



A proposal for Stewardship Support to Private Native Forests in NSW

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of forest researchers and practitioners**



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The members of the Southern Cross Group are individuals with experience and expertise in forestry and forest ecology. We are all concerned about the direction that has been taken by the Private Native Forestry (PNF) legislation and code of practice in NSW. These PNF initiatives are overly prescriptive and unnecessarily punitive. We believe that an approach based on incentives would be more effective than the current proposals. Inspired by the work of the Wentworth Group, we have given careful thought to these issues, and in this brochure present our thoughts on a way forward.

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Executive Summary

The Southern Cross Group is proposing a completely new approach to private forest management in NSW based on stewardship support. This means that incentives will be used to encourage landholders to manage their forests in a way that maintains their environmental and other values for the community, without compromising their value as a resource to the farming community.

Importantly, the Southern Cross Group system will foster good outcomes through innovation rather than through cumbersome and onerous prescriptions.

Private forests in NSW are important as a source of timber as well as for the conservation values they provide to the general community. Landholders should be encouraged to manage them in a way that preserves their productive capacity and their conservation values for the long term. At present, however, neither the current regulatory regime, including the Private Native Forest legislation and proposed code of practice, nor the current market regime encourages sustainable management of the State's private timber resources.

The Southern Cross Group has designed an effective and simple way of fostering and rewarding **good stewardship** of private native forests.

Good stewardship may be viewed as a 'duty of care' responsibility that should be enforced by legislation, or as an environmental service that should be recognised and rewarded. The distinction is academic: the reality is that incentives are more effective than punitive regulations. Good environmental outcomes for most forests depend on active management and, especially in the case of private native forests, on incentives for continuing management. The challenge is to devise an equitable scheme that sends the right signals for forest management, is cost-effective to administer, and represents a worthwhile investment in terms of the public good generated.

We believe the way forward is with simple, transparent indicators that provide an immediate and ongoing incentive. Under our proposal, landholders will receive an annual cash payment as a reward for progress towards specific outcomes.

Rather than complicated targets, we are proposing a simple, two-tiered system that will give enough incentive to landholders to provide the environmental services desired by the community.

The first tier rewards and encourages landholders to regenerate more forest, to retain big trees, and to stimulate tree growth on private land. The second tier rewards and encourages stewardship of endangered species and ecological communities.

These incentives will be simple to apply and audit, and will encourage landholders to learn about and encourage biodiversity on their land, and to consider it part of their income portfolio.

This system will contribute to farmers seeing forests as **core business**, both as part of their income stream and as part of their environmental stewardship responsibilities. When all farmers view forests in this way, Australia will reap the benefit of forests that are more diverse and productive, and a forest estate that no longer continues to shrink.

Introduction

Bob has been a farmer for all of his life. He and his wife Jane are proud that their farm is one of the most productive in the district, and yet still carries many stately trees and some very special animals. In their eyes the farm is better now than when Bob inherited it from his father 40 years ago. They don't understand where all the controversy about private native forest is coming from. They know very well that there are some rare native animals on the farm; they and the kids know exactly where they are and the conditions that they like, and Bob makes sure that his farm work does not interfere with them. But Bob is afraid to talk about 'their' wildlife, because he knows that the 'bloody bureaucrats' could make life difficult.

His neighbours think that Bob is 'nuts' in his dedication to nature; their experience is that it is unwise to encourage wildlife because, if the Department finds out, farming can get complicated. One unpleasant experience with an official is enough to change attitudes. Some of Bob's neighbours don't merely neglect the remaining native vegetation, rather they take every opportunity to reduce it, believing this will improve their production.

This makes it hard for Bob. He loves his animals and those rare plants, and is proud of what he has achieved on the land, and wants to replant more slopes, buffers and corridors, but he can't tell anyone but his closest confidants. He loves the rural lifestyle and the local community, but tough times are taking their toll, and the community is dwindling as more and more people go broke and leave the district. Fears and frustrations surrounding the new native vegetation legislation add to other tensions and it looks like it may divide the community.

Still, Bob remains optimistic: "People are basically good. They try to do their best for their families, for their land, and for the community. If only there was a better way to reward them for looking after our natural heritage."

That's what this brochure is about; better ways to encourage good stewardship of native forest resources so we can all enjoy more wildlife, wildflowers, good scenery and a healthy environment, while maintaining the economic productive potential of the forest.

(Bob and Jane are a hypothetical collage of several people in northern NSW).

The challenge

NSW has about 27 million hectares of native forest, one-third of which is on private land. These private forests are important both for production and conservation in a number of ways:

- They provide 60% of the log supply in some regions of NSW.
- They are important for conservation, making an important contribution to wildlife habitat, complementing national parks, and providing a corridor across other land uses.
- They are important to the farm economy, providing fencing materials and construction timber, shelter for stock, and environmental services (e.g. catchment protection, water yields, salinity mitigation, carbon sequestration). Some of these benefits accrue to the farmer, but many benefits accrue to the community at large, and to subsequent generations.

The challenge for government is to reward and encourage conservation and good silviculture (the cultivation of forests), while allowing a profitable and sustainable timber harvest to supplement farm income. Even when they are logged occasionally and grazed periodically, private native forests can provide important conservation services. Indeed, recent studies indicate that occasional timber harvesting need not detract from these conservation values. And despite the fear of possible bureaucratic intervention, many farmers do actually foster diverse fauna and flora within their forests.

Unfortunately, the current market and regulatory regime does not favour good husbandry of private native forests. Many

private forests in rural NSW are far from sawmills and have little commercial value. Growth rates in these forests provide yields that are usually less than prevailing interest rates, so potential timber production provides no incentive for landholders to retain trees to grow into 'giants' or to invest in good silviculture. Instead, prevailing financial and legislative signals encourage rational landholders to harvest all commercial timber whenever an opportunity arises, and to neglect rather than to invest in their forest. The signal that we currently send to farmers is that sustainability does not matter, and that they should harvest for today and forget about tomorrow. The fluid regulatory environment adds to the uncertainty, discouraging investment and fostering a short-term outlook.

What policy should be doing is encouraging 'good stewardship'. Good stewardship of forests and other lands may be viewed as a 'duty of care' responsibility that should be enforced by legislation, or as an environmental service that should be recognised and rewarded. The distinction is academic: **the reality is that incentives are more effective than punitive regulations.** Penalising landholders who have preserved native forest is widely regarded as unfair, and may foster a belligerent attitude among landholders. Rewarding good stewardship is likely to be more effective. Both the Wentworth Report (*Blueprint for a Living Continent*, Key Change #4) and the Sinclair Report (Native Vegetation Reform Implementation Group, Recommendation #23) called for incentives to support sound stewardship by farmers.

Understanding the issues

Private native forest policy will only be effective in the long term if it recognises two key elements:

- the ecology and economics of forests
- the attitudes of farmers.

Forests are dynamic, and initiatives should work with these natural processes of change. Many farmers are proud and independent and, like most of us, will respond better to incentives than to regulations. Thus regulations seeking to maintain the status quo may not have the desired effect as they fail to recognise this essential forest dynamic and are antipathetic to the social perspectives of the farming community

Ecology of forests. Forests are dynamic. Trees germinate, grow and die. Fires, storms, floods and droughts, which are common in Australia, all leave their 'footprints' behind in the forest. When the whole landscape is forested, these forces work to create a healthy diversity, but their effect can be different when forests are fragmented into small patches in an agricultural or urban landscape. In such landscapes we have no choice but to manage vegetation actively to avoid all-or-nothing disasters (like the wildfires in Royal National Park in 1994 and in the Snowy Mountains in 2003, which burned most of these parks). Active management is especially necessary where exotic weeds or feral animals may impede natural regeneration (by competition, browsing, or by interfering with pollination or seed dispersal). In an environment where forests are fragmented and affected by weeds and feral animals, 'fence and forget' is simply not an option.

Good environmental outcomes for most forests depend on active management and, especially in the case of private native forests, **incentives for continuing management.**

Economics. Timber production from native forest is a marginal enterprise in much of Australia. The value of timber is relatively low compared to the cost of transport, so most timber is unsaleable unless it is within 100 km of a sawmill. The slow growth of trees, coupled with the low intrinsic value of timber in the marketplace, means that most forests accrue value more slowly than interest rates, so the financial signal to a rational landholder may be to harvest at the first opportunity, especially when sovereign risk is considered. Harvests in private forests commonly seek to maximise the value of the current harvest, without regard to future productive potential. Such practices (taking the best and leaving the worst, known as 'high-grading', similar to selling your best livestock without regard for the genetic quality of the herd) have degraded many forests, altering the species composition both directly through removals and indirectly by failing to create suitable conditions for germination and growth of key species. The silvicultural intervention needed to restore these forests to their full productive potential – whether for the production of timber or for ecological values – is not financially attractive. The result is that without incentives, most private native forests are likely to remain degraded and neglected.

Attitudes of farmers. Australians have a reputation of being proud and independent, with a keen sense of fairness and a dislike

of government interference. Farmers are no exception. Many anecdotes support the contention that stubborn farmers are likely to 'dig their heels in' and resist unwelcome legislation. This attitude is exacerbated by the current lack of trust between landholders and government agencies in NSW, in part due to the move away from public support through farm extension towards an increasing regulatory role.

For native vegetation and water issues, the trust has been further eroded by a series of failed planning processes to which landholders voluntarily gave much time for no result, or where principles apparently agreed during consultation processes were later modified by the bureaucracy. Much private native forest is remote from roads and neighbours, so monitoring surreptitious clearing or poor logging practice is likely to be difficult and expensive, especially in an environment where trust is lacking. In this context, offering an incentive for good stewardship is more likely to be effective than imposing regulations restricting harvesting.

NSW supplies about 40 per cent of Australia's sawn hardwood, about half of which comes from private native forest. Much of the private harvest is used for high-value applications where strength, durability or appearance is important, and is unlikely to be replaced by plantation products in the short term. Any reduction in the supply of sawlogs from private native forests in NSW is likely to lead to an increase in imports from our tropical neighbours. Such imports already provide about 10 per cent of Australia's sawn hardwood. As Rob de Fegely said recently,

"A country conserving its forests at the expense of others has little environmental credibility...Australia as a producer should ensure that by excluding harvest of its own resources it is not exacerbating the loss of other poorly-managed resources."

Key facts - 2005

- 32% of native forest in NSW is privately owned
- 43% of hardwood sawlogs in NSW are harvested from private forests
- 75% of sawmills in northern NSW rely entirely on private timber resources
- Australia imported 138,300 m³ of sawn hardwood
- Private native forests on the north coast of NSW supplied 268,370 m³ of hardwood sawlogs, injecting about \$100M into the regional economy through stumpage payments to landholders
- When the flow-on effects from these private forests are included, they supply around \$210M of gross output value and more than 2,300 jobs for the north coast economy

A new approach

Forests should be seen as **core business** for farmers, both as part of their income stream and as part of their environmental stewardship responsibilities. When all farmers view forests in this way, Australia will reap the benefit of forests that are more diverse and productive, and a forest estate that no longer continues to shrink.

Current market forces and existing regulations do not send helpful signals for private native forestry in Australia. This is in contrast to Europe, where a range of annual revenues and government subsidies that recognise the multi-functionality of forests create a strong incentive to create and manage forests in a 'close-to-nature' manner. Despite a long tradition of 'continuous-cover' forestry in Europe, it is these annual revenues (e.g. up to \$90/ha/year in Denmark) that motivate management for multiple use rather than high-grading. Increasingly, countries are realising that community interests requiring investment in environmental services provided by the forests cannot be met by 'free-loading' on timber revenues, and that some incentives are needed to ensure that these environmental services are provided in the way that the broader community desires.

The challenge is to devise an **equitable** scheme that:

- sends the right signals for forest management
- is cost-effective to administer
- represents a worthwhile investment in terms of the public good generated.

While multiple-use forestry has been the

paradigm in Australian public production forests for some decades, regulatory efforts for private forests have focused on single use (e.g. conservation covenants) and on single indicators (e.g. 'Biometric'), both of which have limitations. Many landholders may not wish to make a permanent commitment to a conservation covenant, and composite indices often prove to be too simplistic to quantify habitat as well as too complicated and/or expensive for landholders to apply.

Two-tiered system a better option. More progress can be made with simple, more transparent indicators that provide an immediate and ongoing incentive. The Southern Cross Group advocates an annual cash payment to landholders for progress towards specific outcomes. Rather than having complicated targets, a simple two-tiered system will be enough incentive to provide the environmental services desired by the community.

Tier 1. The first tier rewards and encourages landholders to regenerate more forest and to stimulate tree growth on private land. This could be done through an incentive payment, e.g. an annual payment for each square metre of standing basal area (a conventional and easy-to-measure forestry statistic representing the total cross-sectional area of living trees; it is a good surrogate for productivity). This would offer an incentive to encourage more trees, to allow them to reach bigger sizes, and to invest in silviculture for faster tree growth. Although a relatively 'blunt' instrument, it is attractive because it is amenable to self-assessment, is easy to audit (through fieldwork or satellite

imagery); and adjusts automatically for land quality (well-watered fertile land can grow higher basal areas than arid land). Moreover, it represents a simple method for teaching landholders about the basics of silviculture and helping them to understand the response of forests to active management. These are skills which are noticeably absent, but which must be learned if we are to have healthy and productive forests and regional timber industries.

Tier 2. The second tier rewards and encourages stewardship of endangered species and ecological communities, e.g. by offering a subsidy based on the contiguous area of suitable habitat, triggered only on an authenticated record of a species within that habitat. The simple expedient of allocating equal funding to each endangered species would adjust automatically for rarity, with the largest subsidies accruing to species that are rare or confined in their distribution. Basing the subsidy on habitat area avoids the need for expensive surveys, while an authenticated record retains an incentive to control predators. Restricting the subsidy to contiguous habitat encourages the creation of corridors and fosters collaborative management between adjacent landholders. This incentive will create an awareness of endangered species, and stimulate a balance between wildlife, timber, grazing, and other farm pursuits. It would also overcome the current situation where many landholders regard the presence of a threatened species on their land as a liability likely to lead to restrictions on future farm enterprises. A system of

financial reward makes these species an asset and would help to rebuild the eroded trust between landholders and government in NSW.

Together, these two tiers offer a collaborative and consensual approach to complement and eventually replace the current punitive approach of legislation and regulation. Both tiers should be voluntary, with landholders who elect to participate doing their own self-assessment (or buying their own independent advice), and applying for stewardship support. The first tier is amenable to self-assessment after minimal training, which can also be the vehicle to inform landholders about the benefits of good silviculture. The ability to cross-check claims with neighbouring land holdings or with remote sensing, and the capacity for independent audit should be enough to minimise fraudulent tier one claims.

The normal avenue for second tier support may be to engage (from time to time) an expert to search for and advise on suitable management of any rare or threatened species on the property. Expert input in this form would overcome the dangers of blanket regulations, and would allow management regimes to be customised for each situation. Depending on the species involved, such advice may involve, for example, burning regimes, regulating grazing, managing weeds, controlling feral predators, fostering native understorey species, retaining additional coarse woody debris and fostering tree hollows for wildlife, supplementing the species composition of the stand to improve biodiversity, or thinning some trees to stimulate nectar flows in the residual stand. However, the

Tomorrow's forest

incentives offered to the landholder should be enough to encourage and compensate for such expert input.

The benefits of such a stewardship scheme are that it would:

- stimulate landholder interest in forest management for economic production and biodiversity conservation
- provide financial support for rural communities
- provide reliable resource data on the private native forest estate
- provide additional data on the distribution and abundance of threatened species
- reassure the community about the state of forests and wildlife
- offer a strong incentive for the control of woody weeds, if exotics are excluded from tier one incentives.

The scheme may also offer a performance-based incentive for conservation on other land tenures. The proposal is consistent with the Wentworth Group's Key Change #4, with the Sinclair Report's Recommendation #23, and with recommendations by the Productivity Commission (Report 29, Finding 9.6 & Recommendation 10.9). There are many winners and few losers in such a scheme.

Key facts - spending on environmental outcomes 2006-07

- \$ 403M allocated for 'Grants and subsidies' by NSW Dept of Natural Resources
- \$1,046M allocated for Land and Inland Waters by Federal Government
- \$2,200M spent on native vegetation since 1997 through National Heritage Trust

Part of our motivation in advocating this strategy is our conviction that many current initiatives dwell too heavily on the current appearance of private native forests, overlook the dynamic nature of these ecosystems, and ignore their future potential.

Providing healthy forests for our children requires an adaptive strategy based on ecosystem dynamics. Although we know much about forest dynamics, we have unwittingly changed the forest environment in many ways, with logging, weeds, feral animals, altered fire regimes, fragmentation, pollution and possibly climate change. Sustaining tomorrow's forests relies on our ability to observe, monitor, learn and act.

The incentive scheme we propose relies on annual self-assessment of basic stand condition, with occasional expert diagnosis and advice on specific targets, such as threatened species. This should encourage landholders to be more interested in forests and biodiversity, and provide a new level of reporting on private native forests not previously experienced.

Incentives for good stewardship by landholders are central to healthy private native forests, **but they are not enough on their own.** Financial returns from timber harvesting in Australian forests are low relative to interest rates, and this means that, in the absence of other income sources from forest services, timber harvesting may provide the only economically viable opportunity for silviculture in most forests. Stands most in need of silvicultural intervention are those that have been high-graded excessively in the past, or that have regenerated as a dense thicket (e.g. after fire, removal of grazing or cultivation), unable to self-thin. In both these cases, forests may be filled with trees of no current commercial value, that are too small and slow growing to provide a range of wildlife habitat (e.g. nesting hollows) or much pollen and nectar flow. Silviculture could liberate these forests and provide both production and conservation benefits, but its cost would not provide a competitive return on investment. In some forests, the tier one payment for basal area may be enough for landholders to intervene and stimulate growth, but many will need a stronger incentive. A market for wood residues could provide such an incentive, and could lead to a re-invigoration of many degraded forests. Biofuels (charcoal, chips or liquids) are a possibility that warrant further research.

In the past, logging contractors have had a vested interest in maximising the current harvest and ignoring the future productive potential. In the future, because of the high cost of individual silvicultural operations, 'chainsaw silviculture' will remain the most critical operation undertaken in the forest, with the key decisions being taken by the contractor undertaking a timber harvest on behalf of a client. We therefore need to create a new generation of contractors who are certified in silviculture as well as logging technique, and who work with landholders and their advisors to harvest forests with a view to creating the best long-term production and biodiversity outcomes. Because it is in the community interest to create this new breed of 'loggers', training and certification of contractors should be publicly funded.

These initiatives should be coupled with publicly-funded initiatives to inform and educate landholders about effective land stewardship.

Call to action

In *Collapse: how societies choose to fail or survive*, Jared Diamond (2005) discusses the demise of several societies, including Easter Islanders, who failed to anticipate the demise of their forests, with the catastrophic consequence of producing a wood shortage. As a result they could not build boats to catch deep sea fish, their major protein source. In stark contrast, in *The History of the Island of St Helena*, Brooke (1808) tells how the people of St Helena recognised that “whatever young wood might have been standing, or planted, was exposed to the trespass of cattle, sheep, and goats” and “proposed to the Governor ... the destruction of all the goats and sheep, for the period of ten years, to commence from the 1st of February, 1731 ... followed by the expected success ... indigenous trees shot up spontaneously in great numbers.”

The people of Easter Island did not anticipate the long-term consequences of short-term actions (and inaction). In contrast, the people of St Helena took heed of the symptoms, diagnosed the problem, and acted decisively to preserve their forests, and as a result, have retained many of their forests and endemic species.

In our private native forests, many symptoms are clear: our challenge is to diagnose correctly, and to devise effective solutions for good stewardship of our dynamic forest ecosystems. Our solution is to offer outcomes-oriented economic incentives to those closest to the forests, supported by a system of monitoring and action that promotes and encourages the return of silviculture to our private native forests.

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