

vegetation

NSW Woody Vegetation Change

2006 TO 2007 REPORT

Woody vegetation

The total reduction in the area of woody vegetation in NSW from 2006 to 2007 was 243,155 hectares or 0.3% of the area of NSW, of which 0.25% was attributable to fire.

Woody vegetation, for the purpose of this report, is defined as woody communities with 20% crown cover or more (e.g. woodlands, open forests and closed forests) that are taller than about 2 metres. This definition aligns with the Montreal Protocols for woody vegetation.

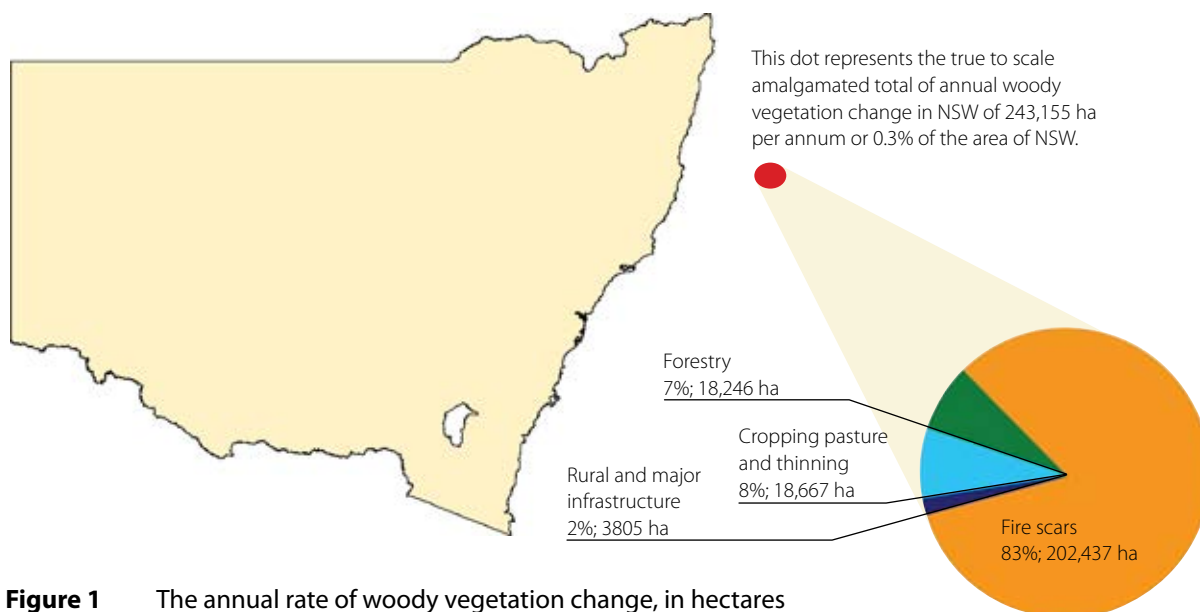


Figure 1 The annual rate of woody vegetation change, in hectares and as a percentage of the total area of NSW

Where did the changes occur?

Changes in woody vegetation occurred across NSW. The major changes occurred in the following categories.

Cropping, pasture and thinning

The majority of changes due to agricultural activities were identified in the Northern Tablelands and the north east of NSW. While the statewide clearing figure is slightly higher than the previous (2004–2006) figure, the annual rate of clearing in the Western and Central West areas of NSW has declined.

Forestry

- The majority of forestry activity was identified on the coast and tablelands.
- Forestry activity has increased as a result of bushfires in many state forests, leading to the need to quickly harvest the burnt timber, and an increase in private native forest harvesting in the North Coast Region.

Fire scars

Major fire scars were identified in the Pilliga forests south west of Narrabri and the Blue Mountains west of Sydney. Many smaller fires burnt woody vegetation across most regions of the state in 2006 and 2007. Other fires, such as the Junee fire (January 2006), burnt agricultural grass and pasture lands which are not part of the woody vegetation analysis.

Rural and major infrastructure

Major changes due to rural and major infrastructure, such as clearing for buildings, highways, roads, power lines, water pipelines, fence lines, and mine development, occurred in the North Coast, Hunter, and central areas of the state.

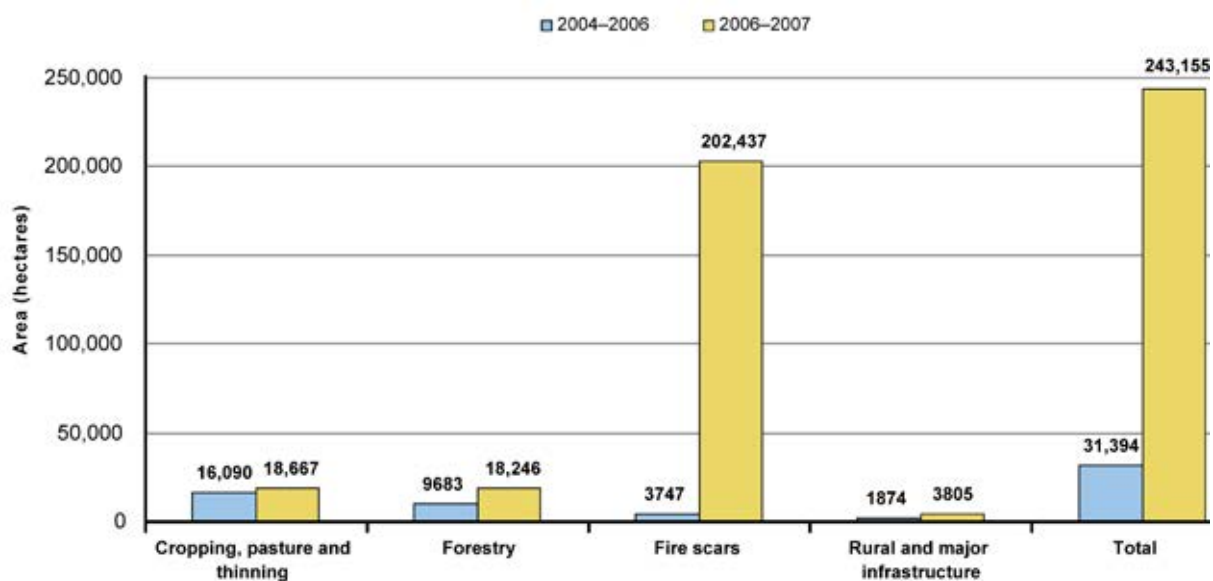


Figure 2 The annual rates of woody vegetation change in different categories in NSW from 2006 to 2007

Methodology

The Woody Vegetation Change 2006 to 2007 Report is the result of applying satellite imagery analysis techniques to NSW data to calculate annualised woody vegetation change across NSW. The methodology was developed over many years by the Queensland Department of Natural Resources and Water as a scientific approach to reporting change in woody vegetation (above 20% canopy cover) and is known as the *Statewide Landcover and Tree Survey (SLATS)*.

This report is the second to be provided on the change in woody vegetation in NSW since the implementation of the *Native Vegetation Act 2003*.

The previously reported annualised figures (2004–2006) are included in the charts for comparison.

Category descriptions for woody vegetation change

Cropping, pasture and thinning

This class includes areas cleared for cropping, pasture and thinning. This represents the reduction of canopy cover from above 20% woody canopy cover to substantially less than 20%. Areas of possible clearing have been included for thoroughness, and represent 9% of the total class.

Forestry

This class includes areas where woody canopy has been removed due to forest harvesting activities. This includes private native forestry, harvesting within State Forests and harvesting within plantations.

Fire scars

This class includes areas where canopy cover has changed due to fire-related effects. This class only captures those fire scars that had substantial leaf features removed at the time of image acquisition, and does not capture all historic fire scars.

Rural and major infrastructure

This class includes all activities where canopy has been changed due to rural infrastructure including fence lines and firebreaks, as well as major infrastructure including powerlines, water pipelines, highways, roads and major works. This class includes mine extensions and related activities.

DATA SOURCES

The analysis techniques are based on Landsat 5 TM and Landsat 7 EM+ Imagery acquired from the Australian Centre for Remote Sensing for the periods from March 2005 to July 2006, and from January 2007 to June 2007.

DATA LIMITATIONS AND EXCLUSIONS

The results of the state-wide analysis using Landsat 5 TM and Landsat 7 EM+ imagery have been checked using higher resolution SPOT5 imagery and digital aerial photography undertaken in selected parts of NSW. These techniques show a close correlation to known vegetation changes identified.

The SLATS methodology provides a clear view of changes in the landscape (above 20% woody canopy cover). Analysis of the output has enabled the change to be classified according to land use (agriculture, forestry, and infrastructure) and fire. It does not allow a relationship to be determined between the change in vegetation extent and the conservation/ approved clearing activities of CMAs and other agencies.

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