

natural  
resources  
commission

## **AEF Annual Conference 2010**

16th & 17th October 2010

*Can policy change save the environment?*



# NSW Government's long-term, aspirational goal

*Resilient, ecologically sustainable landscapes functioning effectively at all scales and supporting the environmental, economic, social and cultural values of communities*







# The Vision

## State-wide natural resource targets

### Biodiversity

- Native vegetation
- Native fauna
- Threatened species
- Invasive species

### Water

- Riverine ecosystems
- Groundwater systems
- Marine waters
- Wetlands
- Estuaries and coastal lakes

### Land

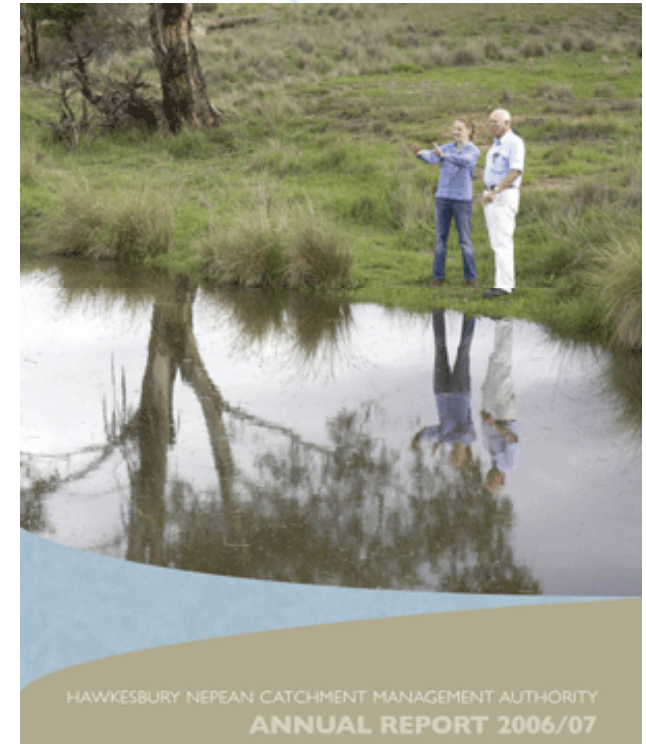
- Soil condition
- Land that is managed within its capability

### Community

- Economic sustainability and social wellbeing
- Capacity of natural resource managers

# What is the NRM regional model?

- 89% land privately managed
- Goal: resilient landscapes, 13 targets
- Catchment Action Plans – regionally owned by community & govt
- NRC independent auditor





# What is the NRM regional model?

- It was part of:
  - a landscape conservation agenda
  - regulation is an important, but small part of a bigger agenda
- It recognized that:
  - we all want healthy and productive landscapes
  - we'll only achieve this by working with landholders and farmers to get better environmental outcomes



# Background

- Queensland 2003 - approved clearing of 528,000 ha:
  - 2 million hectares in 4 years
- of the 67,000 ha approved in NSW in 2004:
  - 22,000 ha was for Private Native Forestry (33%)
  - 2,000 ha was for woody weeds (3%)
  - 21,000 ha was for isolated paddock trees (31%)

1991 - 120,000 ha cleared  
2004 - 67,000 ha approved



# On the other side of the ledger

- we need to regenerate approximately 5 million hectares if we are to restore the important riparian vegetation along our rivers and streams across NSW
- another 4 million hectares are needed to restore 44 of the 100 classes of vegetation to at least 30% of their original extent - an important ecological threshold for long term sustainability
- these are big numbers, requiring a sophisticated institutional delivery framework



# Objectives of the native vegetative Reforms

- to create healthy and productive landscapes
- by changing land use towards practices that are in harmony with the Australian landscape
- where science and the farming community are working in partnership





# Landscape Conservation

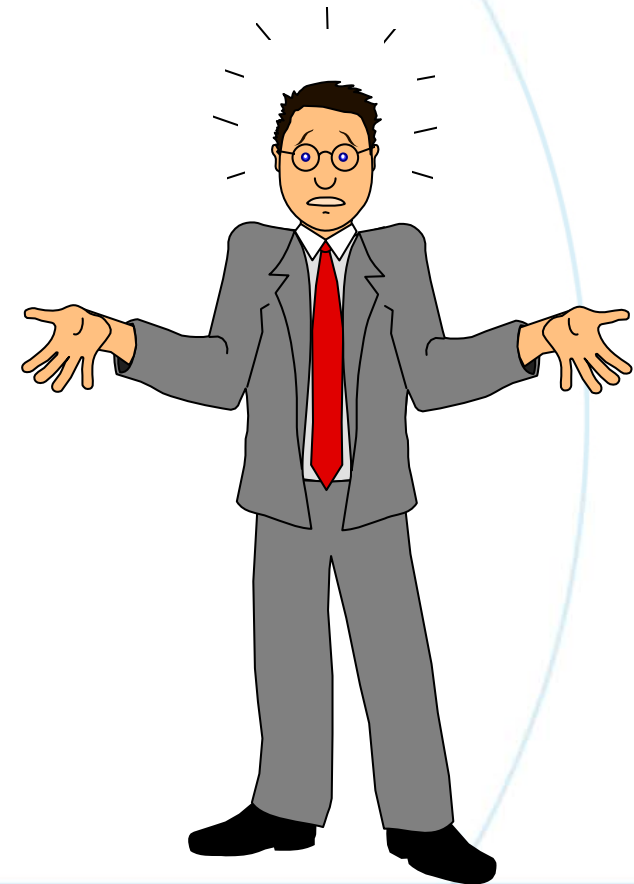
Native vegetation underpins this agenda:

- it holds the landscape together, especially in times of climatic extremes
- it helps manage the hydrological cycle and salts in the landscape
- it filters particles and chemicals which keeps our rivers healthy
- it provides food and shelter for birds, bats and other animals that provide free environmental services, such as insect control

# We have learnt from bitter experience that rigid and inflexible laws:

- not only make farming unnecessarily difficult
- they have done very little to fix the environment

**Rigid inflexible laws don't work**



# Wentworth Group Report

- Fundamental to the success of a new model for landscape management is:
  - simplifying the overwhelmingly complex structures that exist
  - to empower the farming community to take control of the problem
  - to back them with first class science
  - provide them with adequate funds to deliver on-ground solutions on the farm





# Wentworth model for landscape conservation

- Contains five interdependent components:
  1. Ending the broadscale clearing of remnant vegetation
  2. Setting environmental standards and clarifying responsibilities for native vegetation management
  3. Using property management plans to provide investment security, management flexibility, and financial support for farmers

# Wentworth model for landscape conservation cont'd

4. Providing significant levels of public funding to farmers to meet new environmental standards and support on-ground conservation
5. Restructuring institutions by improving scientific input into policy setting, improving information systems, and regionalising administration

# Wentworth model for landscape conservation

- These reforms were to drive historic changes to the way we manage our landscapes:
  - by ending further damage caused to our land, rivers and wildlife from broadscale clearing
  - by delivering much needed security and increased flexibility for farmers
  - by delivering our first major down payment of \$436 million over 4 years
  - by taking away bureaucracy and instead giving new powers to local Catchment Management Authorities



# The Reforms

- The NSW Government adopted these reforms in late 2003 and passed 3 new pieces of legislation:
  - the *Native Vegetation Act 2003*
  - the *Natural Resources Commission Act 2003*
  - the *Catchment Management Authorities Act 2003*



# The Reforms

- These reforms created 2 new institutions:
  - Catchment Management Authorities (CMAs); and the
  - Natural Resources Commission (NRC)

**They were designed to provide both local decision making and transparent audited regional administration and delivery.**

# CMAs

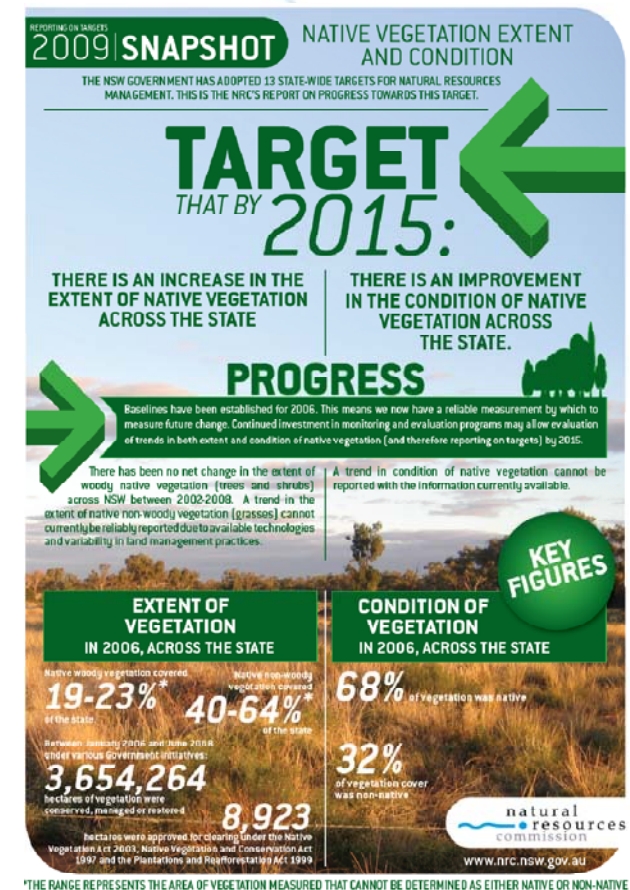
- The CMAs were created to be:
  - evidence based
  - open
  - transparent bodies
- operating to a consistent set of state-wide targets and standards for natural resource management
- 13 CMAs replaced 72 boards and committees



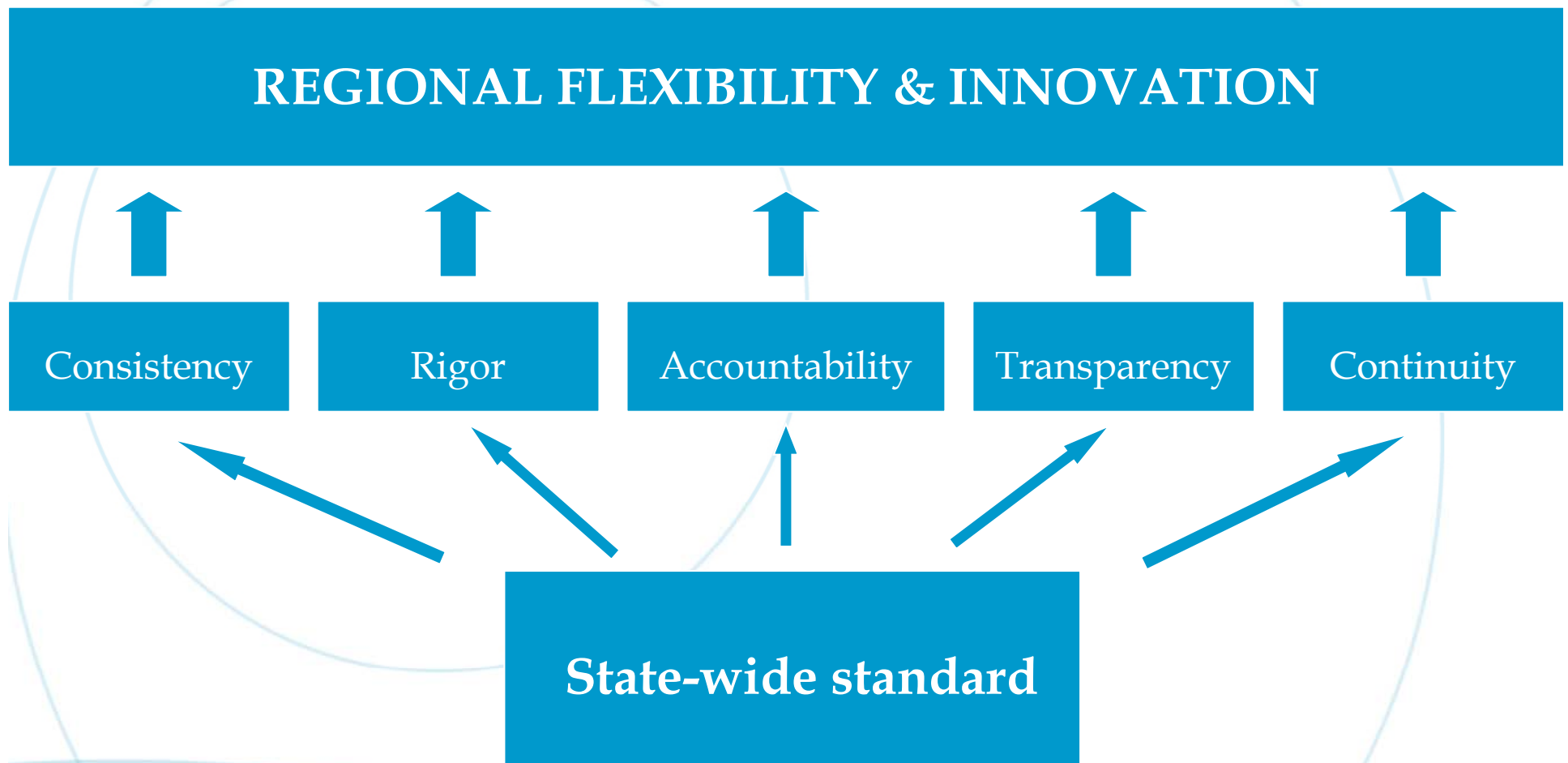


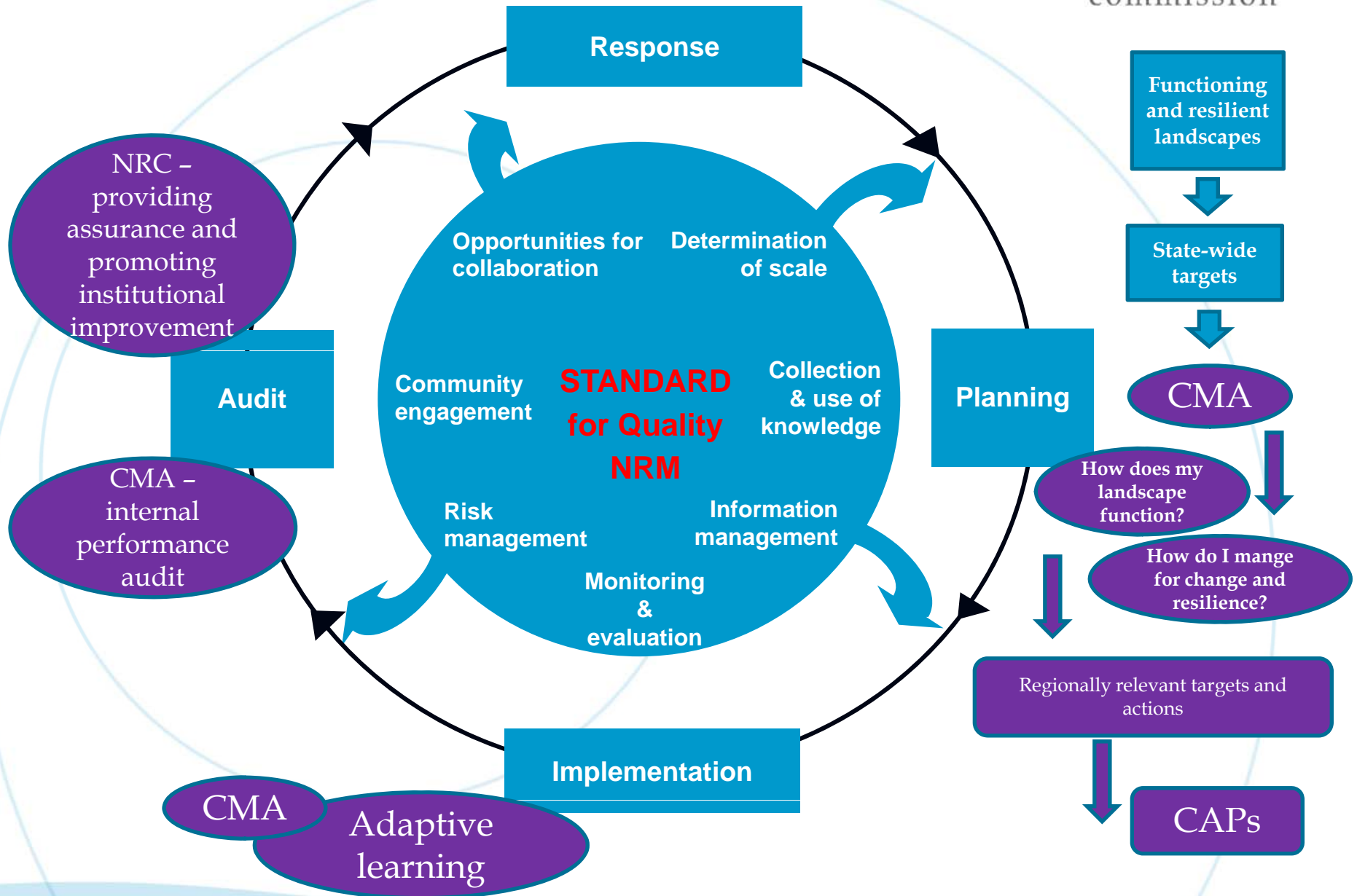
# The independent NRC

- The independent NRC was established to provide:
  - process to establish state-wide targets and standards
  - audit progress against them
  
- through the implementation of a Catchment Action Plan (CAP) approved by Cabinet on the recommendation of the NRC



# Goals for State-wide standard





## 8 Design Principles

1. Use simple language and practical processes
2. Incorporate vegetation and threatened species
3. Based on voluntary incentives to help farmers protect and restore native vegetation
4. Based on world class science and regional information leading to quick on-the-ground decision making at the farm level

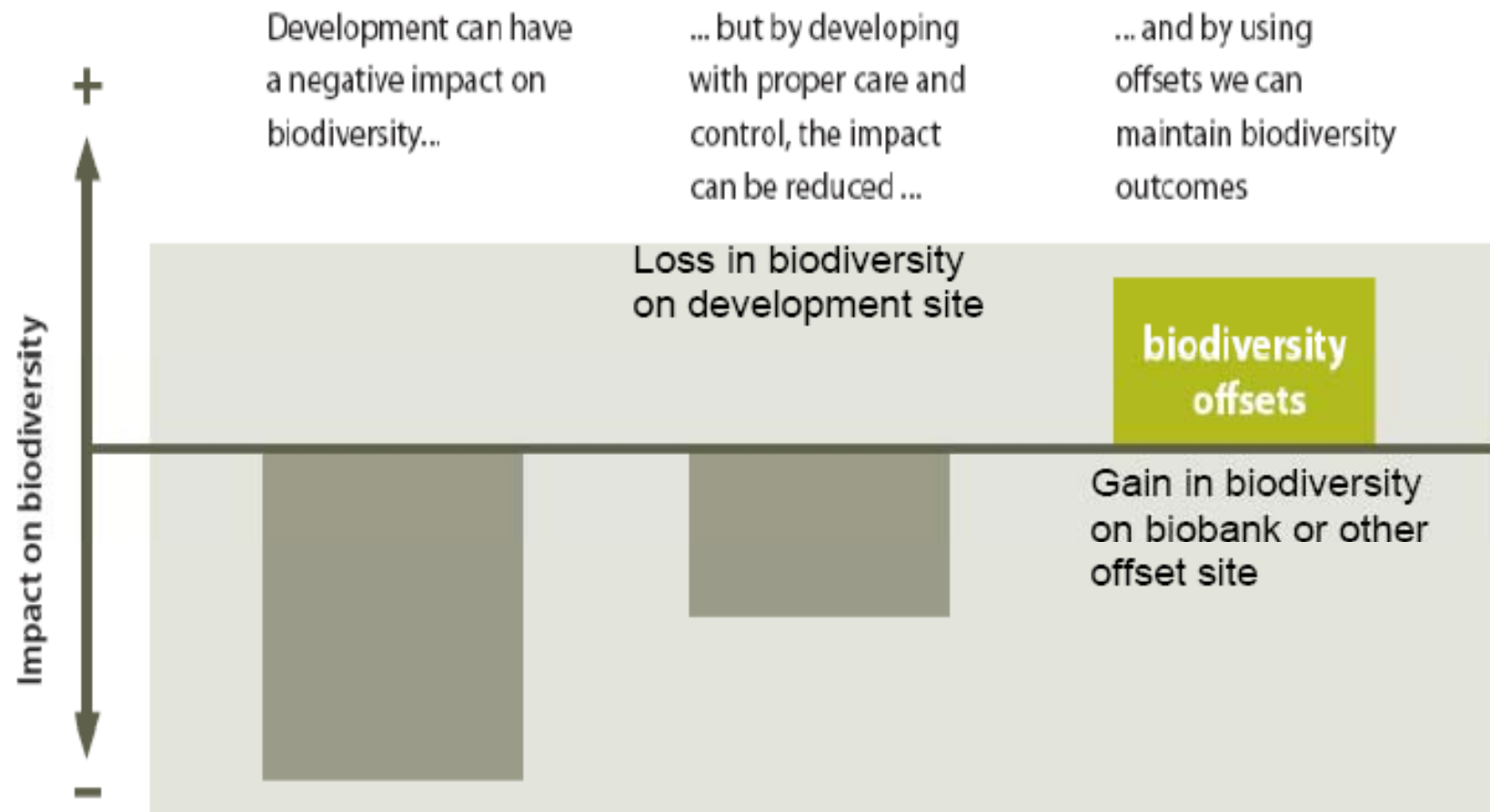


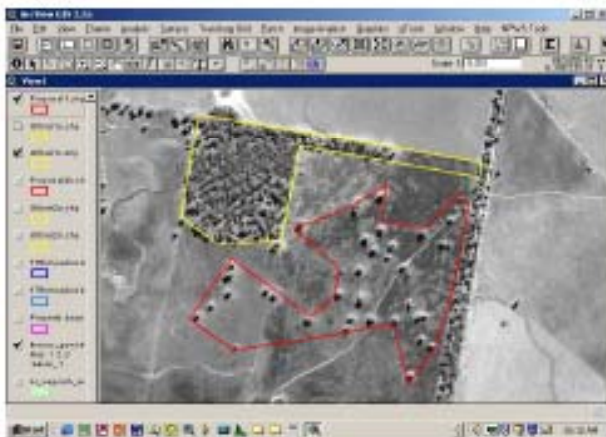
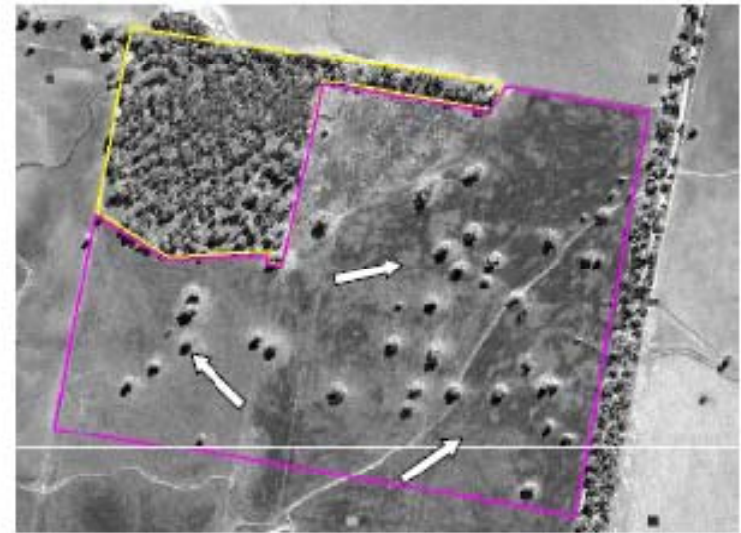
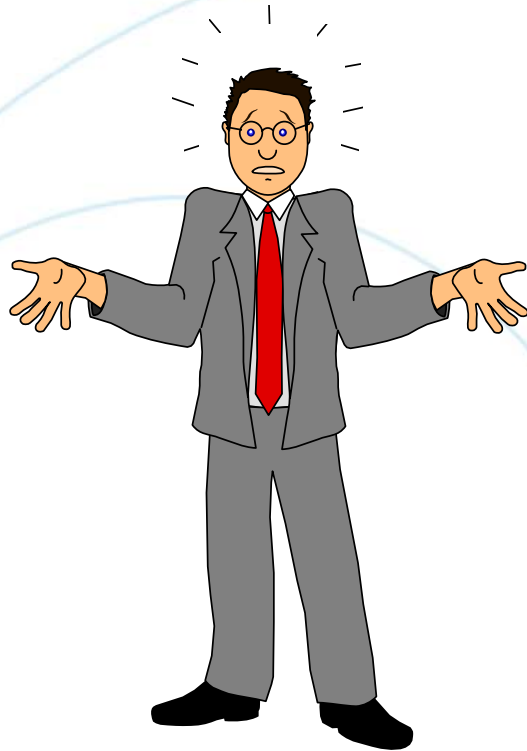
## 8 Design Principles Cont'd

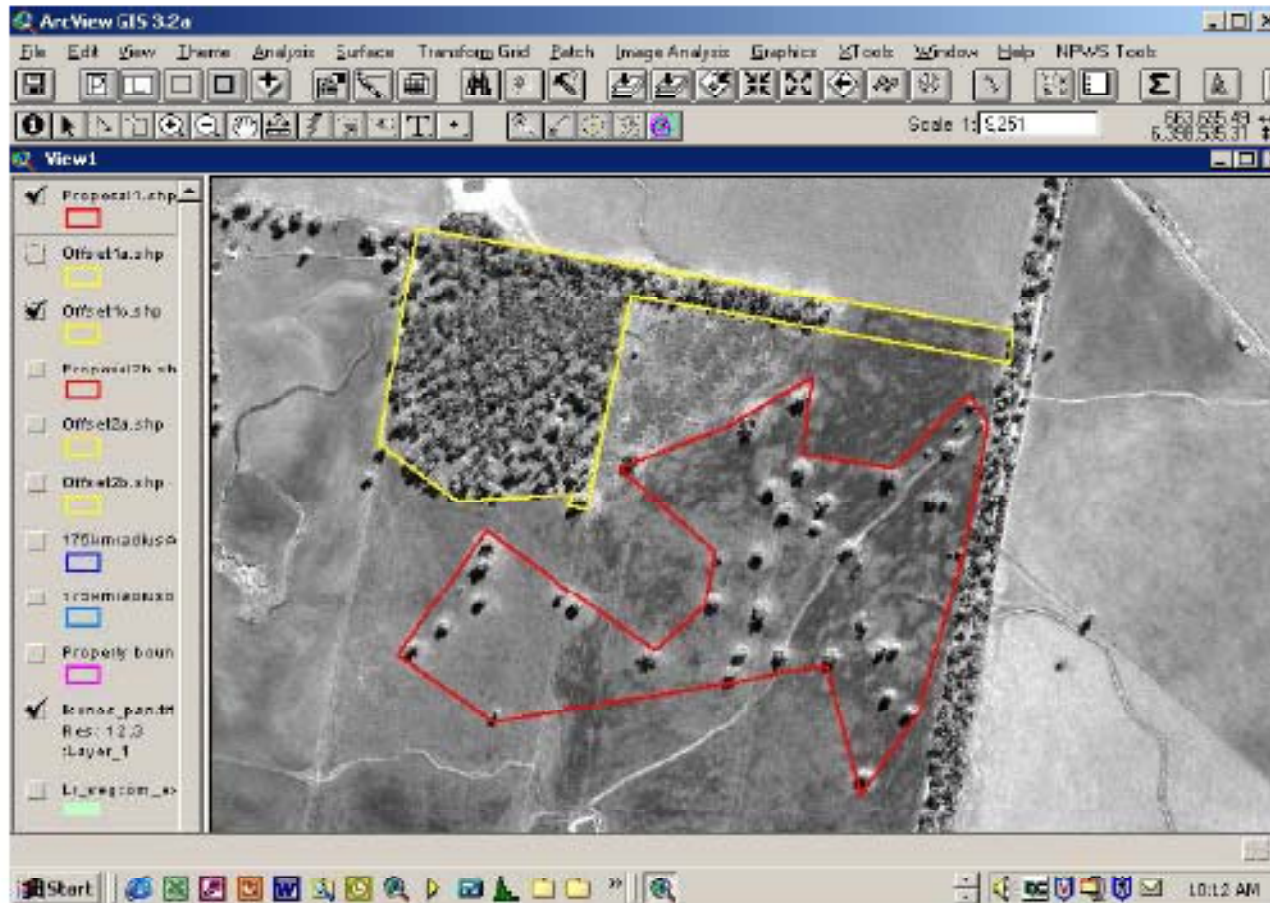
5. Protect landscapes, rather than individual plants and animals
6. Give effect to Government policy to end broadscale clearing unless it improves or maintains environmental outcomes
7. Support farmers to effectively manage their properties and reward them for good management
8. Understand and track what is happening to the landscape

## Can the loss in biodiversity from development be offset

Figure 1 Using offsets to help address biodiversity loss







Loss in biodiversity values on the clearing/development site has to be balanced by gain in biodiversity values on the offset/biobank site with management actions – gain can include forgone permitted activities that reduce biodiversity



# The new system

- is based on voluntary agreements:
  - between landholders and CMAs
  - through Property Vegetation Plans
- uses state of the art technology and cutting edge science
- is comprehensive and practical
- has a flexible design:
  - to encourage improvement as knowledge grows
- it has potential to lead to a revolution in the way we manage native vegetation across NSW

# Institutional Foundations

- NRC set statewide standards and targets
- CMAs prepare Catchment Action Plans
- CMAs approve native vegetation incentives:
  - through PVPs
  - consistent with Catchment Action Plans
- \$436.5m over four years for on-ground works:
  - at least \$120m for PVPs

## Institutional Foundations Cont'd

- CMAs assess clearing proposals:
  - PVPs & DAs
- regulation sets the 'improve or maintain environmental outcomes' test
- DECCW undertake compliance/enforcement

# PVP Developer 2.0

*healthy and productive landscapes for the people of NSW*

- **an objective decision support tool:**
  - weighs up the positive and negative impacts of different management actions
- **allows farmers to make practical decisions:**
  - based on the best scientific information available
- **designed to work with farmers, on their farms**
- **encourages dialogue:**
  - to explore optimal production and conservation outcomes

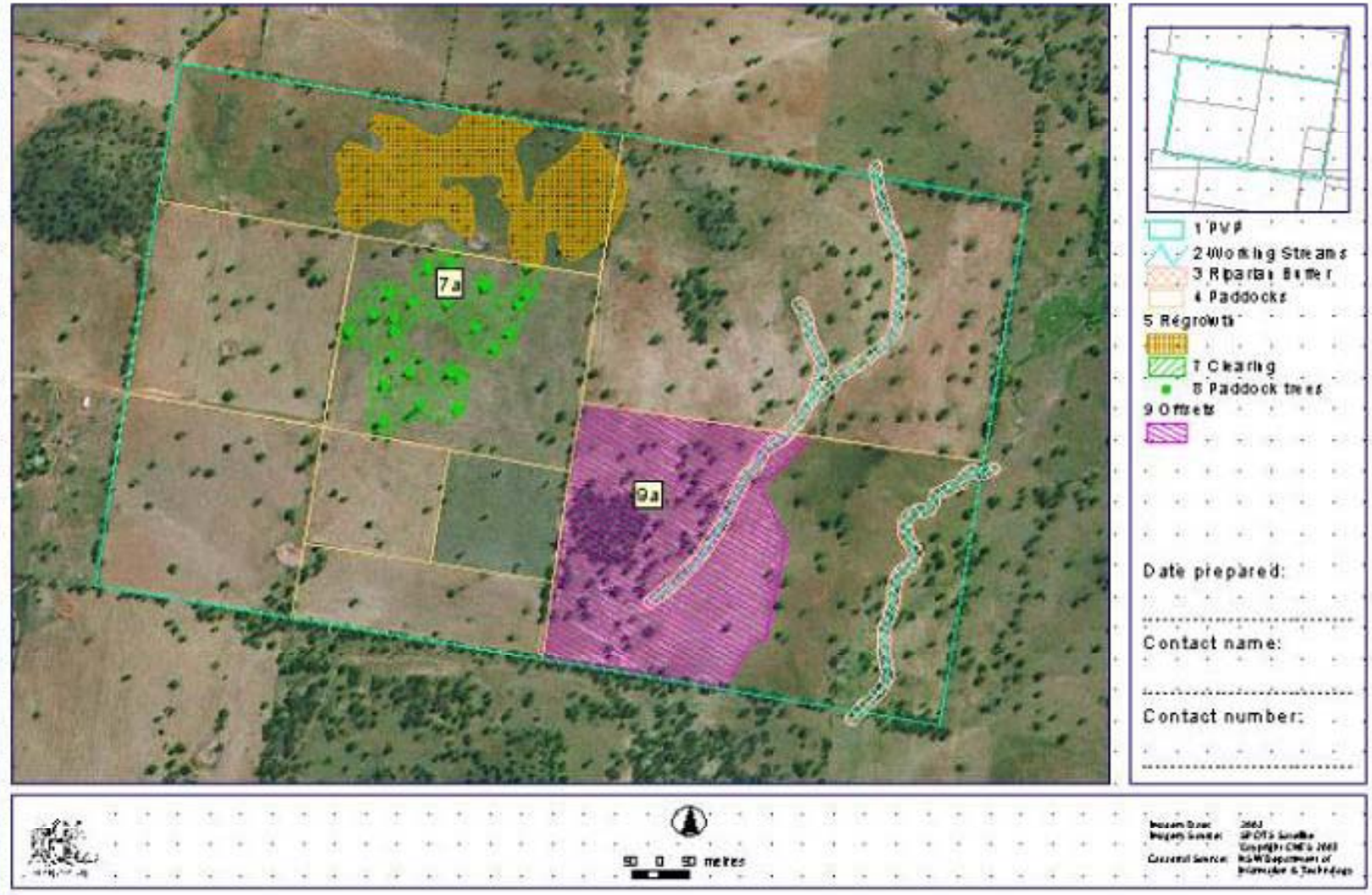


# PVP Developer 2.0 Cont'd

*healthy and productive landscapes for the people of NSW*

- **state of the art computer technology combined with cutting edge science**
- **taken an infinitely complex environmental system and packaged it into a user friendly computer tool**
- **the most sophisticated collection of scientific knowledge ever assembled on native vegetation**
- **can be easily changed as science improves**

Map 1: PVP Area



# Advantages of the new system

1. Clearing of remnant vegetation can now only be approved if it improves or maintains environmental outcomes
2. Farmers will be able to offset any negative impacts of clearing by improving or planting native vegetation elsewhere
3. PVPs, issued for up to 15 years, cannot be overturned by any future environmental planning instruments

This gives farmers security to invest

## Advantages of the new system

4. Farmers can apply for a 15 year Continuing-use PVP allowing them to get on with business without the worry some new law will come in and disrupt their operations
5. Regrowth younger than 1 January 1990 (1 January 1983 in the Western Division), can be cleared without approval or reference to the government

This is a permanent right to:

- clear regrowth, or
- use it as an offset, or
- gain incentive funding



## Advantages of the new system

6. Routine agricultural management activities are not regulated in any way

Farmers are free to undertake routine farming activities, such as:

- farm infrastructure
- roads and tracks
- corridors for fire protection
- power and water supply
- sourcing timber for fences and other farm structures

without approval or reference to the government

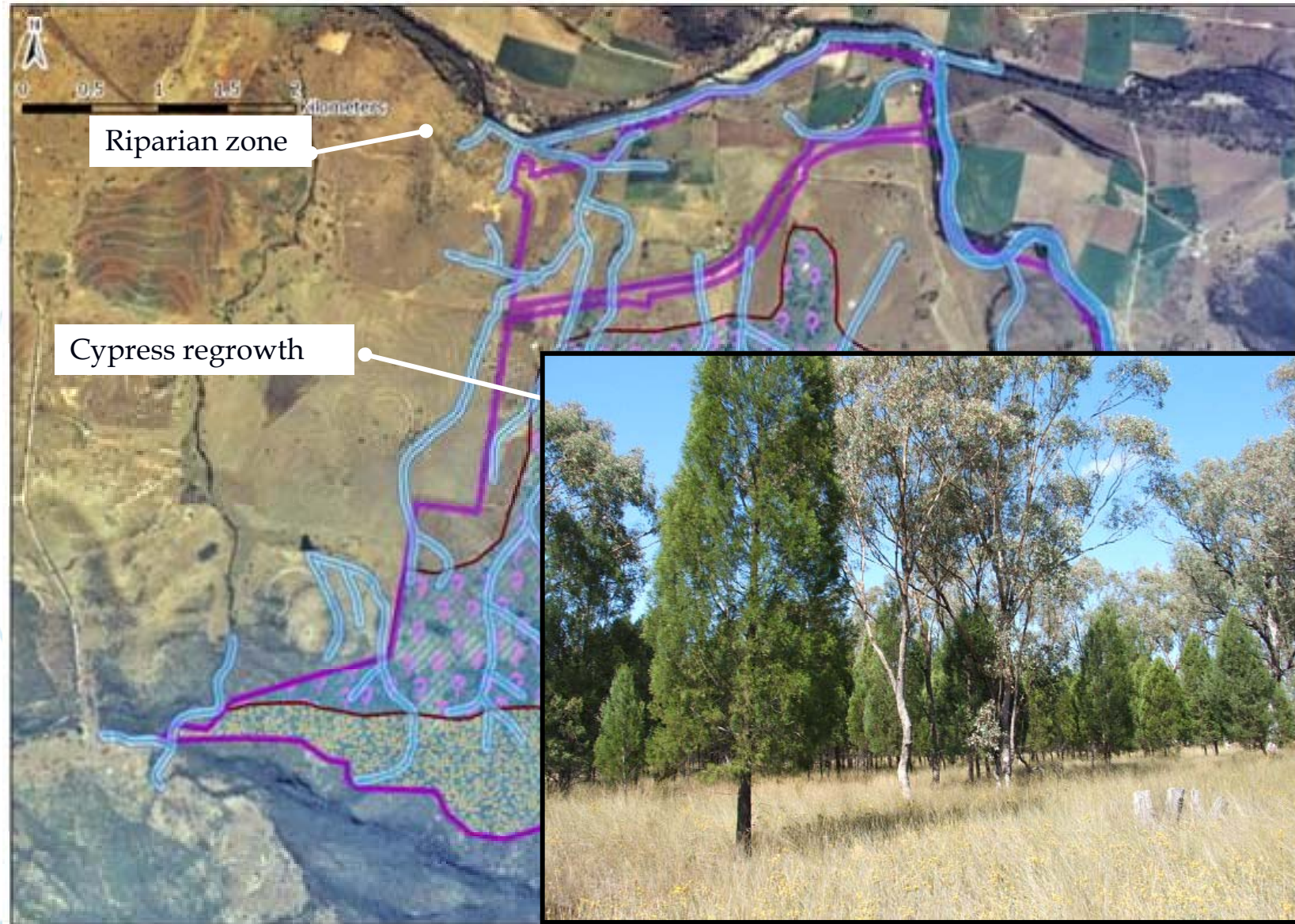
## Advantages of the new system

- For the first time ever, the clearing of invasive native scrub to restore open woodlands and grasslands will be recognised as providing environmental benefits as well as providing economic benefits to the farmer
- Establishment of *Exit Provisions* through operations of a revolving fund by NSW Nature Conservation Trust with some \$13M from NSW Environmental Trust to purchase property in hardship circumstances. Properties are on sold with conservation agreements attached

# Invasive Native Scrub

- scrub invasion has beaten policy makers for 100 years
- invasive native scrub takes over native grasslands and open woodlands, especially in western NSW
- to deal with the issue we have:
  - released in December 2004, a discussion paper prepared by the DIPNR Science and Information Board, inviting public comment
  - held 16 public meetings coordinated by the NSW Farmers Association, in January 2005
  - a team of experts, chaired by Dr Denis Saunders, considered the 48 submissions on the discussion paper
  - building an Invasive Native Scrub module in the PVP Developer 2.0





# PVP Developer 2.0

*healthy and productive landscapes for the people of NSW*

- a new module to recognise that approving clearing of invasive scrub will have positive environmental as well as production benefits
- increased flexibility in methods for thinning
- mechanisms to recognise past good land management
- incorporation of salinity hazard mapping
- reduced requirements for offsets for paddock trees and increased requirements for good condition bushland



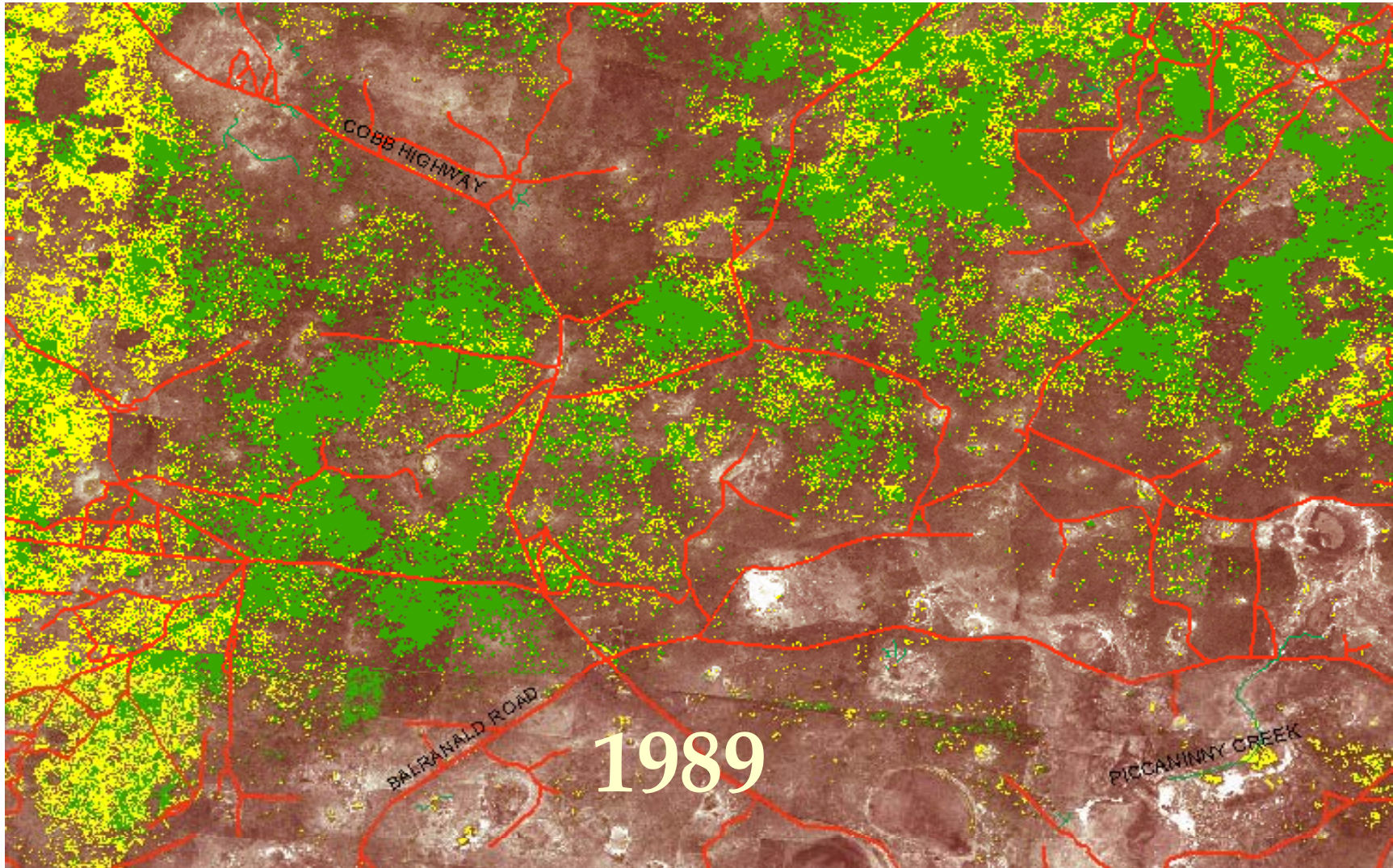
# New Landsat Data

- Australian Greenhouse Office time series data
- describes changes to vegetation cover across NSW:
  - years 1974 to 2004
  - 5% vegetation cover and above
  - first ever coverage of open woodlands in central and western NSW
- confirm continuing use and rotational farming practices
- observe woody weed invasions
- track progress in CMA native vegetation targets

# **'Ivanhoe' Change 1989-2002**

**AGO TIME SERIES WOODY COVER CHANGE  
- PRELIMINARY RESULTS -**

65 Km

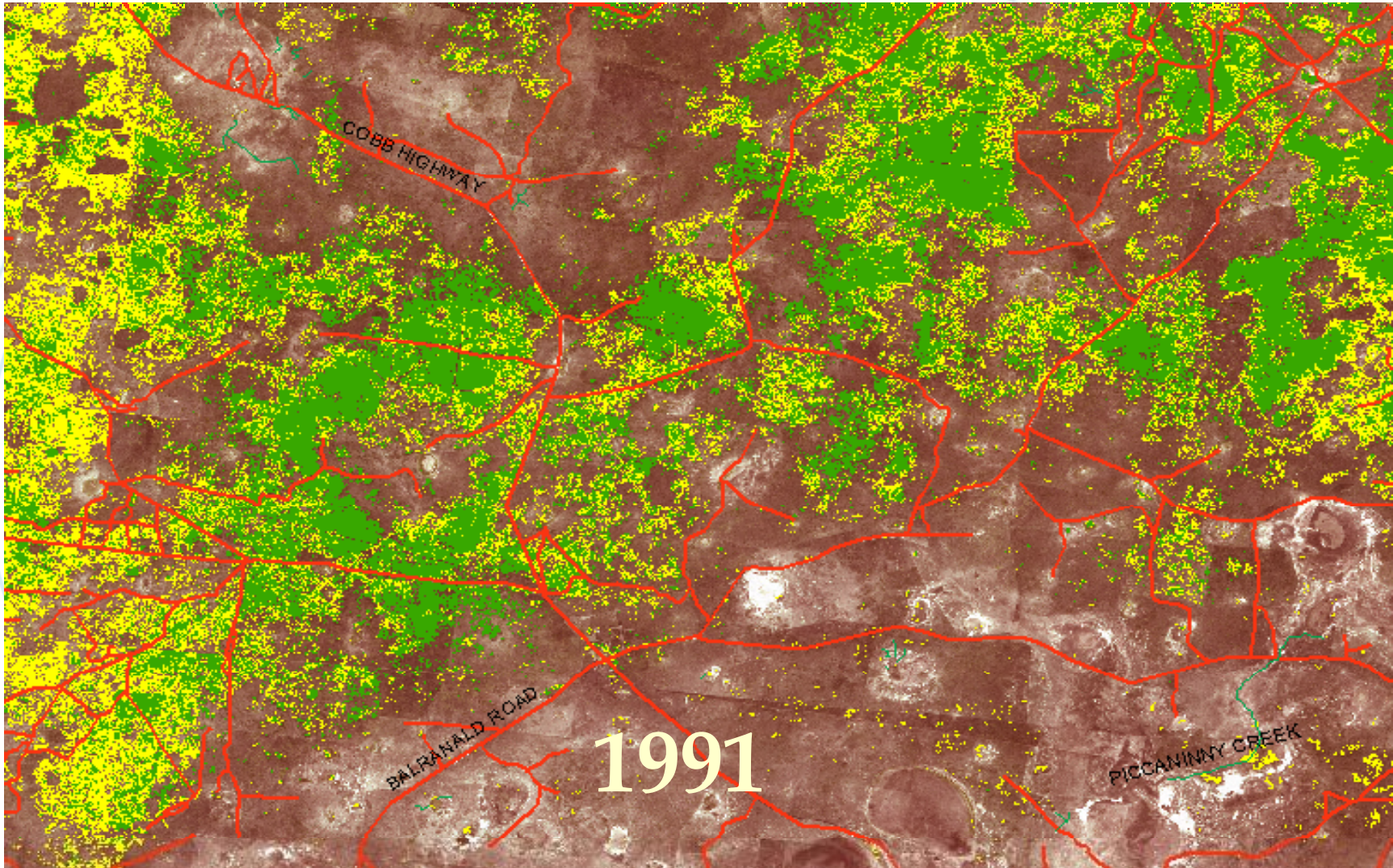


 1989 forest

 1989 sparse woody



65 Km

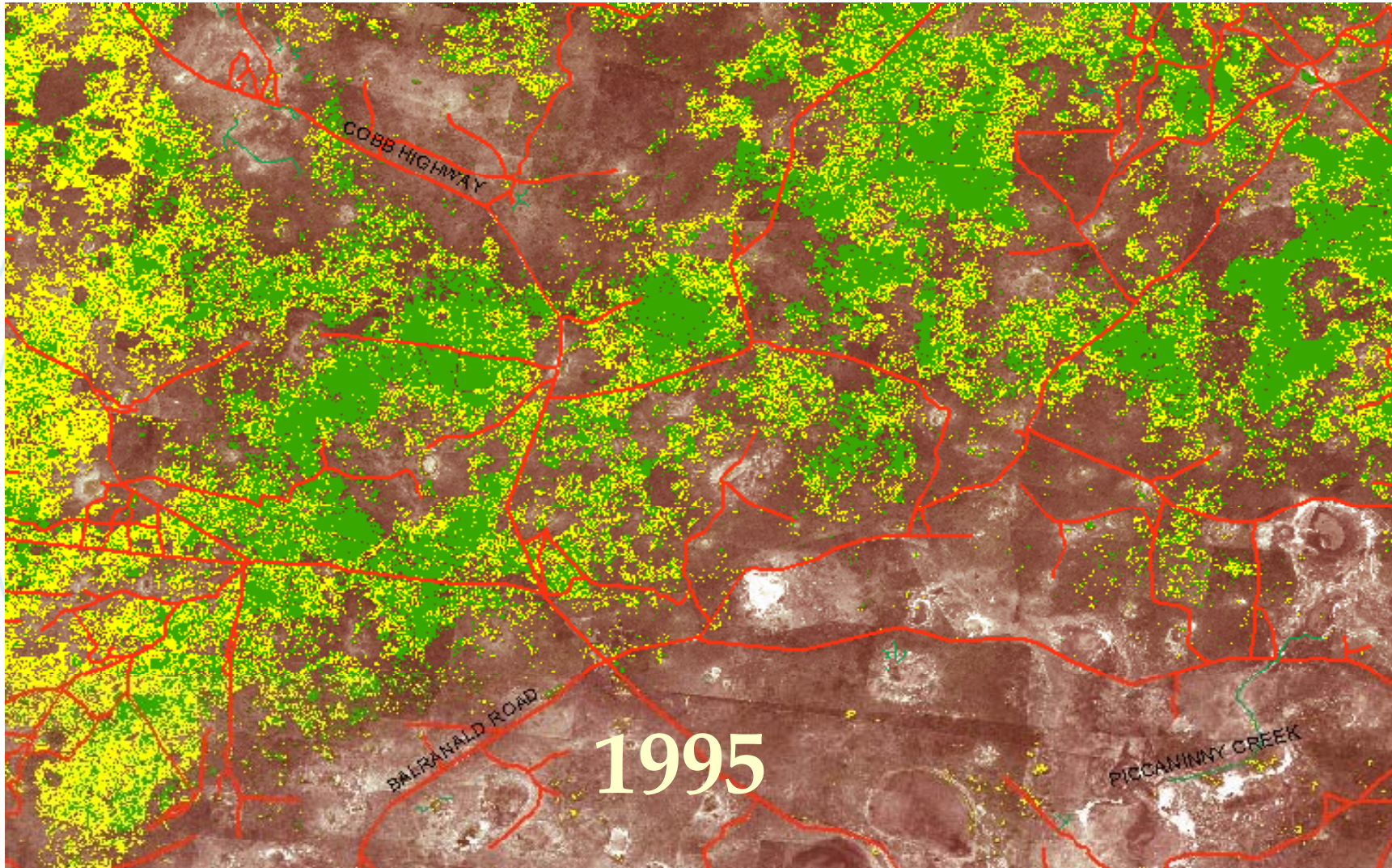


 1991 forest

 1991 sparse woody



65 Km

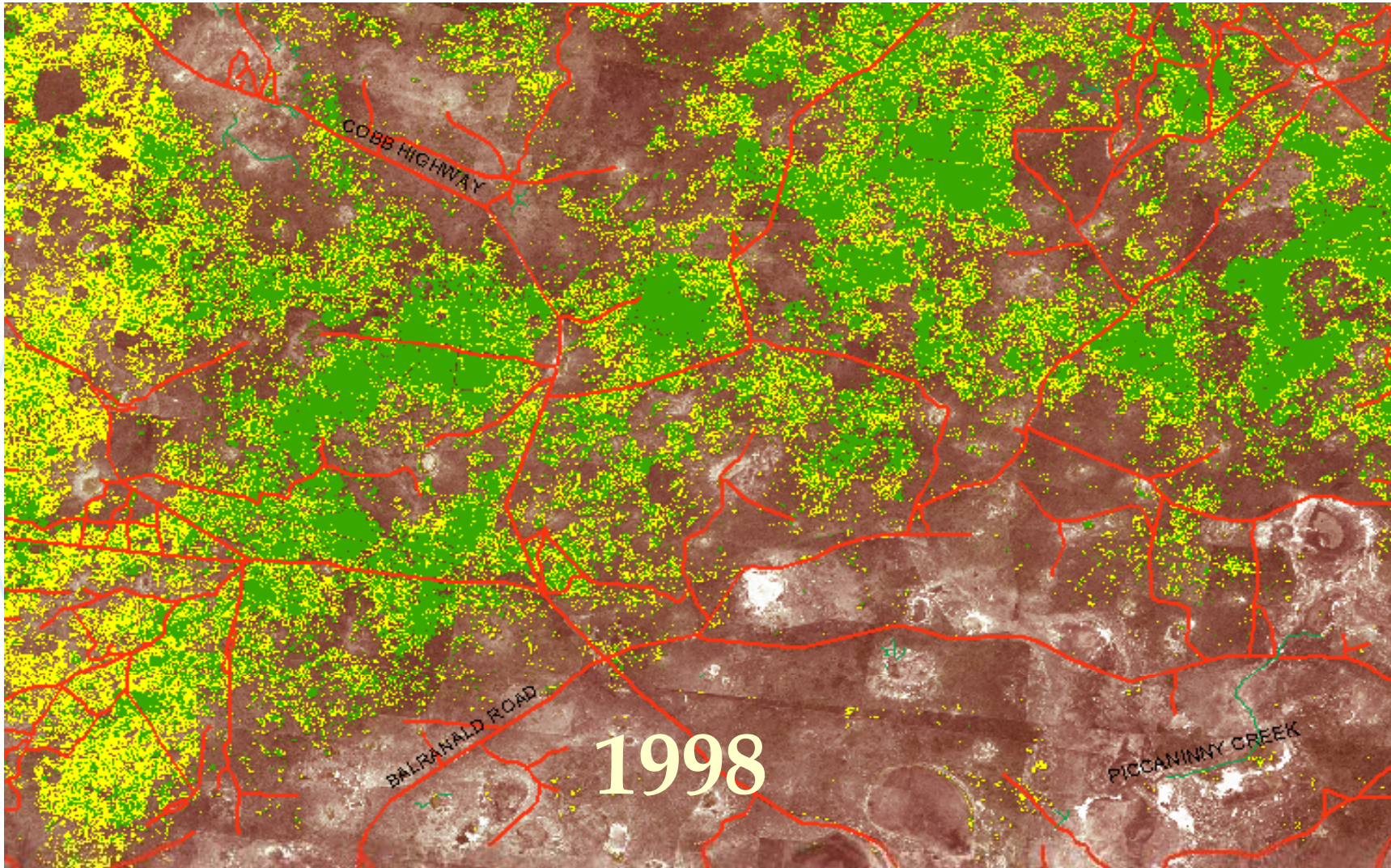



 1995 forest

 1995 sparse woody



65 Km

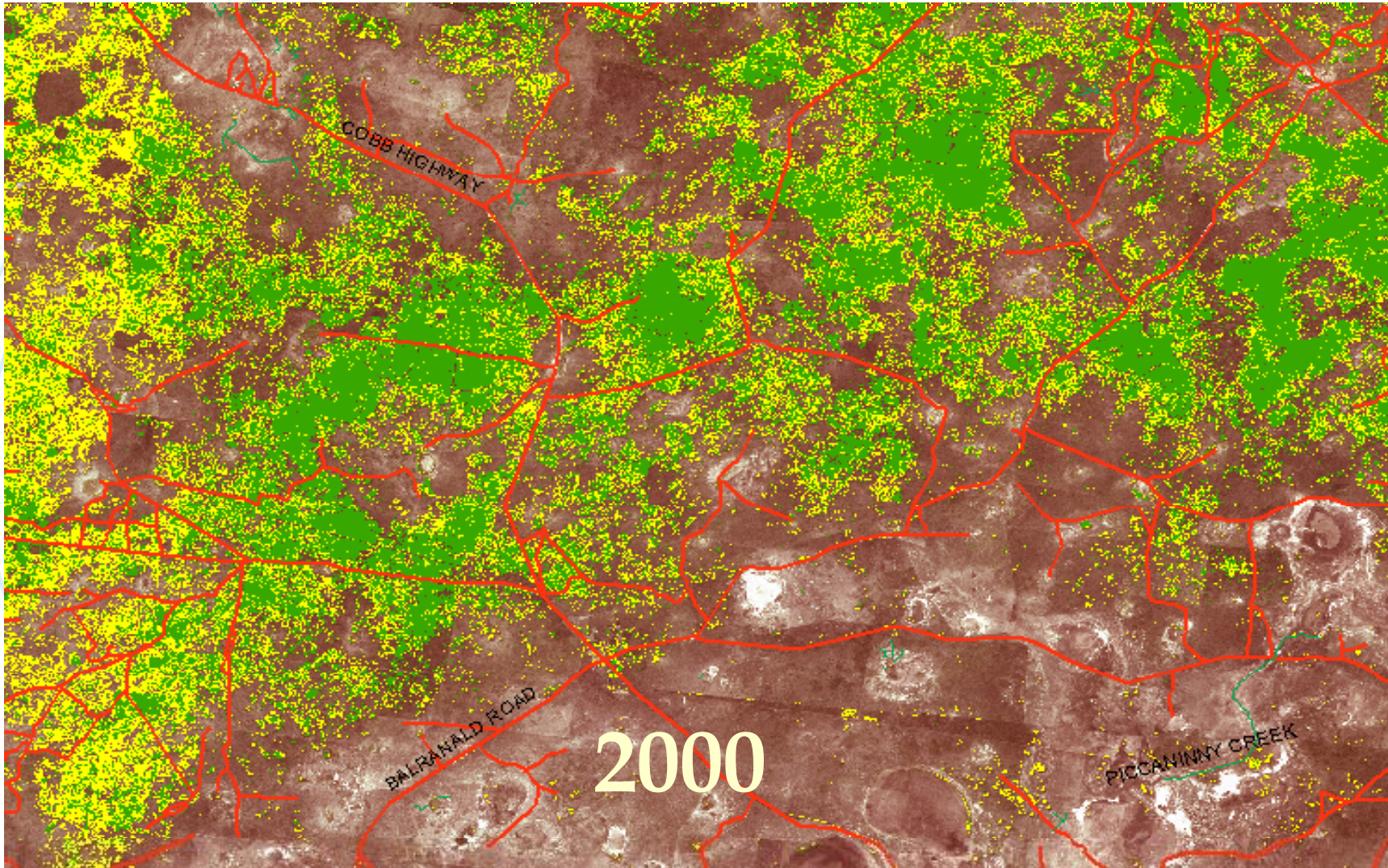


 1998 forest

 1998 sparse woody



65 Km

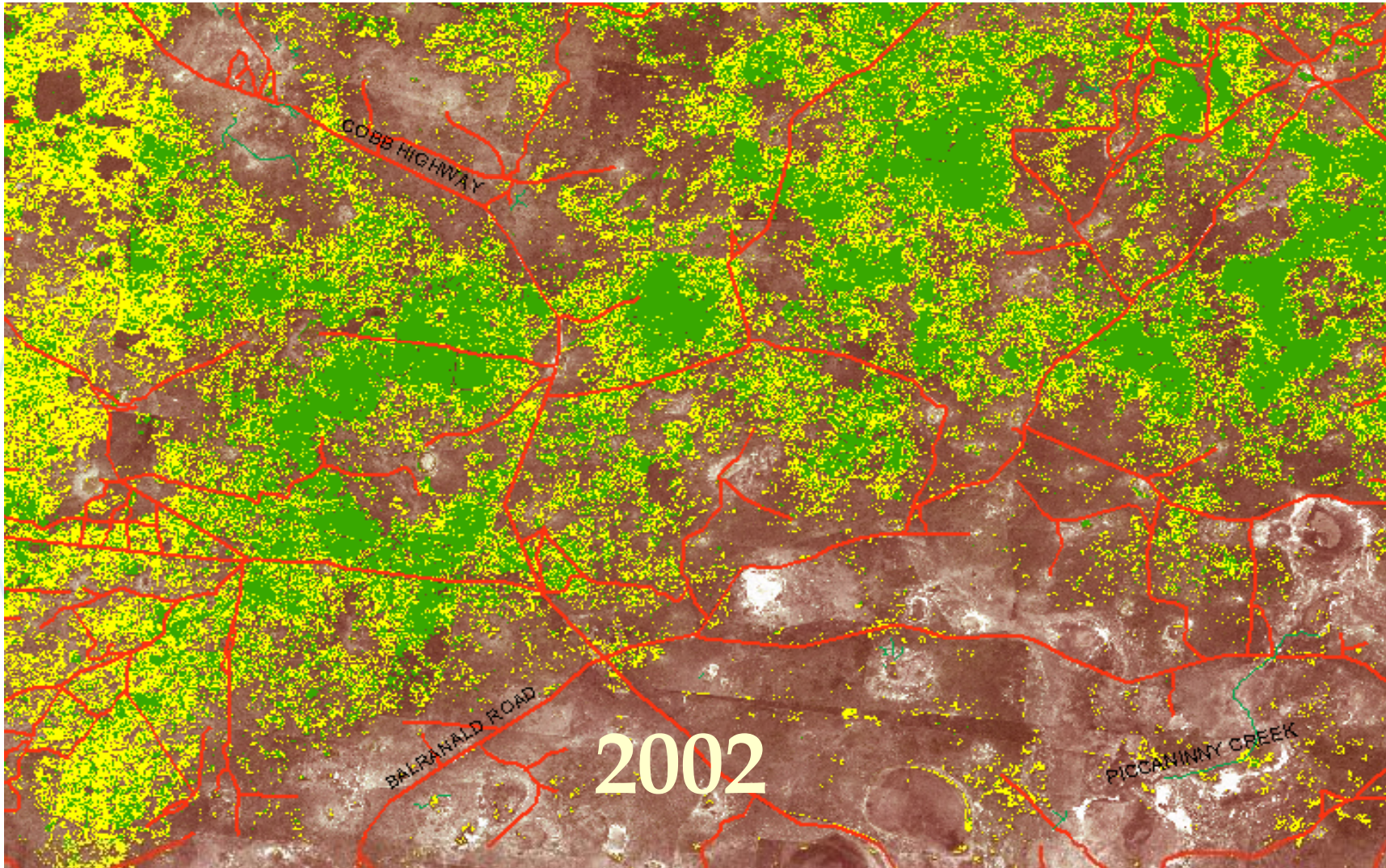


 2000 forest

 2000 sparse woody



65 Km



 2002 forest

 2002 sparse woody



REPORTING ON TARGETS  
**2009 | SNAPSHOT** NATIVE VEGETATION EXTENT AND CONDITION

THE NSW GOVERNMENT HAS ADOPTED 13 STATE-WIDE TARGETS FOR NATURAL RESOURCES MANAGEMENT. THIS IS THE NRC'S REPORT ON PROGRESS TOWARDS THIS TARGET.

**TARGET** ←  
 THAT BY **2015:**

THERE IS AN INCREASE IN THE EXTENT OF NATIVE VEGETATION ACROSS THE STATE

THERE IS AN IMPROVEMENT IN THE CONDITION OF NATIVE VEGETATION ACROSS THE STATE.

**PROGRESS**

Baselines have been established for 2006. This means we now have a reliable measurement by which to measure future change. Continued investment in monitoring and evaluation programs may allow evaluation of trends in both extent and condition of native vegetation (and therefore reporting on targets) by 2015.

There has been no net change in the extent of woody native vegetation (trees and shrubs) across NSW between 2002-2008. A trend in the extent of native non-woody vegetation (grasses) cannot currently be reliably reported due to available technologies and variability in land management practices.

A trend in condition of native vegetation cannot be reported with the information currently available.

**KEY FIGURES**

**EXTENT OF VEGETATION IN 2006, ACROSS THE STATE**

Native woody vegetation covered **19-23%\*** of the state.  
 Native non-woody vegetation covered **40-64%\*** of the state.  
 Between January 2006 and June 2008 under various Government Initiatives:  
**3,654,264** hectares of vegetation were conserved, managed or restored  
**8,923** hectares were approved for clearing under the Native Vegetation Act 2003, Native Vegetation and Conservation Act 1997 and the Plantations and Reforestation Act 1999

**CONDITION OF VEGETATION IN 2006, ACROSS THE STATE**

**68%** of vegetation was native  
**32%** of vegetation cover was non-native



www.nrc.nsw.gov.au

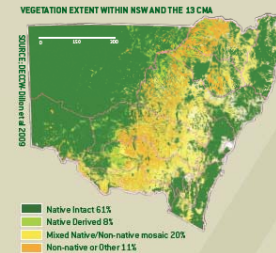
\*THE RANGE REPRESENTS THE AREA OF VEGETATION MEASURED THAT CANNOT BE DETERMINED AS EITHER NATIVE OR NON-NATIVE

**MORE DETAIL**

**EXTENT OF VEGETATION**

**IN 2006, VEGETATION WAS:**

- 61% Native Intact
- 8% Native Derived
- 20% Mixed Native/Non-native
- 11% Non-native



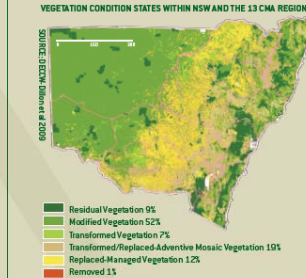
**CONDITION OF VEGETATION**

**IN 2006, NATIVE VEGETATION COVER WAS 68%:**

- 9% was Residual
- 52% was Modified
- 7% was Transformed

**IN 2006, NON-NATIVE VEGETATION WAS 32%:**

- 19% was Transformed/Replaced-Adventive Mosaic
- 12% was Replaced-Managed
- 1% was Removed



**REGIONAL MANAGEMENT ACTIONS**

Important management actions are being implemented by CMAs in the regions to improve native vegetation. Examples of these actions include:

- In the Lower Murray Darling and Western CMAs approximately 130,000 hectares have been conserved via the creation of permanent reserves or Property Vegetation Plans (PVPs)
- The Murray, Lachlan and Murrumbidgee CMAs known for their wheat and sheep production have conserved, improved or restored over 60,000 hectares of native vegetation
- In the Northern and Southern Rivers CMAs over 18,000 hectares have been protected including over 1,000 hectares of environmental corridors

**ABOUT THE NRC**

The Natural Resources Commission (NRC) provides the NSW Government with independent, objective and practical advice on natural resources management issues.

As part of our obligations, the NRC is tasked with reporting progress towards the natural resource management (NRM) targets adopted by the NSW Government and embedded in the NSW State Plan.

**HOW WAS THE INFORMATION COLLATED?**

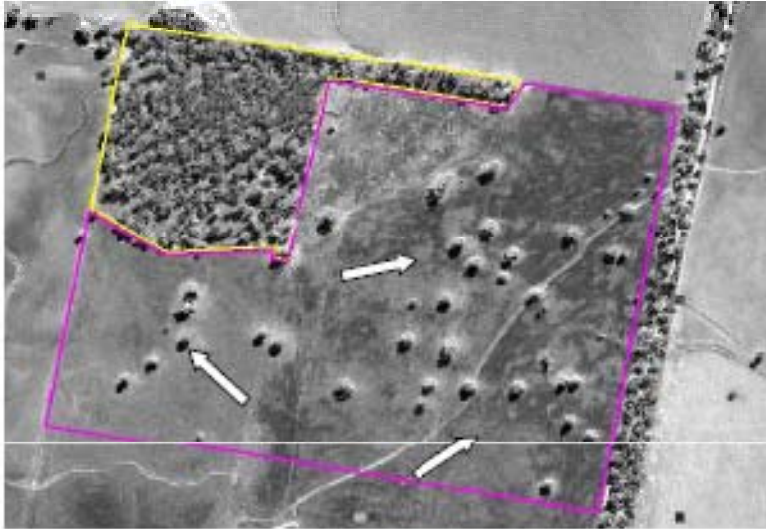
To evaluate progress, information was collated and evaluated from state and federal agencies including NSW Department of Environment, Climate Change and Water and Catchment Management Authorities (CMAs). The results of the analysis were independently analysed and verified by a panel of recognised experts in NRM.

This Snapshot presents the key findings of the assessment of progress made towards the stated target. Additional information is provided in a Technical Report and the Reporting on Targets: Native Vegetation Extent and Condition technical analysis document. For copies of these documents or additional information go to [www.nrc.nsw.gov.au](http://www.nrc.nsw.gov.au) or contact (02) 8227 4300.

## Some new ways forward

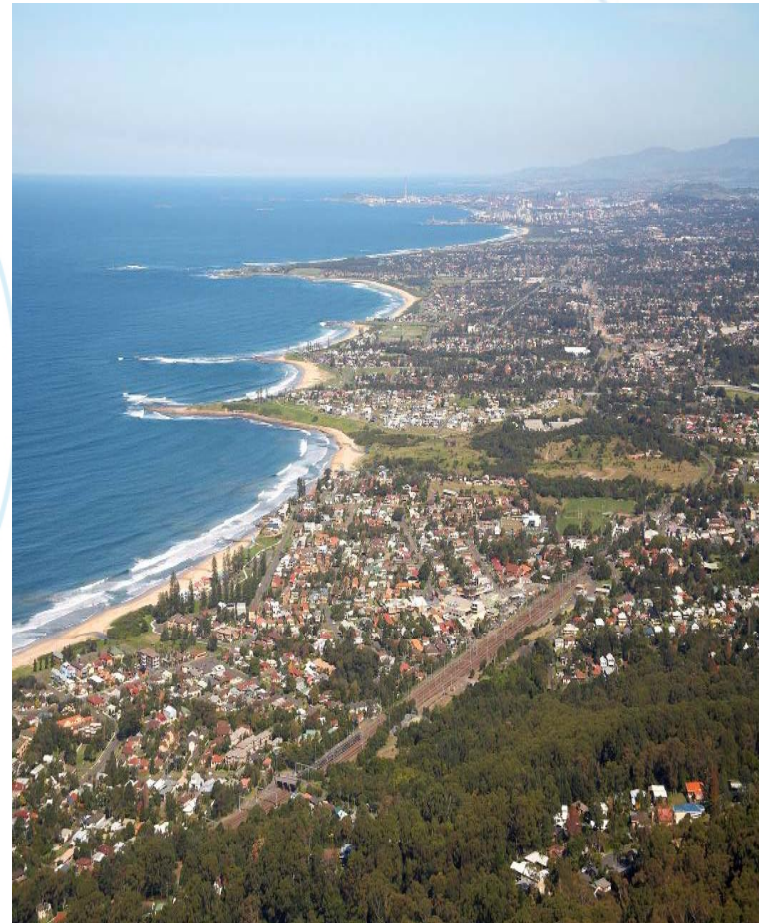
- Multiple Property Vegetation Planning and a whole of landscape approach to vegetation management
- Vegetation Management in Urban Areas
- Natural Resource assets on Private land





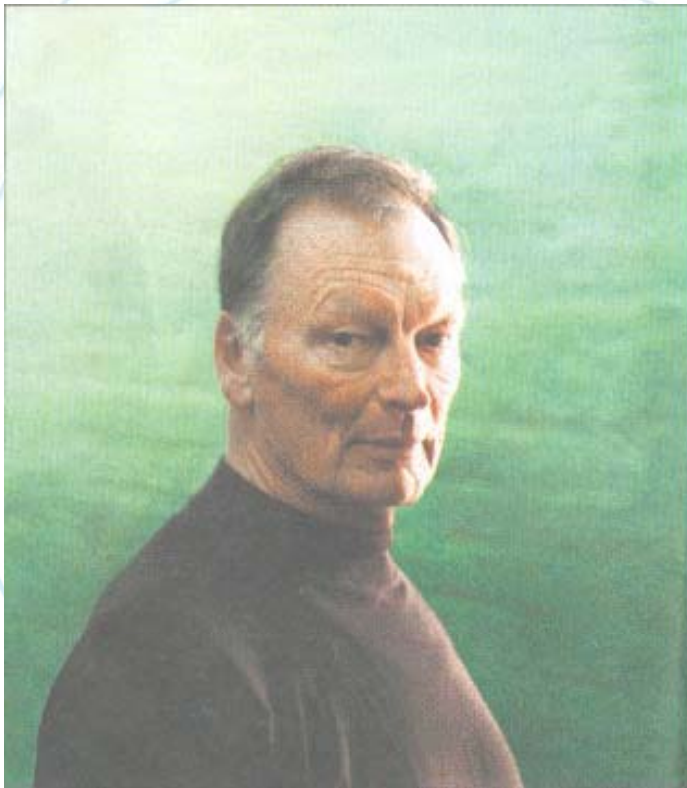
# Align Planning with NRM

- Vegetation Management in Urban Areas

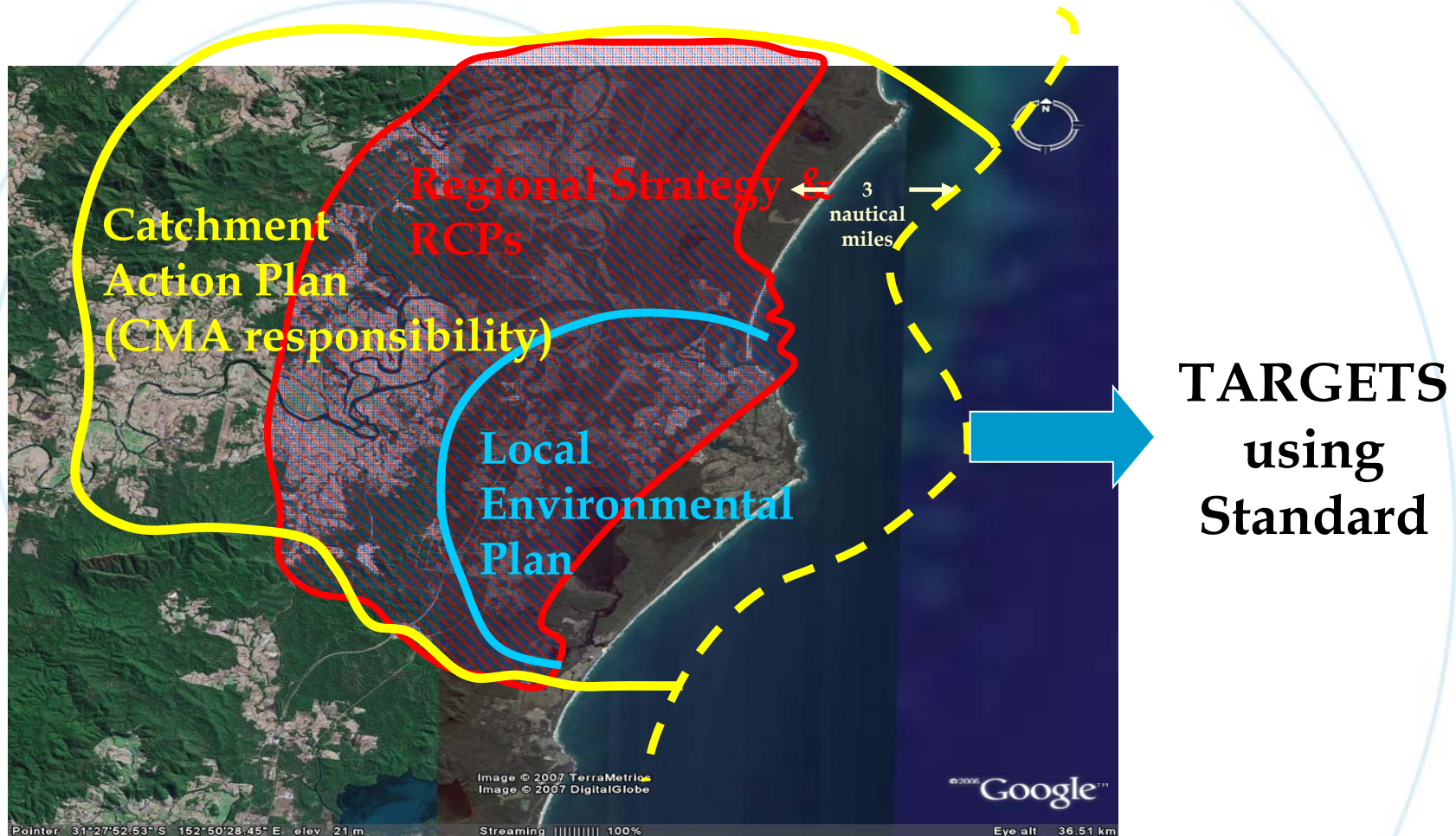




# Natural Resource assets on on Private land



# A critical issue: Integrated catchment, regional and local planning





**We need:  
Integrated approach that  
links planning and  
regulation to delivery of  
natural resource targets**



*Image: NSW Department of Natural Resources*