Delivering on the promise of stewardship

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Delivering on the promise of stewardship

Executive summary

Over seventy per cent of the Australian continent is managed by farmers, graziers, Indigenous communities, and other private land managers. Recent years have seen a growing interest in the potential to use stewardship payments to encourage conservation activities on private land. Australian governments have supported a variety of pilot programs and studies, including through the joint Market Based Instrument pilots. In May 2007 the previous federal government announced a new Environmental Stewardship Program. The current government has built on this foundation through the *Caring for our Country* initiative, which brings together the Environmental Stewardship Program, the National Heritage Trust, the National Action Plan for Salinity and Water Quality and a number of other programs.

The Australian Conservation Foundation commissioned this discussion paper to identify the role and potential contribution of stewardship payments in promoting biodiversity conservation and sustainable natural resource management; to outline key design principles and implementation issues; and to explore possible tensions and synergies with other policy areas – particularly interactions with future policies addressing climate variability and drought, and the introduction of emissions trading.

The key findings of this research include:

(A) Stewardship payments represent an important addition to the Australian sustainability policy toolkit, and can play an essential and distinctive role in promoting environmental conservation and sustainable resource use.

(B) There is scope for a significant increase in the size of the stewardship program over time. This would provide economies of scale and scope, increasing the outcomes achieved and the environmental returns per dollar.

(C) Payments are best delivered through flexible outcomes-based mechanisms. We consider devolved arrangements and trust funds are likely to perform better over time than programs managed directly by government.

(D) As implementation matures, increased priority should be given to:

- supporting innovative approaches to delivering environmental outcomes;
- exploring farm-level and regional approaches for enhancing conservation outcomes and improving management of climate risks and variability; and
- engaging with land managers and investors who are willing to establish new enterprises to deliver environmental benefits that are difficult to achieve through changes within existing businesses.

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The paper is structured around a set of principles and short propositions summarising the key issues in unlocking the full potential of environmental stewardship payments in Australia:

The case for stewardship payments

1. Stewardship payments have an important role as motivators of behavioural change to promote environmental conservation, sustainable natural resource use, and healthy rural industries and communities.
2. Consistent with the catchment care principle, which argues that individual resource managers have an obligation to avoid practices that harm the environment, stewardship payments and other public funds should only be provided for conservation actions over and above what is required to prevent damage to the long term health and productivity of the natural resource base.
3. Stewardship payments will achieve the best long term results when implemented as a part of a mutually supporting set of policy tools – including extension, capacity building, resource assessment, smart regulation, and support for innovation.
4. Overseas and Australian research suggests that increasing the size of the stewardship program would be expected to help achieve economies of scale and scope, thereby increasing both the outcomes achieved and the environmental returns per dollar.

Implementation issues

5. Commonwealth funded environmental stewardship payments should be targeted to national environmental priorities in the initial phase, with a view to expanding the program to encompass nationally significant outcomes across a wider range of issues as implementation matures and more funds become available.
6. Stewardship payments are best delivered through flexible outcomes-based mechanisms that can engage private actors, promote innovation, and focus resources on activities providing the highest environmental returns per dollar. Devolved arrangements and trust funds are likely to perform better in terms of encouraging innovation and streamlining administration than programs managed directly by government, and should play an important part in new stewardship arrangements.
7. Stewardship payments should be available to any individual or group able to provide the conservation activity or outcome sought on a value for money basis, who is willing and able to comply with the accountability and transparency conditions associated with funding, and who can build and maintain the community trust and relationships required.
8. Stewardship payments should be allocated and delivered in ways that support the range of motivations for undertaking conservation actions (including that they do not undermine social motives or existing stewardship ethics).
9. Stewardship payment programs should build on the local knowledge base for effective natural resource management with decision processes and implementation being carried out in ways that engage key actors, promote mutual appreciation of different values and viewpoints, and address key knowledge gaps.

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10. Stewardship payments should be based on coherent regional plans that bring together the best available science and local knowledge to provide a platform for identifying investment priorities and regulating resource use.

Policy synergies

11. The introduction of stewardship payments provides an opportunity to foster innovative approaches to simultaneously enhancing conservation and improving the management of climate risks and variability, at both farm and regional levels.
12. Emissions trading is likely to provide synergies with stewardship payments, especially through providing significant financial support for reafforestation, but may also create tensions in some circumstances.
13. As arrangements for stewardship payments mature, increased priority should be given to engaging with land managers and investors who are willing to establish new enterprises to deliver environmental benefits that are difficult to achieve though changes to management practices within existing businesses.
14. A balanced 'stewardship payments portfolio' will include a component focused on supporting innovative approaches to the delivery of desired environmental outcomes, including the evaluation and demonstration of business models with the potential to provide public environmental benefits and attractive private financial returns.

We consider these principles and propositions provide a set of practical benchmarks for assessing the progress of stewardship payments over the next few years. Some are already met. Others are more relevant to the evolution of the program as it matures. We hope that this discussion paper will help interested individual and groups refine their thinking, engage more productively in discussion and action on stewardship, and contribute to the evolution of stewardship policy design and practice in Australia.

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Contents

Executive summary **2**

Introduction **6**

The need for sustainable resource management 6

Interest in stewardship based approaches 6

The purpose and structure of this paper 7

Section One: The case for stewardship payments **9**

Are stewardship payments a good idea? 9

What should stewardship payments be used for? 10

Where do stewardship payments fit? 11

What is the right scale for stewardship programs in Australia? 13

Section Two: Issues in implementing stewardship payments **16**

How should funding priorities be determined? 16

What are the best delivery mechanisms? 17

Who should be eligible for payments? 20

Could payments undermine existing stewardship motives? 20

How can implementation build long-term performance? 22

Section Three: Synergies between stewardship payments and other natural resource management policies **24**

How will climate change impact on farmers and other landholders? 24

What synergies might be achieved between stewardship and managing the impacts of climate variability? 25

What are the main synergies and tensions between stewardship and reducing carbon pollution? 26

Encouraging sustainable resource management 28

Conclusions **30**

References **31**

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Introduction

The need for sustainable resource management

Australian agriculture is amongst the most productive and efficient in the world, earning Australia valuable export revenues and feeding millions of people at home and abroad. It is becoming increasingly apparent, however, that past farming practices have left a legacy of environmental damage. The full consequences of inappropriate resource management – such as broad scale land clearing - can take many years, decades, or even centuries to fully emerge. Understanding of impacts is complicated by the fact that practices that are appropriate and sustainable in one situation may result in resource degradation in another.

The warning signs are clear. The clearing, fragmentation and degradation of native vegetation for cropping and grazing has resulted in significant threats to – and losses of – native biodiversity, altered surface and ground water flows, and disrupted carbon and nutrient cycles. Vegetation clearing is a continuing threat to the conservation of many native species (NLWRA 2001c, NLWRA 2002). Dryland salinity impacts around five percent of Australian farmland; and is expected to adversely effect 15 to 20 percent of cultivated land over the next 50 years – with implications for soil erosion, reduced river health, weeds and pests, and native vegetation loss (COAG 2000, NLWRA 2001b). Even in 'normal' rainfall years, more than a quarter of Australia's water management areas (accounting for more than half of our surface water use) are approaching or beyond sustainable levels of water use (NLWRA 2001a, see Khan 2006). These resource management challenges are more extensive and severe than those faced by any other developed country (Pannell and Ewing 2004, Tilman et al 1994). Non- degrading commercially-viable management options have not been identified for many of our important agricultural regions (Walker et al 1999). Climate change will exacerbate many of these pressures (Preston and Jones 2006, Hennessy et al 2008).

We need to learn, as a nation, how to live and make a living in harmony with our landscapes and natural heritage (Wentworth Group 2002, 2002, 2006).

Interest in stewardship based approaches

Enhancing environmental conservation on private land is a key component of this transition, as over seventy per cent of Australia's land area is managed by farmers, graziers, Indigenous communities, and other private land managers.

Consistent with this, recent years have seen growing interest around the world in the design and use of voluntary incentive based programs for fostering environmental stewardship on private land (FAO, 2007). A number of stewardship based approaches have been in piloted by state and federal governments over the last five to ten years. This led the previous government to announce a new *Environmental Stewardship Programme* (ESP) in the 2007-08 Federal Budget, along with a *Working on Country* program tailored specifically for Indigenous communities, with combined funding of around $100 million over four years (McGauran and Turnbull 2007, Turnbull 2007). The new programs are focused on matters of national environmental significance and were intended to complement the third phase of the Commonwealth's Natural Heritage Trust.

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The stewardship program is intended to ensure protection and enhancement of environmental assets on private freehold and leasehold land. It is to be delivered under contract by organisations such as regional catchment groups, industry bodies, NGOs, or suitably qualified companies. The program will aim to use a diversity of market-based mechanisms to select participants, including tenders for contracts (up to 15 years) with farmers and other landholders who can provide services on a cost-effective basis. Facilitators will be employed by on-ground delivery agents to assist land managers to understand program arrangements. At the time of writing the intention was to establish the first contracts before the end of the 2007-08 financial year.

The current government has built on this foundation through the *Caring for our Country* initiative, which brings together the Environmental Stewardship Program, the National Heritage Trust, the National Action Plan for Salinity and Water Quality and a number of other programs. The initiative is overseen jointly by the Ministers for the Environment and Agriculture. Its key goals are "a healthier environment, which is better protected, well managed, and more resilient against the challenges of climate change" (Garrett and Burke 2008). Priorities for the initiative include protecting biodiversity and natural icons and promoting sustainable farm practices.

The purpose and structure of this paper

This paper was commissioned by the Australian Conservation Foundation to assist it and other conservation groups to engage with and make a constructive contribution to the development and implementation of Australian stewardship policy. The primary aim of the paper is to identify key issues and provide guidance on realising the full potential of stewardship payments, so that they work for our natural ecosystems, farmers and industries, and regional communities.

The original project discussions raised a wide variety of questions and issues:

- To what extent should management agreements focus on ecological outcomes rather than management inputs?
- Should stewardship payments be used to reward past voluntary conservation efforts, or must recipients undertake some new action?
- Should stewardship payments cover payments for labour and other inputs?
- What can be done to prevent community conservation efforts and a stewardship ethic from being eroded? Can stewardship payments help to build the voluntary effort?
- Who should be involved in deciding the priorities to be addressed through stewardship payments? What are the roles of different groups – such as national government, catchment management agencies, farmers, and local communities?
- How can science and scientists best be involved?
- Can the allocation of payments be managed effectively at a national level, or is it better to devolve most or all of the funds to the regional level? Who should be responsible for assessing and allocating payments to specific providers?

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To deal with these questions in a coherent way the paper is organised in three main sections:

Section One: ***The case for stewardship payments***

- Are stewardship payments a good idea? (p11)
- What should stewardship payments be used for? (p12)
- Where do stewardship payments fit? (p13)
- What is the right scale for stewardship programs in Australia? (p15)

Section Two: ***Issues in implementing stewardship payments***

- How should funding priorities be determined? (p18)
- What are the best delivery mechanisms? (p20)
- Who should be eligible for payments? (p22)
- Could payments undermine existing stewardship motives? (p23)
- How can implementation build long-term performance? (p25)

Section Three: ***Synergies between stewardship payments and other natural resource management policies***

- How will climate change impact on farmers and landholders? (p27)
- What synergies might be achieved between stewardship and managing the impacts of climate variability? (p28)
- What are the main synergies and tensions between stewardship and reducing carbon pollution? (p29)
- Encouraging sustainable resource management (p31)

Our intent in writing this paper is to help interested individuals and groups explore the range of issues involved in effectively implementing stewardship payments at a worthwhile scale in Australia. We hope this will encourage and empower people to engage more productively in policy discussion and on ground action, and contribute to the evolution of world-leading stewardship policy design and practice. To this end we present a series of concise propositions throughout the discussion to summarise the key implications of the different issues canvassed.

We hope that these propositions will provide a useful set of practical benchmarks for guiding and assessing the progress of stewardship payments over the next few years.

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Section One: The case for stewardship payments

Are stewardship payments a good idea?

Australian agriculture has a proud history of contributing to our development as a nation, our sense of national identity, and our prosperity. It is now recognised, however, that our farming practices have not always been well suited to our landscapes. Practices that are profitable and sustainable in one place or in one period may result in substantial environmental damage in another. These costs and negative impacts are often felt well beyond the farm gate; imposing costs across the landscape and over time. These environmental costs are rarely reflected in the price of agricultural commodities.

Importantly, the immediate adoption of current best-practice management would reduce but not prevent further degradation in significant parts of the country (Walker, Gilfedder & Williams, 1999). This implies that many landholders do not have management options available that are both environmentally sustainable and commercially attractive (Williams, 2001). In some cases there are also strong lifestyle, social and cultural pressures to maintain current practices (Vanclay, 2004).

Box 1: *What are Stewardship Payments?*

Stewardship payments – also referred to as payments for 'ecosystem services' – are a way of creating positive economic incentives for natural resource managers to manage their land and activities in ways that improve or maintain ecosystem health. These might include restoring habitat for endangered species, improving water quality and availability through catchment protection, or sequestering carbon in biomass or soils.

One method favoured by governments and non-governmental organisations is to provide direct payments to farmers and other landowners in order to encourage 'conservation-oriented' land-use and/or management practices. Mark Rey, Under Secretary in the US Department of Agriculture, summarises the benefits of using market-based approaches:

> *Market based conservation is an innovative way to … preserve productivity and enhance landowner livelihoods while producing numerous environmental benefits. Market based solutions can provide flexibility to undertake actions that have the lowest cost and result in more cost-effective achievement of natural resource conservation and environmental goals compared to traditional command and control approaches. … I look forward to the day when credits for clean water, lower levels of greenhouse gases, and protected wetlands can be traded as freely as corn or soybeans are today (Rey, 2007).*

These mechanisms are being used or at least trialled in North America, Europe, and Australasia, as well as parts of Africa, Asia, and Central and South America. Other mechanisms for providing incentives for ecosystem services include the purchase or leasing of land, eco-labelling and certification schemes, and the creation of tradable entitlements, or other new markets (such as tradable carbon rights or habitat offsets).

Sources: Rey (2007), see Ecosystem Marketplace (2004); Abel et al (2003) for more information.

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For the following reasons, it is not feasible for the farming sector to bear the whole cost of the transition to sustainable natural resource use:

- Most of Australia's agricultural output is produced for export, making it difficult to pass on any costs that might be associated with achieving higher environmental standards to the consumers of those products (Hatfield-Dodds, Binning & Yvanovich, 2006);
- While there are good reasons for asking farmers and other resource managers to bear the costs of preventing future damage to the natural resource base – which is their core business asset – these reasons often do not apply to the repair of damage resulting from past actions (which may also be beyond their financial capacity) (Wentworth Group, 2003a, Wentworth Group, 2003b);
- Achieving improved biodiversity outcomes will generally not provide immediate net production benefits to farmers, and so it is reasonable to expect the wider community to contribute to the cost of achieving these outcomes (Hatfield Dodds, 2006).

Stewardship payments differ from traditional approaches in that they do not impose new duties or obligations on land managers through public regulation, but instead offer payment as motivator of behavioural change. This essentially voluntary approach is appropriate for encouraging actions that are considered desirable, but are not widely considered to be a legal or moral duty.

Stewardship payments are a prospective way of providing support and resources for conservation actions, and the transition to ecologically sustainable natural resource management, along with other 'market-based instruments' such as carbon credits or biodiversity offsets for urban development. Importantly, however, stewardship payments should not be viewed as a 'magic bullet'. Rather, they are one part of a set of policy tools, with a distinctive role and contribution.

P1	*Stewardship payments have an important role as motivators of behavioural change to promote environmental conservation, sustainable natural resource use, and healthy rural industries and communities.*

What should stewardship payments be used for?

It is widely agreed that stewardship payments, as with other categories of public funding, should not be provided for actions that are legally required or normally thought to constitute landholders' 'duty of care' (McGauran, quoted in Barden, 2007). In practice, however, developing mechanisms for implementing this principle has proven difficult.

To begin with, the problem is often framed as a contest between 'private' and 'public' benefits; the assumption being that achieving public environmental benefits involves net costs to private actors. In many cases, however, farmers as a group would benefit from improved natural resource management (NRM) – as many of the 'off farm benefits' of action occur on other farms. This insight prompted the Wentworth Group to suggest a new

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approach to duty of care (Wentworth Group, 2003a), which they described as the *catchment care principle*:

> *"The catchment care principle is that individual resource users have an obligation to avoid natural resource management practices that harm the long-term interests of resource users as a whole. This is taken to imply that resource management practices should not damage ecosystem integrity or essential landscape function"*

The principle seeks to ensure the maintenance of 'healthy working landscapes'. In contrast to the 'polluter pays' and 'beneficiaries pays' principles, the catchment care principle recognises the environment as a source of both amenity and livelihood, and argues that the responsibilities of natural resource managers should be linked to an agreed ecological benchmark rather than simply reflecting current social preferences. This approach may also be contrasted with existing arrangements which allow short-term benefits to be achieved at the cost of long-term damage to ecosystem health; usually as a result of costs being shifted onto other farms and future natural resource users. This undermines the long-term productivity of the resource base, and thus undermines real resource security. While assessing the extent of this problem is difficult, existing information suggests that inappropriate management of relatively small areas can impose significant net costs on others over time.

It follows that public investment should focus on facilitating improvements in natural resource condition, including by remedying past damage where this is worthwhile, while resource managers should be responsible for avoiding actions that would result in additional resource degradation or environmental damage.

P2 *Consistent with the catchment care principle, which argues that individual resource managers have an obligation to avoid practices that harm the environment, stewardship payments and other public funds should only be provided for conservation actions over and above what is required to prevent damage to the long term health and productivity of the natural resource base.*

Where do stewardship payments fit?

We can think of the transition to sustainable agriculture and natural resource management in terms of five interlocking policy challenges:

(a) Encouraging investment in *existing* commercially attractive and environmentally sustainable land-use options;

(b) Making those sustainable management practices that are likely to remain unprofitable in commercial terms more attractive to landholders than unsustainable practices;

(c) Advancing the development of profitable new industries with significant environmental benefits and minimal ill-effects;

(d) Effectively discouraging or prohibiting natural resource and agricultural management practices where these impose net social costs; and

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(e) Advancing the science, technology and understanding required to underpin good NRM policy and practice.

Stewardship payments have the potential to play a more or less profound role in each of these areas, particularly in providing a transparent and accountable mechanism for funding private conservation actions that are otherwise non-commercial (see point (b) above). As confidence and experience with stewardship payments grows, payments may displace some activities currently supported through grants (which are generally limited to not-for-profit groups).

Alone, however, payments are highly unlikely to be effective in tackling any of these problems. Rather, the best results will arise via a flexible and pluralistic approach, sometimes called 'smart regulation' (Gunningham & Grabosky, 1998), involving a mix of complementary policy tools tailored to a given set of circumstances and environmental goals.

Achieving improved policy outcomes will also require capacity building and refinements to governance arrangements, including improving the targeting and oversight of investments, and to ensuring that different policy components work together effectively.

It is also worth underscoring that rising to these challenges will require a sustained increase in public funding commensurate with the scale of our continental environmental challenges. The use of some of those funds to mobilise large-scale private sector investment – particularly for tasks (b) and (c) – is less often recognised but also a priority. Of course, any public subsidies ought to be transparent, and wound back as once novel environmental industries reach self-sufficiency.

P3	*Stewardship payments will achieve the best long term results when implemented as a part of a mutually supporting set of policy tools – including extension, capacity building, resource assessment, public regulation, and support for innovation.*

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Box 2: *What practical experience is there with stewardship payments?*

There is growing attention to the potential for stewardship payments and market-based instruments around the world, beginning with the active inclusion of conservation objectives into US farm support payments in 1985 (Helms, 2003). The US farm bill now provides over A$3.5 billion a year for conservation activities through nine major programmes (USDA, 2005), and EU agricultural support is also being transformed to support conservation (European Commission, 2003). While decoupling these programmes from the original motivation of providing subsidies and income support has proven difficult, there now appears to be is growing commitment to genuine market-based conservation (USDA, 2007).

In Australia, the first round of the NAP/NHT Market-based Instruments Pilot Programme (2003-2006) provided $5 million for ten projects exploring effective implementation of innovative conservation policy tools, mainly incentive payments and conservation auctions (National MBI Working Group, 2005; Whitten, van Bueren & Collins, 2004). These projects have provided useful insights and helped to develop practical experience in the design and implementation of stewardship payment programmes and related policy approaches. The review of the first round of projects found that these approaches can help to improve natural resource management, and have an important role in the delivery of future conservation programmes. Further funding of $5 million has been announced for a second round of projects (NAPSWQ, 2007), in addition to the Environmental Stewardship Programme announced in the May 2007 Budget (Joint Media

What is the right scale for stewardship programs in Australia?

The ideal scale for implementing stewardship payment programs in Australia will be influenced by a range of factors, such as:

- the scope for achieving improved conservation outcomes;
- the effectiveness of a stewardship-based payment approach in achieving these outcomes, both in absolute terms and relative to other policy approaches;
- the synergies between a stewardship-based approach and other policy tools;
- the value or relative priority that Australian's place on these outcomes (which determine whether this expenditure provides 'value for money' to Australian taxpayers); and
- the resources available through government budgets and other sources.

The discussion above suggests that stewardship payments and similar voluntary market-based mechanisms are likely to provide a cost-effective way of achieving conservation outcomes. Further, stewardship payments allow access to conservation opportunities that would be difficult to achieve through other policy approaches.

Outlays by Australian governments on private conservation have historically been quite modest compared to the US and Europe, where existing farm support payments have been redirected towards environmental objectives. As a result of this reform of farm support, the

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US *Farm Bill* now provides over A$3.5 billion a year for conservation activities through nine major programs under the farm bill, and EU agricultural support is being progressively transformed to support conservation (see Hatfield-Dodds et al 2007). These substantial outlays contrast with the Federal Government commitment of around $100 million over four years for the ESP and Working on Country programs. (The former aims to protect and enhance the environmental values of endangered yellow box-gum woodland habitat in Victoria, NSW and Queensland.)

Estimates of the potential scale for using stewardship payments in Australia are rare. Analysis undertaken last year for the Australian Agricultural Alliance on Climate Change (Hatfield-Dodds et al 2007) found that implementing stewardship payments across 8% of Australia's total land area would require annual stewardship payments between $0.7 to $1.6 billion per year. This would more than double the effective area with 'active conservation' of native vegetation and ecosystems from 6% to 14% of the continent. The analysis was based on implementation of cost-effective voluntary agreements to secure at least 10% of each ecosystem and habitat type across Australia (including grasslands, savannah, forest, and arid zones), implemented to provide cost-effective conservation outcomes in light of differences in land values and opportunity costs. Details are provided in Table 1.

Taken together, this suggests that there is considerable scope to expand the scale of stewardship payments in Australia, both through new funding and the redirection of existing funding within state and Commonwealth environment portfolios. Note that this would also be likely to generate improved conservation outcomes more broadly, as stewardship payments encourage private land management in greater sympathy with the management needs of Australia's national reserves system.

In the short term, the main constraint on scale of stewardship is likely to be the need to establish and test oversight and administration arrangements. Over the longer term, the limiting constraint is likely to be perceived value for money – both technically (reflected in program assessments, and the confidence of Ministers and central agencies in the outcomes achieved), and in the hearts and minds of the general public.

We consider that a well designed and implemented stewardship program, backed by sound priority setting and reporting mechanisms, could deliver quality conservation outcomes and long-term value for money. With careful but ambitious management such a program could grow to invest in the order of $600-1000 million a year over five to seven years, especially if designed to contribute to wider goals (such as assisting farmers manage climate variability). While difficult to judge precisely, it is very likely that the program is currently below optimal scale, and that expanding the program would improve both overall outcomes and outcomes per dollar spent.

P4	*Overseas and Australian research suggests that increasing the size of the stewardship program would be expected to help achieve economies of scale and scope, thereby increasing both the outcomes achieved and the environmental returns per dollar.*

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Table 1: Potential scale of a national environmental stewardship scheme – estimated area and annual payments

Region	New land selected for stewardship payments		New land plus existing reserves	Total stewardship payments (a)	
	km2	share of state	share of state	*low* $m pa	*high* $m pa
NSW (d)	76,680	10%	15%	180	397
NT	111,492	8%	12%	2	5
Queensland	156,138	9%	12%	236	519
SA	72,616	7%	18%	97	212
Tasmania	13,350	20%	41%	78	171
Victoria	18,486	8%	20%	45	98
WA	199,491	8%	13%	102	223
Australia (a)	**648,252**	**8%**	**14%**	**739**	**1,627**

Notes: (a) Total includes $55-121 m in estimated payments for stewardship on indigenous lands;
Source: Hatfield-Dodds et al 2007 Table 6 p.32

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Section Two: Issues in implementing stewardship payments

The success, or otherwise, of transforming stewardship payments from 'a good idea' to an effective policy on the ground will depend on the detail of how policy is designed and implemented. From a review of the literature and discussions with a variety of people involved in natural resource policy and practice, we identify a number of key policy and institutional design issues:

- How should funding priorities be determined?
- Could payments undermine existing stewardship motives?
- What are the best delivery mechanisms?
- Who should be eligible for payments?
- How can implementation build long-term performance?

These questions are discussed below.

How should funding priorities be determined?

How funding is allocated across different potential priorities is one of the most important design and implementation issues in the introduction of the new national stewardship program.

One option would be to focus on 'national priorities', interpreted as issues for which the Commonwealth has primary legal responsibility, such as meeting international treaty obligations, like the protection of Ramsar wetlands. This suggests linking payments to outcomes pertaining to relevant matters of 'national environmental significance' (NES) under the Commonwealth Environmental Protection and Biodiversity Conservation Act (the *EPBC Act 1999)* (Australian Government, 2007), namely:

- Listed threatened species and ecological communities;
- Migratory species protected under international agreements;
- Ramsar wetlands of international importance;
- The Commonwealth marine environment;
- World Heritage properties; and
- National Heritage places.

Another option would be allow stewardship payments to address broader objectives, such as the *Caring for our Country* priorities of (protecting) 'biodiversity and natural icons' and promoting 'sustainable farm practices and landcare', particularly where the issues addressed are of national importance.

There are a number of arguments in favour of adopting a tighter environmental focus in determining funding priorities for stewardship payments. The first is that biodiversity conservation is much less likely to provide net benefits to primary producers, as a group,

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than outlays on other natural resource management issues, such as dryland salinity, weed control, or soil conservation. This implies both that there is a much stronger case for full public funding to achieve desired biodiversity outcomes, and that there is less scope for biodiversity-focused funding to be diverted to inappropriate projects, including projects with lower environmental benefits but higher non-environmental public benefits. The second reason is that adopting a wider set of objectives would necessarily require more discretion and judgement in resource allocation, including decisions about the relative importance of different objectives or of expenditures and outcomes across different regions. It is not clear that existing regional governance mechanisms have the capacity to deal with significant injections of new funds, and to ensure that these funds are invested to best effect.

Against this, stewardship payments have the potential to deliver conservation outcomes across a wide range of objectives, not just federally legislated NES matters. Fully realising this potential would require genuine regional engagement in allocating funds to achieve national conservation priorities (see 'How can implementation build long-term performance?' below). Allocation decisions could be informed by recent advances in environmental information systems, such as the decision support and conservation planning tools developed by the University of Queensland and CSIRO (Hajkowicz in press, Marinoni et al in press, Klein et al 2007, Carwardine et al 2006).

More generally, allocation of funds should take account of the social and economic capacity of landholders and regions, the attitudes of key stakeholders towards stewardship payments, and synergies or tensions between specific payments - such as scale effects in revegetation, or undesirable consequences of some actions - and their relationship to other policy tools.

One way to resolve this dilemma would be to focus stewardship payments on Commonwealth priorities in the initial phase of program design and implementation (as favoured in the establishment of the environmental stewardship program in 2007), with a view to expanding the scope of these payments once effective mechanisms have been demonstrated, and regional planning and delivery capacity has had a chance to mature.

P5	*Commonwealth funded environmental stewardship payments should be targeted to national environmental priorities in the initial phase, with a view to expanding the program to encompass nationally significant outcomes across a wider range of issues as implementation matures and more funds become available.*

What are the best delivery mechanisms?

The success or failure of the new ESP and similar programs rests in large part on how they are delivered.

One option would be for the Commonwealth to administer payments directly, drawing on the systems and experience of the NHT and National Salinity Action Plan (NAP) grant processes. This would enable close engagement and accountability, with federal officials directly involved in selecting and administering stewardship projects.

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Box 3: *Innovative approaches to conservation*

Trust funds have a strong track record of achieving conservation outcomes through innovative approaches and partnerships, but are not yet widely known in Australia. Recent years have seen an increase in private conservation efforts, such as those led by Victoria's Trust for Nature and Bush Heritage Australia, who purchase and manage land for environmental benefits or sell it on to sympathetic buyers subject to a permanent conservation covenant. The potential additional traction of this approach is illustrated by a number of initiatives of The Nature Conservancy (TNC), including their 'grass bank', debt-for-nature swaps and a new EcoEnterprises Fund. Under the grass bank initiative, the TNC secures a property in an area subject to environmental stress and allows nearby graziers periodic access for their stock; thereby helping to relieve grazing pressures on their own properties and assists in the restoration of native grasses across the district. The EcoEnterprises Fund is a joint initiative with the Inter-American Development Bank which is using venture capital principles to protect environmentally sensitive areas in Latin America and the Caribbean while developing and demonstrating economic livelihoods strategies for local people.

However, a reliance on direct grant-style processes immediately heightens a number of risks:

- Government grant processes tend to focus on process and accountability rather than expected outcomes. In so doing, they work against the development of trust and often impose excessive transaction costs on smaller grants and thus act as a disincentive for people to take part in such programs;
- This procedural focus tends to prevent innovation and the evolution of more cost-effective approaches to achieving the outcomes sought;
- Administrative culture has a strong emphasis on the purchase of internally-defined benefits on a 'take it or leave it' basis, and rarely seeks or even understands the notion of partnering with others to achieve shared goals; and
- Governments find it difficult to contract for periods of more than four years, making it difficult to successfully devise the kind of long-term projects that are needed given the slow response of many degraded environments to treatment.

As a result, many highly capable and otherwise willing environmental practitioners – including many landholders and business people - are not interested in government grants; an attitude that would be likely to reduce the reach and effectiveness of stewardship payments if they were administered in the same way.

There are a number of options for delivering stewardship payments which would avoid these potential pitfalls:

Streamlined application processes, such as conservation tenders supported by site assessments and simple contracts. These can go some way towards ensuring desirable actions are undertaken and reducing transaction costs for both bidders and government (Stoneham,

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Chaudhri, Ha & Strappazzon, 2003; Comerford, 2007). These are most relevant to situations where governments know both the outcomes sought and the best mechanisms for achieving these. Such processes require transparent and easy-to-use benefit indices, such as the Victorian *BushBenefits* assessment tool (DSE/DPI Victoria, 2005). Indeed, access to a simple and repeatable evaluation tool appears more important than the specific approach to selecting conservation bids (Connor, Ward & Bryan, 2007). It is also important to note that it is legitimate for stewardship programs to include payments that reflect the effort or opportunity cost of landholders, rather than only covering out-of-pocket expenses (as is often the case under grant funding rules).

Devolved grants, where a head grant is provided to a trustworthy organisation – such as an NGO, catchment authority, or local farm management consultancy – that then negotiates conservation actions and funding with individual landholders. From the landholders' perspective, procedures tend to be rapid and relatively informal, with the head grant organisation taking responsibility for the bulk of the reporting, accountability and paperwork (Proctor, Comerford, Hatfield-Dodds, Stauffacher & Wilkinson, 2007). A recent study found that activities undertaken through devolved grants have resulted in significant long-term conservation outcomes, reflecting the trust and goodwill of those involved, and questioning the cost benefit ratio or requiring strict or enforceable accountability mechanisms (Natural Heritage Trust, undated).

Trust funds, established with capital or long-term funding, are given considerable autonomy in how they work. The trustees of the fund have strict legal obligations to serve the objectives of the fund, akin to the responsibilities of company directors to serve the interests of their shareholders (Australian Greenhouse Office, 2005). Particular advantages of trust funds include that they can receive funds from government which may be retained as capital, and are able to implement long-term contracts with landholders (such as for periods of 15-20 years) where this is appropriate (Allen Consulting Group, 2005). Trusts are also able to be much more entrepreneurial in their approach, where the trustees consider this best serves the objectives of the fund.

Investment leverage, where public and private funds are jointly invested in activities or projects that yield both public benefits and private returns – most likely with the public funds provided through a dedicated trust fund. This has particular advantages where larger-scale changes in land-use are desired (which may require establishing new enterprises, rather than contracting with existing enterprises), or where there would be benefits from demonstrating the commercial and environmental benefits of new land management practices. Investment leverage is best suited to situations where desired outcomes are known but supply options are not well understood, or where it is considered that innovative approaches – once demonstrated – are likely to require lower levels of continuing public funding. The Greening Australia pilot Land Innovation Fund found that there was significant potential for investment leverage that would provide large-scale environmental benefits and be likely to fully repay the public cost of borrowing (Hatfield-Dodds, Binning & Yvanovich, 2006).

The real world limitations of government grant administration, and the availability of other options able to meet the transparency and governance requirements of government, suggest that stewardship payments should at least be delivered through streamlined approvals and

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contracting processes, and that the overall effectiveness of the program would be enhanced by ensuring that at least a substantial share of payments through devolved grants or trust funds.

Implementation should also recognise that developing skills and understanding takes time, and invest more heavily in education, support and capacity building in the initial phases of any program.

P6 *Stewardship payments are best delivered through flexible outcomes-based mechanisms that can engage private actors, promote innovation, and focus resources on activities providing the highest environmental returns per dollar. Devolved arrangements and trust funds are likely to perform better in terms of encouraging innovation and streamlining administration than programs managed directly by government, and should play an important part in new stewardship arrangements.*

Who should be eligible for payments?

Most of the public discussion of stewardship payments is with reference to the farming and pastoral communities. In the past, government grants have usually been provided to non-profit groups, while businesses and other for-profit bodies were often ineligible. Payments have often been calculated to cover out-of-pocket costs, such as fencing materials, but have usually required recipients to donate their labour and other in-kind assistance.

There would be advantages to allowing stewardship payments to be made to organisations that are not primary producers. This would allow NGOs, catchment authorities, and businesses with relevant expertise to manage funds and broker arrangements for landholders; simplifying engagement and broadening the appeal of participation (see the discussion of devolved grants and trust funds above). In some cases, these arrangements might also provide access to additional funds, such as by providing conservation offsets to private companies or philanthropic donors. Note, however, that many conservationists regard such offsets with suspicion.

P7 *Stewardship payments should be available to any individual or group able to provide the conservation activity or outcome sought on a value for money basis, who is willing and able to comply with the accountability and transparency conditions associated with funding, and who can build and maintain the community trust and relationships required.*

Could payments undermine existing stewardship motives?

Most policy makers and economists assume that offering stewardship payments will enhance the motivation of landholders to undertake desired conservation actions. Monetary rewards are only one form of incentive, however, and offering payments can reduce motivation to undertake activities that are currently undertaken primarily for non-financial reasons.

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Box 4: *Multiple motivations and 'multiple currencies of action'*

It is important for incentive-based policy to recognise that there are different types of motivation, involving different 'currencies of action'.

Many people like entertaining friends. Having people around for a barbeque or dinner party is motivated by a complex set of social factors, which are likely to vary between individuals. You may enjoy going to friends for a party or a meal, and wish that you went to more. Offering your friends $10 to invite you to their next party would add a cash payment to their existing motivations, but would be unlikely to result in more invitations. Rather, introducing the offer of a cash payment may actually depress the sense of enjoyment, mutuality and celebration that motivate your friends, and may indeed offend them by implying that you do not understand their motives, or suggesting that you can buy their hospitality. In any case, as $10 is insufficient payment for an evening's work, an offer of this kind would probably reduce the total number of invitations you receive. Offering $100 may be enough to secure a stream of invitations, but the fundamental nature of the event would be changed; people would now be providing a meal in return for payment, rather than as an act of friendship. Money can be used in more thoughtfully appropriate ways, however, such as by buying flowers or chocolates, or by taking your friend to the movies as a thankyou for a dinner. Such gifts acknowledge your friends' efforts and may increase their enjoyment and reinforce their existing motivations (Frey, 2001).

Many childcare centres, for example, rely on a sense of duty or responsibility to motivate parents to collect their children on time. If these motivations are not sufficient to prevent excessive late collections, a centre may consider introducing a monetary incentive to encourage parents to be on time. The introduction of a modest fine has been found to have the opposite effect, however, resulting in more parents being late to collect their children. What appears to be happening is that some parents interpret the fine as a fee-for-service price that 'gives permission' to be late as long as the payment is made. Where this is the case the new payment erodes or 'crowds out' existing motivations, reducing the embarrassment or stigma associated with late collections, and so *increases* the behaviour the fine was intended to reduce (Gneezy & Rustichini, 2000). This suggests that any new charge should be large enough to be seen as a 'penalty' rather than a 'purchase' (consistent with social norms for fines and penalties), and clearly described and implemented as a fine or penalty (such as through requiring separate payment arrangements).

There are a number of reasons why the introduction of stewardship payments might undermine existing motives for conservation. Farmers and pastoralists may consider it unfair that some landholders are paid to undertake actions while others are not, or that the social motives for conservation-friendly management practices – such as pride in doing your bit or a shared duty to contribute to the local community – may be eroded by introducing cash payments, or a view that payments are not compatible with a genuine stewardship ethic. Australian studies indicate that many farmers are motivated by a strong sense of moral or social obligation operating alongside financial motivations (Vanclay 2004). For many

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farmers, their roles as producers of food and fibre and "stewards of the land" are central to their identity, with farming seen as a way of life more than a way of making a living.

Given that significant numbers of landholders currently undertake conservation-friendly practices on a voluntary basis, even a small reduction in stewardship motivation would be likely to outweigh the increase in payment-motivated activities (see Frey, 2001; Reeson, 2006). Furthermore, the literature on these issues suggests that current motivations would be difficult to recover if driven out by poor policy, as the previous norms and behaviour are unlikely to restabilising once the inappropriate policy is discontinued.

This suggests that considerable care should be taken in the design and communication of stewardship-type programs to ensure that they are seen to complement and support a genuine 'productive stewardship' or 'landcare' ethic, rather than displace these motives. A key goal of any stewardship payment scheme should be to augment the ability of landholders to provide conservation services that would otherwise not be financially viable or attractive, and to raise overall participation in the national conservation effort. In order to avoid undermining motives for existing conservation activities there should be a general presumption against paying for conservation covenants, which in the vast majority of cases are not currently undertaken for financial motives.

P8	*Stewardship payments should be allocated and delivered in ways that support the range of motivations for undertaking conservation actions (including that they do not undermine social motives or existing stewardship ethics).*

How can implementation build long-term performance?

Ensuring that stewardship resources are applied to best advantage will require a coherent information and knowledge platform, as well as clear priority setting. The regional governance model outlined by the Wentworth Group (2003a) sets out a practical way of developing light-handed knowledge-based management plans for catchments, individual properties, and sub-catchments or groups of properties. Implementation of this approach would involve the development of map-based catchment plans covering the management of water, native vegetation and other natural resources. The regional plans would then form the basis for simple farm plans that provide management flexibility and investment security.

An approach of this sort would provide the knowledge base required to set priorities and assess specific options or applications for funding. It would also help ensure that funding is only provided for actions that are over and above what is required to prevent damage to the long-term productivity and health of the natural resource base. To be fully effective, these plans should bring together local knowledge and the best available science, and be reviewed and renewed every five to ten years. In this way, the regional plans provide a vehicle for coordinating planning, regulation, and investment – 'the three arms of regional governance' – and for building the knowledge base required to ensure resource management avoids damaging the integrity and productivity of the natural resource base.

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This suggests that strengthened science-based regional planning could provide a practical mechanism for identifying the real world implications of farmers' duty of care, and coherent basis for identifying regional investment priorities for stewardship payments.

Such an approach to regional knowledge-building would complement the use of devolved grants or arms length trusts for the delivery of some or all stewardship payments. If these approaches were used together it would be important to promote coordination while retaining transparency and a separation of planning and investment decisions. This would imply – for example – that it may not be appropriate for a catchment management agency to have responsibility for both planning and the allocation of stewardship payments, although it might manage contracts and reporting arrangements once another body had awarded these.

P9	*Stewardship payment programs should build on the local knowledge base for effective natural resource management with decision processes and implementation being carried out in ways that engage key actors, promote mutual appreciation of different values and viewpoints, and address key knowledge gaps.*

P10	*Stewardship payments should be based on coherent regional plans that bring together the best available science and local knowledge to provide a platform for identifying investment priorities and regulating resource use.*

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Section Three: Synergies between stewardship payments and other natural resource management policies

Climate change and increased climate variability raises enormous new challenges for Australian rural industries, and for those concerned with protecting the health of our native plants, animals, and natural ecosystems.

Stewardship payments have the potential to enhance the resilience and adaptability of Australia's rural industries and communities – by providing a new source of income – and of our environmental communities and ecosystems, such as through supporting enhanced conservation activity on private land where climate change poses particular risks to our native flora and fauna.

This section explores a number of potential synergies between stewardship payments and other arms of natural resource management policy, particularly:

- drought policy and the management of climate variability;
- the introduction of emissions trading to reduce carbon pollution; and
- promoting sustainable natural resource management and agricultural industries;

How will climate change impact on farmers and other landholders?

Over coming decades climate change will result in rising temperatures, higher evaporation, reductions in rainfall and surface water flows across much of Australia, changes in the length and timing of growing seasons, increases in the frequency and severity of storms and other extreme events, and changes in the spread and behaviour of weeds and pests (Preston and Jones 2006, Khan 2006). These trends are expected to be accompanied by significant increases in climate variability, increasing in the intensity and frequency of extreme weather events. A recent CSIRO and Bureau of Meteorology analysis of future drought patterns, for example, found that years with exceptionally low rainfall are likely to occur more than twice as often in coming decades than at present, and more than three times as often in Victoria and Tasmania and South West WA. The frequency of exceptionally hot temperatures is projected to increase from less than one year in twenty to around one year two across most of the continent (Hennessy et al 2008).

In addition to the direct impact of climate change, some policy responses to climate change will also present challenges and opportunities for farmers and rural landholders. The buying power of some agricultural export markets could, for instance, be degraded; particularly those in the developing countries where societal adaptive capacity may be relatively low. Emissions trading may also encourage shifts from current land uses into biofuels (displacing fossil fuels, and reducing emissions), for example, or conversion of pasture to forest or biodiversity plantings (taking up, or sequestering, carbon from the atmosphere).

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Coming on top of existing pressures, such as the long run declines in agricultural production margins and distorted international markets, key agricultural leaders have observed that "climate change may be the greatest threat confronting Australian farmers and their productive capacity now and in the future" (NFF 2006, 2007).

The nature and extent of these challenges has already triggered a sea change in the way rural industries, communities, and policy-makers think about the future. Climate change means that the past is no longer a reliable guide to the future, and that old ways of doing things are unlikely to live up to the challenges ahead.

What synergies might be achieved between stewardship and managing the impacts of climate variability

There is now widespread recognition that there is room to improve the operation of drought policy so that it better achieves its goals of reducing the adverse impacts of extreme climate variability on rural households and the natural resource base, without reducing the efficiency and dynamism of agricultural industries (see Nelson et al *in press*).

We have identified three main potential synergies between the objectives of stewardship programs and the ability of the farming sector to manage climate variability.

First, widespread implementation of stewardship payments would provide a new additional income stream for farming households and enterprises, and – in principle – might support additional on-farm employment (or returns to labour) related to active conservation measures (such as weed control, or earthworks to establish or protect a wetland area). This income stream would be highly predictable from year to year, and in most circumstances would not be correlated with variations in other sources of income, such as grain or livestock prices. The independent source of income provided by stewardship payments would thus help moderate year to year variations in farm income from other sources, and may provide scope for countercyclical employment, such as where conservation works are able to be undertaken in dry years.

Second, the conservation management agreements used in stewardship payments could include specific agreed 'drought clauses' to encourage self-management of the risks of climate change, for example. An agreement might set out, for example, that specified parts of an on-farm conservation area could be moderately grazed on a long rotation – such as at 40% of the normal stocking rate once every nine years – where this was compatible with the environmental outcomes sought. Such provisions might mimic the impacts of natural climate variation. Provisions of this kind would provide improved on-farm management of climate risk (such as by providing additional fodder), making the conservation agreement more attractive to landholders. This would be expected to reduce the price asked by landholders, allowing a given budget for stewardship payments to cover a larger area and achieve greater benefits. Whether inclusion of a drought clause is worthwhile, from a public perspective (and assuming that it can be administered), will depend on whether the reduction in payments sought by landholders outweighs any negative impact of the provisions on expected environmental outcomes.

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Third, there may be scope to introduce cross-compliance or cross-program funding arrangements. Future drought policy may, for example, place more weight on preventative measures and pre-accreditation of drought management plans. Under such plans a group of landholders may agree to establish a grazing reserve that provides both a forage buffer in dry times, and long-term conservation benefits – modelled on the successful prairie "grass bank" developed by The Nature Conservancy's (Veseth n.d., Robbins 2006, RLC 2008). In return these farmers would receive improved access to support provided through drought policy mechanisms. The same concepts could be applied to collectively held water entitlements used for both irrigation and environmental flows over different points of the climate cycle, or to the establishment of wildlife corridors to assist with salinity or pest management. In this case, appropriate design of the policy to encourage incentives for collective action should be considered.

P11 *The introduction of stewardship payments provides an opportunity to foster innovative approaches to simultaneously enhancing conservation and improving the management of climate risks and variability, at both farm and regional levels.*

What are the main synergies and tensions between stewardship and reducing carbon pollution?

Government action to reduce carbon pollution through the introduction of emission trading will have a variety of implications for farmers and other rural landholders. These include creating incentives to establish carbon sinks, expanding the demand for wind power (sited largely on farms), and the development of biofuels over time. Previous CSIRO analysis suggests that these opportunities could generate $815-1,310 million in net new income for Australian rural communities by 2025 (assuming carbon prices of $50-65 t/CO2, see Hatfield-Dodds et al 2007).

The inclusion of direct agricultural emissions in emissions trading from 2015, as discussed in the recent Green Paper on reducing carbon pollution (DCC 2008), has the potential to substantially alter the relative returns to different farming activities. The nature of these impacts will depend crucially on the details of how specific activities and types of entity are treated, particularly given that many agricultural activities may qualify as emissions intensive trade exposed sectors and that the direct emissions of most farm businesses are below the proposed reporting threshold.

The most important immediate interaction between reducing carbon pollution and stewardship arrangements is that emissions trading will give tangible mainstream economic value to reafforestation activities.

This will provides an opportunity for private actors and non-profit bodies to enhance biodiversity outcomes from reafforestation by combining stewardship payments – if granted – with income from the sale of emissions permits and potential philanthropic support. Where this strategy is successful, stewardship payments will leverage greater biodiversity outcomes through the use of carbon revenues.

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Against this, in some instances emissions trading may work against the objectives of stewardship, by encouraging plantations of monospecies for wood harvesting objectives that provide lower biodiversity benefits than existing land uses, or that increase competition for water. Managing these pressures may require changes to governance arrangements for forestry, surface water, or natural resource management arrangements more generally (Wentworth Group 2006, 2003). It will also require adequate scheme design and effective administration and monitoring procedures.

As the scale of the carbon market will dwarf the funds available for stewardship, it is expected that market conditions will be determined by the sequestration rate of commercial forest species in favourable rainfall zones. If, as proposed in the recent Green Paper (DCC 2008), the emission trading system does not constrain access to permits (recognising all reafforestation, on a voluntary basis), achieving biodiversity outcomes will require stewardship payments to cover most or all of the sequestration differentials associated with any shortfall in carbon uptake by biodiverse plantings, as well as differences in carbon uptake due to growing conditions (such as rainfall, soils and other factors).

An alternative would be for the emissions trading system to provide some additional incentive for reafforestation that provides biodiversity benefits. This might be considered worthwhile if there was evidence that total plantings were constrained by non-market factors, and so all or most reafforestation activity would receive super normal returns (akin to quasi-monopoly rents on intramarginal investments). In this circumstance, diversion of some reafforestation activity from plantation forestry to biodiversity plantings would involve little or no net economic loss. In practice, however, unless it is decided to limit access to reafforestation credits for some non-biodiversity reason, it would be simpler and more transparent to argue that some portion of the revenues from auctioning emission permits should be used to increase the funds available for stewardship payments that simultaneously help landholders better manage climate risk and augment ecosystem resilience.

Over the longer term, emissions trading may provide new opportunities for the development of sustainable rural industries. The inclusion of direct livestock emissions, for example, could provide an economic incentive to expand kangaroo meat exports as a unique low emissions source of protein. Kangaroos do not produce methane and, with right drivers and regulation, the industry could yield significant conservation benefits in Australia's rangelands (Ampt & Baumber 2006). Emissions trading may also improve returns to non-timber tree-based products, such as native sandalwood, wattle seed, and oils, charcoal and bioenergy from mallee crops in the low rainfall zone. A range of other new industries are possible[1].

P12 *Emissions trading is likely to provide synergies with stewardship payments, especially through providing significant financial support for reafforestation, but may also create tensions in some circumstances.*

[1] See, for example, Allen Consulting Group (2001) and Martin (2007).

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Encouraging sustainable resource management

The scale and nature of the challenges involved in achieving sustainable resource management in Australia are not always widely recognised. It is now clear, however, that many Australian farming practices are not always well suited to our landscapes. As discussed in Section One, farming practices that are profitable and sustainable in one place often impose significant costs and degradation in another, and immediate adoption of best practice resource management would not prevent further resource degradation in significant areas of Australia (see Walker, Gilfedder & Williams, 1999, Wentworth Group 2002).

This implies an urgent need to develop innovative resource management practices that are both commercially attractive and environmentally sustainable. Public support for innovation is required because incentives for private investment are diluted by two interacting market failures: innovation failures (where private investors are not able to capture the full benefits of successful innovations due to unavoidable – and often desirable – spillovers and demonstration effects) and public good issues (where a significant share of the benefits are non-excludable and intrinsically difficult to capture).

These issues were explored in though an MBI Pilot that trialled a 'leverage fund' that used a combination of public and private capital to identify and develop innovative investment proposals providing a mix of public environmental benefits and private financial returns (see Hatfield-Dodds et al 2006). This involved the pilot acting as a business incubator, seed venture capital broker, and public good environmental trust.

The major findings of the pilot were that investment leverage approaches:

- are able to access environmental benefits that are unlikely to be achieved through competitive tenders and devolved grants, and are particularly well suited to supporting innovation and exploring options where desired outcomes are known to governments but the most appropriate or cost effective resource management actions are difficult to identify;
- have significant advantages in supporting landscape level change, including where desired resource management practices are not easily introduced within existing enterprise structures, or involve the demonstration and diffusion of new niche industries; and
- are likely to be more cost-effective than grant based approaches where innovation and implementation risks are significant.

This suggests that it would be valuable for the environmental stewardship program to consider using some portion of its budget to support delivery options that facilitate innovation in land use practices, and encourage or allow for the implementation of new enterprises or reorganisation of existing landscape management activities. This contrasts with tender-based approaches that are only able to engage with existing enterprises (in contrast, for example, with an approach that allowed proponents to merge a number of farms and re-parcel them into a sustainable grazing enterprise and a mixed forestry-biodiversity plantation business serving a number of markets). Many of our existing agricultural landscapes (for example irrigated agriculture and forestry) were indeed

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encouraged by publicly funded subsidy schemes in the initial stages thus providing a precursor for solutions to amend the effects of such schemes.

P13	*As arrangements for stewardship payments mature, increased priority should be given to engaging with land managers and investors who are willing to establish new enterprises to deliver environmental benefits that are difficult to achieve though changes to management practices within existing businesses.*

P14	*A balanced 'stewardship payments portfolio' will include a component focused on supporting innovative approaches to delivering desired environmental outcomes, including the evaluation and demonstration of business models with the potential to provide public environmental benefits and attractive private financial returns.*

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Conclusions

Recent years have seen the first steps towards developing a genuinely national program of environmental stewardship payments; representing a new and important tool for promoting biodiversity conservation and sustainable resource management.

This paper has sought to distil the literature on environmental governance and incentive based instruments into practical principles and guidelines for the development of stewardship programs across Australia over the next five years. To this end the paper outlines fourteen propositions that together provide a set of practical benchmarks for assessing the progress of stewardship payments. Many of these have already been met. Others will only be relevant as the program evolves and matures.

These propositions form the basis for the following key findings:

1. Stewardship payments represent an important addition to the Australian sustainability policy toolkit, and can play an essential and distinctive role in promoting environmental conservation and sustainable resource use.

2. There is scope for a significant increase in the size of the stewardship program over time. This would provide economies of scale and scope, increasing the outcomes achieved and the environmental returns per dollar.

3. Payments are best delivered through flexible outcomes-based mechanisms. We consider devolved arrangements and trust funds are likely to perform better over time than programs managed directly by government.

4. As implementation matures, increased priority should be given to:

    - supporting innovative approaches to delivering environmental outcomes;
    - exploring farm-level and regional approaches for enhancing conservation outcomes and improving management of climate risks and variability; and
    - engaging with land managers and investors who are willing to establish new enterprises to deliver environmental benefits that are difficult to achieve through changes within existing businesses.

We consider stewardship payments are an essential part of the next generation of environmental governance arrangements, supported by enhanced planning and regulation, better national decision support, and more widespread use of market based resource management policies. It is time to invent the future.

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