Managing overabundant and mobile wildlife: Social and institutional dimensions of kangaroo harvest in South Australia

by

Dana Arlene Thomsen

This thesis is presented for the degree of Doctor of Philosophy at The University of Adelaide, School of Agriculture, Food and Wine December, 2007
This thesis is dedicated to my delightful son, Angas.

NOTE: These images are included in the print copy of the thesis held in the University of Adelaide Library.

“The pursuit of truth and beauty is a sphere of activity in which we are permitted to remain children all our lives”

Albert Einstein
Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968. The author acknowledges that copyright of published works contained within this thesis (as listed below) resides with the copyright holders of those works.


Dana A. Thomsen

December 2007
Abstract

In South Australia, overabundant kangaroo populations are managed through commercial harvest. Kangaroo harvest rates over the past decade have averaged only 40% of the harvest quota despite strong demand for the product. With kangaroo populations increasing, the problem of low kangaroo harvest rate in South Australia requires research attention. Previous research regarding kangaroo harvest has focused on questions of biology and ecology and little attention has been directed towards advancing understanding of the human dimensions of kangaroo management. This research sought to fill this gap in knowledge.

Qualitative research methods were most appropriate due to the focus on social and institutional dimensions of kangaroo management. Data were collected during interviews with people involved in commercial kangaroo harvest: landholders, harvesters and meat processors. The main topics covered were regulations and policy, economic issues, the rights and interests of various industry stakeholders and South Australian harvest rates. The views of Aboriginal people were also sought including the significance of kangaroos to Aboriginal people, access to kangaroos for subsistence harvest, kangaroo management and the kangaroo industry.

The main findings of this research are presented as a series of peer-reviewed articles:

- Article 1 introduces the research topic and presents preliminary findings of this study.

- Article 2 establishes that an increase in South Australia’s low harvest rate is needed if kangaroo harvest is to make greater contributions to regional communities, and recommends institutional reform to meet this goal.

- Article 3 examines the management regime for kangaroos in South Australia and shows how the informal rules in use are often incongruent with the formal rules established by management administrators.

- Article 4 describes the undervalued position of landholders in the kangaroo industry and the obstacles to landholders deriving income from kangaroo harvest.
• Article 5 discusses the cultural basis of Aboriginal perspectives on kangaroo harvest and includes suggestions for appropriate ways for Aboriginal people to contribute to kangaroo management.

The main findings of this research were applied in a comparative study of kangaroo management with that of moose management in Finland. This study found that similar social and institutional factors impact on the management of moose and kangaroos. The broad lessons for wildlife management drawn from the comparative study are:

• mobile wildlife resources require flexible management systems
• stakeholder involvement is critical to management
• hunters/harvesters are conservative of their resource base
• declining harvester numbers need to be addressed through support, incentives and training.

These lessons can be applied in part, or in whole, to other overabundant and mobile wildlife species. Thus this thesis makes contribution to kangaroo management by making specific recommendations for the industry, but also contributes to wildlife management in a broader sense through the application of findings to other species.
Acknowledgements

Funding for this project was provided by the Rural Industries Research and Development Corporation (RIRDC), the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) and the South Australian Department for Environment and Heritage (SA DEH). I also received financial support in the form of a scholarship stipend provided by Land and Water Australia.

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Remote area field work was assisted by Luke Diddams, Luke drove the vehicle, set up camp, cooked the meals, stoked the camp fire, made the tea and helped me clean the vehicle when we returned home. He shared stories, befriended research participants, made everyone feel at ease and kept the field work running smoothly! Thanks Luke.

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Special thanks goes to Dr. Jocelyn Davies. The idea for this project was conceived by Jocelyn and she was the driving force behind the project funding. It was Jocelyn’s
Insightful advice that directed this research and her faith in me that helped me through the difficult times. Jocelyn is an extraordinary researcher, a motivated supervisor, a treasured friend to me a loving godmother to my son, Angus. Thank you Jocelyn.

NOTE: This image is included in the print copy of the thesis held in the University of Adelaide Library.

Two of my greatest supporters, Dr Jocelyn Davies and Angas Thomsen.

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List of Publications

The following publications have arisen from research conducted during PhD candidature and are included in the thesis as individual chapters. Contributions of co-authors are described in authorship statements that appear prior to each article.

Chapter 4 – Article 1

Chapter 5 – Article 2

Chapter 6 – Article 3

Chapter 7 – Article 4

Chapter 8 – Article 5

A significant publication that is not included in this thesis as a chapter is the major report presented to the Rural Industries Research and Development Corporation (RIRDC). The citation for this report is:
Extent of involvement of the student in publications

The majority of the work submitted for this thesis was conducted as a Rural Industries Research and Development Corporation (RIRDC) research project in the Resilient Agricultural Systems program. The indigenous component of the research was funded by the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS). Three of the peer-reviewed articles that form the body of this thesis are derived from the reports presented to RIRDC and AIATSIS. All of the peer-reviewed articles are multi-authored but I am the lead author on each. Descriptions of the involvement of each author and their agreement to the inclusion of the manuscript in this thesis are provided in the authorship statement at the start of each chapter in which each manuscript is reproduced in this thesis. A brief overview of the involvement of the authors in each article is provided below.

Article 1: My own work based on preliminary research findings with advice and editorial assistance from Dr. Jocelyn Davies.

Article 2: Drawn from the 2007 RIRDC report that was co-authored by myself and Dr. Jocelyn Davies. I wrote the article based on the content of the report and Dr. Jocelyn Davies provided editorial comment.

Article 3: I drafted this article prior to writing the 2007 research report to RIRDC. Editing by Dr. Jocelyn Davies greatly improved the quality of this article.

Article 4: Drawn from the 2007 RIRDC report with editorial advice from Dr. Jocelyn Davies.

Article 5: Drawn from the AIATSIS report that was co-authored by Dr. Jocelyn Davies, Kado Muir and myself. I prepared and submitted the draft of this article. Significant modifications to the manuscript were required as a result of the reviewer's comments and I undertook the process of revising the manuscript. Dr. Jocelyn Davies and Kado Muir approved the final product.
The Literature Review (Chapter 2) includes parts on kangaroo management that are drawn from the 2007 RIRDC report co-authored by myself and Dr. Jocelyn Davies. Although I was the lead author on this report, Dr. Jocelyn Davies was primarily responsible for the subsection of the report titled, 'Aboriginal people and commercial use of wildlife'.

All other chapters of this thesis are the result of my own work with editorial advice from academic supervisors Dr. Jocelyn Davies, Dr. Ian Nuberg, Dr. John Hatch and Dr. Patricia Murray.

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