WWF- Australia submission to the Queensland Parliamentary Agriculture and Environment Committee on the *Vegetation Management (Reinstatement) and other Legislation Amendment Bill 2016*

Contents

Executive summary

The *Vegetation Management Act* (VMA) in Queensland is no longer fit for purpose, as a result of the drastic weakening of its provisions by the previous state government. Under sect. 3 of the VMA:

> *"(1) The purpose of this Act is to regulate the clearing of vegetation in a way that—*
> *(a) conserves remnant vegetation that is—(i) an endangered regional ecosystem; or(ii) an of concern regional ecosystem; or(iii) a least concern regional ecosystem; and*
> *(b) conserves vegetation in declared areas; and*
> *(c) ensures the clearing does not cause land degradation; and*
> *(d) prevents the loss of biodiversity; and*
> *(e) maintains ecological processes; and*
> *(f) manages the environmental effects of the clearing to achieve the matters mentioned in paragraphs (a) to (e); and*
> *(g) reduces greenhouse gas emissions; and*
> *(h) allows for sustainable land use."*[1]

Failure to fulfil the purpose to conserve remnant vegetation is indicated by fact that remnant vegetation clearing tripled from 34,588 ha in 2011–12 to 103,308 in 2013-14. Land clearing data for 2014-15 are expected to show yet higher levels. The VMROLA Bill partly redresses this failing by restoring the ban on broadscale clearing that was reversed for so-called 'high value agriculture' by the former Newman government, and by restoring reasonable capacity to effectively prosecute unlawful clearing of regulated remnant vegetation.

Failure to fulfil the purpose to prevent land degradation and allow for sustainable land use is indicated by the fact approx. 700,000 ha of formerly protected high conservation value regrowth on freehold land was de-protected by the former government. Clearing of this high conservation value regrowth is increasing despite much of it containing streamside buffers and slopes vulnerable to erosion. In Great Barrier Reef catchments over 30,000ha of riparian or streamside bushland has been cleared, mostly in those catchments lacking protection of Reef watercourse regrowth. Tree cover loss also means loss of ecosystem services valuable to agriculture, and increased drought risk. The 2011 Queensland State of the Environment report highlighted the importance of conserving native vegetation to prevention of land and water degradation, reporting how coastal rivers were degraded by high sediment and chemical pollution, how 30% of coastal wetlands had been lost and how fertility of topsoil is severely depleted.

Failure to fulfil the purpose to prevent loss of biodiversity is indicated by the fact that over 200,000 ha known and likely to occur habitats of threatened species was cleared in the period 2012-14. Approx. 700,000 ha of formerly protected high conservation value regrowth was de-protected by the former government. Clearing of this high conservation value regrowth is increasing despite it containing endangered ecosystems, habitat for endangered species, streamside buffers and slopes vulnerable to erosion. Land clearing in Great Barrier Reef catchments more than doubled, including over 30,000ha of riparian or streamside bushland, increasing water pollution risk for the Great Barrier Reef. Increased land clearing also increases greenhouse emissions helping to drive global warming. At a time when almost the entire Reef has bleached due to record water temperatures, the very existence of the Reef is at stake, and escalating air and water pollution caused by land clearing is only making the threat worse.

[1] https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/V/VegetManA99.pdf

Failure to fulfil the purpose to reduce greenhouse gas emissions is indicated by the fact land clearing emissions have doubled since 2009-10, and now represent 6.6% of national greenhouse emissions.

The VMROLA Bill by restoring the ban on broadscale clearing, restoring protection of high conservation value regrowth, reducing greenhouse gas emissions and by expanding the protection of regrowth in watercourse buffer zones to all Great Barrier Reef catchments will substantially improve the degree to which the VMA fulfils all the above mentioned purposes.

WWF supports the VMROLA Bill, but also urges the Committee to recommend measures to strengthen it further.

WWF is also willing to provide testimony at the Committee hearings to answer any questions that that the Committee may have.

Introduction

WWF supports VMROLA Bill

Founded in 1962, WWF is an international network of conservation organisations with offices in over 100 countries and with over five million supporters worldwide. WWF- Australia has over 200,000 supporters, more than 40,000 resident in Queensland.

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by conserving the world's biological diversity and ensuring that the use of renewable natural resources is sustainable.

WWF supports efficient and effective laws to conserve the natural resources on which human life depends – water, soil, climate and biodiversity – and works closely with business and industry to slow, stop and ultimately reverse our negative impact on the natural environment.

To this end, in Queensland, WWF-Australia is working with sugarcane farmers in Project Catalyst to prove that cane farming can eliminate its negative water quality impacts on the Great Barrier Reef while still remaining profitable.[2] Through Project Pioneer, WWF is working with innovative beef producers to achieve the same objectives.

Australia is a party to the Aichi Targets of the Convention on Biological Diversity, in particular, target 5:

> *'By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced,' where*
>
> *'The emphasis of this target should be on preventing the loss of high-biodiversity value habitats, such as primary forests and many wetlands.'*[3]

The reason given for this target is that

> *'Ultimately, there must be limits to the conversion or degradation of natural habitats. This is particularly the case for some ecosystems, where continued loss risks passing 'tipping points' that could lead to large scale negative effects on human well being'.*[4]

The growing field of ecosystem services recognises that natural ecosystems supply very real and economically valuable services to agriculture and more widely to the human economy, services which have been valued at about USD33 trillion a year. These services include aesthetic, amenity and tourism value, regeneration of soils, moderation of local climate and hydrology, sinks for greenhouse gases, cleansing of other air and water pollution and conservation of beneficial species such as pollinators and genetic resources for crops and pharmaceuticals.[5]

The Consumer Goods Forum announced in 2010 its intention 'to achieve zero net deforestation by 2020' in the supply chains of its members. Consumer Goods Forum members represent some of the largest goods

[2] http://www.wwf.org.au/about_us/working_with_business/project_sponsorships/project_catalyst/

[3] https://www.cbd.int/sp/targets/rationale/target-5/ Primary forest in Queensland is called 'remnant vegetation.'

[4] Ibid and citations made therein

[5] http://www.esd.ornl.gov/benefits_conference/nature_paper.pdf

corporations in the world and in Australia, including Woolworths, IGA, Walmart, Amazon, Cargill, Kimberley-Clarke and Proctor &Gamble.[6]

Queensland agriculture cannot continue to rely on the outmoded and ultimately self-defeating approach of bulldozing and burning forests and woodlands. This destructive approach is increasingly out of step with evolving markets and inconsistent with Australia's commitments to the world in regard both to greenhouse gas emissions and the conservation of biodiversity and natural ecosystem services.

VMA settled in 2009

In 2004, the Beattie government legislated a ban on broadscale clearing of intact or remnant bushland. This was supported by then Liberal Party MPs (Langbroek, McArdle, Stuckey, Quinn) and Independent MP Wellington.[7] Mr Quinn, then Liberal Member for Robina, explained in Hansard his support for the ban:

> *'we need to reduce the amount of tree clearing across the state in order to protect our biodiversity, our endangered species and our species of concern'*
> and…
> *'We have also had to recognise the salinity problem and ensure that water quality is improved and maintained at the highest level.'*

The Liberal Member for Surfers Paradise, Mr Langbroek added:

> *'One of the positive outcomes of this move is the massive reduction in greenhouse gas emissions.'*

Agriculture lobby group AgForce accepted the ban, saying publicly *'we're prepared to accept the Act as it is'.* AgForce received a grant of $8 million to help roll out more than $150 million in assistance to landholders and contractors affected by the ban.[8] In addition, the amendments of 2004 provided for one final tranche of 500,000ha of remnant clearing allotted by ballot to landholders with more than 30% tree cover on their properties, prior to the ban taking effect at the end of 2006.[9]

The ban on broad-scale land clearing was a negotiated bipartisan settlement, entailing extensive consultation, financial assistance for affected interests and stakeholder acceptance.

In 2009, the Bligh government also regulated (not banned) clearing of certain regrowth bushland in two categories ('regulated regrowth'): a) 'high value regrowth', bushland that had been cleared prior to 1990 but had been regrowing since; and b) regrowth of any age in 50m buffer zones around watercourses in particular Great Barrier Reef catchments. Self-assessable codes were enacted for clearing of this regulated regrowth, which restrict clearing only for endangered ecosystems, essential habitat of threatened species, on slopes vulnerable to erosion and in buffer zones around wetlands and watercourses. Only regrowth bushland with undoubtedly high conservation value and value for preventing land and water degradation is restricted for clearing. Even restricted regrowth can still be cleared under the code, if an appropriate 'exchange area' is provided.

---

[6] http://www.theconsumergoodsforum.com/sustainability-strategic-focus/climate-change/deforestations emiss

[7] Hansard Legislative Assembly Tuesday, 20 April 2004

[8] http://southburnett.com.au/pdfs/20050210agforce.pdf
http://www.abc.net.au/news/2005-07-19/vegetation-law-changes-promise-farmer-benefits/2061642

[9] http://www.parliament.qld.gov.au/documents/explore/ResearchPublications/ResearchBriefs/2004/200406.pdf

Agforce welcomed these changes, saying '*the new legislation balances productive land management while maintaining biodiversity values*.'[10]

With extensive consultation and funding provided to assist industry to adapt to the new regulations, these changes were likewise widely accepted.

This acceptance was made clear in AgForce's official policy in the lead up to the 2012 election. After revealing that *'farmers and graziers have adapted extremely well to landmark Vegetation Management laws introduced in 2009'*, AgForce recommended there be *'No new vegetation management legislation.'*[11]

Campbell Newman, then leader of the opposition, evidently agreed, promising publicly *'The LNP will retain the current level of statutory vegetation protection'*.[12]

Broken promise

After the 2012 election, the Newman government broke that election promise, with a succession of steps, culminating in the 2013 amendments to the VMA and related legislation.

Reduced enforcement

Newly appointed Minister Cripps suspended enforcement penalties in April 2012, pending a review. In October 2012 he revealed that the report of the review existed and would be tabled in due course. However, the report does not appear in the Parliamentary record.[13]

The 2012-14 SLATS supplementary report from the Dept. of Natural Resources reveals that there was a real policy change in regard to enforcement, and that this had an impact on the rise in clearing rates:

> *'Clearing trends were also likely to be driven by a shift in clearing culture and perceptions brought about by the change in government in 2012. The change in landholder perceptions was supported by a new compliance approach, introduced soon after the change in government in 2012. The Department of Natural Resources and Mines shifted the priority to assisting landholders to undertake clearing rather than the previous priority on assessment and compliance.'*[14]

Likewise, the state Auditor General in 2015 observed that increased clearing in Great Barrier Reef catchments '*coincided with the policy change to reduce compliance activities.'*[15]

Of 1,425 notifications of clearing irregularities only three prosecutions commenced and only one was concluded in the period 2012-14.[16]

---

[10] http://www.agforceqld.org.au/file.php?id=211&open=yes

[11] http://www.agforceqld.org.au/file.php?id=1285&open=yes

[12] This statement is contained in WWF's submission to the inquiry into *Vegetation Management Framework Amendment Bill 2013* found at https://www.parliament.qld.gov.au/documents/committees/SDIIC/2013/10-VegetatationMgmtFramewk/submissions/057.pdf

[13] http://statements.qld.gov.au/Statement/Id/79000
For the admission about the report see Hansard Estimates—Natural Resources and Mines 12 Oct 2012 p.9

[14] https://publications.qld.gov.au/dataset/supplementary-report-to-the-statewide-landcover-and-trees-study-report-2012-14

[15] https://www.qao.qld.gov.au/files/file/Reports%20and%20publications/Reports%20to%20Parliament%202014-15/RtP20GreatBarrierReef.pdf

Changes to codes

The Newman government also removed the requirement for permits and allowed clearing under self-assessable codes (SACs) for thinning of remnant bushland, clearing encroaching woodlands and harvesting mulga for stock fodder within four Area Management Plans (AMPs) in July 2012, prior to changing the Act itself. These AMPs remain in operation.[17] Regional Vegetation Management Codes, which governed the assessment of applications to clear, were likewise amended in Nov 2012, however WWF has yet to complete detailed analysis of the impact of those code changes.[18] Ultimately these codes were repealed and replaced by State Development Assessment Provisions Module 8 following amendment of the VMA.[19]

Amendment of the VMA

The *Vegetation Management Framework Amendment Act* of 2013 (VMFA) introduced major changes to the operation of the VMA that impair the ability to fulfil its purposes.[20] The intent of the former government to weaken the law was made quite clear by then Minister Cripps who announced he was 'Taking the axe to Queensland's tree clearing laws.'[21]

Key changes include:

- Reversing the 2006 ban on broadscale clearing with new relevant purposes of 'high value agriculture' and 'high value irrigated agriculture' (the latter including irrigated pastures).
- Repealing the 2009 regulation of clearing of 'high value regrowth' on freehold and Indigenous lands, and a blanket amendment of all extant Property Maps of Assessable Vegetation to show such regulated regrowth as exempt (although Reef watercourse regrowth buffers – Category R--- continued to be regulated).
- Replacing the requirement to obtain permits with self-assessable codes for 'necessary environmental clearing' (also a new purpose), thinning, clearing of encroachment, fodder harvesting, and other purposes. Previously only clearing of 'high value regrowth' (including Reef watercourse regrowth) and native forest practices were subject to self-assessable codes, apart from areas under Area Management Plans as described above.
- Removing landholder deemed liability and inserting honest mistake and withholding of self-incriminating documents defences in regard to prosecutions.

Other related Acts were also amended in the process. The Water Act was amended to remove the requirement for a Riverine Protection Permit to clear in-stream native vegetation between the defining banks of watercourses. Instead, regulation of clearing of in-stream vegetation came under the exemptions and self-assessable codes of the amended VMA or new development assessment codes under the

---

[16] Agriculture, Resources And Environment Committee, Estimates Pre-Hearing Non-Government Answer to Question On Notice No. 9 asked on 25 June 2014

[17] Desert Channels Thinning and Encroachment Area Management Plan', 'Dirranbandi Thinning Area Management Plan', 'Moonjaree Fodder Harvesting Area Management Plan' and 'South West Fodder Harvesting Area Management Plan'

[18] https://www.legislation.qld.gov.au/LEGISLTN/SLS/2012/12SL128.pdf and https://www.legislation.qld.gov.au/LEGISLTN/SLS/2012/12SL220.pdf

[19] http://www.dilgp.qld.gov.au/resources/policy/sdap/sdap-module-8.pdf

[20] https://www.legislation.qld.gov.au/Bills/54PDF/2013/VegeMgmtFramwkAB13E.pdf

[21] http://www.sunshinecoastdaily.com.au/news/changes-will-take-axe-to-clearing-laws/1851306/

Sustainable Planning Act. As far as we have been able to ascertain, Fig 1 illustrates how this currently affects clearing of instream vegetation. Prior to this change, conditions for issuing a permit under the Water Act were more restrictive.

The Sustainable Planning Act and regulations were also amended, in effect, granting sole approval power for development applications for clearing of native vegetation to the planning department, and removing the power of veto over such approvals from other departments.[22]

One beneficial amendment in the VFMA Act was the establishment of a single regulated vegetation map, replacing earlier multiple maps.

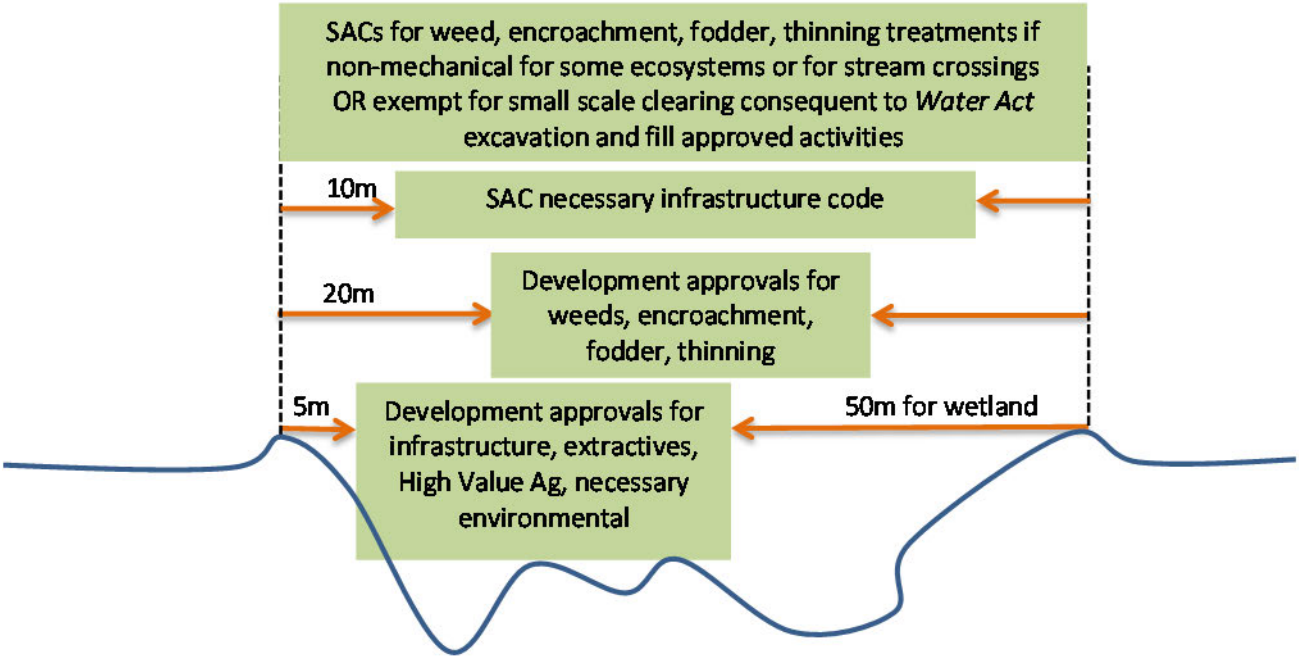

FIG 1. Summary of where and under what circumstances in-stream vegetation between the high banks of watercourses or wetlands might be cleared following 2013 amendments to the relevant Acts. Green boxes indicate circumstances in which clearing could be permitted. Red arrows indicate setbacks from defining banks for each category of permitted clearing. SAC means self-assessable code.

[22] *Sustainable Planning Amendment Regulation (No. 3) 2013*, regulation 12(4) omitted reference to the chief executive of DNRM as a concurrence agency, and replaced it with 'The chief executive', which refers to the chief executive administering the *Sustainable Planning Act 2009 (Qld),* being the Director General of the Department of Planning. This amendment therefore made the State Assessment and Referral Agency (SARA) the sole decision maker for vegetation clearing under development applications, and reduced the roles of other agencies to providers of advice.

Mandate for reinstatement

Election promise

The present government was elected in Jan 2015 on a promise to reinstate land clearing laws as follows:[23]

> *'We will reinstate the nation-leading vegetation protection laws repealed by the Newman Government. In addition, we will reintroduce riverine protection permits to guard against excessive clearing of riparian vegetation. These laws will reduce the clearing of native vegetation and contribute to our effort to reduce sediment run-off.'*

The Palaszczuk government subsequently secured government based on this promise and therefore has a mandate to reinstate key protections removed by the previous government.

Promise to the world on the Great Barrier Reef

Australia was one of the first signatories of the World Heritage Convention, which ensures the protection of natural and cultural heritage of 'outstanding universal value'. The Great Barrier Reef ('GBR') was declared a World Heritage Site in 1981.

In 2012, UNESCO's World Heritage Committee warned of significant risks to the GBR from coastal development, poor water quality, and climate change and proposed to list the Reef as World Heritage 'in danger' unless steps were taken to prevent further decline of the condition of the GBR.[24]

After the change of government in 2015, the Queensland and federal governments made an urgent amendment to the State Party report to the UNESCO World Heritage Committee.[25]

This addendum promised that *'the new Queensland Government will introduce riverine protection permits to guard against excessive clearing of riparian vegetation'* and also that *'Queensland will: strengthen vegetation management laws to protect remnant and 'high value regrowth' native vegetation (including in riparian zones)'.*

Based on this updated report, the Committee decided in July 2015 not to list the GBR as 'in danger' for the time being. [26]

VMROLA Bill

The VMROLA Bill currently under consideration by the Agriculture and Environment Committee partly delivers on these promises:

- restoring the 2006 ban on broadscale clearing by removing high value agriculture (including high value irrigated agriculture) as a relevant purpose for a development application;
- restoring the 2009 regulation of 'high value regrowth' on freehold and Indigenous land (except for those areas which had been locked-in as exempt on property maps of assessable vegetation);

---

[23] Queensland Labor Party, *Saving the Great Barrier Reef: Labor's plan to protect a natural wonder,* Jan 2015.

[24] https://theconversation.com/unesco-recommends-great-barrier-reef-should-not-be-classed-as-in-danger-42564

[25] http://www.environment.gov.au/system/files/resources/cb36afd7-7f52-468a-9d69-a6bdd7da156b/files/2015-state-party-report-addendum.pdf

[26] http://whc.unesco.org/en/decisions/6216/

- restoring the regulation of clearing of instream vegetation to the Riverine Protection Permit provisions of the *Water Act*; and
- restoring deemed landholder liability for clearing offences while removing the honest mistake of fact defence.

The VRMOLA Bill does not however, reverse the 2013 changes replacing permits with self-assessable codes. This is a significant shortfall on the promise to reinstate earlier protections. Self-assessable codes (SACs) have been a major driver of increased land clearing as shown below. The thinning code in particular allows unchecked broadscale bulldozing of virtually unlimited areas of intact native bushland under the pretext that an environmental problem is being corrected, when the clear purpose is to create pasture for livestock.

In one key aspect, the VMROLA Bill goes further than promised by expanding the area of Great Barrier Reef regulated watercourse buffers (Category R) beyond just the central catchments to all of the catchments feeding into the Reef, from the mouth of the Mary River to the tip of Cape York.

The Bill also provides retrospective regulatory powers to prevent panic clearing of areas that are proposed for reinstatement of protection, the clearing of which might otherwise run counter to government policy.

Analysis of the provisions of the VMROLA Bill

How VMA is not fit for purpose, & how VMROLA would redress

The purpose of the VMA is to regulate land clearing so that it 'conserves remnant vegetation', **'**does not cause land degradation', 'prevents the loss of biodiversity' and 'reduces greenhouse gas emissions'. These purposes of the VMA were left largely unchanged by the amendments of 2013.[27] The VFMA did add an additional purpose of 3(1)(h)'allows for sustainable land-use'.

Evidence suggests that the Act no longer serves these purposes, including the latter purpose added in 2013.

Examination of the provisions of the VMROLA Bill suggests that the flaws in the VMA introduced in 2013 will be substantively corrected by the Bill.

Conserving remnant vegetation

The VMA is no longer fit for the purpose of conserving remnant vegetation as indicated by the fact that remnant clearing increased fourfold since 2009-10, and tripled in just the two years 2012-14. In addition, over 112,000 ha of remnant vegetation lost protection and may now be cleared under 'high value agriculture' approvals.[28] The rise in remnant clearing derives in part from due to reversal of the broad-scale clearing ban, self-assessable codes and weaker enforcement.

- Remnant clearing nearly doubled following the changes to codes and compliance approach in 2012. The SLATS unit reports *'In 2012–13, clearing of remnant woody vegetation increased to 59 776 ha/year … from 34 588 ha/year in 2011–12'*
- Remnant clearing nearly doubled again following the changes to the Act in 2013. SLATS reports *'In 2013–14, clearing of remnant woody vegetation increased to 103 308 ha/year from 59 776 ha/year in 2012–13.'*[29]
- It has been argued that since remnant clearing was increasing prior the changes of the VFMA Act, the changes observed cannot be attributed to the Act. However, as noted above, the Newman government weakened enforcement and changed self-assessable codes for broadscale thinning, encroachment and fodder under Area Management Plans in 2012, prior to the change in the law itself.
- The 2012-14 SLATS supplementary report attributes the observed rise in clearing rates to such changes as well to changed landholder perceptions:

> *'Clearing trends were also likely to be driven by a shift in clearing culture and perceptions brought about by the change in government in 2012. The change in landholder perceptions was supported by a new compliance approach, introduced soon after the change in government in 2012. The Department of Natural Resources and Mines shifted the priority to assisting landholders to undertake clearing rather than the previous priority on assessment and compliance.'*[30]

[27] VMA sect 3

[28] The area approved to date for high value agriculture is as quoted to WWF by the Dept of Natural Resources

[29] https://publications.qld.gov.au/dataset/8d2f982c-7a5b-41fa-935e-5f0ea4f65f9a/resource/db43b755-0a44-4b50-8d76-51c5c55da357/download/slatsreport201214.pdf

[30] https://publications.qld.gov.au/dataset/supplementary-report-to-the-statewide-landcover-and-trees-study-report-2012-14

- Figure 2 shows an example of unexplained possibly unlawful clearing of endangered remnant forest that may have derived from this shift in perceptions and policy.
- The effect of removing requirements to obtain a permit for most clearing also had a dramatic effect. In the first year after the VFMA changes, 2013-14, allowable clearing (including under SACs) rose from 8% to 20% of all clearing observed.[31] Large areas have been cleared since then under SACs as illustrated further below (Fig. 7).

Fig 2. Satellite photos showing an example of unexplained possibly unlawful broadscale clearing of what is currently mapped as regulated remnant of endangered brigalow forest north of Carnarvon Gorge National Park. The dark green patch indicated at left was endangered brigalow forest.

VMROLA Bill will partly restore capacity to 'conserve remnant vegetation'

The VMROLA Bill will close substantial loopholes that have meant the VMA is currently no longer fit for its purpose to conserve remnant vegetation.

- By removing high value agriculture as an allowable purpose, the VMROLA Bill will restore the 2006 ban on broadscale clearing, and enhance conservation of remnant vegetation.
- By restoring the deemed landholder liability provisions, and removing the honest mistake of fact defence, the Bill will remove unnecessary impediments to effective prosecution of illegal clearing.

Nonetheless, the Bill will retain Self-Assessable codes, a major reason for the recent increases in remnant clearing. SLATS reports that 5,176 ha of clearing in 2012-13 was identified as thinning. After the change in law greatly expanding SACs, thinning more than doubled to 12,036 ha in 2013-14, illustrating the effect of allowing statewide SACs for thinning in 2013.[32]

Since SACs will continue to replace permits, the SACs will have to bear the brunt of realising this purpose of the VMA, rather than the VMA itself. For this reason the current review of the Self Assessable Codes must be

[31] SLATS supplementary report 2012-14 figs 3 and 4.

[32] SLATS report 2012-14 p. 29

used to replace the lax codes created by the previous government as soon as possible.[33] The VMA should be amended to constrain the application of SACs to genuinely low ecological risk levels. Further below we recommend further amendments to the VMA to restrict the scope of SACs so as to keep ecological risk within acceptable limits.

Stronger administration of the Act is also needed to realise this purpose. The Department of Natural Resources has developed an Early Detection System to catch unauthorised clearing in the early stages. We are informed by the Department that once landholders are warned about such clearing, they stop immediately, saving them from going too far and facing a major prosecution.[34]

A major area of concern, that unfortunately will not be addressed by this Bill, is the administrative remapping of 125,000 ha of remnant bushland as exempt on Property Maps of Assessable Vegetation by regional officers with little oversight. This represents another little appreciated reduction in capacity of the VMA to fulfill the purpose of 'conserving remnant vegetation'.[35]

[33] https://www.dnrm.qld.gov.au/our-department/policies-initiatives/vegetation-management/review-sac

[34] *Satellite to root out rogue tree clearers*, Sunday Mail 3/4/16

[35]

http://awsassets.wwf.org.au/downloads/fl024_bushland_destruction_rapidly_increasing_in_queensland_16sep15.pdf

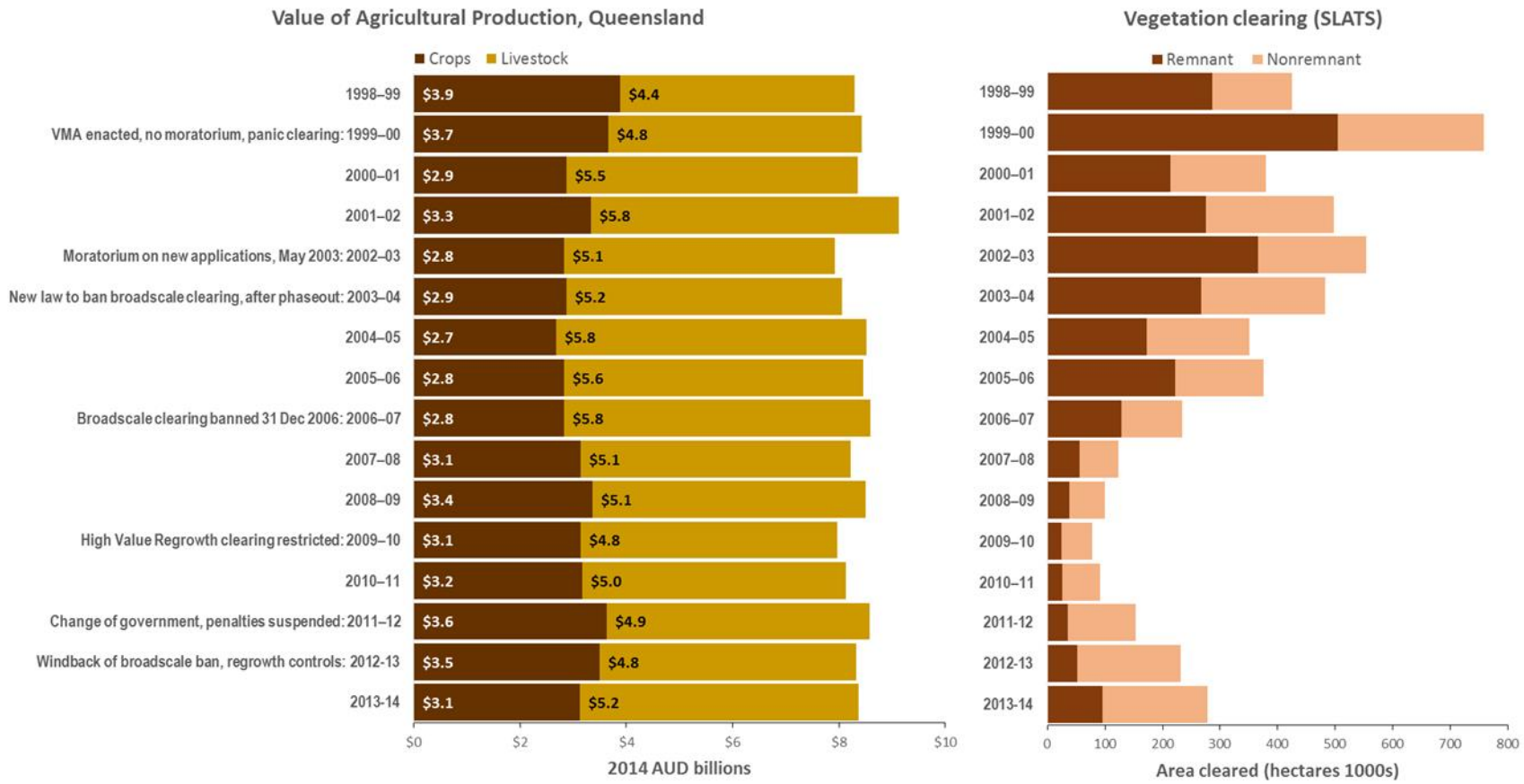

Fig. 3. LEFT Total value of agricultural production in Queensland from 1998-2014, and significant changes in land clearing controls, and RIGHT, the record of areas cleared from SLATS.[36]

[36] Queensland Government Statistician's Office Agriculture: Gross value of production by commodity, Queensland, http://www.qgso.qld.gov.au/products/tables/agriculture-gross-value-production/index.php. We aggregated production values into two classes of livestock and livestock products, or crops. We corrected all values to 2014 dollar equivalents using the inflation correction calculator of the Reserve Bank at http://www.rba.gov.au/calculator/. For areas cleared we used the SLATS report for 2012-14 already cited above.

Prevent land degradation, allow for sustainable use.

It has been claimed that the VMROLA bill will negatively impact agriculture in Queensland. We argue here that the opposite is true. Sustainable agriculture is only possible if there is effective regulation to prevent land and water degradation and to conserve native bushland and the ecosystem services that it provides to agriculture, without which agriculture cannot reasonably be called sustainable.

Existing purposes under the VMA of 'ensures the clearing does not cause land degradation' and 'maintains ecological processes' are both relevant to the sustainability of agriculture and more broadly primary production, including fisheries production downstream of catchments within which land clearing occurs. The previous government when amending the VMA added an additional purpose of 'allows for sustainable land use'. WWF proposes that the 2013 changes to the VMA have meant that none of these purposes are being well-served, including the added purpose of 'allows for sustainable land use'.

Agricultural production unaffected by vegetation management laws

The value of agricultural production is not correlated with changes to vegetation management laws, nor with fluctuation in areas cleared, refuting a key argument of opponents of the VMROLA Bill. Statistics for livestock and crop gross value of production from the Australian Bureau of Statistics (corrected to 2014 AUD values using Reserve Bank CPI values) showed no significant trend up or down for the period 1998-2014 during which major changes in the *Vegetation Management Act* and in land clearing rates were observed (Fig 3). There was no significant correlation (or lagged correlation) between the areas cleared and the total value of production. This suggests that other drivers are more important in affecting agricultural production than the regulation of land clearing. Some may wish to see an upward trend in agricultural production. These data suggest that reversing key protections for high value native vegetation is not going to deliver that outcome.

An independent analysis of the drivers of agricultural profitability in NSW likewise found that vegetation management was bottom ranked in a list of nine key drivers.[37]

Excessive land clearing negatively impacts agriculture

Effective regulation to guarantee retention of important bushland is essential to achieve the VMA's purposes, including the purpose of sustainable land use which was added by 2013. A large body of peer-reviewed scientific research reveals negative feedbacks of excessive land clearing and associated land use change on agricultural potential.

Drought: Land clearing is strongly correlated spatially with local increases in surface temperatures and an observed 4-12% decline in mean summer rainfall in south eastern Australia (Fig. 4). This local climatic desertification effect is quite separate from and additional to the larger global warming trend.[38] A hot topic

---

[37] http://www.wwf.org.au/our_work/saving_the_natural_world/wildlife_and_habitats/threats_to_species/loss_of_habitat/?11180/no-major-impact-on-agriculture-from-nsw-vegetation-laws

[38] McAlpine CA et al. (2007) Modeling the impact of historical land cover change on Australia's regional climate. *Geophysical Research Letters* 34:n/a-n/a.
McAlpine CA et al (2009) A continent under stress: interactions, feedbacks and risks associated with impact of modified land cover on Australia's climate. *Global Change Biology* 15:2206-2223.

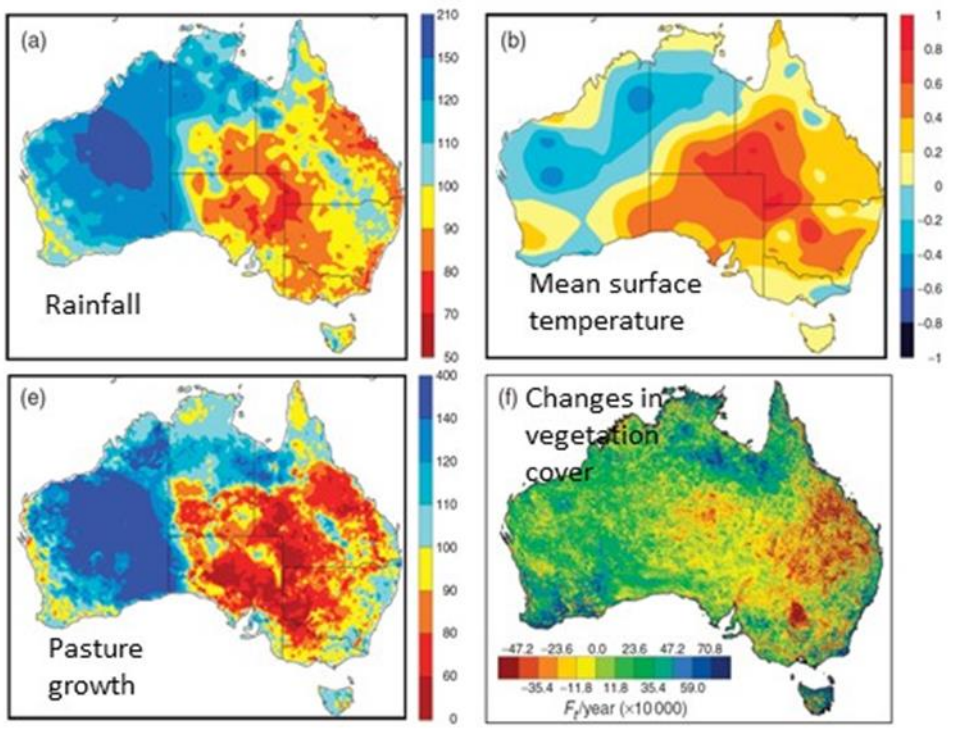

FIG 4. Departures from long term averages in (a) observed annual rainfall, (b) observed mean surface temperature, (e) estimated pasture growth showing spatial correspondence with (f) observed changes in vegetation fractional cover over 1981-2006 (Adapted from McAlpine et al., 2009)[39]

of research now is how best to retain native vegetation so as to prevent desertification and retain ecosystem services.[40]

Soil salinity: The removal of deep-rooted vegetation like trees and their replacement with shallow-rooted crops and pasture also leads to increased soil salinity through rising ground water, severely degrading the soil and reducing productivity.[41]

Erosion: Land clearing exacerbates soil erosion by wind and water, leading to soil and water degradation. Land clearing reduces rainfall infiltration and increases runoff, which also accelerates erosion, and reduces the recharge of the water table. For example, a study of land clearing in the Comet River catchment concluded that broadscale clearing had increased runoff in the catchment by 40-58%.[42]

[39] McAlpine CA et al (2009) A continent under stress: interactions, feedbacks and risks associated with impact of modified land cover on Australia's climate. *Global Change Biology* 15:2206-2223.

[40] https://www.researchgate.net/profile/Justin_Ryan2/publication/47456695_Integrated_vegetation_designs_for_enhancing_water_retention_and_recycling_in_agroecosystems/links/02e7e5227dc4047fa1000000.pdf

[41] Lindenmayer D, Burgman M (2005) Vegetation Loss and Degradation. In: *Practical Conservation Biology* Collingwood, VIC Australia: CSIRO Publishing.

[42] Siriwardene et al 2006, The impact of land use change on catchment hydrology in large catchments: The Comet River, Central Queensland, Australia*, Journal of Hydrology*, 326, 199-214, http://www.sciencedirect.com/science/article/pii/S0022169405005639

Loss of beneficial species: retaining important habitat including both remnant and 'high value regrowth', also benefits agriculture, as native animals provide many services such as pollination, seed dispersal, and pest control services to agriculture.[43]

Global warming & climate change: The emission of greenhouse gases from deforestation and consequent land use change contributes to global warming. Resulting climatic change is expected to substantially impair agricultural production. The former Department of Environment and Resource Management summarised these impacts as follows:

> *'The effects of declining rainfall and runoff into streams are already being felt by primary producers and the effects of temperature changes are likely to be felt within the next decade. Key impacts on the primary industries sector are likely to include:*
>
> - *warmer and drier weather in future decades over much of Queensland*
> - *more frequent droughts and drier conditions*
> - *increased frequency of severe weather events including flooding, which could also reduce primary and agricultural production through reduction in crop yields and through stock losses*
> - *changes in average rainfall and temperatures, in seasonal distribution of rainfall and in rainfall variability, which directly affect crop production.*
>
> *Land clearing is a significant factor in Australia's recent droughts and changing climate. The intensity and duration of droughts may have increased as a result of large-scale clearing of native vegetation, amplifying the effects of El Niño related droughts. Maintaining adequate land cover could help reduce the impacts of climate change.'*[44]

VMROLA Bill will likely benefit agriculture

The VMROLA Bill will likely generate a net benefit for agriculture:

- by preventing excessive loss of tree cover that would otherwise exacerbate drought risk;
- by reducing greenhouse emissions contributing to global warming;
- by preventing excessive runoff, soil erosion, land and water degradation due to enhanced regulation of instream vegetation and of regrowth in stream margins and on slopes vulnerable to erosion;
- by conserving habitats for beneficial species.

Genuinely high value agricultural projects will be unaffected by the VMROLA Bill. Agricultural projects declared as a coordinated projects under the *State Development and Public Works Organisation Act 1971* (SDPWO Act) are an allowable purpose under the VMA and this will remain unchanged by the VMROLA Bill. Agricultural projects which have '*strategic significance to the locality, region or state, including for the infrastructure, economic and social benefits, capital investment or employment opportunities*' may qualify for

[43] http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp0102/02RP02

[44] Department of Environment and Resource Management 2010. *Climate Change in Queensland: What the Science is Telling Us.* https://www.longpaddock.qld.gov.au/about/publications/pdf/climate-change-in-queensland-2010.pdf

such treatment.[46] Two such agricultural projects in northern Queensland are currently under the Coordinator General's consideration.[47]

Also, an area of 22 million hectares of land, comprising the best agricultural land, is already 'locked in' as exempt on property maps, of which we estimate based on land use data, that 13 million hectares have not yet been converted to development, cropping or sown pastures (Fig 5). This represents a significant unrealised potential for agricultural expansion that remains unchanged by the VMROLA Bill.

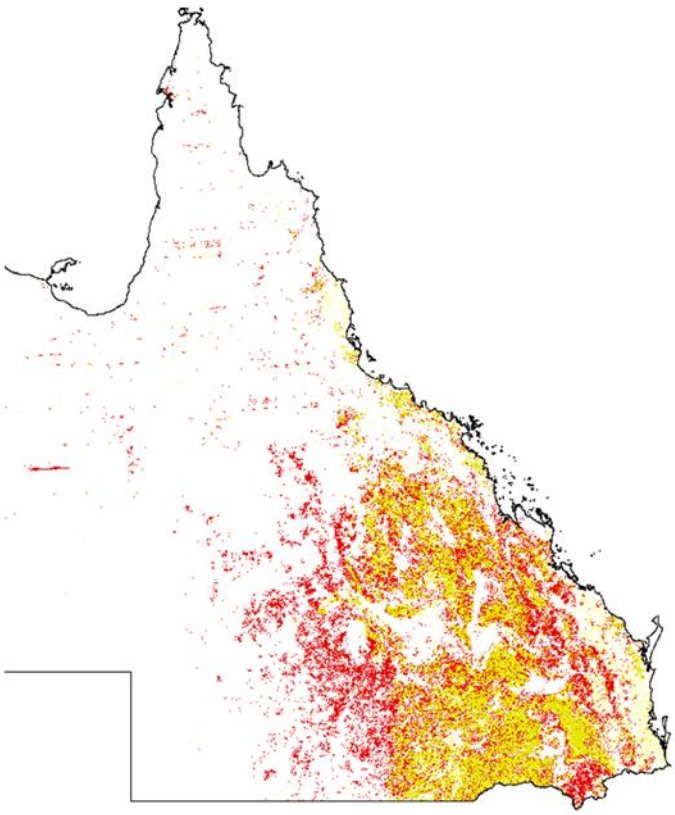

Fig 5. Areas exempt from land clearing controls on property maps of assessable vegetation in April 2016.[45] Yellow indicates exempt areas that according to the land use map of Queensland have been converted to crops, sown pastures, mines or buildings and infrastructure. Maroon indicates areas that do not appear to have been converted and which contains substantial areas of regrowth in various stages.

Reducing greenhouse gas emissions

The VMA is no longer fit for the purpose of reducing greenhouse gas emissions as indicated by rising emissions following weakening of the law, its codes and administration by the previous government.

As areas cleared have risen, so have greenhouse gas emissions resulting from burning and decay of dead vegetation. Greenhouse gas emissions from land clearing more than doubled to nearly 36 million tonnes CO_2 in 2013-14, from the low point of 16 million tonnes in 2010-11 (Fig 6).[48] This is roughly equivalent to the annual emissions from 8 million cars, or 6.6% of Australia's total greenhouse emissions.[49] Emissions are also generated by machinery doing the clearing, and of nitrogen-based gases and methane due to more intensive livestock production and cropping that follow land clearing. However, these potentiated emissions are not captured in the SLATS estimates.

We previously estimated that remnant bushland put at risk by the changes to the VMA of 2013 contained stocks of 184 million tonnes of CO_2, while areas of de-protected 'high value regrowth' holds a stock of about

[45] http://qldspatial.information.qld.gov.au/catalogue/custom/detail.page?fid={D96F12B8-D3A3-4D7D-824B-AF2D45805592}

[46] http://www.statedevelopment.qld.gov.au/assessments-and-approvals/coordinated-projects.html

[47] http://www.statedevelopment.qld.gov.au/assessments-and-approvals/current-eis-projects.html

[48] https://www.qld.gov.au/environment/land/vegetation/mapping/slats-reports/ SLATS supplementary report 2012-14.

[49] Total national emissions were 549 million tonnes in the latest year reported of 2013. http://ageis.climatechange.gov.au/

46 million tonnes of carbon dioxide, which if allowed to regrow to maturity, would absorb an estimated additional 139 million tonnes.[50]

VMROLA Bill will make significant contribution to reducing greenhouse gas emissions

The VMROLA Bill by restoring the 2006 ban on broadscale clearing and restoring the 2009 protection of 'high value regrowth' will make a significant contribution to meeting this purpose.

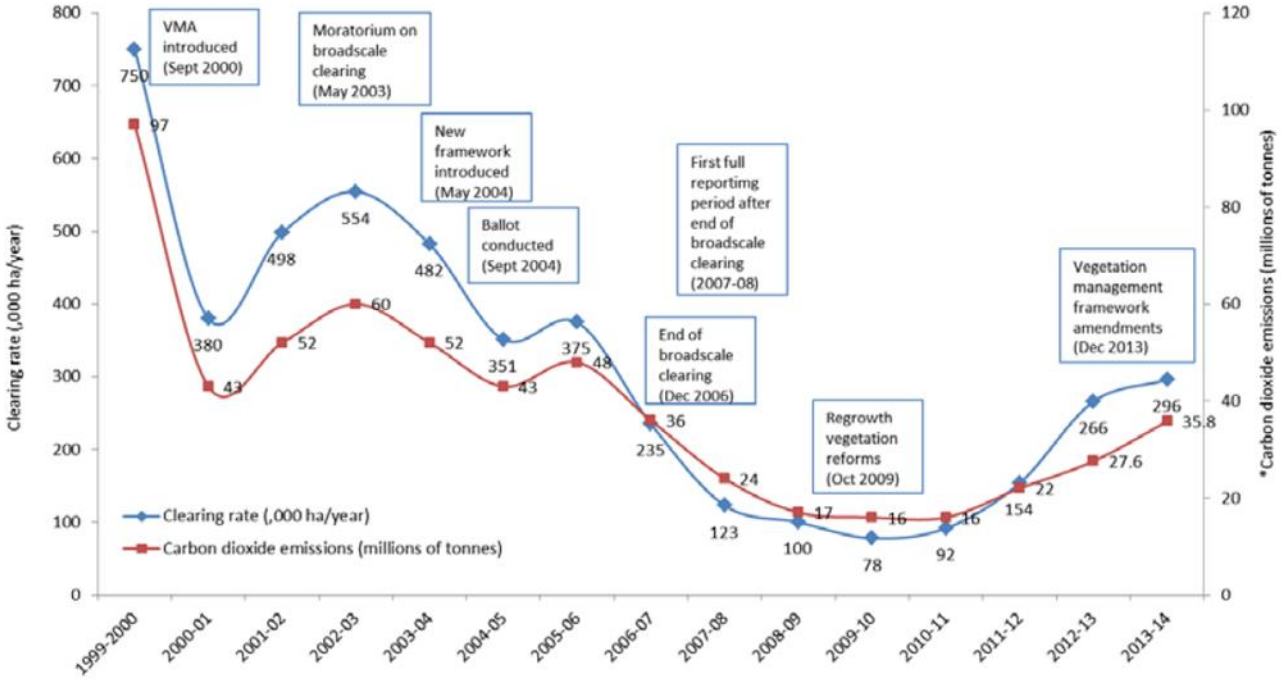

Figure 6. Figure 9 greenhouse gas emissions and areas cleared since 1999, reprinted from the Supplementary SLATS report 2012-14.[51]

Preventing loss of biodiversity

The VMA is not fit for the purpose of preventing loss of biodiversity after the major jump in de-protection and clearing of habitats for threatened species, and land and water degradation affecting the Great Barrier Reef from 2012 to present.

Rising rates of land clearing as detected by the Queensland Government in the 2012-14 period, include the destruction of over 200,000 of known or likely to occur habitats of threatened species of national significance as mapped by the Australian Government. [52] As noted above, this rise in clearing likely derives from:

- escalation of remnant bushland clearing due to lax self-assessable codes;[53]

[50] http://www.wwf.org.au/?6800/bushland-at-risk-of-renewed-clearing-in-queensland p 3

[51] https://www.qld.gov.au/environment/land/vegetation/mapping/slats-reports/ SLATS supplementary report 2012-14.

[52] http://www.wwf.org.au/news_resources/?15660/More-than-40000-hectares-of-koala-habitat-cleared

[53] The recent Cardno review of the Self-Assessable Codes of 2013-14 compared them with the Regional Vegetation Management Codes that previously governed the issuance of permits, and found substantial weakening of protections buried in the details of the codes. Perhaps greatest change was in the so-called thinning code which allows broadscale bulldozing of up to 75% of remnant bushland, leaving thin strips 5m wide behind, without any requirement to show

- increases in unexplained, potentially unlawful, clearing due to weakened enforcement.

In addition, changes to the Act, its codes and its administration under the Newman government condemned more than 800,000 ha of such habitats for threatened species, habitats that lost protection but had not yet been cleared as of mid-2014 according to SLATS mapping.[54] The major sources of loss of protection are:

- reversal of the ban on broadscale clearing for high value agriculture, which has led to over 112,000 ha of remnant bushland being condemned to be broadscale cleared;[55]
- repealing of the regulation of clearing of 'high value regrowth' on freehold or Indigenous land;
- the administrative remapping of 125,000 ha of remnant vegetation as exempt on property maps by regional officers with little oversight.[56]

In 2003, a panel of eminent zoologists and botanists estimated that: [57]

> *'The average annual clearing rate of 446,000 ha of remnant vegetation in Queensland during 1997-99 also led to the loss of an estimated 190 million trees per year';* and also
>
> *'approximately 100 million native mammals, birds and reptiles die yearly as a result of the broad-scale clearing of remnant vegetation.'*

This estimate included 2.1 million native mammals including 19,000 koalas, 8.5 million birds and 89 million reptiles. Native animals do not simply move and live elsewhere when their habitat is destroyed. Those not killed during the bulldozing of their bushland homes, are often killed by cars or mauled by dogs and cats as they scramble to find new homes. Even if they chance on intact habitat, they come into conflict with animals already living there, causing stress, starvation and disease to which most survivors succumb.

WWF estimates based on this earlier study, that resurgent land clearing in Queensland must be resulting in millions of native animal deaths every year.[58]

RSPCA and other wildlife rescue organisations have reported manifold increases in wildlife rescues in recent years, which they attribute ultimately to increasing habitat loss. RSPCA's annual reports report that wildlife patients jumped from 8,359 in 2011-12 to 18,413 in 2014-15.[59]

---

there had been a thickening problem to correct in the first place. The previous codes had at least contained such a requirement. https://www.dnrm.qld.gov.au/our-department/policies-initiatives/vegetation-management/review-sac

[54] http://www.wwf.org.au/news_resources/?15800/400000-hectares-of-Queensland-koala-habitat-could-be-bulldozed-if-land-clearing-controls-not-restored

[55] Except that the approval for Olive Vale station has been suspended pending approval by the Australian Government.

[56] http://awsassets.wwf.org.au/downloads/fl024_bushland_destruction_rapidly_increasing_in_queensland_16sep15.pdf

[57] http://awsassets.wwf.org.au/downloads/sp128_impacts_land_clearing_on_australian_wildlife_qld_1jan03.pdf

[58] http://awsassets.wwf.org.au/downloads/fl024_bushland_destruction_rapidly_increasing_in_queensland_16sep15.pdf

[59] http://www.wwf.org.au/news_resources/?16100/Land-clearing-causing-upsurge-in-distressed-native-wildlife-needing-treatment

Preventing land degradation and consequent loss of marine biodiversity of the Great Barrier Reef

- Bulldozing trees disturbs soils and increases runoff, leading to spikes of soil erosion.[61] Eroded soil washes downstream where it smothers and kills seagrass beds and corals.
- The definitive study in Great Barrier Reef catchments found that *'Catchments with high levels of land clearing, cattle grazing and cropping show the largest increases in sediment export compared with natural conditions.'*[62]
- Conversion of bushland to crops generates ongoing pollution. In the Wet Tropics, crops generate from 4.5 to 9 times the sediment pollution of intact bushland, and from 2-7 times the nitrogen pollution, depending on the crop. Sugarcane and bananas are the highest polluters.[63]

Sediment laden water run-off from a recently cleared banana farm, Lakeland Downs, Normanby River Catchment, Cape York.[60]

- The Reef is in grave danger due to global warming and ocean acidification caused by rising greenhouse gas pollution of the planetary atmosphere. A more acidic ocean makes it harder for marine life to form shells and coral skeletons. Warming is leading to widespread coral bleaching and death. Land clearing emissions after a long period of decline in Queensland more than doubled from 2010 to 2014 (see next section). Hence the greenhouse gas emissions from land clearing are also having biodiversity impacts.
- The 2015 Queensland Auditor General's report *Managing water quality in Great Barrier Reef catchments Report 20: 2014–15* recognised that the Newman government's weakening of controls over land clearing adversely affects the Reef: *'The recent relaxation of land clearing rules also increases the risk of adverse consequences from sedimentation run-off'* noting that *'land cleared in reef catchments increased by 229 per cent, from 31 000 ha per year in 2008–09 to 102 000 ha per year in 2013–14.'*[64]
- The Queensland Government's 2014 report card on progress toward Reef water quality targets, reveals that the target of increasing riparian vegetation in Reef catchments is far from attained, with: *'Overall forest loss in riparian areas continued between 2009 and 2013 (31,000 hectares, 0.4 per cent), with an increased rate of loss compared to the previous periods.'*
- The report card reveals further that almost all this riparian forest loss happened in Fitzroy and Burnett - Mary catchments, catchments conspicuously lacking Reef watercourse buffer protections (Category R in current VMA).[65]

[60] Fig 12 in http://www.capeyorkwaterquality.info/sites/default/files/downloads/normanby_wqmp_final_draft.pdf

[61] Thornton et al. (2007) The Brigalow Catchment Study: II*. Clearing brigalow (*Acacia harpophylla*) for cropping or pasture increases runoff. *Soil Research* 45, 496–511.

[62] McKergow et al. (2005) Sources of sediment to the Great Barrier Reef world heritage area. *Marine Pollution Bulletin* 51.1: 200-211.

[63] Table 44 in http://www.terrain.org.au/content/download/1566/9499/file/WT_TechReport_Final_190914.pdf

[64] https://www.qao.qld.gov.au/files/file/Reports%20and%20publications/Reports%20to%20Parliament%202014-15/RtP20GreatBarrierReef.pdf

[65] http://www.reefplan.qld.gov.au/measuring-success/report-cards/2014/assets/gbr-2014report-card.pdf

VMROLA Bill will partly restore capacity to 'prevent loss of biodiversity'

The VMROLA Bill will close substantial loopholes that have meant the VMA is not fit for its purpose to prevent biodiversity loss.

- By removing 'high value agriculture' as an allowable purpose, the Bill will restore the 2006 ban on broadscale clearing, and enhance conservation of intact habitats for native wildlife.
- Restoration of regulated regrowth will provide major biodiversity benefits. WWF estimated that repealing protections for 'high value regrowth' in 2013, prevented the eventual recovery of 27 endangered regional ecosystems to less threatened categories, as well as putting at risk habitat for many threatened species. The VMROLA Bill will partly restore those protections.[66]
- Restoration of more effective prosecution of illegal clearing will also prevent unlawful clearing of wildlife habitats.

By restoring stronger protection for in-stream vegetation under the Riverine Protection Permit system of the former *Water Act* (Fig 1), by restoring 'high value regrowth' protection in watercourse buffers and on high slopes, and by expanding the protection of regrowth in Reef watercourse to all Great Barrier Reef catchments, the VRMOLA Bill will also greatly reduce clearing of riparian forests, reducing pressure on aquatic biodiversity and marine biodiversity particularly in the Great Barrier Reef.

Nonetheless, the Bill will retain self-assessable codes, a major reason for the recent increases in land clearing. The VMROLA Bill will also leave unregulated approx. 22 million hectares of land that is currently mapped as exempt from all land clearing controls on property maps of assessable vegetation ('PMAVs', Fig 5), regardless that it may contain formerly protected 'high value regrowth', endangered ecosystems, essential habitat for threatened species, or land vulnerable to degradation such as riparian buffer zones and high slopes.

Already a compromise, needs to go further

The VMROLA Bill is already a significant compromise and it does not fully reinstate provisions that were in place prior to 2012.

Self-assessable codes

The Bill does not reverse one of the most damaging loopholes introduced in the 2013 amendments, which is the almost complete reliance on self-assessable codes, with the thinning code arguably being the most damaging, as recognised in the independent review of the SACs[67] and as we have argued in our earlier reports on this matter[68] (Fig 7).

By evading this issue, the Bill allows significant broadscale clearing to occur under self-assessable codes in contravention of the 2006 ban on such clearing. Virtually unlimited areas of land can be bulldozed without any permit, thereby completely undermining the purposes of the Vegetation Management Act to 'conserve remnant vegetation', ' not cause land degradation', 'prevent the loss of biodiversity' and 'reduce greenhouse gas emissions'.

---

[66] http://www.wwf.org.au/?6800/bushland-at-risk-of-renewed-clearing-in-queensland p 3

[67] https://www.dnrm.qld.gov.au/our-department/policies-initiatives/vegetation-management/review-sac

[68] http://awsassets.wwf.org.au/downloads/fl024_bushland_destruction_rapidly_increasing_in_queensland_16sep15.pdf

For the VMA to fulfil its purposes the VMROLA Bill needs to go further and restrict the scope of operation of self-assessable codes.

Recommendation: The Act should be amended to remove the risk of serious ecological harm from clearing under self-assessable codes. This could be achieved by limiting the application of all exemptions and self-assessable codes combined to no more than 1% of any given lot, and no more than 50ha total. Any larger scale clearing should require a development approval. Exemptions and SACs should also be excluded from areas with endangered ecosystems, essential habitat, stream or wetland buffer zones, and on high slopes or land vulnerable to degradation. Any clearing of such high conservation value habitats should require a development approval.

Fig 7. LEFT intact bushland near Augathella in 2014 prior to being cleared under the self-assessable code for thinning introduced with the amendments of 2013. RIGHT is the same area in July 2015. Over 4400 hectares were cleared in the space of six months from Feb to July 2015 on just one property. Up to 75% of tree cover has been removed in laneways 10-15m wide leaving only narrow strips of remaining trees of at most 5m width. New roads were also bulldozed including through endangered remnant brigalow forest. The area is still mapped as remnant vegetation category B based on the presumption that the vegetation structure was unnatural and has now been restored to its 'ideal' ecological state, which it seems, is cattle pasture. There is no requirement in the code to show that the vegetation cleared in this manner had been subject to unnatural anthropogenic thickening.

Thickening and encroachment

The definition of thinning in the Act represents a major loophole in the ban on broadscale clearing of remnant vegetation (Fig 7).[69] Only clearing with a chain is prohibited under this SAC, not clearing with other heavy machinery. Running heavy machinery over 75% of an otherwise intact forest or woodland cannot possibly avoid substantial wildlife death and soil damage. In some respects, the immediate death of wildlife

[69] VMA Dictionary
'1 Thinning means the selective clearing of vegetation at a locality to restore a regional ecosystem to the floristic composition and range of densities typical of the regional ecosystem surrounding that locality. 2 The term does not include clearing using a chain or cable linked between 2 tractors, bulldozers or other traction vehicles.'

and damage to soil may be greater for direct bulldozing than for chaining. At least with chaining, the proportion of area impacted by bulldozer tracks is less than with direct bulldozing.

The belief in a widespread unnatural thickening problem underpinning the thinning code has little scientific support,[70] and is primarily driven by livestock production not ecological objectives.[71] Likewise, the concept of encroachment[72] is predicated on the belief that woody shrub invasions of grasslands are anthropogenic disturbances from a natural state that need to be corrected. The definitive work on invasions of grasslands in Queensland by trees and shrubs shows that it is a natural fluctuation tied to fluctuations in rainfall at the boundary of the arid and semi-arid zones, not a primarily anthropogenic disturbance.[73] A recent global review further disputes the belief that transition from grassland to shrub or woodlands represents a form of ecological degradation.[74]

Entirely natural responses of natural ecosystems to changes in climate, are being artificially disrupted by clearing for thinning and encroachment on the pretext of correcting an 'unnatural' process, when the real motivation is to create pasture for livestock. In the process, the natural adaptation of wildlife and ecosystems to a changing climate or climatic fluctuations is hampered, and opportunities to sequester atmospheric CO_2 pollution are foregone, contrary to the purposes of the VMA.

Recommendation: The definition of thinning should be modified as follows: 'Thinning is the non-mechanical manipulation of vegetation community composition and density which has been proven to be an ecologically detrimental and unnatural result of land management practices, rather than due to natural processes'. The definition of encroachment should also be modified as follows 'Encroachment means an invasion of naturally treeless grasslands by trees, which has been proven to be an ecologically detrimental and unnatural result of land management practices, rather than due to natural processes.'

Any proponent of thinning or clearing of encroachment should be required to prove a) that statistically significant thickening/encroachment has taken place, b) that is has been caused by land management practices as opposed to natural processes, and c) that it is ecologically detrimental.

Scope of 'High Value Regrowth'

The current definition of 'high value regrowth' in the VMA uses a cut-off date of 31 Dec 1989, which is not ecologically meaningful. As regrowth forests progressively mature they reach ages in advance of the 20 years of age regrowth forests that were protected when the provision was first made in 2009, but paradoxically may not now be protected. Rather than a fixed date threshold in the definition, an ecologically meaningful age should be used. By comparison, the Australian Government follows better practice by for instance,

---

[70] Fensham, R. J., Fairfax, R. J. & Ward, D. P. (2009) Drought-induced tree death in savanna. *Global Change Biology*, 15, 380-387.

[71] *The Production, Economic And Environmental Impacts Of Tree Clearing In Queensland*, J.C. Scanlan and E.J Turner, Department of Lands, 1995.

[72] VMA Dictionary *'encroachment means a woody species that has invaded an area of a grassland regional ecosystem to an extent the area is no longer consistent with the description of the regional ecosystem.'*

[73] Fensham R et al 2005, Rainfall, land use and woody vegetation cover change in semi-arid Australian savanna. *Journal of Ecology* 93, 596-505 (http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2745.2005.00998.x/full).

[74] Eldridge DJ et al 2011, Impacts of shrub encroachment on ecosystem structure and functioning: towards a global synthesis. *Ecology Letters* 14, 709-722. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3563963/

requiring referral for clearing of endangered brigalow more than 15 years old, under the *Environment Protection and Biodiversity Conservation Act*.[75]

Recommendation: 'High Value Regrowth' should be defined as any woody vegetation that has been regrowing for more than 15 years, and which also contains endangered ecosystems, or essential habitat for threatened species, or is within 10-50m buffers of streams (depending on stream order) or wetlands, or protects slopes above 8% or highly erodible soils, recharge areas or other land vulnerable to degradation.

Lock-it-in PMAVs

A disturbingly large area, 125,000 ha of remnant bushland, including ecosystems mapped as endangered, has been administratively remapped as exempt (Category X) via property maps of assessable vegetation or PMAVs between 2012 and 2015.[76]

Once an area is mapped as exempt on a PMAV it is presumed to be 'locked-in' as an enduring right to clear regardless of ecological consequences. The VFMA amendments of 2013 included a blanket amendment of all existing PMAVs to 'lock-in' de-protected 'high value regrowth' as exempt.

'Lock-it-in' PMAVs confer a permanent right where none should exist. There should be no presumption that areas exempt now, can never be protected in future if environmental values are discovered to be significant and worthy of protection, for example as a result of high conservation regrowth reaching a threshold age as proposed above.

PMAVs should be returned to the original intent of providing a means to check for and if necessary correct genuine inaccuracies in regulatory maps. Regulatory maps should be reserved to the state in the VMA, and not taken to represent a property right.

Recommendation: There should be no enduring right to clear areas mapped as exempt in PMAVs. Any authority to clear exempt vegetation should be temporary and only endure for as long as the regulatory map allows. A later change to regulatory maps revoking exempt areas should not be presumed to constitute a taking of a property right. The purpose of PMAVs should be solely to correct errors of fact in regulatory maps. In cases where it is proposed in a PMAV to remap remnant vegetation as exempt or to change the regional ecosystem map from endangered or of concern to a lower concern status, concurrence of the custodian of regional ecosystem maps should also be required.

Dispelling misconceptions about VMROLA

'Land clearing already increasing prior to 2013 amendments, not caused by them'

Rates of land clearing were indeed increasing prior to the changes to the VMA in mid 2013 (Fig. 6). However, the weakening of land clearing controls did not start in 2013 with the VFMA Bill. As explained above, weakening of land clearing controls began immediately the government changed in March 2012.

[75] http://www.environment.gov.au/system/files/resources/43e7adb3-247e-4285-9a2e-386be94c9523/files/brigalow-regrowth.pdf

[76] http://awsassets.wwf.org.au/downloads/fl024_bushland_destruction_rapidly_increasing_in_queensland_16sep15.pdf

The 2012-14 SLATS supplementary report attributes the observed rise in clearing rates to changes in enforcement as well to changed landholder perceptions, not simply to changes in the Act itself:

> *'Clearing trends were also likely to be driven by a shift in clearing culture and perceptions brought about by the change in government in 2012. The change in landholder perceptions was supported by a new compliance approach, introduced soon after the change in government in 2012. The Department of Natural Resources and Mines shifted the priority to assisting landholders to undertake clearing rather than the previous priority on assessment and compliance.'*[77]

'VMROLA Bill will hold back agriculture'

As indicated above, there is no correlation between changes in land clearing controls, or areas cleared and total value of agricultural production in Queensland (Fig. 3). Research shows to the contrary that droughts have increased in Queensland due to cumulative effects of tree cover reduction from entire landscapes (Fig 4). It is more likely that poorly regulated, excessive land clearing is holding back agricultural production, by impairing the provision of ecosystem services by native vegetation.

'VMROLA Bill will hold back Indigenous development'

Some commentators have suggested that the closing of the high value agriculture loophole via the VMROLA Bill will thwart Indigenous opportunities to develop, particularly for Indigenous communities of Cape York.[78]

However, none of the applications for High Value Agriculture made to date were on indigenous land to our knowledge.

On Cape York, there is a specific provision to allow broadscale clearing for agricultural development by Indigenous communities pursuant to the *Cape York Peninsula Heritage Act 2007.*[79] The VMROLA Bill will not affect this provision.

'VMROLA Bill an attack on property rights'

There is no unqualified right to do whatever one pleases on private property. Building construction, plumbing, drainage, excavation which alters overland flows or could contaminate waterways are all heavily regulated in the public interest. Industrial operations are prohibited in areas zoned as residential. Emissions from industrial operations are regulated, in the public interest. Landholders are obligated to control declared pests on their properties, in the public interest.

Environmental harm caused by poorly regulated land clearing is an infringement of the public interest and of the rights of all Queenslanders to a clean and healthy environment. Laws are in place to ensure that publicly owned resources and amenities such as native wildlife and native vegetation are not threatened and destroyed by untrammelled private interests. These public interests are articulated in the purposes of the *Vegetation Management Act*, purposes which were retained in the amendments of 2013:

- conserves remnant vegetation

[77] https://publications.qld.gov.au/dataset/supplementary-report-to-the-statewide-landcover-and-trees-study-report-2012-14

[78] http://www.abc.net.au/news/2016-03-09/indigenous-leader-hits-out-at-qld-land-clearing-laws/7230726

[79] VMA Section (2AA) states 'Also, a vegetation clearing application is for a relevant purpose under this section if, under the CYPH Act, the Minister is satisfied the development applied for is for a special indigenous purpose.'

- ensures the clearing does not cause land degradation
- prevents the loss of biodiversity
- maintains ecological processes
- reduces greenhouse gas emissions

Nonetheless, the VMROLA Bill does not change the exemption of over 22 million hectares on property maps of assessable vegetation (Fig 5). It does not affect the validity of permits already approved for High Value Agriculture, notwithstanding that many of these areas should not be exempt due to their conservation value and the environmental harm caused by clearing them.

Such property rights as may be represented by PMAVs and already approved applications are unaffected by the VMROLA Bill.

'VMROLA Bill consultation blocked by conservation groups'

Key provisions of the VMROLA Bill have already been through extensive stakeholder consultation prior to the amendments of 2004 which introduced the ban on broadscale clearing and the amendments of 2009 for regulation of 'high value regrowth' and Reef watercourse regrowth. As noted above, these provisions have long been accepted by all stakeholders and should never have been reopened for debate.

It has been alleged that a stakeholder roundtable process in 2015 was blocked by environmental groups refusal to participate. The facts are however, essentially as related by DNRM Deputy Director General Sue Ryan to the Agriculture Environment Committee on 22 Mar 2016:

> *'On 13 July 2015, DNRM held a stakeholder round-table meeting on the future of vegetation management with participants from AgForce, the Queensland Farmers' Federation, Canegrowers, WWF, the Wilderness Society, the EDO, and the Wildlife Preservation Society of Queensland. At that meeting, background information on clearing rates was provided and discussions held on potential future vegetation management reforms. Following that meeting, DNRM engaged Professor Allan Dale of James Cook University to liaise with the key stakeholders to build consensus on the best possible approach for the government to meet its election commitment in relation to vegetation management. The stakeholders the professor has been talking to included agriculture and conservation groups and natural resource management and Indigenous representatives. In late 2015, it became clear to the government that the process being facilitated by Professor Dale was not going to meet consensus and that urgent action was required to deliver on the government's election commitments.'* (emphasis added).

We believe that the rejection of the government's election commitment by industry stakeholders was a key stumbling block to consensus.

'Woody cover increased by 437,000 ha'

It has been claimed that *'Tree coverage in Queensland has increased by almost twice the size of the ACT in just three years.'*[80] This estimate comprises the difference between woody cover estimates provided in successive SLATS reports.

In SLATS analysis, woody cover is defined as anything above zero foliage projective cover (FPC), which includes knee-high shrubs.[81] Woody cover as reported by SLATS is also modelled approximation, not ground validated, unlike SLATS clearing data.

[80] http://www.agforceqld.org.au/index.php?tgtPage=news&id=view,511

Mindful of this the Queensland Government has issued the following warning in regard to use of the FPC layers*: 'While some land cover change may be detected in the FPC processing, this product is not designed to generate clearing or regrowth following clearing layers, and should not be used to assess clearing or be compared with previous years for change monitoring.'* (emphasis added)

An increase in FPC is a result of more leaves being visible to the satellite camera. More leaves do not mean more trees. Leaves can and do come and go depending on rain or drought, resulting in fluctuations in foliage cover. A minor change for example from zero to just 1% FPC over large areas can make it seem a large area of forest suddenly appeared, when in reality it may just be widespread leafing-out of small shrubs, or the appearance of many seedlings.

Much of the increased FPC is likely to be either regrowth or appearance of woody seedlings in grasslands or unseasonably green ground cover misinterpreted as woody foliage. Regrowth is almost all exempt and subject to re-clearing at any time. Encroachment can also be freely cleared under the self-assessable codes.

Minor increases in foliage cover due to climate fluctuations or directional change cannot be treated as an offset against the clearing recorded by SLATS in the same year, because:

- it's generally not secured to prevent it being cleared;
- it can and will reverse if drought comes along;
- it cannot meaningfully be compared with or replace the clearing of trees down to bare ground;
- it likely occurs in quite different ecosystems from those being cleared; and
- it cannot offset carbon emissions, because under carbon accounting rules, only human induced changes in carbon stocks are relevant.

'Farmers ability to control regrowth and weeds curtailed'

The VMROLA Bill does nothing to restrict control of exotic weeds because the VMA only regulates clearing of native vegetation.

Farmers already have unrestricted ability to control regrowth over the 22 million hectares that is exempt on property maps, an area approaching that of the entire island of Great Britain (Fig. 5).

Almost all regrowth is exempt. Even 'high value regrowth' may be cleared to the extent provided by codes.

The VMROLA Bill does not change any of these vegetation management capabilities.

Acknowledgements

Primary submission author is Dr Martin Taylor.

The assistance of volunteers Alexandra Brown, Simone Bosshard and Nakita Thackwray and Environmental Defenders Office solicitors Revel Pointon, Andrew Kwan and Jo-anne Bragg is gratefully acknowledged.

[81] SLATS report 2012-14, p. 6 "The wooded vegetation extent for 2012 and 2013 is compiled from the foliage projective cover (FPC) index values, ranging from 1–100%. Non-wooded pixels (0% FPC) are excluded from the wooded extent area."