

#### August 2016

## Comment on Productivity Commission Draft Report: Review of Regulation of Australian Agriculture

Regulation of Agriculture Productivity Commission Locked Bag 2, Collins Street East Melbourne Vic 8003

By Web: <a href="http://www.pc.gov.au/inquiries/current/agriculture/make-submission">http://www.pc.gov.au/inquiries/current/agriculture/make-submission</a>

The Wilderness Society welcomes the opportunity to provide comment on the draft Productivity Commission (the Commission) report into the Regulation of Australian Agriculture<sup>1</sup>. This submission deals with top-line issues of concern for the Wilderness Society and our members, most particularly regulation covering land use and vegetation protection.

## **About Our Organisation**

The Wilderness Society is an Australian, community-based, not-for-profit, non-governmental environmental advocacy organisation, formed in 1976 by a small group of concerned Australians who came together to launch a campaign to protect the wild Franklin River in south west Tasmania.

Our shared organisational purpose is to protect, promote and restore wilderness and natural processes across Australia for the survival and ongoing evolution of life on Earth. We operate campaigns to safeguard our sources of clean water and air, to tackle dangerous climate change, to create a safe future for life on Earth, and to give a better world to our children. Our organisational vision is an Australian society that protects and respects the natural world to create a vibrant, healthy continent with positive connections between land, water, people and wildlife.

We enjoy a diverse membership of over 34,000 Australians from across Australia. We represent the views and concerns of our members and a wide range of Australians on major environmental issues.

<sup>&</sup>lt;sup>1</sup> Productivity Commission 2016 *Draft Report into the Regulation of Australian Agriculture* retrieved 16 August 2016 from <a href="http://www.pc.gov.au/inquiries/current/agriculture/draft/agriculture-draft.pdf">http://www.pc.gov.au/inquiries/current/agriculture/draft/agriculture-draft.pdf</a>



#### Recommendations

In our opinion, the Draft Report does not provide a full and comprehensive review of the issues surrounding the regulation of Australian agriculture.

Given the importance and potential impact of any changes to regulations covering biodiversity and agriculture, the Wilderness Society recommends a more comprehensive and thorough investigation into the regulation of Australian agriculture, including the benefits (not just the costs) of regulation.

As part of this, the Wilderness Society recommends that the Draft Report:

- evaluates environmental regulation of agricultural activities with regards to those regulations' stated aims. This should include benefits as well as costs;
- includes thorough economic, water, conservation and productivity assessments of retaining vegetation at both a site (farm) and regional scale;
- considers the historical examples provided by a long history of unregulated clearing in Australia in determining the value of vegetation controls in maintaining agricultural productivity;
- considers the role of site-specific environmental regulation in preventing damage to neighbouring landholders
- examines previous failures in designing and best practice options for regional approaches to environmental conservation;
- considers a wider pool of current research, including the CSIRO Australian National Outlook, on the ability of Australian agriculture to maintain or improve productivity while increasing environmental protection and vegetation cover in its next iteration;
- performs a comparative analysis of the comparative efficacy of differing regulatory approaches in achieving environmental and productivity aims;
- further examines the potential for Commonwealth leadership in reforming our system of environmental regulation of Australian agriculture;
- provides greater clarity in the use of the term "community" and, if a community is specified as having specific views, values or interests, these are demonstrated through currently existing literature or an exploration is made by the Commission to explore those views;
- Australian and International examples of how carbon rights can function with leaseholds and provides recommendations on how tenure reform can support landholders in best accessing carbon incentives; and
- supports the application of best practice environmental regulation to all actions which may remove or change vegetation composition or cover, regardless of the purpose of the intended action.



## Draft Report on the Regulation of Australian Agriculture

As the Draft Productivity Commission report into the Regulation of Australian Agriculture (the Draft Report) notes, "around half of Australia's total land area is used for agriculture, [therefore] successful environmental management and the conservation of biodiversity depend in large part on the actions of the agricultural sector<sup>2</sup>".

Thus, the Wilderness Society welcomes any inquiry into how to best maintain and improve environmental values and services while supporting opportunity and development for rural and regional communities. This submission will focus on on the sections and recommendations in the Draft Report relating to land use, vegetation and biodiversity management.

Unfortunately in our opinion, the Draft Report does not provide a full and comprehensive review of the above issues. Several key issues are not given consideration and we believe that the Draft Report makes several recommendations without providing sufficient evidence for their provision or a full consideration of their comparative cost.

Recommendation: Given the importance and potential impact of any changes to regulations covering biodiversity and agriculture, the Wilderness Society recommends a more comprehensive and thorough investigation into issues surrounding the regulation of Australian agriculture, including the benefits (not just the costs) of regulation.

## Scope of the Inquiry

The Wilderness Society believes the Draft Report's underlying premise that environmental protection laws are inherently restrictive of agricultural activity is flawed, and fails to recognise that environmental laws protect healthy ecosystems, including water and soil which are essential for productive agriculture. The Terms of Reference directed the Productivity Commission to look at the 'regulatory burden imposed on Australian farm businesses." An inquiry into productivity, however, requires considering the benefits as well as the costs of regulation. Our concern is that the benefits of certain regulation have not been considered, and this could be redressed in the next draft.

As the Draft Report notes, regulation is simply defined as "as any laws or other government rules (such as standards and codes of conduct) that influence or control the way people and

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<sup>&</sup>lt;sup>2</sup> Productivity Commission 2016, op. cit., p92



businesses behave."<sup>3</sup> While the Wilderness Society supports the assertion that regulation relating to Australian agriculture needs a thorough review to ensure it is achieving its stated aims, we believe that such a review should be shaped by considering the role that regulation may play in shaping an agricultural sector that is both efficient and sustainable.

As part of its consideration of the benefits of regulation to productivity, the Commission should also consider which threats to productivity may require regulatory solutions. For example, climate change, broad scale clearing and declining rainfall are documented threats to agricultural productivity, and may require regulatory interventions to secure future agricultural productivity.

In our opinion, by focussing solely on how to reduce current regulations without a larger consideration of the aims of that system, the Draft Report does not go any meaningful way towards considering this issue.

It is concerning that the Draft Report does not take into account current research, including the CSIRO Australian National Outlook 2015<sup>4</sup>, that specifically addresses this policy question of how we can ensure that economic growth does not come at the cost of environmental sustainability. Much modern scholarship considers that Australia's total output of food and fibre can increase even in scenarios with significant increases in land use for conservation and carbon sequestration. We urge the Commission to consider this research in the next iteration of this report.

Recommendation: That the Draft Report evaluate environmental regulation of agricultural activities with regards to those regulations' stated aims. This should include benefits as well as costs.

Recommendation: That the authors of the Draft Report consider a wider pool of current research, including the CSIRO Australian National Outlook, on the ability of Australian agriculture to maintain or improve productivity while increasing environmental protection and vegetation cover in its next iteration.

In addition, the term "community" is often used in a way which is unclear and undefined, and in section 3 "Environmental Regulations" there seems to be an oftentimes arbitrary binary drawn between the interests of the agricultural sector and the "community" without

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<sup>&</sup>lt;sup>3</sup> Ibid, p5

<sup>&</sup>lt;sup>4</sup> CSIRO 2015 Australian National Outlook 2015: Living standards, resource use, environmental performance and economic activity, 1970-2050 CSIRO, Canberra



explanation of what comprises that community or exploration of the views, values and expectations of the community<sup>5</sup>.

Recommendation: That the Draft Report provides greater clarity in the use of the term "community" and, if a community is specified as having specific views, values or interests, these are demonstrated through currently existing literature or an exploration is made by the Commission to explore those views.

#### Tenure reform

The Wilderness Society supports the Draft Report's recommendation (2.1) that leasehold reforms are needed to allow greater diversity of land use (e.g. carbon farming, tourism and conservation) and to provide greater certainty of tenure to land users.

However we do not believe that Draft Report provides sufficient evidence for its finding and recommendation that transference of leasehold to freehold *ipso facto* allows for more efficient land use (draft recommendation 2.1). The Draft Report does not make clear what measures or definitions of "efficient land use" might apply here, but intimates that this is related to the use of the land for its highest economic value. However, as the Draft Report itself notes, "private ownership of land or the private exercise of land rights can sometimes lead to inefficient outcomes and there may be a case for government intervention.... In some cases, land assets can be overexploited (in the case of common resources, such as forests) or under-provisioned (in the case of public goods, such as biodiversity values). Regulation can be used to manage the use of common resources and the provision of public goods."<sup>6</sup>.

The Draft Report recommends that land management objectives should be implemented directly through land use regulation, rather than through pastoral lease conditions<sup>7</sup>. Maintaining control over land use through lease conditions allows governments to efficiently manage land use while providing longer term certainty of conditions.

In addition, we do not support the broadscale transfer of tenure from leasehold to freehold on various grounds. One of those is because we believe this to be incompatible with future native title claims and may leave the Australian Government open to compensation claims for extinguished native title; another is that it unfairly prioritises incumbent land uses that may be considered inappropriate in the future.

<sup>&</sup>lt;sup>5</sup> For example: "Such an arrangement is likely to encourage the community to continue to demand greater levels of environmental protection simply because they are not paying for (or not paying the full cost of) that protection." (p108); "They provide a way of ensuring that the community bears the costs of providing the public-good native vegetation and biodiversity conservation services that it has sought." (p135)

<sup>&</sup>lt;sup>6</sup> Productivity Commission 2016, op. cit., p58-9

<sup>&</sup>lt;sup>7</sup> Productivity Commission 2016, op. cit., p68



However, the Wilderness Society supports reforms that enable land users to diversify their activities, for example to undertake carbon farming, conservation covenants, tourism or cultural activities. However, we believe that this can be obtained via continued leasehold, for example through increasing lengths of leases (i.e. to match the "100 years rule") or through transferring carbon rights to leaseholders under the terms of the lease. We note that the Draft Report does not investigate issues surrounding the interaction between carbon rights and leasehold, which (given the importance of land carbon to previous and current government initiatives such as the Carbon Farming Initiative and Emissions Reduction Fund) we believe would be a profitable line of enquiry.

Recommendation: That the Draft Report consider Australian and International examples of how carbon rights can function with leaseholds and provides recommendations on how tenure reform can support landholders in best accessing carbon incentives.

### **Environmental Regulation**

#### Cost versus benefits

The Wilderness Society is concerned that the Draft Report does not adequately examine the benefits of the retention of native vegetation to farm productivity, instead reducing the regulatory equation to one of "tangible cost to landholder to support broader community views or wishes". This approach fails to take into account several key issues.

Firstly, the demonstrated benefit of retention of native vegetation to the farm or enterprise on which it is situated. As highlighted publicly by the NSW Government's Department of Environment and Heritage, native vegetation supports agricultural productivity. Agricultural productivity is highly dependent on the maintenance of ecosystem services provided by healthy native vegetation and associated biodiversity. These include healthy riparian zones, maintaining soil stability and biota, reducing erosion and salinity, and assisting pollination and nutrient cycling. Protecting biodiversity thus protects the productivity and value of that agricultural land.

<sup>8</sup> http://www.environment.nsw.gov.au/vegetation/importance.htm#8

<sup>&</sup>lt;sup>9</sup> Sources include: Gillespie R 2000 "Economic Values of Native Vegetation" *Background Paper Number 4*, Native Vegetation Advisory Council, Sydney; Lockwood M, Walpole S & Miles C 2000 "Economics of remnant native vegetation conservation on private property" *LWRRDC Research Report 2/00*, LWWRDC, Canberra; Miles, C.A., Lockwood M, Walpole S, Buckley E 1998 "Assessment of the on-farm economic values of remnant native vegetation" *Johnstone Centre Report No. 107* Johnstone Centre, Albury; Walpole S 1999 "Assessment of the economic and ecological impacts of remnant vegetation on pasture productivity" *Pacific Conservation Biology* 5: 28-35.



Secondly, the integral role that native vegetation plays in maintaining regional productivity. As noted above, maintaining adequate vegetation reduces or prevents salinity and erosion and supports local precipitation rates, all of which affects farm productivity at a regional scale<sup>10</sup>.

The Wilderness Society feels that in failing to examine the on-site and regional productivity benefits of maintaining vegetation and biodiversity, the Draft Report fails to make an adequate assessment of the cost-benefit ratio to land holders, effectively placing a zero value on services such as water supply, carbon sequestration, pollination and soil stability. Not only does this undermine the credibility of the Draft Report's findings and recommendations, it also represents a vital missed opportunity to provide an accurate assessment of this equation to policy makers and members of the agricultural sector.

Recommendation: That the Draft Report include thorough economic, water, conservation and productivity assessments of retaining vegetation at both a site and regional scale.

Indeed, the Draft Report fails to examine the historical example of the effects of unregulated vegetation management in Australia. From the *Western Lands Act 1901* to various modern native vegetation acts, much of our regulation has been born of community concern from both the agricultural sector and the wider public about widespread soil erosion and land degradation caused by a combination of overstocking, clearing, drought and invasive animal species. It is concerning that the Draft Report does not consider the example of the recent reduction of regulations in Queensland that has seen a doubling in the rate of yearly clearing from 153,638 hectares in 2011-12 to 296,324 hectares in 2013-13, according to the Queensland government<sup>11</sup>.

Recommendation: That the Draft Report consider the historical examples provided by a long history of unregulated clearing in Australia in determining the value of vegetation controls in maintaining agricultural productivity.

In addition, the Draft Report fails to properly examine the role of regulation that is site-specific (i.e. focussed on retaining vegetation at a single farm scale) in protecting

http://statements.qld.gov.au/Statement/2016/8/4/lets-stick-to-the-facts-on-land-clearing

Australia" Journal of Geophysical Research: Atmospheres 109:D18

<sup>&</sup>lt;sup>10</sup> See, for example, CSIRO 2015, op. cit; Daily et al. 2000 "The Value of Nature and the Nature of Value" *Science* 289(5478): 395-396; Lockwood M, Walpole S & Miles C 2000 "Economics of remnant native vegetation conservation on private property" *LWRRDC Research Report 2/00*, LWWRDC, Canberra; McAlpine C, Syktus J, DeoR 2007 "Modeling the impact of historical land cover change on Australia's regional climate" *Geophysical Research Letters* 34:L22711; Pitman A, Narisma G, Pielke R 2004 "Impact of land cover change on the climate of southwest Western

<sup>&</sup>lt;sup>11</sup> Queensland Government



agricultural productivity in neighbouring properties. As the Draft Report notes, governments may intervene (or regulate) where the private exercise of land rights leads to inefficient outcomes<sup>12</sup>. The decision by one landholder to broadscale clear on their own property often has concrete effects on downstream properties, whether through erosion or sedimentation of creeks and waterways, that may reduce the affected properties land value or productivity. The decision to undertake activities that reduce neighbouring property values could constitute damage to a neighbouring property and potentially contribute to land-use conflict.

# Recommendation: That the Draft Report consider the role of site-specific environmental regulation in preventing damage to neighbouring landholders.

#### Landscape-scale conservation

The Wilderness Society strongly supports the Draft Report's recommendation that a regional approach to conserving biodiversity (draft recommendation 3.1) should be taken, especially in the form of bioregional assessment and planning. There are inherent logistical issues in tooling regulation for regional rather than site specific conservation that the Draft Report should explore in more detail in its next draft..

It is essential that cumulative impacts are taken into account for environmental regulation to be effective. As the Draft Report notes, "native vegetation and biodiversity conservation regulations still typically require assessments of individual proposals, and so involve consideration of environmental outcomes at a smaller, local level. This can mean that cumulative impacts of proposals on the environment, and cumulative impacts of regulations on landholders, are not sufficiently addressed." We have often found this to be the case, and would support any further investigation that the Commission might make into regimes that have overcome these issues.

The importance of regional and cumulative approaches highlights why self-assessment is not a good tool for regulating vegetation management. In exploring this issue, the Draft Report might consider the proposed NSW Biodiversity Reforms package<sup>14</sup>, which we believe provides an instructive example of the problematic nature of self-assessment codes. The NSW Reform package comprises a reduction in regulation of site-specific clearing actions through a move to clearing by notification-based codes and aims to move to a regional approach to conservation, but fails to address issues of cumulative impact and contains no mechanism for assessing nor regulating cumulative clearing in a region.

<sup>&</sup>lt;sup>12</sup> Productivity Commission 2016, op. cit., p58

<sup>&</sup>lt;sup>13</sup> Productivity Commission 2016, op. cit., p129

<sup>14</sup> https://www.landmanagement.nsw.gov.au/home/biodiversity-reforms-overview/



The NSW Reform package also provides an example of the equity issues that self-assessment may create among land users. If one or more landholders fully utilise their clearing allowance within a region, a situation arises in which landholders seeking certificates for clearing after their neighbours would either have to be rejected as further clearing would result in a loss of biodiversity at a regional scale or regional scale biodiversity will suffer. It is unclear how clearing by notification would be refused in this situation.

Recommendation: That the Draft Report examines previous failures in designing and best practice options for regional approaches to environmental conservation.

#### **Equity of approach**

The Wilderness Society strongly supports the Draft Report's assertion that regulations and regulatory approaches apply equally to all landholders, with the same factors considered regardless of the purpose of the intended action. The same clearing restrictions that apply to agricultural enterprises should apply to mining, petroleum, geothermal and exploration activities.

Recommendation: That the Draft Report supports the application of best practice environmental regulation to all actions which may remove or change vegetation composition or cover, regardless of the purpose of the intended action.

#### Risk-based approach to regulation

The Draft Report recommends that regulators take a risk-based approach to conservation regulation, citing the Victorian example of mapping vegetation risk categories<sup>15</sup>. However, while the Wilderness Society is not inherently opposed to risk-based regulation, we do not consider that the Draft Report has adequately examined the results of that approach relative to the approach taken in other states, either on environmental or productivity outcomes. In addition, the Draft Report does not explore other potential approaches to regulation, including principles or outcomes focussed regulation.

Recommendation: That the Draft Report performs a comparative analysis of the comparative efficacy of differing regulatory approaches in achieving environmental and productivity aims.

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<sup>&</sup>lt;sup>15</sup> Productivity Commission 2016, op. cit., pp 126-7,



#### Incentives schemes

The Wilderness Society supports draft recommendation 3.2, which recommends the continued development of incentive schemes for biodiversity conservation.

We note that the Draft Report explores both the benefits and challenges of this approach extensively. We would like to note the following challenges that are not covered by the Draft Report:

- Membership of incentive schemes is by definition voluntary and wide-spread take-up is uncertain. In contrast, regulation is applied to all members of a sector, thus creating a level playing field for land-holders and systematically protecting biodiversity across the multiple community groups and landscapes;
- At this stage, there are serious questions about additionality in markets-based systems; and
- Biodiversity markets are not sufficiently developed in Australia to fully value the cost
  of ecosystem services and biodiversity, and this means that markets are, at this time,
  inherently problematic as a solution to incentivising biodiversity conservation.

## The intersection between Commonwealth and State regulation

#### **Education and awareness**

The Wilderness Society strongly supports draft recommendation 3.3, and any efforts by regulators to deepen engagement with the agricultural sector and increase awareness and education efforts about environmental regulations. We recognise that land users are often working within multiple regulatory regimes, which are themselves subject to modification and change (see "Duplication and redundancy" below), and that this makes it difficult to ensure understand what is needed for and ensure compliance.

We support the Draft Report's assertion that "(p)roviding information to citizens affected by regulation is a core part of the regulatory task" and that "(u)nless those affected by a regulation are aware of the actions they must or must not take as a result of that regulation, the objective of the regulation is unlikely to be achieved".

We would also support the creation of information centers (such as websites) that provide complete information on what local, state and Federal regulations may affect a land users activities in their area, and provides clear pathways to find more detail as required.



#### **Duplication and redundancy**

The Wilderness Society supports the Draft Report's finding that there is often overlap, redundancy and inconsistency between various Federal, state and local regulatory regimes, particularly relating to vegetation management, and that the cost of compliance can be prohibitively high, particularly in regards to seeking expert advice and making applications for clearing<sup>16</sup>. We recognise that this can lead to perverse outcomes and make it hard for land users and the community to achieve the outcomes behind the creation of those regulations.

The need for effective regulation that both encourages compliance and a race to innovate to reach conservation and productivity goals is clear. More than 1200 Australian plants and nearly 400 animals are listed as threatened with extinction, more than half of the Great Barrier Reef's coral has been lost in the past 30 years, and over one million hectares of Australian bushland was destroyed in the first half of this decade. Land clearing is listed as a key threatening process in both Federal and state legislation nation-wide, and areas such as western NSW which have been subject to the highest rates of historical clearing show the greatest vulnerability to erosion and soil degradation<sup>17</sup>. Perhaps even more significantly, erosion, loss of organic carbon and acidification are all increasing in impact in these areas<sup>18</sup>.

We note and support the Draft Report finding that extending the current approach to "one-stop shop" assessment and approval to agricultural projects will not have any tangible benefits in improving environmental regulation of agriculture<sup>19</sup>.

The Wilderness Society believes the Commonwealth is the most logical entity to take a strong leadership role in ensuring robust and evidence-based protection of our valuable natural assets as:

- A single governance entity coordinating a coherent approach is more likely to coordinate a single approach to regulation than eight entities on eight different parliamentary cycles trying to work together - the potential for failure to rationalise in such a system is too great;
- Land units (such as leases or freeholds) or the impacts from activities on those land units (such as runoff, sedimentation or water impacts) may go across state boundaries; and
- Many of values being regulated (such as water, air, biodiversity) are Commonwealth responsibilities under various treaties, and so the Commonwealth will always have to have a regulatory role in their management.

<sup>&</sup>lt;sup>16</sup> Productivity Commission 2016, op. cit., p114

<sup>&</sup>lt;sup>17</sup> Department of Environment and Conservation NSW 2006 *NSW State of the Environment Report 2006*, Department of Environment and Conservation NSW, Sydney

<sup>&</sup>lt;sup>18</sup> NSW EPA 2015 NSW State of the Environment Report 2015 NSW EPA, Sydney

<sup>&</sup>lt;sup>19</sup> Productivity Commission 2016, op. cit., p126



On advice from the Australian Panel of Experts on Environmental Law (APEEL)<sup>20</sup>, we believe that the Commonwealth has a sufficient capacity to undertake the coordination and setting of regulation concerning the environment, especially through the external affairs, corporations and referrals heads of power.

The view as to the extensive reach of Commonwealth legislative powers was reinforced in in 1999 by the Senate Environment Committee in its enquiry into Commonwealth environment powers, which concluded that "the Commonwealth Government has the constitutional power to regulate, including by legislation, most, if not all, matters of major environmental significance anywhere within the territory of Australia"<sup>21</sup>.

To best protect and preserve the health of our environment and the communities that rely on it, we need a robust and integrated system of environmental management at the State and Federal level. We also believe that Australia should have an independent national environmental agency to administer national environment law, coordinate national nature conservation strategies and provide publicly available evidence-based assessment and monitoring of environmental issues to all sectors. Such an agency must be free from political interference and decision making, be defined in law and have sufficient capacity, resources and system to regulate, monitor and implement environmental legislation and conservation programs. Such a body must also play a central role in coordinating programs and processes with state and territory governments.

Recommendation: That the Draft Report further examines the potential for Commonwealth leadership in reforming our system of environmental regulation of Australian agriculture.

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<sup>&</sup>lt;sup>20</sup> http://apeel.org.au/

<sup>&</sup>lt;sup>21</sup> Parliament of the Commonwealth of Australia, Commonwealth Environment Powers, "Commonwealth Environment Powers", Report of the Senate Environment, Communications, Information Technology and the Arts Reference Committee, Parliamentary Paper No. 133 of 1999.



#### References

CSIRO 2015 Australian National Outlook 2015: Living standards, resource use, environmental performance and economic activity 1970-2050 CSIRO, Canberra

Daily G, Söderqvist T, Aniyar S, Arrow K, Asgupta P, Ehrlich P, Folke C, Jansson A, Jansson B, Kautsky N, Levin S, Lubchenco J, MAler K, Simpson D, Starrett D, Tilman D & Walker B 2000 "The Value of Nature and the Nature of Value" *Science* 289(5478): 395-396

Department of Environment and Conservation NSW 2006 NSW State of the Environment Report 2006 Department of Environment and Conservation NSW, Sydney

NSW EPA 2015 NSW State of the Environment Report 2015 NSW Environment Protection Agency, Sydney

Gillespie R 2000 "Economic Values of Native Vegetation" *Background Paper Number 4* Native Vegetation Advisory Council, Sydney

Lockwood M, Walpole S & Miles C 2000 "Economics of remnant native vegetation conservation on private property" LWRRDC Research Report 2/00 LWWRDC, Canberra

McAlpine C, Syktus J & Deo R 2007 "Modeling the impact of historical land cover change on Australia's regional climate" *Geophysical Research Letters* 34:L22711

Miles C, Lockwood M, Walpole S & Buckley E 1998 "Assessment of the on-farm economic values of remnant native vegetation" *Johnstone Centre Report* No. 107. Johnstone Centre, Albury

Parliament of the Commonwealth of Australia, Commonwealth Environment Powers, "Commonwealth Environment Powers", Report of the Senate Environment, Communications, Information Technology and the Arts Reference Committee, Parliamentary Paper No. 133 of 1999

Pitman A, Narisma G & Pielke R 2004 "Impact of land cover change on the climate of southwest Western Australia" *Journal of Geophysical Research: Atmospheres* 109:D18

Productivity Commission 2016 Draft Report into the Regulation of Australian Agriculture retrieved 16 August 2016 from <a href="http://www.pc.gov.au/inquiries/current/agriculture/draft/agriculture-draft.pdf">http://www.pc.gov.au/inquiries/current/agriculture/draft/agriculture-draft.pdf</a>

#### **Queensland Government**

http://statements.qld.gov.au/Statement/2016/8/4/lets-stick-to-the-facts-on-land-clearing

Walpole S 1999 "Assessment of the economic and ecological impacts of remnant vegetation on pasture productivity" *Pacific Conservation Biology* 5: 28-35