



**Australian Government**  
**Rural Industries Research and  
Development Corporation**

# Extending the Sustainable Management of Kangaroos

RIRDC Publication No. 09/056



**RIRDC** Innovation for rural Australia





**Australian Government**  

---

**Rural Industries Research and  
Development Corporation**

# **Extending the Sustainable Management of Kangaroos**

by John Kelly

April 2009

RIRDC Publication No 09/056  
RIRDC Project No PRJ-000694

© 2009 Rural Industries Research and Development Corporation.  
All rights reserved.

ISBN 1 74151 859 8  
ISSN 1440-6845

*Extending the Sustainable Management of Kangaroos*  
*Publication No. 09/056*  
*Project No. PRJ-000694*

The information contained in this publication is intended for general use to assist public knowledge and discussion and to help improve the development of sustainable regions. You must not rely on any information contained in this publication without taking specialist advice relevant to your particular circumstances.

While reasonable care has been taken in preparing this publication to ensure that information is true and correct, the Commonwealth of Australia gives no assurance as to the accuracy of any information in this publication.

The Commonwealth of Australia, the Rural Industries Research and Development Corporation (RIRDC), the authors or contributors expressly disclaim, to the maximum extent permitted by law, all responsibility and liability to any person, arising directly or indirectly from any act or omission, or for any consequences of any such act or omission, made in reliance on the contents of this publication, whether or not caused by any negligence on the part of the Commonwealth of Australia, RIRDC, the authors or contributors.

The Commonwealth of Australia does not necessarily endorse the views in this publication.

This publication is copyright. Apart from any use as permitted under the *Copyright Act 1968*, all other rights are reserved. However, wide dissemination is encouraged. Requests and inquiries concerning reproduction and rights should be addressed to the RIRDC Publications Manager on phone 02 6271 4165.

#### **Researcher Contact Details**

John Kelly  
Lenah Consultancy  
PO Box 294  
MOWBRAY, 7248  
Phone: (03) 6326 7696  
Fax: (03) 6326 2790  
Email: [lenah@bigpond.net.au](mailto:lenah@bigpond.net.au)

In submitting this report, the researcher has agreed to RIRDC publishing this material in its edited form.

#### **RIRDC Contact Details**

Rural Industries Research and Development Corporation  
Level 2, 15 National Circuit  
BARTON ACT 2600

PO Box 4776  
KINGSTON ACT 2604

Phone: 02 6271 4100  
Fax: 02 6271 4199  
Email: [rirdc@rirdc.gov.au](mailto:rirdc@rirdc.gov.au)  
Web: <http://www.rirdc.gov.au>

Electronically published by RIRDC in April 2009  
Print-on-demand by Union Offset Printing, Canberra at [www.rirdc.gov.au](http://www.rirdc.gov.au)  
or phone 1300 634 313

# Foreword

Kangaroo harvesting is entrenched as an essential agricultural and environmental management tool in the arid grazing rangelands of Australia. A significant amount of research exists which confirms that harvesting kangaroos at the maximum sustainable yield of the population delivers a considerable benefit to agricultural enterprise margins. More-over doing so also aids in biodiversity maintenance. Overgrazing remains one of the biggest sustainability threats to the rangelands environment.

Various state and territory governments regulations prevent commercial kangaroo harvesting in large sections of grazing lands in Australia. This project was commissioned to identify these restricted areas, the impediments involved and attempts to gain commercial access key identified regions.

This project was funded from the kangaroo industry statutory levies which are matched by the federal government.

This report, a new addition to RIRDC's diverse range of over 1800 research publications, forms part of our emerging animal industries R&D program, which aims to accelerate the development of viable new animal industries.

Most of RIRDC's publications are available for viewing, downloading or purchasing online at [www.rirdc.gov.au](http://www.rirdc.gov.au). Purchases can also be made by phoning 1300 634 313.

**Peter O'Brien**  
Managing Director  
Rural Industries Research and Development Corporation

# Contents

- Foreword ..... ii**
- Executive Summary..... v**
- 1. Introduction ..... 1**
- 2. The Potential ..... 2**
  - 2.1 Areas not covered by Management Plans ..... 2
    - 2.1.1 All of Victoria ..... 2
    - 2.1.2 Parts of Eastern NSW ..... 3
    - 2.1.3 South Australia ..... 3
    - 2.1.3 All of the Northern Territory ..... 4
  - 2.2 Areas covered by Management Plans but not accessible to industry ..... 4
- 3.The benefits of a Management Plan..... 4
- 4. Kangaroo Management Plans ..... 5
  - 4.2 Benefits ..... 5
    - 4.2.1 Direct Economic ..... 5
    - 4.2.2 Animal Welfare ..... 5
    - 4.2.3 Conservation..... 5
    - 4.2.4 Pastoral Productivity ..... 6
    - 4.2.5 Community safety ..... 6
    - 4.2.6 Summary of benefits..... 6
    - 4.2.7 More about kangaroo management. .... 6
    - 4.2.7 Public support for kangaroo harvesting..... 7
- 5. What’s to be done? ..... 8**
  - 5.1 Victoria ..... 8
  - 5.2 NSW..... 8
  - 5.3 Northern Territory..... 9
  - 5.4 South Australia..... 9
  - 5.5 Western Australia..... 9
- 6. Public Opinion on the issue ..... 10**
  - 6.1 Specific Results were - ..... 10
- 7. Results and Discussion ..... 11**
  - 7.1 Victoria ..... 11
  - 7.2 NSW..... 11
  - 7.3 NT ..... 11
  - 7.4 South Australia..... 11
  - 7.5 Western Australia..... 11
- Appendix 1. .... 12**
  - Survey Technique and results in Victoria ..... 12

# Executive Summary

## ***What the report is about***

The kangaroo harvest has become an accepted part of sustainable environmental management of our grazing lands. Thirty years of refinement have led to the development of highly sophisticated Kangaroo Management Plans. Kangaroo harvest is generally considered to be sustainable, poses no threat to the species and delivers positive environmental and economic benefits.

Yet in significant portions of Australia, including all of the Northern Territory and Victoria, commercial harvest is not allowed. In most of these regions, kangaroos are still culled as part of agricultural damage mitigation, although typically this is well below the levels required for adequate control of total grazing pressure and well below the maximum sustainable yield of the population. When they are culled in these regions, the carcasses are generally left to rot. This is an environmental and economic waste, particularly during times of increasing world food shortages.

## ***Who is the report targeted at?***

The principal targets for this research were state and territory departments concerned with conservation.

## ***Background***

The regions of Australia that do not currently support a commercial harvest generally do not have in place Kangaroo Management Plans. These Plans specify comprehensive management actions, including annual population assessment, which give kangaroos considerable species protection. The plans lay down strict animal welfare guidelines under which kangaroos must be shot. Thus implementation of commercial kangaroo harvesting in these regions offers benefits not only in the sustainable management of the land, but also in sustainable and humane management of kangaroos.

## ***Aims/objectives***

This project's intent was to seek introduction of commercial kangaroo harvesting into as many as possible regions in which it currently can not take place. Doing so offers benefits to the kangaroo industry, the local environment, regional economies and the kangaroo populations.

## ***Results/key findings***

The project identified significant regions in four States and the Northern Territory in which kangaroo harvesting currently can not take place as well as the regulatory barriers preventing a harvest. The outputs of the project set in place actions to attempt to address the restrictions in each region. The project successfully changed a restriction in Western Australia, made significant progress to opening new regions for harvest in South Australia and New South Wales and opened productive dialogue with the Victorian government which will hopefully lead to introduction of a harvest in that State. No progress was made in negotiation with the Northern Territory government.

## ***Implications for relevant stakeholders for:***

These initiatives could deliver a substantial increase in available kangaroo quota to the industry. If the NSW, Victorian and SA surveys all point towards establishment of commercial harvests in the various regions, this may potentially amount to a 5% increase in total quota. At current values, this adds another \$9-11 million to the industry's production.

### ***Recommendation***

The outcome of the NSW, Victoria and SA surveys should be assessed by the relevant state departments and the kangaroo industry.



# 1. Introduction

The kangaroo harvest has become an accepted part of sustainable environmental management of our grazing lands. Thirty years of refinement have led to the development of highly sophisticated Kangaroo Management Plans. There is no debate amongst informed commentators ..... the kangaroo harvest is sustainable, poses no threat to the species and delivers positive environmental and economic benefits.

Total Grazing Pressure (TGP) is one of the key environmental management indices in the grazing rangelands. At any one time, kangaroos typically represent 30% of Total Grazing Pressure. If country is expected to support sheep and cattle as well as kangaroos, then kangaroo numbers must be controlled to prevent overgrazing and plant biodiversity loss.

The kangaroo industry has grown substantially in the past 5 years. Export markets for manufacturing meat (for smallgoods manufacture) in particular have grown dramatically. These markets are subject to strong price sensitivity and fluctuate with competition from cheaper substitutes, but they have placed a sound floor in the industry. This has led to a strong demand for kangaroos.

Drought conditions have reduced overall kangaroo populations over the past few years. Correspondingly quotas have been reduced. As a result, sectors of the industry have consistently reached the quota before the end of the year. In 2007, for example, the entire Queensland industry was shut down during November by the state government in response to predictions that quota would be fully taken by that time. As it turned out these predictions proved inaccurate, however it highlighted the fact that industry was at the time operating close to full capacity.

Yet significant portions of Australia, including all of the Northern Territory and Victoria, do not allow any commercial harvest. In most of these regions kangaroos are still culled as part of agricultural damage mitigation, although typically this is well below the levels required for adequate control of TGP and well below the maximum sustainable yield of the population. When they are culled in these regions, the carcasses are generally left to rot. This is an environmental and economic waste, particularly during times of increasing world food shortages.

These regions do not have in place the Kangaroo Management Plans required to enable a commercial harvest for export. These Plans specify comprehensive management actions, including annual population assessment, which give kangaroos considerable species protection. The Plan also have strict animal welfare guidelines under which kangaroos must be shot. Thus implementation of commercial kangaroo harvesting in these regions offers benefits not only in the sustainable management of the land, but also in sustainable and humane management of kangaroos.

This project's intent was to seek introduction of commercial kangaroo harvesting into as many as possible regions in which it currently can not take place. Doing so offers benefits to the kangaroo industry, the local environment, regional economies and the kangaroo populations.

## 2. The Potential

At the start of January 2006 significant areas of Australia were not available to the kangaroo industry for commercial harvest operations. These regions fall into several categories:

- National Parks, state forest and other ‘conservation’ areas
- areas for which no Management Plan exists
- areas covered by a Management Plan which industry can not access due to regulatory restrictions, excluding conservation reserves.

The last two are the subject of this project. The kangaroo industry has never looked for access to conservation reserves.

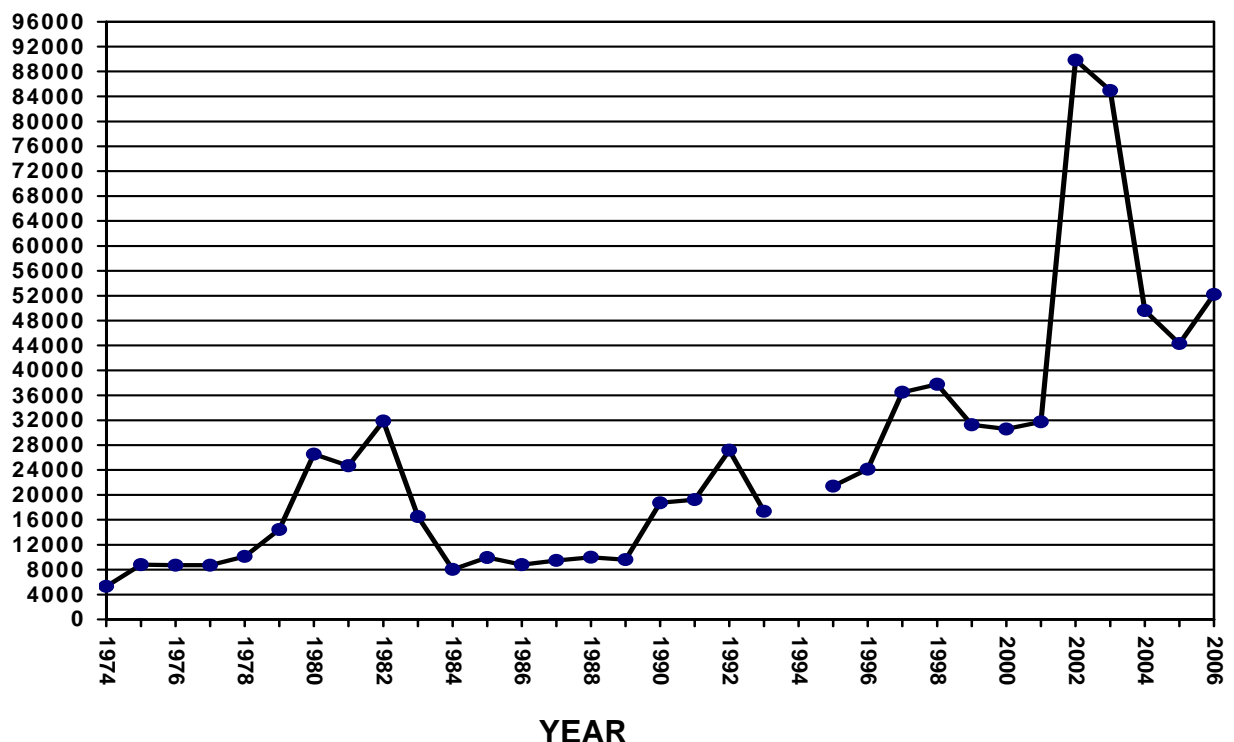
### 2.1 Areas not covered by Management Plans

#### 2.1.1 All of Victoria

The Victorian Department of Sustainability and the Environment issue cull permits for kangaroos on agricultural land in response to farmer concerns about excessive numbers. The graph below shows the historical records of the numbers of permits issued per year.

**Fig 1. Number of Kangaroos Authorised to be Destroyed on Crop Protection Permits in Victoria**

All Species Combined 1974-2005



2002 figures include 15,000 kangaroos shot at Puckapunyal.

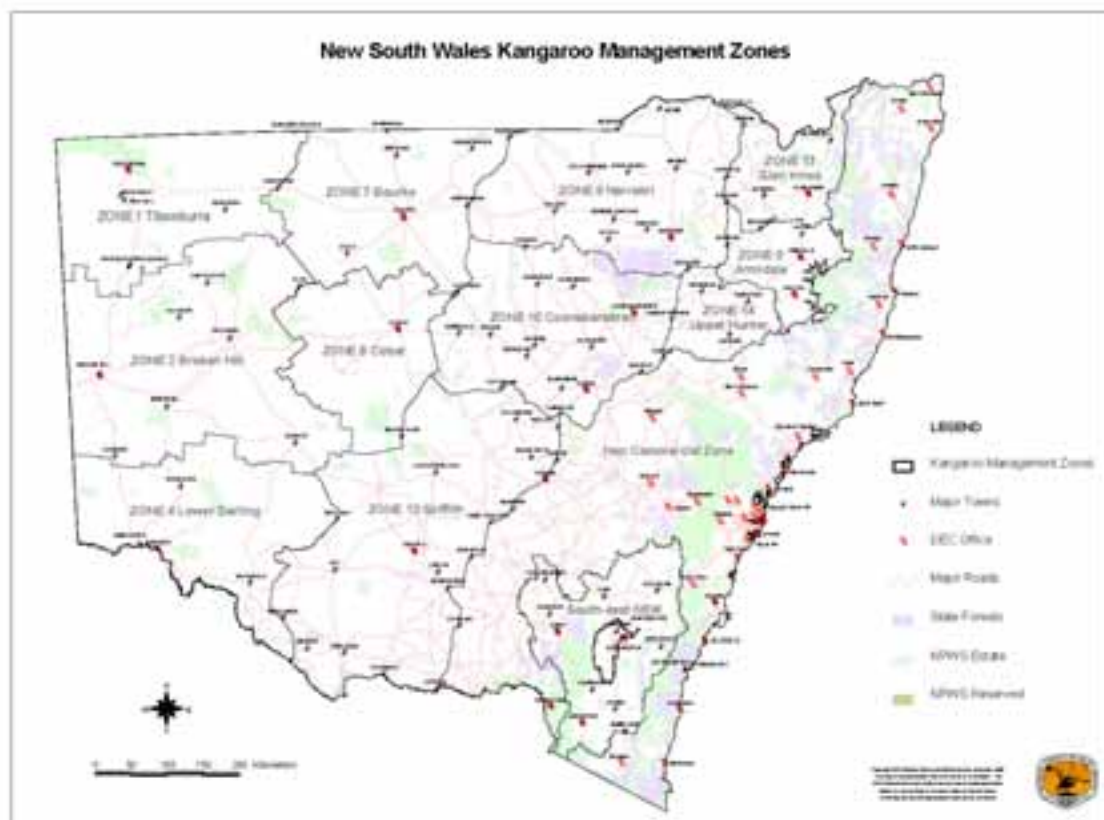
***NB Kangaroos culled on land managed by Parks Victoria are not included in these figures.***

Clearly Victoria has a rapidly expanding kangaroo problem. The average cull over the period 2002-2007 was 65,000/year. Given the authorities readily admit the numbers of kangaroos actually culled would be significantly more than the numbers of permits applied for, numbers culled each year in Victoria are approaching 80,000. Culls rarely operate at levels approaching maximum sustainable yield, thus Victoria may support a sustainable kangaroo harvest approaching 100,000 animals/year. However no reliable estimate of the Victorian kangaroo population has ever been undertaken.

### 2.1.2 Parts of Eastern NSW

Significant areas of NSW are not included in commercial zones. The main historical reason being lack of suitable population monitoring techniques for forested areas. However after establishing a commercial zone in the southern highlands the State has developed survey techniques which can be replicated in other equally heavily forested areas.

The map below shows the regions in which commercial harvesting cannot currently take place.



### 2.1.3 South Australia

#### 2.1.3.1 Yorke Peninsula, lower South East districts

In the past, no quotas have been issued since no kangaroo population surveys are conducted in these regions.

Of the three lower south east districts viz. Coorong, Lacedpede-Tatiara and Lower South East, only The Coorong has been surveyed once in 2005, showing low kangaroo numbers. However the fixed wing aircraft technique used by DEH is not very well suited to these more scrubby regions. Any issue of quota in these regions would also be hampered by the tag issue system in SA. This puts the onus on the land holder to get tags, rather than the harvester. In regions of smaller holdings DEH's experience is that land holders who are unfamiliar with the system tend to not get tags but continue to seek destruction permits. DEH is currently reviewing the tag issue system.

## ***The Alinytjara Wilurara region***

Approximately two thirds of this is Aboriginal land, the remaining lower one third is conservation reserve. Some regions have been surveyed for camels, with incidental surveys for kangaroos at the same time. These suggest low kangaroo numbers, but they are by no means authoritative. DEH has no plans for further surveys. However the Aboriginal Partnership Group within DEH has a program to encourage entry into the kangaroo industry for Aboriginal peoples as harvesters.

### **2.1.3 All of the Northern Territory**

There is no commercial harvest of kangaroos in the NT. There is no similar data to that available for Victoria to indicate possible cull levels or population numbers. Anecdotal evidence from pastoralists suggests the NT carries a sizable kangaroo population, particularly on the Barkly Tablelands.

In addition, the evidence of climate change suggests rainfall across northern Australia will improve noticeably with global warming. This may lead to considerable growth in kangaroo numbers as pasture availability improves.

## **2.2 Areas covered by Management Plans but not accessible to industry**

### **Western Australia**

#### ***2.2.1.1 Vacant crown land not classified as conservation reserve***

These include vast tracts of land such as the northern Nullarbor, the southern Kimberly and east Newnham. Kangaroos can only be harvested in Western Australia on property subject to an Open Season Notice. These are issued to individuals and stipulate they apply only to “land they own or occupy”. Thus this precludes any commercial harvest on vacant crown land, which is a significant portion of the state.

## **3. The benefits of a Management Plan**

Kangaroos are not ‘protected’ in any of the regions identified at 2.1. These are all agricultural regions in which kangaroos are culled by farmers or pastoralists under permit, as a damage mitigation exercise. The extent of these culls and their impact on the populations is at best very poorly monitored. In addition these culls are not subject to the strict animal welfare controls of the commercial harvest and the welfare outcomes are also poorly monitored.

The kangaroos killed under these culls are largely left to rot where they are shot.

One would think there is a better option.

Victoria and the Northern Territory are alone in Australian States not having a Kangaroo Management Plan enabling a commercial harvest of kangaroos. Why? The NT simply pleads lack of financial resources, but what’s Victoria’s excuse?

Below is a document prepared as part of this project and submitted to the Victorian Government on the issue.

## **4. A Case for Kangaroo Management Plans**

### **4.1 The Resource**

Victoria has a substantial, and growing, kangaroo population. Unfortunately under the current low level of kangaroo management there are no reliable estimates of its actual size. However for the past six years the State has issued permits to cull on average at least 65,000 kangaroos each year. This does not include kangaroos culled on Parks Victoria lands, or those shot illegally by frustrated farmers taking the law into their own hands. Given the strong upward trend line in permit numbers issued over the period in spite of the horrendous drought conditions, and the reasonable assumption that actual populations are following this trend, it appears this cull also does not represent anything like the States maximum sustainable yield of kangaroos.

The kangaroos culled in Victoria are largely left to rot.. Sold to the commercial industry they would yield a direct return of \$5 Million. The full benefits of establishing a commercial harvest however are substantially more than this.

### **4.2 Benefits**

#### **4.2.1 Direct Economic**

Culling kangaroos is currently a net cost to the community. Pastoralists either have to do it themselves or encourage amateur hunters to do it for them. If a commercial industry was established to take the full currently permitted cull, this would then:

- turn this cost into a \$2.2 M injection into the Victorian economy,
- turn a shameful waste into a sustainable harvest,
- turn an agricultural problem into jobs in rural towns.

#### **4.2.2 Animal Welfare**

Culling of kangaroos in Victoria is currently left to amateur hunters and farm hands. Establishing a commercial harvest would hand it over to licensed, trained and accredited professional kangaroo harvesters. Management Plans require professional harvesters to be trained and assessed in their competency with their firearms, knowledge of the wildlife regulations and hygienic procedures. The professionalism this delivers can be demonstrated by the results of the latest RSPCA audit into the welfare outcomes in the kangaroo harvest. Published in 2002 it demonstrated that 99.8% of kangaroos taken by commercial harvesters are shoot either in the head or at the base of the skull adjoining the neck (targeting the brain stem), exactly where the shooters aim! This amazing level of accuracy will deliver considerable animal welfare advantages over the current system in Victoria.

Kangaroos are being culled in Victoria, under permit or not, to protect agricultural enterprises. Is it not the responsibility of the Victorian government to ensure that any culling which does take place is as humane as possible? If so then clearly the most humane option is professional kangaroo harvesters.

#### **4.2.3 Conservation**

*Kangaroos in Victoria are currently unmanaged wildlife. Virtually nothing goes into ensuring the animal is protected or managed in any way. The State has no clear idea of how many kangaroos it supports, of where they live, of what's happening to their populations in response to seasonal conditions, nor, most disturbingly, of how healthy they are.*

Establishing a Management Plan changes all that. Firstly it requires all kangaroos taken have a tag issued by the State fixed to them. These are sold to Harvesters, in NSW they sell for \$0.80 each. Add harvester and chiller depot licensing fees and the Victorian Government then could expect a direct injection of \$150,000/anum to fund kangaroo management, that's about \$150,000 more than is currently devoted to the issue. This funding would deliver an annual aerial survey to estimate kangaroo populations and determine their response to harvest pressure and seasonal conditions.

The data collected from the harvest (all harvesters in other States are required to report at least monthly what kangaroos, of what sex and weight they take from where and who they sell them to) will then enable Victoria to determine with some certainty how many kangaroos it has, where they are and to monitor the occurrence of any disease conditions in the population. All essential information for responsible wildlife management.

#### 4.2.4 Pastoral Productivity

Complex computer simulation trials conducted by the NSW Department of Agriculture have estimated that harvesting kangaroo's at the populations maximum sustainable yield can lead to a long term increase in wool yields of up to 25%. Victoria's wool clip varies from year to year, but typically it's worth some \$480M. Let's discount the estimated benefit in wool production from kangaroo harvesting by half, ..... and then by half again,.... and then by half again, ..... and then by half again .....this still yields a benefit of \$7.5M/annum to the Victorian wool industry! Add to this the benefits likely from improved crop yields due to less kangaroo damage and a substantial net yield to agriculture seems likely.

#### 4.2.5 Community safety

Collisions with kangaroos are a major cause of car accidents. The RACV recently reported they alone received 4421 motor vehicle insurance claims relating to animal collisions in 2005. An increase of 43% over the past two years.

Accurate enough data is not available to estimate how many of these are due to collisions with kangaroos. However it would be a reasonable percentage. It's also reasonable to expect a well managed kangaroo harvest to reduce this.

#### 4.2.6 Summary of benefits

Benefit	annual \$ value	other inherent value
Direct value of harvest	\$5,000,000	Jobs in rural areas
'cull' turned into a 'harvest'		Improved animal welfare outcomes
Population monitoring		Improved species management and conservation safeguards.
Better agricultural damage mitigation - improved wool clip - reduced crop loss	say a min. of \$10,000,000	
Fewer road accidents involving kangaroos	say a min. of \$1,000,000	Fewer deaths or injuries on roads.
Total Annual \$ value	say \$16,000,000/year	

#### 4.2.7 More about kangaroo management.

Kangaroos have been harvested extensively in all other States for several decades. This has enabled the development of highly refined management systems which ensure the harvest delivers no threats to kangaroo species. Indeed studies conducted in Victoria even suggest harvesting kangaroos delivers a net conservation gain by reducing grazing pressure and increasing the abundance of rare and threatened species. More on the sustainability of kangaroo harvesting can be found at <http://www.kangaroo-industry.asn.au/morinfo/BACKGR1.HTM>.

There is no informed and credible scientific opposition to the kangaroo harvest based on conservation or environmental grounds. The opposite is the case as demonstrated in the list of industry supporters given below. On animal welfare grounds the industry also attracts considerable credible support, not the least of which is the Australian Veterinary Association.

#### 4.2.8 Public support for kangaroo harvesting

A wide range of conservation and scientific NGO's are vocal in their support for the kangaroo harvest, some are listed below:

- The Australian Veterinary Association
- Australian Association of Veterinary Conservationists and Biologists
- Ecological Society of Australia
- Wildlife Preservation Society of Queensland
- Conservation Council of SA
- Nature Conservation Society of South Australia
- The Australasian Wildlife Management Society
- Wildlife Preservation Society of Australia
- Planet Ark

The vast and increasing majority of Australian's (and Victorian's) support the idea also. Below is a selection of some surveys on the issue, showing an upward trend in support.

#### Public surveys on attitudes to the kangaroo industry

Date	Source	Question	Number surveyed	Result
March 1997	RIRDC	Kangaroos are a valuable natural resource and we should use their meat and leather?	503	77% yes 8% unsure
July 2000	publicdebate.com	Should we be eating kangaroo meat?	7540	75% yes 5% unsure
March 2002	60 Minutes	Is it barbaric to cull kangaroos?		81% no
May 2002	Herald Sun	Should (Vic) state laws allow commercial use of slaughtered kangaroos?	1698	87% yes
April 2007	Newspoll	Would you support a change in regulations to allow (Vic) kangaroo meat and leather to be sold commercially	300	80% yes

The last survey quote is telling. It was conducted in Victoria only last year showing overwhelming support. More details on this are available.

## 5. What's to be done?

It seems clear from the Victorian analysis that introducing commercial kangaroo harvesting offers significant economic, environmental and animal welfare benefits to the regions where it currently does not occur.

In all the regions detailed in this study the only impediment is government wildlife based regulatory restrictions. All Meat Hygiene regulations are in place to enable kangaroo harvesting. The kangaroo industry has sufficient processing capacity to cope with the additional product all these regions could deliver. The industry could readily expand operations into these regions with simple infrastructure developments such as field depots.

The sections below detail for each major region the regulatory impediment identified and the actions undertaken by this project to attempt to change them.

### 5.1 Victoria

The current Victorian government claims to have a policy opposed to commercial kangaroo harvesting. It's a very old policy. It seems to exist in peoples minds only (no-one has ever been able to produce the actual policy document) and changing it doesn't occupy a very high priority in the present Victorian government agenda. Along with supportive representatives from the Victorian Field and Game and the Sporting Shooters Associations, the project delivered the document detailed in the above chapter to the Environment Minister during detailed discussion late in 2006. This was followed up with further discussion and meetings during 2007 and 2008.

Support of Field and Game and the Sporting Shooters Association is essential. Both represent recreational shooters who have strong political influence in Victoria. Is essential both do not see a commercial kangaroo harvest as a threat to property access for recreational shooters.

Subsequent discussions with the Ministers office indicated concerns over public opinion on the issue. The survey detailed in 5 was commissioned in an attempt to dismiss these concerns.

### 5.2 NSW

NSW has a Management Plan. Commercial kangaroo harvesting currently occurs in most of the State. This has wisely been drafted allowing them to add to it without having to seek Commonwealth approval. Thus it is possible for the State to create new harvest zones or to change boundaries of existing zones, provided population surveys indicate kangaroo numbers justify a harvest.

The project, in conjunction with the relevant Rural Protection Boards, encouraged the Department of Environment and Climate Change to establish commercial harvest in the areas marked in the map below.





### 5.3 Northern Territory

The NT has always claimed it can not afford the cost of establishing and maintaining a Management Plan. Which to some extent may well be valid since large parts of the Territory would not support enough kangaroos to justify a commercial harvest. However it seems apparent from anecdotal evidence that the Barkley Tablelands and other regions have a significant kangaroo population.

The project, along with the Northern Territory Cattleman’s Association, has suggested to the NT government that it conduct a survey of the Barkley to establish kangaroo populations and the potential for a commercial harvest. If numbers justified doing so the government could develop a regional plan for that part of the Territory only. This would greatly reduce initial set-up costs and if written appropriately, could be expanded to include other regions, such as the Victoria River district, at a later date.

### 5.4 South Australia

The project strongly lobbied the SA DEH to conduct surveys in the lower South East regions to accurately establish the potential for quota allocation.

### 5.5 Western Australia

Via the WA Kangaroo Management Advisory Committee, the project arranged for a request to the WA Department of Conservation and Land Management to alter the wording on property permits, precluding harvesters from large parts of the State.

## 6. Public Opinion on the issue

Public opinion in Australia has always been substantially in favour of kangaroo harvesting. The project is not aware of any survey of the general public, even emotive media surveys, which has returned a less than 75% approval for the industry. However a vocal micro-minority has in the past managed to harness the 'novelty' value of the industry to get wide media coverage of their opposition. This leaves sensitive governments thinking the public is more divided than is reality.

A selection of past public opinion surveys is presented at 4.2.8. In response to the Victoria governments concern over the question the project commissioned a further survey specific to this issue. The survey conducted by Newspoll asked 300 Victorians the question:

In Victoria each year between 50,000-80,000 kangaroos are culled under strict guidelines for conservation and sustainability, to keep populations at stable levels. However existing government regulations mean that this meat and leather can not be used in any way and is wasted. Would you support or not support a change in regulations which would allow this meat and leather to be used commercially?

The overall result was:       79.7% yes  
  13.1.% not sure  
  7.2% no.

### 6.1 Specific Results were -

86% of those working full time would support the change.

Outside of the metropolitan area support for the change in legislation increases to 87%.

Interestingly the support for the change increases with increasing education and with increasing household income.

The lowest levels of support for these changes are within the 18 to 24 year olds (68%), females (72%) and people with household incomes under \$30,000 (69%).

The survey technique and results are given at Appendix 1.

# 7. Results and Discussion

## 7.1 Victoria

After persistent contact, the Victorian government finally held serious discussion on the question early in 2008. The result being a willingness to at least look into the capacity of Victoria to fund a Kangaroo Management Plan and the potential yield of kangaroos from the population. It is expected the Victorian Government will commission research to examine these questions.

## 7.2 NSW

NSW has accepted a plan to expand commercial harvests into the region detailed at Fig 2.1.2. The first step is conducting a survey to determine populations. This will inform further developments. The survey will be undertaken during 2008.

## 7.3 NT

The NT government has consistently failed to respond to requests to discuss the issue. This is disappointing from a government which is otherwise highly regarded internationally for its commitment to sustainable wildlife management.

## 7.4 South Australia

At the present time, DEH does not support establishing a new harvest zone in the South East. However, they are looking into the possibility of trialing an extension of the current commercial harvest zone further south for the harvest of western grey kangaroos. Early in 2008 they started investigations on the feasibility of conducting surveys to establish populations in the region. It is anticipated that such a survey will be undertaken in July 2008. The results of this survey will guide decisions on extension of the zone.

## 7.5 Western Australia

Permit wording has been changed in WA and industry can now gain access to vacant crown lands.

These initiatives could deliver a substantial increase in available kangaroo quota to the industry. If the NSW, Victorian and SA surveys all point towards establishment of commercial harvests in the various regions this may potentially amount to a 5% increase in total quota. At current values this adds another \$9-11 million to the industry's production.

When account is also made for improved agricultural productivity and social benefits such as decreased road accidents involving kangaroos this benefit starts to exceed \$26 million.

Further accounting for benefits such as:

- improved capacity to maintain bio-diversity in the face of overgrazing risks
- improved animal welfare outcomes resulting from kangaroos being taken by professional harvesters rather than being culled to protect agricultural crops
- improved data collection on kangaroo populations giving better species management suggest this is a very profitable result.

# **Appendix 1.**

## **Survey Technique and results in Victoria**



April 2007

## Kangaroo Regulations

Job No. 070402

Prepared for

Mr Rod Hall  
**STRATEGIC DIALOGUE**  
16 Sussex Road  
FRANKSTON VIC 3199

Level 5  
Newspoll House  
407 Elizabeth Street  
Surry Hills NSW 2010  
Tel (02) 9921 1000  
Fax (02) 9212 5880  
[newspoll@newspoll.com.au](mailto:newspoll@newspoll.com.au)

Level 3  
126 Wellington Parade  
East Melbourne VIC 3002  
Tel (03) 9416 4100  
Fax (03) 9417 1800  
[newspoll.melb@newspoll.com.au](mailto:newspoll.melb@newspoll.com.au)



## METHODOLOGY

### Sample

- Conducted in Victoria Statistical Division among 300 respondents aged 18 years and over.
- Respondents were selected by means of a stratified random sample process which included:
  - a quota set for each telephone area code;
  - random selection of household telephone numbers drawn from current telephone listings for each area code;
  - random selection of an individual in each household by a "last birthday" screening question.

### Interviewing

- Conducted by telephone over the period of 13 - 15 April 2007 by fully trained and personally briefed interviewers.
- To ensure the sample included those people who tend to spend a lot of time away from home, a system of call backs and appointments was incorporated.

### Weighting

- To reflect the population distribution, results were post-weighted to Australian Bureau of Statistics data on age, highest level of schooling completed and sex.



**SECTION B** - **PROG NOTE: ASK RESPONDENTS IN VIC ONLY. OTHERS GO TO NEXT SECT**

B1 Now a question about something different. In Victoria each year between 50,000 and 80,000 kangaroos are culled, under strict guidelines for conservation and sustainability, to keep populations at stable levels. However, existing government regulations mean that this meat and leather cannot be used in any way and is wasted.

Would you **support** or **not** support a change in regulations that would allow this meat and leather to be used commercially?

**PROG NOTE:**  
**- SINGLE RESPONSE**

1	Yes \ support
2	No \ not support
3	Neither \ Don't know



**DEMOGRAPHICS**

1 To make sure we're speaking to a cross-section of people, please tell me if you are aged...? **READ OUT 01-04 IF AGED 18-34 OR 05-11 IF AGED 35 AND OVER**

18-19.....	01	40-44.....	06
20-24.....	02	45-49.....	07
25-29.....	03	50-54.....	08
30-34.....	04	55-59.....	09
35-39.....	05	60-64.....	10
		65+.....	11
		REFUSED.....	12

2 **RECORD SEX** → MALE..... 1  
FEMALE..... 2

3 Are you the person who is **most** responsible for doing the household grocery shopping?  
**IF UNSURE / SHARED EQUALLY WITH SOMEONE ELSE CODE AS "YES" IE CODE 1**

YES..... 1  
NO ..... 2

4(a) How many people aged 18 years or over live in your household, including yourself?		---4(a)--- <b>ADULTS</b>	---4(b)--- <b>CHILDREN</b>
	ONE .....	1	1
	TWO.....	2	2
4(b) And how many children aged 17 years or younger live in your household?	THREE .....	3	3
	FOUR .....	4	4
	FIVE .....	5	5
	SIX+ .....	6	6
	NONE.....	-	7
	DON'T KNOW / REFUSED.....	8	8

5 Are you in paid employment full time, part time or not at all?  
**IF UNSURE / CASUAL / SELF EMPLOYED** Is that closer to full time or part time hours?

FULL TIME..... 1  
PART TIME..... 2  
NOT AT ALL..... 3  
DON'T KNOW / REFUSED..... 4

6 To help us ensure we have a representative sample could you please tell me the highest level of primary or secondary school you personally have completed? Was it...? **READ OUT 1-3**

YEAR 9 OR BELOW..... 1  
YEAR 10..... 2  
OR, YEAR 11 OR 12..... 3  
DON'T KNOW / REFUSED..... 4

7 And **apart** from primary and secondary school, what is the highest level of education you personally have **completed**?  
Was it...? **READ OUT 1-3**

A DIPLOMA OR CERTIFICATE FROM A COLLEGE OR TAFE, INCLUDING AN APPRENTICESHIP..... 1  
A DEGREE OR DIPLOMA FROM A UNIVERSITY..... 2  
OR, NONE OF THESE..... 3  
REFUSED / DON'T KNOW..... 4

8 Which **one** of the following best describes your present marital status?  
**READ OUT 1-6**

NEVER MARRIED..... 1  
DEFACTO OR LIVE TOGETHER..... 2  
MARRIED..... 3  
SEPARATED BUT NOT DIVORCED..... 4  
DIVORCED..... 5  
WIDOWED..... 6  
REFUSED..... 7

9 Could I please have the occupation of the main income earner of your household?  
**IF NECESSARY** Could I also have the position or job title of the main income earner of your household?

\_\_\_\_\_

\_\_\_\_\_

10 Is your household's combined annual income from all sources, before tax...  
**READ OUT A-D.** Would that be...? **READ OUT 02-04 IF 30 TO 59, 06-08 IF 60 TO 89 OR 10-11 IF 90 THOUSAND OR MORE**

**INTERVIEWER INFORMATION**

**UNDER \$30,000 PA IS UNDER \$577 PER WEEK**

-----

**\$30,000-\$39,999 PA IS \$577-\$769 PER WEEK**

**\$40,000-\$49,999 PA IS \$770-\$962 PER WEEK**

**\$50,000-\$59,999 PA IS \$963-\$1,154 PER WEEK**

-----

**\$60,000-\$69,999 PA IS \$1,155-\$1,346 PER WEEK**

**\$70,000-\$79,999 PA IS \$1,347-\$1,538 PER WEEK**

**\$80,000-\$89,999 PA IS \$1,539-\$1,731 PER WEEK**

-----

**\$90,000-\$99,999 PA IS \$1,732-\$1,923 PER WEEK**

**OVER \$100,000 PA IS OVER \$1,923 PER WEEK**

**A) UNDER 30 THOUSAND DOLLARS..... 01**

**B) 30 TO 59**

\$30,000-\$39,999..... 02  
\$40,000-\$49,999..... 03  
OR, \$50,000-\$59,999..... 04  
REFUSED / DON'T KNOW..... 05

**C) 60 TO 89**

\$60,000-\$69,999..... 06  
\$70,000-\$79,999..... 07  
OR, \$80,000-\$89,999..... 08  
REFUSED / DON'T KNOW..... 09

**D) OR, 90 THOUSAND OR MORE**

\$90,000-\$99,999..... 10  
OR, \$100,000 OR MORE..... 11  
REFUSED / DON'T KNOW..... 12  
REFUSED..... 13  
DON'T KNOW..... 14





## COMPUTER TABLES

### Base and filters

- BASE - 'Weighted respondents' (WTD RESP) - the total number of completed interviews weighted to reflect the latest Australian Bureau of Statistics population estimates. Expressed in thousands (000's).
- FILTERS - Screen the questionnaires so that only certain types of respondents will be represented in the table.

### Analysis panel

- Comprises demographic or other discriminators, sub-divided into standard groups.
  - 1 SEX - Male, Female
  - 2 AGE - 18-24 years, 25-34 years, 35-49 years, 50+ years
  - 3 GROCERY BUYER - Whether the respondent is the person in the household most responsible for doing the weekly grocery shopping  
Yes, No
  - 4 CHILDREN - Whether there are children under the age of 18 currently living in the household.  
Yes, No
  - 5 MARITAL STATUS  
Married - married, defacto or living together  
Not married - never married, divorced, separated or widowed



- 6 WORK STATUS - Whether the respondent is in paid employment:  
Full time, Part time, Not at all
  
- 7 AREA  
'Melbourne' - the Statistical division of Melbourne as defined by the Australian Bureau of Statistics  
'X-city' - the rest of Victoria
  
- 8 SOCIO ECONOMIC STATUS (SES) - Based on the occupation of the main income earner of the household, using the ABS ASCO statistical classification. Subdivided into:  
  
White collar - professional, para-professional, manager, administrator, clerk, salesperson or other white collar worker.  
  
Blue collar - tradesperson, plant and machine operator, labourer, retired with previous occupation unknown, other blue collar workers, student, home duties or unemployed.
  
- 9 HIGHEST EDUCATION - Primary / secondary school, College / apprenticeship, University degree
  
- 10 HOUSEHOLD INCOME - Household's combined annual income from all sources before tax (for respondents specifying household income)  
Less than \$30,000, \$30,000 - \$69,999, \$70,000+



## **Respondents and weighted respondents**

- **RESPONDENTS** - The total number of completed interviews before weighting has been applied. The figure directly below the 'Total' is the number of respondents included in that table. The number of respondents included in any particular column appears at the top of the column.
- **WTD RESP (000's)** - The population estimates represented by the respondents, expressed in thousands. The percentages in the main body of the table are based on these weighted figures.

## **Questions**

- Down the left side of the page is a question description and response frame.

## **Totals**

- Column totals appear across the bottom of the table. These will be greater than 100 percent if there have been multiple responses by individuals.

## **FORMAT OF RESULTS**

- Data also available on disc in Surveycraft, TABGEN, SPSS, SYSTAT or ASCII formats.



KANGAROO REGULATIONS - 13/15 APR 2007

NEWSPOLL  
TABLE 1

JOB:B070402A  
PAGE 1

STANDARD ANALYSIS PANEL I \*BY\* QBI.SUPPORT \ NOT SUPPORT USING KANGAROO MEAT AND LEATHER COMMERCIALY

BASE: WID. RESP.(000's)

WEIGHTS: HIGHEST LEVEL OF SCHOOLING COMPLETED/AGE/SEX/AREA

	SEX		AGE					GROCERY BUYER		CHILDREN		MARITAL STATUS		WORK STATUS			
	TOTAL	MALE	FEMALE	18-24	25-34	18-34	35-49	50+	YES	NO	YES	NO	MARRIED	NOT MARRIED	FULL -TIME	PART -TIME	NOT AT ALL
RESPONDENTS	300	150	150	23	42	65	80	155	213	87	86	214	171	129	132	70	98
WID. RESP.(000's)	3966	1933	2033	494	721	1215	1138	1613	2681	1285	1295	2671	2114	1852	1729	919	1318
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
QBI.SUPPORT \ NOT SUPPORT USING KANGAROO MEAT AND LEATHER COMMERCIALY																	
Yes \ support	3160	1705	1455	335	608	943	965	1253	2184	977	1060	2100	1750	1411	1481	736	944
	79.7%	88.2%	71.6%	67.7%	84.3%	77.6%	84.8%	77.6%	81.5%	76.0%	81.8%	78.6%	82.8%	76.1%	85.6%	80.1%	71.6%
No \ not support	519	143	376	113	94	207	127	185	355	164	214	305	199	320	149	160	210
	13.1%	7.4%	18.5%	22.8%	13.0%	17.0%	11.2%	11.5%	13.2%	12.7%	16.5%	11.4%	9.4%	17.3%	8.6%	17.4%	15.9%
Neither \ Don't know	287	86	202	46	19	66	46	176	142	145	21	266	165	122	99	23	165
	7.2%	4.4%	9.9%	9.4%	2.6%	5.4%	4.0%	10.9%	5.3%	11.3%	1.7%	10.0%	7.8%	6.6%	5.7%	2.5%	12.5%
TOTALS	3966	1933	2033	494	721	1215	1138	1613	2681	1285	1295	2671	2114	1852	1729	919	1318
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



KANGAROO REGULATIONS - 13/15 APR 2007

NEWSPOLL  
TABLE 2

JOB:B070402A  
PAGE 2

STANDARD ANALYSIS PANEL II \*BY\* QB1.SUPPORT \ NOT SUPPORT USING KANGAROO MEAT AND LEATHER COMMERCIALY  
BASE: WID. RESP.(000's)  
WEIGHTS: HIGHEST LEVEL OF SCHOOLING COMPLETED/AGE/SEX/AREA

	TOTAL	AREA		S.E.S.		HIGHEST EDUCATION COMPLETED			HOUSEHOLD INCOME		
		MELB -OURNE	REST VIC	WHITE	BLUE	PRIMARY /SECOND -ARY SCHOOL	COLLEGE /APPRENT -ICESHIP	UNIVER -SITY DEGREE	LESS THAN \$30000	\$30000 TO \$69999	\$70000 PLUS
RESPONDENTS	300	200	100	165	135	98	89	113	63	95	105
WID. RESP.(000's)	3966	2915	1051	2068	1898	1571	1213	1182	940	1107	1327
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
QB1.SUPPORT \ NOT SUPPORT USING KANGAROO MEAT AND LEATHER COMMERCIALY											
Yes \ support	3160	2248	912	1605	1555	1205	977	979	651	963	1129
	79.7%	77.1%	86.7%	77.6%	81.9%	76.7%	80.5%	82.8%	69.3%	86.9%	85.0%
No \ not support	519	423	96	339	180	217	162	139	166	128	142
	13.1%	14.5%	9.1%	16.4%	9.5%	13.8%	13.4%	11.7%	17.6%	11.5%	10.7%
Neither \ Don't know	287	244	44	124	163	149	74	64	124	17	56
	7.2%	8.4%	4.1%	6.0%	8.6%	9.5%	6.1%	5.4%	13.1%	1.5%	4.3%
TOTALS	3966	2915	1051	2068	1898	1571	1213	1182	940	1107	1327
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%



## NEWSPOLL TERMS AND CONDITIONS

### A) Professional behaviour and Privacy

NEWSPOLL is a member of the Association of Market and Social Research Organisations and is AS4752 quality accredited. Newspoll adheres to the Code of Professional Behaviour of the Australian Market and Social Research Society and the Market and Social Research Privacy Principles. The Code of Professional Behaviour includes the following key requirements:

#### 1. Confidentiality

Clients' identities will not be revealed to respondents nor to any third party without the client's consent or unless Newspoll becomes legally obliged to do so. Respondents' identities will not be revealed to clients without the respondent's consent and only in cases where the information is to be used for research purposes and the intended use has been explained to respondents.

#### 2. Ownership of information

Results to a research study commissioned by a client become the property of the client. Results to syndicated studies remain the property of NEWSPOLL.

All research proposals, research designs, questionnaires and processing techniques, including systems of weighting, remain the property of NEWSPOLL. All computer table reports provided by NEWSPOLL identify the variables used in the weighting process. Further details, if required, are available at an additional cost. Photocopies of individual questionnaires or a copy of the database, **excluding** respondents' identities, may be made available to a client at the client's expense.

Unless specified otherwise, any hard copy or electronic material provided by a client for the conduct of a project will be retained by Newspoll and stored in a secure location.

#### 3. Publication of results

Clients choosing to release the findings of a NEWSPOLL survey must ensure that the results are represented in an objective and non-misleading fashion.

NEWSPOLL advises that all questions must be objective and not intentionally misleading or attempting to elicit a desired response. NEWSPOLL must be consulted and agree in advance on the form and content of any intended release. NEWSPOLL must be provided with a copy of the proposed release and given 48 hours for its review. Up to two executive hours will be made available for this review process. Additional reviewing time, if required, will be charged at an hourly rate. NEWSPOLL is obliged to take action to correct any misleading statements about the research or its findings. **The NEWSPOLL name may be used only in cases where these conditions have been satisfied.**

### B) Conditions of agreement between NEWSPOLL and clients

#### 1. Reporting

Standard reporting format is a computer table report consisting of analysis of each client question by up to two standard panels of demographic discriminators. Reports are available either in electronic (PDF) format, or hard copy (A4 sized, two copies). Extra or non-standard analysis and optional reporting formats are available at additional cost and may require longer reporting time.

#### 2. Conduct of fieldwork

From time to time Newspoll employs the services of associated companies to assist with fieldwork related services. Newspoll reserves the right to do so when required.

### 3. Costs and confirmation of costs

Costs for a study can be confirmed only after agreement on questionnaire outline or on sighting a draft client questionnaire. Changes to agreed research specifications and/or questionnaire will result in a cost revision. Unless otherwise specified, all quoted costs refer to Australian dollars and reflect current year's rates, effective for the January - December period. Costs are quoted exclusive of GST. For Australian clients, GST will be shown separately on a tax invoice and must be paid for by the client.

### 4. Omnibus bookings, approvals and late changes

Space on NEWSPOLL's omnibuses is strictly limited to ensure high quality response. Early bookings, at least a week prior to fieldwork, are recommended and clients are advised to finalise and approve questionnaires as early as possible. Final approval of a questionnaire refers to approval, after all agreed changes, to a questionnaire developed or formatted by Newspoll and submitted to a client for review.

Questionnaires approved, or bookings made, after the following deadlines are subject to late surcharges as shown:

	Final Questionnaire Approval Deadline	Late approvals or changes	
<b>Telephone Omnibus</b>			
Fri - Sun	Thurs 11:00am	After 11:00am After 4:00pm	15% of study cost, min \$425 plus GST 20% of study cost plus one question unit cost per page
Mon - Wed or Mon - Thurs	Thurs 5:00pm	After 5:00pm After 1:00pm Fri	15% of study cost, min \$425 plus GST 20% of study cost plus one question unit cost per page
Tues - Thurs	Mon 11:00am	After 11:00am After 4:00pm	15% of study cost, min \$425 plus GST 20% of study cost plus one question unit cost per page
<b>Online Omnibus</b>			
Thurs-Sun	Tues 4:00pm	Questionnaires <b>must be</b> finalised and approved by specified deadline, otherwise they <b>cannot</b> be included in the Online Omnibus and cancellation charges (below) apply. Late provision or changes to visuals <b>may</b> be accommodated up to 1:00pm Wed, subject to late charge of \$600 + GST per visual.	

### 5. Cancellation or postponement charges

NEWSPOLL reserves the right to charge up to full quoted study cost where a confirmed booking is made and the study is subsequently cancelled or postponed within three working days prior to the commencement of fieldwork or after fieldwork has begun. Studies cancelled or postponed earlier than this are subject to a minimum 10 percent charge if questionnaire development has begun.

### 6. Invoicing and payment terms

Omnibus studies are invoiced in full at the time of provision of results or for multi-round studies 50 percent will be invoiced at the commencement of the study and 50 percent on provision of results. Custom studies are invoiced 50 percent upon commissioning and 50 percent upon provision of results.

Full payment of invoices is requested within seven days of invoice date. Newspoll reserves the right to impose a late payment surcharge of up to \$1,000 per month for invoices unpaid after 30 days. NEWSPOLL also reserves the right to delay the commencement of any study if there are overdue invoices from previous studies. Repeated late payment of invoices will result in the need for payment in full prior to the commencement of future studies.



# Extending the Sustainable Management of Kangaroos

RIRDC Publication No. 09/056

Kangaroo harvesting is entrenched as an essential agricultural and environmental management tool in the arid grazing rangelands of Australia. A significant amount of research exists which confirms that harvesting kangaroos at the maximum sustainable yield of the population delivers a considerable benefit to agricultural enterprise margins. More-over doing so also aids in biodiversity maintenance. Overgrazing remains one of the biggest sustainability threats to the rangelands environment.

Various state and territory governments regulations prevent commercial kangaroo harvesting in large sections of grazing lands in Australia. This project was commissioned to identify

these restricted areas, the impediments involved and attempts to gain commercial access key identified regions.

The Rural Industries Research and Development Corporation (RIRDC) manages and funds priority research and translates results into practical outcomes for industry.

Our business is about developing a more profitable, dynamic and sustainable rural sector. Most of the information we produce can be downloaded for free or purchased from our website: [www.rirdc.gov.au](http://www.rirdc.gov.au), or by phoning 1300 634 313 (local call charge applies).



Most RIRDC books can be freely downloaded or purchased from [www.rirdc.gov.au](http://www.rirdc.gov.au) or by phoning 1300 634 313 (local call charge applies).

*[www.rirdc.gov.au](http://www.rirdc.gov.au)*

Contact RIRDC:  
Level 2  
15 National Circuit  
Barton ACT 2600

PO Box 4776  
Kingston ACT 2604

Ph: 02 6271 4100  
Fax: 02 6271 4199  
Email: [rirdc@rirdc.gov.au](mailto:rirdc@rirdc.gov.au)  
web: [www.rirdc.gov.au](http://www.rirdc.gov.au)