Submission 1. Re

Vegetation Management and Other Legislation Amendment Bill 2018

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Summary

In my opinion

1. The **Vegetation Management and Other Legislation Amendment Bill 2018** ignores existing research on ecological principles operating in the Queensland rangeland areas.

2. Emphasises only the possible effects of woody vegetation management from clearing while ignoring the detrimental effects established in research literature of woody vegetation thickening on biodiversity, soil erosion and ecological processes

3. Relies on assumptions made by the Queensland Herbarium on potential growth rates of mulga which overlook available literature(including that of a former Government Botanist!) which emphasise its response to seasonal conditions – from minimal in dry seasons to very rapid in wet ones. These assumptions ignore recent findings on the positive response of woody vegetation to increased levels of atmospheric CO2, particularly in drier areas. (See #6 also)

4. Ignores the effect of thickening woody vegetation on reducing the fuel load potential of the ground layer and thus reducing the use of fire as a management tool.

5. Takes no account of the workplace health and safety aspect of working in conditions resulting from its imposition

6. In reality the Native Vegetation Management Act operates in concert with other Acts, particularly the one concerned with management of the kangaroo population. And this, at present, ignores the fact that management of grazing pressure is an essential part of range management and thus of achieving the Purposes of this Act.

7. Is likely to fail in its Purpose around “greenhouse gas emissions”, which should be re-examined in the light of recent research developments.

8. Thus is unlikely to achieve its stated purposes in the Queensland rangeland area, with sustainable land use the first casualty.

9. And, incidently, by its use of the tree layer as a surrogate for regional ecosystem condition, this Act enshrines discrimination against the ground layer vegetation species and does not abide by The Precautionary Principle, oft invoked by the conservation fraternity.

Introduction.

"*Paul Birkeland* April 23rd, 2015

Unintended consequences seem to be a common thread through most of the arguments here. Perhaps it might be best to consider all possibilities when passing a law – the good AND the bad consequences, to weigh costs v benefits. Then both sides would have an equal say! Currently the enviros have the stage; previously the polluters did. Somewhere there is a balance."

In comments at

http://www.aei.org/publication/18-spectacularly-wrong-apocalyptic-predictions-made-around-the-time-of-the-first-earth-day-in-1970-expect-more-this-year-2/ (Accessed 21/03/2018).

And, in my view, the rangelands area of Queensland are still spectacularly and poorly served by **Vegetation Management and Other Legislation Amendment Bill 2018** and its predecessors. As are the holders of its land area allocated for agricultural production. In view of the history of recent vegetation management in this state it would be a real optimist that expected that this is likely to change.

This submission draws largely on my submission to that made to the 2016 enquiry

http://www.parliament.qld.gov.au/documents/committees/AEC/2016/rpt19-11-VegetationMangt/submissions/601.pdf (Accessed 21/03/2018)

and updates with more recent material. as appropriate. These include

1. Rates of Growth of Mulga.

Everist (1949) provides the following observations:-

From seed to 12 feet high in 8 years

From a small sapling (approx 1 inch diameter) to a tree 20 feet high and 8 inches in diameter in 14 years.

He suggests that there may be a "suppression period" where root growth continues which allows rapid stem growth under favourable conditions. Examples are where mulga regrowth kept in check by grazing grows to beyond animal access in response to a single good season

Management prescriptions ought to allow for these effects which result in the rule of thumb of about 20 years from fodder harvest to fodder harvest.

2. Effects of Increased Atmospheric Levels of Carbon Dioxide on Plant Growth

In the effects listed by Idso (2017) are:-

Basic plant responses to atmospheric CO2 enrichment

Increased productivity stimulates C3, C4 and CAM pathways. Woody plant response is generally larger than for herbaceous plants (mean growth enhancement of about 50% for an approximate doubling of atmospheric CO2 content) with examples referenced.

Increased water-use efficiency and the ability to withstand drought, leading tp plants better able to reclaim areas of desertification.

Amelioration of environmental stresses "A high level of atmospheric CO2 has been shown to help reduce the deleterious effects of high soil salinity, high air temperature, low light intensity, and low levels of soil fertility". - air temperature and soil fertility being operative factors in the mulga community.

Biospheric impacts of atmospheric CO2 enrichment

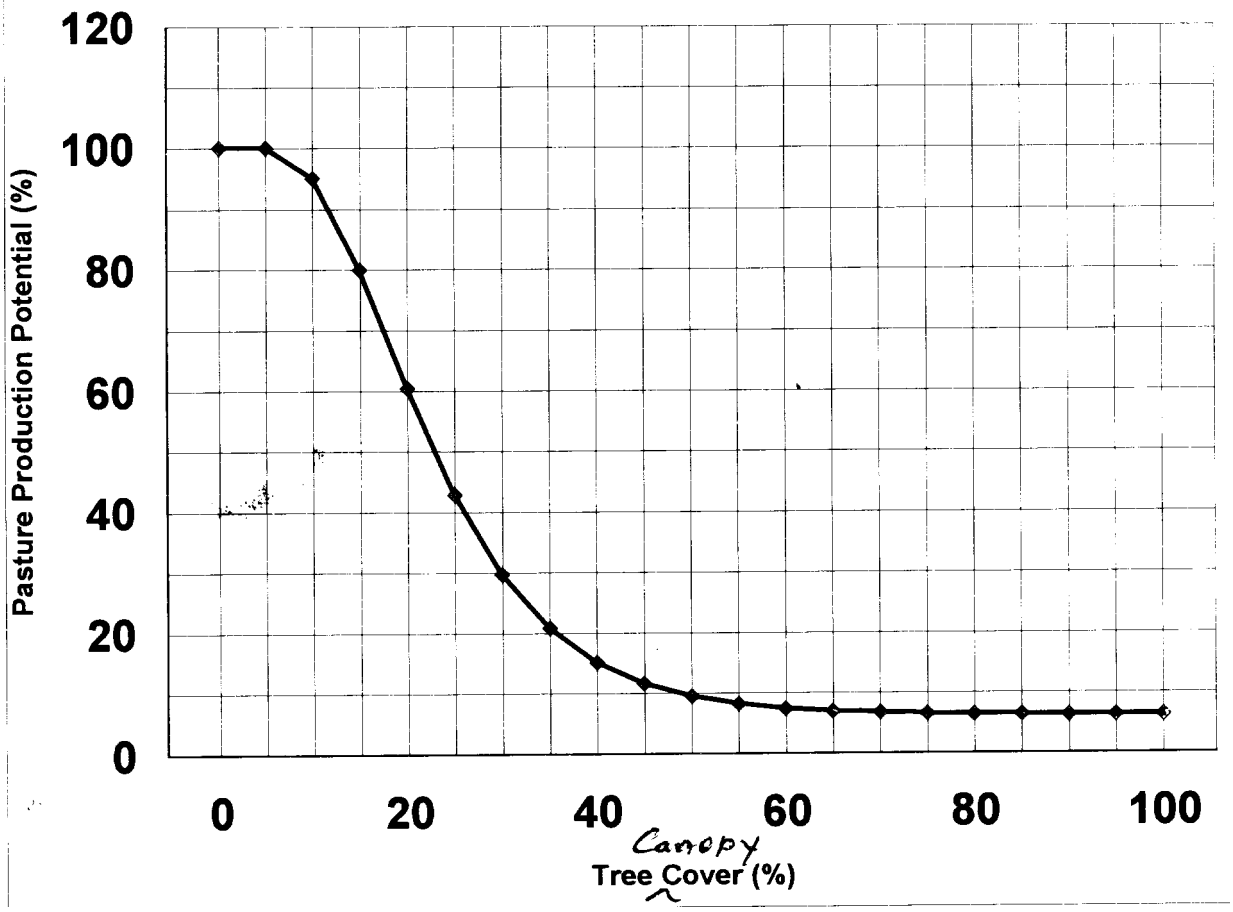
Forest Ecosystems "Convincing evidence exists for the effectiveness of the aerial fertilisation effects of atmospheric CO2 enrichment in the enhancing of Earth's forested ecosystems"

Other aspects of greenhouse gas emissions impacting on woody vegetation management in the Queensland rangelands are discussed by Burrows (2017), particularly that they are net sinks for CO2..

If the Act is to have a meaningful purpose it ought to be updated to include factors like those listed above.

And, incidently, this Act enshrines discrimination against the ground layer vegetation species and does not abide by The Precautionary Principle, oft invoked by the conservation fraternity.

Figure 3. Modified Tree Cover - Pasture Production Relationship (Beale unpublished)



Relevant references are contained in Beale (2016) which was submitted to the 2016 enquiry.

As this shows a canopy cover increase from around 10 % to around 30% has reduced ground layer productivity to about 30% of potential. And in my experience this takes about 20 years in this area. This obviously has a drastic effect on potential productivity of any livestock operation – and on the general welfare of the denizons of the lower levels.

We have an area of around 4850 ha of leasehold land which has thickened significantly in my lifetime (canopy cover was up to around 45% when the property was assessed for Safe Carrying Capacity in 1996 – this will obviously be greater now). For around the last 40 years it has formed a peninsular surrounded on three sides by cleared and developed buffel grass country. Our area provides daytime shelter for the local kangaroo population which migrates for night time grazing. The whole area has suffered severe drought over 2012-15 with somewhat better rainfall in 2016 and 2017 so far. It has not been grazed by sheep since around 2005 due to wild dog activity and has no rangeland goats present. It ran about 40 cows in 2016 which were removed in January 2017 and is currently destocked. The following photographs provide an update to those in my 2016 submission to the contrasting ground layer response to rainfall, canopy cover and severe kangaroo grazing pressure between the timbered area and cleared country on the opposite side of the road.

Rainfall so far this year is

January 0 mm, February 77.5 mm, March 76.5 mm so far.

Only the March rainfall has had one sequence of falls that overlapped. It has been sufficient to promote reasonable pasture growth and seedling establishment in cleared areas where kangaroo populations have been controlled. 74 without trees and kangaroo control has some established grass and new seedlings.

Photographs in Table 1 are contrasts between cleared country (74 and Pest Fence) and unmanaged thickened country (84 and 85). Captions with the same background colour are photographs taken in the same area.

The Road Lane ones are idcluded for the benefit of anyone who may try to claim that the lack of ground layer response is influenced by grazing of domestic animals. The lane being uncleared, ungrazed by domestic animals, and as equally bare and unresponsive as the blocks either side.

Thus in this area the tree layer has been a very poor surrogate for the ground layer. Over the whole area there is negligable grass response, even from wiregrass (Aristida spp). The scattered ground layer response is from flannel weed species, which provide very little dry matter or ground cover.

So, by the rules of conservative management, the Precautionary Principle should be invoked to avoid its use as a surrogate.

Table 1 . Tree Effects on Grass Establishment Across Tomoo Road	
 **Dunheved House paddock, Few trees, kangaroo cull, grass and seedlings**	 **Pest Fence. Few Trees, grass**
 74 **No trees, kangaroos, cattle, forbs, some grass established, some seedlings**	 **74 No trees, kangaroos, cattle, some grass in the green background**
 85 Clear, kangaroos, forbs, no grass	 85 Clear, kangaroos, forbs, no grass

	
85 Trees, kangaroos, forbs, no grass	Mid 85 Kangaroo tracks in sand, Trees, some forbs, no grass
	
Road Lane Trees, Kangaroos, No livestock, Forbs, No grass	**Road Lane** Trees, Kangaroo Tracks, No livestock, Forbs, No grass
	
84 S Trees, kangaroos, Forbs, no grass	84 S Trees, kangaroos, Forbs, no grass

	
Pest Fence Few trees, grass	Pest Fence Few trees, grass
	
85 Trees, kangaroos, no grass	Pest Fence Few trees, grass

References

Everist, S.L. (1949). Mulga (Acacia aneura F. Muell.) in Queensland. Qld Dept. Agric. Stock Bull. No. 49.

Beale, I.F. (2016) http://www.parliament.qld.gov.au/work-of-committees/former-committees/AEC/inquiries/past-inquiries/rpt19-11-VegetationMangt Submission 601.

Burrows, W.H. (2017). Climate Change Policies Review – Discussion Paper Submission .at

http://www.environment.gov.au/climate-change/review-climate-change-policies/discussion-paper-2017#ac

Idso, C.D. (2017). Carbon dioxide and plant growth. Chapter 13. Climate Change: The Facts 2017. Ed. Marohasy, J.. Inst. Public Affairs.

Further Reading

Marc Morano, (2018). “The politically incorrect guide to Climate Change ”. Regency Publishing. P 4-6 of chapter 1 "the Education of a Climate Denier"

Elizabeth Nickson (2012). "Eco-Fascists: How Radical Conservationists Are Destroying Our Natural Heritage". Broadside Books, 384pp.