



RESEARCH NOTE

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Clearing Trees on Farms in Australia

Introduction

The loss of native forest and woodland area on farms is increasingly seen as a problem and programs such as *Save the Bush*, *One Billion Trees* and *Corridors of Green* have been established to halt such loss and replace the native vegetation. The Government estimated that, since 1989, these programs have resulted in the establishment and protection of 680,000 hectares (ha) of vegetation throughout Australiaⁱ. However during the first four years of that period (1989–1993) approximately 2 million ha of native vegetation was cleared for agricultural purposesⁱⁱ.

Native vegetation provides a number of ecological, economic, cultural and social benefits. These include protecting water resources; maintaining biodiversity; providing a carbon sink to absorb greenhouse gases; providing shelter to stock; contributing to soil conservation; maintaining lower water tables and preventing salinity; providing places for tourism and recreation; and providing timber and non-wood products such as honey and flowers. The large-scale clearance of native vegetation leads to a number of problems such as dryland salinity, rising water tables, decline of biodiversity leading to extinctions, habitat loss and fragmentation. It also contributes to an increase in greenhouse emissions and reduction of regional rainfallⁱⁱⁱ.

Past Clearing

The significant historical clearing of native vegetation for pastoral and agricultural purposes on Australian farms is still occurring, primarily in two States, NSW and Queensland. Estimates of the rate of land clearing have

been made with the figure of 500 000 hectares (ha) per year given as an indicative rate of natural vegetation for agricultural purposes in Australia for the period 1983–1993. Data on land clearing has been produced from an analysis of Landsat Satellite imagery for an area of south-central Queensland which represents 4% of Queensland. Over the period 1972 and 1990, over one million ha was cleared to some extent, with an average annual clearing rate of 43 000 ha, about double the clearing rate of the previous 100 years. The Queensland Department of Lands issued permits (valid for five years) to clear 684 967 ha of virgin native vegetation and 391 730 ha of regrowth on leasehold land in 1994. It should be noted that not all areas permitted to be cleared will actually be cleared.

Extent of Remnant Vegetation on Farms

A survey of trees on Australian farms by ABARE in 1993/94 produced some interesting results. It defined native forests as trees or regrowth which were higher than 2 metres with a canopy cover of 50–100%. Native woodland was defined as trees and regrowth higher than 2 metres, with a canopy cover of 10–

50% or with 10 large trees or 40 small trees per hectare (ha). The survey reported that 81% of Australia's wheat-sheep zone (areas of inland Australia most suitable to broadacre cropping) farms and 68% of Australia's high rainfall zone farms still contain areas of native forests and woodlands^{iv}. The extent in percentage terms and actual area of remnant native vegetation varies significantly between the States and between holdings in the pastoral (arid and semi arid) zone, the wheat-sheep zone and the high rainfall zone. Only 4% of South Australia's wheat-sheep zone farms still retain native forests while 43% of Queensland's wheat-sheep zone farms support areas of native forests. The reasons that a significant number of farms have no area of trees or woodland include clearing but also the fact that some farms were established on native grasslands.

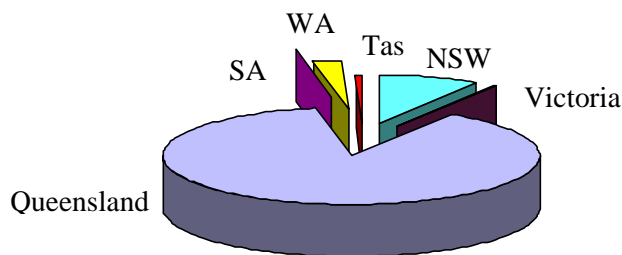
The average area of native forests and woodlands on Australian farms is significant, 348 ha for the wheat-sheep zone and 163 ha for the high rainfall areas, but these are up small proportion of the area of these farms, 19.6% and 9.3% respectively (see Table 1). Native forests make up a smaller component of this total

Table 1: Percentage Area of Australian Farms covered by Native Vegetation

	NSW %	Vic %	Qld %	SA %	WA %	Tas %	Australia %
Wheat Sheep Zone							
of native forests	2.2	1.8	5.5	1.5	2.9		3.5
of native woodlands	10.2	3.3	25.5	13.5	5.5		15.0
Total	12.4	5.0	31.0	15.0	8.5		18.5
High Rainfall Zone							
of native forests	6.2	1.6	11.0	1.3	8.0	6.0	5.9
of native woodlands	8.8	0.9	20.0	7.8	4.5	15.9	13.7
Total	14.9	2.5	30.0	9.3	12.5	21.9	19.6

Source: ABARE Research Report 95.7

Figure 1: Proportion of Native Vegetation on Farms intended to be cleared 1994-95 to 1988-99



Source: ABARE Research Report 95.7

than native woodland. 5.9% (49 ha) of the area of Australian farms in the high rainfall zone are covered by native forests with the percentage cover varying from 1.6% (5 ha) for Victorian farms to 7.7% (201 ha) for Queensland farms.

Proposed Clearing

The survey also found out the landholders's intentions to clear native forest and woodlands over the five year period 1994/5–1998/99. As mentioned previously Queensland and NSW are the states where farmers are planning the greatest amount of

clearing native vegetation over this period. 27% of Queensland farmers in the wheat-sheep zone, 23% of Queensland farmers in the pastoral zone and 12% of NSW farmers in the high rainfall zone planned to clear native forests and woodlands. Figure 1 shows the state proportions of planned clearing of native vegetation. The pastoral zone and the wheat-sheep zone of Queensland are where the greatest average area per farm of native vegetation is intended to be cleared over the five year period, 696 ha in the pastoral zone and 186 ha in the wheat-sheep zone. The figure for

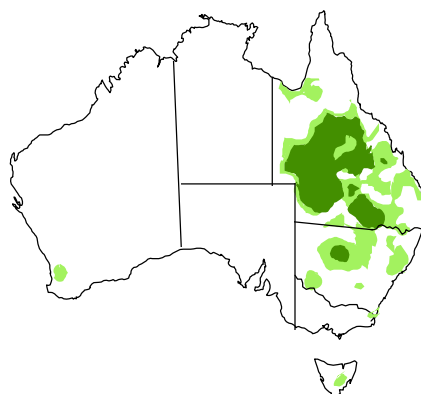
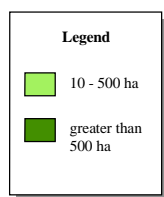
the wheat-sheep zone in Queensland represents one quarter of the remaining native forests on each property. Figure 2 shows the total area that is to be cleared over the five year period with 2 886 000 ha intended to be cleared in Queensland and 283 000 ha intended to be cleared in NSW.

Clearing Controls

Clearing controls vary between the States; they are quite comprehensive in South Australia, Victoria, Western Australia and the ACT but limited in Tasmania and the Northern Territory^v. New procedures are being implemented in Queensland (draft State guidelines on tree clearing) and NSW (State Environment Planning Policy No 46 for the protection and management of native vegetation) which have been modified due to pressure from landholders. While it is not yet clear to what extent, the new clearing controls and guidelines in these two states will influence the final clearance outcome.

Figure 2

Average area per farm of planned clearing of native vegetation 1994/95 - 1998/99



Source: ABARE Research Report 95.7

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