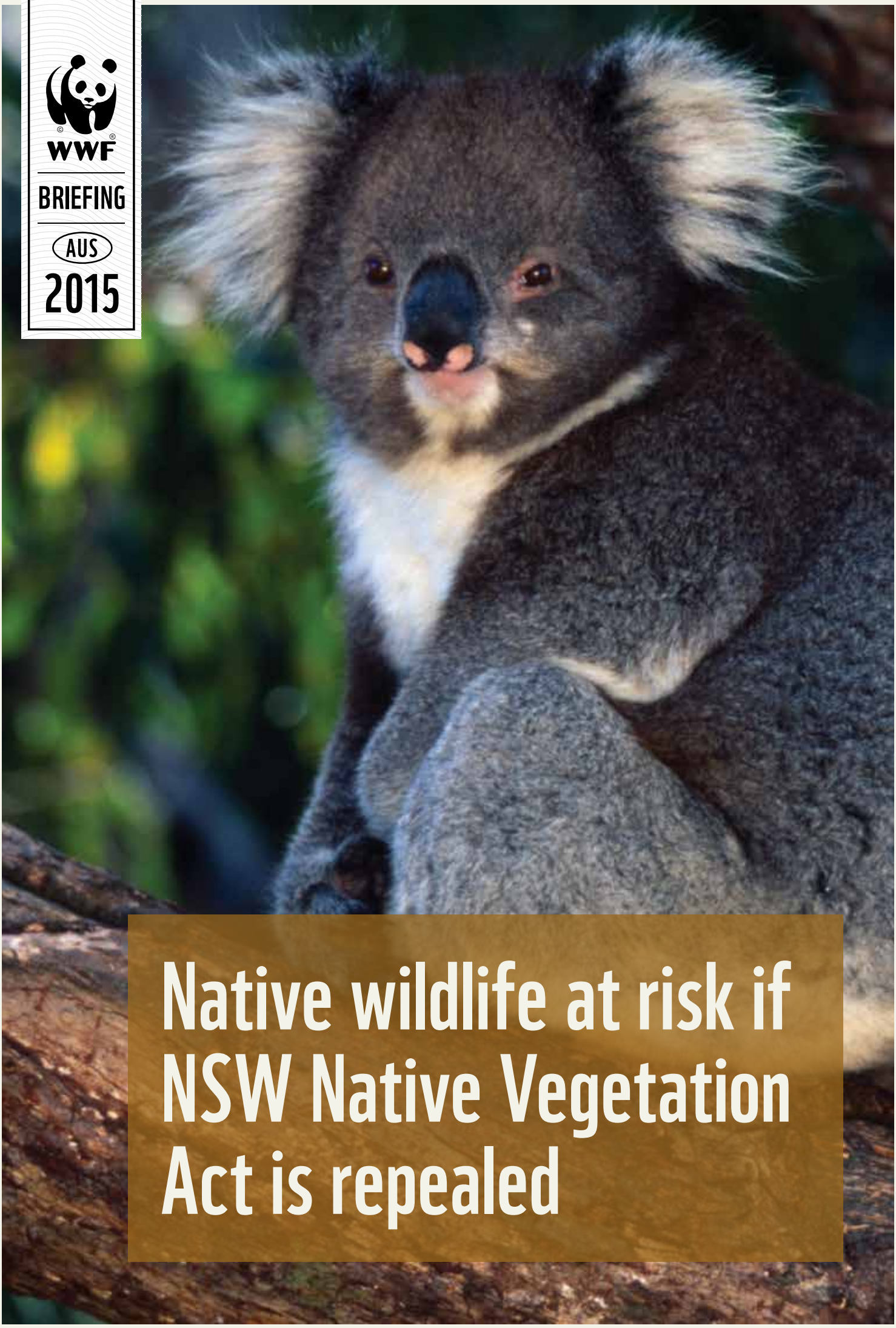
WWF

BRIEFING

AUS

2015



Native wildlife at risk if NSW Native Vegetation Act is repealed

Dedication: WWF-Australia dedicates this report to the memory of Glen Turner, a native vegetation officer shot and killed while serving an illegal landclearing notice in Moree, north central NSW on 30 July 2014.

Cover: Koala © Martin Harvey / WWF

SUMMARY

The *NSW Native Vegetation Act* ("NVA" or "the Act") has been a clear success, achieving its core purpose of reducing broadscale clearing with the requirement that all land clearing must improve or maintain environmental outcomes. The Act has also protected native vegetation of high conservation value, leading to substantial reductions in native wildlife deaths from land clearing.

Approvals of broadscale and paddock tree clearing have reduced to modest levels, and permitted clearing is offset to ensure condition of vegetation of the same type being cleared is improved or maintained. Approvals for thinning and invasive native shrub treatments which are presumed to be environmentally beneficial, have expanded to cover over 4 million hectares since the Act came into force in 2005.

Nonetheless, agricultural landclearing continues on average about 10,000ha per annum. This is most likely due to the exemptions and exclusions under the Act put in place to accommodate the farm sector. Some of this clearing may be illegal, but the NSW Government does not disclose the breakdown into illegal, approved or exempt clearing.

AGRICULTURAL LANDCLEARING CONTINUES ON AVERAGE ABOUT 10,000HA PER ANNUM

WWF's 2014 report, *NSW Native Vegetation Act saves Australian wildlife,* reported a decline in average annual agricultural clearing rates and in numbers of native mammals likely to have been killed by clearing, following the commencement of the *Native Vegetation Act 2003*. This was attributable to declines in agricultural clearing in central and western NSW. Clearing for agriculture actually increased slightly in coastal NSW. Clearing for infrastructure increased in all districts. Since most infrastructure clearing falls outside the scope of the Act, this cannot be ascribed to the operation of the Act, and we exclude it from consideration here.

In this update we only consider agriculture clearing. The most recent publicly available clearing data results in revised estimates of 330,000 native mammals killed annually prior to the Act, compared with 214,000 killed annually by agriculture clearing in the period 2006-2011. This means on average about 116,000 native mammals have avoided death due to agricultural clearing each year since the introduction of the Act. However the dramatic fall in clearing rates in 2010-11 may have been largely due to very wet weather and sodden soils, making operation of machinery impractical, and may not be attributable to the operation of the Act.

Repeal of the Act as proposed by the recent Independent Biodiversity Legislation Review Panel presents a real risk of reversing such protections, resulting in a return to the high levels of native wildlife deaths found prior to its enactment in 2005.

SQUIRREL GLIDER © WWF-AUS / ANDREW COCHRAN

WALLABIA BICOLOR, SWAMP WALLABY MARSUPIAL, AUSTRALIA © MARTIN HARVEY / WWF

INTRODUCTION

According to the NSW Government Office of Environment and Heritage (OEH):[1]

59% OF MAMMALS IN NSW ARE THREATENED WITH EXTINCTION, AND LAND CLEARING IS THE MAJOR DRIVER

- 59% of mammals, 34% of amphibians, 30% of birds, 18% of reptiles and 14% of plants indigenous to NSW are threatened with extinction;
- 968 individual species of native animals and plants are threatened with extinction, with 72 of these species presumed extinct;
- Landclearing and fragmentation are the most severe threatening processes to native species;
- 91% of native vegetation in NSW is disturbed by land use and land management practices;
- 39% of native vegetation has been cleared ('replaced or removed') or significantly altered;
- Agriculture is the dominant driver of native vegetation change;
- 87% of all 'classes' of native vegetation are degraded due to reduced perennial cover, soil salinisation and acidification;
- 104 'ecological communities' are threatened and 86% of these are endangered (at imminent risk of extinction).

It is the poor state of biodiversity in NSW and the accepted responsibility of government to conserve biodiversity which are the major drivers behind the protection of native vegetation. Landclearing is the major driver of biodiversity loss, and the main driver of landclearing is agriculture.

This briefing updates WWF's 2014 report, *NSW Native Vegetation Act saves Australian wildlife* in which we estimated the number of koalas and other native mammals saved due to reductions in clearing rates following the entering into force of the *Native Vegetation Act 2003*, by which 'broadscale' clearing of native vegetation in NSW was drastically curtailed.[2]

Since the *NSW Native Vegetation Act saves Australian wildlife* report was released in 2014, the NSW Government has released two important reports:

- NSW Report on Native Vegetation 2011–13[3]
- Report of a recent review of biodiversity legislation in NSW[4]

This updated briefing incorporates new information found in these two reports.

FALL IN CLEARING RATES AND NATIVE MAMMAL DEATHS AFTER THE NATIVE VEGETATION ACT

The NSW *Report on Native Vegetation 2011–13* shows a dramatic drop in the most recent year reported (2010-11). The Report shows that from 2009-10 to 2010-11:

- clearing due to agriculture declined by 68%
- clearing due to development declined by 57%.[5]

CLEARING BULLDOZER KNOCKING DOWN SINGLE TREE
© ELLEN WEBER, CAFNEC

WWF's 2014 report, *NSW Native Vegetation Act* saves Australian wildlife, multiplied the areas cleared by available estimates of densities of native mammals to calculate the probable loss of individual animals. In this update we exclude clearing for infrastructure because it falls mostly outside the scope of the Act. Hence any change in clearing rates cannot be ascribed to changes in the operation of the Act. Only changes in clearing for agriculture are indisputably due to changes in the operation of the Act.

After including the much lower reported areas cleared in 2010-11 we estimate an average annual clearing rate prior to the Act of about 17,575 ha per annum, compared with an average of 10,540 following the Act (Figure 1).

The annual loss of native animals due to agricultural clearing was about 330,000 prior to the Act declining to 214,000 afterwards. Therefore, there are about 116,000 fewer mammal deaths per year on average due to clearing for agriculture for the period following the introduction of the Act, 2006-2011, compared to the preceding period 1988-2006 (Figure 2).

FIGURE 1

Annual clearing rates for agriculture 1998-2011 and averages before and after the *Native Vegetation Act*. The large drop in clearing in 2010-11 is not necessarily due to the operation of the Act, but rather to very wet soils preventing use of machinery.

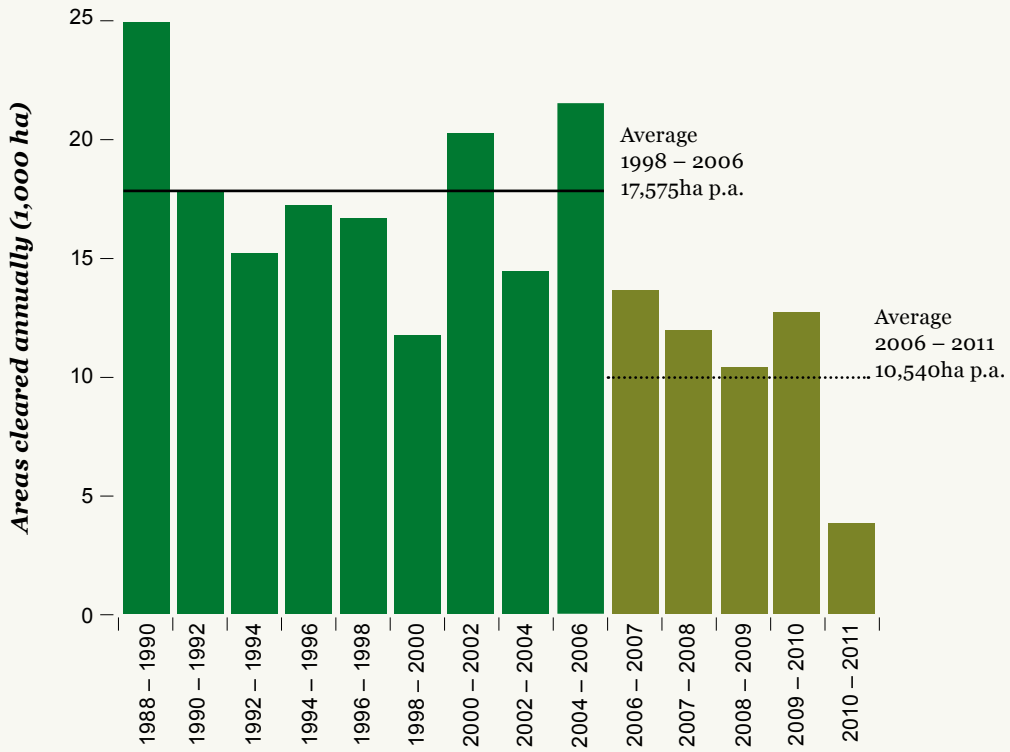
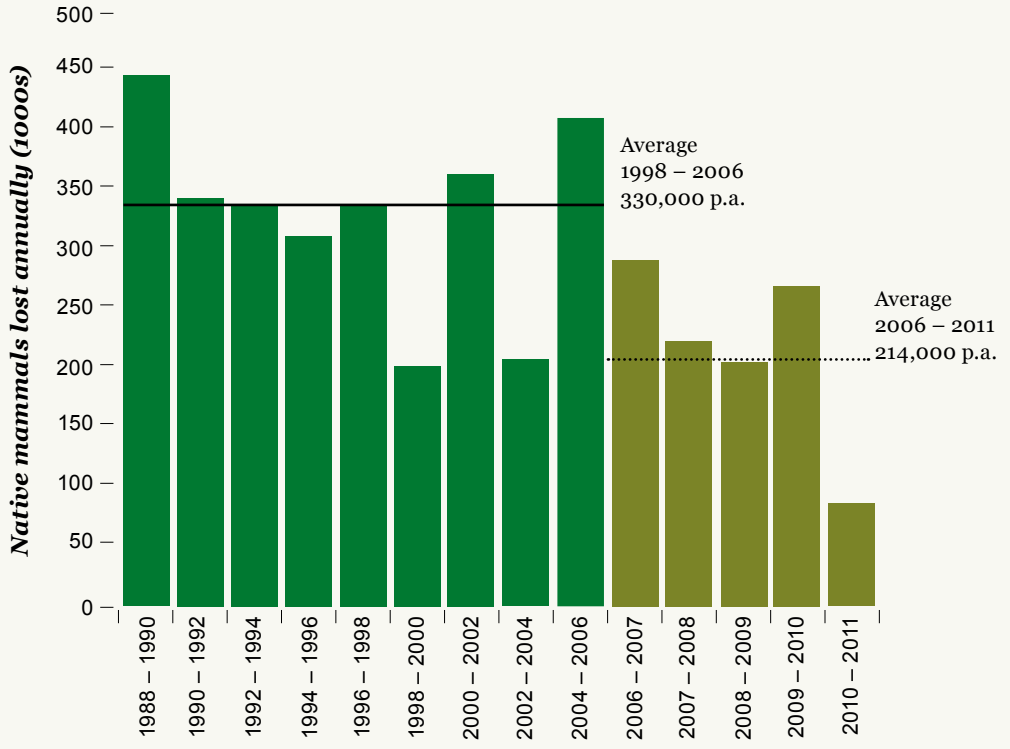


FIGURE 2

Annual losses of native mammals inferred from the areas cleared for agriculture in Fig 1, and averages before and after the *Native Vegetation Act*. The same caution with regard to losses due to clearing in 2010-11 applies as in Fig 1.



KOALA RESCUE © ELLEN MCILLROY / OZSTOCK IMAGES PTY LTD

Koala deaths avoided due to the *Native Vegetation Act*

"KOALAS ARE TOTALLY DEPENDENT ON PARTICULAR SPECIES OF EUCALYPT TREES WHICH ARE BEING RAPIDLY CLEARED IN NSW"

SOURCE: NSW Office of Environment and Heritage.[6]

Koalas are perhaps the most loved animals in Australia and a global icon that encapsulates 'Australia' to millions of people around the world. When dignitaries visit, they cuddle a koala.

The Sydney Basin koalas hold a special place in modern Australian history. The first koala encountered by the European newcomers was in southern Sydney Basin in 1798.[7] The Sydney Basin population is estimated at about 1,900 and in the Campbelltown area about 300 koalas still persist despite rapid urbanisation around them.[8] However, most of the Sydney Basin falls outside of the scope of the *Native Vegetation Act,* which does not apply in urban areas. It would be highly desirable to have the *Native Vegetation Act* apply to all vegetation clearing regardless of who is doing the clearing for whatever purpose.

In NSW, koalas have declined sharply from about 31,400 in 1990 to 21,000 in 2010, a population decline of about 520 koalas per annum. Landclearing and consequent habitat loss and fragmentation is considered the principal threat.[9] This rapid decline is the principal reason for the recent listing of the koala in Queensland, NSW and the ACT as vulnerable under Commonwealth Law. The koala is also listed as vulnerable in NSW.[10]

Any resurgence in clearing rates is sure to have a devastating effect on NSW koala populations, further pushing them toward extinction. Despite the decline in agricultural landclearing observed since commencement of the Act, landclearing continues at unsustainable levels, particularly in coastal areas, where clearing rates for agriculture and infrastructure have not declined. This is due to illegal clearing, or clearing made legal through exemptions, such as urban developments which fall outside the scope of the Act for, or still current approvals issued under previous weaker vegetation legislation, the *Native Vegetation Conservation Act.*

It is estimated from clearing and density data that 965 koalas were killed annually on average from 1988-2006 by agriculture clearing, compared with 538 from 2006 to 2011, meaning about 428 fewer koalas killed by agricultural clearing due to operation of the Act.

The average of 930 annual koala deaths between 1990 and 2010 due to both agriculture and development is consistent with the estimated annual decrease in the NSW koala population of 520 over this same period.[11]

CATTLE ON WELL MAINTAINED PASTURE IN SOUTHEAST QUEENSLAND © IAN MCCONNEL

AGRICULTURAL PRODUCTIVITY CONSERVED DUE TO THE NATIVE VEGETATION ACT

Controls on landclearing also benefit agriculture.

Tree cover is critical for conserving local rainfall – the loss of tree cover has been shown to lead to longer lasting and more severe drought in NSW, due to the loss of rainfall capture by mature tree cover.[12] This important ecosystem service is well understood by the NSW Government:

"Land-use and land cover changes, such as the conversion of native vegetation to crops and exotic pastures, appear to be amplifying the natural climate variability of Australia and this could result in more extensive, frequent and severe droughts, particularly in south-east Australia."[13]

Moreover, adequate tree cover moderates wind and water erosion of soils, the fundamental asset of agriculture. Tree cover harbours predators of agricultural pests, especially the many insect-eating birds. These ecosystem processes create a healthy environment made up of stable soils, fresh air, clean water, food and shelter.

An active area of current research is the question of how to design agricultural landscapes that retain the ecosystem services provided by adequate tree cover. Previous work suggests that the minimum threshold for a healthy agricultural landscape is 30% tree cover, as well as maintenance of high ground cover levels.[14] The NSW Government recognises clearing below 30% of vegetation as 'over-clearing' and has estimated that 30% of broad vegetation types are over-cleared, with the highest proportions in Namoi (48%), Central West (45%) and Border Rivers/Gwydir (43%) CMAs.[15]

There are many farm productivity benefits to be gained from remnant vegetation, including:

- lower stock mortality rates – vegetation shades and shelters livestock, especially shorn sheep and young lambs and calves
- prevention of erosion – native trees, shrubs and groundcover help stabilise the soil and shelter it from wind and rain
- holding water in the landscape as a buffer against extreme weather
- corridors for animals to move within for breeding and to find better habitat and food
- essential wildlife habitat, particularly for threatened species
- termites and ants to decompose plant material, aerate the soil and spread seeds
- shelter for birds of prey, which helps reduce pest animal numbers, including rabbits and hares
- native fish consume mosquito larvae, reducing mosquito numbers
- improved property values.

Native plants also deliver important ecosystem services, including:

- Filtering out nutrients in the water
- Stabilising and adding nutrients to soils
- Removing carbon and releasing oxygen into the atmosphere
- Providing food, shelter and breeding habitat for animals.

SOURCE: NSW Government Local Land Services http://northwest.lls.nsw.gov.au/land-and-water/native-vegetation

EUCALYPTUS FOREST ON THE OUTSKIRTS OF SYDNEY, NEW SOUTH WALES © MICHÈLE DÉPRAZ / WWF

SPOTTED TAIL QUOLL © WWF / FEDY MERCAY

REPEAL OF VEGETATION LAWS IN NSW WOULD PUT NATIVE WILDLIFE AT RISK

The NSW Government's *Independent Biodiversity Legislation Review* has recommended repealing the *Native Vegetation Act* based on the contention that the Act *"overregulates ongoing farm management practices, such as managing invasive native species, native grasslands and construction of on-farm infrastructure, and is creating an unnecessary barrier to innovation, sustainable agricultural production and efficient land management"*.

The evidence available shows to the contrary, that far from over-regulating the farm sector, the *Native Vegetation Act*:

- Permits clearing for a wide range of recognised routine agricultural management activities including infrastructure, fencepost and firewood harvest, pest and weed control, and lopping for fodder.

SYDNEY BLUE GUM, EUCALYPTUS SALIGNA. BLUE GUM GALLEY UNDER PROTECTION, REFORESTATION PROGRAM. CARLINGFORD, NEW SOUTH WALES. AUSTRALIA © MICHÈLE DÉPRAZ / WWF

GLIDER © VIEWFINDER AUSTRALIA PHOTO LIBRARY

- Generally allows clearing if the environmental impacts are such that environmental conditions are 'maintained' or 'improved', under an agreement called a 'Property Vegetation Plan' or PVP.
- Has resulted in approval of nearly one thousand PVPs covering approximately 4.2 million hectares of land, from 2006 to the present (or approximately one PVP every four days) resulting in a net improvement in ecological condition of cleared vegetation through the provision of over 60,000 ha of like-for-like offsets. These offsets have provided the basis for NSW agriculture to become more sustainable (Figure 3).
- Almost all of the area under PVPs, 4.1 million hectares, an area equal to 5% of the entire state area, was for invasive shrub and thinning treatments, which is not offset because it is presumed ecologically beneficial (Figure 3).
- Under recent changes, PVPs are no longer required for clearing of isolated paddock trees for crops and thinning and control of invasive native shrubs, merely notification of intent to clear in accord with a self-assessable code.

Contrary to the view expressed in the *Biodiversity Legislation Review,* the evidence above shows clearly that the Act has been effective in achieving its core objects, resulting in a dramatic decline in vegetation clearing and consequent loss of wildlife.

WWF-Australia believes that these facts provide clear evidence that the *Native Vegetation Act* is an effective and efficient regulation to minimise serious environmental harm. There is no case to be made for amending, let alone repealing, the *Native Vegetation Act*.

If the Act is repealed as proposed, removing the requirement for any approved clearing to improve or maintain vegetation extent and condition, WWF-Australia expects that agricultural landclearing and deaths of native wildlife will return to the high levels seen prior to the Act. That is 116,000 native mammals can be expected to die every year, including hundreds of koalas that would otherwise have avoided death due to the operation of the *Native Vegetation Act*. We expect to see happening for agricultural clearing what has been seen already for infrastructure clearing, which largely falls outside the restrictions of the Act and has been increasing.

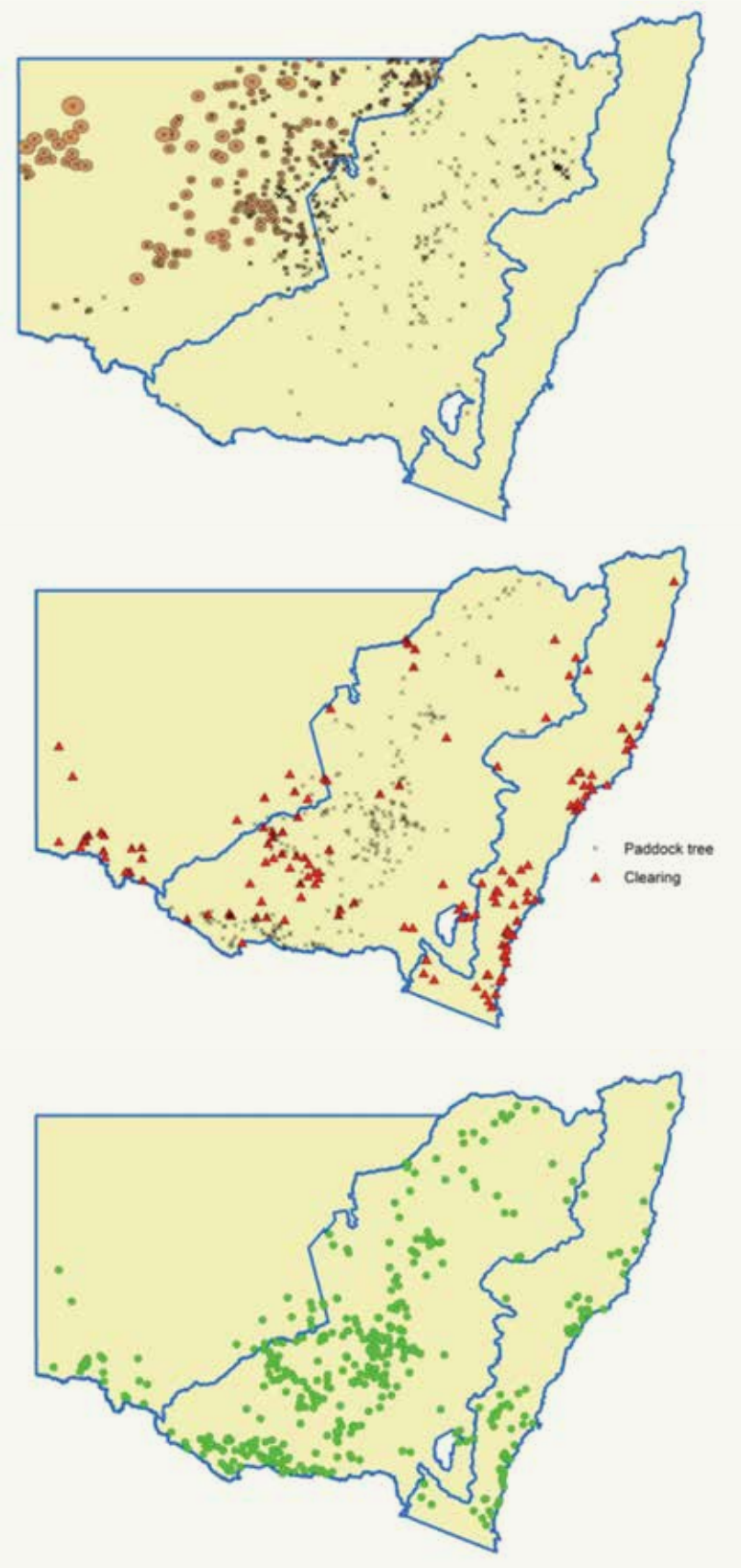
FIGURE 3

Abundant opportunities provided to clear for agriculture under the *Native Vegetation Act*.

Top: Invasive Native Shrub and Thinning approvals 2006-2014. Areas of circles indicate the actual areas approved to scale. Crosses indicate all instances.

Middle: Approvals for broadscale agricultural clearing and for removal of isolated paddock trees, 2006-2014 under the *Native Vegetation Act*.

Bottom: Offsets corresponding to the approvals for clearing and paddock tree removal mapped in the middle panel. The three divisions of NSW left to right are Western, Central and Coastal.



EUCALYPTUS FOREST, NEW SOUTH WALES © MICHÈLE DÉPRAZ / WWF

AN ECHIDNA ON THE FOREST FLOOR OF THE MACQUARIE PASS NATIONAL PARK. NEW SOUTH WALES, AUSTRALIA © GLOBAL WARMING IMAGES / WWF

CONCLUSIONS

The *NSW Native Vegetation Act* has been spectacularly successful at reducing death rates of native wildlife due to clearing for agriculture while providing abundant opportunities for landholders to continue landclearing, so long as appropriate offsets are provided. In addition, millions of hectares have been approved for invasive native shrub clearing and thinning without any offset requirement.

116,000 NATIVE MAMMALS HAVE BEEN SAVED FROM AGRICULTURAL CLEARING EACH YEAR SINCE THE INTRODUCTION OF THE ACT

WWF's 2014 report, *NSW Native Vegetation Act saves Australian wildlife,* estimated the loss of native mammals due to agriculture clearing to be 330,000 per annum from 1988 to 2005, declining to 247,000 per annum from 2006 to 2010, following the commencement of the *Native Vegetation Act 2003*.

Incorporating the much lower area cleared in 2010-11 reduced the average annual loss rate down to 214,000 in the period 2006-2011. This means an average of 116,000 native mammals have been saved from agricultural clearing each year since the introduction of the Act. We caution however, that the much lower rate of clearing in 2010-11 could have been due as much to wet soils as to operation of the Act.

Repeal of the Act as proposed by the recent Biodiversity Legislation Review is likely to cancel out these protections, and result in a return to the high levels of native wildlife deaths found prior to its enactment in 2005.

WOMBATUS URSINUS COMMON WOMBAT A NOCTURNAL MARSUPIAL AUSTRALIA © MARTIN HARVEY / WWF

ENDNOTES

1 http://www.environment.nsw.gov.au/resources/biodiversity/140864objects.pdf

2 http://www.wwf.org.au/?9540/NSW-native-vegetation-act-saves-Australian-wildlife

3 http://www.environment.nsw.gov.au/resources/vegetation/2011-13NSWAnnRepNatVegFinal.pdf

4 http://www.environment.nsw.gov.au/resources/biodiversity/BiodivLawReview.pdf

5 Based on the Landsat imagery analysis in http://www.environment.nsw.gov.au/resources/vegetation/2011-13NSWAnnRepNatVegFinal.pdf. The reductions are lower if the more recent SPOT estimates are used, 27% and 23% respectively. As in the earlier report we do not report on native forestry. While forestry involves large areas of clearing of at least 17,300 ha in 2010/11 it does not result in conversion of native forest to non-forest. Conversion of forest to plantations is however, included under agriculture because it entails land cover conversion.

6 http://www.environment.nsw.gov.au/animals/thekoala.htm

7 Lunney D et al 2010. Campbelltown's koalas : their place in the natural history of Sydney. http://researchdirect.uws.edu.au/islandora/object/uws:21907

8 McAlpine, C et al 2012. Conserving Koalas in the 21st Century: synthesising the dynamics of Australia's Koala populations. Report of a workshop. http://www.aceas.org.au/conserving_koalas_report.pdf; EPBC Act profile for *Phascolarctos cinereus* Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory). http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=85104

9 EPBC Act profile for *Phascolarctos cinereus* Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory). http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=85104

10 http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10616

11 http://www.wwf.org.au/?9540/NSW-native-vegetation-act-saves-Australian-wildlife. We expect annual death rate to exceed annual population decline, because it is offset by births.

12 Deo, R. C., J. I. Syktus, C. A. McAlpine, P. J. Lawrence, H. A. McGowan, and S. R. Phinn (2009), Impact of historical land cover change on daily indices of climate extremes including droughts in eastern Australia, *Geophys. Res. Lett.*, 36, L08705, doi:10.1029/2009GL037666.

13 http://www.environment.nsw.gov.au/resources/biodiversity/140864objects.pdf

14 Lindenmayer, D. On borrowed time. CSIRO http://www.publish.csiro.au/onborrowedtime/sections/

15 http://www.environment.nsw.gov.au/resources/biodiversity/140864objects.pdf

16 http://www.environment.nsw.gov.au/vegetation/noselfassess.htm

WWF 35 years of advancing environmental protection in Australia

GREAT BARRIER REEF

WWF has helped secure new highly protected areas that help recovery of fish populations and which build the resilience of the Reef system.

LANDCLEARING

WWF has campaigned alongside farmers, industry, Indigenous communities and local and state governments to help see broadscale clearing of remnant bushland in Queensland significantly reduced.

NINGALOO

WWF has played a pivotal role in securing sanctuaries within Ningaloo waters.

EARTH HOUR

Earth Hour was co-founded by WWF-Australia and has evolved into one of the most recognised campaigns in history.

ANTARCTICA & THE SOUTHERN OCEAN

WWF continues to promote sustainable fisheries and to protect seabirds from fishing and pest animals.

SOUTHWEST AUSTRALIA

WWF helped to ensure that some 5,000 hectares of globally important, privately-owned bushland in WA's wheatbelt is protected.

WWF

Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

wwf.org.au

WWF-Australia National Office

Level 1/1 Smail Street,
Ultimo NSW 2007
GPO Box 528
Sydney NSW 2001

Tel:+1800 032 551
enquiries@wwf.org.au
@WWF_Australia
wwf.org.au

WWF NATIVE WILDLIFE AT RISK IF NSW NATIVE VEGETATION ACT IS REPEALED 2015

AUS WWF.ORG.AU