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WWF briefing - native vegetation regulation: financial impact and policy issues 31 October 2005

Introduction

In 2003 and 2004 the NSW and Queensland Parliaments enacted legislation to allow the clearing of non-remnant vegetation without approval and to ban the clearing of remnant vegetation (subject to certain exemptions).

Since the legislation was enacted the Australian Government and industry groups have claimed that four economic studies provide evidence that native vegetation regulation is having a profound financial impact on the farm sector.

WWF has undertaken an economic and policy review of the studies and has found that the evidence that the legislation is having a financial impact on the farm sector is weak:

- First, the costs identified in the studies consist entirely or almost entirely of "opportunity" costs rather than money out of pocket or other costs immediately incurred by the business. Where immediate costs have been identified, they are not quantified and as they can be expected to be comparatively easy to quantify they can be assumed to be small.
- Second, the localities selected for study are likely to exaggerate the cost of native vegetation regulation to the farm sector as a whole.
- Third, the Davidson and Sinden studies are based on very high levels of clearing.
- Fourth, the Productivity Commission and Davidson studies do not attempt to quantify the economic benefits of conserving native vegetation. That is, they are cost studies not cost-benefit studies.

On the other hand the studies can be relied upon to conclude that:

- The regulations have very little immediate financial impact on farm businesses;

- The regulations will limit the ability of landholders who have a significant proportion of native vegetation on their properties to intensify or further intensify their landuse if they need to clear native vegetation to do so. That was the intention of the native vegetation legislation, and an opportunity cost is to be expected as a result.

The four studies

ABARE/BRS 2003, "*Queensland Land Clearing Proposal- Socio-economic Impact*", Department of Agriculture Fisheries & Forestry, Australia, Canberra.

Davidson A, Elliston L, Kokic P, Lawson K 2005, *"Native Vegetation cost of preservation in Australia", Australian Commodities,* Vol. 12 no. 3 September Quarter.

Productivity Commission 2004, *Impacts of Native Vegetation and Biodiversity Regulations*, Report no. 29, Melbourne.

Sinden, JA 2004, "Do the Public Gains from vegetation protection in North-Western NSW exceed the landholder's loss of land value?" *The Rangeland Journal,* Vol. 26 no. 2.

Opportunity costs rather than immediate costs

In each of the studies the major cost to landholders identified is the lost opportunity to clear the land for more intensive use.

- The Productivity Commission's Moree study assumed intensification from grazing to cropping;
- The Productivity Commission Murweh study assumed intensification from native vegetation to sown pasture;
- Sinden's Moree study focused on the difference in value between cleared and uncleared land;
- The ABARE/BRS (2003) study (which included the Murweh area) assumed the replacement of native vegetation with pasture and some cropping;
- The Davidson study assumed intensification from native vegetation to sown pasture or grazing to cropping.

Opportunity costs are not costs immediately incurred by a business enterprise. They represent foregone opportunities. The loss associated with those foregone opportunities is necessarily based on assumptions, including assumptions about future commodity prices, fuel prices, water prices, availability of water and soils, rainfall and

weather patterns, not all of which are necessarily stated in the studies and not all of which will come to pass. For example, the Productivity Commission's study assumed replacement of native vegetation with pasture in Murweh Shire (in Queensland) but the Shire has been drought declared since 2002, and it is extremely unlikely that any opportunity costs have been incurred to date.

Even when the estimated costs are more direct there is good reason to treat them with some caution. The American economist Eban Goodstein (1997, "Polluted Data" *The American Prospect,* Vol 8 no. 35) reviewed industry estimates of the cost of proposed new regulation in a variety of industries, and then compared the estimated costs to the actual costs after implementation. Goodstein found that in all cases the estimated costs were significantly greater than the actual costs; in most cases double the actual costs.

Study localities selected exaggerate opportunity cost for farm sector as a whole

None of the studies take into account the fact that farmers may clear non-remnant vegetation at anytime without approval. They focus on remnant native vegetation. Further, as Sinden (2004) noted, when "*native vegetation must be retained, losses in land value will be high when productivity of alternative agriculture is high* [ie. there are opportunities to intensify land use] *and when large amounts of native vegetation remain*". The studies focus on localities where the opportunity cost of the regulations will be high relative to the farm sector as a whole.

- The Productivity Commission and Sinden studies both relied upon the Moree area. However Moree has one of highest gross agricultural production value of any NSW Shire and also has at least 41% of its area is still covered by native vegetation (Sinden 2004). As a consequence, the opportunity cost of the clearing regulations is high and very unlikely to be representative of the NSW farm sector as a whole.

- The Productivity Commission and ABARE/BRS studies both relied upon the Murweh area. However, Murweh has amongst the highest opportunity costs of any local area in Queensland (ABARE/BRS 2003).

- The Davidson study did not specify its study area (other than as "*western and central NSW*"). It also did not identify the number of farmers ABARE had surveyed (in the survey that Davidson relied upon as primary material) and does not identify the questions the farmers were asked by ABARE. ABARE advised WWF that its survey is not publicly available.

It is considerable concern that studies that suggest that native vegetations regulation will have a severe financial impact are promoted over those that reach a different conclusion. For example, ABARE/BRS (2003) estimated that the financial impact of Queensland's native vegetation legislation was only $190 million for the whole of Queensland.

Similarly, Sinden reviewed 6 other NSW studies and found that most cases the native vegetation regulations had a detrimental financial impact, though the impact differed markedly in its severity, but that in some cases the regulations had no impact and in others they had a positive impact.

The results of some studies rely on extreme levels of land clearing

The studies showing the most dramatic financial impact of native vegetation regulation assume extremely high levels of land clearing.

- Sinden (2004) assumes that the farms in the sample will move from an average of 52% of land cleared to between 85%-95% cleared.
- Davidson et al (2005) assumes that all land appropriate to cropping is cleared.

Setting aside for the moment the environmental degradation from this level of clearing, it is reasonable to question whether such clearing would have a direct adverse financial impact on farmers. Sinden (2004) cited several studies which suggest that land values increase as land is initially cleared, because landholders clear their best land first, and then levels off and declines as more land is cleared. For example, a study by Walpole (2000), referred to by Sinden, found that the percentage of native vegetation cover on farms in the Murray River catchment had little effect on land values once cover fell below 50% of the property.

The questions to be asked are whether landholders would really clear the level of vegetation assumed in the studies and whether the benefits based on such a level of clearing truly represent a loss of opportunity.

Costs and benefits of regulation

To be economically justifiable, the total private and public benefits of regulation should outweigh the total private and public costs.

- The most significant study of the four in policy formation terms, the Productivity Commission, did not consider the benefits of retaining native vegetation. Furthermore, the Commission heavily qualified its findings by

expressly noting that its findings were based on two small studies, one in Moree and the other in Murweh, that the findings were "*orders of magnitude*" not measures of likely impact, that the findings should not be applied to other regions or other states or territories and that no attempt had been made to quantify the state-wide impact of the regulations in either case[1].

- However Sinden (2004) attempted to quantify the biodiversity and greenhouse gas benefits of retaining native vegetation and concluded that overall "*these results suggest that public gains may well exceed private losses*". He suggested that other parts of NSW would be likely to show higher benefits. An earlier report by Lockwood and Walpole (1999) also concluded that there was a net economic benefit in conserving native vegetation in the areas studied. ABARE/BRS (2003) identified the benefits to biodiversity and dryland salinity of conserving vegetation and recognized them as significant.

There will be some private costs to individual enterprises due to regulation of native vegetation clearing. All regulations that restrict the activities of commercial enterprises entail some costs. For example, reductions in speed limits financially impact upon the road freight businesses. Tighter pollution laws impact upon chemical companies. And laws banning advertisements by compensation lawyers and placing restrictions on the amount of costs they can recover impact upon them. The mere existence of costs cannot be used to suggest that the regulations are not justified or effective.

Benefits of native vegetation regulation

Broadscale native vegetation clearing is the number one or two cause of terrestrial biodiversity loss nationwide[2] and indeed world-wide, and its full impact probably will not be for another century. Broadscale clearing is the number one cause of dryland salinity in both south-west Western Australia and the Murray Darling Basin, a key cause of nutrient loss, a key threat to inland, estuarine and coastal water quality and one of the largest sources of Australia's greenhouse gas emissions.

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[1] After the release of the Report the Australian Government asserted that the Commission had "*found that state native vegetation and biodiversity regulations are imposing significant and unnecessary costs on landholders*" (Australian Government 2004, *The Australian Government's Response to Recommendations in the Productivity Commission Inquiry into Impacts of Native Vegetation and Biodiversity Regulations*, 10 Aug 2004). As the Productivity Commission did not consider the benefits of the regulations, and therefore could not comment on necessity, this statement was simply untrue.

[2] The key immediate threat of equal significance is feral animals, weeds and diseases. In the longer term climate change is also a key threat.

The threat posed to biodiversity in cleared areas has addressed, at great expense and not very effectively, by tree planting programs supported by government and private funds, including Australian Government funds (primarily under the Natural Heritage Trust and the Envirofund).

The risk posed by modern forms of agriculture to salinity and water quality has been understood by scientists for many years and the need to introduce new crops comprised largely or substantially of deep-rooted perennials is expressly recognized in the Murray Darling *Basin Salinity Management Strategy 2001-2015* and the *National Action Plan for Salinity and Water Quality*.

Given the large-scale environmental problems faced by Australia the first step must be to avoid any further damage, and ending the broadscale clearing of native vegetation is the key first step in that process.

Responsibility of Governments to regulate the use of land

The responsibility of governments to closely regulate the use of land by individuals and businesses has been recognized in Australian urban areas for at least a century for much the same reason as regulations are being introduced in rural areas – the use of land, particularly the intensive use of land, has impacts beyond property boundaries. That is particularly true of native vegetation clearing because its impacts are frequently manifest many hundreds or thousands of kilometers away.

The number of rural enterprises and individuals involved in rural enterprises is very large and spread over very large areas of land. Clearing activities may cover the whole range from small to large scale. The cost of administering a system based upon state-wide property by property assessment appears likely to be very significant indeed. Some benefits of native vegetation are quantifiable (the cost of replacing infrastructure damaged by dryland salinity for example) but other costs (the regional or total extinction of native animals, plants and biodiversity, for example) are not. Finally, even if the benefits of native vegetation were quantifiable and could be costed, it is very difficult in a world of free trade and ever falling commodity prices to see how the cost of native vegetation could be incorporated into commodity prices.

In such circumstances there is much to be said for the approach adopted by the NSW and Queensland Parliaments – to de-regulate the clearing of non-remnant native vegetation and ban the clearing of remnant native vegetation – and thereby strike a broad balance between the rights of landholders to operate their businesses cost effectively and the right of the wider society (including other rural landholders) to a healthy environment. The fact that the Parliaments struck that balance following the formation of Government by the Australian Labor Party after it had taken its native

vegetation policies to the electorate as its key environmental policy, has been lost in the public debate.

A better way?

The Productivity Commission and Davidson studies suggest that regulation is not the most appropriate way of protecting native vegetation, with alternatives, primarily market based incentives, capable of providing superior environmental outcomes at lower costs to agriculture. The studies do not meaningfully amplify their suggestions nor do they provide any satisfactory evidence that alternative approaches will achieve the environmental objectives – salinity control, water and soil protection and biodiversity conservation – of the legislation.

Conclusion

Based on the above, the evidence that native vegetation regulation is having a serious impact on the farm sector is weak with studies based on small samples of landholders largely located in areas selected to show the highest opportunity costs. The studies provide evidence that some agricultural businesses will be impacted by the regulations. However, it is difficult to see why the opportunity costs of landholders should be treated differently to the opportunity costs incurred by other businesses when regulations are changed for the wider public good.

Further information

Information in relation to the economic and financial issues in this briefing can be obtained by contacting Tony Trujillo, Economic Policy Officer, WWF-Australia on 02 8202 1245.

Information in relation to the policy issues in this briefing can be obtained by contacting Paul Toni, Program Leader Development, WWF-Australia on 02 8202 1218.