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Privately funded contributions to NRM activities in the Goulburn Broken Catchment: testing the "x2 Assumption".

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Executive Summary

The Goulburn Broken Catchment Management Authority (GBCMA) is responsible for reporting annually on progress towards the Resource Condition Targets (RCTs) set out in the Regional Catchment Strategy (RCS). In order to report on progress towards targets, the Biodiversity Program has used the following equation:

Outputs x Assumptions = Outcomes

There is an assumption around the extent to which voluntary (non-GBCMA/GBCMA partner funded) activities impact on the progress towards the targets. This assumption has been known as the "Two-times" or "x2" Assumption.

A survey questionnaire was commissioned to assist the GBCMA Biodiversity Program gauge the level of native vegetation management activities occurring outside the incentives offered by the GBCMA and its partners. Activities occurring outside GBCMA initiatives - usually carried out via landholders own 'investment' - were defined as unfunded activities. Funded activities are those that have been undertaken with assistance provided through GBCMA grant initiatives.

Our results indicate that over the survey period the x2 Assumption has proven to hold true; there is a ratio of at least 1ha funded biodiversity activity:1ha unfunded biodiversity activity. Overall results would seem to indicate at least 2ha of area has unfunded biodiversity activity to every 1ha. For areas taken out of production in the last five years there is a change in the ratio of close 1:1 for CMA funded activities. This would seem to indicate a trend towards unfunded activity occurring in areas out of production more than 5 years. In addition, it seems that the size of funded areas is getting larger while the size of the unfunded areas is getting smaller. It was beyond the scope of this study to comment on the reasons for this result.

In addition to the survey results outlined above, mapping of survey returns and a preliminary analysis of land use and spatial context of results was conducted. The results, while confirming that the level of activity at a minimum matches CMA activities, the nature of the unfunded activity would seem to be distinctly different in terms of size and age of areas taken out of production, the size and enterprise of properties that undertake unfunded activities and the location of these activities in relation to prior landholder activity.

While these results are limited in terms of survey size and distribution they merit further investigation to support spatial modelling of the distribution of unfunded landholder activity in biodiversity.

To help understand the trend in the reduction of the ratio of funded versus unfunded areas a study aimed at investigating landholder's decision making could be conducted. Additionally, a study to determine differences in quality aspects of biodiversity could be commissioned if quality parameters, as well as quantity parameters, are important to the GBCMA.

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Introduction

The Goulburn Broken Catchment Management Authority (GBCMA) is the statutory authority responsible for the coordination of natural resource management programs within its region. Under the Catchment and Land Protection Act 1994, the GBCMA is required to develop a Regional Catchment Strategy (RCS) that establishes the planning framework for land, water and biodiversity management in the region. The RCS also outlines a series of environmental outcomes (catchment targets), whose progress needs to be reported annually. The activities that contribute to the progress towards these targets are achieved through two main processes:

- Publicly Funded Activities: activities / on-ground works fully or partially funded through government incentive programs
- Privately Funded Activities: activities / on-ground works fully funded by the land manager themselves

There are a number of assumptions made when reporting on the progress towards targets, especially around the extent to which voluntary (non-GBCMA/GBCMA partner funded) activities impact on the progress towards the targets. For example when reporting against the target "*To increase the cover of all endangered and applicable vulnerable EVCs to at least 15% of their pre European vegetation cover by 2030"* it is currently assumed that the total increase in vegetation double that that achieved through GBCMA/GBCMA partner funds as tracked through systems such as the Catchment Activity Management System (CAMS) (Brunt & McLennan 2004). In other words, it is assumed that the increase in vegetation cover brought about through ***non-GBCMA*** funded activities is the same as the increase in vegetation cover brought about through ***GBCMA*** funded activities. This is known as the "x2 Assumption". The x2 assumption is also applied to the target "*To improve the quality of 90% of existing (2003) native vegetation by 10% by 2030"* where it is assumed that the increase in vegetation quality brought about through ***non-GBCMA*** funded activities is the same as the increase in vegetation quality brought about through ***GBCMA*** funded activities (Brunt & McLennan 2004).

The uses of such assumptions are quite common. For example, in New Zealand it was estimated that for every $1 that the Taranaki Regional Council spent on biodiversity conservation, a landowner would spend $10 (Kaval et al 2007; Smith 2008). Due to the ever increasing demands on public spending accountability the GBCMA aims to obtain a clearer understanding of the level of biodiversity activities occurring outside the GBCMA grants system.

By improving the assumptions held in regard to the privately funded activities it will be possible for the GBCMA to more accurately report on their progress towards catchment targets. Given this assumption, a two to threefold increase in the revegetation activities across the catchment has a profound effect on progress towards targets. Therefore, this project aimed to provide improve the understanding of the x2 assumption by providing a clearer understanding of the amount of activity that is occurring outside of activities funded by the GBCMA.

In this report we present the findings of our survey that aim to quantify the level of investment made to achieve biodiversity outcomes outside the GBCMA incentive system. We, then discuss the findings in relation to the appropriateness of the x2 Assumption with concluding remarks including recommendations. At no point in this report is quality of biodiversity outcomes discussed as this was beyond the project's scope.

Methods

Landholder Survey Questionnaire

A survey questionnaire was commissioned to assist the GBCMA gauge the level of privately funded biodiversity activities occurring outside the GBCMA Grants system.

Surveyed areas included the Strathbogie Shire, Benalla Rural City, City of Greater Shepparton (Dryland), Moira Shire (Dryland & Irrigation) (Figure 1). The sample population was selected from landholders owning two hectares or greater of land. Initially, this criterion was used to exclude all residential properties within the selected Shires. During data analysis a secondary exclusionary process was undertaken to eliminate self-nominated areas of less than 2 hectares.

Dryland landholders in all the areas were targeted because there is little data available from this population. However, irrigators were also targeted within the Moira Shire only. The reason for this was the fact that the Moira Shire, compared to the other survey areas, has a greater area of (natural) biodiverse ecosystem (e.g. proximity to the Barmah Forrest). Therefore it was decided that it was necessary to capture the effects (if any) of such an ecosystem on landholders in the immediate area.

Our project's aim was to test the x2 Assumption. That is, we were seeking to find out if biodiversity activities are being undertaken in the Catchment *above and beyond* GBCMA biodiversity grants (refer to list in survey in Appendix 1). And if so, whether a ratio of 1:1, that is, for every 1ha GBCMA investment another 1ha landholder investment is being carried in the Catchment, is precise.

Figure 1. A map of the Goulburn Broken Catchment depicting the study area (yellow).

Piloting & Pre-testing the Survey Questionnaire

As per Bryman (2001) for the purpose of ensuring the contents and questions in the survey were relevant and applicable we conducted a pilot and a pre-test of the questionnaire. We conducted face-to-face semi-structured interviews with twelve landholders in the GBCMA region to generate our fixed-choice questions as per Glock (1988). Once the draft questionnaire was formulated a pre-testing of it was undertaken. Forty landholders undertook the pre-test survey. A 50 percent response rate was achieved. The resulting answers indicated that they survey questionnaire was deemed to be 'fit-for-purpose' and therefore distributed to landholders.

The 12 A4 page survey booklets (Appendix 1) were divided into five sections. The first section sought to collect information on basic farming enterprise characteristics (e.g. land area and stock numbers). The second section aimed to collect information on areas within the farming enterprise that were not in production at all or that were productive during a specific period of time only. For example, cropping enterprises with portions of land that are grazed opportunistically by livestock. The third section sought to collect information on the type of on-farm biodiversity activities undertaken by the landholder. Biodiversity activities included among other things the planting trees, fencing off particular zones and the protection and enhancement of vegetation (see Appendix 1, Question 7). The fourth section was soliciting information on funding sourced for any biodiversity activities undertaken. The final section offered landholders the option of receiving a summary of results. To obtain an aerial photo of the surveyed property the landholder was required to provide a property address or CFA map reference. This would enable the mapping of participating properties into a GIS which would support further spatial analysis of the results.

In November 2007, a survey distribution, according to the pre determined numbers per Shire, was undertaken with letters directed 'To the Landholder' rather than specific names and addresses. Originally it was decided that an equal number of 500 surveys be distributed to each of the four study areas. However this was not possible as the blanket mail distribution was limited by the number of properties residing within postcode drop-off areas within the separate Shires. Therefore the drop off postcode areas were selected based upon the number of properties residing in differing postcodes within a Shire, with the total number per Shire as equalling 500 as close as possible. The reason for this was to facilitate the distribution of the survey to a wider cross-section of landholders in the area. As an incentive, an A4 map of individual landholder properties was sent to landholders who completed the survey.

The survey, a cover letter outlining the details of the project and a reply-paid envelope where mailed to landholders in the four study areas. One thousand nine hundred and seventy nine (1979) surveys in total where distributed as follows;

- 525 in the City of Greater Shepparton,
- 503 in the Moira Shire,

- 545 in the Strathbogie Shire and,
- 406 in the Benalla Rural City.

A total of 315 surveys were returned some ten weeks after the initial mailing. As previously stated, of these, ninety one surveys were that of landholders who did not own land greater than 2Ha. A further 224 surveys were returned completed. If all non-respondents were owners of land greater than 2Ha then the response rate was only 12 per cent. However, if the proportion landowners of less than 2Ha among non-respondents were similar to the distribution for respondents, then the response rate among landholders was 16 per cent. We believe the latter figure is indicative of the actual response rate among landholders.

Data from surveys was collated, then analysed the data using the Chi Square test via a combination of Microsoft Excel and SPSS 12.1.01 software. For the purpose of this project a significant result refers to the difference between what was observed and what would be expected if the responses were randomly distributed amongst funded and unfunded sites.

As part of our analysis we grouped farming enterprises according to what was deemed appropriate. For example, some landholders listed their enterprise according to what their *primary* enterprise was in terms of size (either head of cattle/ herd size or acres) Mixed farms included landholding with areas dedicated to crops *and* substantial number of heads of cattle. Additionally, soil erosion works were not considered a biodiversity activity if there were no complimentary activities selected by the landholder, such as fencing off or tree planting. Furthermore, weed activities were considered to be production related rather than enhancing on-farm biodiversity and hence not considered to be a biodiversity activity in the data analysis.

General Results

In our survey we asked landholders to identify areas that were not considered to be in production on their farm. A non-production area was defined as a portion of land that landholders perceived to be part of their farm/s that was not primarily used for production (fenced or unfenced). For example, zones considered not in production are areas that are grazed opportunistically or that have not been in production in recent years due to salinity, protection or establishment of trees etc.

Response by Shire

The number of surveys returned per Shire can be seen in Table 1. Due to the method of survey distribution we can not offer any comment on the variation in survey response.

Table 1. Survey responses by Shire.

Shire	Total Responses
Benalla	**58**
COGS	**24**
Moira	**61**
Strathbogie	**88**
Unidentified	**25**

Of the 224 completed surveys 160 properties where located and mapped. An example of a mapped property is shown in *Figure 2*.

Total Farms: Funded and Unfunded

Of the 224 completed surveys there were 315 areas of farm that landholders deemed to be out of production and had biodiversity activities conducted on them. Of the 315 areas, a total of 105 areas were identified by landholders as having funded biodiversity activities carried out on them. We refer to these as "funded" for the remainder of this report. Conversely, a total of 210 areas for which landholders suggested they had not received funding at all or in the last 5 years to undertake biodiversity works are referred to as "unfunded" for the rest of the report. The range of areas not in production on each farm and their activity funding status as identified by landholders varied on farms from 1 to 10 areas identified (Figure 3).

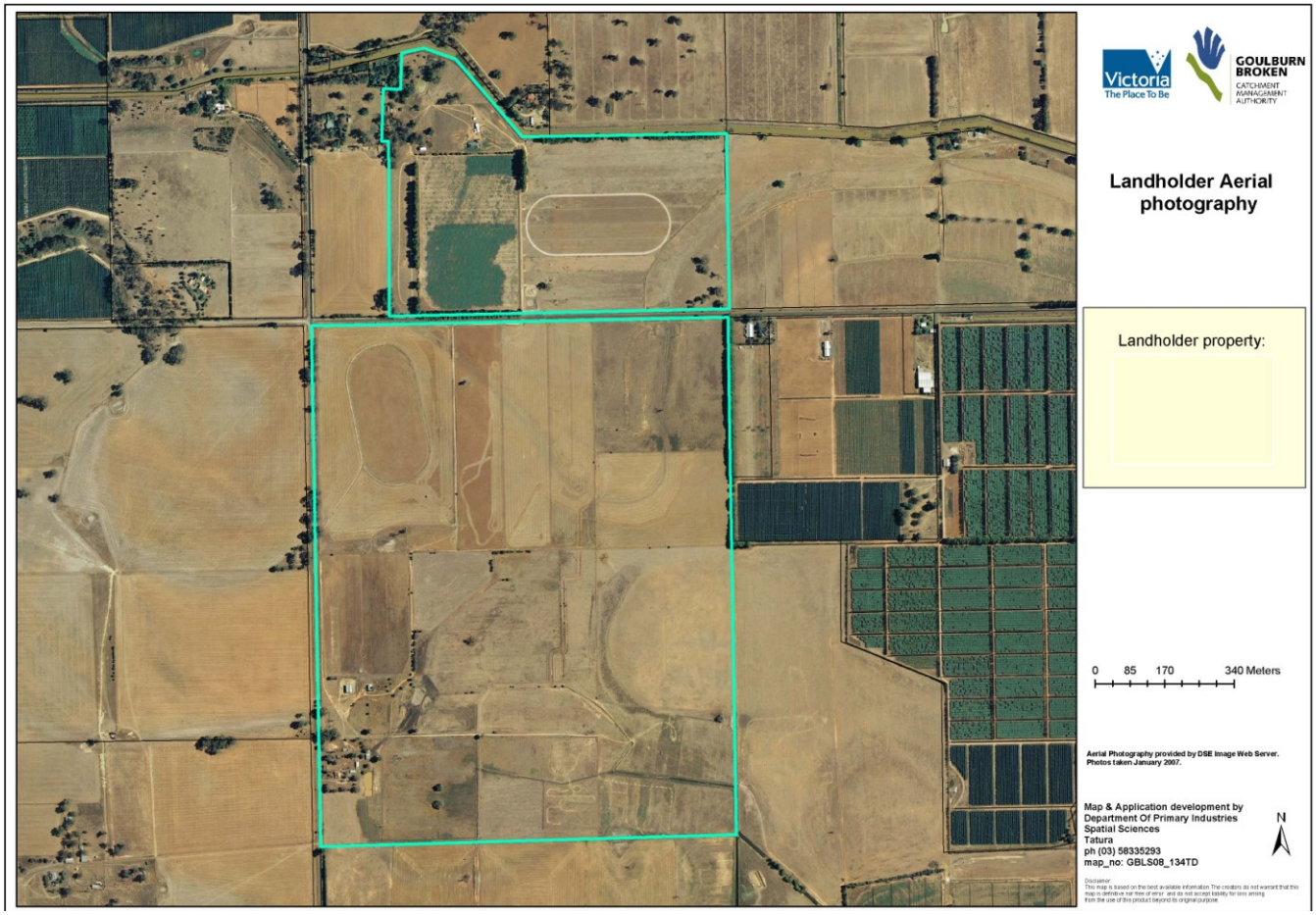

Figure 2. Aerial photo map of a survey respondent's property boundary.

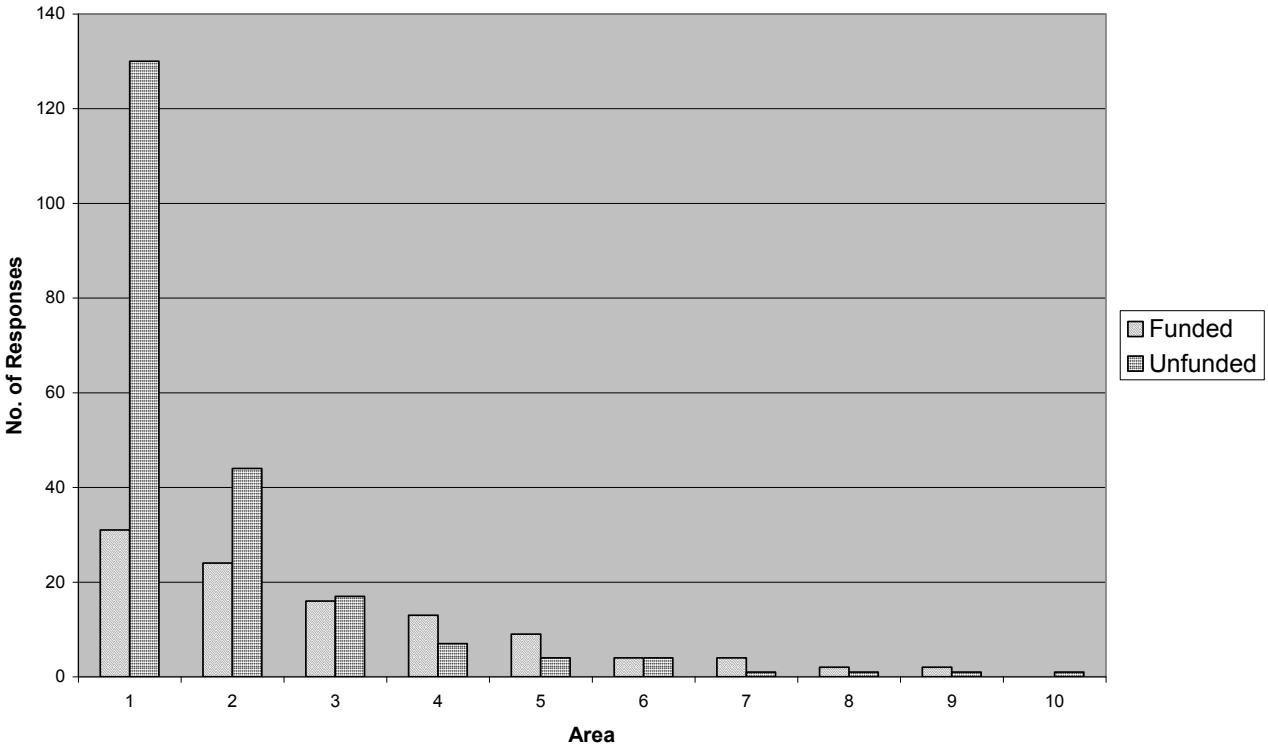

Figure 3. Frequency of areas (funded & unfunded) per survey response.

Areas: Years Out of Production

Respondents were asked how long the areas in which they had conducted activities in the last five years had been out of production (*Figure 4*). We found the ratio of funded to unfunded activities was greater for areas that had been out of production for more than six years. For areas out of production in the last five years we see the ratio between funded and unfunded activities narrow. However, the number of unfunded activities is still greater than the number of activities that are funded.

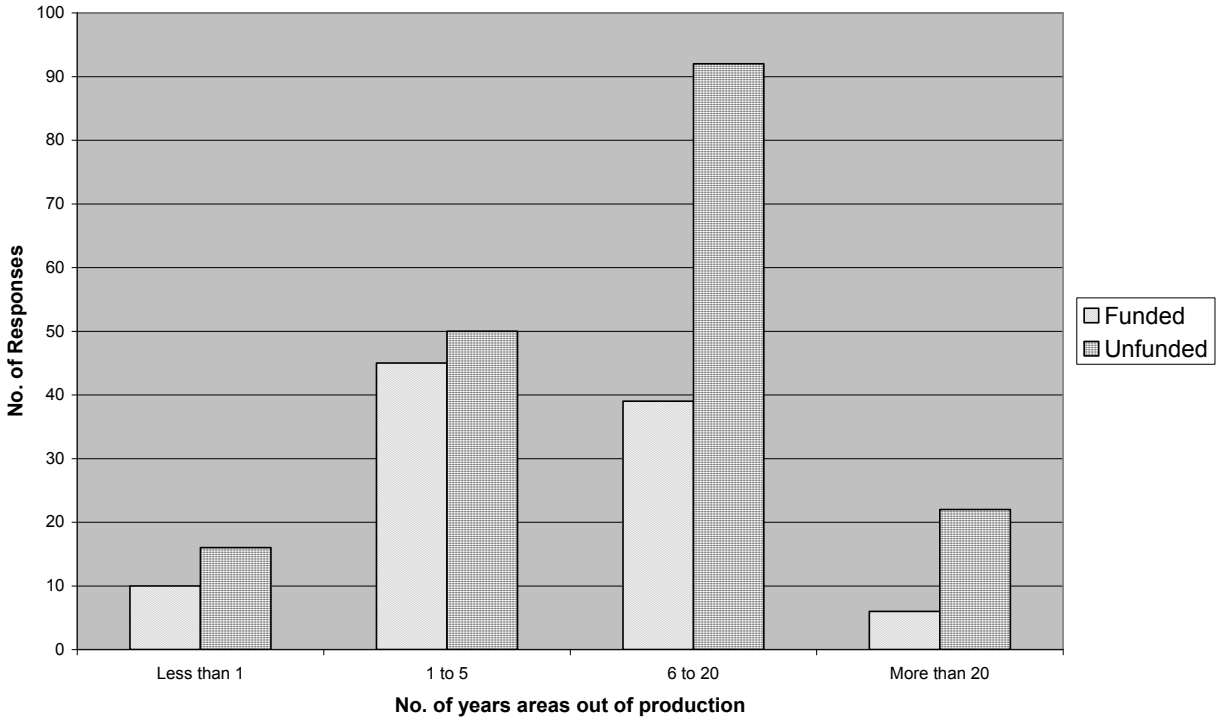

Figure 4. The amount of years, funded and unfunded, areas were out of production.

X2 Assumption Results

We found the average size of the 105 areas in which activities had been conducted in the last 5 years that landholders had indicated were funded was 6.6 hectares (range 0.2- 50ha). Therefore, we estimate a total area of 693ha had received funding for biodiversity activities. Conversely, we found the average size of the 210 areas in which landholders had conducted activities that they had been identified as not receiving funding in the last five years was 7.3 ha (range 0.1- 120 ha). Therefore, a total area of 1533 ha had biodiversity activities conducted on them without funding.

This means that for every hectare in which a funded activity occurs another 2.2 ha has a biodiversity activity conducted in which no funding is received.

Based on the responses depicted in Figure 4 we can conclude that unfunded biodiversity activities are more likely to be conducted in areas that are out of production for more than 5 years.

For biodiversity activities undertaken on areas that had been taken out of production in the last five years we found the average size of the 55 funded activities was 7.3 ha (range 0.1- 45.0 ha), giving us a total of 402 ha having been funded for biodiversity outcomes. Conversely, we found the average size of the 66 unfunded activities was 3.6 ha (range 0.1- 29.6 ha), giving us a total of 244 ha of unfunded biodiversity outcomes. The areas funded tend to be larger in size compared to areas that were unfunded denoting statistical significance. This seems to indicate that funding is important to encourage land holders to remove large areas of land from of production.

This means for every hectare in which a funded activity occurs another 1.6 hectares has a biodiversity activity conducted in which no funding is received.

We also undertook an analysis of the data for landholders who were funded through CMA funds only. For biodiversity activities undertaken on areas that had been taken out of production in the last five years we found the average size of the 38 funded activities was 8.7 ha (range 0.2- 45.0 ha), giving us a total of 330 ha having been funded for biodiversity outcomes. Conversely, we found the average size of the 83 unfunded activities was 3.8 ha (range 0.1- 29.6 ha), giving us a total of 315 ha of unfunded biodiversity outcomes. The difference in area size between funded and unfunded was significant. This reinforces the conclusion above in the importance of CMA funding to encourage land holders to remove large areas of land from production for biodiversity outcomes.

This means for every hectare in which a CMA funded activity occurs another 1 hectare has a biodiversity activity conducted in which no funding is received.

The rest of this report looks at the differences in funded and unfunded biodiversity activities. Please note that 'funded areas' includes those that are funded through GBCMA and its partners (Appendix 1).

Discussion

The spatial and temporal nature of funded and unfunded activity.

As a result of systems such as CAMS and supporting GIS a large proportion of CMA funded activity is spatially captured. However for unfunded activity we only have a model/assumption of these works. That model currently states that activity outside of CMA funding is a replica of CMA activity in both the level and the nature of that activity. This study while confirming that the level of activity at a minimum matches CMA activities, indicates that the nature of funded and unfunded activities were distinctly different.

This project on top of the basic survey results provides some evidence of the differences in spatial and temporal nature of unfunded from funded activity. The following exploratory results and discussion attempts to define some of the spatial and temporal characteristics of this unfunded investment and points to further research that could be undertaken to support these.

The results presented have indicated the following:

- Unfunded activities are heavily weighted towards areas that are out of production more than 5 years.
- That unfunded activities for areas out of production less than 5 years is directed towards smaller areas.

If we assume that activity on land out of production in the last 5 years was primarily activity that actually removed that land from production and that activities on areas out of production more than 5 years are enhancement activities then existing datasets of CMA works investment and native vegetation mapping can be used to indicate areas in the catchment that are out of production more than 5 years ago. This will give a strong indication of where unfunded activity is occurring. It also provides a guide to the type of unfunded activity that is more likely to occur in that their will be a bias towards enhancement and protection activities rather than addition of areas of native vegetation.

Other contextual characteristics that can be drawn from the survey work are the relationship of funded and unfunded activity to property size (Figure 5) and farming enterprise (Figure 6). Note that in Figure 6 mixed farming refers to farms that have a significant element of cropping as well as some grazing.

Again there are some indications that these contexts have a bearing on the distribution of funded and unfunded activities with the livestock industries and properties of smaller size tending to undertake more unfunded relative to funded works.

The survey results would seem to indicate several contexts which would support predictive mapping and quantifying of unfunded works these are:

- Areas out of production more than 5 years.
- Areas with a long history in community based natural resource management activities.
- Properties of landholders who self-selected livestock as their primary enterprise.
- For areas out of production less than 5 years activities trend towards smaller areas and property sizes.

These relationships are fairly general interpretations of the survey results and would need to be confirmed with some spatial modelling, further validation and targeted survey work.

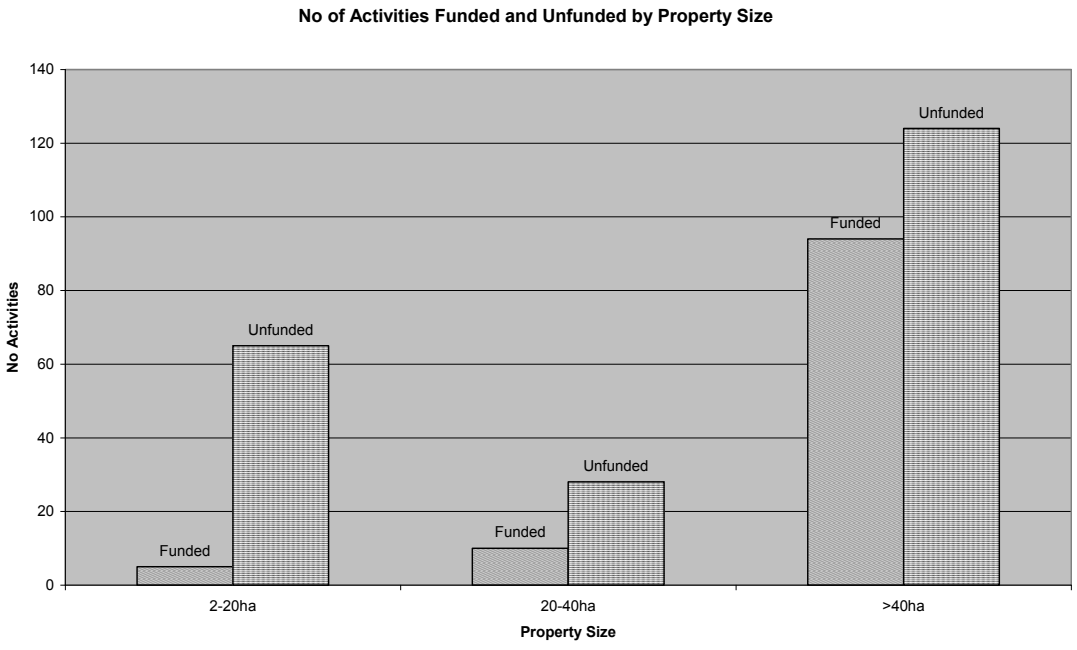

Figure 5. Number of Activities Funded and Unfunded by Property Size

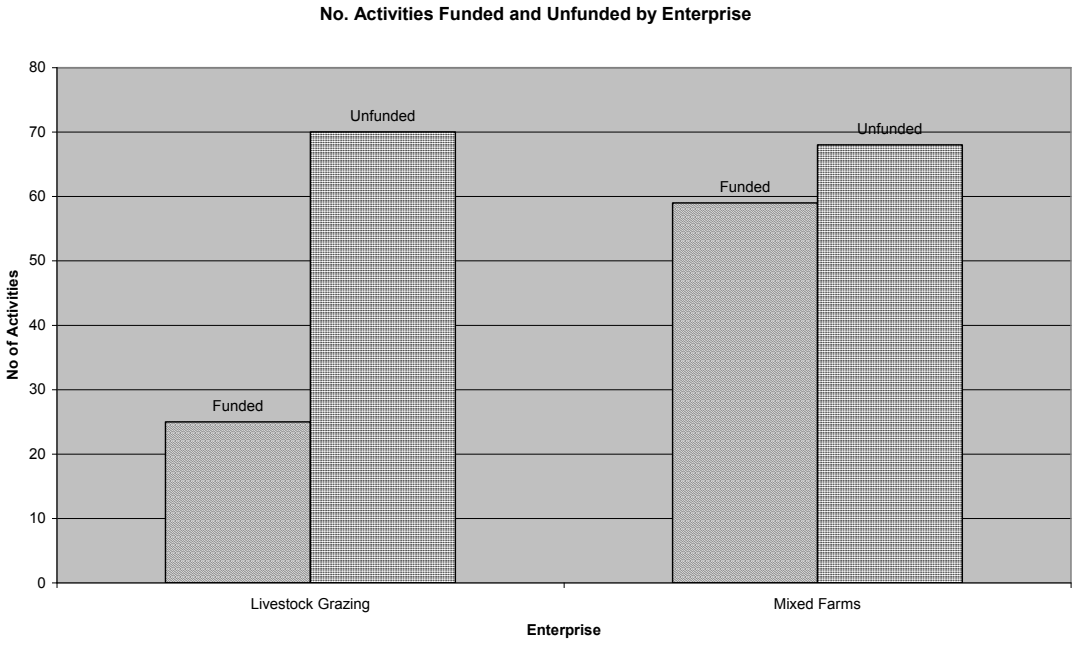

Figure 6. Number of Activities Funded and Unfunded by Enterprise

Why areas are not in production?

In our survey we provided respondents with ten possible reasons as to why specific areas were not in production. Respondents were asked to identify all the reasons they felt were relevant to them. As shown in *Figure 7* we found the most common reasons nominated by landholders who had taken areas out of production was:

- to increase/ improve biodiversity,
- the area was close to a waterway and;
- to protect remnant vegetation.

We found more landholders than expected who had not received any funding nominated 'the area never had been productive' as the reason for the area being out of production (*Table 2*). Conversely, we found more landholders than expected who had gained funding nominated 'paddock tree location' as the reason for the area being out of production (*Table 2*).

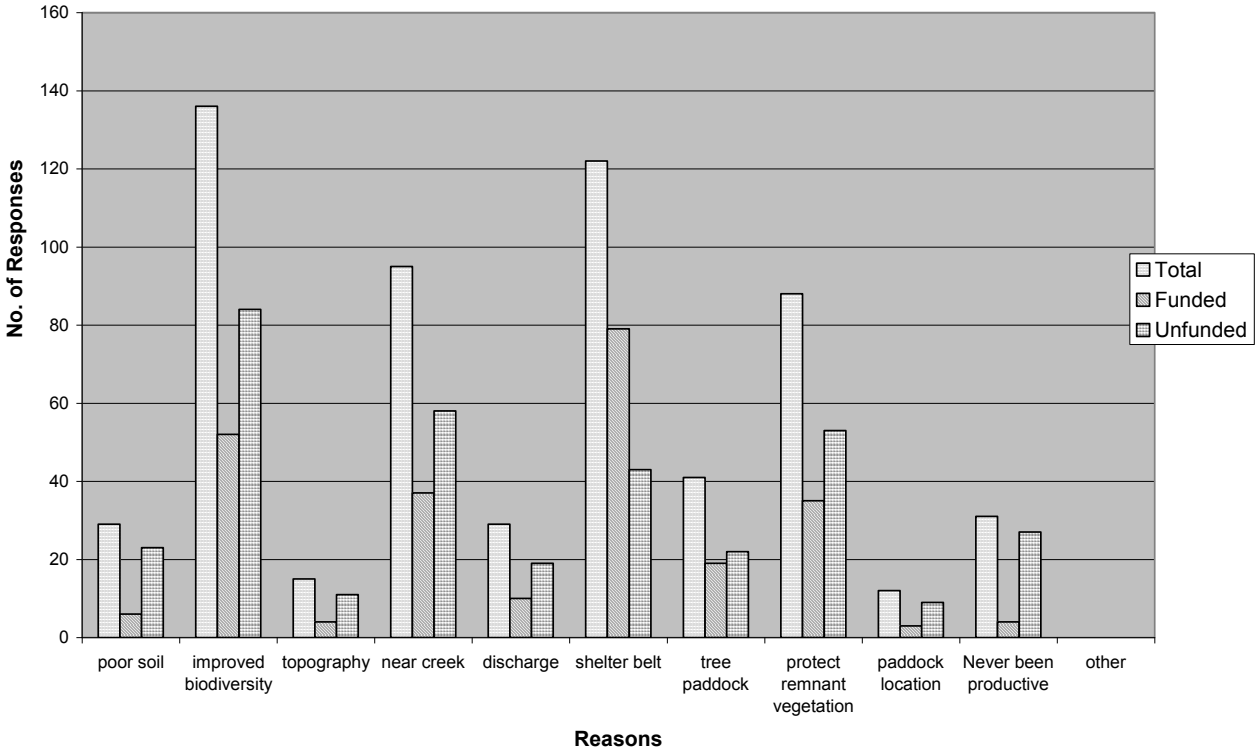

Figure 7. Reasons areas were out of production.

Table 2. Reasons why out of production areas are not in production.

Reasons	Funded	Unfunded	Significant
Poor soils	6	23	
To Improved biodiversity	52	84	
Topography	4	11	
Near creek/ waterway	37	58	
Discharge	10	19	
Shelter belt	43	79	
Location of Paddock tree	19^	22	*
Protect remnant	35	53	
Location of paddock	3	9	
Never been productive	4	27^	**

* p<0.1, ** p<0.05, ^denotes higher than expected

What activities were undertaken in the past 5 years?

We asked respondents to identify the biodiversity activities they had undertaken in the areas out of production in the last five years. We found planting trees and fencing-off to be the most common activities. We also found there was a significant difference between those who had obtained funding for these activities and because more people than expected were likely to choose the planting trees and fenced-off options. There was no significant difference between funded and unfunded areas in the other activities undertaken. In *Figure 8* we show the total responses for activities undertaken.

Table 3. Biodiversity activities undertaken on-farm in the last five years by landholders.

Activity	Funded	Unfunded	Significant
Planted trees	56^	88	*
Habitat enhancement	24	42	
Fenced off	54^	81	**
Ecological thinning/burning	4	12	
Soil erosion	7	19	

* p<0.1, ** p<0.05, ^ denotes higher than expected

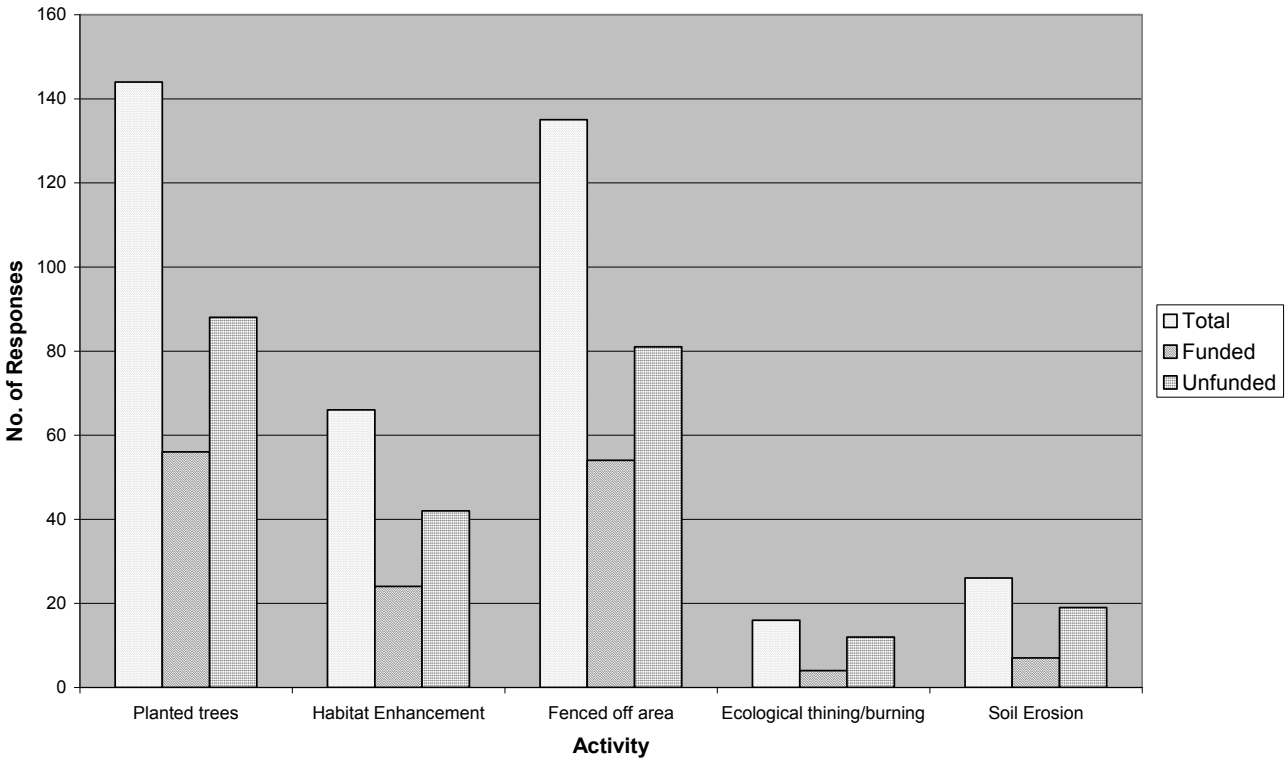

Figure 8. Activities undertaken by landholders over the past five years.

Types of changes noticed with activities undertaken.

We asked respondents to identify the changes they had noticed in the area since undertaking the activities. We found the most common responses were more birds, an increase in ground cover and an increase in regeneration (*Figure 9*). We found that landholders who had been funded were more likely to have reported increased vegetation and increased ground cover as visible changes on their land after undertaking biodiversity activities (*Table 4*). Total responses are shown in *Figure 9*.

Table 4. Changes identified by landholders' after undertaking biodiversity activities on their farm activities.

Activity	Funded	Unfunded	Significant
Increased Vegetation	45^	57	**
Increased ground cover	48^	75	*
More trees	52	90	
More birds	66	123	
More weeds	18	47	
More pests	24	37	
Increased timber	27	44	
Increase regeneration	45	79	
Increased tree health	20	34	

* p<0.1, ** p<0.05, ^ denotes higher than expected

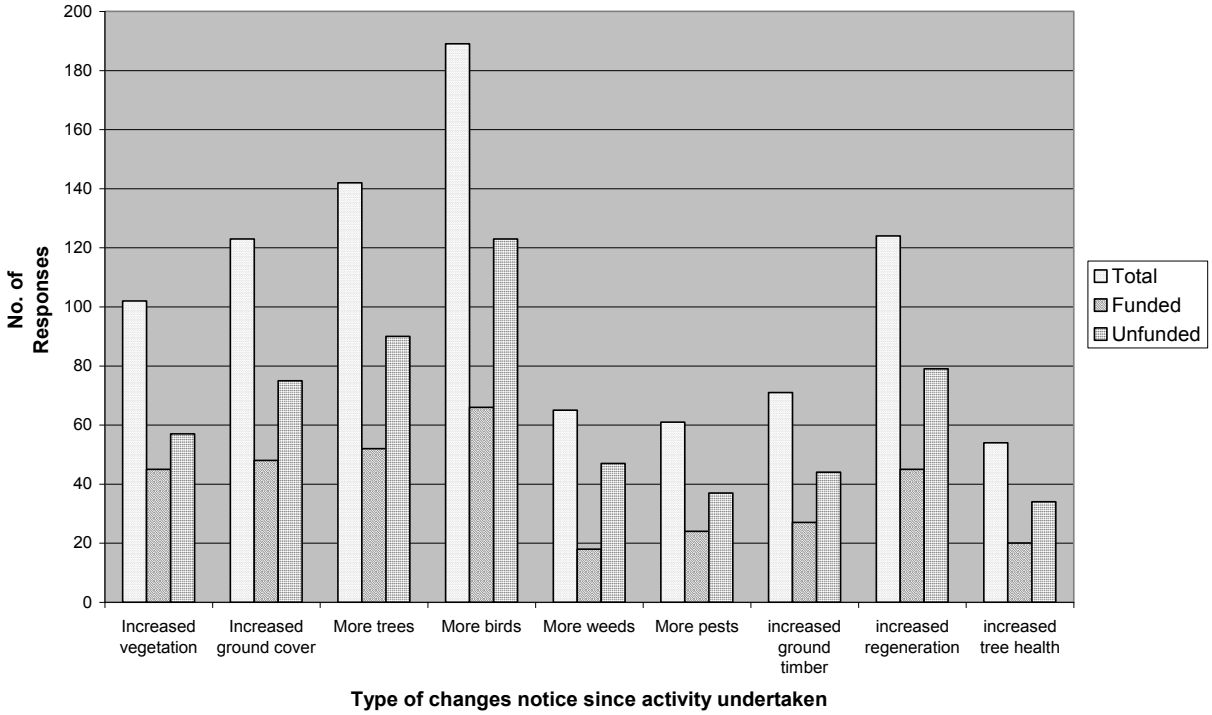

Figure 9. Types of on-farm changes noticed by landholders since taking areas out of production.

Why the activities were undertaken

We asked respondent to identify the reasons that they had for undertaking the activities. We found the most common responses were improved biodiversity, for aesthetic reasons or to increase birdlife. The frequency of responses can be seen in *Figure 10*.

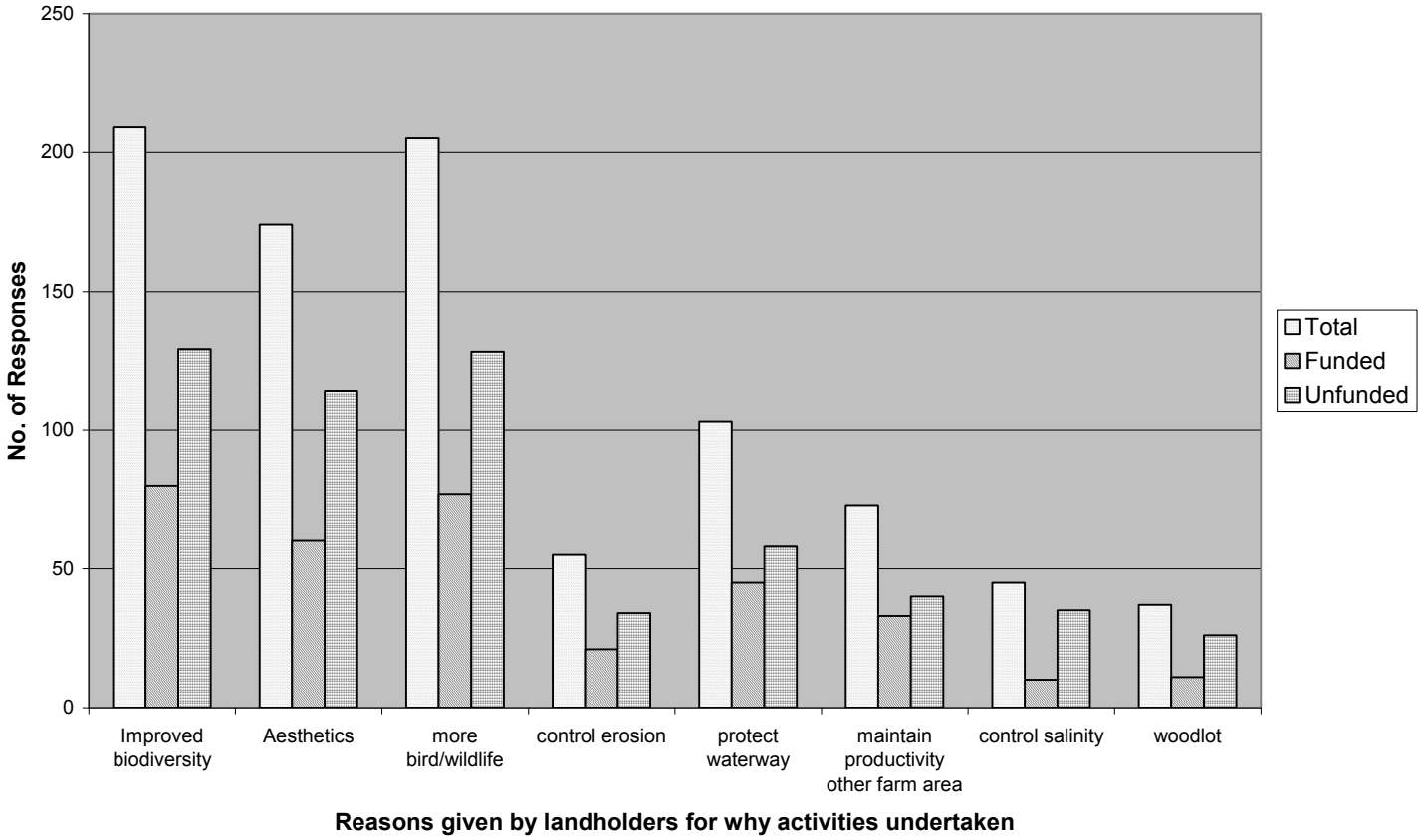

Figure 10. Reasons why activities were undertaken.

We found that landholders who were funded were significantly more likely than expected to have undertaken biodiversity activities for the following reasons:

- to increase/improve biodiversity,
- increase birdlife,
- protect waterways or
- to maintain production in other areas of the farm (*Table 5*).

Table 5. Reasons why the on-farm biodiversity activities were undertaken.

Activity	Funded	Unfunded	Significant
Improved biodiversity	80^	129	**
Aesthetics	60	114	
More bird/wildlife	77^	128	**
Control erosion	21	34	
Protect waterway	45^	58	**
Maintain productivity in other farm area	33^	40	**
Control salinity	10	35	
Woodlot	11	26	

p<0.1, ** p<0.05, denotes higher than expected

Major points

- Based on our survey results we suggest the x2 assumption is more likely to be an underestimate than an over estimate of funded and unfunded biodiversity activity
- We found that CMA funding is crucial for encouraging landholders to remove larger areas of land from production
- Unfunded biodiversity activities are more likely to occur on areas of land that have been out of production for more than 5 years.
- We found that all landholders who had areas of their farm out of production reported biodiversity outcomes regardless of whether they had received funding or not.
- It must be remembered that the responses to this survey were from the perception of the landholder. In the example of the responses to what changes have been noticed, we cannot be certain if the responses reflect actual changes or changes most easily observed by landholders. Also, no inference can be made about the quality aspects of the biodiversity outcomes achieved.
- We also found the type of biodiversity activities undertaken in areas that had been taken out of production were fairly consistent across both the funded and unfunded areas.
- That X2 Assumption model currently states that activity outside of CMA funding is a pattern of CMA activity in both the level and the nature of that activity. This study while confirming that the level of activity at a minimum matches CMA activities. The nature of that activity would seem to be distinctly different.

Recommendations

There are several areas for further investigation that can be recommended from this study:

- To help understand the trend in the reduction of the ratio of funded versus unfunded areas a study to investigate landholder's decision making could be conducted.
- A study to determine differences in quality aspects of biodiversity could be commissioned if quality parameters as well as quantity parameters are important to the GBCMA.
- The survey results would seem to indicate similar contexts which would support predictive mapping and quantifying of unfunded works. The relationships identified in this study are fairly general interpretations of the survey results and would need to be confirmed with some further validation or targeted survey work.

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Appendix 1- Survey Questionnaire

Dear Landholder,

We recognise that you play a significant role in shaping the current and future landscape. As we are currently trying to determine the health of vegetation in the Goulburn Broken Catchment, we are interested to hear what you have done on your property that may have contributed to healthier native vegetation and a healthier future landscape. We would appreciate 5-15 minutes of your time to fill out the attached survey which is being distributed to landholders in your area.

As a token of our appreciation we are offering an aerial photo of properties to all landholders who return the completed survey. For the purpose of this study we are seeking landholders who have properties that are 2 hectares (5 acres) or greater in size. Therefore,

Do you own a property that is <u>2 hectares (5 acres) or greater</u>?

☐ **Yes** ☐ **No**

If your answer is YES we would appreciate it if you could take the time to complete the survey and return it in the enclosed envelope.

If your answer is **NO** then you do not need to fill out this survey. <u>However</u>, to help us assess the reliability of our results we would appreciate it if you would return the blank survey in the enclosed reply paid envelope.

If you wish to discuss the survey please contact:

Cinzia Ambrosio, DPI Tatura on (03) 58 335 222

Thank you for your time.

YOUR FARM

In this section we ask you for some details about your enterprise to get an idea of the type of operation you run.

1. What is your Postcode? _____

2. What is the total area of your farm?

_____Acres or _____ Hectares

3. What enterprise/s do you have on your farm?

(Please tick which applies)

☐ Cattle _____ Head or _____DSE

☐ Dairy _____ Herd size

☐ Cropping/Hay _____ Acres or _____ Hectares

☐ Sheep _____ Head or _____DSE

☐ Orchard (no. of Acres or Hectares) _____Stone _____Pome

☐ Vineyard (no. of Acres or Hectares) _____ Wine _____Grape

☐ Other (enterprise & no. of Acres or Hectares) e.g. Olives 18ha

_____

4. Are there areas of your farm/s that are not primarily used for production (fenced or unfenced) e.g. grazed opportunistically or that have not been in production in recent years due to salinity, protection or establishment of trees etc. Please tell us the ***size and location*** of the areas.

	Short Description of Area or Paddock	Hectares	Acres	Home Block	Outblock
Area a	***E.g. Swampy part***	***54***		√	
Area b	***Revegetation area***		***2***		√
Area 1					
Area 2					
Area 3					
Area 4					
Area 5					
Area 6					
Area 7					
Area 8					
Area 9					
Area 10					

5. For each of the areas you have identified in Question 4 above can you tell us how long they have not been in production? ***(Please tick all that apply)***

As identified in Q 4 above	No. of Years				Never been in production
	Less than 1	1 - 5	6-20	More than 20	
Area 1					
Area 2					
Area 3					
Area 4					
Area 5					
Area 6					
Area 7					
Area 8					
Area 9					
Area 10					

6. For each area, please select the reasons why the areas are not in production. ***(Please tick all that apply)***

As per Q 4 above	Poor soils e.g. fertility/salinity	To increase/ maintain Biodiversity	Topography e.g. too steep	Near creek, waterway or wetland	Discharge/Recharge area	Shelter/ windbreak	Protection of paddock tree	Protect Remnant Vegetation	Location of Paddock	Never been productive	Other (please specify)
Area 1											
Area 2											
Area 3											
Area 4											
Area 5											
Area 6											
Area 7											
Area 8											
Area 9											
Area 10											

7. In the **<u>past 5 years</u>**, have you done any of the following activities? ***(Please tick all activities undertaken)***

As per Q 4 above	Planted or direct seeded native trees and/or shrubs (i.e. local to the area/ indigenous *)	Habitat enhancement	Fenced off (excluding stock containment area)	Ecological thinning/ burning	Weed Control	Soil erosion works	Other (please specify)	Area	
								Acres	Hectares
Area 1									
Area 2									
Area 3									
Area 4									
Area 5									
Area 6									
Area 7									
Area 8									
Area 9									
Area 10									

* Indigenous species are those which are found occurring naturally in the local area. Plants that are native to Australia but that were not found in your local area prior to European settlement are not considered indigenous to your area.

8. For each of the areas not in production, can you tell us what type of changes you have you noticed? ***(Please tick all that apply)***

As per Q 4 above	Increased indigenous vegetation through revegetation/direct seeding	Increased ground cover	More trees/ shrubs/ understory	More birds/ wildlife	More weeds	More pests/ vermin	Increased ground timber	Increased natural regeneration*	Increased tree health(e.g. reduced dieback, better canopy cover)	Other (please specify)
Area 1										
Area 2										
Area 3										
Area 4										
Area 5										
Area 6										
Area 7										
Area 8										
Area 9										
Area 10										

*Natural regeneration refers to native indigenous vegetation that has established naturally – i.e. without being planted.

9. In the past 5 years, did you get any funding that assisted you doing any of the activities described in Question 7?

☐ **No. Please go to Question 12.**

☐ Yes. Please complete the table below for each of the areas selecting the year/s you received funding. ***(Please tick all that apply)***

As per Q 4 above	2002	2003	2004	2005	2006	Don't know
Area 1						
Area 2						
Area 3						
Area 4						
Area 5						
Area 6						
Area 7						
Area 8						
Area 9						
Area 10						

10. For each area can you tell us who assisted you with obtaining the grant? ***(Please tick all that apply)***

As per Q 4 above	*Vanessa Keogh*	*Steve Collins*	*Bec Nicholls*	*Barry Oswald*	*Rebecca Heard*	*Greg Bekker*	*Doug Robinson*	*Sarah Challis*	*Joel Pike*	*Carla Miles*	*Jenny Wilson*	*Jim Moll*	*Don't know*	*Other (Please Specify)*
Area 1														
Area 2														
Area 3														
Area 4														
Area 5														
Area 6														
Area 7														
Area 8														
Area 9														
Area 10														

11. Please indicate the funding source for each area ***(Please tick all that apply).***

	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8	Area 9	Area 10
Revegetation/Direct seeding grant (DPI)										
Remnant Vegetation Protection Grant (DPI)										
Environmental Management Plan (DPI)										
Trust for Nature (covenant & stewardship)										
Waterways Grant – GBCMA										
Bush Returns										
Green Graze										
EnviroFunds										
Bush Tender										
Carbon Tender										
Threatened Species Network Community Grants										
Bundaberg Rum Fund										
Regional NHT										
Second Generation Landcare										
National Landcare Program										
The Myer Foundation G4 Fund										
FRRR/ Dairy Farmers Creating Greener Pastures Grants Program										
FRRR Small Grants for Small Rural Communities										
Don't know										
Other_____ _____ _____										

12. For all the areas you have identified please select the reasons why you have undertaken the activities ***(Please tick all activities undertaken).***

As per Q 4 above	Increase/ maintain biodiversity	For aesthetic reasons	Increase bird/ wildlife	Control erosion	Protect waterway/creek or wetland	To maintain production in other farm areas	Control salinity	Woodlot	Other (Please specify)
Area 1									
Area 2									
Area 3									
Area 4									
Area 5									
Area 6									
Area 7									
Area 8									
Area 9									
Area 10									

REPORT SUMMARY

A summary of results from this survey will be available to all participants. If you would like to receive the summary of results please fill in your details below. Additionally, if we need to contact you, for clarification purposes, regarding this survey could you please include your preferred contact number in the details below. We would like to emphasise that your responses will be kept in the strictest confidence, with results reflecting group responses, and **not** individual responses.

As a token of our appreciation we are offering an A4 aerial photo of individual properties to all landholders who return the completed survey. To do this we require your Property Address **or** CFA Map Details. If you would like an A4 aerial photo of your property please complete the survey, write your Property Address **or** CFA Map Reference below, and return it by no later than the **28th December, 2007.**

I am interested in receiving a 'Summary of Results' ☐ Yes ☐ No

I am interested in receiving an A4 aerial photo ☐ Yes ☐ No

Name: _____

Property Address (e.g. 1184 Waaia Rd, Waaia)

OR CFA Map Ref (e.g. Region 22/ 294 B21):

_____

Postal Address: _____

Preferred contact number_____

Thank you for taking the time to complete this survey.