

Comments on ‘Independent Biodiversity Legislation Review Panel’

By Dr Haydn Washington, ecologist and environmental scientist, Visiting Fellow at the Institute of Environmental studies, UNSW, property owner on edge of Wollemi NP, author of ‘Human Dependence on Nature’ (2013) and ‘Demystifying Sustainability’ (2015 forthcoming),

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Introduction

I write this submission both as an environmental scientist and someone who has been involved in environmental NGOs since 1974. I am thus very familiar with the environmental legislation of NSW, and the community action that led to its creation. It is thus with great concern that I see *yet another review* of legislation regarding the protection of the wonderful biodiversity of this state. All previous reviews of such legislation for the last few decades have in fact *weakened* such legislation, though all have put out PR spin to trumpet that this is ‘an improvement’. Given the current anti-nature actions of the current NSW neoliberal government, such as horse-riding in wilderness, proposals by the NRC to log and graze State Conservation Areas, weakening of the already flawed Biodiversity Offset rules, and an attempt to vastly weaken planning laws – there are good grounds to consider that this review is a ‘stalking horse’ to *further weaken* the laws and regulations in NSW that protect biodiversity.

This review needs to be assessed in the light of the biodiversity crisis that the world and Australia are facing. Humanity is in the process of causing the 6th great extinction event that the Earth has faced in the 4 billion year history of life on Earth (Kolbert, 2014). Extinction levels are at least **1000 times** above the fossil record norm (MEA, 2005). If we do not take action by the end of this century then at least **half the world’s biodiversity may be extinct** (Wilson, 2003). In fact, the situation is worse than this, as a 2011 review by Raven et al (2011) suggests that the extinction crisis is so bad that it is more likely to be **two thirds of all species** extinct – unless we take strong and immediate action. Australia has the worst record for mammal extinction in the world, with 27 species extinct in just 200 years (Johnson, 2007; AWC, 2014), and NSW is the leader of the pack in such extinctions. We have radically altered over 95% of the state so that it is no longer in a wilderness condition (WWG, 1986). We have cleared over 50% of our native vegetation and 80% of our rainforests, and fragmented much of the rest. At the same time we have introduced many dozens of feral and exotic species and changed water tables, nutrient cycles and other ecological processes (White, 1997).

At the same time climate change is impacting on biodiversity worldwide (IPCC, 2014), where 18-35% of species are at risk of extinction due to climate change by 2050 (Thomas et al, 2004) and Australia is one of the countries at *major risk*, given our already stressful el-Niño/ la Niña cycle due to the Southern Ocean Oscillation. Biodiversity in Australia, and in particular in NSW, is thus under great stress. There is thus a real risk of a **further cascade of extinctions**. Many people in society and government do not understand *why* biodiversity is important. It is not because small furry animals or majestic plants need to be hugged. It is because biodiversity runs the *ecosystem services on which society depends* (MEA, 2005; Kumar, 2010). We rely on biodiversity to maintain clean air, clean water, run the nutrient cycles, create and maintain soil, provide pollinators for our crops, and to provide the psychological and spiritual benefits all societies seek by harmony with nature. We have *obligate dependence* on nature, not the other way around, and our biodiversity is the

foundation that keeps the free ecosystem services running that we rely on (Washington, 2013).

In the light of the biodiversity extinction crisis we face, this review of biodiversity legislation is a major worry. There is no indication that it *recognises the severity of the situation*, either on the world or the Australian level. As the next section details, there is no mention of the *fundamental drivers* of biodiversity extinction – **overpopulation and overconsumption**. Indeed we know that our state government wants to accelerate both of these, as part of its neoliberal commitment to ‘endless growth’. We know this state government has labelled the environmental laws built up over decades through public lobbying and legal cases as ‘unnecessary green tape’. As we shall see, there are several clear indications in this document that an amalgamation and ‘dumbing down’ of laws is planned. However the document doesn’t actually state *what should be done and why*, instead it uses a process where it ‘asks questions’. This is clearly aimed at receiving criticism by developers of the current legislative system so that it will be ‘streamlined’ – in reality weakened.

Such a review process is very unlikely to lead to improved outcomes for threatened biodiversity in NSW. It is likely to ‘fiddle while Rome burns’ or to actually *reduce* legislative protection. It is thus likely to lead to another cascade of extinctions in NSW. It is sadly another exercise in ‘PR spin’ that ignores conservation biology and even common sense. The same happened in regard to biodiversity offsets policy and also in regard to the NRC Brigalow proposal which was to log and graze a SCA – and yet argued that this would produce ‘positive environmental outcomes’. The current review appears to arise from a neoliberal ideology rather than science (or indeed ethics), and to arise from a complete surrender to the ‘market is God’ mantra. The 2014 State of the World Report ‘Governing for Sustainability’ (Mastny, 2014) by the prestigious Worldwatch Institute saw distinguished author after author noting that neoliberalism was the *ideology holding us back from reaching a truly sustainable future*. The claim that this review is actually designed to *improve* biodiversity protection legislation is hard to believe when the neoliberal government that created the process is not ethically committed to nature (and its intrinsic value), and also supports endless growth and the ‘market is God’ approach. This review thus risks selling out on decades of protection of the native biodiversity of NSW, built up by steady and committed action by the community to protect the natural heritage of this state. The following sections demonstrate why in more detail.

1.0 Key points in ‘Introduction’ and ‘Context’ of the Review

1.1 Failure to identify and discuss the key drivers of extinction – overpopulation and overconsumption

The International Convention on Biodiversity is referred to on p. 2 where it notes that signatories must ‘address the underlying causes of biodiversity loss’. Similarly, on p. 3 it says ‘The panel is particularly interested in facts and evidence’. But is this really the case? Even first year students at university biology can tell you that the key cause of biodiversity loss is

destruction of habitat. Why is habitat being destroyed? Because native vegetation has been and continues to be cleared. Why is this happening? The key drivers are ***population growth and overconsumption of resources.*** Yet this review does not mention either issue, and certainly does not discuss how to legislatively address either. More people means more impact, more people living a life of high consumption means more cars, more roads, more industrial production and pollution and more environmental impact on biodiversity. The ‘consumer lifestyle’ requires more industrial growth, more pollution and more waste. Pollution and waste (e.g. plastic pollution) are also escalating threats to biodiversity.

However, the state government is 100% committed to endless growth in both population and consumption. This is usually justified by ‘growth is good for everyone. However, this is delusion not reality. It is not good for the biodiversity of NSW but disastrous. If it continues then species extinctions will not just stay the same, they will accelerate. At the 2013 Fenner Conference on the Environment (at which I spoke on the problem of denial, Washington, 2014), speaker after speaker explained that increasing Australia’s population would impact negatively on our biodiversity. There is a very strong correlation between extinction and increasing population in Australia. Prof Chris Dickman (2014) noted at the 2013 Fenner Conference on the Environment in Canberra that for terrestrial vertebrates: ‘almost one (0.95) vertebrate species has become extinct with every additional million people since 1950’. In other words, for each million people we add in Australia *another terrestrial invertebrate will go extinct.* Yet the NSW government in documents such as the ‘Sydney Metropolitan Strategy’ not only note that Sydney’s population will grow by several million – *they support it.* There are no plans by the NSW government to control population, nor sadly by the Commonwealth government federally. The Sustainable Population Strategy of the previous Labor government essentially decided it was all too hard, and came up with no solutions.

If the impact of NSW’s increasing population is not considered in the review, nor our wasteful and over-consumptive lifestyle, there is the question of the impact of the Planning review. We know that the government’s White Paper on this was ***completely pro-development and anti-nature.*** Biodiversity will not flourish under a planning system that cuts out the principles of ESD (as is being attempted) and makes the only object of the act to ‘promote economic growth’, as they attempted (and presumably still plan to try to do again). This has thankfully not yet passed the Parliament. All the drivers of *unsustainability* and biodiversity decline are thus being ***championed*** by the government that is conducting this review. It promotes increasing population, it supports increasing consumption, and it is seeking to weaken the planning laws that have protected (to some extent) the biodiversity of NSW from rampant development. This review is similarly likely to champion the government’s ‘anti-nature’ agenda, to the impoverishment of future Australians. Certainly the questions in the review are ‘Dorothy Dixers’ designed to provide ammunition to all those who seek to weaken biodiversity legislation so they can develop anywhere without any regulations.

1.2 Terms of reference *biased* in Introduction

The introduction on p. 1 notes the TOR for the review are:

The term of reference set out the scope of the review and the NSW Government's objective to establish a simpler, streamlined and more effective legislation that will:

- ☐ *facilitate the conservation of biological diversity*
- ☐ *support sustainable development*
- ☐ *reduce red tape*

This translates as classic 'Yes Minister' speak for *radically changing and weakening legislation*. We have already seen that the review ignores the key drivers of loss of biodiversity, so the TOR to 'facilitate the conservation of biological diversity' *cannot be met* if these drivers are not considered. A 'simpler, streamlined and more effective legislation' means of course more effective *for developers* to develop, not to protect biodiversity. Supporting sustainable development should mean supporting the 4 legislative principles spelled out in various NSW Acts. Yet this government is trying to cut these principles of ESD out of the planning legislation. It also clearly **does not** support the precautionary principle or intergenerational equity. This government supports 'development' by developers first and foremost, while sustainability is just a tokenistic term attached, largely because Australia has signed the international Convention, and thus states are obliged to say something consistent with this. The TORs *assume right from the start* that there *is* in fact too much 'red tape' that needs to be reduced. This is argument by 'Bulverism' as it assumes something and then puts up arguments to show why it is so. If the review was truly 'independent' it would consider if there *was* actually 'too much' red tape and whether this could be reduced this without compromising the protection of biodiversity. The *bias* here is clear, that some legislation will be cut as it is 'assumed' to be unnecessary. Given that the government seems to deny the critical seriousness of the extinction crisis, and certainly ignores the key drivers of extinction (overpopulation and overconsumption) the review cannot meet the first two TORs and the real aim would seem to lie in the last one: *cutting legislation*. This is not being done to strengthen the protection of biodiversity, it is being done to appease developers who don't want to have to worry about this or that 'damn little threatened species'.

1.3 Focus on developers first, people second, nature last

Page 1 in the introduction notes:

The review will test whether the current institutional, policy and legislative framework is delivering efficient outcomes for government, business and the community.

However, if TOR1 means anything (and the title of the document is meant to be about biodiversity *conservation*) then the review needs to be focused on ***ensuring protection for***

biodiversity and nature – a term singularly absent in the above. This clear anthropocentrism shows that the focus of the review is not on ensuring biodiversity protection, but rather on appeasing developers.

Page 1 also notes:

The review will also look at how this system interacts with the planning system. The management of national parks or other public lands will not be assessed in this review.

However such a distinction is artificial as these are key aspects of protecting biodiversity. In fact the current NRC Brigalow proposal to log and graze State Conservation Areas is major attack on SCAs, seeking to turn them into extractive reserves (see my submission attached as appendix). Similarly, the proposed changes to planning laws would impact the state's biodiversity hugely for the worse. If the review of TOR1 is serious then it has to consider such attacks on legislation and the regulatory systems that protect biodiversity.

1.4 Inadequate discussion of human dependence on biodiversity

Society is ***completely dependent*** on nature to survive (not the other way around). It is obligatory dependence, we don't have a choice as that is how nature works. The review notes glibly on p. 2 that 'Biodiversity is vital in supporting human life on Earth'. However, as I detail in my book 'Human Dependence on Nature' (Washington, 2013) we ***completely rely*** on biodiversity for the ecosystem services that allow society to exist and continue. We are also massively degrading these ecosystem services so that the Millennium Ecosystem Assessment in 2005 noted that we were degrading or using unsustainably 60% of all ecosystem services (MEA, 2005). The document notes also 'Biodiversity provides important economic benefits and is also a defining feature of our heritage'. Nature is *more* than an 'important economic benefit' it is the basis for society's existence and the economy that operates within society. Biodiversity is thus not some cuddly animal 'out there' that our children want to see wildlife documentaries about, it is the foundation of existence for our society, within which we operate an economy. Indeed, the foundation of the continued existence of the human species. If this ecological reality was understood then the extinction crisis would be seen as not just a major threat but ***a catastrophe in the making***. This review generally ignores the extreme stakes involved and trivialises the problem.

1.5 Review unlikely to meet the goals of the International Convention on Biodiversity

The convention goals are listed on p. 2 in 'Context':

- *address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society*
- *reduce the direct pressures on biodiversity and promote sustainable use*

- *improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity*
- *enhance the benefits to all from biodiversity and ecosystem services*
- *enhance implementation through participatory planning, knowledge management and capacity building.*

As noted, this government doesn't address the underlying causes (population or consumption) or reduce the direct pressures of land clearing (about to weaken native vegetation clearing laws). The NSW government is thus failing to meet the goals of the Convention, and this review is ***likely to increase that failure*** by weakening what laws we do have currently.

1.6 Failure to acknowledge ongoing government failure on biodiversity

Page 2 notes:

The New South Wales (NSW) Government's role in biodiversity conservation has, over the past 40 years, evolved to reflect changing community concerns and values. The legislative and policy framework in NSW has tried numerous mechanisms to address biodiversity decline and to maintain healthy landscapes.

This fails to acknowledge the *ongoing failure at government level* to halt or even slow the loss of biodiversity. Partly the reason is inadvertently clear in the statement above. Policy was **not** developed first and foremost to *protect biodiversity*, it was to reflect 'changing community concerns and values' of the time. In other words it was *dictated by politics and pressure*, not the need to protect biodiversity. Virtually every review in the last few decades has resulted in a weakening of laws to protect biodiversity, so it is ingenuous for the government and panel to say 'we tried different mechanisms' when in fact governments have systematically weakened protection due to political pressure, and this continues in the current review. To mention the native vegetation clearing laws on p. 2 is a case in point, as the government is currently planning to weaken these greatly.

1.7 Overarching issues

Under 'Context' on p. 3 the review asks for input on 4 overarching issues:

1. what elements of the current framework are working and not working?
2. where there is duplication of legislative and regulatory requirements?
3. where there are gaps (for example, aspects of biodiversity that are not being dealt with including ecosystem services, landscape
4. how legislation should deal with trade-offs

Other sections go into these in more detail, but in summary:

- 1) Ignoring the fundamental drivers of biodiversity loss – overpopulation and overconsumption – is not working (see earlier). These are not even mentioned in the review document. Similarly, continually reviewing and weakening the system and laws is not working, and this review will make this worse. Reducing resources to the NPWS to manage the national parks estate will not help, nor will attempts such as the current NRC Brigalow report that seeks to turn State Conservation Areas into glorified extractive reserves for logging and grazing. Weakening native vegetation clearance laws will not help but will instead accelerate extinction, yet the government is about to do this. Letting horse-riding into wilderness areas will not help, nor shooting into national parks, yet the government is doing the first and attempted the second (stopped only by massive community protest).
- 2) Point 2 is a blatant attempt to weaken environmental legislation under the guise of cutting red or ‘green’ tape. Having state and Federal laws **improves the already weak laws that protect biodiversity**. At the state level, biodiversity issues *get more attention* than at Federal level, hence we need both. If we remove state biodiversity laws then further extinctions will follow. Such laws are not red or green tape, they are **important safeguards** and reality checks to what might be missed at the Federal level.
- 3) Yes there are key gaps, as noted elsewhere, the NSW government wishes to grow the State’s economy and population and consumption forever. Yet like planet Earth, the State of NSW is **finite**, so more people and more development means more stress on ecosystems and more extinctions. Similarly, NSW faces grave climate change impacts on biodiversity, yet neither the state nor Federal governments are taking serious steps to reduce their carbon footprints, since they are in collective climate change denial (Washington and Cook, 2011).
- 4) Accepting trade-offs is accepting the cumulative impact of a ‘death by a thousand cuts’ and hence continuing further decline of biodiversity. We have a biodiversity extinction crisis *because* we assume with each decade that we can make yet more trade-offs and degrade nature ‘just a bit more’. As my submission on biodiversity offsets showed (attached), the idea of ‘offsets’ means you accept that one of the two similar areas of biodiversity will be destroyed. Any workable biodiversity strategy must now **go past trade-offs** to accept that we need to **keep all remaining native biodiversity** and indeed connect remaining natural areas and *expand* the area of native vegetation through restoring areas. The ‘commodification’ of nature, and assuming it is like a free market system - where bits can be traded and ‘offset’ for supposed social gains - is precisely *why we have* a biodiversity crisis.

2.0 Theme 1: Objects and principles for biodiversity conservation

p. 4 notes 4 questions the review is ‘primarily interested in’:

- 1) Should there be an aspirational goal for biodiversity conservation?
- 2) 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?
- 3) To what extent are the current objects being met?
- 4) Could the objects of the current laws be simplified and integrated? If so, how?

In response to these I suggest:

- 1) Yes there should be an ‘aspirational’ goal. That goal should be that there is ***no further biodiversity loss in NSW*** because we take the drivers of extinction seriously and address them. The key drivers of extinction - overpopulation and overconsumption – must be addressed. We also need a ***vision of restoring much of the native vegetation*** that has been cleared or degraded. It has been noted internationally that for long-term protection, ***half*** of all land needs to be protected for nature (Schmiegelow et al 2006). That means we need to restore the native vegetation of large areas of the state and link up other areas by corridors – essential in a climate change world of rising temperatures and species migration. The aspirational goal should also include an *active* climate change policy on both mitigation and adaptation (not just the latter) rather than active denial as at present by both state and Federal governments.
- 2) The existing legislative objects will not be improved by removing ESD principles from legislation, as this government is trying for planning laws. Rather than the weakening that seems to be being attempted behind the scenes in this process, such objects ***need to be strengthened***. The missing objects in legislation are any serious program to deal with climate change, and any comprehensive program to connect areas of native veg and increase the extent of native veg across the state.
- 3) The current objects are not being met because a neoliberal government is bent purely on endless growth and attributes no value to ecosystem services, let alone that nature has *intrinsic value* and a right to exist for itself. The attempt to remove the ESD principles in the planning laws demonstrates this perfectly.
- 4) Any attempt to integrate or simply the current laws is clearly a *code for weakening them*. We have seen this in NSW with every review of such laws over the last few decades. The review is dressing up this clear agenda with PR ‘weasel words’ that attempt to make it sound as if what is proposed is a strengthening rather than a weakening. This review is supposedly ‘independent’, but if it was truly independent and based on environmental science, it would make some of the points I list here. It certainly would not fail to explain why action is needed. Instead the review provides Dorothy Dixier questions designed for the developer lobby to push for weakening the laws we have.

3.0 Theme 2 Conservation Action

3.1 Weakening recovery plans

P. 5 states:

Threatened species recovery programs in Australia and overseas are broadly similar and often involve mandatory preparation of species recovery plans. Over the past decade there has been a gradual shift by governments to remove these requirements and establish programs that set clear priorities and allow greater flexibility in management approaches.

Having been involved in lobbying for the original Threatened Species Conservation Act, the reality was that recovery planning was ***never given the resources it needed*** – and this has got worse. Now we see yet another indication that resourcing of recovery plans will be decreased yet again. This will justified as being ‘more flexible’, but this is just spin. If resourcing of recovery plans declines yet again then extinctions will inevitably increase.

3.2 ‘Save our Species’ program

The Save Our Species program is trumpeted on p. 5 of the review, but seems mainly window dressing, with only \$4.8 million in funded projects as shown on the OEH website. Also in regard to ‘joining a conservation group’ in the website for this program it suggests joining Landcare or Greening Australia. It singularly *fails to mention the existence* of the Nature Conservation Council of NSW and its over 100 member groups across the state (showing clear bias). The NCC is the umbrella body of such groups and hence the public should be informed of its existence.

3.3 Questions asked in theme

It asks:

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?

We ***need regulations and laws to protect biodiversity*** and we need the laws to be applied and *taken to court* when broken. We need **both a stick and a carrot**. As a landowner next to Wollemi NP myself, clearly there could be ways to induce greater conservation action, such as making it much easier to get a voluntary conservation agreement (VCA), and to have rates reduced by local government for areas of a property put under a VCA, by having small grants available to help conservation action, such as fencing off important areas for biodiversity, etc. Part of the reason the current system is not very effective as it has been a *toothless tiger*,

when people break the law they are rarely taken to court, for this costs the government money to do so. Re question 3, biobanking should have *very little or no role*. Biobanking should not be a key link to private land conservation, as this just *justifies further clearing and biodiversity decline*. See my detailed submission on the proposed biobanking changes (attaches as appendix).

Question 4 asks how the government should determine its priorities for funding. I suggest:

- 1) keep national parks and SCAs strong and *for conservation* - not logging and grazing (or mining)
- 2) assess and protect roadside vegetation properly across the state. There is as much roadside veg as land in national parks, yet it is not managed properly for biodiversity conservation.
- 3) give rate relief for VCA agreements on private land and promote them strongly through all media

Question 5 asks how effectiveness can be *monitored*. In essence, effectiveness can be assessed by monitoring *extent and quality of native vegetation* across the state and how fragmented or connected it is. In addition how well protected are our **wilderness** and wild lands being increasingly impacted on my activities such as horse-riding, logging or grazing? Wilderness is of key importance to the long-term conservation of biodiversity in Australia (Mackey et al, 1998). Similarly, an *increasing ecological footprint* for the state indicates ongoing problems, and so needs to be monitored and reported regularly. A slowing state population, moving to a stable level, would be a positive indicator, yet this government is promoting further growth (always).

Question 6 asks again about trade-offs. There should *not be any trade-offs* as they are an acceptance of decline in biodiversity. If we stabilise our population, reduce consumption, connect native veg and revegetate some areas we don't NEED trade-offs. Trade-offs mean further loss of native vegetation yet biogeography tells us that we need to keep large areas of native veg to retain biodiversity in the long term.

Question 7 asks if the system is 'looking forward'. To be cynical, this is *jargon* for weakening the system so developers can make money from degrading natural areas further. The strategy behind this review is not looking forward but taking us back to the bad old days of exploitation first, biodiversity a long way second (if at all).

Question 8 asks about current practice vs. legislation. However, the government has *not enforced* most environmental legislation, so it has to some extent been a toothless tiger and gets ignored. Hence current practice continues, about to be made worse by weakening native veg laws as the government is proposing, and the attempt to weaken planning laws.

4.0 Theme 3 – Conservation in Land Use Planning

p. 7 notes:

Strategic planning can support greater certainty to developers, landowners and the community about how development and conservation objectives will be balanced. It can also streamline regulatory processes at both a state and national level.

‘Balance’ is a term that has been twisted by developers for decades to justify more and more development so that they can make a profit (Washington, 2015). The balance has *always been in favour of developers* and hence we have a biodiversity crisis in Australia. We need *less development* not more, if we are to turn around extinction.

p. 7 also notes:

Biodiversity certification offers planning authorities a streamlined biodiversity assessment process for areas marked for future development at the strategic planning stage, along with a range of secure options for offsetting impacts on biodiversity. It identifies areas of high conservation value at a landscape scale and protects them, as well as identifying areas suitable for development

This is a big claim, without much evidence to lend it credence. It actually offers a future of a ‘death by a thousand cuts’, as if you don’t protect *all* remaining native veg then extinctions will continue. Such a process above may *slow* extinction slightly by avoiding the destruction of biodiversity hot spots but ignores the lessons of biogeography, that you need the large areas of native veg. The data supporting the assessment is also limited, hence conclusions can be provisional only. Certification and offsets are presented as a ‘key strategy’ to solve extinction, yet in reality are more likely a recipe for disaster (see my detailed submission on biodiversity offsets attached).

Question 1 asks about the effectiveness of strategic planning systems. Clearly they are ineffective when they ignore the drivers of overpopulation and overconsumption, and ineffective given the government is seeking to weaken planning laws as well as native veg laws.

Question 2 asks ‘How effective are current arrangements for delivering strategic outcomes for biodiversity and enhancing ecosystem services? How can they be improved?’. Current arrangements are not effective since laws are weak and often not enforced, and the government is seeking to weaken them even further and weaken the biodiversity offsets (which already have problems) even more also.

Question 3 asks ‘How should the effectiveness of strategic planning approaches be monitored and evaluated?’. Well, firstly one must realise that strategic planning is a *buzz word* that involves biodiversity certification and offsets, both *flawed fundamentally* as well as

in operation. We need **conservation biology planning** that considers biogeography and the need to keep and indeed *expand* the current native veg we have. Using buzz words that sound good but in reality offer developers open slather is neither strategic nor planning. It is denial of the problem and a failure to provide a workable solution.

5.0 Theme 4: Conservation in development approval processes

Much of this section discusses offsets, so I repeat below a section from my submission on the proposed changes (attached as appendix).

For a start, the whole idea of ‘biodiversity offsets’ as originally proposed was questionable ecologically in terms of long-term survival of the State’s unique biodiversity. In essence the current policy (not the new draft policy) meant that at the start you can have *two* areas of similar (like for like) biodiversity, while after the development occurs, you will have only *one* left (which is supposedly better protected). This ignores two key aspects of ecological health and integrity:

- 1) **Biogeography** tells us that the larger the area the more species can survive there viably in the long term. Thus if an area is twice the size it can viably protect 10% more species over the long term (Wilson, 1988). Hence reducing the area of similar habitat will just ensure that less species will survive in the long term.
- 2) Conservation ecology is based on the fact you need more than just ‘species’ protected, you need ecosystem diversity and **genetic diversity within species**. That means you need to keep extensive populations within the same species to maintain that genetic diversity and the viability of the species over time. Thus losing one area of ‘like for like’ habitat each time an ‘offset’ is created is degrading the genetic diversity of that species. For many threatened native species to survive in the long term, it is essential to keep all (or at least most) of the genetic populations within that species. Just keeping certain areas of that native species and destroying other areas will jeopardise the survival and viability of such species in the long term.

Biodiversity protection has for long been based on ‘CAR’ – **comprehensive, adequate and representative**. The current biodiversity offsets protection scheme means that biodiversity in NSW becomes less comprehensive, less adequate in terms of long term viability and less representative in terms of genetic diversity. The current biodiversity offsets scheme thus fails the CAR test.

The comments above are made in the light of the current ‘like for like’ offsets policy. However, poor though the existing scheme is, the new proposed policy totally **abandons the commitments of the existing offsets policy**. This new policy will facilitate a further ‘cascade of extinctions’ for biodiversity in NSW.

p. 8 also refers to *cumulative impacts*. Cumulative impacts on biodiversity are the end result of the endless growth myth that the state government seems to support. They are also the result of an endless series of calls by developers for ‘balance’ which means that each decade we lose a bit more, then another bit more, and so it goes on. Cumulative impacts are a major cause of extinction, yet given the subtext of the government’s review is seeking to weaken existing laws, it is hard to see how the review will improve this?

p. 8 also notes: ‘To improve transparency and consistency, governments are moving to approaches that use more objective methodologies, underpinned by scientific data’. This is cynical PR at its worst. This government has sacked many of its scientists. It states that it ‘believes in science’, but when the science doesn’t support their neoliberal ideology it in fact gets rid of the scientists. Marine reserves are an example. Similarly, the NRC Brigalow report is definitely **not objective** and twists ecological science to an astonishing degree (see my separate 16 page submission attached). It is ideology dressed up as science. To pretend that the NSW government takes action on the basis of environmental science is very far from the truth. its current anti-nature attitude is highly ideological and many government members are in denial of the environmental and climate crises.

Question 1 asks about ‘inconsistent assessment processes’. This is a blatant attempt to weaken laws under the pretence of ‘rationalising’ the legislation. The result will not be ‘harmony’ it will be weaker laws that allow developers to develop more easily without consideration to biodiversity loss. This will be excused by the ‘magic’ of offsets and the magic of studying it through ‘adaptive management’. Neither magic will halt extinction, and both are part of denial of the problem.

Question 2 asks about having a single integrated approach to development approval. No, while theoretically possible, any review by this government will inevitably weaken what laws we do have to protect nature. This is PR spin, sounding great but hiding the real intention involved.

Question 3 asks whether biodiversity assessment ‘appropriately accommodates social and economic values’. This is another Bulverist argument, as **it assumes that they should**. They should **not**, laws to protect biodiversity and nature should NOT accommodate social and economic values - that is why we have an environmental crisis. To do so will accelerate biodiversity decline even more. Such accommodation is a very clear weakening of laws first and foremost **meant to protect biodiversity**. If such changes were made, many developments would be approved that are disastrous for biodiversity as they will be said to have ‘high social and economic value’. That is not the point, we have a biodiversity crisis this century where *more than half of life may go extinct*. We need to protect biodiversity **irrespective** of whether a pressure group that makes donations to political parties doesn’t like it. The use of such terminology is becoming more and more common with this government and basically shows their priorities – *business first, community second, nature last*.

Question 4 asks ‘is there utility in specifically protecting these entities (threatened species) through the regulatory system?’. This clearly indicates the subtext inherent in this review. It seems to be asking the public whether it’s *worth protecting* threatened species and populations. Some developers will of course will say ‘no’ - because there is economic value *to them* in not doing so. **Yes there is a point in doing so, we NEED regulation** to control rampant development that is sending species extinct. Hence we need our state TSC Act and regulations to stay to protect threatened species and ecosystems.

Question 6 shows the inherent bias in this review. It asks:

To what extent has the current regulatory system resulted in lost development opportunities and/or prevented innovative land management practices?

This again is a Dorothy Dixier begging developers to list all the development opportunities lost because of some ‘silly little animal or plant’ that happens to be threatened. If our current environment laws occasionally stopped development, then that is a measure of an *effective law*. All development is NOT good, it is the cause of the biodiversity crisis that ultimately threatens our society’s continued existence. Some development opportunities *should* indeed be lost and never go ahead due to their serious and unsustainable environmental impacts. ‘Innovative land management’ in the review is just a code for exploitation and extractive activities, such as those proposed by the NRC for SCAs in the Brigalow area.

Question 7 asks what impacts cannot be offset. I would suggest any activity that sends an ecosystem, species or population extinct or that significantly weakens ecosystem services. It then asks ‘What is the relevance of social and economic benefits of projects in considering these impacts?’. Social and economic benefits *have absolutely NO relevance to protecting the biodiversity upon which society relies*. This is ideology dressed up as science (or even somehow ethics!) to justify more development and hence ultimately more extinction. We cannot keep trading off the biodiversity that supports our society because some developer wants to make money out of bulldozing an area and there may be a marginal social benefit involved. Biodiversity is the literal life-blood that supports society, **a sustainable biosphere is not negotiable**.

Question 8 asks how offsets can be more strategically located. The answer is by reducing the pressures so offsets are not needed.

Question 9 asks ‘Are there areas currently regulated that would be better left to self-regulatory codes of practice or accreditation schemes?’. This is the holy grail of neoliberalism and the ‘market as God’ approach. **Self-accreditation doesn’t work nor do codes of practice**, we need *regulations by a government body* and we need court action when people break the laws. If we are serious about the extinction crisis then we cannot afford the denial inherent in this question and in much else in the review.

6.0 Theme 6 – Information Provisions

Question 1 asks:

What information should be generated about the different kinds of value (for example, monetary and intrinsic value) of biodiversity and other natural assets in NSW?

Sustainability and environmental science increasingly recognise the cultural, psychological and spiritual values associated with biodiversity (Washington, 2015 forthcoming), indeed the Millennium Ecosystem Assessment (MEA, 2005) recognised these as part of ecosystem services, but in NSW we don't record any of these. The intrinsic values and 'Rights of Nature' have been recognized in the 'World Conservation Strategy' (WCS, 1980) and in the Earth Charter (2000). The 'Millennium Ecosystem Assessment' (MEA, 2005) and the UNEP project 'The Economics of Ecosystems and Biodiversity' (Kumar, 2010) also both acknowledge it, yet it **goes without recognition in NSW legislation** – or in this review. In regard to value, *wilderness value* is another important value not recognised by this government, which has ignored the precautionary principle (and research that indicates the damage this causes) and allowed horse-riding in wilderness areas in NSW.

Question 2 is about 'quality of data'. The biggest problem is that biodiversity assessments of developments are **done by paid consultants** (often christened 'biostitutes') and not by an independent organisation that developers pay into to do this work. The work of some consultants is thus *inherently biased* in many cases, and sometimes says what developers want to hear. The scientific data in such EISs is thus questionable at best and completely flawed at worst. The EA for the proposed Coalpac open cut coal mine near Lithgow is a case in point, where it missed 100 plant species including the threatened *Persoonia marginata*, and also radically misrepresented climate science.

Question 3 asks if data about biodiversity is 'credible and assessable'. The answer is **no**, much of it is shrouded in jargon such as 'non-linear change' for ecosystem collapse. Most Australians would have no idea that more than half the world's biodiversity may be extinct by 2100 and that Australia has the worst mammal extinction in the world. Our education system and the media and government 'spin' are to blame.

Question 4 asks about the effectiveness of the threatened species process. I have professionally nominated (successfully) for listing 3 plant species and one EEC under the TSC Act. I think it is effective and the Scientific Community does a good job. **It is the best we have and should not be weakened.**

Question 5 is a very odd question asking if threatened species listing decisions should be *decoupled from conservation actions*! Why on Earth would the paper be raising this cold without any discussion to suggest any possible reason? There is no explanation as to why this could possibly be a plus. Clearly this question is there to allow those critical of threatened species to try and decouple the two and demonstrates the review's apparent bias.

Question 6 is another Dorothy Dixier for those who want to remove state legislation. The question suggests that having state and national lists causes confusion and ‘regulatory burden’. It is clearly a biased question. It’s actually **not a problem**, causes minimal confusion and **provides greater protection for biodiversity** as the state system provides far greater consideration than the Federal one does. *We need both*. They should not be ‘rationalised’ other than what is on state lists should be considered for national ones (there may be cases where a species is threatened in one state but not in others) and all species present on the national list clearly must be on the state one (if in that state).

Question 7 is about critical habitat and whether it is useful. **Yes it is useful** and should be expanded in application.

Question 8 asks if private conservation data should be collected and how. Yes ideally it should be but most not be cost or major time cost for landholders. Possibly universities could be encouraged to collect such data in research projects?

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Appendix 1

Submission on NSW Government ‘Draft NSW Biodiversity Offsets Policy for Major Projects’ and ‘Draft Framework for Biodiversity Assessment’

By Dr Haydn Washington, Hon. Sec. Colo Committee

Plant ecologist and environmental scientist, Visiting Fellow at the University of NSW and author of 6 books on environmental issues, including ‘Human Dependence on Nature’ in 2013

May 7th, 2014

Introduction – situating this draft policy within the biodiversity extinction crisis

I write this submission both as an environmental scientist and someone who has been involved in environmental NGOs since 1974. I am thus very familiar with the environmental legislation of NSW, and the community action that led to its creation. It is thus with great concern that I see how this policy is a retrograde step in terms of the protection of the wonderful biodiversity of this state.

This policy needs to be assessed in the light of the biodiversity crisis the world and Australia are facing. Humanity is in the process of *causing* the 6th great extinction event that the Earth has faced in the 4 billion year history of life on Earth (Kolbert, 2014). Extinction levels are at least **1000 times** above the fossil record norm (MEA, 2005). If we do not take action by the end of this century **half the world’s biodiversity may be extinct** (Wilson, 2003). Australia has the worst record for mammal extinction in the world, with 27 species extinct in just 200 years (Johnson, 2007; AWC, 2014), and NSW is the leader of the pack in such extinctions. We have radically altered over 95% of the state so that it is no longer in a wilderness condition (WWG, 1986). This is because we have cleared over 50% of our native vegetation and 80% of our rainforests, and fragmented much of the rest. At the same time we have introduced many dozens of feral and exotic species and changed water tables, nutrient cycles and other ecological processes (White, 1997).

At the same time climate change is impacting on biodiversity worldwide (IPCC, 2014), where 18-35% of species are at risk of extinction due to climate change by 2050 (Thomas et al, 2004) and Australia is one of the countries at major risk, given our already stressful el-Niño/ la Niña cycle due to the Southern Ocean Oscillation. Biodiversity in Australia, and in particular in NSW, is thus under great stress. There is thus a real risk of a further cascade of extinctions. Many people in society and government do not understand *why* biodiversity is important. It is not because small furry animals or majestic plants need to be hugged. It is because biodiversity runs the *ecosystem services* on which society depends (MEA, 2005; Kumar, 2010). We rely on biodiversity to maintain clean air, clean water, run the nutrient cycles, create and maintain soil, provide pollinators for our crops, and to provide the psychological and spiritual benefits all societies seek by harmony with nature. We have

obligate dependence on nature, not the other way around, and our biodiversity is the foundation that keeps running the free ecosystem services we rely on (Washington, 2013).

In the light of the biodiversity extinction crisis we face, this draft policy on biodiversity offsets is a ***recipe for disaster***. It will not lead to improved outcomes for threatened biodiversity. It is likely to lead to another cascade of extinctions in NSW. It is an exercise in PR spin that ignores conservation biology and even common sense. It is based on neoliberal ideology rather than science or ethics, and is a complete surrender to the ‘market is God’ mantra. The pretence that this policy is actually an *improvement* and a good thing is a blatant denial of reality. This policy is selling out on decades of protection of the native biodiversity of NSW. The following sections demonstrate why.

1.0 Problems with existing biodiversity offsets policy

For a start, the whole idea of ‘biodiversity offsets’ as originally proposed was questionable ecologically in terms of long-term survival of the State’s unique biodiversity. In essence the current policy (not the new draft policy) meant that at the start you can have *two* areas of similar (like for like) biodiversity, while after the development occurs, you will have only *one* left (which is supposedly better protected). This ignores two key aspects of ecological health and integrity:

- 3) ***Biogeography*** tells us that the larger the area the more species can survive there viably in the long term. Thus if an area is twice the size it can viably protect 10% more species over the long term (Wilson, 1988). Hence reducing the area of similar habitat will just ensure that less species will survive in the long term.
- 4) Conservation ecology is based on the fact you need more than just ‘species’ protected, you need ecosystem diversity and ***genetic diversity within species***. That means you need to keep extensive populations within the same species to maintain that genetic diversity and the viability of the species over time. Thus losing one area of ‘like for like’ habitat each time an ‘offset’ is created is degrading the genetic diversity of that species. For many threatened native species to survive in the long term, it is essential to keep all (or at least most) of the genetic populations within that species. Just keeping certain areas of that native species and destroying other areas will jeopardise the survival and viability of such species in the long term.

Biodiversity protection has for long been based on ‘CAR’ – **comprehensive, adequate and representative**. The current biodiversity offsets protection scheme means that biodiversity in NSW becomes less comprehensive, less adequate in terms of long term viability and less representative in terms of genetic diversity. The current biodiversity offsets scheme thus fails the CAR test.

The comments above are made in the light of the current ‘like for like’ offsets policy. However, poor though the existing scheme is, the new proposed policy totally **abandons the**

commitments of the existing offsets policy. This new policy will facilitate a further ‘cascade of extinctions’ for biodiversity in NSW.

2.0 Specific problems with the proposed new policy and framework

2.1 Neoliberal market ideology *not* conservation biology

This draft policy is not based on conservation biology or ecology. It is not based on systems or environmental science. As I have written extensively on environmental ethics (Washington, 2006, 2013) it is certainly ***not*** based on environmental ethics. It does not consider nature has *intrinsic value* or rights of its own. It thus runs totally counter to the growing approach of ‘Earth jurisprudence’ (Cullinan, 2003), which argues that to solve the environmental crisis we must acknowledge that nature has rights of its own (as several nations such as Ecuador and Bolivia have stated in their constitutions). It is based on the neoliberal idea of the commodification of nature (Washington, 2012) that nature is just something that can be ‘bought and sold’ in the market. This is made clear in section 9 of the Framework, which states offsets can be carried out by ‘acquisition and retirement of biodiversity credits from the biodiversity register established under Part 7A of the TSC Act’. Figure 1 of the Framework similarly shows clearly a proponent can just buy credits from the market to fulfil their offsets responsibility. This policy is thus ***not*** about science or ethics, it is about the promotion of neoliberal ideology, an ideology dear to the Coalition. It is also about finding other funding for biodiversity programs that are currently paid for under core funding in the budget, and should remain so.

2.2 Abandonment of the principles of ecologically sustainable development

Following the ‘Our Common Future’ report in 1987 (WCED, 1987) and the 1992 Earth Summit and the commitment by governments around the world to Agenda 21, Australia went through a detailed national process to consider and integrate ***ecologically sustainable development*** into the workings of government (Harris and Throsby, 1998). These principles have been integrated into legislation federally and in most states (e.g. in the Environmental Planning and Assessment Act, 1979) (Preston, 2006). These principles are commonly noted to be in the Intergovernmental Agreement on the Environment (IGAE) (1992) as:

- 3.5.1 Precautionary principle - where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:
 - i. careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and
 - ii. an assessment of the risk-weighted consequences of various options.
- 3.5.2 Intergenerational equity - the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.

3.5.3 Conservation of biological diversity and ecological integrity - conservation of biological diversity and ecological integrity should be a fundamental consideration.

3.5.4 Improved valuation, pricing and incentive mechanisms

This draft policy essentially **abandons steps 1, 2 and 3**. It does not uphold the precautionary principle, since it suggests that making it easier to destroy our native biodiversity may not lead to serious or irreversible damage to the environment. Clearly this is false, as all environmental science studies have shown (e.g. MEA, 2005). It clearly abandons intergenerational equity, since the policy if approved will ensure what we pass on much less biodiversity to future generations. It clearly abandons the conservation of biodiversity and ecological integrity in number 3, since it removes biodiversity as a ‘fundamental consideration’ given it can be ignored under this policy if it has ‘significant overall social or economic benefits’ (p. 7, objective 3). However it also abandons principle of the IGAE, since this is not an ‘improved’ valuation, pricing and incentive mechanism to protect biodiversity. It is the opposite, it is a *retrograde step* that will increase the loss of native biodiversity. The draft policy is first and foremost aimed at making the planning process easier for major project proponents and is clearly contrary to the principles of ecologically sustainable development and to most conceptions of ecological sustainability (Cavagnaro and Curiel, 2012).

Now recently the NSW government has sought in its White Paper on planning to remove the principles for ESD from the Environment Planning and Assessment Act 1979. It stepped back on this attempt due to overwhelming community opposition and lack of support in the upper House. Nevertheless the State Plan and other government documents continue to maintain that the government does support ESD and its principles (as do all other governments at all levels in Australia). NSW did sign the IGAE in 1992 which supports the principles of ESD. However this policy abandons such principles. As we shall see later it may also be in breach of the UN Convention on Biological Diversity, which Australia is a signatory to.

2.3 Abandonment of *real* offsets

The draft policy explicitly allows offset requirements to be reduced or abandoned when they cause a project to be unviable and the project has a significant overall social or economic benefit. These offset ‘discounts’ will be at the discretion of the consent authority. P. 7 of the policy states:

The policy allows the consent authority to reduce offset requirements in certain limited circumstances, where a project’s offset requirements may make the project unviable, and the project can demonstrate significant overall social or economic benefits

Rather than physical offsets, a developer can just pay money to a fund or in fact do nothing in regard to offsets by claiming that *social or economic benefits* outweigh the loss of biodiversity. According to the former Minister for the Environment, Ms Parker media release

of March 20, 2014 ‘our new approach will provide revenue streams to farmers who wish to manage parts of their property for environmental outcomes’. This may mean providing management like weeding and paying farmers to recover degraded endangered ecosystems on their land. This clearly gives biodiversity no real value and is based on the discredited idea of ‘weak sustainability’ where one can trade human and built capital for natural capital (Cavagnaro and Curiel, 2012). This denies ecological reality and denies the need to protect natural capital as they provide the ecosystem services that society relies this (MEA, 2005; Kumar, 2010; Washington, 2013). It is commonly accepted that any *meaningful* idea of long term ‘sustainability’ must mean that all three parts are sustainability are carried out at once, including ecological sustainability, none can be abandoned (Cavagnaro and Curiel, 2012) as this policy does.

Given this is a policy about biodiversity, it is ludicrous for it to suggest that it is acceptable to destroy biodiversity if it provides overall ‘social or economic benefits’. That is why we *have* a biodiversity crisis today. This argument flies in the face of all conservation ecology and attempts over decades to slow and stop the extinction crisis. If the NSW government is seriously going to maintain it is acceptable to destroy its natural environment provided there is ‘*significant overall social or economic benefits*’ then ecological degradation and species extinction will escalate rapidly. NSW would also I believe be in **contravention of the UN Convention on Biodiversity**, which Australia has signed. One cannot simultaneously commit to protecting biodiversity and maintain the argument listed on p. 7 of the policy.

2.4 Abandonment of ‘like for like’

While the ‘like for like’ of the current offset policy may have problems, at least it acknowledged that an offset should aim at protection of the specific biodiversity being destroyed by the proponent. The draft policy is based on the Draft Framework for Biodiversity Assessment. This provides for wide variations in the definition of ‘like for like’ offsets - to such an extent that the concept is almost beyond recognition. The proposed policy effectively abandons this. Instead, it allows the offset to be via mine site rehabilitation (which should already be mandatory under the Mining Act), or by paying money to a ‘Supplementary Measures’ fund. This can be for:

- Actions under a threatened species recovery program
- Actions that contribute to a threat abatement program
- Biodiversity research and survey programs
- Rehabilitating degraded aquatic habitat

Thus an area of unique biodiversity can be destroyed by paying money into a fund to **carry out things that the NSW government should already be doing** – protecting threatened species and carrying out scientific research. The original idea of ‘like for like’, the keystone principle of the biodiversity offsets idea, is thus abandoned in the new draft policy. The draft policy allows for mine site rehabilitation to be attributed biodiversity offset credits. This is effectively impossible to regulate over the long time lag between project approval and

completion. This proposal also does not recognize the poor record of NSW Government regulation of mine rehabilitation to date, nor the ongoing modifications of existing approvals.

It should also be noted that the term ‘supplementary measures’ is a misnomer. These are actually unacceptable alternatives. ‘Supplementary measures’, by definition, augment but do not replace the policy’s (unstated) objective of *protecting endangered biodiversity*

2.5 Failure in clarity about how the system will operate

The draft policy does not have a clear vision, goals or objectives to protect threatened biodiversity. There is no proposed system of ‘red flags/no go zones’ where impacts must be avoided even when local extinctions are an identified impact. It is thus an even messier system than the current offsets system, while also being a far less effective system.

2.6 Failure to consider genetic diversity

Section 1.4 of the Framework makes it clear that genetic diversity will be ignored, as you can only have *ecosystem credits* and *species credits*. Genetic diversity is specifically ignored, which is understandable as the whole offsets process by its nature will decrease genetic diversity. However by ignoring genetic diversity, it is clear that in the long term, the supposed aims of the strategy will fail. As more and more populations of a species disappear, it will steadily decrease the viability and resilience of that species, making extinction more and more likely (especially in a climate change world, Washington and Cook, 2011).

2.7 Failure to ensure that biodiversity offsets are viable into the future

The draft policy fails to show how biodiversity offsets, even when real areas of offset, are to be viable into the future. Objective 2 of the strategy on p. 6 says:

*Biobanking agreements provide security and certainty for offsets, as they ensure adequate funding for offset site management and have clear monitoring and reporting requirements. Such requirements **give the community confidence** that agreed management actions will be undertaken and conservation outcomes achieved.*
(my emphasis)

Why should the community be confident that conservation outcomes will be achieved? How can they be in the long term? There is no creation of a Voluntary Conservation Agreement (VCA) or other covenant on the deed of the property that stops it being cleared. The only protection is by the owner of the offset land been paid some funding to manage it as promised for some (unspecified) time period. If they decide instead one day they wish to clear that area, then presumably they just agree to lose that funding. There is no provision for penalties in the policy if people who provide offsets instead destroy that area at a later time. How can we possibly consider this long term protection? How long will such funding exist for in any case? 50 years? 100 years? In terms of long term protection of the state’s biodiversity even 100 years is inadequate.

2.8 Failure to protect biodiversity ‘in poor condition’

The draft policy provides that biodiversity in ‘very poor condition’ need not be offset (p. 15). This is open to exploitation by proponents who can poorly manage land under their ownership and then claim no offset is required since it is in poor condition.

2.9 Failure to provide red flags for unacceptable activities

The policy does not even have a clear objective of protecting threatened plants and animals. There are no ‘red flags’ so that impacts must be avoided when local extinctions are an identified impact, only Commonwealth listed or critically threatened plants and animals are protected.

2.10 Gross misrepresentation of how easy it is to rehabilitate woodland habitats

The draft policy wrongly believes that threatened woodland habitats can be replanted so that biodiversity credits can even be secured for mine rehabilitation. There is no evidence that rehabilitation can replant endangered ecosystems. The Planning Assessment Commission in 2012 noted for the Coalpac Consolidation Project on p. iii of their report that:

there is no guarantee that mature woodland can develop on rehabilitated areas (there is no example of rehabilitated mature woodland on an open-cut mine in NSW)

This argument, which is accepted by the draft policy, is mining industry PR that reflects their denial of their abysmally poor rehabilitation record.

Conclusion

This draft policy (and associated Framework) is a major departure from previous legislation and policies to *protect biodiversity* in NSW and Australia. It is a major retreat from policies based on what has been learned by conservation biology and environmental science over the last few decades. It is a major abandonment of best practice in terms of protection of our natural heritage. It is a major selling out on our responsibilities to future generations. It represents a total abandonment of the principles of ESD that most Australian governments, including previous NSW governments, have previously been committed to. It seeks to support the discredited idea of ‘weak sustainability’ where the natural capital can be ignored provided there are significant social and economic benefits. Will future generations thank us if we pass on a lot of money but leave them with a biologically devastated world? That is what this policy will contribute towards. The philosophy behind it abandons any conception of environmental ethics or eco-justice. It is motivated purely by a neoliberal ideology where the market is king. It is completely in favour of the developer, where if offsets prove too hard, they can even be omitted. It weakens the meaning of ‘offsets’ to the point where they will become a joke, a farce, just a source of revenue to fund biodiversity action that the government should be taking anyway. Meanwhile the biodiversity of NSW will suffer an

ongoing ‘death by a thousand cuts’. The policy does not even have a vision of protection of biodiversity in NSW, and rightly so, for it will not. It will rapidly escalate a new cascade of extinctions in NSW, where we already have one of the worst records in the world.

This is a fundamentally unsound policy. It is unsound in terms of what is known about environmental science and the protection of the ecosystem services that support our society. It is grossly unsound in terms of its worldview, ethics and values. In the long term it is even unsound *economically*, as it will degrade the state’s biodiversity and the ecosystem services that support our economy. I urge the State government to modify the policy and remove the worst features described above. Government in its best form is about working for a better future. This policy will not lead to a better future, but assist in pushing us towards a biologically impoverished future we hand on to our descendants.

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Appendix 2

An analysis of the ‘Active and Adaptive Management of the Brigalow and Nandewar State Conservation Areas’ by the Natural Resources Commission, NSW Government

By Dr Haydn Washington, plant ecologist, Visiting Fellow, Institute of Environmental Studies, UNSW, author of ‘Human Dependence on Nature’ (2013) and ‘Demystifying Sustainability’ (2015 forthcoming).

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Summary

This report is ideology masquerading as ecology. It shows clear bias throughout, given that the National Resources Commission *wants* to extract resources (a conflict of interest) and is thus not the appropriate organisation to carry out such a study. The reality is this is a report focused on resource extraction of timber (in line with current neoliberal ideology) in national park estate set aside for nature conservation (a State *Conservation Area*). It portrays itself as a report based on ecological science, where the logging will supposedly *improve environmental outcomes*. **It fails to show this**. It twists ecological science and theory (adaptive management) and ESD principles to justify commercial exploitation of these SCAs. Worse, it shows that the NSW government will actually be *paying* (using taxpayer funds) the logging companies to carry out this degradation of the public estate. The report seeks to portray the fact that white cypress forms dense single-species stands as a reason to justify a commercial logging project. This is part of the ecosystem dynamics of this plant community. It does not justify a logging operation, with all the known impacts such as roading, soil erosion and compaction, impact on water catchments, disturbance of wildlife, weed introduction and possible introduction of dieback fungus and other pathogens. Using this logic, then all mountain ash and she-oak forests should be logged. The report notes that the proposal is based on legal advice that ecological thinning is legal provided it is done for the '*primary purpose of providing net positive ecological outcomes*'. **The report does not show this**, it merely twists adaptive management theory to seek to justify resourcism and the logging of national parks estate. The purported science is weak (and contradictory), and net environmental outcomes are far more likely be *negative* than positive. On that basis, the proposal of logging State Conservation Areas should not proceed. This report certainly does not justify logging and grazing of a SCA.

1) History and ideology shaping policy

1.1 Report situated as part of a long-term battle over the meaning of 'conservation'

This proposal to log and graze a State Conservation Area can be seen in the context of an ongoing battle within society over the meaning of 'conservation'. This has been going on for over 100 years, a historical battle of worldviews and ideologies. The idea of 'national parks' came from the US, and built on the writings of Thoreau (1854) and Muir (e.g. 1916). The idea was that parks would firstly *protect natural heritage*, and secondly also be available for human visitation (Washington, 2012). This ecocentric vision of national parks won out over the utilitarian and resourcist view of Gifford Pinchot from the US Forest Service (Oelschlaeger, 1991). The idea that the national park estate was there ***first and foremost to protect nature*** has received wide-spread support around the world and in Australia over many decades. It has been described as the 'best idea America ever had' (PBS, 2009). The report is about State *Conservation Areas*, which are meant to protect nature. However, there have always been commercial forces seeking to exploit the resources supposedly 'locked up' in national parks and SCAs (simply to make money). In the US the 'Wise Use' movement was created by exploiters seeking to get resources in parks (Helvang, 1994; Washington,

2006). In Australia in the 1980s there was a push for ‘multiple use’ to exploit national parks for the same reason (Washington, 2012). This was stopped at the time by public pressure – for Australians quite rightly love their national parks and SCAs. Now, with a neoliberal government (see ‘ideology’ next), we find ourselves with an organisation that *defines itself* as resourcist in its name – the ‘Natural Resources Commission’ (NRC). The NRC is proposing yet another attempt to exploit the national parks estate. This time it is using the mantle of ‘adaptive management’ (see section later) to justify commercial exploitation in the form of logging and grazing. Nothing has changed, this is yet another attempt to exploit nature reserves for commercial activity - just the words are new. This time it is not ‘multiple use’ seeking to justify the exploitation, it is the term ‘active and adaptive management’. These are just camouflage words for logging and grazing of a State Conservation Area, an area set aside to conserve the wonderful natural heritage of NSW.

1.2 ‘Ideology’ dressed up as science

This report is about a proposal for the logging and grazing of a State Conservation Area (SCA). It is not put out by the OEHL, or by the CSIRO or the Ecological Society of Australia, but by the Natural Resources Commission. The NRC seems to see the wonder and diversity of NSW’s natural heritage as merely being ‘resources’. The environmental crisis is commonly accepted by environmental scientists and scholars to be the result of a ‘human supremacy’ (e.g. Crist, 2012; Washington, 2013) an ideology that is intensely anthropocentric and denies that nature has intrinsic value or the right to exist (Rolston, 2012; Cullinan, 2014) other than being a **resource** for human use (resourcism). Professor Eileen Crist (2012) of Virginia Tech summarises the problems of resourcism:

What is deeply repugnant about such a civilization is not its potential for self-annihilation, but its totalitarian conversion of the natural world into a domain of resources to serve a human supremacist way of life, and the consequent destruction of all the intrinsic wealth of its natural places, beings, and elements. “Project Human Takeover” has proceeded acre by acre, island by island, region by region, and continent by continent, reaching its current global apogee with the final loss of wild places and the corollary sixth mass extinction underway.

This ideology runs hand in hand with **neoliberal** ideology, where neoliberalism is a modern politico-economic theory favouring free trade, no control of the free market, privatization, minimal government intervention in business, and reduced public expenditure on social services (Kopnina and Blewitt, 2015). The current State government has a strong neoliberal stance, where all natural resources must be exploited for the good of developers (but not society or future generations). This is in contrast to the *ecocentric* worldview which had led to the creation of our national parks, where the majority of the community believes nature has a *right to exist for itself*, irrespective of whether it is of use to humans (Rolston, 2012; Cullinan, 2014). This Brigalow report clearly comes from a resourcist stance, where the timber in the white cypress forests is seen as ‘just going to waste’ and hence must be harvested. Because these areas are SCAs, the NRC is forced to justify logging, which is clearly seen by most in society as being **out of place in national parks estate** (SCAs are not

national parks but are part of the national parks estate meant to conserve nature). To do this it twists ecological theory such as adaptive management to justify extracting a resource. Adaptive management will be discussed in another section.

Historian Donald Worster (1994) has shown that the history of ecology has been swayed at times by prevailing paradigms (or ideologies). He made a detailed study of equilibria and disequilibria theories within ecology, and pointed out that such theories often *tie in with the worldviews of their promoters*. Using a principle of ‘historicism’, he argues we can ‘approach recent ecological models that dramatize disturbance with a sense of scepticism and independence’ (Worster, 1994). He wonders if they are the ‘mere reflection of **global capitalism and its ideology**’ (my emphasis). Hence the NRC is using adaptive management as a smokescreen to justify logging and grazing in a SCA, something that society decided decades ago was not acceptable. This is highly unprofessional and unethical. The NRC is clearly **not** the correct body to be undertaking such a study – it has *clear prejudice* and a conflict of interest. If this study is seriously expecting the public to accept its claims of ‘positive environmental benefits’ to come out of the logging and grazing of a State Conservation Area, then the study should have been done by CSIRO, or under the auspices of the Ecological Society of Australia, or some similar independent and unprejudiced scientific organisation. An unbiased scientific body could then assess the very weak evidence put forward here that logging and grazing a SCA will have environmental benefits. As a plant ecologist of four decades experience, I conclude the meagre evidence put forward in this report does **not justify this proposal**.

1.3 False argument that proposal is similar to past Aboriginal influence

Humans have influenced ecological communities throughout history. That is an ecological fact (as all species do). They have not in fact ‘shaped’ them. That is anthropocentric ideology based on the ‘Human Mastery’ worldview (Washington, 2006; Rolston, 2012). *Influence* is very different from ‘shaping’, as the latter suggest you are in control and know what you are doing (Washington, 2013). Clearly the global environmental crisis (MEA, 2005) shows humanity does *not* know what it is doing. It is thus not correct to say that past Aboriginal presence ‘shaped’ the landscape. No indigenous peoples created the topography, nor did they evolve the native species present. Influence is thus very different from creation or shaping (as most Aboriginal elders I have raised this with acknowledge). Whatever the past Aboriginal fire history of the Brigalow area, this **does not justify a logging project** renamed as ‘ecological thinning’, a name that has been applied to give the impression that the proposal is ‘helping nature out’. Aboriginal society lived in balance with ‘country’, they did not log or graze it. They did use fire as a tool, however this proposal is **not** a proposal to change fire regime and use adaptive management to study this in terms of dense cypress stands. That may well be acceptable to research. It is a proposal originating from a resourcist ideology to commercially extract resources from a SCA. It then tags on the (supposedly magic) words of ‘adaptive management’ in the hope that this will allay all concerns (as was similarly tried with horse-riding trials in wilderness areas).

2) Twisting ecological science

2.1 Dense stands of cypress and bullock seen as ‘bad’ when they are *natural* features of this plant community

Some species of trees form dense stands of virtually just one dominant tree species. Cypress can, as can bullock, as the report notes on p. 9. So can mountain ash and Blue Mountains ash. So can other species of casuarina. So can species of grass tree (*Xanthorrhoea* spp). However, we do not see (at least yet) argument that the beautiful mountain ash forests in our national parks in southern Australia should be logged because they are in dense stands. ***Dense stands are the natural characteristics of these species that have evolved to this habitat.*** It is what these species naturally do. Single species stands of some species are a natural part of the natural heritage of NSW. And that may mean that some other species naturally miss out *in that location*. If the NRC truly has a concern about the ecological integrity of this area, based on different fire regimes compared to 200 years ago, then it should carry out an adaptive management study of *changed fire regime* in the SCA – not a commercial extractive industry clearly aimed to provide resources. P. 9 states that altering vegetation is one of the few biophysical elements that land managers can manage. However, *fire* is a far easier element to manage than a major and intrusive logging operation in a SCA. P. 12 refers to the ‘removal of trees and biomass for *improved forest health*’. Undertaking the huge invasive activity of roading, bulldozing, logging and taking out timber trucks is NOT an improvement to forest health, it is environmental degradation. This has been understood by ecologists for hundreds of years (though gets no discussion in this report). This is twisting ecological science in a major way to portray a damaging logging proposal as ‘improving health’. Such ‘spin’ would make any PR company proud.

p. 70 discusses ‘restoring vegetation’ which is listed as a policy in the Management Plan, and seeks to twist this to justify a logging operation on the basis that this is *restoring* a mosaic community that existed previously. This is a major twisting of what ‘restoration’ is normally taken to mean. A restoration activity does not log and graze a SCA, for this is a degrading activity. Restoration is what may take place once the area has been degraded, for example by logging.

2.2 Failure to show that white cypress stands are *bad* for biodiversity or ecological integrity, or that ecological thinning has ecological benefits

The ecological evidence produced to justify logging a SCA is both *meagre and inadequate*. It certainly is not enough to over-ride the precautionary principle (which the NSW government is supposedly committed to). P. 55 (6.4.2) ***fails to establish a strong case*** to show that dense stands of white cypress are in fact deleterious to biodiversity or ecological integrity. It says large stands of white cypress are ‘*thought* to reduce spatial variability and habitat values in some forests’ (quoting Lunt 2006). Being ‘thought’ is not the same as being *shown* to be the case. Similarly, it states later on the same page that ‘a commonly held view’

was that dense stands of cypress reduce groundcover and floristic diversity. Being ‘commonly held’ (we don’t know by whom) is not the same as being *scientifically proven*. In any case, reduced ground cover occurs under she-oak forests and other plant communities (for example rainforests!), where groundcover is reduced *naturally* in that community, and community species number may be low compared to some other communities. Does that mean we should wipe out plant communities with low species number or reduced groundcover? Clearly conservation ecology tells us we ***definitely should not***. In fact the report itself notes that other studies have *challenged the assumptions that dense cypress stands cause reduced species richness*. In fact the report quotes as many studies arguing this as it lists suggesting the assumption. It also notes on p. 56 that dense cypress is important for some native species to protect them from predation, a positive benefit that is then glossed over.

p. 55-56 discuss the fact that vegetation mosaics are good for biodiversity, and clearly this is generally the case. However, that overlooks the fact that within such mosaics there can be, and often are, plant communities with lower species number. These have evolved naturally that way, and that is part of the ecosystem diversity of the landscape. P. 56 encapsulates the **fundamental fallacy of this report** clearly, stating categorically that large dense cypress stands are ‘less likely to support ecological values’ than a landscape mosaic. This is a fundamental fallacy in terms of ecology, as it simply ignores that some plant communities *do* form dense stands of only a few species, and that is *natural* and they have evolved that way, and this is part of the natural heritage of NSW that ***SCAs are meant to protect***. They have perfectly good ‘ecological values’ and just as much right to exist as other plant communities in the vegetation mosaic. Such communities are part of the ecosystem diversity of NSW. Clearly the argument by a biased organisation is being mounted because the NRC is a resourcist body that wants to log and graze a SCA set aside to protect nature, simply because they want to exploit it (due to their ideology). ‘Adaptive management’ is just the eco-jargon they use to justify their commercial exploitation (see later).

Finally, p. 85 notes that some studies indicate that ecological thinning of cypress stands will **not necessarily lead to increased growth of eucalypts**, which is the basis of the environmental benefits the proposal is meant to bring. The report is honest enough to admit here that the supposed environmental benefits of the logging may not actually occur. Hardly *conclusive scientific proof*. It is important also to understand the **scale** of the ‘ecological thinning’, p. 106 notes that heavy thinning may remove **35% of the standing volume of timber**. This is not ‘thinning’ it is logging at a major scale and will have corresponding major impact on those areas of the SCA.

2.3 Supposed benefits of ‘ecological thinning’ fails to fully consider the impacts

P. 90 lists supposed ‘benefits’ of ecological thinning. These are self-serving justifications for the proposal the NRC is determined to undertake. None of these supposed benefits explain why ecological thinning would be preferable to changing the fire regime to reduce cypress density (which it argues was the case under past Aboriginal management). The supposed positive effects on threatened species relies totally on the *unproven assertion* that ecological

thinning *may* increase tree hollows. This is based on the premise that thinning will increase eucalypt regeneration (or lead to larger cypresses with hollows) which will take 100 years to form the hollows. However, the report has already stated that some studies have suggested that thinning of cypress will *not* necessarily lead to increased eucalypt growth. The table on p. 91 can only state that thinning ‘**is likely**’ to support the viability of threatened species. In other words, this is *conjecture not fact*, and hence not a definite benefit. The assertion on p. 91 that thinning will ‘increase soil health’ is strange and unsupported. Logging requires the use of large vehicles, the creation of snig tracks, increases erosion and compaction of soils, and mobilises nutrients that can lead to weed growth, and can bring in soil pathogens. I note that the report does not say just *how* it improves soil health, given the wealth of evidence that logging damages soil health from around Australia and the world.

P. 93 has a brief perfunctory discussion of ‘risks’ involved in ecological thinning. Soil erosion or compaction are dismissed through claims of ‘appropriate prescriptions and machinery design’. There is no evidence presented about such impacts where logging of cypress has occurred. The discussion of weeds notes in point two that the ***thinning is likely to increase weeds***. It fails to discuss the fact that logging machinery often can bring in *new weed species* to an area, and that soil disturbance can increase nutrient levels. What are the ‘appropriate weed management’ strategies mentioned? Does this include the spraying of biocides in the SCA, which would not have been necessary if the thinning did not take place? Biocide spraying has its own costs and environmental impacts.

2.4 ‘Targeted grazing’ unnecessary, degrading and impractical

Few activities other than outright clearing have had greater impact on native biodiversity than grazing by introduced ungulates. Their hooves (unlike soft-footed native species) erode and compact the delicate duplex soils most common in Australia, and destroy the biocrusts that protect erodible soils. Damage due to heavy grazing is acknowledged on p. 97 of the report. Compaction prevents aeration and water infiltration (Pickering *et al.*, 2010). Cattle and horses tend to naturally follow pads made by previous horses (Philips & Newsome, 2002 as cited in Newsome *et al.*, 2008), resulting in trails that then erode. The pressure exerted by a cow or horse hoof relative to its mass is proportionally more than that exerted by a human foot, because the weight bearing surface area of the hoof is much smaller in relation to the size of the rest of the animal (Walker, 2005). As a result, horses contribute about 20 times more pressure on an area of soil than a bushwalker (Pickering *et al.*, 2010) and cows (being heavier than horses) likely more than this. Trampling by cows (like horses) can reduce the overall biomass in the area (Cole & Spillie, 1998). The development of woody plant stems makes plants in the shrublands susceptible to breakage as a result of trampling (Newsome *et al.*, 2002).

Grazing by ungulates introduces weeds, and cattle graze in different ways to native species and at greater intensity. Cattle are thus *weed vectors*, they can bring new weed species into the area (and new exotics are still arriving in Australia). Certain plant species also disappear in commonly grazed areas. The suggestion that ‘targeted grazing’ here (e.g. p. 10) is

somehow part of providing ‘environmental benefits’ is quite irrational. It seems to be just PR, without ecological evidence. Clearly this is also coming from the idea that grass is ‘going to waste’ inside a SCA and that people should benefit from by their animals being able to graze there. Again this is pure resourcism that does not arise from concern for nature or ‘environmental benefits’ or a desire for conservation. The suggestion that it will ‘promote diversity’, reduce weeds and reduce fuel loads would appear to be wishful thinking. P. 84 suggests that targeted grazing will ‘maintain and enhance groundcover and improve diversity of native species’. This is contrary to many decades of research on the impact by grazing by ungulates, which lead to decline of certain native species, along with an increase in soil erosion and compaction, introduction of feral weed species, and possibly introduction of *pathogens* such as dieback fungus (*Phytophthora cinnamoni*). Spores of *Phytophthora* can survive 24-72 hours in transport (Pickering et al., 2010). Once the fungus has been established, horses can enable its movement from infected to non-infected areas through soil disturbance (Newsome et al., 2002).

On p. 97 the purported benefits cited for grazing were in fact in regard to ‘light grazing’ and the benefits related only to a few species of birds (notably *not plants*). This is hardly a proper ecological study of the overall pluses or minuses of grazing a SCA. Light grazing is provided by native herbivores, so why is it necessary to admit cattle? It then admits that any benefits are likely also to be only on ‘highly productive soils’, only a small part of the area. It states that therefore grazing will have a ‘more limited application’ in the SCA. How will this be the case? Cows go where they will unless fenced or at least with temporary electric fencing, even the latter is a big undertaking. P. 110 of the report admits that fences would be needed and states that the fencing needed for grazing would **cost \$12000 per km**. Grazing the SCA would thus cost a lot of money, have many negative impacts and quite likely no positive ones.

P. 87 also notes that a lack of comprehensive monitoring and data re grazing in white cypress forests means that it is not possible to determine *how grazing would affect conservation values* or fire risk. Given that this report makes much of how it ‘supports the principles of ESD’ (see later), perhaps it is time to remind the NRC that a key principle is the ‘precautionary principle’. If there is no data on the impact of cattle grazing in the same community, then – in a State Conservation Area – it should **not be permitted**. Instead, the document ignores previous evidence of the damage grazing causes, and blithely states that allowing grazing to ‘enable greater knowledge generation’ (p. 99). The claim on p. 98 that livestock grazing can be used to ‘prevent invasion by exotic weeds’ is surprising, given that the cattle will be bringing in the seeds of many seeds with them (some of them possibly not present in the SCA). To suggest similarly that they will ‘control small scale diversity’ by controlling dominants ignores much plant ecology that shows that grazing by ungulates removes some species from the groundcover due to trampling, increased grazing pressure, different species targeted and increased erosion and increased nutrients in cattle droppings.

This portrayal of grazing as an ‘ecological positive’ is thus wishful thinking and a blatant twisting of ecological science. It is a direct falsification of the damage grazing causes, as

shown by many studies. Similarly, claims that grazing ‘reduces fuel loads’ (p. 85) have been shown to be incorrect in other areas. The claim that grazing by introduced ungulates (that come from weed- infested farms) will ‘reduce impact of weeds’ is similarly without any evidence to show how this can be valid. Finally, p. 122 admits that any grazing in the SCAs would be ‘limited and opportunistic’ and ‘**provide minimal benefits** to the grazing industry’. Given the known deleterious impacts of ungulates on native ecosystems, why then is it even being considered, when it would require an expensive series of fences to be built throughout the SCA? Major fencing would itself both damage the environment and impact on recreational use (walkers trying to climb over barb wire fences!).

2.5 Dumbing down of science in favour of ‘socio-economic benefits’

As was found for horse-riding trials in wilderness areas, the same argument is being used here, being that the adaptive management will bring ‘socio-economic benefits’ that have to be considered. These are given equal weight, or even *stronger weight*, than the ecological impacts. P. 32 of the document has a long section on ‘Current economic values’ in support of this ideological argument. The OEH (and presumably the NRC?) are meant to be *science-based*, and the OEH is meant to protect the natural heritage of the national parks estate on *scientific grounds*. Like much co-option of the term ‘sustainable development’ and the ‘triple bottom line’, this report too ignores the original premise of ‘Our Common Future’ (WCED, 1987) which stated that we need all three but that they *cannot be traded off against each other* (see Washington, 2015 forthcoming). Discussions of socio-economic benefits of an activity should be irrelevant to any organisation (such as OEH) that is committed to protecting the state’s natural heritage, biodiversity and ecological integrity. The reason we have a global environmental crisis is precisely *because* we have traded ecosystem services for money (for developers) in projects such as this (known as ‘weak sustainability’). As a result, a recent review by biodiversity experts Raven et al (2011) found that *two thirds* of the world’s species might be extinct by 2100 (if we continue this way), an appalling prospect. That is why biodiversity and ecosystem services cannot any longer be degraded just because it provides ‘socio-economic benefits’. Our society is totally dependent on ecosystem services to survive (Washington, 2013), hence we have to keep them irrespective of any possible lack of social or economic benefits.

p. 55 states that large dense stands of cypress are ‘likely to have less social and recreational value’ than other communities. These are SCAs established with the *primary purpose* of protecting natural values of native biodiversity, and only secondarily for recreation. Such an argument is thus irrelevant to justify an activity that is predicated on providing net *environmental* benefits (as this report claims).

p. 35 states that traditional management assumes that ‘reserves are static’ and will not change over time. This is absurd, since ecologists have recognised since before Clements (1916) that plant communities are *not static*, they are subject to disturbance and undergo succession. This false statement is then used to justify an invasive logging activity on the assumption that it will somehow produce ‘positive environmental benefits’.

p. 36 uses discussions of ‘tipping points’ and irreversible change as a background to this proposal. This discussion is a ***total non sequitur***, as the discussion about ecosystem collapse or ‘regime change’ in the literature (e.g. The Economics of Ecosystems, Kumar, 2010) is ***in regard to the increasingly huge impacts humanity is placing on ecosystems*** due to land clearing (and logging and grazing!), climate change, nutrient pollution, toxification, introduced species etc. It is not relevant to the ***natural succession*** of native species within native communities (which is happening in the Brigalow area). In other words, such a discussion is being trotted out due to a *twisting of ecological theory*, suggesting that the fact that cypress forms dense stands in areas is an ‘irreversible change’ that degrades ecosystems. Nothing could be further from the truth, it is a ***natural process*** that occurs in response to fire, grazing pressures (possibly also the major reduction of rabbits due to myxomatosis and callicivirus) and other natural factors. Putting in the pretty graph on p. 35 is thus basically ‘spin’ to try and demonise a natural succession of native species, and to suggest that managers can ‘just in time’ save this community - before it falls over the ‘tipping point’ into destruction. This is a complete misrepresentation of ecological reality, and represents PR manipulation to support their clear aim - logging a SCA.

p. 69 states that the overarching goal of ecosystem management in SCAs is for:

*‘Actively maintain and enhance landscape function, ecological processes and natural diversity of the land to **support the community’s values**’* (my emphasis)

This is quite odd, as the overarching goal of ecosystem management of any reserve for nature conservation is to **protect biodiversity and ecological integrity**. This is not to ‘support community values’ but to protect the ecosystem services on which society is obligatory dependent. Australia has the worst mammal extinction in the last 200 years of any country in the world. Hence responsible managers and governments *protect biodiversity* to stop further extinctions and to stop Australia contributing more to the major extinction crisis underway (Kolbert, 2014) that could lead to two thirds of life dying out by the end of this century. If the NRC and OEH are ***truly science-based***, then that has to be their overarching goal, *irrespective of community values support this*. This goal shows clearly that the NRC wishes to make social and economic factors *at least as important as ecological protection*, which if allowed will just contribute to a cascade of further extinctions in NSW. This is despite the fact that the NRC report states that the logging is justified ***primarily*** as an environmental benefit. Clearly the authors realise that this is an unsupportable claim, so seek to bolster their argument with socio-economic benefits.

p. 118 argues that logging and grazing a SCA would be a source of ‘social change’ to the region. Given that this is only a 7 year project, that change is likely to be minimal. Again, it confuses what a State *Conservation Area* is meant to be about – conservation. The unproven assertion that logging and grazing land set aside for conservation purposes is somehow a ‘good thing for society’ ignores the fact that this land was set aside to conserve nature, upon which society depends. It is far more likely to be a source of environmental degradation in an area recognised as being of key conservation significance (the significance of which the report acknowledges). The figure on p. 119 is again a PR exercise to suggest that a

commercial extractive industry will somehow have wonderful flow-on effects to society. This is a totally unjustified deification of a buzz word that hides a damaging commercial activity on national parks estate.

3) Twisting of ESD principles

P. 12 argues that active management is carried out for the *primary purposes of achieving environmental benefits*, which is argued to be *consistent with the ESD principles* in the NP and W Act. I am very familiar with the literature on sustainability and sustainable development, having just completed a book ‘Demystifying Sustainability’ coming out next year from Routledge (Washington, 2015). The whole discussion of sustainability and ESD in this report is *twisting the meaning of the terms* to seek to justify the unjustifiable – logging a State Conservation Area. The POEA Act 1991 lists under ESD principles:

- c) Conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration

The suggested primary purposes of environmental benefits have **not been proven in this report**, indeed there is no overall discussion of the environmental impact of a major logging operation in a SCA. We are being assured that a logging operation will in fact have positive environmental benefits, when history and environmental studies have catalogued the multiple and long-lasting negative impacts of major logging operations on ecosystem health. The whole basis of this report is thus a twisting of ecological science and an **attempt to subvert ESD principles to justify a commercial extractive industry** (for ideological not scientific reasons). There are very good grounds in terms of ecological science to believe that such an activity will degrade ecological integrity.

p. 136 lists a table that purports to compare the ‘active and adaptive management’ proposed against the ESD principles adapted from Preston (2006). The **conclusions in this table are untenable and not based on ecology or environmental science**. This proposal is neither sustainable, prudent, wise, nor critically has the report demonstrated it will provide environmental benefits. It seeks to dress up a commercial extractive industry – inappropriate in a State Conservation Area – under the magic words ‘adaptive management’. It fails to conclusively show ecological benefits from the damaging activity (known to be damaging from hundreds of other logging studies). This table thus represents the worst sort of PR exercise. The NRC proposal *fails the precautionary principle* under both the original definition from the Rio Declaration, or under the legal terms in the POEA Act and other NSW legislation. When there is good evidence of the damage of an activity from elsewhere – many hundreds of logging studies – the precautionary principle means you **don’t allow this in a SCA**. Attempting to get around this in the table by saying that ‘we will use adaptive management’ is actually just ignoring the precautionary principle. This activity **does not in any way conform with the principles of ESD**. The response under intergenerational equity is gobbledegook. Logging the protected lands of a SCA is very likely to degrade the environment. This report certainly has not shown otherwise. Hence we would be passing on

degraded natural heritage to future generations, and so it is *bad* for intergenerational equity, not good. Similarly, the claim that the proposal ‘is likely to accelerate future improvement in ecological outcomes’ is nonsense, and spin at its worst. This has not been shown to be the case. In fact they recognise this, which is why the report uses the caveat ‘is likely’. It is *more likely* realistically to degrade the area however.

The lack of evidence in this report for ‘positive environmental outcomes’ from ecological thinning is one reason why on p. 137 the report lists legislative changes to allow logging in a SCA. This reveals the process for what it is – a **brazen attempt to turn SCAs into glorified extractive reserves**, rather than reserves that conserve nature (as they are meant to be). Logging material from this activity is proposed to be burnt in power stations under the change. While this currently refers to the Nandewar region, clearly this is a Trojan horse to **seek to allow it in other SCAs**. It thus represents the thin end of the wedge of logging SCAs (and probably later they will try national parks) and also burning some biomaterial from these in power stations. Logging and grazing a State Conservation Area set aside to protect nature is clearly not compatible with the principles of ESD. This report twists these principles inappropriately to seek to justify the unjustifiable.

4) Adaptive management misrepresented to justify the unjustifiable

Adaptive management at its simplest has been said to be ‘learning by doing’, that research should inform management. Nobody could argue with the premise that scientific research should inform how these reserves are managed. So does the theory of adaptive management support the proposal put forward by the NRC? The problem here is that the term ‘adaptive management’ is being co-opted and misrepresented in support of a commercial extractive industry. Prof. Steve Dovers of ANU has written much about adaptive management. However, Dovers and Mobbs (1997, p. 49) warn how ‘adaptive management’ could be misused. The paper notes:

Also, AM may be used to defend regimes which avoid reform, justifying doubtful practices while waiting for further evidence (in conflict with the precautionary principle). It may simply provide a façade for investigation, hiding indecision. There is potential use of AM to support different positions based not on participatory and informed learning but on preconceived and rigid interests. AM is to an extent, and empty vessel that we can fill as we wish. A myopic mining-in conservation reserves version of ‘sequential land use’ could be supported by a misrepresentation of AM, ignoring the ecological and institutional requirements for policy learning.

His example is of a ‘myopic mining in conservation reserves’ proposal. While there is CSG in SCAs in the area, this situation it is a **myopic logging and grazing proposal in a SCA**. As he notes, adaptive management is an ‘empty vessel’ and can be misrepresented – as it is in this report.

Part of the problem of ‘adaptive management’ is that it leaves itself open to being *anthropocentric* in nature. All value can be seen to rest with the ‘manager’, as commonly nature is seen as having no intrinsic value, and as p. 36 states ‘managers are encouraged to treat management actions as experiments’. This plays up to the lure of managers being able to play God and *see what happens*. P. 78 makes it clear that the manager will determine what density of cypress is an ‘acceptable’ condition. KP 6.4 makes this statement, so essentially ‘let’s log it and see what happens!’. Hence the application of adaptive management here seeks to portray a logging and grazing operation as really just ‘testing a scientific hypothesis’ (which scientists love to do). There is no recognition here that we are in the midst of a biodiversity crisis, that our reserve system is under multiple stresses (climate change being one increasing threat) or that such ‘experiments’ may themselves be extra stresses and have long term damage on ecological integrity. Indeed we know that logging and grazing have impacted negatively historically on ecological integrity in many areas.

p. 11 seeks to use adaptive management as a *smokescreen* for resource extraction, under the guise of ‘opportunities for learning and improving current management are being lost’. This is like suggesting that we should allow exploratory surgery on people because ‘opportunities to learn about medicine’ are being lost. P. 32 builds on this with KP 5.1, stating that traditional management has ‘not been able to deal with the complexities and uncertainties inherent in most natural systems’. This statement is using the jargon that has built up around ‘adaptive management’ to justify ‘playing God’ through various experiments. I have read various books on adaptive management (e.g. ‘Panarchy’ by Gunderson and Holling, 2000), and there is nothing in the theory of adaptive management that suggests we ignore the precautionary principle, or that we ignore existing scientific research on environmental impacts just so we can carry out new experiments. Adaptive management is being used here to justify a commercial resource extraction, in the hope that using this word will *sanitise* the impacting activity that is proposed and somehow make it ‘scientific’. Hence we should rightly consider the relevance of ‘adaptive management’ in regard to impacting activities on the national parks estate. *Conservation ecology* is a more appropriate field to consider here (notably absent in this report). ‘Adaptive management’ has been used to justify horse-riding in wilderness, ecological thinning in the River Red Gums reserves and grazing in national parks. It is similarly being used to justify logging and grazing of an SCA here. This time it is ‘adaptive management’ rather than ‘multiple use’ that is being used to justify resourceism and a commercial extractive industry in an SCA. This is exactly the inappropriate use of ‘adaptive management’ that Dovers and Mobbs (1997) warned of.

p. 12 shows the use of ‘eco-babble’ in regard to social conditions where it notes ‘improvements in resilience may mean that Baradine and Gwabegar avoid further decline ...’. This statement is seeking to use the buzz-word ‘resilience’ to justify this activity. In reality what is being said is both unlikely and meaningless.

5) ‘Self-serving’ additional management objectives suggested on p. 70

p. 70 lists new management objectives proposed for the SCAs. These are totally self-serving to justify an invasive logging and grazing regime. They use weasel words such as ‘enhance habitat for fauna, including promoting eucalypt numbers’ (read logging), and ‘reduce stress on trees from resource competition’ (read logging), and ‘maintain and enhance ground cover’ (read logging). This is a shameful use of PR wording to dress up invasive commercial logging as something good for nature and appropriate in a SCA. It is not appropriate, and certainly has ***not been shown*** conclusively to be a ‘good thing’ in this report.

6) Government funding being used to log a State Conservation Area

One of the strangest aspects of this report is not just its resourcism, but the fact that tax-payers money will be used to log the SCA. The logging operation will not net any money for the government, it will not even break even. Instead, government funds will be used to degrade a SCA. So while this report comes from a neoliberal ideology, in a free market situation, such a project could not proceed as it is clearly *not economic*. In this proposal, this uneconomic damaging activity to the SCA is **going to be funded by \$40 to \$330 per hectare** by government funds. Given that the ecological need for this project is most definitely not proven in this report, the fact that it is also uneconomic should lend further weight to it ***not proceeding***. P. 107 states that the proposed thinning may cost the government \$3.5 million a year for 7 years, a major outlay without evidence of any proven ‘environmental improvements’.

Conclusion

This report is both inappropriate and unprofessional, and arises from a pre-determined ideological agenda to extract resources from the national parks estate. It is the ***thin end of the wedge seeking to log, graze (and perhaps even open-cut mine in future?) the national park estate*** that Australians have fought for, for many decades. It is inappropriate in that the NRC is most definitely **not** the body to carry out a study that decides on the ecological benefits of logging and grazing a SCA. This is basic part of conflict of interest. The NRC has its focus on extracting resources, so the CSIRO or the Ecological Society of Australia or similar unbiased scientific body should determine such a study, *not the NRC*. It is unprofessional in that the proposal is justified totally on ‘positive environmental benefits’ from the proposed logging and grazing. Yet the scientific evidence in support for this is both ***meagre and contradictory***. Indeed the report is honest enough to note that as many studies contradict its claims of benefits from logging dense cypress stands as support it. The report also outrageously twists and misrepresents ESD principles in regard to a logging and grazing proposal. It also misrepresents adaptive management, seeking to twist this theory to justify the unjustifiable – the logging and grazing of a State Conservation Area. The report is ***not factually accurate scientifically*** and indeed its ideological underpinnings are ethically questionable. This proposal should not proceed, certainly not without an independent ecological study by a reputable scientific organisation (not paid consultants). If this proposal

is allowed to proceed, then the conservation gains of the last 100 years in NSW (supported by *all* previous governments prior to this government) will be placed at major risk.

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