#### PUTTING OUR MONEY WHERE OUR MOUTH IS

# Submission to the Productivity Commission Inquiry into the Impacts of Native Vegetation and Biodiversity Regulations

## September 2003

Dr Ted Lefroy and Dr Peter Stone, CSIRO Sustainable Ecosystems Private Bag PO Wembley WA 6194

**SUMMARY**: If Australians really want private landholders to do a better job of managing native vegetation and biodiversity on private land, we should reflect this by paying for its management. A potential source of funds is the annual monetary value of gross transfers from taxpayers and consumers to support the agricultural sector, which totals \$2.27 billion through a range of input subsidies, price support schemes and other less direct measures. If all 'private good' expenditure on agricultural support was diverted to management of native vegetation, it could secure stewardship payments of \$57/ha per year on each of the 28 million hectares of native vegetation on private land in the agricultural zone, more if we were discerning about which bits we wanted to protect such as only those areas over a minimum size.

#### 1. Science has a limited contribution to make to the policy debate in the short term

Ecological science has influenced native vegetation debate through the concept of thresholds and targets for preservation and management. These are based primarily on the requirement of certain species for connectivity between vegetation patches to enable them to move around a landscape and ensure their total habitat area is sufficient to maintain the viability of populations for the long term (see for example McIntyre et al 2000 and Pearson et al 1996). However these thresholds, such as the 30% rule commonly used in vegetation planning, have been derived from theoretical models or narrowly based empirical studies that do not necessarily transfer from one place to another or from one species to another. In addition, the benchmarks in many regional plans of protecting 15% or 30% of pre-1750 vegetation make little sense given that fire regimes would inevitably have changed the composition and distribution of vegetation communities since then, even without extensive land clearing. However the issues of thresholds and benchmarks will take many years of research to establish and validate, and the more resources we devote to resolving these debates in the short term, the less there will be to carry out management. This doesn't imply research is irrelevant, but that there needs to be a balance struck between paying for actions now and paying for information to better inform action in the future. Also, no amount of research will help to resolve the more subjective decisions concerning which bits of vegetation are more valuable than others. Given that there is general agreement among governments and the general public that we need to protect more native vegetation than we are at present, there is a strong case to stop splitting hairs and get on with it. Where science can play an important role is in the use of remote sensing technology to identify priority areas for stewardship payment on the basis of their size, location and (with improvement in technology) condition.

### 2. Paying for stewardship of native vegetation.

Management of native vegetation in Australia currently relies on public programs that provide some direct subsidies for fencing and other forms of management, but mainly rely on education and persuasion. This ultimately amounts to a reliance on the good will and disposable income of landholders. Over the last decade, there have been some 15 major State

and Commonwealth schemes with a total budget in the order of \$500 million a year that provide direct and indirect support for the protection of native vegetation on farms and establishment of revegetation for conservation and commercial purposes (Williams and Cranley 2003). Seven of these have collectively supported the protection of about 600 000 ha of remnant vegetation on farms through fencing, covenants or conservation contracts. However this represents less than 3% of the estimated 28 million ha of remnant vegetation on private land (Stewart *et al* 1996-97 p. 52). If Australia's citizens and governments really value native vegetation and its dependant biodiversity, we should pay for it directly because pragmatically that is likely to be the only way native vegetation will be adequately protected. If we try to enforce a strong duty of care and place the onus on landholders, the political resistance and landholder backlash will be strong and may result in more damage being done as occurred when clearing bans were imposed in water resource catchments in Western Australia in the 1980's.

In short we are suggesting that the transaction costs involved in a beneficiary pays approach are likely to be lower than under the polluter pays principle and therefore warrant further examination.

### 3. Where do we get the money? Some facts and figures:

- 1. Remnant native vegetation under minimal use on privately held land totals 28 million ha (Stewart *et al* 1996-97 p. 52).
- 2. The Total Support Estimate (TSE) is an indicator of the annual monetary value of all gross transfers from taxpayers and consumers arising from policy measures that support agriculture. The TSE for Australia in 2000-2001 was USD 1.177 billion, or \$A 2.27 billion, which constitutes 0.3% of Australia's GDP (OECD 2002 p. 51).
- 3. The General Services Support Estimate (GSSE) is the portion of the TSE that does not directly affect farm receipts, and covers education, extension, training, marketing, promotion and infrastructure support for agriculture. In a sense, this is public money spent on what may loosely be termed the 'public good'. For 2000-2001, this totalled USD 464 million, or \$A0.90 billion (OECD 2002 p. 48) and would include public programs such as NHT.
- 4. The Producer Support Estimate is the annual monetary value of gross transfers from taxpayers and consumers to agricultural producers, and is measured at the farm gate. Its value in 2000-2001 was \$A1.6 billion (OECD 2002 p. 41; ca \$A200 million has been 'missed', in rounding, we assume).
- 5. The value of this support expressed as a % of gross farm receipts (%PSE) shows the amount of support for farmers irrespective of sectoral and national differences. The 2000-2001 %PSE for Australia was 4%. In other words, 4% of farmers' income comes from the transfer of taxpayer and consumer funds. While this is considerably lower than the OECD average (31%; OECD 2002 p. 42) it nevertheless represents a substantial sum of money.
- 6. Approximately \$A280 million of this transfer occurred through higher than market prices paid by consumers through policies designed to support farmers (Consumer Support Estimate). This represents a 2% tax burden on Australian consumers for expenditure at the farm gate (OECD 2002 p. 49).
- 7. Approximately \$A1.1 billion is transferred via input subsidies, with the remaining \$A256 million coming from historical, area/number based and output-based subsidies.

8. There are approximately 146,000 farm establishments that qualify as economic units (ABS 2002).

# 4. How much native vegetation will this money buy?

The figures above show that taxpayers transfer large sums of money to the agricultural sector through a mix of 'public good' and 'private good' funding. We contend that some proportion of this money could be used to directly fund the purchase of native vegetation management on private land. The mechanism that we are suggesting be examined more closely involves paying farmers a stewardship fee for each hectare of native vegetation that they manage according to agreed criteria. Because the money required would come from existing agricultural support funds, the scheme would be cost neutral in aggregate, but would involve transfers from one farming sector to another, and from some farming regions to others, including from regions where remnant vegetation management is not a significant issue. Of course it may not be possible to redirect some of this assistance, and it may not be desirable to redirect all of it, such as support for agricultural education, research, and infrastructure, but in Table 1 below we begin by examining the extreme case.

The source and amount of the agricultural support funds diverted for this purpose would be determined as part of the normal policy-executive process. The table below outlines the size of the stewardship fee that could be established by diverting different categories of existing agricultural support funds. We have assumed that all native vegetation is desired for purchase. However, not every hectare may be worth managing. For instance, remnants of <1 ha may not be considered valuable. Other cheaply obtained and rational criteria might be used to reduce the number of ha over which the PSE is spread.

**Table 1.** Sources of funds currently used for agricultural support and the stewardship fee that they could purchase if diverted towards conservation of native vegetation.

Source of funds	<b>Description of funds</b>	Amount of funds (\$m)	Stewardship fee available (\$/ha)
TSE total	Total transfer from taxpayers and consumers to agricultural support	2,270	81
TSE private	'Private good' transfer (should ~= PSE total)	1,370	49
TSE public	GSSE - 'Public good' transfer (NHT, training, infrastructure, etc.)	900	32
PSE total	Total transfer from taxpayers and consumers to agricultural producers	1,600	57
PSE input	Input subsidy (eg diesel rebate)	1,100	39
PSE price	Price support	280	10
PSE other	Historical area/number or output-based subsidy	256	8

If all existing transfers to the agricultural sector were used to purchase stewardship of native vegetation on private land it would secure payments of \$81/ha. If all 'private good' expenditure on agricultural support was diverted it would secure stewardship payments of \$57/ha. If existing 'public good' expenditure on agricultural support were diverted to the

purchase of native vegetation it would secure stewardship payments of \$32/ha for all existing native vegetation on private land.

If all existing transfers to the agricultural sector were used to purchase, say, half the existing native vegetation on private land it would be possible to pay stewardship fees of over \$160/ha.

#### 5. Would the cost of compliance costs out weigh the benefits?

While some landholders may clear, graze or otherwise degrade remnant vegetation for which they are being paid a stewardship fee, in time this is likely to be out-weighed by peer pressure and, most significantly, the rise in value of native vegetation in the eyes of landholders as its worth came to rival that of agricultural land in the more extensively farmed areas. There is always the risk that with large amounts of money involved, some people will find ways to exploit and distort the system. While this risk needs guarding against, we are suggesting that the transaction costs involved in compliance warrant examination as they may be less than the cost of losing native vegetation values under the application of duty of care that lacks adequate compensation.

#### **References:**

Australian Bureau of Statistics (2002). Structure of Agricultural Industry. In *Agriculture*. 7113.0. 1999-2000, Table 2.1, p 11, Commonwealth of Australia, Canberra.

Pearson SM, Turner MG, Gardner RH, and O'Neill RV (1996) An organism based perspective of habitat fragmentation. In: *Biodiversity in Managed Landscapes: Theory and Practice* (eds RC Szaro and DW Johnston) pp 77-95, Oxford University Press, New York.

McIntyre S, McIvor JG, MacLeod ND (2000) Principles for Sustainable grazing in eucalypt woodlands: landscape-scale indicators and the search for thresholds. In *Management for Sustainable Ecosystems*. (eds. P. Hale, A. Petrie, D, Moloney and P. Sattler) pp 92-100. Centre for Conservation Biology, University of Queensland, Brisbane.

OECD (2002). Agricultural Policies in OECD Countries, Monitoring and Evaluation 2002, Highlights. Organisation for Economic Co-operation and Development, Paris.

Stewart JB, Smart RV, Barry SC and Veitch SM (1996/97) *Land Use of Australia - Final Report for project BRR5*. National Land and Water Resources Audit December 2001.

Williams, J and Cranley L (2003) Review of vegetation management programs in Australia. In *Native Vegetation Management in Graingrowing Regions*. (ed. EC Lefroy) final report to the GRDC for project CSA7, CSIRO Sustainable Ecosystems, Canberra..