

Wednesday August 6, 2014

Natural Resources Commission  
GPO Box 4206  
SYDNEY NSW 2001

[nrc@nrc.nsw.gov.au](mailto:nrc@nrc.nsw.gov.au)

Dear Sir/Madam,



## Objection to logging and grazing in State Conservation Areas

In May 2005, the Zone 3 Community Conservation Areas (SCAs) of 195,095 hectares in extent were established in the Brigalow and Nandewar Community Conservation Area for conservation, recreation and mineral extraction but no commercial extraction of timber is allowed to occur in this zone (Bob Debus second reading speech, May 2005). Mining was recognised as a compromise to allow these areas to be reserved over areas of mineral interest.

The Colong Foundation for Wilderness opposes all six recommendations contained in the Natural Resources Commission's 'draft report'<sup>1</sup> regarding proposed changes to the management of State Conservation Areas in the Brigalow-Nandewar Community Conservation Area. These recommendations include:

- Commercial logging of White Cypress Pine, called ecological thinning in the draft report;
- Cattle grazing;
- Inclusion of local graziers and loggers on reserve advisory committees to ensure implementation of logging and grazing programs; and
- Requirements that NPWS regional managers must approve plans of management that permit specific logging and grazing regimes through an *active and adaptive management* process.

The Colong Foundation believes the Natural Resources Commission (the Commission) in analysing and reporting on the terms of reference provided by the former Premier, the Hon. Barry O'Farrell, has acted unreasonably in that it inadequately reported on and was insufficiently transparent in revealing the political nature of its findings and recommendations in this draft report. In so doing, the Colong Foundation believes the Commission has damaged its reputation as a government entity providing independent advice to government and the public.

---

<sup>1</sup> Natural Resources Commission, 2014, *Draft Report - Active and Adaptive Cypress Management in the Brigalow and Nandewar State Conservation Areas*, NRC, Sydney.

## The Colong Foundation requests the Natural Resources Commission to:

- Acknowledge that the proposals to log and graze state conservation area reserves are political decisions not motivated by nature conservation concerns;
- Acknowledge that logging of white cypress pines in state conservation area reserves will be uneconomic;
- Acknowledge that supporting taxpayer subsidised logging and grazing of state conservation areas will damage the public's perception of the Commission as capable of providing independent advice to government;
- Acknowledge that there are insufficient reasons to justify logging and grazing in state conservation areas, given conflicting evidence regarding potential benefits; and
- Apply the Precautionary Principle to the draft recommendations and acknowledge they are inconsistent with the objects of the *National Parks and Wildlife Act, 1974* and section 6 (2) of the *Protection of the Environment Administration Act 1991*.

## Flawed draft recommendations

The National Party rejected the Brigalow Belt South Bio-Region conservation decision in 2005. The Commission is well aware that the terms of reference for active and adaptive management of the Brigalow-Nandewar SCAs, are politically motivated.

The NSW Government has chosen to disguise plans to undertake commercial logging and grazing in these SCAs under the smoke screen of 'active and adaptive management', allegedly providing conservation benefits which many believe will never materialise. The Commission has not been transparent in explaining these political motivations in its draft report.

The Commission proposes the following management goal for the SCAs: *Actively maintain landscape function, ecological processes and natural biodiversity of the land to support the community's values* (p69, NRC – my emphasis). This goal reverses the current conservation-focused management principles set down in S30G of the *National Parks and Wildlife Act, 1974* turning them into people-focused principles.

Local conservationists have worked for decades to stop logging and grazing in the Pilliga. Now these activities are alleged to be suitable tools for improving 'conservation outcomes'. The Colong Foundation is stunned that the Commission should propose tax dollar funded logging and grazing in the SCAs to determine if these activities may produce conservation outcomes. Application of the precautionary principle should rule out these wasteful proposals. The proposed adaptive management should instead be called 'experimental mismanagement' because conservation areas will be subject to taxpayer subsidised commercial trials.

The primary management principles for SCAs are 'the conservation of biodiversity, the maintenance of ecosystem function, the protection of natural phenomena and the maintenance of natural landscapes', (S30G of the *National Parks and Wildlife Act, 1974*). The proposal is an experiment

because the Commission does not know whether logging or grazing produces any conservation benefits and suggests that these activities should be trialled at various levels of intensity in order to find out.

Back in 1997, Prof. Steve Dovers (Dovers and Mobbs, 1997, p49) of the ANU Fenner School for the Environment wrote of how adaptive management could be misused:

*Adaptive Management 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 Adaptive Management to support different positions based not on participatory and informed learning but on preconceived and rigid interests. Adaptive Management is to an extent, an empty vessel that we can fill as we wish<sup>2</sup>.*

This has proved to be prophetic in regard to proposed logging and grazing in the River Red Gums National Parks and now the Brigalow-Nandewar SCAs. The Foundation believes the precautionary principle is indeed being ignored, and that adaptive management is being twisted to justify exploitative uses of SCA reserves. With regard to grazing and logging in SCAs, not only is the precautionary principle being ignored, but also existing scientific research on the impacts of cattle and logging on the natural environment.

There is an important ethical principle at stake here, should science be used to contribute to ecological sustainability in protected areas, or twisted to work against this.

The Natural Resources Commission should have explained to the former Premier, the Hon. Barry O'Farrell, that it is not the Commission's role to justify the *transformation* of state conservation areas into another category of reserve, without an Act of Parliament revoking these reserves.

The Commission proposes, in effect, to transform these state conservation areas into reserves for multiple forms of resource exploitation. The Natural Resources Commission recommends that national parks and state conservation areas be managed for social, economic and environmental sustainability, based on the principle of inter-generational equity (p68). These recommendations are contrary to existing management purposes for these protected areas. The Commission has failed to explain this to the public and government and has compromised its independence. Recommending such changes is not befitting for a body charged with providing Government and the public with independent advice. In addition, the management principles enshrined in the *National Parks and Wildlife Act, 1974* would need amendment in order to implement the recommendations which in fact defeat the primary purpose of reservation, to set aside areas for nature conservation.

Further, the Commission's proposal to require NPWS regional managers to regulate these commercial activities is deeply disturbing, as is the plan to transform NPWS regional advisory committees into land use management committees. The primary conservation purpose of SCAs will be lost as advisory committees conduct internal battles over plans advanced by grazing and forestry interests.

---

<sup>2</sup> Dovers, S.R. and Mobbs, C.D. (1997) 'An alluring prospect? Ecology, and the requirements of adaptive management', in Nicholas Klomp and Ian Lunt (eds), *Frontiers in Ecology. Building the Links*, Elsevier Science, Oxford, pp. 39-52

Little supervision of the proposed thinning operations is possible given the need to keep expenses to a minimum. The costs to taxpayers are likely to lead to the NSW Government adopting the proposed 'goods and services' regime which will allow loggers to 'thin' the large white cypress pine trees without paying the royalties for logs as required in state forests. This is supposed to offset costs to the NSW Government of the proposed thinning of smaller pine trees.

The Commission is of course also aware that its draft report recommends re-commencement of logging and grazing as a response to environmental problems caused by logging and grazing prior to May 2005. These proposed activities will be self-perpetuating, especially given the proposed management and advisory regimes.

### **The proposed recommendations should not be supported by the taxpayer**

The Colong Foundation considers the proposed arrangements a waste of taxpayers' money which will only cause further environmental degradation of the four identified state conservation areas.

In 1991 the Commonwealth's Resource Assessment Commission Inquiry into Forestry and Timber summarised the overcutting of forests as follows: *'Australia's native forests have been overcut in most states causing an impending shortage in the supply of hardwood logs. The prolonged overcutting and not the inclusion of cutting areas in national parks and conservation reserves appears to be the main cause of the dwindling supply of hardwood logs. Overcutting coincides with and is caused by, the cutting out of most of the reserved old growth forest well before significant numbers of regrowth sawlogs reach harvestable size. The Inquiry cannot find any instance in recent decades where large areas of forest have been managed on a sustained yield basis.'*

Cypress pines in the semi-arid Brigalow-Nandewar Area generally grow too slowly for a sustainable and viable economic return and have been logged on an unsustainable basis for greater economic return. The proposed logging in state conservation areas will be subject to the same economic pressures, except that the logging will be of lower intensity, and therefore have a lower economic return than current non-viable logging operations in state forests.

The intensity of logging must be lower, otherwise the proposed logging (thinning) of SCAs will be a raid and pillage operation with no sustainable yield nor nature conservation objectives. This explains the proposed taxpayer subsidy and the need for the adaptive management smoke screen promising environmental outcomes.

Time and taxpayers money are better invested elsewhere than in logging SCAs. Costs in terms of amenity, ecological integrity, degradation of wildlife and scenic values as well as pest species invasion should also be added to the economic costs of logging.

It cannot be argued that logging SCAs at low intensities is of an economic benefit, and if it is not economic, it is not justified on the grounds of social welfare for loggers. The Commission's proposed active and adaptive management scheme is a disgrace. The Commission also should note that the very suggestion conservation reserves be logged is repugnant to most Australians.

**The Colong Foundation notes the following remarks in the NRC's draft report:**

- Total program cost is estimated to vary between \$320 per hectare for moderate levels of 'thinning' and \$575 per hectare for heavy levels of 'thinning' (NRC, p. 103) - this translates to \$1.9m and \$3.5m/year (NRC, p 105).
- Cost recovery is associated with the use of *larger stems being 'thinned'* (NRC, p103, my emphasis) – and this is elaborated on in Attachment 16, where it is reported that as log size decreases, unit rates of handling costs increase, green recovery in the log breakdown decreases and the range of products that can be cut from the log is reduced (p65, A16).
- Revenue generated through the sale of sawlogs and some landscaping products could offset program costs by 30 to 40 per cent - this could reduce program costs to between \$215 per hectare for moderate 'thinning' [logging], and \$330 per hectare for heavy levels of thinning [logging] the indicative annual program costs are estimated to be in the vicinity of \$1.3 - \$2 million per year (NRC, p111).
- Under a 'goods for services scheme', program costs could be reduced to \$40 to \$330 per hectare, depending on the costs incurred by the parties engaged to undertake services and the mix of production and non-production material that can be removed and sold (NRC, p103).
- Under a 'goods for services scheme' the party providing the services gets the benefit of the goods (i.e. logs) for free (NRC, p114 – my emphasis).

Even if the loggers are mostly self-regulating their operations and allowed to cut the larger trees, the costs to the taxpayer for logging conservation reserves ranges between \$40 and \$210 per hectare. It would be cheaper and better if taxpayers paid loggers and graziers to leave the state conservation areas alone.

## **Burning woodlands for electricity is unethical**

Burning Pilliga's woodlands for electricity is not economic and will only further intensify the proposed logging (thinning) in the four identified SCAs. The NRC estimates that 51,200 tonnes/year of trees are required to generate 5.5 megawatts of electricity for a capital cost of \$18 million and operating cost of \$1.2 million/year. The unit capital cost of \$3.6 million per megawatt is excessive and these capital and operating costs will intensify proposed logging operations in the SCAs.

Prices [for electricity generated] will not recover the full costs incurred in harvesting, chipping and delivering the wood to a bioenergy plant (p68, A16). That is, the proposal is not viable unless logging these forests for electricity is subsidised by the taxpayer. The NRC proposes legislative amendments that will permit burning trees from SCAs to be considered 'green energy' (i.e. that will recognise 'ecological thinning residues' from SCAs under the renewable energy target). The Colong Foundation considers this to be a highly controversial, unnecessary and repugnant proposal.

Taxpayers will be hostile to green energy subsidising environmental abuse of conservation reserves, that is, further subsidising the costs of logging conservation reserves.

Logging of white cypress pines does not produce “renewable” energy. The removal of native cypress depletes the carbon sequestered in the woodland.

Even accounting for woodland regrowth, wood-fired power plants release far more carbon into the atmosphere per kilowatt hour than coal-fired plants. Wood is a low density fuel when compared with coal. It is many times less carbon efficient per unit of energy generated with only 25 per cent of the heat generated being turned into energy, as the environmental assessment for Eden’s proposed and rejected South East Fibre Exports power plant reported. Greenhouse gas emissions are not only released when the biomass is burnt in the power station but also when the forests are logged and sequestered carbon is released into the atmosphere during post-logging burns.

The actual efficiency of wood-fired plants is around 9.5 per cent according to the Forest Products Association own data, and this compares with 50 per cent generation efficiency associated with the best gas-fired power plants. Further, there is a net loss of carbon from the woodland as logging for wood fuel is far more frequent than the time required for the carbon stores to be returned to pre-logging levels. There are also significant greenhouse gas emissions associated with logging, roading, transportation and treatment of the woodland logs before the wood can be burnt in a power plant.

The US Manomet Biomass Sustainability and Carbon Policy Study (2010) also found that using wood for energy results in a “carbon debt” because burning wood releases more CO<sub>2</sub> into the atmosphere per unit of energy than fossil fuels (oil, coal, or natural gas). The study demonstrates that for at least fifty years, burning wood to generate an equivalent amount of energy would create more emissions than burning coal. In fact greenhouse gas emissions from burning native forest for electricity generation have been estimated to be as much as 6.4 times greater than the equivalent-sized coal-fired power station.

Burning native cypress pine for electricity generation produces air pollution containing chemical pollutants detrimental to human health. These include arsenic compounds, micro-fine particles (PM<sub>2.5</sub> and PM<sub>10</sub>) and 2,3,7,8 tetrachlorodibenzo-p-dioxin, 2,3,7,8-tetrachlorodibenzo-p-furan, hydrogen sulphide, nitrogen oxides (NO<sub>x</sub>), hydrochloric acid, sulphuric acid and sulphur dioxide (SO<sub>2</sub>).

The fine particulate matter, carbon monoxide, carbon dioxide, nitrogen oxides and a range of other organic compounds specified above can decrease lung function, aggravate asthma and increase the risk of developing heart diseases and even cancers.

The proposal to log white cypress pine is inconsistent with the NSW Government’s plan to increase renewable energy generation to 20% by 2020. Burning native forests to generate electricity is not renewable. As the woodlands are logged, habitat is destroyed and does not fully recover for hundreds of years.

Burning native woodlands for electricity will not only increase NSW’s greenhouse gas emissions but will damage the market for genuinely renewable energy technologies. Genuinely green energy sources like wind, solar and even biomass from sustainable sources such as organic agriculture, together with energy efficiency and demand management, can supply all of NSW’s energy needs.

Wood (congealed carbon dioxide) has a greater value to society stored where it does the most good, in living woodlands where it serves ecological functions, stores carbon, and reduces soil erosion and depletion.

Wood “waste” if left in woodlands continues to store greenhouse gases for decades and improves soil fertility. When burned for power it becomes carbon dioxide instantly. Recent research has revealed that native forests store vastly more carbon than previously supposed.

Millions of native animals are killed each year as a result of existing native forest logging. The Brigalow-Nandewar Area is ecologically diverse and provides habitats for numerous native animal species, especially arboreal mammals, including koalas.

When the woodchipping industry began in the 1970s, it was claimed to utilise the “waste” from logging. History has proven that a lie, as up to 90% of logging product has ended up as woodchip. Native woodlands should not by some legal fiction be deemed to produce “waste” suitable for green energy production. These woodlands actually store mega-tonnes of carbon.

The lessons of the past have to be learnt, and this proposal must be rejected.

## **Proposals to log and graze in conservation reserves are a political agenda to reinstate commercial operations regardless of reservation of SCAs**

In May 2005 then Opposition Deputy Leader, Andrew Stoner, promised to overturn the decision to reserve 350,000 hectares of the Brigalow Belt South Bio-Region when the Coalition was elected to government (*Daily Timber News*, August 8, 2013). The Commission are implementing this National Party agenda by means other than revoking the reserves.

Local loggers’ demands to access cypress in the SCAs is motivated by their need to increase timber supply to mills that have over cut the white cypress pine resource elsewhere. Timber mills did not adequately retool to permit use of smaller logs, for example by investing in finger lamination technology. The funds provided to the industry adjustment package were instead largely wasted. Further taxpayer handouts should not be provided to an industry unwilling to adapt. **The proposed taxpayer funded logging of SCAs is about propping up a dying timber industry operating in a semi-arid woodland, not conservation.**

Representations by Gunnedah Timbers manager Paddy Paul to Natural Resources Commission at a public hearing in Coonabarabran described his struggle to save the mill. Mr Paul said he made it clear that logging in these areas [the SCAs] had to be sustainable (*Namoi Valley Independent*, 17 July, 2014). These proposed timber yield objectives will distort any ‘active and adaptive management’ of the SCAs, to the detriment of nature conservation.

Mr Paul has said that “We want to take the bigger saw-log quality trees and leave the medium and small trees to grow bigger” (*Namoi Valley Independent*, June 24, 2014). Mr Paul has also said smaller logs have no value because the market doesn’t want them. Such aspirations will dictate the outcomes of the active and adaptive management under the proposed advisory committee structure, especially if the ‘goods and services’ regime is adopted.

The Member for Tamworth, Kevin Anderson has said “I was actually the one who called for that report to be undertaken”. The Member for Tamworth believes that the recommendations could make enough timber available to secure the long-term future of Gunnedah Timbers, which now only has about four month’s worth of timber left (*Namoi Valley Independent*, June 26, 2014).

The Colong Foundation believes that the inflexible attitude of Gunnedah Timbers ensures that the company has no long-term future but in the meantime it will cause extensive damage by logging the SCA reserves.

## **Values of the Brigalow-Nandewar SCAs**

The 7.9 million hectare Brigalow and Nandewar community conservation area is 70 per cent cleared. Most of the remaining native vegetation is highly fragmented and as a result its wildlife has experienced a high rate of extinctions, with up to 17 mammals and 21 plant species now extinct and many more recognised as threatened or declining.

Despite this clearing, the Brigalow-Nandewar Area retains the largest continuous remnant of semi-arid woodlands in the temperate climatic zone, certainly in Australia, and possibly in the world. Some areas of the woodland, particularly in the Western Pilliga, contain areas dominated by ‘cypress pine’ (*Callitris* spp.), however there are a vast number of distinct plant communities in these woodlands, some of which do not include *Callitris* pine. Another dominant sub-canopy genus group are Casuarinas, while Eucalypts dominate the canopy throughout these woodlands.

The reservation of 352,000 hectares in May 2005 provided protection for the highest quality habitat and the most endangered species. These parks are characterised by native white cypress and iron bark woodlands, broom bush plains, vivid spring flowers and abundant fauna. The reserves contain at least 300 native animal species, including 47 threatened fauna species, such as the Turquoise Parrot, the Barking Owl, Mallee Fowl, Black-striped Wallaby, Pilliga Mouse and the Swift Parrot. The May 2005 decision also protected 60,000 hectares of rare, vulnerable and endangered ecosystems.

The Brigalow-Nandewar Area contains over 2,000 species of vascular plants which represent an estimated 40% of the vascular flora of NSW (RACD, 2002a). More than 450 plant species are known only from a single site.

## **Biodiversity Values of SCAs are not compromised by White Cypress pines**

**‘Overall, the analysis [by the Commission] suggests the forests within these five state conservation areas support mixed-age white cypress within an overall stand structure in which eucalypts and other non-cypress species generally have a much higher cover than cypress in most areas’ (p63, NRC).**

‘Nearly all (99.8 per cent) of the most dense white cypress stand areas (class 3 and class 4) are found in patches of less than 20 hectares in size’ (p62, NRC). Only 4 per cent of the SCAs identified have greater than 31 per cent cover of white cypress pine trees in patches of greater than 1 hectare.

‘There are only limited areas in the SCAs where the number of pixels that contain white cypress crowns were greater than 31 per cent’ (footnote 21, p69,NRC). As these areas total 12,824 hectares of dense cypress in Class four, the vast majority of these areas must be less than a hectare in size.

**Given the above quotations, the density of white cypress stands is not an ecological problem**

‘There is no agreed threshold to define ‘locked-up’ white cypress stands, particularly in the context of land managed for conservation’ (p75, NRC) so there is no current scientific justification for logging stands of white cypress pine. Of course those who want to log these woodlands for commercial purposes, who called for this report and who are proposed to be appointed to advise on active and adaptive management for these SCAs, believe these pine woodlands should be logged.

There is no desirable patch size for an ecosystem defined in the scientific literature (pg 72, NRC). The one hectare minimum patch size is an arbitrary area. The one hectare specified as an appropriate patch size for discrete patches of cypress pine on private land is not relevant to conservation management of SCA reserves of contiguous woodland (p72, NRC).

To claim areas of management concern greater than one hectare with a cypress pine density of more than 11 per cent has no scientific basis. To claim areas undesirable when greater than one hectare with a cypress pine density of more than 21 per cent also has no scientific basis. The entire classification for the areas to be targeted for logging is arbitrary.

Some studies suggest that stand densities do not have an impact on species richness or degraded ecosystems (Eldridge et. al., 2011, Hunter, 2013, Thompson and Eldridge, 2005a) (p 55, NRC).

**There is 44,000 hectares of Pilliga’s SCAs identified suitable for logging but only a small fraction of these areas have dense patches of white cypress pine trees** (p79, NRC). The methodology for the proposed logging is badly flawed by the lack of science and the lack of data. It also does not consider canopy cover density of other species (p60, NRC).

Using the logic of this draft report, the magnificent stands of Coachwood in the Washpool Wilderness and the Snow Gums in Kosciuszko National Park would need to be logged to reduce stand density and promote landscape heterogeneity. These comparisons reveal that the proposed logging operation has no credible argument other than ‘we used to do it, so we should be allowed keep doing it’.

**Gazing Cattle and Logging white cypress pines will not improve conservation outcomes**

The proposed logging and grazing is alleged to promote landscape heterogeneity, eucalypt regrowth and shrubs, improve fauna habitat and promote viable wildlife populations. Logging is to control the alleged dominant species, white cypress pine trees, and grazing by cattle is to control wildfire risk and weeds.

The Commission wants to undertake logging and grazing because they believe it will encourage eucalypts and native wildlife, ground cover and reduce the risk of intense wildfire (p 83, NRC).

The Colong Foundation does not agree. Studies by Cohn et. al. 2012, suggest that thinning of white cypress pine in western NSW does not necessarily result in increased growth and regeneration of eucalypts (p67, NRC). The Colong Foundation believes that logging and grazing cannot both increase sclerophyll ground cover AND reduce the risk of intense wildfire. These are competing objectives. Replacing grass with shrubs by grazing and cypress pines with eucalypts by logging will increase wildfire risk.

There is no need for logging or grazing to achieve the objectives stated at the beginning of this section. Increasing fire in this woodland environment will promote sclerophyll vegetation to the detriment of white cypress pine trees.

The Commission's proposed goal to 'conserve biodiversity and maintain ecosystem function, including restoring native vegetation where necessary' (p69, NRC), is not part of the management principles for SCAs under the *National Parks and Wildlife Act*.

The above restoration direction can be compared with wilderness management that also allows for restoration (s.9 *Wilderness Act, 1987*). The above direction for SCAs does not explain to what state the native vegetation is to be restored. Wilderness is managed to restore to the unmodified state of the area and its plant and animal communities. Surely native vegetation in a conservation reserve **should not** be restored to a highly modified post-logging state?

Pest control seeks to remove ecosystem change agents from the natural environment. Fire management in core park areas is to ensure burning frequency is maintained within an acceptable band of frequencies. Logging and grazing on the other hand are ecosystem change agents undertaken for profit. These activities certainly degrade ecosystem integrity and are generally considered by the public and most scientists to lower ecosystem diversity.

For the Commission to propose restoration of ecosystem diversity through heavy handed ecological disturbance that produces minor economic returns only with taxpayer support is a cynical about face that compromises its public standing as the provider of independent advice to government. Logging and grazing are activities which reduce ecological integrity by causing major ecological disturbance. These activities are likely to create novel, more modified woodland ecosystems. This is a very strange form of native vegetation restoration.

## **Impacts of logging and grazing**

### Logging impacts

The environmental impacts of logging are well documented. Logging removes woodland shelter for fauna during hot weather. Logging machinery disturbs the soil and causes soil compaction and erosion. Logging operations permit ingress for pest species, including foxes, prickly pear and box thorn. Logging will remove dense stands of white cypress pine that provide a refuge for small birds and mammals from predation by cats and foxes. Logging will also cause a loss of biomass and the proposed burning of so-called green energy will generate excessive production of CO<sub>2</sub>.

The following points further summarise logging impacts:

**1. Biodiversity**

The Brigalow-Nandewar native pine woodlands are complex biological systems. They are rich in plant species, ranging from mosses, many species of herbs and shrubs to mixtures of tree species, including a uniquely diverse assemblage of pines and eucalypts. Similarly, animals range from tiny soil organisms through a myriad of insect and other invertebrate species to amphibians, reptiles, birds and mammals, the whole forming a network of interdependent organisms.

The massive disturbance involved in logging with heavy machinery as proposed for the SCAs compromises this complex interaction, removing its major elements (cypress pine trees) and altering the very basis of soils and microclimates on which it depends.

**2. Soil Erosion**

Logging produces soil disturbance. When combined with post-logging fire the soil surface is exposed to a degree that makes large scale sheet and gully erosion inevitable. The removal of the forest canopy allows high intensity rain to bombard the exposed soil and cause run-off loaded with silt.

Snig tracks and roading all contribute to the disturbance. Streamlines in and below logged areas have shown increased turbidity and bed loads at a rate far exceeding that where the woodlands have remained relatively undisturbed.

**3. Soil fertility**

Regrowth pine woodlands will show a decrease in vigour compared to the woodland it replaces, implying a loss of fertility.

**4. Water**

Logging removes vegetative cover and litter. It lowers water infiltration into soil, thereby increasing surface run-off. This is further increased by heavy machinery compacting the soil. Baring the soil surface causes evaporative losses in the upper layer, which forms a dry crust resistant to wetting. Catchment studies have shown that immediately after logging, discharge increases.

**5. Aesthetic, wilderness and recreational value**

The aesthetic impact of integrated logging immediately following harvesting is devastating and for many years afterwards the monotony of even-aged regrowth and lack of diversity detract from the enjoyment of the forest by recreational users. The effect on scenic values is self-evident.

Grazing impacts

The impacts of cattle grazing are also well documented. Graziers replace native pasture with exotic grass species favoured by cattle and establish fences to regulate stock. Cattle trample stream banks, springs and soaks; damage and destroy fragile wetlands; pollute water; create tracks; cause soil erosion; reduce wildflowers; spread weeds; are known to be a significant threat to a number of rare and threatened plants and animals, and plant communities; and cover areas in cowpats spoiling the enjoyment of the area for visitors. Grazing (feral and native) significantly reduces the survival of

seedlings (from 27.5% to 1.3%) and saplings (from 69.6% to 40.8%) after 25 weeks (Horner et al., unpublished).

There is no scientific evidence to suggest that cattle will benefit fuel reduction. In the Barmah National Park in Victoria the Department of Sustainability and Environment, which manages fire risks on public land, has declared that cattle are not an effective tool for fuel reduction.

The proposals by the Commission in this draft report are out of sync with their peers in Victoria: *On floodplain forests, grazing is no longer considered to be an effective tool for fuel reduction. The grazing intensity required to significantly reduce the threat of wildfire would have detrimental effects on forest values.* – 2005 River Red Gum Forest Ecological Grazing Strategy, Department of Sustainability & Environment, DSE.

The Victorian Environmental Assessment Council conducted Australia’s largest and most comprehensive investigation into River Red Gum wetland forests. It found that: *... scientific evidence indicates that in general it (grazing) adversely affects natural values especially biodiversity, water quality and soil condition. Accordingly, VEAC recommends that domestic stock grazing be generally excluded from public land in the investigation area ...* – VEAC River Red Gum Forests Investigation (final report 2008).

New South Wales national park rangers fear the supervision of destructive, additional activities such as cattle grazing will form no small part of managing national parks and stretch their already limited resources (Public Service Association, 15 Nov. 2012).

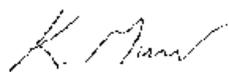
“The cattle grazing trial is an ill-disguised foothold for more widespread cattle grazing across the state,” PSA Assistant Secretary Steve Turner said.

“It will run down natural values and generate further excuses for ‘volunteer’ help from vested interests rather than proper resources for professional staff to get on with their job”, he said.

The Colong Foundation supports the views of the PSA.

Thank you for the opportunity to make a submission.

Yours sincerely,



Keith Muir  
Director  
The Colong Foundation for Wilderness Ltd

## References:

Horner G.J., Baker P.J., Mac Nally R., Cunningham S.C., Thomson J.R., & Hamilton F. (in press) Forest structure, habitat and carbon benefits from thinning floodplain forests: managing early stand density makes a difference. For Ecol Manag.

RACD 2002a Targeted Flora Survey and Mapping; NSW Western Regional Assessments, Brigalow Belt South Stage 2, Draft report to RACAC by the NSW NPWS.