

Dear Sir/Madam,

I have been employed as ecologist for the Far West Region of DNR for eight years and worked in the Western Division as an biologist for 12 years. As part of this employment I was a steering committee member of the WEST 2000 investigation of biodiversity in woody weed areas (Ayers *et al.* 2001) including performing some of the vertebrate fauna assessment of this study and of the Cobar Peneplain Regional Assessment. In addition I have been intimately involved in vegetation assessment since SEPP 46, giving ecological advice on clearing assessments in the "INS landscape". In short, I have significant expertise in this issue and landscape.

I am providing this submission to the INS review as a private citizen as, due to the short timeframe allocated for input, I have not time to provide advice through formal DNR channels. As such the views expressed below are my own and not necessarily those of DNR. I am, however, confident that many of my colleagues in DNR and DEC would concur with the comments below. The short timeframe also means that these comments are not as comprehensive as I would have liked.

Yours faithfully

Terry Mazzer

Comments on Specific Aspects of the Review

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Statement that it is "ecologically desirable to favour eucalypts over Cypress Pine species citing the work of Lunt *et al.* (2006).

This claim is not a logical outcome of Lunt *et al.* (2006). They surveyed areas of State Forest in the central west of NSW and indeed determined that cypress pine species had increased relative to eucalypts. However, their explanation was that areas of State Forest were selected on the basis of the presence of cypress and that silvicultural practices such as culling of eucalypts to favour cypress had created this situation. These silvicultural practices are unlikely to have been carried out on other land in the region thus there is no reason to assume that cypress has increased relative to eucalypts on freehold or leasehold lands in the region. Consequently the justification for Recommendation 2.2.5 is not valid.

Recommendation: retain the requirement to retain smaller stems of the two cypress species unless further evidence is available.

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Inclusion of *Acacia salicina* and *Eucalyptus camaldulensis* as INS species in the Central West CMA.

No justification has been provided that these species are acting invasively. I do not believe that these species act as INS in this area. Rather they are regenerating native species in areas which have been flooded. They are simply recolonising areas from which they have been removed.

Recommendation: do not add these species to the list of INS.

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Increase in size of *Eucalyptus populnea* allowed to be cleared from 20 cm to 30 cm in the Western CMA.

This change seems to be only dealt with in detail in Appendix 2 and therefore may have been missed by many stakeholders. No justification is provided for this increase in size of trees allowed to be cleared under the INS tool. This increase appears to be only for this one species in one CMA. An increase from 20 cm to 30 cm is considerable and must be substantiated. In my opinion this change is unwarranted and will result in significant negative outcomes for biodiversity.

A 30 cm dbh Bimble Box is likely to be in the order of 10 m tall and at least 50 years old if not substantially older. In the Central West catchment Shelly (2003) recorded hollows in one third of Bimble Box in the 20-29 cm size class and 2.36 per tree in the 30-39 cm size class, albeit from small

sample sizes. This shows that Bimble Box around the 30 cm mark are mature and beginning to form hollows.

Harrington (1979) stated that “Trunks of *E. populnea* are invariably hollow at this site when over 19 cm in diameter”. Harrington’s data was collected northeast of Cobar near the edge of the Western Division.

In my experience, on poorer quality sites, such as when the species is associated with *E. intertexta*, 30 cm or less is often the diameter of a mature tree and numerous hollows can be found in trees of this size. Tree hollows are widely acknowledged as critical habitat components for native fauna and are not replaced within timeframes approaching a century or more. To allow removal of these trees is under a pretext of maintaining or improving the environment is frankly irresponsible.

Recommendation: retain the maximum dbh allowed to be cleared at 20 cm for Bimble Box in line with other tree species.

General Comments on the Review and the INS Tool.

- I recommend that the NRC examine the scientific and factual information available regarding the INS issue rather than, as seems to have been done in this review, relying on rhetoric and hearsay provided from stakeholders on both sides of the debate. Key scientific information includes the report on erosion by Eldridge *et al.* (2003), the report on biodiversity by Ayers *et al.* (2001) and the recent paper by Lunt *et al.* (2006). Any NRC review should consult widely amongst the scientific community.
- A couple of avenues could be followed:
 1. Commission research or do some trials and change the INS arrangements on the outcomes.
 2. Commission expert panels of agricultural economists, soil conservationists and biologists or just conduct a series of polls, and attempt to generate a consensus amongst these 3 groups to then feed into policy.
- This review has failed to examine the Term of Reference no 4 – Science underpinning the INS tool. In particular the controversial aspect of the INS tool, the use of cropping to “restore” the environment. The review has failed to examine the positive and negative evidence for this technique. Information may be available which demonstrates the improvement in environmental outcomes as a result of the INS tool, however, I am unaware of it. An evidence-based approach to policy requires that until this improvement can be demonstrated and quantified the INS tool should not proceed.
- Review has been conducted with a lack of consultation with independent biologists regarding biodiversity aspects of the INS tool and soil scientists regarding the erosion aspects of the INS tool. This is shown in the acknowledgement section where virtually all those consulted are CMA staff or members of Environment or Landholder groups.
- The review is characterised by a lack of scientific justification for the recommendations contained within, particularly those changes located in the tables in the Appendices.
- It is my opinion that the more intensive “paddock scale” techniques of INS control allowed within the tool fail to maintain or improve environmental outcomes and thus are contrary to the objects of the Native Vegetation Act.
- In my opinion the INS tool has increased potential clearing in the Western and Central Divisions in contrast to the wording of the Native Vegetation Act to end broadscale clearing unless it maintains or improves environmental outcomes. In those parts of the state where INS is common the tool also probably allows more clearing than under the previous Native Vegetation Conservation Act.

- In my opinion there is no need for an INS module on environmental grounds. Rather the need is based on the economic well-being of some vocal landholders. It is a primary production driven activity, not an environmentally driven one. This may be a justifiable social need but is not relevant to the Native Vegetation Act which aims to maintain or improve environmental outcomes. Social and economic considerations were an assessment criterion under the previous Native Vegetation Conservation Act, now repealed. Note though, many landholders genuinely believe that they would be improving the environment
- In my experience it is common for mechanical treatments of INS to result in either thicker stands of shrubs or degraded pasture prone to erosion and of limited biodiversity value. Thus they have negative outcomes both for the pastoralist and for the environment. It is only occasionally that the treatment results in a desirable outcome for the pastoralist, due to either the skill of the pastoralist or the luck of the weather. There is, as yet, no evidence to show that even a successful pastoral outcome is an environmental improvement. Certainly an unsuccessful pastoral outcome will be an environmental negative. I can think of limited situations where a successful treatment might improve or maintain for biodiversity but I think that it is likely that the conditions on the treatment would make it unattractive / impractical.
- The INS tool doesn't take into account that some species grow in a number of land units but some of those land units are more likely to be targeted than others. For example in the case of Bimble Box it grows in broad drainage flats, on the higher plain and up on to rocky foot slopes. Unless a zone is delineated to a land type (which is dependent on the ability and motivation of the Catchment Officer) the result will be the treatment occurring on the drainage flats and the retained area being the higher plain and foot slopes.

References cited

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