

Michelle Finger

Submission to: Vegetation and Other Legislation Amendment Bill 2018.

Thank you for the opportunity to make a submission.

If not many submissions are received from rural Queenslanders, or if hearings are poorly attended by those living in the effected areas, do not misinterpret this as a sign of disinterest or endorsement.

Rather, I believe it is a sign of disenfranchisement.

People have lost faith in the political process, feeling that consultation is a face-value only farce, with outcomes predetermined long before input is received.

Many have lost faith that the stated objectives are even honest, suspicious that political agendas lurk behind pseudo-science popularist facades.

Thus do not be surprised if few rural people step forward to voice their concerns, for what is the point if it falls upon deaf ears.

I refer the committee to the recent Senate Enquiries: "Australia's beef industry has been subject to 13 senate inquiries in the past 17 years and two Australian Competition and Consumer Commission (ACCC) examinations", resulting in calls "for the representative body for Australian cattle producers to be disbanded and replaced. The Senate's Rural Affairs Committee said the Federal Government should withdraw its recognition of Cattle Council of Australia as the official representative of farmers. "I think it's become evident over a considerable period of time that the Cattle Council has really failed to engage at a grassroots level," said the Committee's deputy chairman and LNP Senator Barry O'Sullivan."

Please find the 2 source articles for the above extracts attached and consider them as a part of this submission.

It is clear from these inquiries that conferring with 'State Farming Organisations' is a very poor proxy for landholder consultation. The committee is cautioned to heed the results of these inquiries and recognise that SFO opinion does not fulfil the due diligence requirements for consultation of industry or effected landholders.

As an avid lover of wildlife, I am deeply saddened by this proposed legislation.

Do not misunderstand me ... I agree that tree clearing rates need to be reduced and I am extremely concerned over the decline of our native species & our soil health ... I am saddened because I believe that this legislation is not only a huge missed opportunity, but that it will actually make things WORSE and it will directly contribute to exacerbating the decline of our environment.

I believe that broad scale positive environmental outcomes across the grazing lands of Australia will not be achieved until politicians and NGOs flip their approach to landholders from the current prejudiced negative punitive approach to one of partnership, recognition, and incentive for landholders to steward native biodiversity on behalf of all citizens.

Until native species have a commercial VALUE & a protective roll to landholders ... rather than the current situation of native species presenting a significant amount of RISK & a financial drain to landholders ... I'm afraid the outlook is very bleak.

For example, rather than having their care recognised & rewarded, good managers who have maintained endangered species on their land risk having their lands resumed, with no compensation, just to see the population plummet due to government mis-management. The current situation is a shameful mess that is not delivering anything positive for either the environment nor the people.

But sadly conflict and drama sells news & votes better than positive stories, so I can't see reconciliation happening anytime soon.

The Landcare movement started out as a fantastic initiative of government and landholders partnering together to improve knowledge & outcomes on the land ... sadly the roll of these departments suddenly flipped from one of cooperation and research extension to one of regulation enforcement ... and tensions have been high between landholders and government or anything supposedly 'green' or 'environmental' since.

There is an excellent 4-part series that details the history of this situation:

<http://evacuationgrounds.blogspot.com.au/.../betrayal-of...>

Yes, things needs to change, there's no doubt about that ... but demonising farmers is only going to make them more defensive and more resistant to change.

The current approach is going to make things worse for the environment.

Love not hate. Education, incentive, support for transition, & recognition for good management need to come first... with heavy-handed regulation as a last resort.

The greatest gains for both rural families and conservation can only be achieved by WORKING TOGETHER.

Environmental scientists, conservationists, NGOs, policy makers, and land managers need to engage in a positive way so that we can gain a true understanding of the issues and complexities effecting land management, in order to make sound decisions on behalf of our extensive environment.

It is true that much of current agricultural practice is not run sustainably.

Issues like biodiversity decline and soil erosion are real concerns. I am not a denialist of these facts, nor an apologist for poor practice. Most certainly much of the agriculture industry needs to evolve beyond current convention ... but there is a lot of potential to do things better, still be productive, AND be a real achiever of conservation outcomes.

But it will take unity, understanding, partnership & support.

Instead of getting farmers off-side, rather than using them as scapegoats and political footballs, we need to bridge the gap between agriculturalists and environmentalists.

We need support for farmer education and training, encouragement for who are trying to change, and partnership in overcoming the barriers. Standing on moral pedestals pointing righteous fingers will not bring about positive results.

We need to work together to drive evolution to better practice.

Policy, public & NGO support for good practice is required to foster change, and thereafter burgeoning market forces will motivate the rest to follow.

This is a far more effective pathway to real outcomes than simply condemning those whose practices we may not agree with. Objurgation only causes people to become defensive and it perpetuates poor practice.

Please read the attached paper entitled "Cattle and Conservation Can Be a Costly Mix" and consider it a part of this submission. Notable extracts are:

- "The general conclusion from this project is that there are limited prospects for wide-scale private adoption of the conservation principles in the absence of significant public support. It's now a question of to what extent the landholder should bear the public cost of conservation, and vice versa."
- "The outcomes from the landholder's point of view are fairly adverse, and they feel that any benefits from the management actions and capital outlays will go to others"
- "...as well as economic losses, the grazing team identified other barriers to the adoption of the ecological principles they had identified. During paddock meetings, landholders and their neighbours pointed to the lack of available labour and skill to plant trees and build infrastructure as important barriers (to adoption of conservation principles)."
- "Farmers are happy to discuss contentious issues, once their point of view is respected"
- "Their knowledge and stewardship of their land is a critical component of any recipe for success"
- "...exchanges of views and ideas ... help both sides understand each other and the nature of the barriers to adopting (conservation) principles".

Consider that farm managers are tasked with being the stewards of ~58% of our total landmass yet make up only ~0.006% of our population. This tiny minority of Australians are burdened with a massive responsibility.

Real environmental outcomes cannot be achieved across majority of our land if we ostracize landholders from being a part of the solutions.

Environmental issues are rightfully deeply important to all Australians.

Thus, environmental issues, and the tiny isolated minority of people who manage land, are both at great risk of being persecuted and exploited for politically-motivated manipulation.

Great damage has been done to both environment/biodiversity and relationships between urban and rural peoples, but we can turn it around. We must.

To preserve our wildlife we must put politics aside and work together using sound and complete science, thorough consultation, collaboration, and mostly consideration to what

the real-world outcomes are likely to be. We need to be real and consider the complexities of each situation: good intentions and ideologies will not help our wildlife or their habitats.

We need to critically assess the notion that removing human activity will preserve biodiversity. There are repeated scientific studies showing that biodiversity is declining within our National Parks, surprisingly at a greater rate than in surrounding pastoral land. After ~60,000 years of human influence in this country, including ~300 years of intense disruption ... the sad truth is now most ecosystems are reliant upon their human managers to maintain them.

Also attached is the Quarterly Essay piece by Dr Tim Flannery entitled “After the Future, Australia's new extinction crisis”. Notable extracts include:

- the second extinction wave is now in full swing and it is emptying our National Parks and wildlife reserves as ruthlessly as other landscapes.
- Paradoxically, biodiversity is sometimes flourishing more vibrantly on private land than in National parks, despite hundreds of millions of dollars being spent annually by Government on reserve lands.
- Firstly and foremost the problem stems from an illusion that the simple act of proclaiming a National Park or Nature Reserve will results in the protection of biodiversity
- Humans have become the keystone species in the Australian environment. When they withdraw their ecosystem services ... Australia’s ecosystems won’t revert to some pre-human ideal, but will spiral toward ecosystem collapse.

Clearly, engaging WITH agricultural landholders and working together to manage our lands with a balance of productivity and conservation is the only viable solution.

Fortunately, there are some fantastic new knowledge and innovative practices emerging that demonstrate that it IS possible to balance production and conservation.

The following list is a non-extensive list of a few Australian “Regenerative Agriculture” pioneers:

Holistic Management Australia:

<http://hmeducators.com.au/>

(I recommend listening to the audio that accompanies the newsletter: [2017 issue 3 november](#))

Soils For Life:

<http://www.soilsforlife.org.au>

Healthy Soils Australia:

<http://www.healthysoils.com.au/>

Colin Seis, Pasture Cropping:

<http://www.pasturecropping.com/pasture-cropping>

Charles Massy:

<http://www.uqp.uq.edu.au/Book.aspx/1445/CalloftheReedWarbler>

However, there are still considerable barriers to adoption of these new eco-practices. Barriers include access to education and training on novel techniques, shifting old paradigms, support through the transition phase, government regulation, and the severely damaged relationship between 'agriculturalists' and 'green groups'.

If we genuinely care about preserving remnant timbers and biodiversity ... we need to immediately abandon the current highly politicised and dangerously inflammatory path of bringing down punitive regulations upon landholders ... as this will truly do nothing at all but further sour relationships and make adoption of good environmental stewardship all the less likely ... nature will end up the real victim in this childish battle.

Before looking to punish landholders who clear trees ... we need to first:

- Acknowledge, encourage and reward those who maintain their trees & care for the biodiversity under their management on behalf of all Australian citizens.
- Make sure that maintaining native ecosystem does not create a financial loss or liability for the landholder! (one example, Peter Spencer court case in NSW).
- Work together to foster new practices that seek to balance production and conservation, and support transition to these new practices.
- Ensure that regulations are equitable across the field, and that some types of developments are not being discriminated against ... for example, it makes little difference to the plight of the Koala if their tree is cleared for food production or to build houses or mine the soil underneath. If an area requires protections, it requires protection from all kinds of development. Anything less is gross hypocrisy & an environmental travesty.

Thank you for your time and the opportunity to make this submission.

With scant hope I plead that my voice has not fell upon deaf ears, that the outcome has not been predetermined before this input is received, and that the real objective at hand is truly to preserve our precious biodiversity.

Regards,

Michelle Finger.

Beef senate inquiry value questioned

Shan Goodwin

22 Jan 2018

FarmOnline

<http://www.farmonline.com.au/story/5182291/beef-senate-inquiry-value-questioned/>

THE decision by Cattle Council of Australia (CCA) to walk away from efforts to reform producer representation via a new organisation has raised big questions about the value of senate inquiries.

Australia's beef industry has been subject to 13 senate inquiries in the past 17 years and two Australian Competition and Consumer Commission (ACCC) examinations.

These investigations have become increasingly high-profile and criticised for bringing economically-significant industries into unfair disrepute.

Now, with a key recommendation from the past two beef senate inquiries around grassfed cattle producer representation being ignored by both industry and government, they are being labelled irrelevant.

The 2014 grassfed cattle levy inquiry's recommendation for a new producer-owned body established by legislation with the authority to receive and disperse transaction levy funds found no political appetite.

The recommendation late last year from the latest beef inquiry, into red meat processing, seeking to replace CCA with a "transparent and accountable producer-owned body" has now been shunned by CCA and state farming organisations.

Of course, senate inquiries are conducted with the understanding they have an advisory function only.

However, given the cost of conducting these inquiries to the taxpayer, where recommendations go nowhere it seems fair to ask what is the point?

Plenty, says former Liberal Party senator and Junee livestock and grain producer Bill Heffernan, former star of the senate standing committee for rural and regional affairs and transport, which handles agriculture.

Ignore senate inquiry recommendations at your peril, he warns both industry and government.

There are many differences between a bureaucratic brief and the paddock and senate inquiries had proven that time and again, according to Mr Heffernan, who retired in 2016.

They were perhaps the best tool available for taking an objective, commonsense approach to looking at a particular industry's problems and what solutions were possible, he said.

Their successes had made a big difference, he said, citing protected biosecurity status of Australian primary industries and systems like traceability in beef that have provided enormous marketing advantages.

There were also many examples, he said, of where the warning had been sounded via a senate inquiry and ignored – to great cost.

One of those was with white spot disease in the prawn industry.

“The bottom line is a senate inquiry is not some political BS exercise,” he said.

“We don’t play politics, we do what is right for the industry. The expose of the strengths and weakness of an industry is accurate. A senate inquiry tells it as it is.”

Who is in government should be of no consequence and if the recommendations are knocked back, it was up to senators to “jam it up them,” according to Mr Heffernan.

“Make a fuss and follow up because history has shown us the dire consequences of not listening to the outcomes of these inquiries,” he said.

The most outspoken senators during the latest beef inquiry, including Senator Barry O’Sullivan, Bridget McKenzie and Glenn Sterle, have not made a comment in the wake of CCA’s decision to resign from the implementation committee setting up a new producer advocacy model.

New Agriculture Minister David Littleproud sent Fairfax Media a statement saying the Coalition Government had contributed \$500,000 to towards a transition, however it was a matter for the cattle industry to determine what organisational structure was best to represent a united voice for farmers to government.

How much did the last beef senate inquiry cost?

BEEF industry sources estimate the cost to conduct the senate inquiry into the effect of market consolidation on the red meat processing sector, which handed down recommendations late last year, was more than half a million dollars.

Secretary of the senate standing committees on rural and regional affairs and transport Dr Jane Thomson said it was difficult to provide a cost for individual inquiries.

“This is partly because the costs are not limited to expenditure by the senate committee office but also include the time devoted to the inquiry by senators and their staff, the costs of travel undertaken and the costs of other parliamentary services such as broadcasting,” she said.

“It would also include the time and resources that submitters and witnesses put into providing evidence to the committee which is something that would be extremely difficult to calculate.”

The cost of the senate committee office in 2016/17 was \$10.6 million but, again, that would be impossible to break down to the individual inquiry level with any accuracy.

“As a general rule, the committees that we support table more than 100 substantive reports each year. In 2016-17, this figure rose to 158 reports,” Dr Thomson said.

Senate report slams Cattle Council, recommends it be disbanded and replaced as producers' representative body

ABC Rural

By [Anna Vidot](#)

Updated 13 September 2017 at 3:04 pm

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<http://www.abc.net.au/news/rural/2017-09-12/senate-releases-long-awaited-red-meat-report/8895700>

[A Senate committee investigating collusion and anti-competitive practices in the red meat industry delivers its report.](#)

A scathing Senate report, more than two years in the making, has called for the representative body for Australian cattle producers to be disbanded and replaced.

The Senate's Rural Affairs Committee said the Federal Government should withdraw its recognition of Cattle Council of Australia as the official representative of farmers.

"I think it's become evident over a considerable period of time that the Cattle Council has really failed to engage at a grassroots level," said the Committee's deputy chairman and LNP Senator Barry O'Sullivan.

[Senator Barry O'Sullivan discusses red meat industry recommendations](#)
(ABC News)

"Some of the views that are expressed by the Cattle Council are just those of the six or eight men and women around the [boardroom] table, not the 50,000 cattle producers around the country."

Instead, the Committee recommended the creation of a new representative body with producers, and not state farming organisations, as its members.

"We'll be saying that if you don't meet base standards of interaction with a membership, if you don't create a structure that we believe will oversight the spend of levy money, then of course you won't get it. It'll be as simple as that," Senator O'Sullivan said.

Despite canvassing the idea in a number of hearings, the Committee stopped short of recommending a mandatory code of conduct to guard against anti-competitive behaviour among buyers in livestock saleyards.

Senator Bridget McKenzie, who was one of the drivers of the Committee process, noted it was the eighth inquiry into the red meat industry in 17 years.

"This time we have to get it right," she told the Senate chamber on Tuesday evening.

Cattle Council CEO says organisation working to improve

The man who headed Cattle Council of Australia for most of the Senate's inquiry period is no longer with the organisation and his replacement also left after six months.

Margo Andrae was appointed acting CEO last month and acknowledged the Cattle Council did need to improve its engagement with producers and the public debate.

She said the organisation is already working to do that.

"What I've chosen to do is to listen to producers and find the best way forward," she said.

"I'm not saying we're perfect, but there are some great things that CCA is doing.

"Moving to a direct-elect model is what producers are looking for and we are working really hard to make that happen."

Ms Andrae said she was surprised the Senate recommended removing the Cattle Council's status as the recognised representative body because that would mean renegotiating a memorandum of understanding between Government and 13 different industry groups.

'They've been given every chance': Senators

It was not just the Cattle Council causing frustration for senators on the Rural Affairs Committee, however.

In successive hearings over many months, visibly exasperated senators criticised what they called a "lethargy and resistance to change" and a "nothing-to-see-here attitude" from industry representatives.

Senator O'Sullivan said his Committee adopted a "carrot and stick" approach to improving transparency and producer representation in the beef industry.

While major players would be given a chance to implement the Committee's recommendations, Senator O'Sullivan warned his Committee would encourage Government to step in if industry did not follow through.

"If they don't, we as legislators will have to look at what we have to do with legislation and regulation to protect the producers," he said.

"This work will not be over until we have created a fair and equitable marketplace [and have taken] any prospect out of collusion in the saleyards."

Producer allegations of 'collusion' sparked investigation

The Senate began investigating after an incident at the Barnawartha saleyards in northern Victoria in February 2015.

A buyer and processor boycott resulted in a price slump for farmers seeking to sell livestock and brought to a head years of producer complaints that consolidation in the red meat processing industry had led to less competition and anti-competitive behaviour at saleyards.

An ACCC investigation found the [evidence did not prove that buyers had colluded](#) to boycott the sale and the competition watchdog's subsequent review of buying behaviour in the red meat industry delivered a [raft of recommendations](#).

In scathing hearings throughout its investigation, the Senate Committee slammed industry representatives for failing to begin implementing the ACCC recommendations.

The ACCC's decision, putting the Red Meat Advisory Council in charge of driving those reforms, was akin to putting ['the fox in charge of the hen house'](#), senators said.

Cattle and Beef Market Study key recommendations:

- All processors and major purchasers of prime cattle to make their price grids available in a timely manner
- Meat and Livestock Australia to improve reporting of prices throughout the whole supply chain
- More transparent data collection and reporting of prices over the hooks and for cattle sold to the live export market
- Standardised licensing of livestock agents
- The introduction of carcase measurement technology and auditing of technology
- A clear dispute resolution process for sales across the beef industry, including online, over the hooks and saleyard sales
- A mandatory buyers' register for saleyards

Source: [Australian Competition and Consumer Commission \(2017\)](#)

Neil MacLeod



What is the true cost of on-farm conservation, and who will pay? **Wendy Pyper** reports.

Native biodiversity conservation and beef production may seem unlikely allies. But until recently, few studies on whether the two could co-exist had been conducted. In a project just completed, CSIRO Sustainable Ecosystems economist, Neil MacLeod, and his colleagues in the Grazed Landscapes Management Team, considered the costs and barriers involved in implementing conservation strategies with livestock production on Queensland's grassy eucalypt grazing lands.

'We looked at the on-farm impacts of adopting best practice conservation management in Queensland to optimise biodiversity on rural landscapes,' MacLeod says.

'The grassy eucalypt woodlands are under-represented in formal conservation reserves because they're among the richest grazing lands in the country, and they're some of the oldest settled. But they're also ecologically diverse, and maintaining that biodiversity is a high priority.'

The first questions typically asked of any strategy to conserve resources are: how will changing management practices affect production, and what are the economic implications of such change?

MacLeod's study sought real-world answers to these questions.

Down on the farm

Four beef cattle properties were selected for the study, at Crows Nest, west of Brisbane, and further north at Mundubbera. Two properties were small, intensive farms of about 900 hectares, and two were larger farms of 1700 ha and 10 000 ha.

The properties were chosen to represent the diversity of enterprises in the region, in terms of their vegetation structure and commercial activity. All four contained 'variegated landscapes', that is, 60–90% of the original native vegetation remained. This definition is important as it influences landscape management.

'Treating them as "fragmented" landscapes and seeking to only protect a few of

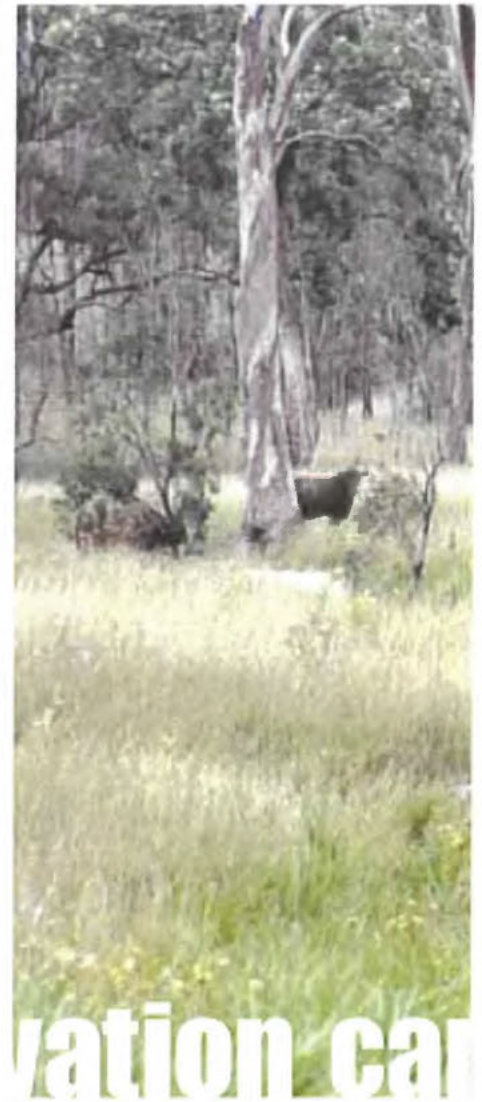
their component species is likely to eventually lead to their degradation,' MacLeod explains.

MacLeod and his colleagues assessed the ecological health of each property under their present management systems, through vegetation and ground surveys, air photo interpretation and landowner consultations. Using geographic information systems, the ecological information was turned into spatial maps showing the distribution of different land uses and ecological elements.

Principles and thresholds

The maps were then compared to a set of ecological principles for the sustainable management of grazed woodlands. These principles promote improved ecological function through the management of pastures, soils, trees, watercourses, wildlife and habitat.

'The principles were developed through a partnership between our project team and 11 scientific specialists with expertise





Main pasture: Cows graze on alluvial flats surrounded by blue gums at 'Nukinenda', one of four Queensland properties studied. Left: Zebu cattle on speargrass pasture in narrow-leaved ironbark country.

Tara Martin, CSIRO Sustainable Ecosystems

in different aspects of landscape management, such as soils, hydrology, wildlife, tree grazing ecology, and farm forestry,' MacLeod says.

Some of the management principles contain threshold values for minimum levels of native vegetation. For example, 'there should be a minimum of 30% woodland or forest cover on properties'; 'woodland patches should be a minimum of 5–10 ha'; and, 'at least 10% of the property managed for wildlife values'.

'Thresholds are naturally contentious, but we've included them to show that as tree or grass cover gets below a certain threshold, some key ecological processes change for the worse,' MacLeod says.

'Woodland bird populations decline or tree dieback increases, for example.'

The health assessment revealed that the soils and pastures on each property were in good condition. The most significant issue for the four properties, however, was the state of their treescapes and the health of riparian vegetation.

While many paddocks had significant tree populations with a reasonable diversity of species, there were also many paddocks with non-viable tree populations. In all cases, MacLeod says the riparian zones had been extensively cleared (which is common practice), and continued access by livestock had significantly modified the bankside timber and soil structure.

'Most of the properties had more than the minimum threshold of trees, but they weren't necessarily in the right spots to be ecologically sustainable over time, or to sustain regional wildlife populations,' MacLeod says.

'Riparian zones are the real battlegrounds, however, because they are generally the most productive parts of the landscape. They were often the first areas cleared for pastoral settlement and remain targets for pasture development. But they're also critical for retaining local wildlife populations and ensuring adequate water quality.'

Landholders could implement a number of management strategies to address this imbalance. These include limiting areas of intensive development, reducing stocking rates to minimise bare soil, retaining, regenerating and planting trees, particularly in recharge and riparian areas, and excluding cattle from watercourses by fencing. But how much would these strategies cost?

Conservation costs

To find out, MacLeod used an economic model to estimate differences in profitability between the present management systems and alternative conservation measures. The analysis was based on changes in grazing access, timber densities and stock carried, and the capital costs of the restoration options (fencing off watercourses, tree planting, dams and troughs).

If the conservation measures were adopted, the model projected a decline in net profit across the four properties of



Tara Martin, CSIRO Sustainable Ecosystems

Without significant public support, the prospect of farmers adopting management principles that protect native animals, such as this bearded dragon, are slim.

between 29 and 77%. This was mostly due to the reduction in forage available to cattle as timber densities increased and access to riparian areas was restricted. The capital costs for infrastructure and trees ranged between \$90 000 and \$1.4 million.

'This fairly poor finding is not entirely surprising' MacLeod says. 'The scale of change required to meet serious conservation objectives was always going to be a large one.'

As well as these economic losses, the grazing team identified other barriers to the adoption of the ecological principles they had identified. During paddock meetings, landholders and their neighbours pointed to the lack of available labour and skills to plant trees and build infrastructure as important barriers.

'Most farms are operated by one person or a small family team, so the amount of effort to plant and manage thousands of trees is very high,' MacLeod says.

'Farmers also like to trial new things before they adopt them. But augmenting a large treescape or "buffering" (planting trees and shrubs) a whole creek can't be tested on a small scale.'

Farmers argue that replanted and fenced riparian zones would become weed, pest and fire hazards. The first fire would take the trees and the \$2000 a kilometre fence with it. And treeing riparian areas is contentious, particularly in headwater areas, because stock grazing around shallow-rooted trees encourages bare soil and increased erosion.

Furthermore, MacLeod says not all farmers accept that the level of dysfunction in the landscape is as great as ecologists claim it is. The long time scales in which any positive results from alternative management *might* accrue is a disincentive, and there is no real evidence that money will fix a supposedly damaged system.

'The outcomes from the landholders' point of view are fairly adverse, and they feel that any benefits from their management actions and capital outlays will go to others,' MacLeod says.

'The general conclusion from this project is that there are limited prospects for wide-scale private adoption of the conservation principles in the absence of significant public support. It's now a question of to what extent the landholder should bear the public cost of conservation, and vice versa.'

Seasoning unpalatable solutions

For MacLeod, a 'product' of the land himself, this outcome is frustrating, considering the apparent urgency of the situation. But his realistic streak and a determination to find alternative solutions temper his frustration.

'Australia has a long history of pastoralism and landscape modification, so it would be unrealistic to turn it around quickly. We just have to be more creative in trying to break down barriers and solve some of the problems,' he says.

He ponders whether a 'Volkswagen' alternative to the 'Rolls Royce' conservation effort could be found.

'Australian farmers are notorious for finding their way around tricky problems with a bit of native ingenuity. We need to tap into that innovation if we are serious about fixing the problems this study suggests are out there,' MacLeod says.

He adds that alternative income sources such as agroforestry, or intensifying production on particular parts of the land, are being considered. More wide ranging issues are also being canvassed in the public arena, such as reforming markets and institutions to reward private landholders' efforts to provide environmental services for the wider community.

With the continued support of Land and Water Australia, MacLeod has launched a new project that will attempt to resolve some of the economic and other issues raised by the landholders. The project will consider the validity of the ecological principles in different vegetation communities, and at larger scales across 20–30 subcatchments (each 500 ha) at Emu Creek.

'Does every landholder have to apply the principles, or can we operate at a different scale and get the same or better result?' MacLeod asks. 'Can we get people to operate in groups, on a landcare-type basis, and target parts of the catchment that would be priority areas? We might be able to get some economies of scale on the effort or the outcomes.'

Using economic modelling, the Grazed Landscapes Management Team will try to define costs for particular management activities, and how those costs might be distributed among a group of landholders. The team will also try and confirm that following the principles really does improve ecosystem function.

'We are going back into the catchments to look for evidence that the landscape is

Abstract: A CSIRO project looked at the impacts, at farm level, of adopting best practice conservation management in Queensland, to optimise biodiversity on grassy eucalypt woodlands, which are ecologically diverse yet under-represented in conservation reserves. Modelling of differences in profitability between the present management systems and alternative conservation measures projected a decline in net profit of 29–77% if conservation measures were adopted. The project concluded there were limited prospects for wide-scale private adoption of the conservation principles in the absence of significant public support. A new project will attempt to resolve some of the economic and other issues.

Keywords: woodlands, grassy eucalypt woodlands, grazing, biodiversity conservation, cattle, sustainable management, land management.

or isn't configured the way our principles suggest,' MacLeod says.

'We'll look for output indicators – water quality, tree health, or wildlife populations – to see if subcatchments that appear to be consistent with the principles are giving a good outcome, if there's no difference, or if there's an in-between response.'

The project will seek to maintain landholder interest by working with the Emu Creek Catchment Landcare Group. As with the previous project, landholders are being engaged and consulted.

'Farmers are happy to discuss contentious issues, once their point of view is respected,' MacLeod says.

'Their knowledge and stewardship of their land is a critical component of any recipe for success. In the previous project there were many exchanges of views and ideas, and I think it helped both sides understand each other and the nature of the barriers to adopting the principles.'

At the end of the day, MacLeod says the search for sustainable land use in Australia is a journey rather than a destination: 'we have already started walking in the grassy woodlands at least'.

This is an edited version of an article that first appeared in Thinking Bush, published by Land and Water Australia.

More about the ecological principles

McIntyre S McIvor JC and MacLeod N (2000) Principles for sustainable grazing in eucalypt woodlands: Landscape-scale indicators and the search for thresholds. Chapter 13, *Management for Sustainable Ecosystems*. P Hale A Petrie D Moloney and P Sattler (Eds.). Centre for Conservation Biology, The University of Queensland, Brisbane.

McIntyre S McIvor JGM and Heard KM (2002) *Managing and Conserving Grassy Woodlands*. CSIRO Publishing, Melbourne.



Neil MacLeod and his colleagues are investigating conservation incentives, such as the reform of markets and institutions, to reward private landholders' efforts to provide environmental services for the wider community.

A practical guide to conservation farming

WIDESPREAD changes to the grassy eucalypt woodlands of south-eastern Australia, mainly for agricultural production, highlight the need for landholders to consider conservation goals in their daily decisions about property management.

A new book from CSIRO Publishing, *Managing and Conserving Grassy Woodlands*, offers practical guidance to help them do just that.

The book draws together the findings of a major project in which a multidisciplinary team of CSIRO scientists worked for more than six years to address the issue of ecological sustainability in grazing lands.

It features a set of principles covering property planning, and the conservation of native vegetation, soils, pastures, wildlife and watercourses. Each is addressed in a separate chapter that outlines the scientific understanding behind the principle and discusses issues relating to its practical application.

A chapter on wildlife and core conservation areas is based on the principle that all properties require core conservation areas for species that are sensitive to agricultural land uses. It describes the ecosystem services that a diversity of organisms can

provide, such as pest control, pollination and the maintenance of soil health.

The chapter also offers advice on selecting core conservation areas, and the critical elements they should contain – mature trees, hollows, fallen timber, vegetation, ground litter, and understorey and waterside vegetation – and how to preserve them. For example, a variety of grazing regimes can help maintain areas of large grass tussocks, leaf litter and fallen branches that protect bird species, and mammals such as the rufous bettong and long-nosed potoroo.

A minimum woodland cover of 30% is advocated in the book's chapter on trees. This is supported with an explanation of the positive effect of trees on production systems, and discussions of natural regeneration, minimum patch sizes, tree locations and population structures.

A chapter on barriers and opportunities for adoption explores issues relating to the uptake of new agricultural practices by Australian farmers. It includes feedback from landholders who have had the opportunity to discuss the principles.

The final chapter offers an example of how a simple landscape of one land type might look if the principles were applied.

The 250 page hard-cover book is extensively referenced and clear diagrams are used to illustrate many of the concepts outlined in the text. It has been edited by CSIRO's Sue McIntyre, John McIvor and Katina Heard.

Managing and Conserving Grassy Woodlands is available for \$59.95 from CSIRO Publishing, freecall 1800 645 051, email: publishing.sales@csiro.au.

