

# Analyzing changes in the extent and condition of a critically endangered ecosystem – data sources, methods and issues

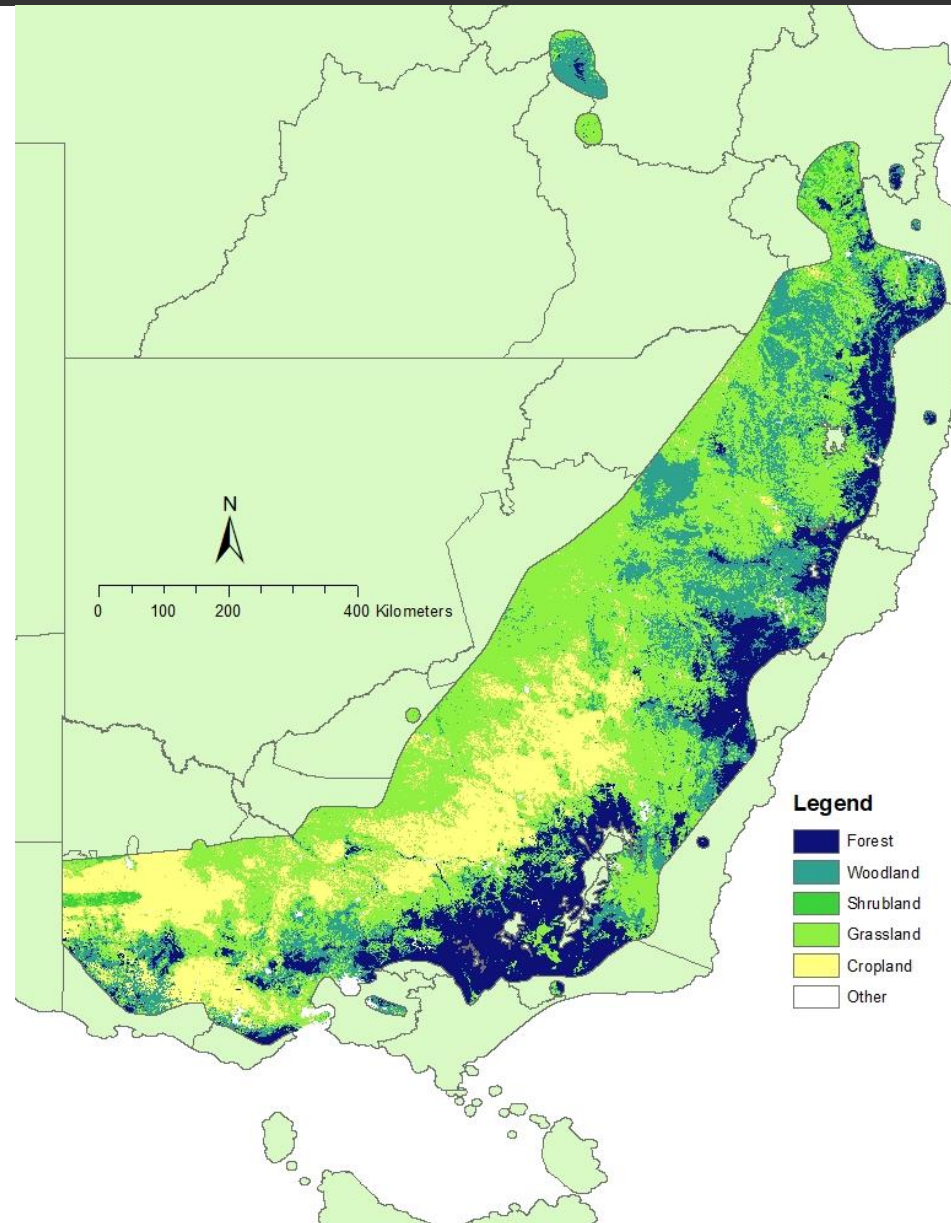
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# Temperate eucalypt woodland

Box gum grassy woodland



## Area of study

- Delineated by the area protected under the Environment Protection and Biodiversity Act
  - Area is xx km<sup>2</sup> (roughly the size of United Kingdom)
  - Accounts are to inform decisions about the best ways to conserve and restore the woodlands
- Natural Resource Management regions
  - The areas used by local land management agencies

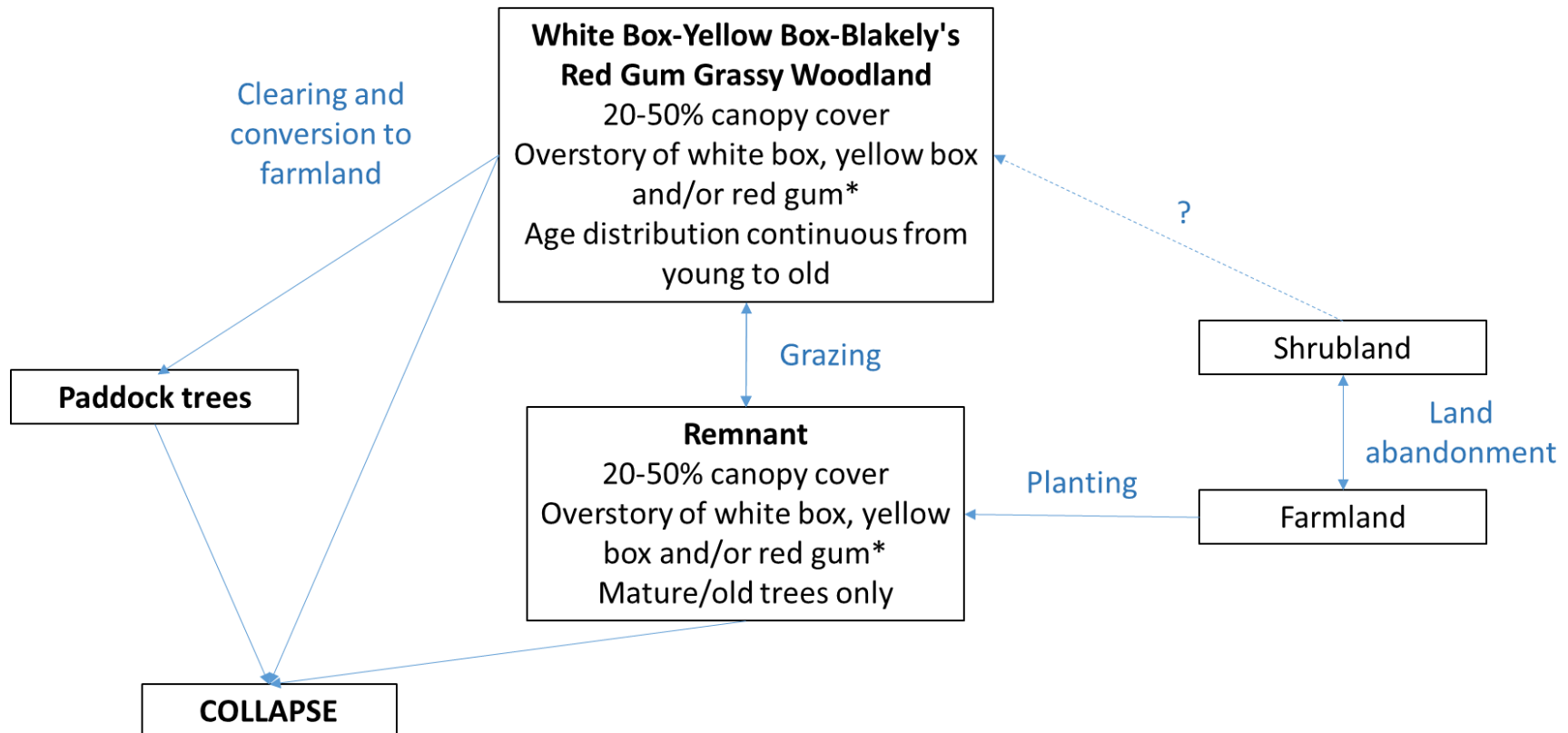
# Data sources

- Land cover
  - National Carbon Accounting System (1988-2016)
- Land use
  - National scale land use data (2016)
  - Australian Bureau of Statistics' Agricultural Survey (2007/2008 - 2015/2016)
- Land value
  - National accounts

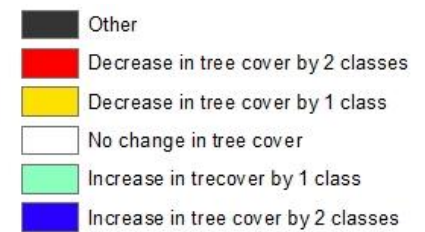
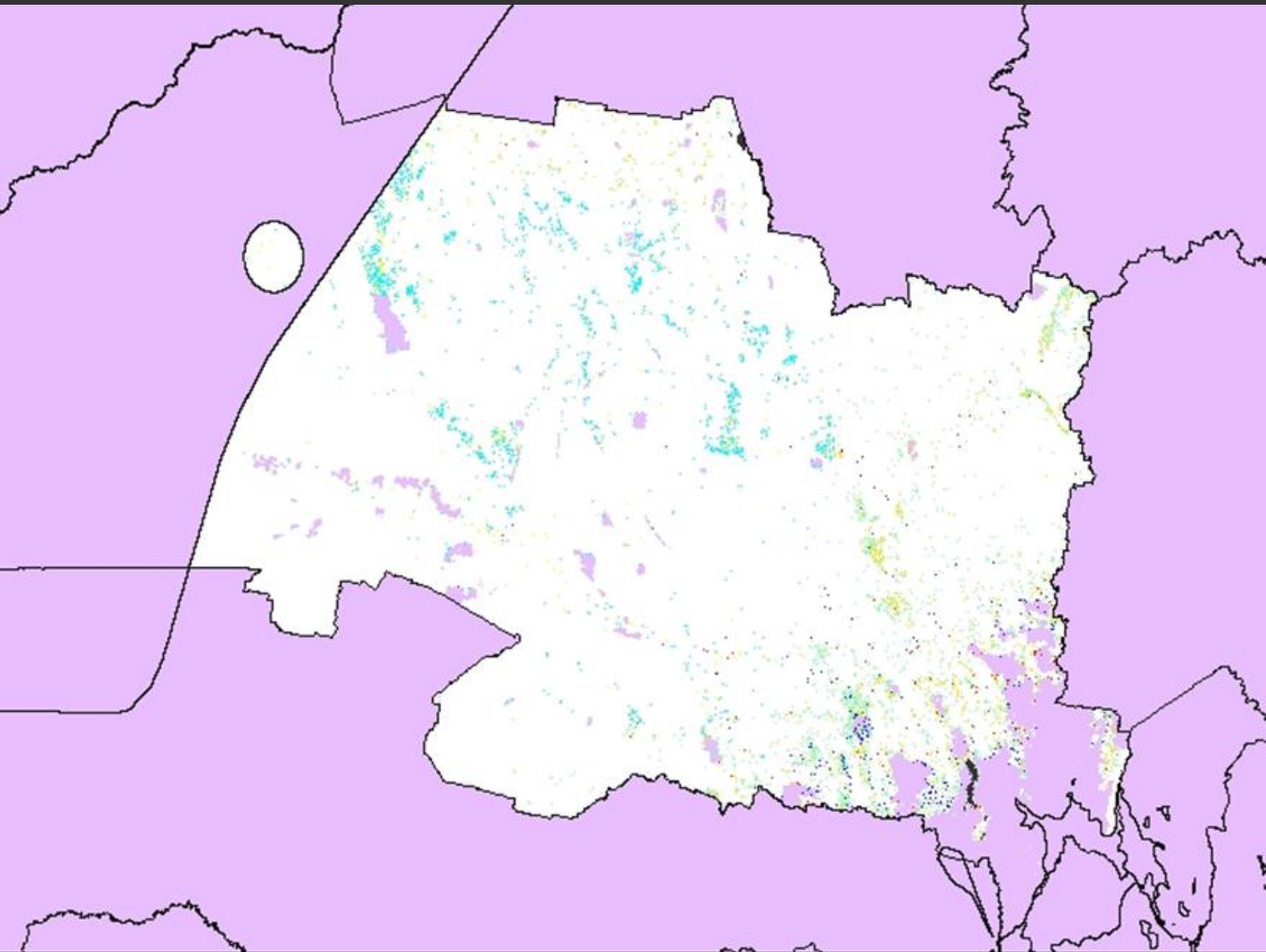
# Methodological issues

- Computing power
- Data on land use only available for one year
- Land use classifications
- Different data are available for different spatial areas
- Land value only available at national level
- Calendar year vs financial year

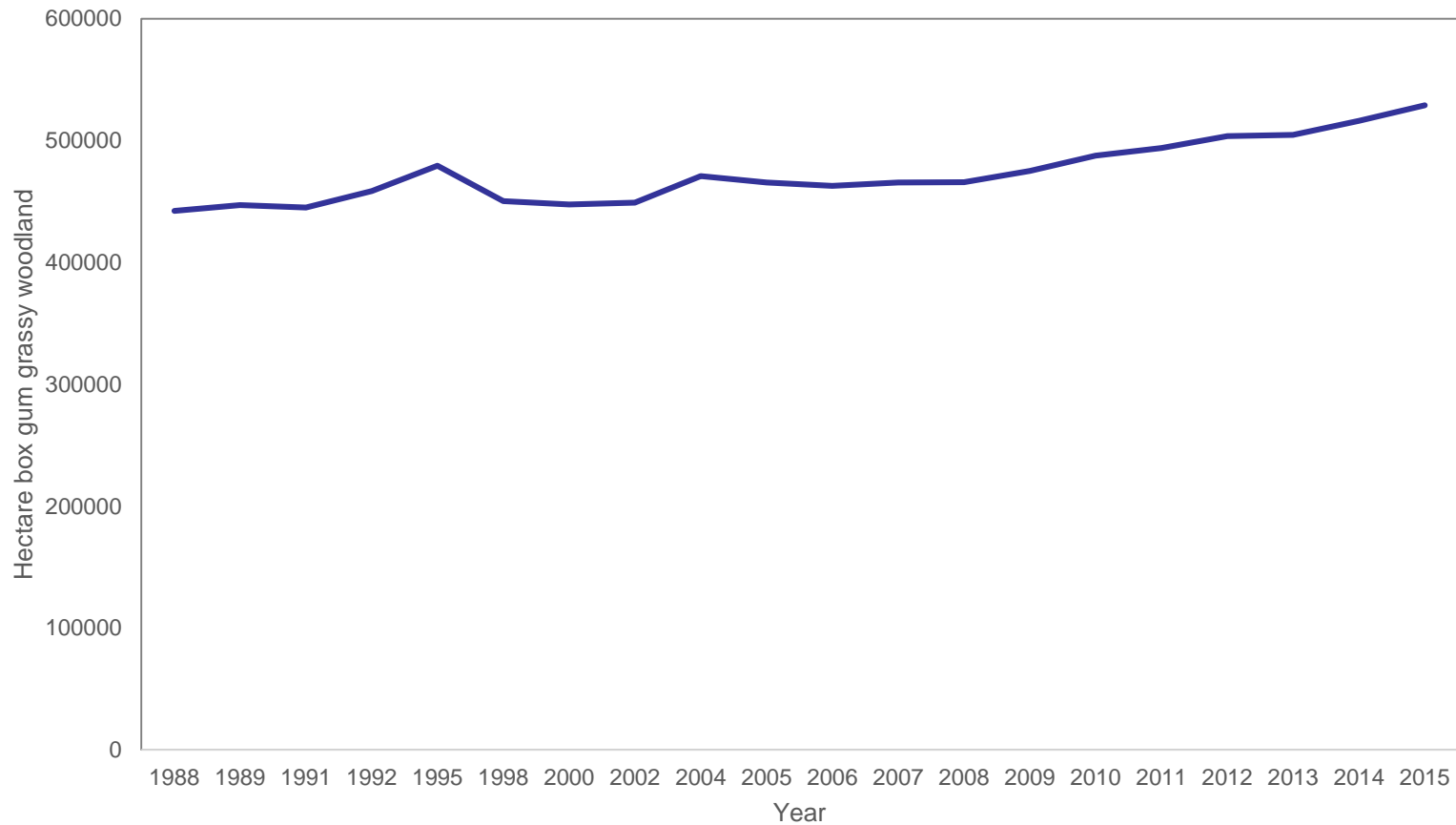
# Process model of box gum grassy woodland



# Land cover change 2000-2015 Riverina



# Change in quantity of box gum grassy woodlands





# Why is it important to quantify changes in both the extent and condition of the ecosystem?

- Analyzing consequences of legislation in Australian states
- Assess impacts of increased protection and restoration
  - Carbon storage
  - Water
  - Biodiversity
  - Agriculture
  - Land value

# For an endangered ecosystem, quantity does not guarantee quality

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