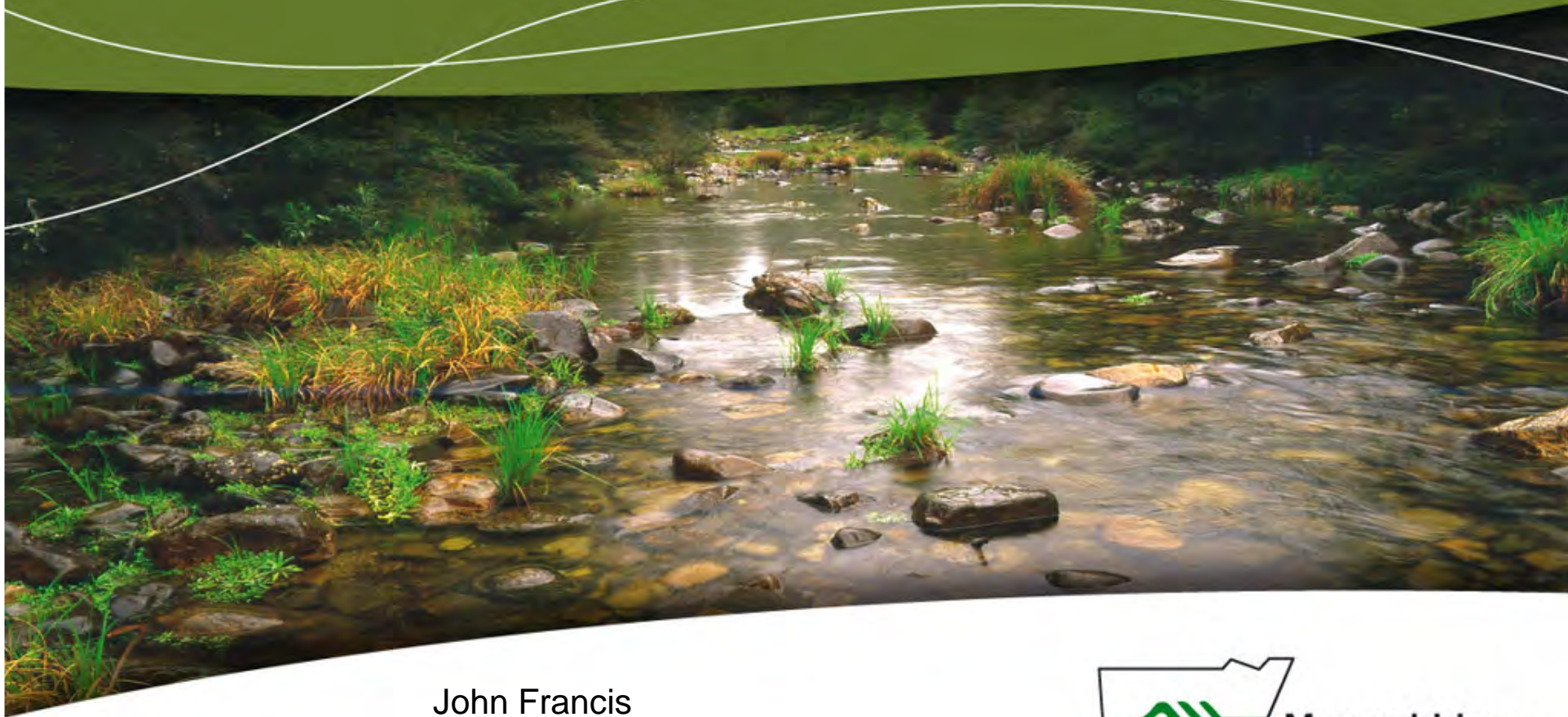


Changing times and paradigms in the Murrumbidgee Catchment



John Francis
A/General Manager



Changing Times in NRM

- CMAs commenced 2005
- Developed Water, Land, Biodiversity & Community Asset based Catchment Action Plan
- Focused on funding delivery of NRM via NHT II, NAP & NSW funds direct to landholders and key stakeholders



Changing Times in NRM

- @ Mid- term review of 10 year CAP cycle
- Funding more targeted & competitive via Caring for Country & NSW Catchment Action
- Improved science, knowledge and approaches to NRM
- Same expectations on CMA for NRM in Murrumbidgee



Changing Paradigms

- Changed operating environment required change in paradigm:
- Mid term CAP upgrade focus on **functional & resilient landscapes** – not asset based
- CMA being the **facilitator** of whole of government & community delivery of upgraded CAP
- **Leveraging** funding from variety of sources



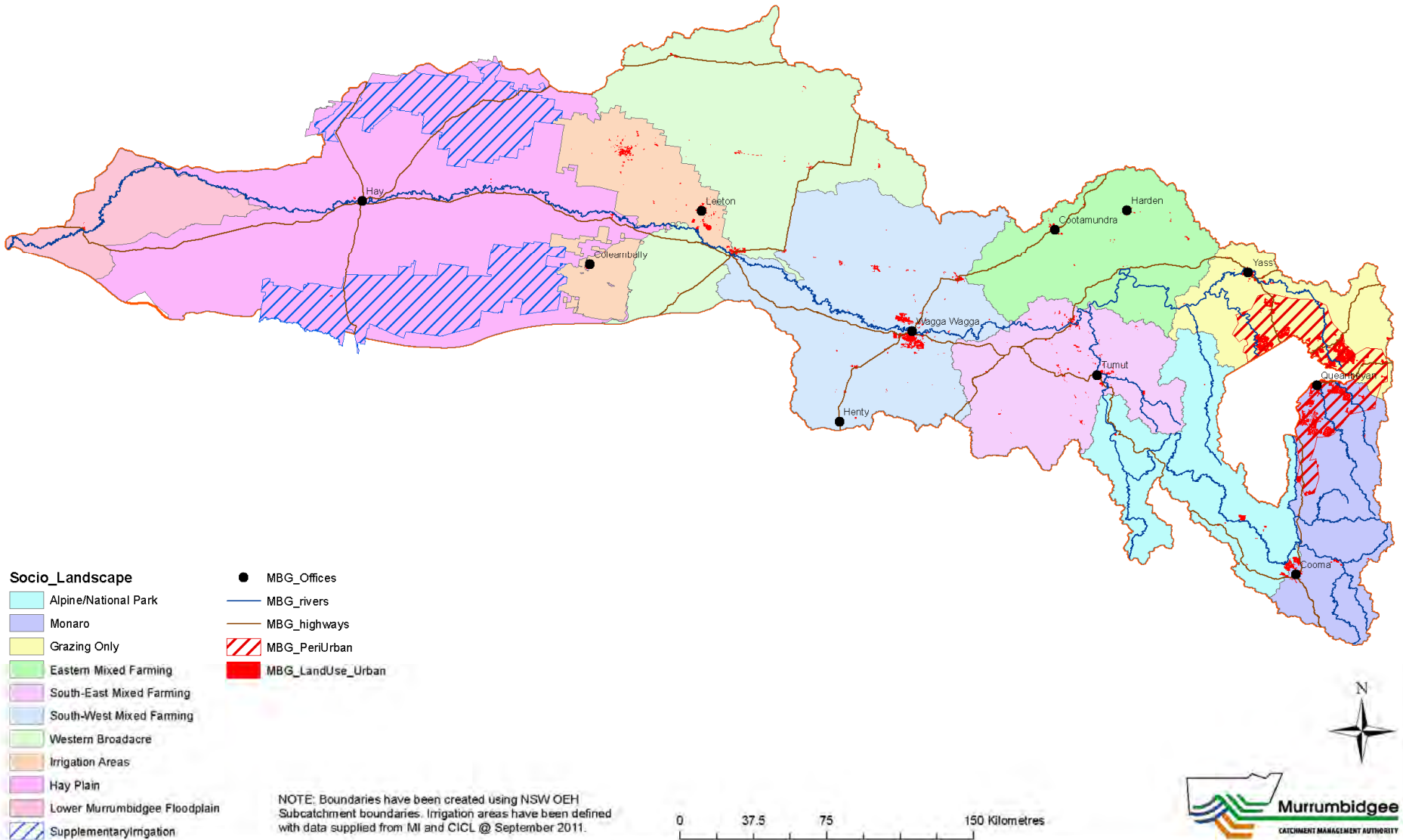
What are landscapes?

“Landscapes are areas with which communities identify and which provide a range of the social, environmental and economic goods & services that distinguish them from other areas”



Socio-Ecological Landscapes

DRAFT



What are Functional Landscapes?

“Functional landscapes are those that have the capacity to provide the social, ecological and economic goods & services for which they are valued”



What are Resilient Landscapes?

“Resilient Murrumbidgee landscapes’ are landscapes that have the capacity to rapidly ‘bounce back’, in terms of their function, after disturbance”



Why are functional & resilient landscapes important?

- Landscapes are subject to constant change
 - temporal variation (short term / long term)
 - spatial variation (small scale / large scale)
- Landscapes are not static
- Natural variation is compounded by human induced changes such as land use & climate change
- Therefore the resilience to change is critical to maintain functionality



Without resilient landscapes..

- Natural and human induced variation can exceed the landscape's ability to cope with variation (it's resilience), resulting in:
 - Crossing a change ***threshold***
 - Permanent change of state
 - Permanent Loss of landscape function

Implications and challenges with losing landscape function?

- Implications:
 - Loss of ecological function & species
 - Loss of agricultural productivity
 - ‘Cascade’ of ecological effects
 - Loss of other social, economic services
- Challenges:
 - Identifying landscape limits and thresholds
 - Avoiding a permanent change of state
 - Reversing and Restoring lost Landscape function



Examples – Dryland Salinity

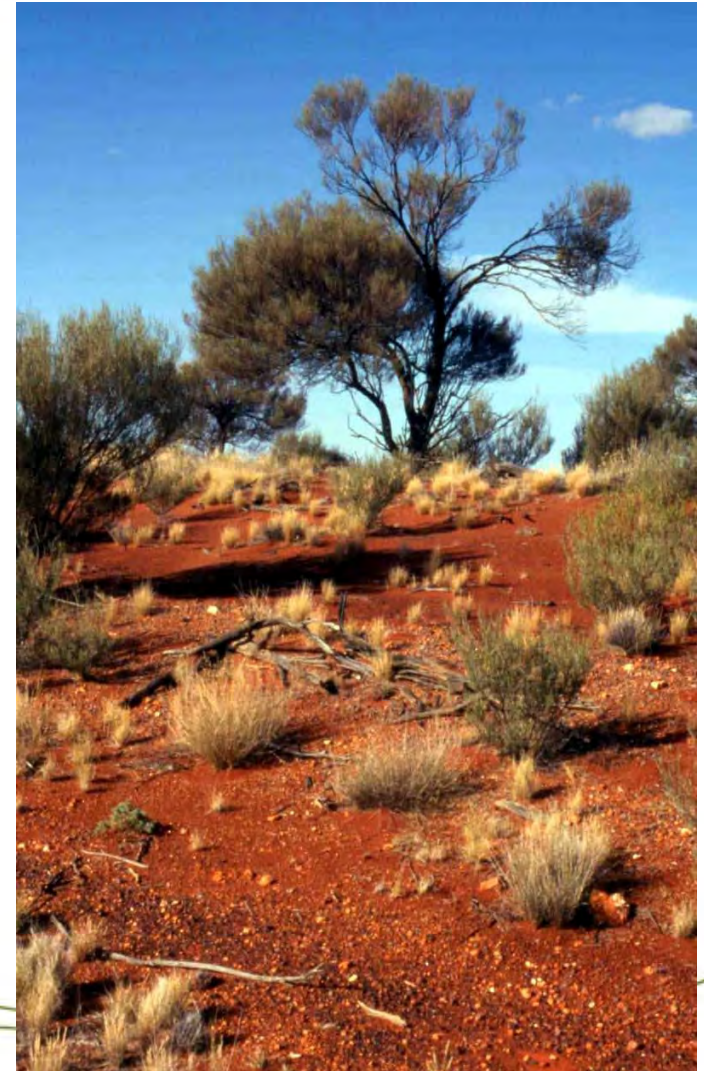


- Land-use change
- Rising saline groundwater
- Threshold groundwater depth
- Vegetation community change
- Loss of productive landscape function

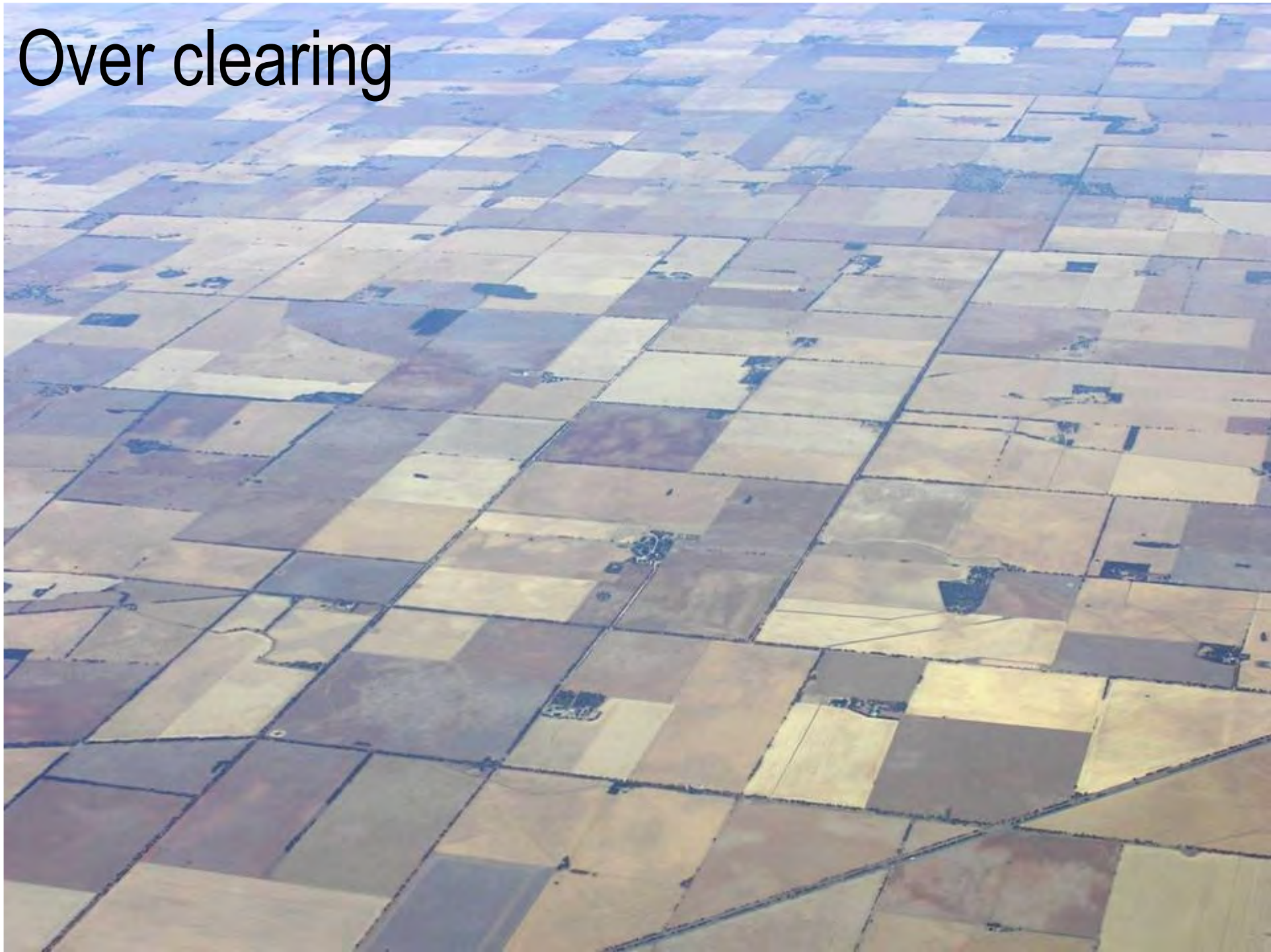
Over grazing - Rangelands



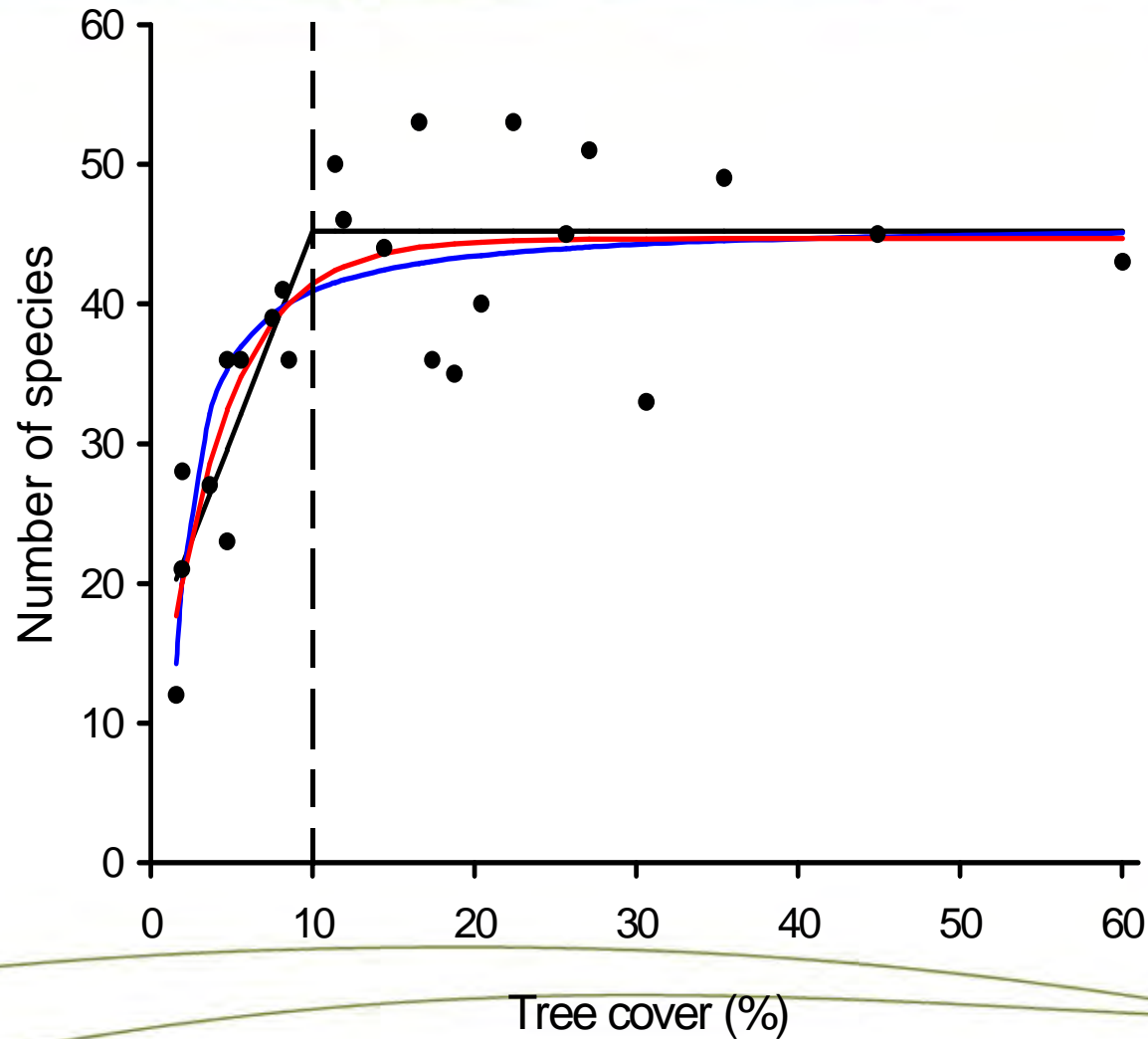
- reduced groundcover,
- below 50% threshold <-
- wind erosion – loss of topsoil
- loss of productivity –
- change in vegetation community
- loss of productive landscape function



Over clearing



Loss of woodland birds in rural landscapes



How are we increasing resilience in Murrumbidgee Landscapes?

Working with our partners to:

- Understand landscapes and the pressures and threats they are under (CAP review)
- Manage and restore landscapes across multiple scales
- Maintain and restore ecological processes
- Identify & manage critical points of change
- Improve the landscape's capacity to recover
- Improve our understanding of what's happening and using this to adaptively manage



Understanding pressures and threats to Murrumbidgee landscapes

- understanding the catchments many landscapes, threats and pressures
- capture this in the CAP upgrade and support with best science and knowledge
- engage broadly with stakeholders to build knowledge of these landscapes, threats and pressures

[Critical role for landcare engagement]



Management and restoration of landscapes across multiple scales

Integrated landscape based projects e.g.:

- Climate Change Corridors across priority vegetation landscapes
- Conservation Farming Projects in high productivity agricultural landscapes
- Community Partnership Projects supporting social and economic functionality in landscapes
- Land & Water Management Plans for irrigation landscapes

[opportunities for landcare in partnering/delivering projects]



Maintaining and restoring ecological processes

By supporting land managers to:

- protect and enhance remnant native vegetation and biodiversity values
- manage agricultural lands according to capability
- protect and enhance critical sensitive areas such riparian area and wetlands



Identifying and managing critical change points

- identify through CAP Upgrade thresholds and changes points across all our landscapes
- ensure projects and activities manage according to these critical landscape change points
- Eg maintaining groundcover above 70% & 50% thresholds



Improving the landscape's capacity to recover (resilience)

Facilitate the protection and creation of:

- **Refuges** - from disturbance which can then become sources for recolonisation
e.g. large blocks of native vegetation, vegetated stream systems
- **Connectivity** – to facilitate movement and recolonisation to avoid disturbance and recover areas which have been disturbed
e.g. linear features, networks, patchy mosaics, stream systems, major linkages



Improving our understanding..

By developing new knowledge, prioritisation, modelling and MER systems to support an adaptive management and continual improvement approach to managing our landscapes, e.g.:

- Spatial systems SCARPA & MCAS
- Reporting systems CIMS/LMD
- River Reach /wetland DSS
- Property management plans



Key Opportunities for Landcare

- Participating and assisting in the stakeholder Engagement process to support CAP upgrade.
- Partnering in the delivery of projects / programs consistent with upgraded CAP.
- Delivering projects/outcomes consistent with community's upgraded CAP
- Providing & sharing knowledge, information, data & networks to facilitate CAP implementation





END THIS SHOW