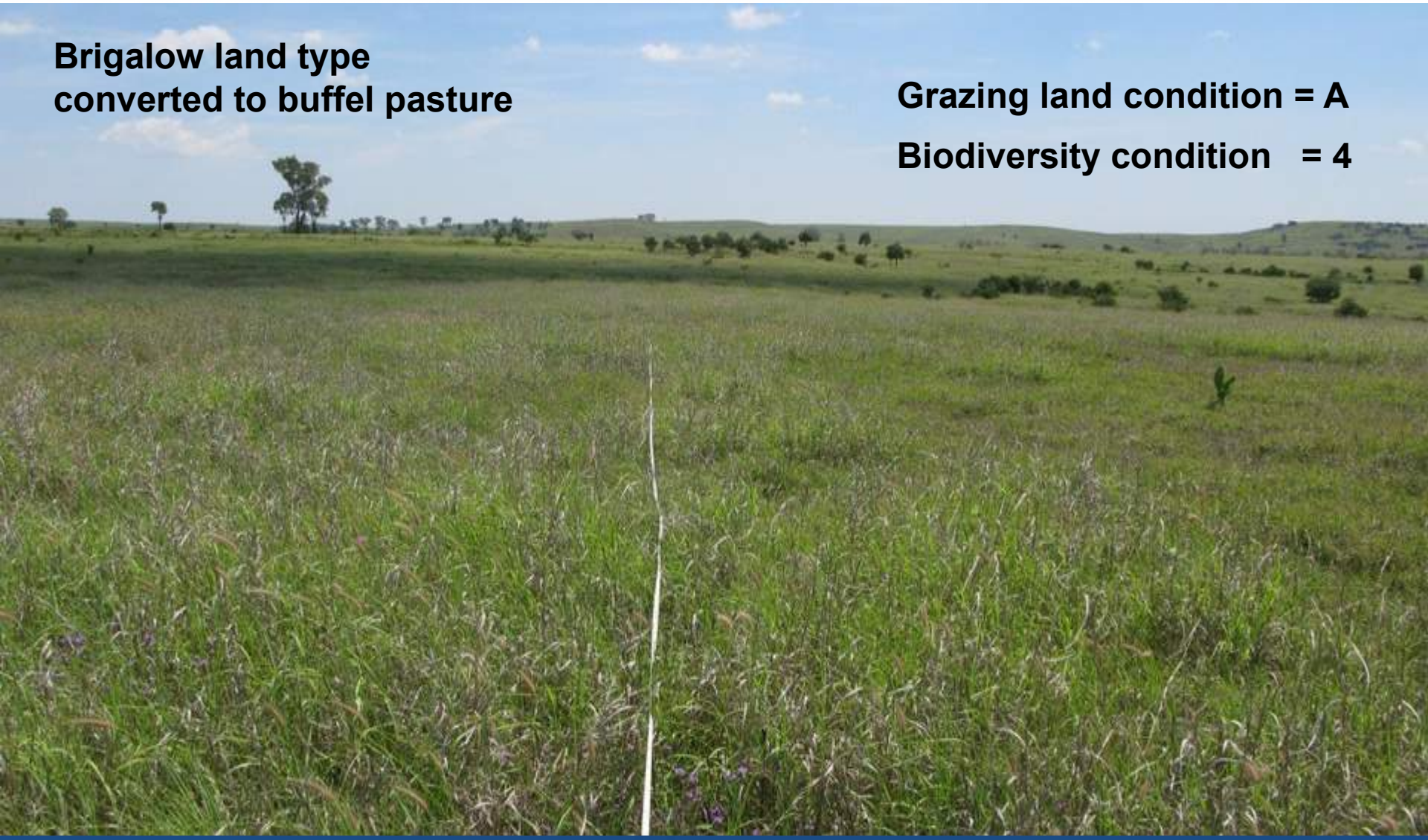
Non remnant vegetation

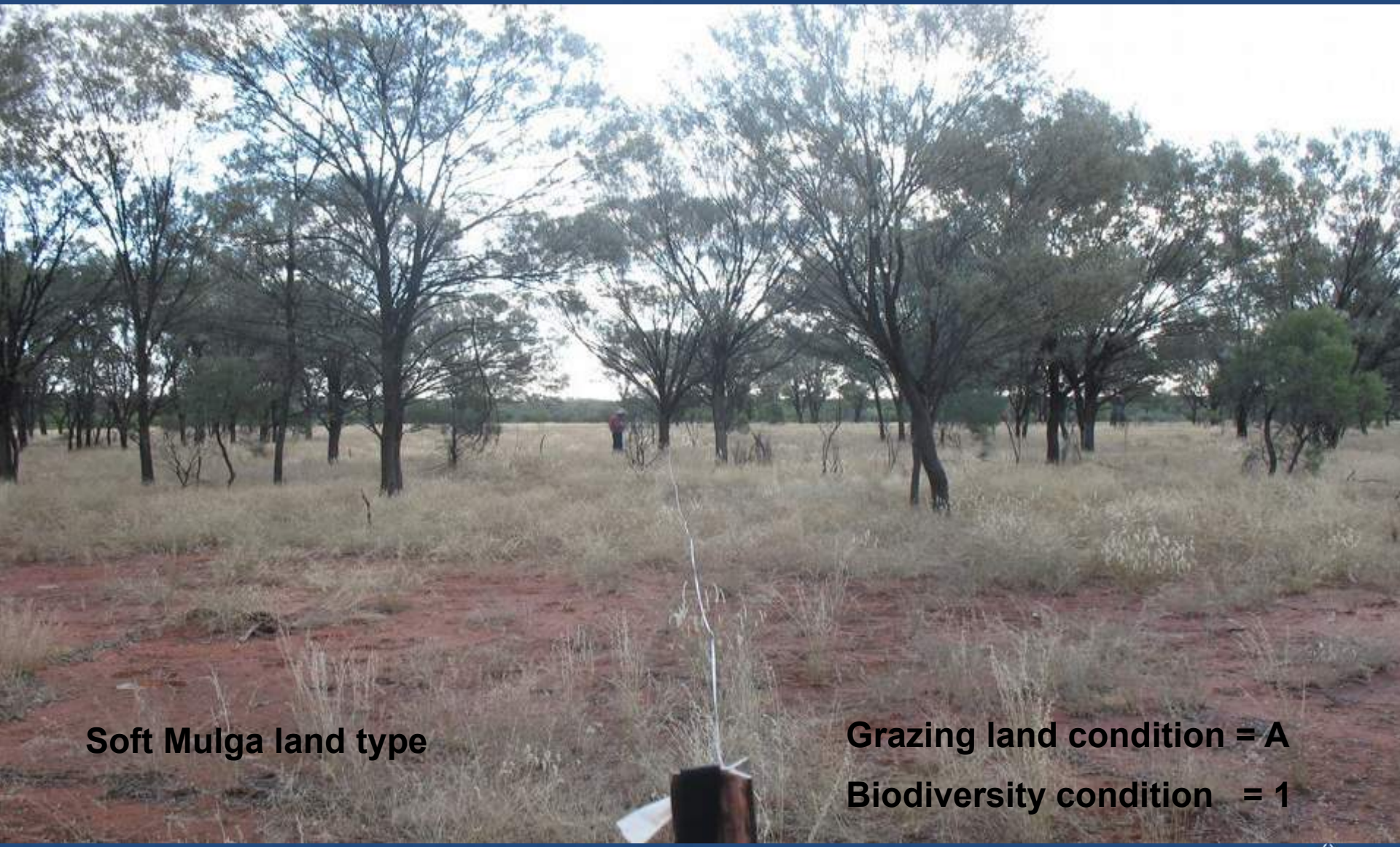


Mitchell grass downs

Grazing land condition = A

BioCondition class = 1

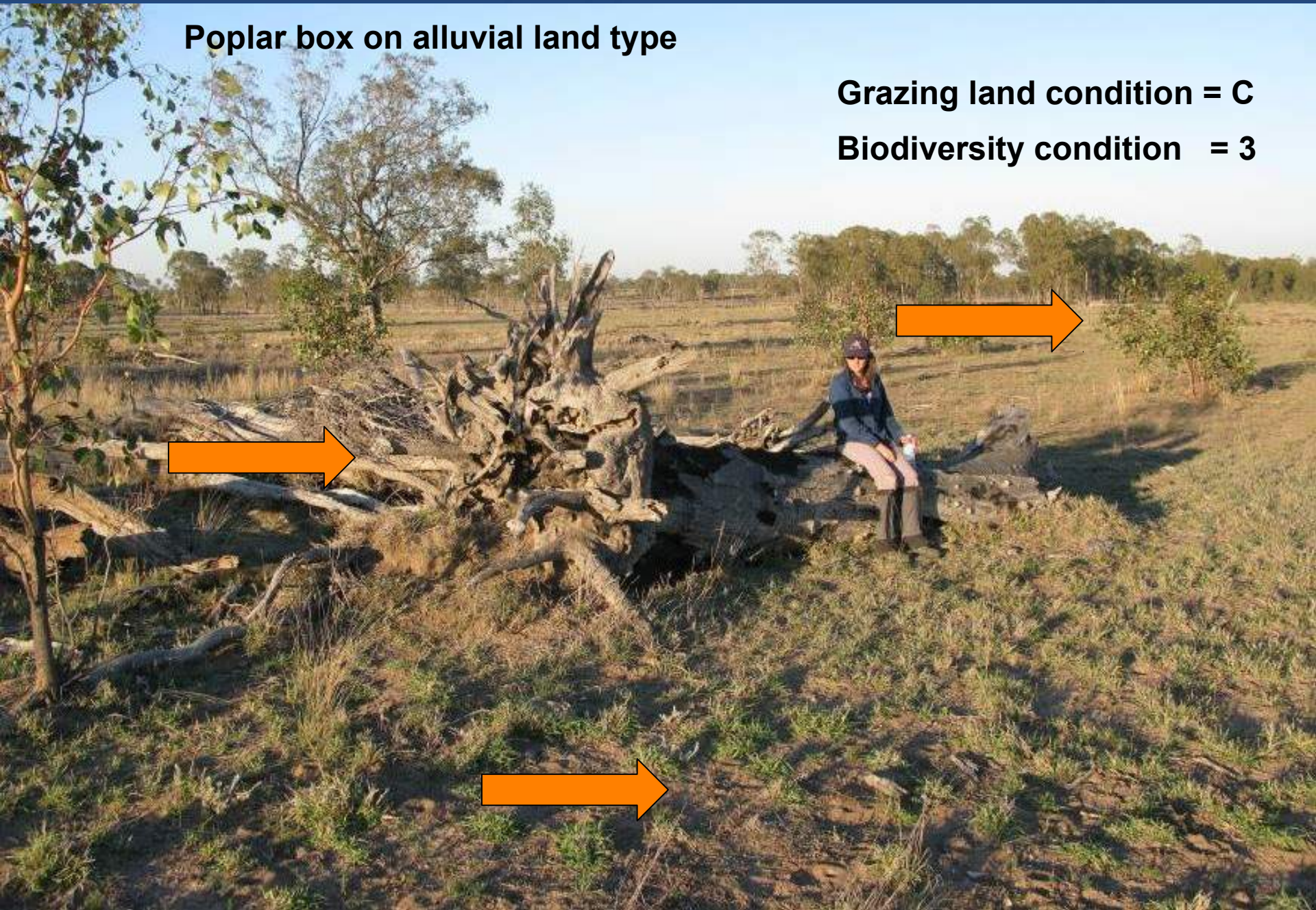

Brigalow land type
converted to buffel pasture
Grazing land condition = A
Biodiversity condition = 4


Soft Mulga land type
Grazing land condition = A
Biodiversity condition = 1

Poplar box on alluvial land type

Grazing land condition = C

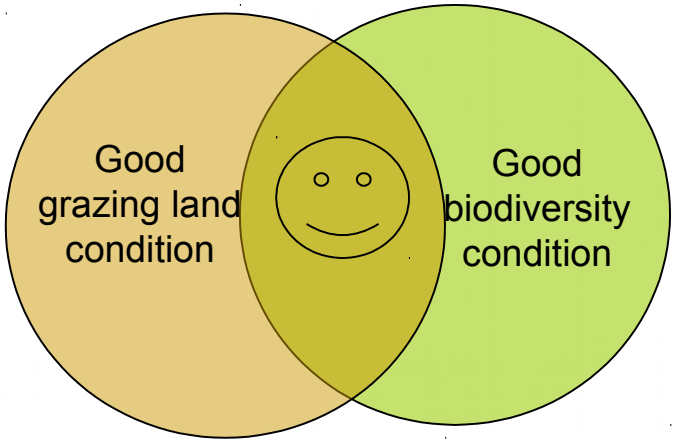
Biodiversity condition = 3



Conclusion

- Knowledge of condition states helps us articulate what is going right and what is going wrong

- Monitoring condition states can show good management practice for both production and biodiversity in our rangelands



- The challenge: to map condition for biodiversity for the state, that accounts for natural variation, across time and space

Many warm thanks to….

- Funding bodies (Meat and Livestock Australia, Australian Govt, GISERA, Biodiversity Fund, Queensland Govt)
- My team and colleagues
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- You for listening