

Native Vegetation Review Submission

Having read the Issue Paper published online by the NSW Department of Environment, I make the following comments:

1. Should there be an aspirational goal for biodiversity conservation? The short answer is yes, but biodiversity works best when incorporated into agricultural management, feral animal control, erosion remediation and optimal watercourse function. Without water, soil and plant management, the goal of preserving or improving biodiversity is unachievable. Therefore, it is imperative that improvements to rather than conservation of current biodiversity levels become the desired outcomes.
2. Are the existing legislative objectives still valid? Do they accord with international and national frameworks, laws, regulations etc? No, they do not. The State of the Environment Reports indicate that the legislation is largely ineffective and that there is considerable resistance within the agricultural community against the “heavy handed” operation of these laws. A process of adaptive management would be far more useful together with incentives and engagement. Top down policy has not worked.
3. To what extent are current objectives being met? Environmental processes are in decline. Leaving land to “return to its natural state” does not work. The condition of much of the Tablelands of NSW is too degraded for recovery to occur without intervention.
4. Could current laws be simplified and integrated? In an ideal world a single authority would take responsibility for planning, development, agriculture, water, native species, soil conservation and food quality. However, the likelihood of inter-departmental co-operation is low given the jealousies that exist between bureaucrats and scientists.

THEME 2 – Conservation Action

Threatened species and threats to habitat on private land.

1. Is the current system effective in encouraging landowners to generate public benefits from their land and rewarding them as environmental stewards? Are current mechanisms too proscriptive and costly? Any rewards available are more than counterbalanced by reductions in land value and covenants that are likely to impede the sale of land in the future. Penalties for offences are also counterproductive and encourage landholders to undertake works in a secretive fashion.

2. What incentives might be effective, efficient and equitable in promoting biodiversity on private land? Note the omission of the word “conservation” in relation to biodiversity. There is very little to conserve and much biodiversity to create. Developing biodiversity is entirely feasible and has been achieved in the USA and UK, particularly in respect of bee habitat, water quality issues and groundcover development. The successes have been directly linked to “ecosystem service” payments to farmers within defined boundaries or catchments. The payments are significant, even for small landholders and provide a commercial benefit to the farmer that is sufficient to increase the value of the land. The payments do not necessarily come from government alone – water utilities, food companies, supermarkets and infrastructure funds are all contributors.
3. BioBanking is of no value to small or medium scale landowners. The major decline in landscape condition has occurred in areas where “lifestyle” blocks have been developed via subdivision. Incentives or physical assistance with shelterbelts and grassland development is essential.
4. Governmental priorities. Local Land Services must become re-engaged with landholders by combining advice on productivity with environmental rehabilitation. Insects and birds require shelter of non-eucalyptus woodlands and shrubs but in the past the emphasis has been on regeneration of box and gum woodlands. Many exotic species assist in providing nectar, nesting sites and protection from predation. They also improve the aesthetics of a landscape and reduce fire impact.¹
5. How to monitor and evaluate? Satellite monitoring is now well-advanced and uses Geoscience Australia’s Landsat Archive. Analysis of changes can be performed using NDVI (The Normalised Difference Vegetation Index) derived from MODIS satellite images at 250 metre pixel resolution. MODIS data can be blended with Landsat data which gives a higher level of resolution. The NDVI can be used to calculate the fraction of the Photosynthetic Active Radiation (fPAR). When NDVI is coupled with climatic data, it can be used to estimate Gross Primary Productivity, and if physiological information on the vegetation is available NDVI can be used to calculate Net Primary Productivity. This technology is available at the Australian National University.
6. Tradeoff assessment. This policy does not work.
7. The system does not deal with legacy impacts appropriately.
8. To what extent does current practice (rather than legislation) determine outcomes? What is current practice? Every landholder has a different level of interest in environmental outcomes and productivity. Some are organic, biodynamic or natural farmers while others subscribe to intensive, industrial agriculture. In either case, if the property is intended to produce a commercial return, the landholder will have a

¹ Holmgren, D., *Trees on the Treeless Plains: Revegetation Manual for Volcanic Landscapes of Central Victoria*. (1994), Hepburn, Victoria: Holmgren Design Services. [eBook, 2006];

view as to how best his land can be managed. In some instances this intention will be in harmony with biodiversity while in others it will require the establishment of monocultural crops and vegetation. Education and extension based upon farming objectives are far more conducive to favourable outcomes than regulatory enforcement.

THEME 3 – Conservation and Land Use Planning.

1. How effective are current arrangements at ensuring biodiversity values are identified early and properly considered in planning systems? The friction between development, urban expansion, resource extraction and agriculture is a problem unlikely to be solved simply. LEP templates have made arbitrary distinctions between varying types of land – from RU1 through to E3. The concept of productivity is completely unworkable as there are pockets of highly productive country that have been classed as of low agricultural value and other areas of low productivity that have been classed as highly arable. Rainfall and aspect have been ignored as has historical overgrazing and clearing.
2. How effective are current arrangements for delivering strategic outcomes for biodiversity and enhancing ecosystem services? How can they be improved? See above.
3. How should the effectiveness of strategic planning approaches be monitored and evaluated? See Theme 2 (5) above.

Theme 4 - Conservation in development approval processes.

1. To what extent has the current framework created inconsistent assessment processes, environmental standards, offset practices and duplicative rules? What can be done to harmonise processes? Again the zoning issues outlined above are relevant. Issues such as “Wildlife Corridors” have distorted the approval process, e.g. in the Wingecarribee Shire the wildlife corridor follows the Hume Freeway with attendant native animal carnage along the 4-6 lane highway. The existence of a wildlife corridor within an E3 Environmental Management Zone precludes much development of agricultural industry and eco-tourism projects without any resultant benefits to biodiversity. Over-population of kangaroos within these corridors contributes to loss of biodiversity through over-grazing.
2. Can we have a single, integrated approach to the approval of all forms of development, including agricultural development that is proportionate to the risks involved? If yes, should one methodology (or a harmonised methodology) be used to assess all impacts? The procedure for development should be uniform but there must be differing criteria depending upon the expected impact of the proposal. Agriculture should be viewed as consistent with biodiversity whereas mining, rural subdivisions, roadworks and urban expansion are inconsistent and their effects should be mitigated as much as possible.
3. What are the advantages and disadvantages of the different biodiversity assessment methodologies? Are the rules transparent and consistent? Is the way data is used to underpin decisions transparent? Do the assessment methodologies appropriately

accommodate social and economic values? The whole planning issue is complex and opaque. It really requires an entirely fresh approach to ensure that such important factors as waste management, infrastructure establishment, urban consolidation and agricultural productivity are addressed.

4. Does the regulatory system adequately protect listed threatened species, populations and ecological communities? Is there utility in specifically protecting these entities through the regulatory system? The system is misguided in that it attempts to preserve a status quo that is failing. It is quite possible to create habitat, re-introduce vulnerable populations of plants and animals and accommodate sustainable populations of threatened species in modified landscapes. Observation of native animals, insects and birds will show their incredible adaptability and opportunism – provided their populations are in keeping with the available resources.
5. Are there other models (international or Australian) that regulate activities impacting on biodiversity that may be relevant to NSW? Australia has followed the line of a Biodiversity Action Plan with all the attendant inventory measurements and target development. However, the friction between development and habitat protection persists, largely because of the differences in outcomes between large scale programmes in sparsely-populated areas and those in peri-urban or rural residential zones. There is a large body of international literature on this subject but the results of most of the plans are disappointing. Australia's environment requires an Australian solution owing to the unique nature of the ecosystems that are threatened and the impact of imported plants and animals used in our agriculture.
6. To what extent has the current regulatory system resulted in lost development opportunities and/or prevented innovative land management practices? This is a serious issue given that agronomists and planners have many preconceived ideas about the suitability or otherwise of various landscapes for traditional agriculture. The application of organic waste can have dramatic effects upon soil condition and nutrient content on even the most hostile land. The critical factor is moisture. Once sufficient water is available, plants will create soil provided they have the requisite nutrition. There is much NSW legislation that impedes the improvement of land for both environmental and commercial use – e.g. the Water Management Act and the Native Vegetation legislation. Orchards, horticulture and dairy farming can take advantage of convenient markets on the Eastern seaboard but are limited by regulations that prevent the thinning of eucalypts, the rehabilitation of watercourses and the planting of introduced species to produce timber, fruits and nuts for sale.
7. Some impacts cannot be offset. What are they? Are these appropriately addressed in approval systems? What is the relevance of social and economic benefits of projects in considering these impacts? Where the land is already degraded there are few opportunities for offsets. As mentioned above, there is no advantage in spectacular inactivity – leaving land to regenerate native vegetation almost always results in sickly woodlands, over-grazing by native and feral animals and continued erosion. Active intervention to slow streams, build soil fertility and manage grasslands with grazing is a far better alternative to “locking up” areas for offsets.
8. How can offsets be more strategically located? See above.

9. Are there areas currently regulated that would be better left to self-regulatory codes of practice or accreditation schemes? The concept of education and extension based upon solid research is vital. If a landholder has undertaken appropriate training and has access to expert advice **relevant to his own land** he will be a superior landowner and will provide improved habitat for threatened species. To be an effective steward of land, a farmer must be profitable and his land must escalate in value over time. Assistance to achieve these outcomes will please both government and the public.

Theme 5 - Wildlife management

1. Have the threats to biodiversity posed by:
 - (a) people taking animals and plants from the wild,
 - (b) feral animals and weeds, and
 - (c) illegally imported species,
 been effectively managed?
 The feral animal issue is difficult for farmers. I have personal experience with feral pigs and have been unable to gain assistance from the local authorities to deal with them. Weeds are only flourishing because of over-grazing, salinity and reduced fertility. Once the landscape is in balance the desirable species return. No amount of money or sprays will ever eradicate the weeds problem. It is only good husbandry that defeats weeds as they are there to correct man-made problems. Again, this is an area where education and extension are the best solution.
2. Has the NPW Act and the supporting policy framework led to a positive change in the welfare of native animals (captive and free-living)? What role if any should the government have in ensuring the welfare of individual native animals—particularly where there are already stand-alone welfare laws such as the Prevention of Cruelty to Animals Act 1979? In the case of kangaroos, the populations in the Highlands and Tablelands are reaching plague proportions. Until there is a value placed on the carcass and the hide of the animal, this will continue. Too many kangaroos lead to welfare issues for that population – starvation and road kill are the results. They also pose a threat to motorists as do wombats. WIRES in the Tablelands is kept busy dealing with the orphaned young of these species as a result of population pressures. The more animals, the more they graze the roadsides looking for food.
3. Are the provisions for marine mammals effective? Not my area of expertise.
4. Is the current framework for wildlife licensing, offences and defences, including those applying to threatened species, easily understood? Is the current licensing system too complex? How can it be improved and simplified to focus on conservation outcomes? I apply for tags to kill kangaroos each year, but it is difficult to find reliable people to reduce the numbers. If they could be taken for meat and leather, the numbers would be sustained at appropriate levels.
5. Is there currently appropriate regulation for the sustainable use and trade of wildlife? See above.

Theme 6 - Information provisions

1. 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?
Visitor numbers to National Parks are useful for quantifying the value of our native flora and fauna. However, tourists are really only interested in the “cute and cuddly” animals. They are afraid of our reptiles, ignorant of our birds and see our insects (and spiders) as a threat. However, it is the birds and predatory insects that the farmers need to pollinate their crops and to keep pest species under control. The use of chemical sprays should be investigated, particularly as bees are often casualties of herbicides, pesticides and fungicides.
2. What type, quality and frequency of data should be collected about biodiversity? Who should be responsible for such a system? The cheapest way to gain information is to ask landholders to take the counts. Each year there should be a “bird day” using twitchers and farmers to identify species on rural lands. Similarly, “marsupial day”, “reptile day” and “monotreme day” might work. Schools could also be involved.
3. Is current data about biodiversity highly credible and readily accessible? If not, how can quality and access be improved? No. It is not easy to find out what species should or should not be on a particular piece of land and whether they are threatened, vulnerable or plentiful.
4. How effective is the threatened species listing process (including the listing of key threatening processes) in guiding subsequent conservation action? Not effective at all.
5. Should threatened species listing decisions be decoupled from decisions on conservation actions (including recovery planning) and regulatory processes? Where in all this regulation are provisions for re-introduction of threatened species. Land in my area is appropriate for koalas but there are none in the National Park nor on private land.
6. To what extent, if any, does having national and state lists of threatened species cause confusion, regulatory burden or duplication of conservation effort? How could national and state lists be rationalised? It is very confusing and the websites unhelpful. All threatened species should be listed on a state by state basis together with pictures and information on their habitat and basic biology. Ditto the “vulnerable” list.
7. To what extent is the identification of critical habitat an effective tool for biodiversity conservation? Should we list critical habitat for more species where relevant and useful? Lists without explanation are useless. There is a paucity of information on all environmental issues that affect a farmer – when do they breed, how many young do they have, are they a threat to domestic animals, etc.?
8. Should private conservation data be collected and if so how? Yes, see (2) above.



