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Biodiversity Legislation Review
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Dear Dr Byron,

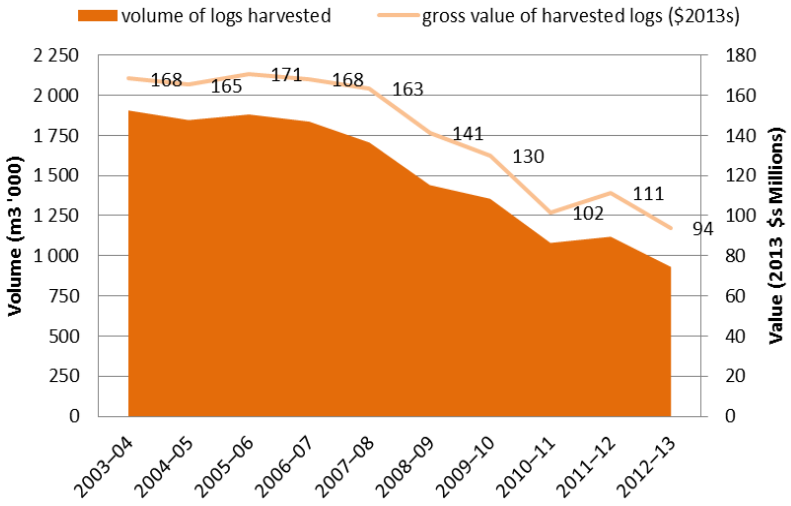
Re: Submission on Biodiversity Legislation Review

Thank you for the opportunity to make a submission on an issue which is extremely important to the NSW timber industry.

For over twenty years the NSW timber industry has been portrayed as a major threat to biodiversity conservation and placed under sustained pressure by city centric lobby groups and sympathetic environmental regulators.

Through ongoing reservation of State forests and private lands and disproportionally heavy regulation the industry is now a mere shadow of its former self. Within the last ten years alone the value and production levels of the industry have nearly halved (refer figure 1)

Figure 1 - Volume and value of logs harvested from NSW native forest by year



Source: ABARES (2013) Australian Forest & wood product statistics –Sept &Dec Quarters

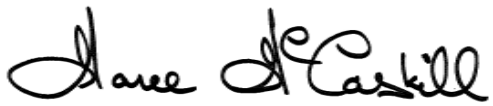
Within New South Wales there is 20 million hectares of land supporting woody native vegetation. Only 7% of these lands are now subject to timber harvesting.

Effective management of common threats to biodiversity is the key to environmental conservation. Altered fire regimes and mega-fires; pests, weeds & diseases; climate change; unsustainable and illegal activities; and land-use change are all key threats to our native vegetation. Focus must be redirected to the holistic management of these threats if we are to have any chance of stemming further biodiversity decline.

Forest based industries are a critically important tool for the future managers of biodiversity conservation. They provide the most effective mechanism for undertaking active and adaptive management at least cost.

If the NSW government does not wish to see further biodiversity decline it must seek to design a new cross tenure governance model that includes a role for the NSW timber industry that is both sustainable and holistic.

Yours sincerely,

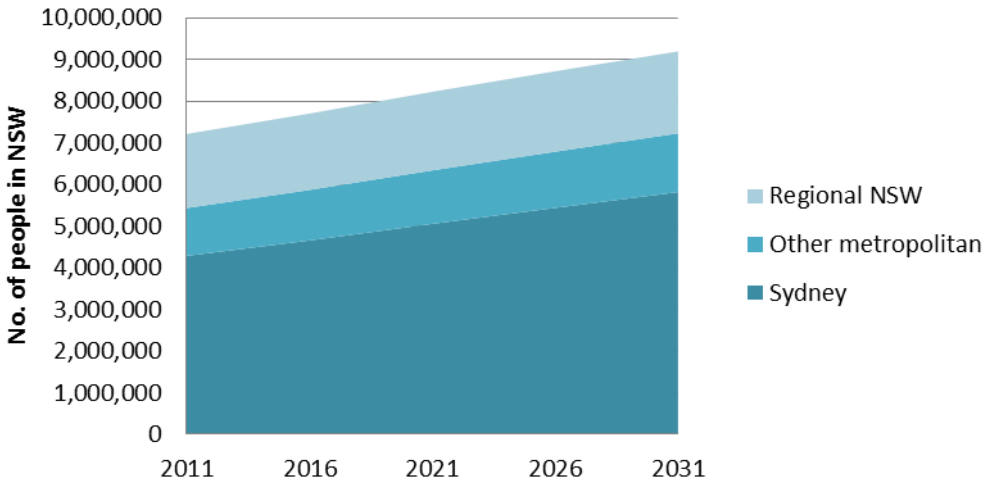


Maree McCaskill
General Manager

How do we effectively manage biodiversity alongside competing socio-economic needs?

In New South Wales we very are fortunate to still have vast tracts of native vegetation. Over half of our State (40 million hectares) supports natural rangelands and a further quarter (20 million hectares) supports native forest. We also have an expanding population (refer Figure 2) and a resource hungry economy.

Figure 2 – Projected Population Growth in New South Wales



Data source: Department of Planning and Infrastructure (2013)

Population growth however is driving demand for minerals and natural resources and this in turn is placing increasing pressure on our natural landscapes. Our historic tenure based approach to the management of natural landscapes and the biodiversity they support is ill-equipped to support future demands and threats associated with this growth.

To what extent has the current framework created inconsistent assessment processes, environmental standards, offset practices and duplicative rules? What can be done to harmonise processes?

Taking a more holistic view to biodiversity conservation is essential but not easy. In less than two centuries we have managed to create and embed ourselves within a highly restrictive tenure based governance system with multiple layers of complex competing legislation and an array of deep jurisdictional and cultural divides.

The current government is clearly committed to reducing this complexity, evidenced by the large number of legislative reviews which it has instigated. It should be commended for taking the first steps as they are long overdue.

Finding real solutions to stem biodiversity decline demands a comprehensive approach. The approach taken to date however has been both timid and piece meal and this is constraining opportunity for more fundamental and critical reform.

In the case of this review the government has clearly taken advice to restrict its scope to a small subset of the legislative instruments which influence biodiversity conservation outcomes. The findings of this review therefore risk being of limited

value unless the Review Panel is able to highlight and address the major gaps left uncovered by its terms of reference.

Within the last two years the Government has undertaken a broad suite of environmental reviews all of which have direct relevance to biodiversity conservation. These include:

- a new Forestry Act 2012 that applies to 1.8 million hectares of native State forest
- An Upper House Inquiry into the *Management of Public Land*,
- A *Crown Lands Management Review* report. Note the CLD is responsible for around 2.0 million hectares of Crown Reserve and Travelling Stock Routes
- A discussion paper on the *Remake of the Coastal Integrated Forestry Operations Approvals* that apply to native State forests
- A discussion paper on a *Proposed Framework for a New Biosecurity Act* which includes the management of pests, weeds and diseases
- Various Natural Resources Commission reports including:
    - *Weeds – Time to get serious - Review of weed management in NSW* and a NSW government response
    - *Active and adaptive cypress management in the Brigalow and Nandewar State Conservation Areas*

To date none of the biodiversity conservation aspects of the above reviews have been effectively captured or considered by government in an integrated manner.

In particular, the NSW Government's Department of Primary Industries *Proposed Framework for a New Biosecurity Act* has no reference to native vegetation and no specific consideration of the relationship between the new *Biosecurity Act a*nd the biodiversity protection laws which pertain to environmental protection.

As another example, the NSW EPA's discussion paper on the *Remake of the Coastal Integrated Forestry Operations Approvals* fails to consider any threats to biodiversity aside from timber harvesting. This means if a State forests ecosystem subject to timber harvesting is at risk from a particular pest, weed or disease (e.g. lantana or myrtle rust) there are no provisions which enable holistic consideration of these risk elements. In fact EPA has made it clear that they it has no interest in threatening processes beyond timber harvesting simply because they do not fall within its legal jurisdiction.

Today each of the State's natural resource agencies is operating autonomously with their own biodiversity conservation priorities, objectives and budget and their own performance indicators and reporting standards. With little commonality between their indicators and standards these is no mechanism for Government to measure or benchmark their performance or ensure that services are delivered in an integrated fashion.

Is it possible that government may be relying too heavily on the advice which comes from these agencies and their senior officer group representatives? It is known that that they can benefit from maintaining the status quo and that they are always inclined to put the interests of their own respective agency/sector ahead of others.

In theory the Department of Premier's and Cabinet is there to balance and moderate these interests and to drive reform where it serves the broader public good. Similarly, the Department of Treasury has responsibility to ensure balance and transparency in the allocation and accounting of public expenditure. Over many years the natural

resource groups within both of these departments have comprehensively failed to coordinate or effectively account for public expenditure on biodiversity conservation.

It is our informed view that this poor state of accountability has also facilitated large imbalances in the allocation of public resources for biodiversity conservation management (some details of which are provided below). A measure of this failure may be sheeted back to a few highly influential policy officers within Premier's and Cabinet and the Treasury who have consistently blocked all attempts to bring about reform.

If government is serious about stemming biodiversity decline it must commit to a more holistic legislative reform process and seriously question the quality and motives of some of its key advisers.

Given available evidence about the value and state of the environment, are the existing legislative objects still valid? Do the current objects align with international and national frameworks, agreements, laws, obligations? If not, what objects are required?

The creation and management of a world class, comprehensive, adequate, and representative reserve system has come at a high cost. With most ecosystem reserve targets met or exceeded (e.g. in the Eden Region the CRA ecosystem target was exceeded by 203%) it is recommended that relevant laws be tightened to ensure that any further dedications be required to meet stringent scientific eligibility criteria. Creating more national parks to satisfy the demands of environmentalist or connectivity objectives is a luxury that is unaffordable.

Threats to Biodiversity

Have the threats to biodiversity posed by: (a) people taking animals and plants from the wild, (b) feral animals and weeds, and (c) illegally imported species, been effectively managed?

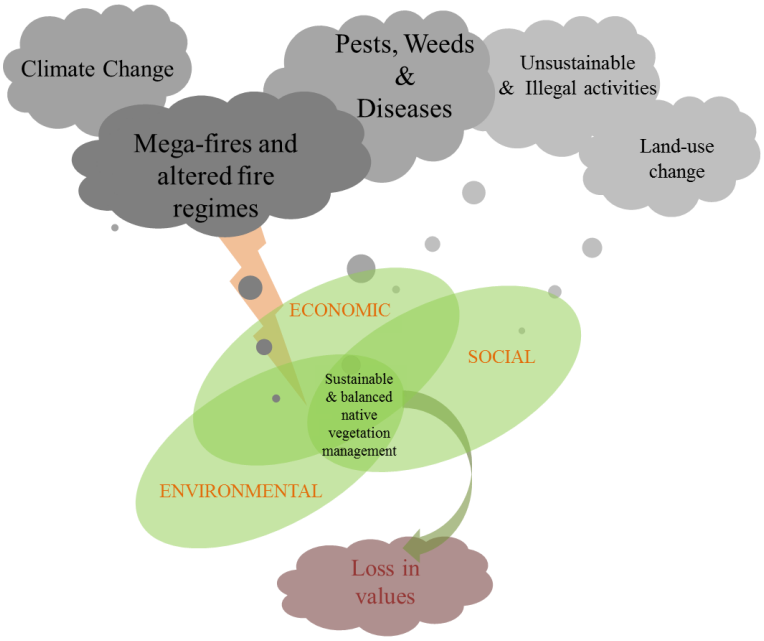
The current laws pertaining to biodiversity fail to make a clear connection between conservation outcomes and the management of key threats. Similarly, some of the laws pertaining to the management of key environmental threats remain disconnected from the management of biodiversity.

A fundamental challenge for the Biodiversity Review Panel is to better understand how key threats to biodiversity conservation can be more effectively integrated with biodiversity legislation.

The benchmark we should use for biodiversity is its status at the time of European settlement. Prior to European settlement it is assumed that biodiversity thrived and there were no 'unnatural' threats.

Since European settlement, altered fire regimes and mega-fires; pests, weeds & diseases; climate change; unsustainable and illegal activities; and land-use change have all developed into major common threats to biodiversity (refer Figure 3). Unlike timber harvesting whose highly regulated operations are now limited to 5% of our 20 million hectare native forest estate, major common threats impact on 100%.

Figure 3 – Major threats to biodiversity values



Mega-fires and Altered Fire Regimes

The role of fire and how it has been managed by humans over many millennia has had a major influence on biodiversity. From European records, made at the time of settlement, we have comprehensive evidence of the widespread use of fire by Indigenous Australians (Gammage, 2013).

There is now little doubt that Indigenous Australians actively manipulated biodiversity over vast tracts of the landscape to meet their own requirements (refer Figure 4). Despite this evidence our legislation is yet to embrace the 'fire-stick' role of humans and its importance in biodiversity conservation.

Figure 4 – Joseph Lycett c1820, Aborigines using fire to hunt kangaroos

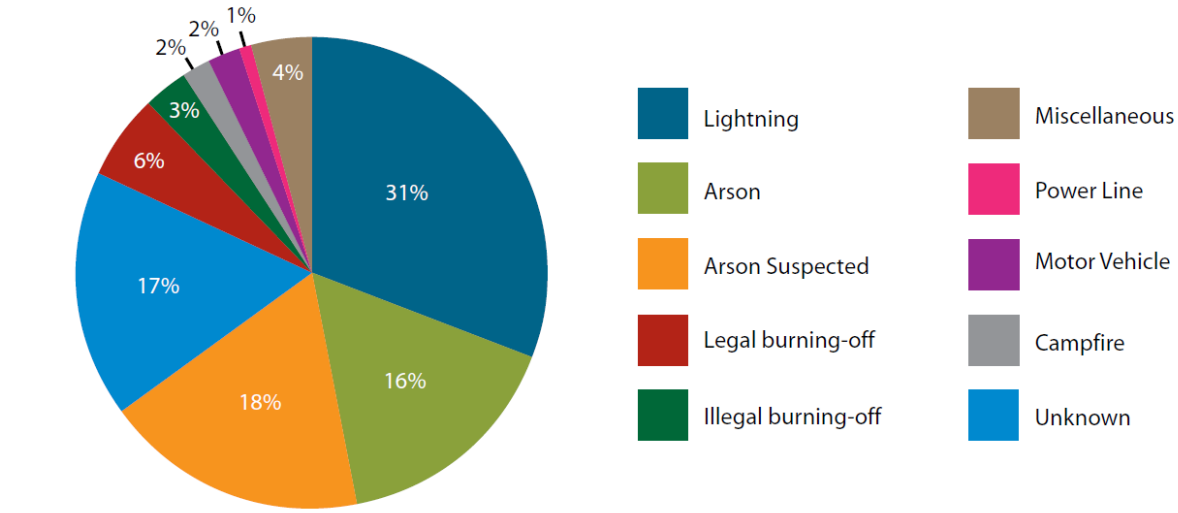
Altered fires regimes and mega-fires are now arguably the single biggest threat to biodiversity. As their impacts are often greatest within formally protected areas we have been reluctant to admit that we have a problem and are yet to reveal its extent and depth.

A key characteristic of fire is that its impacts occur very rapidly while the time taken for biodiversity to restore itself occurs over a much longer period.

It is well known that our biodiversity has evolved with fire and is adapted to it with inbuilt to coping and recover mechanisms. The problem arises however when the frequency and intensity of fire is altered to a point that biodiversity is unable to adapt.or evolve.

Today less than one third of the wildfires (31%) occurring on NSW Parks and Reserves are known to be started by natural causes. Human ignition sources are known to be responsible for 52% of wildfire ignitions with the balance of 17% being of unknown cause (refer Figure 5). These statistics reveal that humans are more than doubling the frequency of native vegetation wildfire.

Figure 5- Cause of wildfire ignitions on Parks and Reserves 1995–2010 (n=2886)



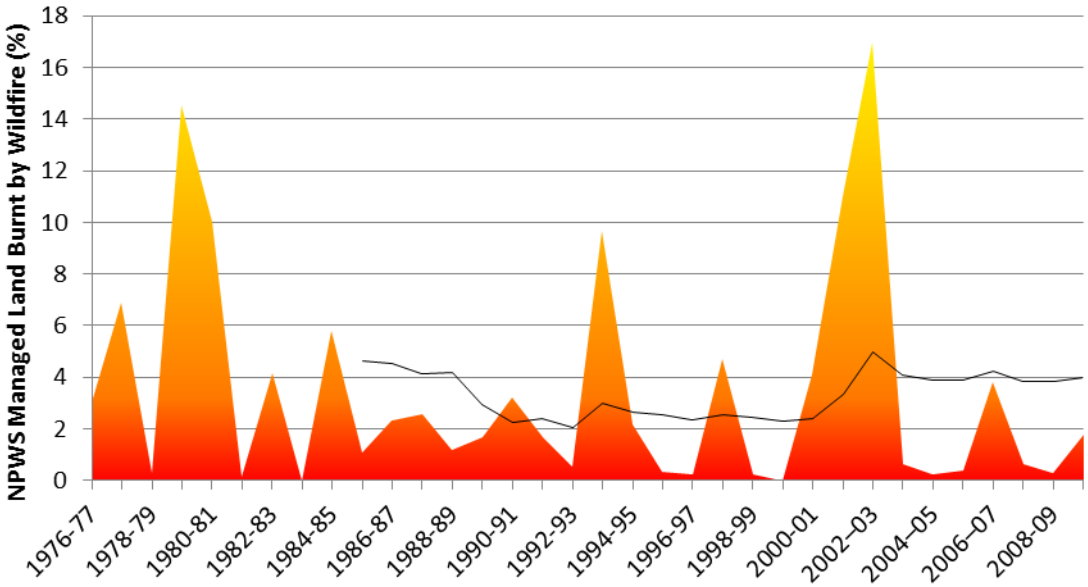
Source: (OEH, 2012)

Government agencies currently apply fire management regimes that are consistent with ecological fire thresholds developed for vegetation communities by NPWS, 2004. Under this system each vegetation community is allocated a minimum and maximum fire regime threshold. A fire interval between these thresholds is the time between fire events that a vegetation community supposedly needs, to avoid being at risk from a decline in biodiversity.

A shortcoming of this approach is that it does not account for altered modern day fire regimes (which are now dominated by unplanned wildfire ignitions). The consequence is that native vegetation is being burnt by damaging wildfires well before being scheduled for its ‘ecological burn’. A second failing is that there is too much flexibility in the system so for example if an individual NPWS officer wants to take a passive approach there is plenty of scope to do so.

On average around 4% of our National Parks and Reserves are burnt by wildlife each year (refer Figure 6). If human ignitions source were able to be removed this figure would (in theory) fall to below 2.0%. Such an objective is unlikely to be easily achieved so the focus must be directed to more proactive fire management.

Figure 6 – Percentage of Parks and Reserves that have been burnt by wildfire



*Note - black line is 10 year rolling annual average
Data source: NPWS Annual reports http://www.environment.nsw.gov.au/whoweare/decannualreport0304.htm

In many localities wildfires are now the predominant form of fire and this is having a highly detrimental impact on biodiversity. Examples of large scale impacts on biodiversity from unplanned high intensity wildfires are currently on show within the Brindabella and Namadji National Parks (2003 fire), the Pilliga National Park (2006 fire) Kosciusko and Alps National Parks (2006 megafire), the Warrumbungle National Park (2013 fire), and the Blue Mountains and Wollemi National Parks (2013 fire). In Victoria, consecutive wildfires in 2006 and 2009 have impacted biodiversity on a massive scale, the significance of which was recently revealed in the ABC's Catalyst program.

Unless and until biodiversity conservation legislation recognises and embraces the importance of integrating fire management with conservation the decline in the State's biodiversity may be expected to continue.

Pests, Weeds and Diseases

The following statement was made by NSW DPI in its recent review of NSW Biosecurity legislation:- *Pests, diseases and weeds do not recognise jurisdictional boundaries, so state and territory governments cannot operate in isolation from each other, despite having full responsibility within their borders.*

The irony of this statement is that it has more direct relevance to DPI and the jurisdictional boundaries it has with other government agencies within the State than it does to its interstate colleagues.

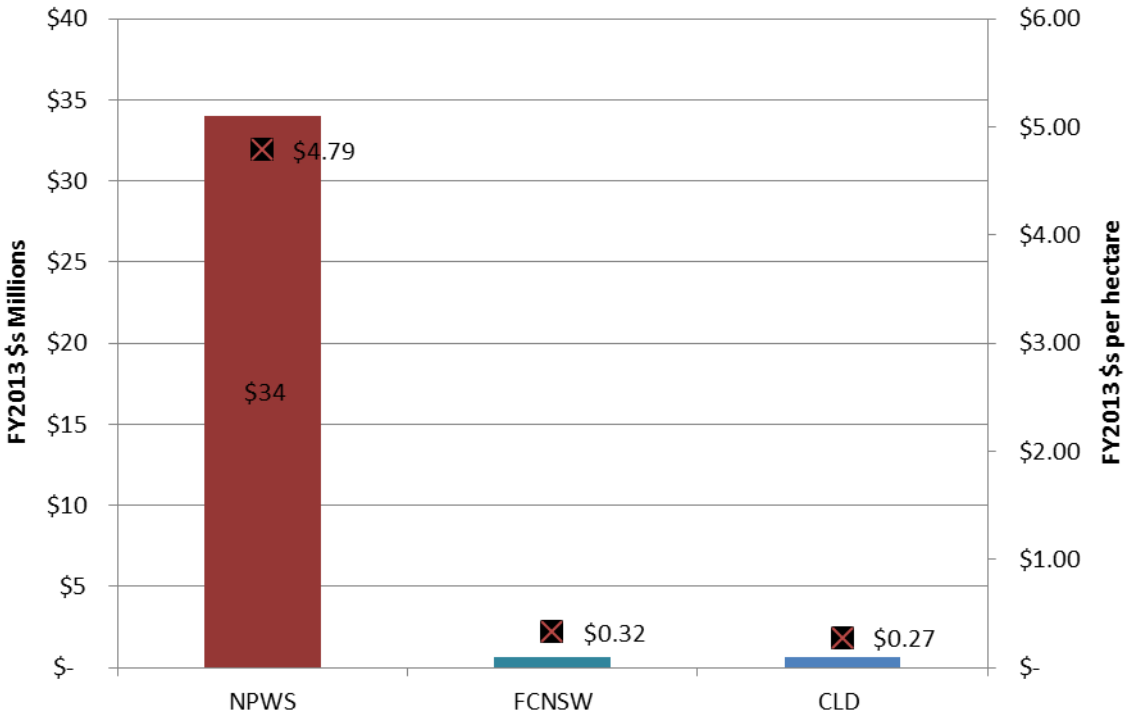
Although NSW DPI has legislative control over biosecurity on all lands it remains focused on agricultural landscapes. Under this operating environment the

governance of pests, weeds and disease in natural woody landscapes remains weak and uncoordinated. The leaders in NSW biosecurity are experts in containing outbreaks of things like Hendra virus and foot and mouth disease but have virtually no knowledge or expertise in the biosecurity of native vegetation.

This is having some highly undesirable consequences for biodiversity conservation and also the timber industry.

One consequence is the imbalance in the way public resources are being allocated, refer Figure 7.

Figure 7– Expenditure on Pests and Weeds in FY2013 by public agency

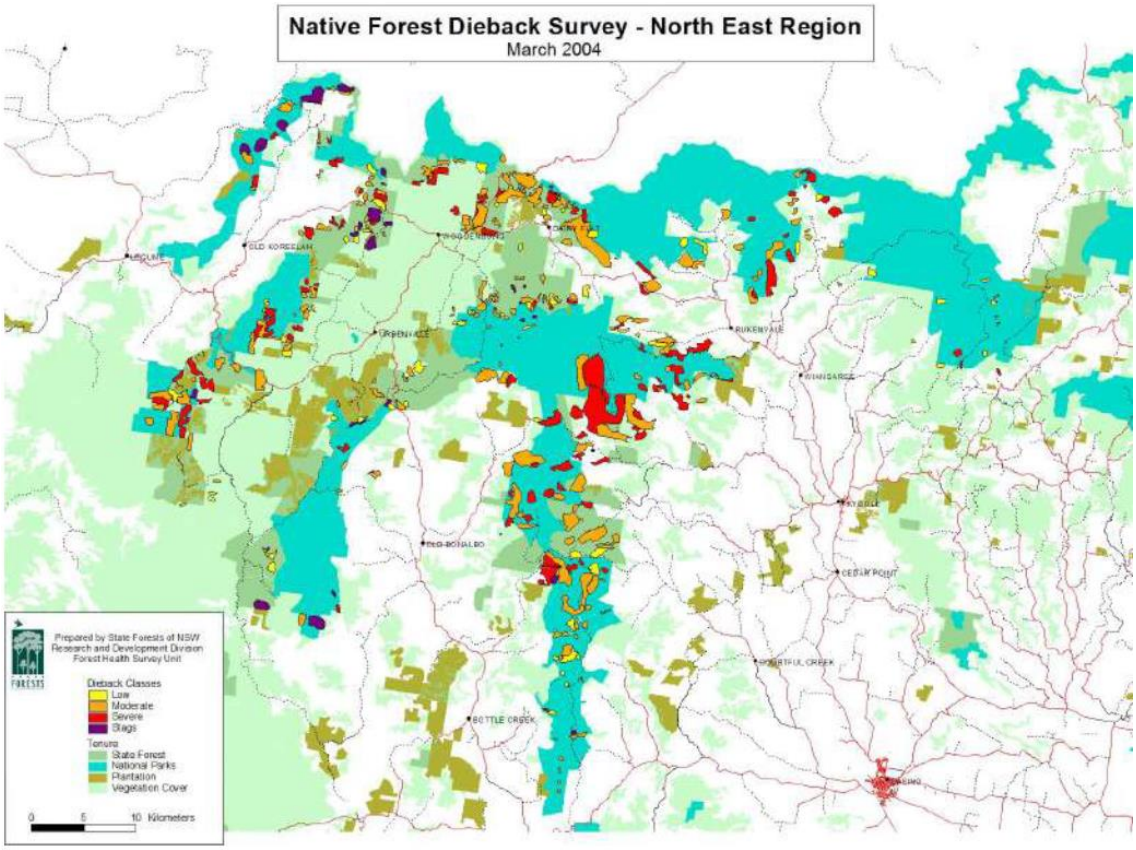


Source: NPWS – public report; FCNSW & Crown Lands (CLD) - internal costing data
Note: there is no consolidated information available on pest & weed expenditure on private native vegetation lands (= 8 million hectares) or leasehold land (> 30 million hectares)

Another issue concerns is the resourcing and effectiveness of pest and weed control. Bell Miner associated dieback (BMAD) is closely associated with dense lantana understory which is a cross tenure issue in the State's North East.

BMAD has recently become 'too big to hide'. Tens of thousands of hectares are now affected by BMAD along the eastern seaboard and the problem is spreading with hundreds of thousands of hectares thought to be at risk. In the North East current estimates of the area impacted are thought to be much larger than what is shown in Figure 8.

Figure 8 – North East NSW showing results of native forest aerial survey of dieback (2004)



Source: Forestry Corporation of NSW

Key:
Purple = dead = 1,382ha
Red = severe dieback = 6,511ha
Orange = moderate level dieback = 9,776ha
Yellow = low level dieback= 2,205ha

Light Blue = National Park
Mid green = State forest
Light green = private property
Olive green = plantation

Should threatened species listing decisions be decoupled from decisions on conservation actions (including recovery planning) and regulatory processes?

Yet another costly consequence of ineffectual pest and weed management has been the introduction of biodiversity and species specific legislation (much of which is the subject of this review), refer Figure 9.

The Threatened Species Conservation Act places heavy emphasis and obligations on the local management of habitat around individual threatened species records. This approach impacts on the economic viability of the native timber industry. More importantly however it is occurring at the expense and attention of landscape level management of common biodiversity threats.

Most threatened species records are generated by opportunistic survey events and adhoc observations rather than from broad scale systematic scientific survey effort. An exception to this occurs on State forest where pre harvesting survey has been consistently applied over a period of 15 years. Not surprisingly, the distribution of threatened species records and the management resources which they attract are now naturally skewed toward where survey effort has occurred. State Forests now

have three times more threatened fauna species records per square kilometre than National Parks.

Does the regulatory system adequately protect listed threatened species, populations and ecological communities? Is there utility in specifically protecting these entities through the regulatory system?

With literally hundreds of species listed as vulnerable, threatened or endangered, focus and attention now has to prioritised and spread. This species specific approach results in iconic high profile species attracting the bulk of scarce conservation resources at the expense of other lower profile species which are sometimes more at risk.

The importance of managing individual threatened species should not be completed discounted but it must not continue to be the central driver of biodiversity conservation management.

Figure 9- Environmental and economic implications of ineffective management of fire, pests, weeds and diseases

Issue

Ineffective control of fire, pests, weeds and diseases in forests due to unbalanced and uncoordinated management and resourcing

Noxious Weeds Act,
Game and Feral Animal Control Act
Plant Diseases Act, Rural Fires Act, Forestry Act, NPW Act

Flow-on Effects

Declining Biodiversity & Forest Health[1]

Ecologically Valuable Species Threatened

Reactive environmental protection laws applied to forest users based on the precautionary principle.

Protection of the Environment Operations Act
Native Vegetation Conservation Act
Threatened Species Conservation Act

Forest industry financially impacted by loss of resource to national park and heavy regulatory burden[2]

[1] *Our biodiversity continues to decline, and many important ecological processes and threats operate at scales larger than individual protected areas. Climate change, along with invasive species, land use change and altered landscape hydrology, presents a major challenge for biodiversity conservation planning in Australia. (Australia's Strategy for the National Reserve System, 2009)*

[2] *Each coastal IFOA applying to public native forest contains over 2000 conditions* (NSW EPA, 2014, IFOA Remake)

Unsustainable and illegal activities and land-use change

Is the current system effective in encouraging landowners to generate public benefits from their land and rewarding them as environmental stewards? Or are current mechanisms too focused on requiring private landowners to protect ecosystem services and biodiversity at their own cost?

The Native Vegetation Act was introduced in 2003 to stem the loss of natural landscapes to agriculture and to control what were perceived to be unsustainable and illegal natural land-use activities and practices. Since its introduction the legislation has been contentious with farming communities who derive their living from the land. If effectively reconfigured the Native Vegetation Act has the potential to be a powerful instrument for encouraging landholders to facilitate enhanced biodiversity outcomes.

Since 2003 the rules and obligations relating to native vegetation management have been strengthened and are now regarded as quite onerous (when compared to other regulatory instruments applying to private land). For example, a NSW farmer may still graze or cultivate their land right to the edge of a creek while a NSW native vegetation landholder must comply with detailed operational restrictions within all riparian zones. For third order (or higher) streams these restrictions extend 35 metres each side of the drainage feature.

Property vegetation plans (PVPs) are now required for all commercial operational activities and are subject to government approval. This can be a lengthy process if the property includes forest which has been mapped as 'old growth'.

My general comments from our dealings with EPA on PNF - PVP approvals is that they try to wear you down through a process of dragging out the approval. It has taken 8 months to receive a review on an extremely defective initial PVP approval which had huge areas of erroneous Old Growth listed on it. We appealed & despite many phone calls & follow up 8 months later they have sent back a plan with eight small areas of old growth still marked on it. Although it appears that at least seven out of the eight are under the minimum area form old growth exclusion are & the largest area overlaps with a rocky outcrop, which have their own prescriptions anyway. I was advised I should accept it & sign off - otherwise it could take another eight months to get it reviewed again. Many landholders roll over, because of either lack of knowledge or they cannot afford to wait There is no one in the system to advocate for the landholder & the EPA carries on like a law unto themselves. Someone needs to remind them that this is privately owned land & the forest is a privately owned asset. (NSW FPA member, August 2014)

A typical PVP applying to coastal forests will take several months to be approved and result in a requirement for between 15% and 50% of the property's native vegetation to be set aside for biodiversity conservation purposes. In addition the owner must operate within a specified harvesting intensity and retain a specified number of trees per hectare for animal habitat.

The proposed introduction of self-assessable codes were seen as an opportunity by private landholders to regain some control over the management of their native vegetation. Draft codes that were publicly released by the Office of Environment & Heritage (OEH) earlier this year were considered by most to be unworkable. This was due to the criteria for self-assessment being designed in a way that meant that only a very small percentage of applicants would ever be eligible to qualify.

From an OEH perspective this approach was seen as necessary to ensure that biodiversity is appropriately safeguarded. From a broader perspective however it has

simply further undermined what is already a poor relationship (between OEH/EPA and the farming community). If government seeks to regain the trust and support of the NSW farming community it needs to rethink its approach.

To achieve good biodiversity outcomes requires landholder good will. While rules for native vegetation management remain overly restrictive, landholders are likely to remain disengaged and disinclined to invest their time and resources.

Native vegetation costs money to manage properly. For example in 2013 the average net operating cost to manage NSW National Parks and Reserves was $53 per hectare.

The tax payer should not be expected to subsidise the cost of managing native vegetation on private land except other than in exceptional circumstances (e.g. where private native vegetation contains a very rare ecosystem that is highly under-represented within the public reserve system).

If a private landholder can be encouraged to generate a modest income from actively managing their native vegetation (e.g. from ecological thinning or selective timber harvesting) then they may then be more inclined to reinvest some of the proceeds into the mitigation of common threats (wildfire pests, weeds and disease.

Are there elements of the current system for private land conservation that raise impediments (for example, the binding nature of agreements and potential loss of production) for individuals who want to manage their land for conservation? If so what are they? What incentives might be effective, efficient and equitable in promoting biodiversity conservation on private land?

As conservation covenants encumber both current and future generations they must be applied judiciously. In general landholders should not be encouraged to sign up to conservation covenants as they will prevent them from generating any income from land which they are obliged to manage.

The use of conservation covenants should be restricted to lands which contain very rare ecosystems or exceptional heritage values that are not well represented within the public reserve system. Where these criteria can be met then public funds should be made available to assist in their management.

For all other cases interested landowner should be encouraged to take up the option of a PVP. The concept behind PVPs is sufficiently flexible to cater for both conservation and socio-economic interests. At present however the need for a PVP tends to only be considered when a landowner wants to harvest trees.

In future PVPs should be promoted as the instrument of choice that caters for both conservation and socio-economic interests. Conservation convents should only be used in exceptional circumstances.

'Active and adaptive' management is a paradigm that has been recently promoted by the NSW Natural Resources Commission for western Cypress forests. The concept recognises that where the structure of our forests and native vegetation has been dramatically altered since it was under the stewardship of Indigenous Australians there is now a need for active intervention.

The extent to which the structure of our native vegetation has been altered has been comprehensively documented by Bill Gammage in his book *The Biggest Estate on Earth – How Aborigines made Australia* (2011, Allen & Unwin press).

Today much of our natural vegetation is dominated by two homogenous extremes - over cleared landscapes largely devoid of woody vegetation and unmanaged landscapes where woody thickening is a defining characteristic. Following European settlement early explorers encountered and documented much more heterogonous landscapes that commonly featured park like panoramas.

Enormous opportunities for biodiversity enhancement lie in breaking up our homogenous landscapes and creating more heterogeneous mosaics (refer Figure 10).

Figure 10 – Pathway for achieving better biodiversity outcomes

Current Situation

Divisive governance structures
Polarised views about natural resource management
Major threats not effectively managed

Homogenous natural landscapes (poor biodiversity outcomes)

Passive management Woody thickening Homogenous bushfire prone forested landscapes	Over-cleared pastoral landscapes Disengaged private landholders

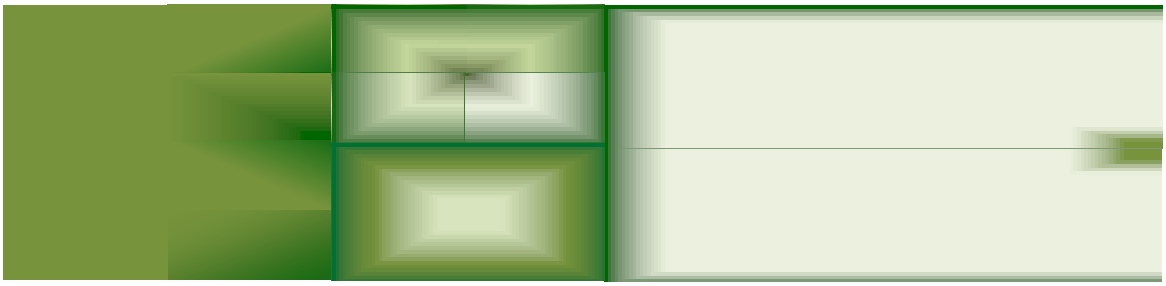
New Direction

Breakdown divisive and inflexible governance structures
Redirect focus onto holistic management of major common threats
Combine & Integrate PVPs and Conservation Agreements
Engage private landholders as partners
Promote flexible landuse and 'active and adaptive' management

Future

Holistic cross tenure approach to management of major threats
Proactive and adaptive (flexible) approach to biodiversity conservation on both public and private land
Engaged private landholders
Broad scale community support

More heterogeneous natural landscapes (enhanced biodiversity outcomes)



Benchmarking biodiversity conservation

How should the government determine priorities for its investment in biodiversity conservation while enabling and encouraging others (e.g. community groups) to contribute to their own biodiversity conservation priorities?

Is current data about biodiversity highly credible and readily accessible? If not, how can quality and access be improved?

A key weakness of conservation management in New South Wales is that it is not underpinned by an effective feedback system which enables routine monitoring or evaluation of activities that mitigate biodiversity threats and generate biodiversity benefits.

New South Wales can claim that is has one of the world's most comprehensive and representative conservation reserve systems. It can also claim that it is spending over $380 million dollars annually on the management of this estate and on broader biodiversity conservation initiatives.

What it cannot readily demonstrate is whether or not this is a wise investment and whether or not it is maintaining or enhancing biodiversity values.

After 15 years of regional forest agreements, cross tenure knowledge of the status of biodiversity and its key threatening processes still remains poor.

We currently know much less about the conservation status of Parks and Reserves than we do about the conservation status of our State forests. Our knowledge of the status of biodiversity on private and Crown Lands is appalling.

How can the effectiveness of conservation programs be monitored and evaluated? Should private conservation data be collected and if so how?

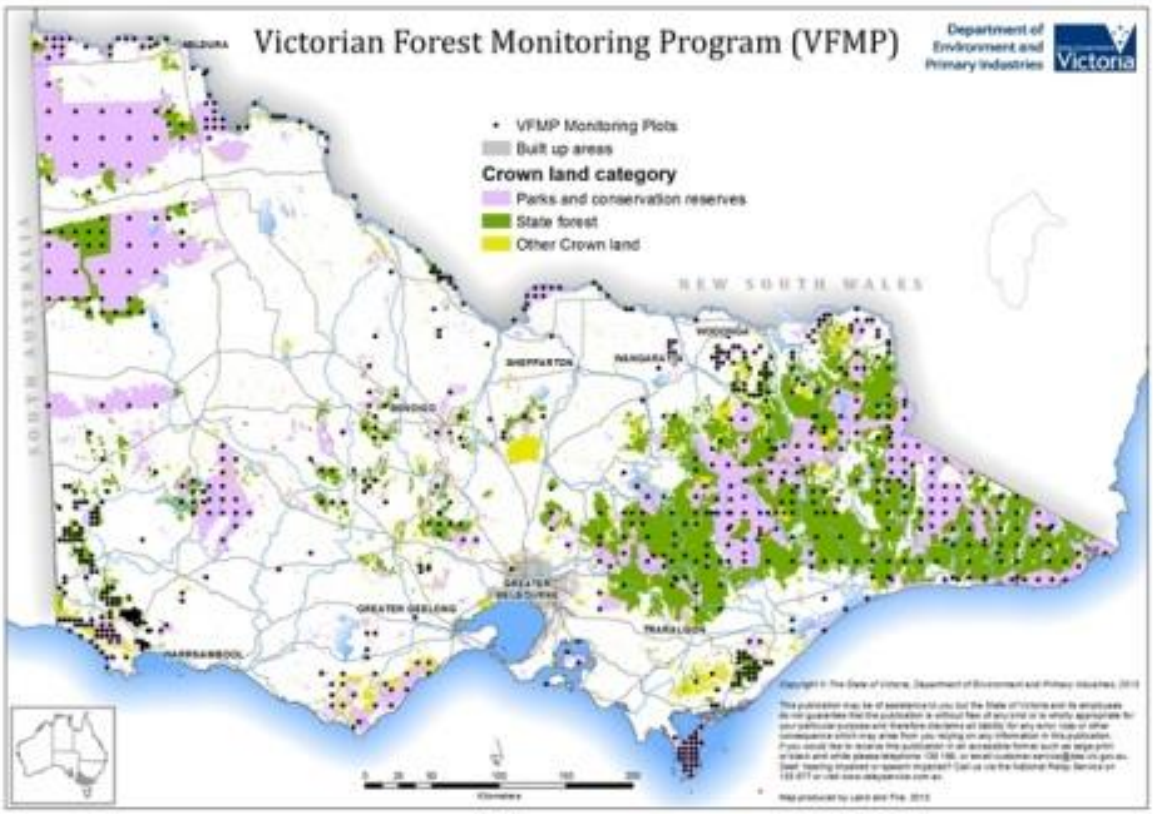
In the absence of a permanent cross tenure monitoring system we are unable to really understand the worth and benefit of our conservation reserve system or measure or benchmark its performance against other public and private tenures. If we seek to advance our knowledge and improve our management practices we must embrace the need for a cross tenure monitoring system.

What type, quality and frequency of data should be collected about biodiversity? Who should be responsible for such a system?

In Victoria , the Department of Environment and Primary Industries (DEPI) has introduced a Victorian forest monitoring program (VFMP) that is based on the Montreal sustainability criteria, refer Figure 11.

The VFMP utilises a network of permanent ground plots located across Victoria's public forests and parks, together with detailed aerial photography and satellite imagery. Together these provide a set of basic attributes (including forest structure, species diversity, canopy condition and soil characteristics) that are used to derive indicators of sustainability and measure changes in the extent, state and condition of its forests (DEPI website).

Figure 11 - The Victorian Forest Monitoring Program



The NSW EPA has recently expressed interest in the development of a forest monitoring systems but it has limited its focus to monitoring the impacts of timber harvesting on State forest. Similarly, the Forestry Corporation has recently developed a forest monitoring system that it is applying to Cypress State forests in its Western Region. Many design elements of this system have been well considered and would be worthy of inclusion in a larger cross tenure version.

Much can also be learnt from advanced countries such as the US and Canada where state of the art permanent forests monitoring systems have been in place for many years.

Advancing best practice knowledge

If the NSW is serious about protecting and enhancing biodiversity it must also invest more heavily in forest science. This science should be directed toward mitigating common biodiversity threats. For example finding effective biological controls for weeds like lantana, pests like feral cats and investing heavily in fire management research.

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