

Submission on Draft Report on Active and adaptive cypress management in the Brigalow and Nandewar State Conservation Areas

Friends of the Pilliga has been following this issue for many years and would like to make the following comments on the draft report

Terms of Reference

The report has misinterpreted its Terms of Reference. These refer to cypress forests. The report however specifically focuses on white cypress, apparently assuming that this is the only species which would benefit from active management. While parts of the Pilliga may have been managed by State Forests in the past for white cypress production, dense stands of black cypress and buloke have also developed and may benefit from an active management process.

It is unfortunate that the ToR relate only to State Conservation Areas. The opportunity to thin for commercial gain would be better suited to a proper trial on lands already set aside for commercial purposes ie State Forests as would a review of sustainable targets for the cypress industry both on and off state forest lands.

Assumptions

The NRC has produced this report after making a number of assumptions which are not necessarily accurate:

- **That there is a problem.** Much of this is perception rather than fact. Oxley reported on his original passage through the Pilliga that there were areas which were impassably thick while others were easy passage. Much of the densest regrowth is along the more frequented roadways and is thus more visible. Should drivers walk away from the roads, the forest frequently opens out markedly.
- **That areas of low density will transition into areas of high density over time** (p54). It is past management practices such as the suppression of fire and the harvesting of eucalypts which have led to the thickening. These practices have now stopped in SCAs so the thickening process will probably stop. In any case, there is no ecological crisis and the question can be investigated over time.
- **That any area of dense regrowth larger than 1 ha is unnatural.** Density thresholds used to define what areas should be thinned (p53) were developed from a silvicultural perspective or to manage native

vegetation to maximize commercial returns on private land. The fear of lack of ground cover under cypress ignores the stabilizing effect of cryptogams (alga and other microorganisms) on soil. Ecologists indicate that a 1ha patch is far too small to maintain natural biodiversity in the long term. A minimum patch size of say 100ha would greatly reduce the potential area available for proposed commercial thinning.

- **That canopy density greater than 10% is not natural.** This seems to imply that cypress pine itself is not part of the natural ecosystem. It may be that 30% would be a better cut-off level. Again, there should be no need to rush and time, combined with proper trials, may answer this question.
- **That there will be sawlogs within the areas to be thinned.** From personal observation there is very little quality timber within dense areas, and what is there is usually quite old and therefore important as habitat trees.
- **That management by thinning is preferable to management by fire.** The current aims of NPWS fire management strategies, listed on p100, are essentially the protection of assets. The third aim mentions biodiversity but asset protection seems to take priority. These aims need to be revisited to encourage the use of fire to enhance ecological outcomes. There has been considerable research into the ecological use of fire both here and in the US (Watson 2001; Brockway et al 2002; Harrison et al 2003; Bradstock et al 2005).
- **That management by fire in the Aboriginal manner will not work.** On page 31, Attachment 6 – Stakeholder Feedback, NRC is quick to dismiss Aboriginal fire management strategies. While specific local detail may have been lost, much of the general process continues in Northern Australia and is explored in detail in Culture, Ecology and Economy of Fire Management in Northern Australia (J Russell Smith, P Whitehead, P Cooke: CSIRO Publishing: 2009 and Lewis 1989). Bill Gammage's book, The Greatest Estate on Earth, documents a landscape, shaped by fire, which supported a biodiversity much greater than now. These burning practices can best be described as small and patchy, working at a microscale with cool season burning to develop a fire break months prior to the much hotter burn required to eliminate dense cypress. Damage to mature trees (whether white cypress, black cypress, buloke or eucalyptus) could be managed by much smaller scale thinning to produce asset protection zones.
In "Old Days, Old Ways" 1934 (pp152/3), Dame Mary Gilmore describes Wiradjuri burning practices observed by her. "Red Steers and White Death" by George Mann in Australian Humanities Review, Issue 33, October 2004, analyses non-Aboriginal views of fire usage to manage landscape.

NRC Recommendations

1) Actively manage the State Conservation Areas

The principles set out in Table 24 would support this process so long as the only priority was improved ecological outcomes. Grazing should not be

permiyyed in SCAs because it will have negative ecological outcomes due to trampling ground cover, destruction of the cryptogam layer, soil compaction, nutrient addition, spread of weeds and selective removal of palatable species.

- 2) Implement interventions in line with the principles of adaptive management
 - a) There is much to recommend the focus on adaptive management. This process of defining what you want the final landscape to look like and then actively managing to achieve that result while learning along the way is to be applauded and should be part of the Plan of Management process for all public lands, not just that managed by National Parks.
 - b) The potential for good outcomes using new data and technologies is only as good as the interpretation. This may be dubious. A case in point is Trinkey SCA. The data proposes extensive areas of management concern to the west of a north/south line on the map. This is not a feature on the ground but a junction of two maps or mapping runs. There would be no major difference between east and west sides of that imaginary line. It is of concern that such data has been used to predict the potential areas to be thinned and may give a gross overestimate of these. It is also unclear whether the technology can distinguish between these three species.
- 3) Develop plans of management for SCAs
 - a) The concept of consolidation of a number of SCAs under the one PoM is a good one. NPWS has already begun to utilize this process with the Bobbiwaa group of reserves, though has not taken it to its best final result.
 - b) The choice of Goonoo, Pilliga, Pilliga West and Trinkey as priority areas seems to be based not on ecological but on commercial considerations. These are the biggest SCAs in the defined areas with the biggest volumes of potential commercial timber. It may be better from an adaptive management point of view to start with some of the smaller SCAs. It is inconsistent with the stated desire for good socio-economic outcomes for Gwabegar and Baradine to include Goonoo and Trinkey. These would have no benefit for the two small towns. In addition it should be noted that large conservation reserves give better ecological outcomes than smaller fragmented ones.
- 4) Seek cost recovery and sharing opportunities to implement active and adaptive management.
 - a) Secondary commercial benefits are already used by NPWS in its use of contractors in the removal of feral goats in many western reserves. However this “goods for services” model goes well beyond that. It seems to propose that silvicultural and commercial outcomes are once more a desired result. Any guarantee of timber returns to the contractors would lead to so-called thinning actually resulting in harvesting.
 - b) The huge cost of a thinning program of such an extent is of concern. We question the size of the program and probable overestimation of the actual areas to be thinned. We also question the apparent dismissal of the use of a variable fire regime as the prime management tool.

- 5) Amend legislation to facilitate active and adaptive management.
 - a) The requirement for an Adaptive Management Plan with specific measurable and spatially specific management targets assumes the knowledge of the what the best outcome will be and does not allow for the learning component of adaptive management.
 - b) Allowing Plans of Management to be approved at regional manager level would lead to inconsistencies across the state and bypass expertise found elsewhere in the Service.
 - c) There is no need to amend legislation since allowing commercial use of residues would in fact be turning SCAs back into State Forests. The decision was made in 2005 and the industry has been compensated. Changes in legislation would also open the door to timber harvesting in other reserves.
 - d) Biomaterial from native forests should not be allowed to be used for electricity generation and thus establish a new industry which may require compensation should things change in the future. It would also set a precedent to allow such a use from more commercially valuable material in other forests elsewhere in the state.
 - e) In other words, there should be no changes to legislation.

- 6) Review governance arrangements in the SCAs
 - a) With the present arrangements leaving many reserves without oversight, it is essential that some advisory group take over as quickly as possible. The Regional Advisory Committee is at present best placed to carry out that function with the recommended additions.
 - b) An independent review process would be invaluable.
 - c) The original Community Conservation Area Advisory Committees should have functioned similarly to the proposed Regional Officers Working Group. Unfortunately, failure to engage by some agencies led to frustration and poor outcomes. A whole of landscape cross-tenure approach, managed by a Regional Officers Working Group and overseen by an expanded RAC, would produce the best environmental results.

Further comments

Chapter 11 analyses costs and potential revenue. These assume the management of over 6000ha per annum by thinning. This is far more than adaptive management, it is a large scale commercial operation. There is no opportunity for learning and changing management practices as understanding develops. It is a case of going too hard, too soon.

It would allow the development of a new industry, using thinning residues for bioenergy. Once established, expectations that it would continue indefinitely may lead to the necessity for compensation should it not continue.

The short thinning cycle depends on the expectation that increasing density will continue. This may not be so.

Fire is still the most cost-effective method of landscape management in the Pilliga.

Should proposed commercial outcomes for ecological thinning go ahead, it is essential that it does not lead to a case of the “tail wagging the dog”. There need to be strong contracts combined with enough resources to monitor and audit the outcomes. Suggested requirement for reduced monitoring should change the method of measuring harvested logs from dbh to basal diameter. This would allow more accurate assessment of harvesting. Any fines should be larger than the profits to be made, large enough to act as a real deterrent.

If the report is actually about making the cypress industry sustainable, then a number of ideas should be considered

- Mining towns die. Once the timber industry changed from harvesting individual trees to large scale mechanical harvesting, it became timber mining and inevitably unsustainable.
- Private pine plantations on private land should be investigated.
- The current royalty on timber is too low to allow for good management of a sustainable industry. Increasing the royalty will encourage the development of higher value products with fewer resources.

Thank you for the opportunity to comment. We trust that good environmental common sense will prevail over commercial pressures.

Friends of the Pilliga
Jane Judd, Convenor

References

Restoring fire as an ecological process in shortgrass prairie ecosystems: initial effects of prescribed burning during the dormant and growing seasons
DG Brockway, RG Gatewood, RB Paris - Journal of Environmental, 2002. Elsevier
... in: SC Nodvin, TA Waldrop (Eds.), Fire and the Environment: Ecological and Cultural Perspectives

The role and use of fire for biodiversity conservation in south-east Queensland:
Fire management guidelines derived from ecological research
P Watson - 2001 - coagbushfireinquiry.gov.au

Ecological heterogeneity in the effects of grazing and fire on grassland diversity
S Harrison, BD Inouye, HD Safford - Conservation Biology, 2003 - Wiley Online Library

Which mosaic? A landscape ecological approach for evaluating interactions between fire regimes, habitat and animals
RA Bradstock, M Bedward, AM Gill, JS Cohn - Wildlife Research, 2005 - CSIRO

Ecological and technological knowledge of fire: Aborigines versus park rangers
in northern Australia
HT Lewis - *American Anthropologist*, 1989 - Wiley Online Library