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INSTITUTE FOR
LAND, WATER AND SOCIETY

Report No. 3

*Evaluation of the North East Catchment
Management Authority Rural Land
Stewardship project: promoting
sustainable agriculture through
landscape change and payments for
environmental services*

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Table of Contents

| | |
|---|-----|
| PUBLICATION DETAILS..... | ii |
| ACKNOWLEDGMENTS..... | ii |
| TABLE OF CONTENTS..... | iii |
| EXECUTIVE SUMMARY..... | v |
| Introduction..... | v |
| Key findings of the evaluation..... | vi |
| Strengths..... | vi |
| Areas for Improvement..... | vii |
| Conclusion..... | ix |
| INTRODUCTION..... | 1 |
| AIMS OF THIS EVALUATION..... | 1 |
| APPROACHES USED IN THE EVALUATION..... | 1 |
| BACKGROUND TO THE RLS SUSTAINABLE AGRICULTURE PROJECT..... | 2 |
| EVALUATION QUESTIONS..... | 5 |
| FINAL REFLECTIONS..... | 17 |
| REFERENCES..... | 19 |
| PERSONAL COMMUNICATION..... | 19 |
| APPENDIX 1. SUSTAINABLE AGRICULTURE PROJECT LANDHOLDER PROFILE..... | 20 |

Executive Summary

Introduction

This report presents the findings of an evaluation of the project *Promoting sustainable agriculture through landscape change and payments for environmental services*, (the RLS Sustainable Agriculture Project).

The RLS Sustainable Agriculture Project fulfils a key objective of the North East Catchment Management Authority (North East CMA) Land Stewardship Program, providing co-investment in the form of stewardship incentives in exchange for actions to improve sustainable practices on farms. The RLS Sustainable Agriculture Project has a dual focus; seeking to offset a change in land use away from mainstream agricultural practices on land with lower productivity capacity, with an increase in sustainable agricultural practices on land with a higher productive capacity. In the context of this project 'sustainable' implies a long-term commitment to these management practices.

CSU has been contracted to provide an evaluation of the RLS Sustainable Agriculture Project in its initial phase from January 2005 to June 2005. This report contains information gathered from the evaluation. Members of the project evaluation team are Gillian Earl, Dr Catherine Allan and Professor Allan Curtis of the Institute for Land, Water and Society, Charles Sturt University, Thurgoona, NSW.

The overall goal of the RLS Sustainable Agriculture project was to be accomplished by:

- *providing investment by government to promote sustainable management practices on private land;*
- *creating a deliberate link between public investment and private action to increase production and assist the transition to better practice;*
- *targeting incentives to promote identified NECMA priorities; and*
- *formalising the mutual obligation requirements in the project with management agreements.*

From an initial 46 applications the RLS Sustainable Agriculture Project has agreed to fund 30 on-ground works projects to the value of \$227 688. Project works are expected to be undertaken over a three year period commencing in June 2005. A total of 244 sites covering 1265 ha, ranging between 0.05 ha and 150 ha, has been set aside for the provision of environmental services. A total of 78 sites covering 1671 ha, ranging between 7 ha and 335 ha, has been nominated for productivity improvement, mostly in the form of liming or perennial pasture establishment. Additional activities included the establishment of off-stream watering systems and conversion to cell grazing systems. Successful applicants will be paid an annual fee associated with the management of areas set aside for the provision of environmental services. Fees ranged between \$22/ha/year and \$251/ha/year, with an average value of \$60/ha/year.

The key aims of the RLS Sustainable Agriculture Project evaluation were to:

- *define the program logic;*
- *evaluate the soundness of the Project;*
- *understand the nature of human interaction occurring in the Project; and*
- *inform ongoing project development and management processes.*

A range of qualitative and quantitative methods were employed for the evaluation including:

- desk-based comparisons with other recent stewardship incentive programs operating in the North East CMA;
- key informant interviews with North East CMA staff involved in the project development and implementation;
- a phone questionnaire to all but one of 32 grant recipients (including two who later withdrew from the project);
- observations of selected negotiations between landholders and the CMA staff (12);
- observation of the selection panel meeting.

Key findings of the evaluation

Strengths

1. The RLS Sustainable Agriculture Project served an extremely valuable role in promoting and encouraging existing stewards to maintain, extend or accelerate improvements towards sustainable land management on their farms. In phone interviews, many landholders expressed satisfaction at receiving acknowledgment of their ongoing contribution to provision of environmental services.
2. The RLS Sustainable Agriculture Project has reached the intended audience of primary producers in the North East CMA. They represent a different cohort to the wider landholder community, and also to those involved with the River Tender program, thus broadening the landholder segments involved in current North East CMA incentives programs. The majority of participants have already been engaged with North East CMA through the RLS Environmental Management Systems project.
3. The RLS Sustainable Agriculture Project addressed priorities from the North East CMA Regional Catchment Strategy and should contribute to achieving overall catchment goals. The assumption that activities proposed in the Project will have a positive impact is founded on a considerable body of literature, and underpins the Regional Catchment Strategy. Although the RLS Sustainable Agriculture Project may not be able to quantify improvements in environmental conditions that result from these management actions, many of the participating landholders have already experienced (real or perceived) improvements from earlier works they have undertaken.
4. The mutual obligation principle, linking public and private benefits through environmental and economic outcomes, was well received by landholders, but could only be applied as an eligibility criterion.
5. Landholders left no doubt that they consider the environmental services emanating from areas out of agricultural production (for example remnant bush, revegetated areas) benefit the broader community by bringing improvements in biodiversity, downstream water quality and salinity. A number of landholders also recognised that these areas brought benefits to them personally, citing examples such as improved water quality for their stock, increased milk production from dairy cows with shade and shelter, protection for off-shears sheep, aesthetics and improved predator control from birds.
6. All participating landholders indicated they had a mental plan or vision for their properties, and 83% had a written farm plan half-completed or completed and ongoing.
7. There was no suggestion that farmers were lacking the knowledge and skills necessary to undertake their management improvements. However it is not clear whether the

management improvements really constitute changes in management, as opposed to a continuation of existing practices.

8. The great majority of landholders considered that ongoing responsibility for the management of areas set aside from mainstream agriculture as theirs, but welcomed financial assistance to help defray some of the costs involved.
9. Eighty-seven percent of participants expressed a long-term commitment to managing their areas after funding from the RLS Sustainable Agriculture Project ceased.
10. Potential conflict of interest issues surrounding project implementation were actively avoided. In our view the familiarity of project staff with landholders was beneficial to the process, with negotiations proceeding from a firm basis of trust.
11. Selection of applications was based on a transparent formula, and anonymity of applicants was established by use of coding identifiers. This process ensured that probity was maintained throughout the selection process.
12. The RLS Sustainable Agriculture Project has employed a number of time and technology efficiencies in delivering the first round of incentives; these have helped to overcome initial delays so that project approvals were completed by the end of June. In particular, efforts to promote and communicate the project, the brief nature of negotiations and site assessments, and the absence of written information prior to project selection, have been very efficient in their use of time. The use of spatial mapping technology has been very effective and efficient, but limitations of mapping scale need to be considered. This approach has partly been driven by insufficient resources, with project management being undertaken by CMA staff in addition to their existing duties.
13. The cost for managing land taken out of production (environmental services) averaged at \$60/ha/year, ranging between \$13/ha/year to \$139/ha/year. This value is similar to the average cost found in a number of programs involved with management of remnants or vegetation enhancement including the North East Bush Tender trial (G.Robinson pers. comm.) It is also close to the average cost of managing remnant vegetation in the North East CMA (\$47/ha/year) determined in an earlier study by Miles *et al.* (1998). This suggests some 'reliability' or constancy in the way people value the management of remnant vegetation, notwithstanding the inherent variation in management needs between sites.

Areas for Improvement

1. First round implementation of the RLS Sustainable Agriculture Project placed little emphasis on changing land use, as opposed to maintaining existing areas and/or implementing already planned changes. Although the project has identified a valuable niche in the incentives market, implementation has been at variance to the initial objective of helping landholders meet the transitional costs of managing land removed from agricultural production. Clear definition of goals and objectives should be made at the outset of future funding rounds.
2. Written information about the project may have encouraged greater participation from other sections of the farming community. Heavy reliance on verbal communication meant that some people were given more detailed information than others. Future rounds of the RLS Sustainable Agriculture Project should adopt different communication strategies to stimulate interest from the wider community.

3. In contrast to other incentives programs such as Bush Tender and Plains Tender, management agreements were not prepared for landholders. Landholders thus had nothing to base their funding bids on, nor management goals to work with. In other programs draft management agreements, seen by landholders prior to selection of applications, are often valued in their own right, regardless of whether applications are successful. It is recommended that management agreements be expanded beyond their current activity based description, to incorporate vision and a plan for improvement negotiated with landholders. The intrinsic value of management plans as a guide for landholders, and as a basis for their funding bids, needs to be recognised.
4. Site assessments and calculation of the environmental benefits index have not followed best practice examples. In particular, spatial data have been used without regard for limitations of scale, calculation of the environmental benefits index has not included a vegetation quality assessment to assess biodiversity/habitat services, and sites have generally been aggregated on each property. In future, on-ground assessment of each site designated for environmental services management is recommended, and this should incorporate rapid vegetation quality assessment. Individual site data should be maintained. This approach will lead to an improved index of environmental services, and also contribute valuable baseline information against which to measure change.
5. Project selection rules were determined after site assessments had been completed. This meant that the selection of successful projects was limited by the data available for all applications. Areas were based on an aggregation of sites per property, and the mutual obligation contribution in each application could not be incorporated into the selection process. In future it is recommended that selection rules be determined prior to site assessments, to ensure that appropriate and relevant data is collected. Rules (metrics) to enable mutual obligation contributions to be analysed and compared in a transparent and repeatable way, would greatly improve the assessment process.
6. In our view the project has included too many small and widely dispersed sites to have a measurable impact on key catchment issues. As the RLS Sustainable Agriculture Project pilot area covers the entire North East Catchment Management Area, it is difficult to envisage how this outcome could have been improved. However, consideration could be given to targeting activities within a small geographic area.
7. Measures of success will be derived from activities rather than direct on-ground outcomes. Local scale measurements, such as soil pH, carrying capacity, weed distribution, vegetation quality, or photo-points, could have enabled short-term changes towards improved sustainability to be identified. This information would have provided landholders with confirmation of the value of their actions and encouragement to do more. It is recommended that in future a range of baseline measurements be recorded at the commencement of projects.
8. While efficiencies in the use of time and technology have helped to overcome delays, some compromise in the quality of project implementation may have resulted. In particular, efforts to promote and communicate the project, the brief nature of negotiations and site assessments, and the absence of written information prior to project selection, represent a 'minimal' approach. This approach has partly been driven by insufficient resources, with project management being undertaken by CMA staff in addition to their existing duties. In future, greater resourcing for project management should be allocated to the RLS Sustainable Agriculture Project.

9. In practice, many of the actions funded in the RLS Sustainable Agriculture Project involve control of noxious weeds, particularly blackberries, and/or pest animals including rabbits and foxes. Control of these pests is already identified in the *Catchment and Land Protection Act 1994* as falling within a landholder's general duty of care to the environment. It is our view that the role of government investment in the RLS Sustainable Agriculture Project has not been fully articulated. In particular, the merit of using public funds to pay landholders to meet their duty of care is an area worthy of further investigation.

Conclusion

The RLS Sustainable Agriculture Project, incorporating the innovative mutual obligation principle, has been well received by farmers in the North East CMA. The project has moved from its original objective of promoting transition to improved practices, to one that also focuses on recognising and rewarding existing stewardship practices. While the project has certainly registered positively with the farming community, key objectives and implementation processes will need to be reviewed and clarified prior to the commencement of future funding rounds.

Evaluation of the North East Catchment Management Authority Rural Land Stewardship project: promoting sustainable agriculture through landscape change and payments for environmental services

Introduction

- This report presents the findings of an evaluation of the project *Promoting sustainable agriculture through landscape change and payments for environmental services*, hereafter described as the RLS Sustainable Agriculture Project.
- The RLS Sustainable Agriculture Project fulfils a key objective of the North East Catchment Management Authority (North East CMA) Land Stewardship Program, providing co-investment in the form of stewardship incentives in exchange for actions to improve sustainable practices on farms (NECMA 2000; Victorian Catchment Management Council 2004).
- The RLS Sustainable Agriculture Project is a pilot project exploring the link between environmentally and economically sustainable practices on farms. The North East CMA has received funding of \$300 000 from the NLP Community Support Component for the project from January 2005 to June 2008.
- The RLS Sustainable Agriculture Project has a dual focus; seeking to offset a change in land use away from mainstream agricultural practices on land with lower productivity capacity, with an increase in sustainable agricultural practices on land with a higher productive capacity.
- CSU has been contracted to provide an evaluation of the RLS Sustainable Agriculture Project in its initial phase to June 2005. This report contains information gathered from the evaluation. Members of the project evaluation team are Gillian Earl, Dr Catherine Allan and Professor Allan Curtis of the Institute for Land, Water and Society, Charles Sturt University, Thurgoona, NSW.

Aims of this evaluation

The key aims of the evaluation were to:

- Assist the program manager to define the program logic of the RLS Sustainable Agriculture Project;
- Evaluate the soundness (appropriateness, effectiveness, efficiency) of the RLS Sustainable Agriculture Project;
- Understand the nature of the human interaction occurring as part of the RLS Sustainable Agriculture Project;
- Inform the RLS Sustainable Agriculture Project ongoing project development and management processes.

Approaches used in the evaluation

A range of qualitative and quantitative methods were employed for the evaluation including:

- Desk-based comparisons with other recent stewardship incentive programs operating in the North East CMA;
- Key informant interviews with North East CMA staff involved in the project development and implementation;
- a phone questionnaire to all but one of 32 grant recipients (including two who later withdrew from the project);
- observations of selected negotiations between landholders and the CMA staff (12); and

- observation of the selection panel meeting.

Background to the RLS Sustainable Agriculture Project

The RLS Sustainable Agriculture Project is a pilot project funded through the National Landcare Program (NLP) – Community Support Component. In the first instance, the project will operate for a period of three years, with a budget of \$300 000 from NLP, augmented with \$4000 from the North East CMA. A large component of those funds will provide financial incentives for farmers to undertake on-ground management works for the period June 2005 to May 2008.

GOAL:

The main goal of the RLS Sustainable Agriculture Project is to help recognised primary producers implement farm management practices that lead to environmentally and economically sustainable farming businesses. In the context of this project ‘sustainable’ implies a long-term commitment to these management practices.

PROGRAM LOGIC:

The overall program logic, including project objectives, was articulated during a discussion between the project manager and the evaluation team. These objectives were not explicitly stated in the project documents.

1. Investment by government

Government funding for incentives to overcome real or perceived barriers to the adoption of sustainable management practices is a feature of many natural resource management programs in Australia. In this project, incentives are specifically intended to reimburse farmers for management costs associated with land that has been or will be removed from mainstream agricultural production.

2. Create a deliberate link between public investment and private action to increase production and assist the transition to better practice

Although incentives are clearly intended to support improved environmental management of land removed from agricultural production, the inclusion of a mutual obligation principle requires farmers to undertake works to improve their production using sustainable practices. In this way, the public investment is linked to private investment in sustainable agricultural practices.

3. Target incentives to promote identified North East CMA priorities

The project has specific objectives consistent with targets identified in the North East Regional Catchment Strategy (NECMA 2004). The objectives of the project are to:

- reverse the decline in water quality and soil acidification;
- reduce salinity;
- reduce soil erosion;
- improve pest plant and animal management; and
- develop more sustainable agricultural practices.

With the exception of the last item, achievement of the specific objectives would potentially lead to both environmental and economic benefits. The last item reiterates a key element of the overall project goal. Interestingly, the project does not include a specific objective addressing biodiversity/habitat improvement, although it is implicit in the selection criteria, the management agreements, and also clearly expressed by landholders in their intentions and management objectives.

Inclusion of a biodiversity/habitat objective would provide a more encompassing approach to the provision of ecosystem services, but would require substantial adjustments to the assessment process, and higher transaction costs associated with the project.

4. Formalise the mutual obligation requirements in the project with management agreements

A written management agreement is prepared for each grant recipient. Management agreements document project sites, payment schedules and activity timelines, and are signed by individual farmers and the North East CMA. Although not legally binding, these agreements provide a statement of obligations under the project, and are intended to be the main reference by which annual performance is measured.

ASSUMPTIONS

A number of assumptions are implicit in the program logic. These assumptions are:

- there is a public benefit that comes from government investment in environmental services on private land;
- the change in management will bring about improvements in environmental condition;
- farmers have sufficient knowledge and skills to make the change, and so minimal extension effort is required;
- the cost of management discourages farmers from taking unproductive land out of mainstream agricultural production; and
- there is long-term commitment to the changed management.

PROJECT ACTIVITIES:

Evaluation of the project has been undertaken within the context of activities performed during or proposed for the project. These activities are described briefly below. Activities marked with an asterisk (*) were not performed during the evaluation period:

1. Communication – advertising and promotion

- Advertisements in local newspapers in the North East Catchment Management Area
- Presentations to Environmental Management System (EMS) group meetings
- Phone calls to past Whole Farm Business Plan (WFBP) participants
- No other written information provided.

2. Applications

- Expression of Interest by phone call
- No detail required.

3. Assessment against eligibility criteria

- Only properties in the North East Catchment Management Area
- Only primary producers recognised by the Australian Tax Office.

4. Negotiation between CMA and eligible landholders

- Discussion at farmer's home to explain key elements of the program, about 1 hour duration
- Key elements mentioned – land out of mainstream agricultural production, types of productivity improvements, general explanation of mutual obligation, typical management activities, management fees
- Site delineation undertaken with computer-based spatial mapping of sites

- Action delineation - negotiation about sites to be managed a) outside mainstream agricultural production and b) for increased productivity
- Cost delineation - requested but not normally supplied at the time. Usually supplied by phone after the visit.

5. *Site assessment*

- Inspection of sites only where CMA project officer was not already familiar with the property (usually only non-EMS farmers)
- A site assessment form was completed by the CMA project officer using desktop analysis of GIS 1:100 000 map layers against pre-determined CMA priorities derived from the North East Regional Catchment Strategy
- Site scores averaged for each property application, or sometimes separate site scores maintained
- Site areas aggregated for each property application. No minimum site area prescribed
- No measure of existing site quality taken, eg. photo-points, vegetation quality assessment, carrying capacity, biomass or soil condition.

6. *Process for prioritisation and selection of applications*

- A panel was invited to assess applications. The panel consisted of a CMA senior manager, an independent expert and a landholder representative
- The project co-ordinator and project officer were present to facilitate and advise the panel
- The panel was required to set the rules for prioritisation and selection of applications at the start of the panel session.
- Different options were considered, but prioritisation was based finally on ratings for the land being taken out of mainstream agricultural production - site score, area, and the management cost (adjusted according to the site score).

7. *Preparation of management agreements for successful applicants*

- Prepared by CMA project officer, approximately 3 hours for each agreement
- Includes specifies terms and conditions, obligations of landholder, obligations of CMA, details of property
- Management plan outlines management targets for land out of mainstream agriculture, and landholder commitments including:
 - Land use commitments
 - Management commitments
 - Mutual obligation commitments
 - Fire prevention targets
 - Fencing targets
 - Reporting requirements.
- Management actions are general, not specific to sites, apart from amount of time/cost for each action specified by individual landholders.

8. *Communication – advice to successful/unsuccessful applicants*

- First notification to successful applicants by mail when management agreements are sent out for signature
- Unsuccessful applicants informed in writing.

9. *On-ground works**

- To be organised and undertaken by farmer
- No observation by CMA.

10. *Payments**

- Initial payment upon signing of management agreement – all or part of annual fee

- Annual payment on basis of satisfactory performance based on management agreement
- Receipts for purchases not required.

11. Compliance*

- Annual inspection by CMA with reference to management agreement obligations.

12. Reporting*

- Annual written report by landholder on progress with agreed activities.

13. Performance measures

- No baseline data to measure performance – eg. productivity levels, soil condition, area affected by pest plants and animals, amount of fallen timber, diversity of woody species.

SUMMARY OF PROJECT OUTPUTS TO DATE

Forty-six expressions of interest from eligible landholders were assessed by the selection panel, with 30 applications (65%) being approved. Projects were funded according to their priority until funds were exhausted. Two landholders subsequently withdrew their projects and they were replaced by the next projects on the priority list. The total allocation for incentives was \$227 688, which included a \$4000 contribution from the CMA.

A total of 244 individual sites have been funded for management of environmental services. Sites range between 0.05 ha and 150 ha in area, but most sites are less than 4 ha, with a combined area of 1265 ha.

The combined area of proposed production improvements is 1671 ha, with 78 individual sites ranging between 7 ha and 335 ha. Most sites are less than 20 ha. Projects are spread across seven sub-catchments shown in Table 1.

The adjusted management fees to be paid to successful applicants ranged between \$22/ha/year and \$251/ha/year, with an average payment of \$60/ha/year.

TABLE 1. Distribution of projects across sub-catchments

| Sub-catchment | Number of projects |
|----------------------|---------------------------|
| Upper Murray | 9 |
| Lower Mitta Mitta | 8 |
| Mid Kiewa | 2 |
| Lower Ovens | 7 |
| Upper Ovens and King | 2 |
| Mid King | 1 |
| Dartmouth | 1 |

Evaluation Questions:

1. Is the logic sound (based on theory/other programs)?

Evaluation of the project focuses strongly on key elements of the program logic associated with incentive programs for natural resource management, and the assumptions underpinning them.

Project audience

One of the key assumptions in natural resource management programs is the need for a mix of policy options to appeal to different groups of people in the community (Dovers 1997; Curtis and Lockwood 2000). In evaluating this project, key social and farming characteristics of successful applicants were considered to determine whether the project attracted a new suite

of landholders not previously involved with incentive or stewardship programs in the North East CMA.

The target audience for this project were farmers, and eligibility was restricted to primary producers as recognised by the Australian Tax Office. For most participants eligibility had been established through other programs such as Whole Farm Business Planning (WFBP) and Environmental Management Systems (EMS) run by the North East CMA.

Data gathered during this evaluation enabled some comparisons between landholders in RLS Sustainable Agriculture Project, and those in the Ovens catchment who were surveyed in 2001 (Curtis *et al.* 2002). Although the study areas are not strictly comparable, some noteworthy contrasts can be made. In phone interviews 93% of RLS Sustainable Agriculture Project respondents identified themselves as farmers, suggesting a high success rate at reaching the intended audience. Comparisons with landholders in the Ovens catchment where 58% of respondents identified farming as their main occupation (Curtis *et al.* 2002), and the North East CMA River Tender program, where only 18% of respondents identified farming as their main occupation (A Curtis, pers. comm.), clearly indicate that this is a different group of people from the general population of the area, and from the cohort of people engaged in the River Tender program. Similarly, the median property size for the RLS Sustainable Agriculture Project participants is 405 ha, in contrast to the Ovens catchment where the median farm size was 130 ha (Curtis *et al.* 2002), and the River Tender properties with a median size of 30 ha (A Curtis pers. comm.).

The majority of participants (87%) had been involved with earlier stewardship projects offered by the North East CMA, principally with the Environmental Management Systems (EMS) pilot program, while the remaining four landholders (13%) had no previous involvement with programs funded by the CMA. Eighty-three percent of participants were part of a Landcare group, in sharp contrast to the Ovens sample where only 55% were in Landcare (Curtis *et al.* 2002). Only one participating landholder could be considered as a complete 'newcomer', without any previous experience of funding programs for the provision of environmental services.

A brief landholder profile for the RLS Sustainable Agriculture Project, compiled from phone interviews, is shown in Appendix 1.

The RLS Sustainable Agriculture Project has been very successful at engaging landholders participating in the existing EMS program, but has attracted few newcomers. The project has fulfilled a useful role in encouraging EMS landholders to extend their interest in and knowledge of environmental services, while simultaneously fostering continuing productivity improvements on their farms. RLS Sustainable Agriculture Project participants are different from typical landholders in the Ovens catchment, and River Tender participants, so the project is fulfilling a need to attract a range of landholders with a mix of policy instruments.

Communication

The project aims were promoted through advertisements in local newspapers and newsletters. In addition, verbal presentations were made to participants in the Rural Land Stewardship EMS pilot program, at their regular meetings. A number of other landholders who had completed Whole Farm Business Plans were also advised of the project. No written information about the program was provided other than in the general advertisements. This communication strategy has clearly advantaged RLS participants over other farmers.

Twelve meetings between a CMA Project officer and the applicants were observed. It was apparent that few landholders had a clear understanding of the project processes prior to that meeting, but for the majority of those people this lack of clarity did not appear to be a problem, perhaps because of their familiarity and trust in the project staff through involvement with EMS. For landholders outside the EMS network, the absence of written material may have been a deterrent to further investigation of the project.

Of the 30 successful applicants only three (10%) learned about the program through newspaper advertisements, suggesting very limited use or effectiveness of broad scale media compared with targeted verbal approaches.

Future rounds of the RLS Sustainable Agriculture Project, if promoted as a stand-alone incentive scheme, will need to adopt different communication strategies to stimulate interest from the wider community. This should include a written summary of the project objectives, criteria and priorities, so that the same information is available to all interested people. Other methods including targeted letter-drops, using other networks such as Landcare, Land for Wildlife, farming networks, and increased public meetings, although more costly in time and money, will be necessary to reach a wider audience.

Interest in the RLS Sustainable Agriculture Project

The interest of many participants stems from prior involvement in programs such as EMS or Beef Check, which had a strong emphasis on sustainable production. The RLS Sustainable Agriculture Project is a logical ‘next step’ for many landholders who have recently completed the latter programs.

We’re already working along those lines. It fitted in with what we were doing. The financial assistance is attractive.

Many landholders already manage areas for purposes other than mainstream agricultural production, and in some cases have been doing so for several years. These landholders expressed satisfaction that the RLS Sustainable Agriculture Project gave recognition to their ongoing management, acknowledged their contribution to environmental services, and helped to defray some of the costs associated with the provision of these services.

We’ve done all the work fencing off trees and protecting remnant sites, and the program is going to repay us for our efforts’.

The RLS Sustainable Agriculture Project could be specifically targeted at landholders who have already undertaken projects to manage environmental services.

In this respect, the RLS Sustainable Agriculture Project has served an extremely valuable role in promoting and encouraging existing stewards to maintain and extend or accelerate improvements towards sustainable land management on their farms. The importance of continuing support for existing stewards was highlighted with the English wildflowers conservation experience (King 2002), where a review of stewardship programs for native grasslands on private land found that despite the financial incentives offered to new stewards, a net loss of biodiversity occurred. One of the reasons for this was that the program did not extend support to existing stewards of high quality grasslands on private land (J. Todd pers. comm.).

Incentives that provide recognition and rewards for existing stewards have a potentially valuable role in the mix of options to promote and encourage management for environmental services.

Is it a different approach?

The RLS Sustainable Agriculture Project is a pilot project with a number of elements that distinguish it from other incentive programs operating in the North East CMA:

- A mutual obligation principle linking environmental and economic outcomes on farms distinguishes this project from others
- The RLS Sustainable Agriculture Project has adopted elements of the Bush Tender program in that landholders nominate a management fee for provision of environmental services;
- However, it is not an auction program, and neither is it a fixed incentive program. Proposed management fees are weighted with an environmental benefits index (site score) for each property, to give an adjusted management fee against which the project is considered for funding. Applications were ultimately prioritised by a formula (metric) that included the site score, the area, and the adjusted management fee.
- In contrast to other programs, the RLS Sustainable Agriculture Project does not offer any written information, such as selection priorities, standards for on-ground actions or a draft management plan, to landholders prior to submission of their management fee. Similarly, landholders are not required to submit any information in writing prior to selection of projects. While this approach creates great efficiencies in terms of paper use, the absence of any hard copy information could potentially lead to misunderstandings for both parties
- Selection of successful projects is based on allocation of all available funds, without use of a 'value for money' threshold, such as the marginal cost curve used in auction programs.
- Management plans are prepared only after selection of successful projects, and without any landholder involvement in their development beyond information provided at the site assessment meeting.

Apart from the mutual obligation principle, all other differences are concerned with implementation processes, which are discussed in following sections of this report. The mutual obligation principle attempts to give clear recognition of public and private benefits, linking environmental and economic outcomes. This aspect represents an innovative inclusion, with broad appeal to the participating landholders. As one landholder remarked *'it's a good idea that the payment is not just a handout for conservation; there is a link between conservation and production.'*

However, the project was not set up with metrics, i.e. rules that enable the semi-quantitative analysis of information in a repeatable and transparent way, to evaluate the mutual obligation contained within individual project applications. Ultimately 'mutual obligation' became an eligibility criterion necessary for applications to be considered for funding.

Further development of the RLS Sustainable Agriculture Project should aim to include some rules to enable the relative values of mutual obligation within individual project applications to be compared. In doing so, it should become possible to incorporate productivity improvement proposals into the selection process.

Is this investment going to priority CMA areas?

The RLS Sustainable Agriculture Project is clearly intended to address management priorities within the CMA. Selection criteria applied to determine application priority order include:

- riparian zones including wetlands;
- heritage river status;

- slopes greater than 20%;
- land capability;
- salinity threat;
- erosion threat; and
- Ecological Vegetation Class threat status.

These priorities are derived from the North East CMA Regional Catchment Strategy, and therefore should result in funding for on-ground actions that contribute to the achievement of overall catchment goals.

Site assessment was largely a desk-top exercise undertaken by the CMA project officer, who drew on information from various spatial datasets held by the DSE Corporate Geospatial Data Library (CGDL) delineating priority information for hydrology, salinity priority areas, vegetation and slope. The Land Resource Assessment tool was used to define land capability. On-ground site inspection was only undertaken where the CMA project officer was not familiar with a property.

While this approach has been extremely efficient in the amount of time required, there is a potential scale incompatibility associated with using mapped information to assess values at paddock scale, particularly where mapping has occurred at a scale of 1:100 000 (eg. salinity priority, vegetation, land capability). Spatial datasets at 1:100 000 were used when no better alternative was available. The significance of scale incompatibility in the RLS Sustainable Agriculture Project cannot be evaluated in this study.

The use of broad scale spatial data may be inappropriate when used in decision making at paddock scales. Ground-truthing needs to be recognised as a standard procedure when assessing site quality and condition.

Is the scale of these activities likely to lead to meaningful impacts on the issues?

As a pilot program the RLS Sustainable Agriculture Project is not intended to bring about major impacts on the issues it addresses. Our view is that the project has included too many small and widely dispersed sites to have a measurable impact on key catchment issues at a catchment scale. Impacts on water quality and salinity are not measurable at the paddock scale, but the assumption that the activities proposed in the project will have a positive impact is founded on a considerable body of literature, and underpins the Regional Catchment Strategy. Local impacts on soil acidity, pest plants and animals, and other environmental parameters could possibly be detected if baseline measurements had been taken (eg soil tests, weed mapping, photo points). Productivity improvements may be estimated from individual project proposals, but measurements of actual changes in productivity (eg, carrying capacity, biomass) cannot be made without baseline data. Individual farmers may have collected this information themselves, but it is not a requisite for the RLS Sustainable Agriculture Project.

2. What has been the nature of interactions between the CMA and landholders?

Negotiation of project activities and costs

In the majority of cases, landholders were already familiar with the CMA project staff, from prior involvement with the EMS pilot or other North East CMA programs. Interactions were comfortable, with a great deal of trust shown between all parties.

Assessment of sites and negotiation of proposed activities was generally undertaken in farmers' houses, rather than involving direct on-site observation and discussion. Proposed sites were plotted directly onto a GIS mapping layer, providing a clear, visual plan for

landholders to see instantaneously, which was greatly appreciated by them. Detailed discussion about agricultural improvements was undertaken, while discussion about management of land being taken out of mainstream agriculture was generally activity-based, with little mention of overall goals or objectives. On average, these meetings lasted an hour, in contrast to other programs such as Bush Tender, Bush Returns or Trust for Nature where site assessments might take on average half to one day each, depending on the areas involved.

Landholder vision

Underpinning this approach is the assumption that landholders already have a well developed vision for the management of these areas. The accuracy of this assumption was confirmed in the phone interviews with all landholders (n=30) indicating they had a mental plan or vision for their properties, and 26 (87%) indicating they had a written farm plan. In addition, 87% indicated they intended to maintain their areas outside mainstream agriculture beyond the three year term of the project, regardless of ongoing funding, providing clear evidence of long-term commitment. For these people incentive funding is attractive, but not essential for their ongoing management of areas.

There is no downside to this...it's all pluses!

In phone interviews some participants alluded to future goals for their areas, while others mentioned the activities they would carry out. The articulation of their vision or plan for these areas has not occurred within the RLS Sustainable Agriculture Project itself, but may have occurred via involvement in other programs.

'I've got a long-term revegetation program'

'Treeing the place is a long-term goal... improvement outside production aspects...feelgood stuff... preserving remnants'

Most participating landholders had a clear vision for the ongoing management of land out of production. That vision was not articulated in the RLS Sustainable Agriculture Project but was nevertheless a strong motivation for landholders to participate in the project.

Integrated extension

The RLS Sustainable Agriculture Project sought to dovetail with other funding programs, CORIS in particular, to cover incentives for fence construction. In contrast with other programs run in the North East CMA, such as Heartlands and, to some extent, Incentives for the Protection of Land and Water (M. Titcumb pers. comm.), the RLS Sustainable Agriculture Project has not offered the 'one-stop shop' approach to landholders, instead limiting the advice to information about the location, contact details and application procedures for other funding sources.

No literature was available to help landholders reflect and digest information immediately after the negotiation meeting. The complexity of different funding programs – their acronyms, objectives and procedures – can be very confusing and in the absence of written, take-home material, may have acted as a deterrent to people pursuing the incentives offered. This may be most noticeable for landholders unfamiliar with Landcare, the CMA or its programs. In these instances the 'one stop shop' approach can overcome much of this confusion, and is particularly useful with new contacts.

Management agreements

Management agreements are prepared by the CMA based on information supplied during the negotiation/assessment meeting with landholders, and the management bids they submit. Landholders have no further input into agreements beyond the initial meeting.

Agreements contain a series of schedules outlining the terms and conditions, details of the property including a map showing areas designated for action, a management plan listing generic targets, landholder commitments, and a payment schedule. In contrast with other programs such as Bush Tender, these agreements provide details of actions and payments, but are without reference to long term goals tailored for individual sites.

Agreements were prepared after selection of projects had been completed and were not seen by landholders until that time, in contrast to other programs where draft management agreements are developed prior to submission of bids, and are used as a basis to guide the estimates. This approach minimised the amount of time taken preparing agreements for projects that were eventually unsuccessful. In the recent tender trials, such as Bush Tender and Southern Rivers Catchment Tender (NSW), approximately 30% of plans prepared were not successful in the tender. Feedback from unsuccessful landholders indicated that the plans were highly valued in their own right, and not wasted effort, because they provided vision, guidance and an incentive for landholders to undertake the work without the funding (D. Hazell, pers. comm.).

By excluding landholders from stages of preparation of agreements there is a risk that they will not agree with some details of agreements and withdraw their participation.

Management agreements have the potential to provide a vision and strategic management guidelines for landholders, independent of incentive funding. Their preparation is best undertaken with direct involvement of landholders to avoid potential misunderstandings about their content and implications.

3. Has the program been implemented in the way it was specified?

The incentive delivery process was generally as specified in the project outline, but with some exceptions:

- Expressions of Interest were verbal only, with no electronic or written application forms provided. While this has expedited the process, a written EOI format is potentially more informative and would provide a record of intentions.
- No emphasis was given to the stated objective to achieve changes in land use or the transitional nature of payments, and as a consequence, few of the funded projects can clearly be identified as involving new activities, as opposed to those that have already

'It's an acknowledgment of what we had done off our own bat, voluntarily'

been scheduled or initiated. Although this represents a major departure from the original aim of the project, it has given rise to some positive consequences. Acknowledgment of ongoing management efforts towards

ecosystems services is important to landholders, and in their opinion, rarely forthcoming from either governments or the wider non-rural community. The RLS Sustainable Agriculture Project has been well received by landholders for the very reason that it recognises ongoing stewardship.

'It's nice to be recognised for work that we are doing'

- Site assessment was largely desk-based (assuming prior knowledge of assessor), and rapid on-ground survey of sites (including remnant vegetation) did not occur. By

omitting this action, the project has missed an opportunity to gather sound baseline data from which monitoring of ongoing changes could be undertaken.

- Use of the Catchment Assessment Tool (CAT) was intended to aid the selection of projects. However it was found to be too complicated and not useful with the limited amount of data collected in the project. For this reason it was not used.
- In the absence of sound metrics collected at the commencement of the project, measures of success will be derived from activities rather than measurable outcomes. Paddock scale measurements, such as soil pH, carrying capacity, weed mapping, vegetation quality, and photo points, made at the outset of projects, would enable short-term changes towards improved sustainability to be identified. This type of information would be valuable in improving landholder understanding about the effects of the activities they have undertaken, and perhaps in motivating them further.
- The short timeframe of the project (3 years) means that it is unlikely that significant, measurable changes in key catchment indicators, such as water quality or salinity, could be detected anyway, as happens with many environmental programs.

4. Has the program been implemented efficiently?

Efficiency in program implementation is a desirable outcome, and a useful measure in program evaluation. The RLS Sustainable Agriculture Project is considered here in terms of efficient use of time, technology and financial investment.

Use of time

- The project experienced some delays with site assessments not commencing until April 2005, and has consequently run behind schedule. The final notification of successful landholders did not occur until late June rather than in May - June as planned.
- Project management has been undertaken by existing CMA staff, on top of their existing workloads. Consequently, there has been only part-time project management, and many time (and money) saving expediencies undertaken. Examples include the limited effort directed at communication and promotion of the project, the absence of written information for landholders, the absence of a written Expression of Interest and the brief nature of site assessments.
- Site assessments were very brief and convenient for landholders, but did not allow for the collection of baseline site quality information from which change could be measured over time. More detailed information about current soil condition, current carrying capacity and proposed productivity improvements would assist with a more quantitative estimation of the mutual obligation aspect of the project.
- Sites taken out of mainstream agricultural production were usually aggregated on each property and a single environmental benefits score assigned. This approach precludes any distinction between, for example one block of 50 ha and 10 blocks of 5 ha. A single large block is likely to score more highly for its environmental benefit than a series of smaller blocks, where biodiversity and habitat considerations are included,. Because the Sustainable Agriculture project included few biodiversity and habitat attributes in the assessment of environmental benefit, the aggregation of sites is less critical.
- The site assessment method should be improved in any subsequent programs. In particular, baseline biodiversity/habitat information should be collected to provide a measure of current environmental condition and expected benefits and services. The Victorian Vegetation Quality Assessment tool (DSE 2004) offers an acceptable, best practice approach for measuring biodiversity/habitat condition.
- Rules for the prioritisation and selection of applications were determined by the selection panel on the day. In effect, assessments of projects were undertaken without knowledge of the full range of information required, and the selection rules were limited by the

information available. This process of determining the rules, though ultimately transparent, was not an efficient use of time for panel members. Rules for processing applications should be determined before commencement of the project to ensure that all relevant information is gathered at the time. If necessary, an expert panel should be convened to determine the rules.

The RLS Sustainable Agriculture Project has overcome time constraints to achieve the delivery of project approvals by the end of June. These constraints placed pressures on the project management team that have been addressed by a range of time-saving approaches. However, these time efficiencies have compromised the quality of the project, particularly in the areas of communication, negotiation and site assessment procedures, and project prioritisation and selection. A review of procedures to ensure that time constraints do not compromise the quality of information and processes is recommended before future rounds of the RLS Sustainable Agriculture Project commence.

Use of technology

- **Spatial mapping**
Computer-based GIS mapping tools were used during meetings with landholders to define the project sites on each property. This method is a very efficient way to document site information. GIS is visual, has an immediate output, and is easy for landholders to understand. Area calculation tools allow accurate area estimates to be generated instantaneously. Hard copy images of each property on a SPOT image base are included with management agreements.
Spatial map layers were used to determine site scores for each property. This approach is very efficient, but as mentioned earlier, problems with disparity of scale may arise.
- **Management agreements**
Management agreements were prepared following a template, but this process was nevertheless very time-consuming, with each agreement estimated to take approximately 3 hours. Use of a database for centralising information about on-ground projects and associated management agreements may help with streamlining this process.

The RLS Sustainable Agriculture Project has made good use of spatial mapping technology, but greater awareness of scale limitations of datasets is required. Use of a purpose-designed database should be investigated to assist with streamlining administrative processes.

Spread of investment across activities

- A complete allocation of resources for specific activities was not available for the evaluation. However, from discussions with the project staff, it is clear that great effort was made to maximise the amount of funding available for incentives, in contrast to other activities, such as communication, where very limited amounts were allocated. In addition, resourcing for project management was limited.
- Of the \$300 000 funds allocated to the RLS Sustainable Agriculture Project, \$ 227 688 (76%) were directed to incentives (plus an additional \$4000 provided by the CMA), \$30 000 was allocated for this evaluation, leaving \$40 000 for all other activities.
- In-kind investment from other sources was limited to the input of time by panel members involved with the selection process. This amounted to 3 persondays in total. Other costs have been met from within the RLS Sustainable Agriculture Project budget, with some subsidy from EMS in the form of staff time.

A clear statement of budget allocations for specific project activities is recommended for future rounds of the RLS Sustainable Agriculture Project. A statement identifying real versus predicted costs is a useful tool for adapting future budget programming, particularly where the real costs of project management are not fully recognised.

5. Is it likely to lead to practice change beyond the initial investment?

During phone interviews many landholders described the actions they are undertaking for the RLS Sustainable Agriculture Project as a continuation of current practices, *'doing what we're already doing'*, rather than a change of practice, *per se*. However, practice change may occur in other ways including:

- Changes in attention to practice detail:
'I'm not used to avoiding the tiny trees. I've had to learn to spray around small trees.'
'It gives me more incentive to keep the land out of production in good order.'
- Increasing areas of changed practice:
'Hopefully we'll do a few more' (fence off dams, springs and wetlands).
- Acceleration of planned changes of practice:
'They're things we wanted to do anyway.'
'I want to get up to speed.'
'It's an encouragement to do more.'

From phone interviews it is clear that the majority of landholders intend to maintain the level of management agreed to in the RLS Sustainable Agriculture Project beyond the three year term of the agreement. Installation of off-stream watering systems and paddock configurations to facilitate cell grazing are changes that can only be implemented for a long-term period. Similarly, the benefits of balanced soils and perennial pastures are expected to last many years if they are managed appropriately. The majority of landholders also indicated a long-term commitment to managing areas of land out of mainstream agricultural production. Ongoing management actions for these areas were often described as a continuation of current practices, rather than improvement, so it is not clear how much ongoing change may result. Some landholders indicated that the management fee they received for this land would be directed towards expanding or accelerating pasture improvements on their property.

6. Will this change make any significant difference (cf. incremental change)?

RLS Sustainable Agriculture Project is a pilot project operating on a small scale and with a limited budget. The spread of funds to a large number of projects (for a pilot), and an even greater number of sites, was never likely to result in significant on-ground differences.

Overall, the project is not substantial enough to make a significant difference to environmental issues at the catchment scale, although it may contribute to incremental change. It may make a significant difference to the landholders and properties involved, either by providing the incentive to change practices, or by acknowledging the value of ongoing practices and stimulating their interest in making additional changes.

Future rounds of this project should include a number of procedures to optimise the impacts of funding and potential for measuring change, including:

- Best practice evaluation of environmental benefits, including biodiversity/habitat parameters to incorporate patch area, potential linkages with other remnant vegetation, etc.
- Assessment of individual sites, rather than combined sites per property, will focus attention on larger patches of land out of mainstream agricultural production.

- Collection of baseline information such as soil pH, carrying capacity, photo-points to enable production increases to be measured over time.
- For ease of monitoring, consideration should be given to focusing on a smaller number of sites, perhaps introducing a minimum size eligibility criterion.
- A written Expression of Interest could be valuable for identifying and prioritising the range of sites prior to detailed assessments being undertaken.

7. How have potential conflict of interest issues been addressed?

There are a number of instances where potential ‘conflicts of interest’ have arisen during the implementation of this project, and it is useful to consider how they have been addressed.

Familiarity of project staff with landholders

The project manager remained distant from the site assessment procedures by choice, because of his close professional relationship with most applicants through the EMS program. However, site assessments were undertaken by a project officer who also had close relationships with most of the applicants, either through professional work associations, or by virtue of his upbringing in the local area. This situation arises regularly with projects of this nature, where project or extension staff are local to the area, and has many positive consequences.

However the question of equity, as it relates to provision of information, may become more pertinent, when it is limited to verbal interactions between people who are more or less familiar with each other. From observations taken over a two week period, variations occurred in the way in which the project was described to landholders, and the level of detail provided. While these were unintentional, and not likely to promote serious differences in understanding, they are inevitable when relying heavily on verbal communication.

The provision of a written project summary outlining all the key points of a project overcomes any unintentional variations in communication, and is an effective measure to ensure equity in the provision of information for projects like the RLS Sustainable Agriculture Project.

The selection panel

The selection panel for this project included:

- An independent expert in rural land management extension
- A senior manager from the North East CMA
- A landholder representative from the North East CMA, who was also a project applicant.

In addition, the project manager and the project assessor were present to observe and advise, but were not responsible for the final decision.

A number of issues arose during the selection process that can broadly be considered as ‘conflict of interest’ issues.

- Anonymity of applications

To preserve the anonymity of landholders, all applications were identified by a number code only. This ensured that the three members of the selection panel treated all applications equally and fairly without knowledge of individuals associated with them. The project staff knew this information, and while it did not influence the outcome, some discussion of individual projects and properties did arise because of their knowledge. The landholder representative recognised their own application, but at no stage did that knowledge influence

the outcome. The manner with which projects were dealt with did not require the identification of individual landholders.

- Panel representation

The presence of an applicant on the selection panel places awkward pressures on both that person and the other panel members. While this was acknowledged by the panel, and clear steps to ensure probity were taken, it is preferable to avoid such situations by ensuring that panel membership precludes applicants.

- Role of assessor on selection panel

While the detailed knowledge of staff directly involved with project assessments can be extremely helpful and valuable, it may also lead to personal influence being exerted in an improper way. There is no suggestion that this occurred within the selection of RLS Sustainable Agriculture Project applications. In some programs, on-ground field staff are deliberately excluded from the selection process as a probity measure. This is because they have knowledge, by virtue of their involvement with the project, which other panel members do not have, and which may influence decisions. An alternative approach is to have field staff present at the selection meeting as advisors to the panel, without any role in decision making.

Anonymity of landholders should be preserved by substituting a code for all identifying details during selection of projects.
Any person with a direct interest in a project should be excluded from the selection panel, to protect their integrity and ensure probity.
Where project staff attend selection meetings, their role should be clearly explained and understood by all panel members and staff members.

8. Are there any unintended outcomes?

Average cost of projects

The cost for managing land taken out of production (environmental services) averaged at \$60/ha/year, ranging between \$22/ha/year to \$251/ha/year. This average value is similar to the average cost found in a number of programs concerned with management of remnants or vegetation enhancement including the North East Bush Tender trial (G.Robinson pers. comm.) It is also close to the average cost of managing remnant vegetation in the North East CMA (\$47/ha/year) determined in an earlier study by Miles *et al.* (1998). This suggests some ‘reliability’ or constancy in the way people value the management of remnant vegetation, notwithstanding the inherent variation in management needs between sites.

Positive landholder response

The strong, positive response from landholders to the project is based on their satisfaction at receiving some recognition and acknowledgment for their efforts in managing areas for environmental services. The amount of money was not generally seen to be critical, although most recognise the real costs they incur; it is the thought that counts most of all.

‘It’s attractive to be paid to look after areas we are already doing, and an encouragement to do more’

‘We’ve done all the work fencing off trees and protecting remnant sites, and the program is going to repay us for our efforts.’

Final Reflections

At the commencement of this evaluation a number of assumptions in the program logic were identified (see p. 5). With the information that has been revealed through the observations and interviews undertaken, it is worthwhile reflecting on the appropriateness of these assumptions.

There is a public benefit that comes from government investment into environmental services on private land

Landholders left no doubt that they consider the environmental services emanating from areas out of mainstream production (for example remnant bush and revegetated areas.) benefit the broader community by bringing improvements in biodiversity, downstream water quality and salinity. A number of landholders also recognised that these areas brought benefits to them personally, citing examples such as improved water quality for their stock, increased milk production from dairy cows with shade and shelter, protection for off-shears sheep, aesthetics and improved predator control services from birds.

In practice, many of the actions funded in the RLS Sustainable Agriculture Project involve control of noxious weeds, particularly blackberries, and/or pest animals including rabbits and foxes. Control of these pests is already identified in the *Catchment and Land Protection Act 1994* as falling within a landholder’s general duty of care to the environment. It is our view that the role of government investment in the RLS Sustainable Agriculture Project has not been fully articulated. In particular, the merit of using public funds to pay landholders to meet their duty of care is an area worthy of further investigation.

The change in management will bring about improvements in environmental condition

Although the RLS Sustainable Agriculture Project may not be able to quantify improvements in environmental conditions that result from these management

‘We have improved management of the property in riparian areas and swamps. We’ve designed management of the property around these. It’s easier to manage.’

‘Bird life has appeared. It could be the drier years, but birds are coming back.’

actions, many of the participating landholders have already experienced (real or perceived) improvements from earlier works they have undertaken.

Farmers have sufficient knowledge and skills to make the change, and so minimal extension effort is required

All participating landholders indicated they had a mental plan or vision for their properties, and 83% had a written farm plan half-completed or completed and ongoing. There was no suggestion that farmers were lacking the knowledge and skills necessary to undertake their management improvements. However it is not clear whether the management improvements really constitute changes in management, as opposed to a continuation of existing practices.

The cost of management discourages farmers from taking unproductive land out of mainstream agricultural production

Most of the participating landholders have already set aside areas from mainstream agriculture, either through other programs such as Bush Tender, Trust for Nature, CORIS, or voluntarily. Financial assistance with the management of these areas is very welcome, and some

‘We were going to do this regardless. It will help to defray some costs.’

‘We’re very aware of costs, but also benefits.’

suggested it provided an incentive to maintain best management practices, but there was no indication that their management would cease without ongoing funding.

There is long-term commitment to the changed management.

Eighty-seven percent of participating landholders expressed a long-term commitment to managing areas set aside from mainstream agricultural production, and 83% regard themselves as responsible for the ongoing management, with 43% suggesting that financial assistance from governments in recognition of public benefits would be fair. Farmers are also committed to long-term production improvements, especially those who have already recognised the benefits that follow.

'I haven't lost any production from the area taken out. I have increased stock numbers [elsewhere on the farm].'

References

- Curtis, A. and Lockwood, M. (2000) Landcare and catchment management in Australia; lessons for state-sponsored community participation. *Society and Natural Resources* 13:61-73.
- Curtis, A., Graham, M., Byron, I., Lockwood, M. and McDonald, S. (2002) *Providing the knowledge base for landscape change in the Ovens Catchment*. Johnstone Centre Report No 160. Charles Sturt University, Albury, NSW.
- Dovers, S. R. (1995) Information, sustainability and policy. *Australian Journal of Environmental Management* 2:142-156.
- DSE (2004) *Vegetation Quality Assessment Manual – Guidelines for applying the habitat hectares scoring method*. Version 1.3. Victorian Government, Department of Sustainability and Environment, Melbourne.
- King, M. (2002) *England's green unpleasant land? Why urgent action is needed to save England's wildflower grasslands*. Summerfield Books, England
- Miles, C. A., Lockwood, M., Walpole, S. and Buckley, E. (1998) *Assessment of the on-farm economic values of remnant native vegetation*. Johnstone Centre Report No 107. Charles Sturt University, Albury, NSW.
- NECMA (2000) *Rural Land Stewardship Pilot Program Proposal*. Unpublished document by the North East Catchment Management Authority, October 2000.
- NECMA (2004) *North East Regional Catchment Strategy*. North East Catchment Management Authority, Wodonga.
- Victorian Catchment Management Council (2004) *The Land Stewardship Project*. The State of Victoria, Melbourne.

Personal Communication

- Donna Hazell, Manager, Southern Rivers Bush Incentives Program, Southern Rivers CMA, Braidwood.
- Geoff Robinson, Manager, Land & Vegetation Projects, North East CMA, Wodonga.
- Mary Titcumb, Native Vegetation Management Officer, Department of Sustainability and Environment, Wodonga
- James Todd, Project Manager, EcoTender Trial, Department of Sustainability and Environment, Melbourne.

Appendix 1. Sustainable Agriculture Project landholder profile (n=30)

| | |
|------------------------------|----------|
| Median property size | 405.5 ha |
| Majority enterprise beef | 80% |
| Majority enterprise sheep | 10% |
| Majority enterprise dairying | 10% |
| Conduct a tourism enterprise | 7% |

| | |
|-------------|------------|
| Average age | 48 years |
| Median age | 52.5 years |
| Female | 33% |
| Male | 67% |

| | |
|------------|-----|
| Occupation | |
| Farmer | 93% |
| Other | 7% |

| | |
|--|-----|
| Landcare participant | 83% |
| Other farm interest group membership | 83% |
| EMS participant | 87% |
| WFBP participant | 53% |
| Completed a short course in last 5 years | 93% |

First heard about the project

| | |
|---------------------|-----|
| Through CMA contact | 93% |
| From newspaper | 7% |

Plan for future management of land out of mainstream agricultural production

| | |
|-----|-----|
| Yes | 87% |
| No | 13% |

Ongoing responsibility for land out of mainstream agricultural production

| | |
|----------------------------|-----|
| Farmer | 83% |
| Government | 3% |
| Shared (farmer/government) | 13% |

Combined hours per week worked on-farm

| | |
|--|------|
| Av on-farm hrs/week (farmer + partner) | 83 |
| Median on-farm hrs/week (farmer + partner) | 52.5 |
| Minimum combined on-farm hrs/week | 16 |
| Maximum combined on-farm hrs/week | 150 |

Combined hours per week worked off-farm

| | |
|---|----|
| Av off-farm hrs/week (farmer + partner) | 15 |
| Median off-farm hrs/week (farmer + partner) | 0 |
| Minimum combined off-farm hrs/week | 0 |
| Maximum combined off-farm hrs/week | 60 |

On-farm profit & equity

| | |
|--|-----|
| On-farm profit before tax 2003-04 | 70% |
| On-farm profit before tax 2003-04 >50K | 10% |
| Average equity | 78% |
| Median equity | 95% |

Property plan

| | |
|---|------|
| Mental plan or vision for property | 100% |
| Written plan - not started/early stages | 17% |
| Written plan - half way | 13% |
| Written plan - advanced/completed/ongoing | 70% |
| RLS project meshing - well/completely | 93% |

Previous works to restore or enhance remnant vegetation

| | |
|--|-----|
| Previous funding for works in last 5 years | 87% |
| Unfunded work previously in last 5 years | 97% |