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Taking Control: a national approach to pest animals

Inquiry into the impact on agriculture of pest animals

House of Representatives
Standing Committee on Agriculture, Fisheries and Forestry

November 2005
Canberra

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Photo of fox on front cover courtesy of Clive Marks

Photo of feral camels on front cover courtesy of David Wurst

Photo of feral pig eating a lamb courtesy of Peter M Heise-Pavlov

Photo of ewe after feral dog attack courtesy of Peter McPhie

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Foreword

Pest animals are one of the most serious issues currently facing Australian farmers. Wild dogs, feral pigs, foxes, rabbits and many other pest species have a tremendous impact on agricultural industries, both in lost production and control costs. Pest animals also impact on the environment, competing with native species, destroying native plants and causing land degradation.

The message from farmers and others in the community in relation to pest animals is clear. If urgent action is not taken to address these problems, the consequences for the economy and the environment will be dire. Pastoralists in areas of the country are already being forced out of sheep by wild dogs – if something is not done to rid the country of this dangerous predator, more and more families will be forced to leave their sheep-farming enterprises.

Approaches to managing pest animal problems currently vary across state and territory jurisdictions, making coordinated cross-border control difficult. A recurring theme of this inquiry has been the need for a national approach to the pest animal problem. The committee has addressed this national inequity by recommending the formation of a National Pest Animals and Weeds Committee, comprising state and territory government representatives.

The proposed National Committee would be supported by a National Pest Animals Advisory Committee, akin to the recently-formed National Weeds Advisory Group. This would include members of local and community pest animal control groups, conservation and landcare groups, animal welfare organisations, and representatives of agricultural and pastoral industries.

The need for research into new and improved pest animal control techniques was also a feature of the inquiry. The committee has recommended that the newly-formed Invasive Animals Cooperative Research Centre play a role in coordinating research priorities nationally, to ensure that maximum benefit is obtained from the myriad of uncoordinated initiatives occurring around the country.

In its report, the committee makes a number of recommendations as to ways of improving pest animal management. These include increased state and territory government expenditure directed at on-ground control and eradication, and better management of pest animal problems on government land. The committee has also recommended that people be able to harvest pest animals as a resource, where there is the potential to do so as part of an overall strategy for controlling pest populations.

This inquiry was commenced by the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry of the 40th Parliament. The current committee recognised the need for an inquiry such as this one and continued it into the 41st Parliament. I would like to express, on behalf of the committee, our thanks to the previous committee for its contribution to this inquiry. In particular, thank you to the previous Chair, Mrs Kay Elson MP, Member for Forde.

I would also like to thank the many individuals and organisations who gave evidence in relation to this inquiry. In particular, the committee would like to acknowledge the warm hospitality spontaneously given by farmers and landholders in Tasmania and Western Australia. Their warmth and generosity were greatly appreciated.

Alby Schultz MP
Chair

Membership of the Committee

41st Parliament

Chair	Mr Alby Schultz MP	
Deputy Chair	The Hon Dick Adams MP	
Members	Mr Martin Ferguson MP	Mr Gavan O'Connor MP
	Mr Michael Ferguson MP	Mr Patrick Secker MP
	Mr John Forrest MP	The Hon Wilson Tuckey MP
	Mr Peter Lindsay MP	Mr Tony Windsor MP

40th Parliament

Chair	Mrs Kay Elson MP	
Deputy Chair	The Hon Dick Adams MP	
Members	Mr John Forrest MP	Mr Patrick Secker MP
	Mrs Sussan Ley MP	Mr Sid Sidebottom MP
	Mr Harry Quick MP	The Hon Wilson Tuckey MP
	Mr Alby Schultz MP	Mr Tony Windsor MP

Committee Secretariat

Secretary	Mr Ian Dundas
Research Officer	Ms Kylie Weston-Scheuber
Administrative Officer	Mrs Marlene Dundas

Terms of reference

The House of Representatives Standing Committee on Agriculture, Fisheries and Forestry is to inquire into the impact on agriculture of pest animals particularly:

1. To identify nationally significant pest animal issues and consider how existing Australian and State government processes can be better linked for more coordinated management of these issues across State boundaries.

2. To consider the approaches to pest animal issues across all relevant jurisdictions, including:

    - prevention of new pest animals becoming established;
    - detection and reporting systems for new and established pest animals;
    - eradication of infestations (particularly newly established species or 'sleeper' populations of species which are considered to be high risk) where feasible and appropriate; and
    - reduction of the impact of established pest animal populations.

3. Consider the adequacy of State Government expenditure on pest animal control in the context of other conservation and natural resource management priorities, with particular reference to National Parks.

4. Consider the scope for industry groups and R&D Corporations to improve their response to landholder concerns about pest animals.

5. Consider ways to promote community understanding of and involvement in pest animals and their management.

List of abbreviations

AFAS	Australian Fumigation Accreditation Scheme
AHA	Animal Health Australia
AIA CRC	Australasian Invasive Animals Cooperative Research Centre
APB	Agriculture Protection Board (Western Australia)
APCCSA	Animal and Plant Control Commission South Australia
APVMA	Australian Pesticides and Veterinary Medicines Authority
AQIS	Australian Quarantine and Inspection Service
AVA	Australian Veterinary Association
AWC	Animal Welfare Centre
BRS	Bureau of Rural Sciences
CALM	Conservation and Land Management Western Australia
CCA	Cattle Council of Australia
CCWA	Conservation Council of Western Australia
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CWA	Country Women's Association (New South Wales)
CRC	Cooperative Research Centre

DAFF	Department of Agriculture, Fisheries and Forestry (Australian Government)
DAWA	Department of Agriculture Western Australia
DEC	Department of Environment and Conservation (New South Wales)
DEH	Department of Environment and Heritage (Australian Government)
DEST	Department of Education, Science and Training (Australian Government)
DNRM	Department of Natural Resources and Mines (Qld Government)
DPIWE	Department of Primary Industries, Water and Environment (Tasmanian Government)
DSE	Department of Sustainability and Environment (Victorian Government)
FFIC	Forests and Forest Industry Council
FGA	Field and Game Australia
NAQS	Northern Australia Quarantine Strategy
NHT	Natural Heritage Trust
NIMTG	National Information Manager's Technical Group
NPWS	National Parks and Wildlife Service (New South Wales)
NRM	Natural Resource Management (Australian Government)
NRMMC	Natural Resource Management Ministerial Council
NRMSC	Natural Resource Management Standing Committee
NSWFA	New South Wales Farmers' Association
NSWFACDC	New South Wales Farmers' Association Cooma District Council

PAC CRC	Pest Animal Control Cooperative Research Centre
PGA	Pastoralists and Graziers Association (Western Australia)
PHA	Plant Health Australia
PIAPH	Product Integrity/Animal and Plant Health
PISC	Primary Industries Standing Committee
QFF	Queensland Farmers' Federation
QPWS	Queensland Parks and Wildlife Service
RCD/RHD	Rabbit Calicivirus Disease/Rabbit Haemorrhagic Disease
RIFA	Red Imported Fire Ant
RLPB	Rural Lands Protection Board
SQCR	Surveillance, Quarantine, Control and Recovery System
SSAA	Sporting Shooters Association of Australia
TFAWG	Tumbarumba Feral Animal Working Group
TFGA	Tasmanian Farmers and Graziers Association
TGMSU	Tasmanian Game Management Services Unit
USEPA	United States Environmental Protection Agency
VFF	Victorian Farmers Federation
VPC	Vertebrate Pests Committee
WAFF	Western Australia Farmers Federation
ZCA	Zone Control Authority (Western Australia)

List of recommendations

9 Research and development

The committee recommends that the Australian Government:

- provide certainty of funding to the Australasian Invasive Animals Cooperative Research Centre to enable it to undertake long-term research and to provide national leadership in pest animal research; and
- through the Natural Heritage Trust, immediately increase research funding to the National Feral Animal Control Program to $1 million, and investigate possibilities for relocating the National Feral Animal Control Program to ensure its continued funding after 2007-2008.

The committee recommends that the Australian Government Minister for Agriculture, Fisheries and Forestry:

- arrange for the Department of Agriculture, Fisheries and Forestry to become a core participant of the Australasian Invasive Animals Cooperative Research Centre; and
- investigate ways to enhance the involvement of rural research and development corporations in pest animal research and development, in particular, by including pest animal research in the statement of government priorities for rural research and development.

The committee recommends that the Australasian Invasive Animals Cooperative Research Centre:

- coordinate with all stakeholders to develop research priorities for national pest animal research;
- establish a national database recording all significant past and ongoing pest animal research;
- collaborate with research and development corporations and private sector research groups to ensure that the potential for involvement of these groups in pest animal research and development is maximised;

1

Introduction

Overview

1.1 The agricultural sector makes an enormous contribution to the Australian economy. A recent study indicated that the agricultural sector contributed an average of 3.2 percent of Gross Domestic Product (GDP) for the six years up to and including 2003-04. If raw inputs provided by the agricultural sector to other sectors and domestic inputs purchased by the agricultural sector are factored in, the contribution was 12.1 percent of the national GDP.[1]

1.2 The threat posed by pest animals is therefore a serious issue not only for the agricultural sector, but also in terms of the consequences that it may have for the Australian economy. The committee's inquiry into the impact of pest animals on agriculture is of critical importance to the well-being of the agricultural sector and the Australian economy. There is ample evidence available to prove that pest animals have a significant impact on Australia's environment and biodiversity.

1.3 The committee received evidence in relation to this inquiry from a variety of organisations and individuals. Much of the evidence came from pastoralists and farmers throughout Australia who expressed concern at the impact that pest animals have had, and are continuing to have, on their livelihoods and their way of life.

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1 Econtech Pty Ltd, *Australia's Farm-Dependent Economy: Analysis of the Role of Agriculture in the Australian Economy*, Australian Farm Institute, Surry Hills, March 2005, p. ix.

1.4 Of particular concern to the committee is the amount of evidence received in relation to the impact that wild dogs are having on the Australian sheep industry. It is apparent that wild dogs have had a devastating impact on sheep graziers in many regions of Australia, to the extent that it is no longer viable for many of them to continue running sheep on their properties. This is of concern not only for the effect that may have on the Australian economy, but also the social ramifications it has for an iconic Australian way of life. It is clear that wild dogs are a pest animal of national significance and that measures for their increased control need to be implemented immediately.

1.5 The committee received a considerable amount of evidence about the detrimental effects on agriculture of a range of other pest species, including feral pigs, rabbits, foxes, feral cats, mice and feral camels. A number of submissions also described some native species, such as possums, kangaroos, emus and grey-headed flying foxes, as constituting a pest problem. There was some difference of opinion amongst submitters as to whether native species should be considered as pest animals.

1.6 A majority of submissions received by the committee that addressed the issue advocated a national approach to pest animal management, in one form or another. The committee considers that a national approach to pest animal management is important in terms of ensuring the most efficient use of resources and preventing unnecessary duplication of services and research. A national strategy would not necessarily involve federal control; rather, it would incorporate a unified approach to dealing with pest animal issues across jurisdictions, with leadership and coordination at the national level.

1.7 The committee also recognises that community involvement and empowerment are vital to ensure efficient on-the-ground control of pest management problems. Many submissions addressed problems that landholders have in managing pest animals, including problems with access to appropriate control methods and personnel, and incursions of pest animals from government lands. The need to address these issues was a particular focus of the inquiry.

1.8 The committee also notes the range of submissions that pointed to the need to ensure that pest animal management is carried out humanely. The committee acknowledges the general commitment that exists to humane pest animal control strategies across a range of organisations involved in pest control.

1.9 It was apparent, from evidence presented to the committee, that there is a need for consistency of approach to pest animal control across land tenures. Many submissions expressed concern and frustration about the lack of appropriate measures taken by government land managers, in particular national parks, to manage pest animal problems.

1.10 A recurring theme throughout the inquiry was the need to facilitate programs which allow landholders and other interested persons to use pest animals as resources. The committee notes with concern that in a number of cases, animals which might otherwise be utilised for meat or skins are being left to rot in paddocks due to regulations and other impediments to their effective use as resources. The committee considers that facilitating the use of pest species – both native and exotic - as a resource is a useful strategy, both economically and environmentally, in the overall management of pest animals.

1.11 The need for ongoing research and development, and education about pest animals was also an important theme in evidence submitted to the inquiry. Given the wide-spread nature of pest animal problems and their significance on a national scale, the committee believes that coordination at the federal level is urgently required.

Previous Parliamentary Reports

1.12 This report covers some similar ground to the Senate Environment, Communications, Information Technology and the Arts References Committee Report on the regulation, control and management of invasive species and the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002. That report was tabled in December 2004.

1.13 The Invasive Species inquiry was referred to the Senate Environment, Communications, Information Technology and the Arts References Committee on 26 June 2003.

1.14 The terms of reference for that inquiry required the committee to investigate the regulation, control and management of invasive species, being non-native flora and fauna that may threaten biodiversity. The committee gave particular reference to, inter alia, the nature and extent of the threat that invasive species pose to the Australian environment and economy; the estimated cost of different responses to environmental issues associated with invasive species; the adequacy and effectiveness of

administrative arrangements for regulation and control; and the effectiveness of Commonwealth-funded measures to control invasive species.

1.15 Although the Invasive Species report addressed some issues in common with the current report, the following major differences exist between the two reports:

- The Senate report considered primarily the threats posed to the environment by invasive species, rather than threats to Australia's agricultural industries;
- The Senate report considered the impact of weeds and pest animals while the current report focuses solely on pest animals;
- The terms of reference for the Senate inquiry focused on particular animals and insects, namely the European fox, feral cat and pig, yellow crazy ant, fire ant and cane toad;
- The Senate report focused on the impact of non-native species, while the current report also considers the impact, often significant, of native species that impact on agriculture.

1.16 Despite the differences in focus between the Senate inquiry and the current inquiry, the committee notes that some of the recommendations contained in this report echo recommendations made by the Senate committee, in particular the recommendation for a national effort to combat invasive species.[2]

1.17 The committee also notes that one of the General Purpose Standing Committees of the New South Wales Legislative Council conducted an inquiry into the damage caused by feral animals to the environment. The report from this inquiry was published in October 2002. Although the inquiry focused on environmental impacts rather than agricultural impacts, the committee has considered the contents of that report and referred to parts of it in the body of this report, where relevant.

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2 Senate Environment, Communications, Information Technology and the Arts References Committee, *Turning back the tide – the invasive species challenge: Report on the regulation, control and management of invasive species and the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002*, Commonwealth of Australia, Canberra, December 2004, Recommendation 1.

Conduct of the inquiry

1.18 The inquiry into the impact of pest animals on agriculture was referred to the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry by the then Minister for Agriculture, Fisheries and Forestry, the Honourable Warren Truss MP, on 16 March 2004.

1.19 Details of the inquiry were advertised in national and rural newspapers across Australia in April 2004 and letters inviting submissions were sent out to selected organisations and individuals. One hundred and three submissions were received from around the country.

1.20 The inquiry was suspended in late 2004 following the dissolution of the House of Representatives prior to the October election. The inquiry was then re-referred to the committee by Minister Truss on 7 January 2005.

1.21 The committee held public hearings in Canberra, Albury and Cooma, Longford, Perth and Broome. Evidence was taken at the public hearings from government representatives, scientific and research organisations, agriculturalists and pastoralists, farmer and industry groups, sport shooting groups, conservation groups and animal welfare organisations.

1.22 The committee conducted a series of inspections in Tasmania in March 2005. The committee visited Connorville Station, a 44,000 acre property 14 kilometres south of Cressy that is used for mixed grazing, forestry and cropping. The committee was provided with information in relation to Connorville's Property-based Game Management Plan, which regulates visits to the property by shooters who assist in controlling populations of feral deer, wallaby and possums.

1.23 The committee then visited Elverton Pastoral Company, located in Blessington, and used primarily for dry land agriculture, grazing, irrigation, native forest and timber forestry. The committee heard about serious pest animal issues on the property, including deer, wallaby, possums and white cockatoos and inspected the vermin-proof fence that has been constructed on the property.

1.24 The committee also visited Lenah Game Meats at Rocherlea, which processes and packages a range of game meats, including wallaby and possum. The committee was told about the commercial use that can be made of over-abundant native species and potential problems facing entrepreneurs in this industry.

1.25 Three inspections were also conducted in Western Australia. On 12 April 2005, the committee travelled to Yuin Station, where local pastoralists attended to discuss problems caused by over-abundant populations of emus and kangaroos, and problems with the standard of the existing state barrier fence. The committee then travelled to Leonora, in the Goldfields region, where it conducted roundtable discussions with pastoralists from around the region in relation to predation of livestock by feral dogs.

1.26 In July 2005, the committee again travelled to Western Australia and visited Warrawagine Station, where the committee was presented with information about large numbers of wild camels causing damage to infrastructure on the property, and to the environment.

1.27 A list of submissions, exhibits and public hearings is located at the back of this report.

Structure of the report

1.28 During the course of its inquiry, the committee found that pest animals, both vertebrates and invertebrates, are having a devastating impact on Australian agriculture and on the environment. Urgent measures are required to add to, and improve on, existing measures that are being taken to address the problem.

1.29 Chapters 2 and 3 establish the context for this inquiry by examining the impact that pest animals have on agriculture, the environment and rural communities. Chapter 2 examines the pest animal issues facing agriculturalists. It sets out the major pest species impacting on agriculture, including wild dogs, feral pigs, foxes, rabbits, mice, camels, kangaroos and eagles. Consideration is given to the issue of native species that impact on agriculture, and whether they should be categorised as 'pests'.

1.30 Chapter 3 discusses the economic impacts that pest animals are having on Australian agriculture. Although difficult to quantify, the environmental and social impacts of pest animals are also considered.

1.31 Although some pest animal issues are of particular relevance in certain states and territories, or regions within states and territories, pest animals generally, and the impact that they have on agriculture, are issues of national significance. Chapter 4 considers possibilities for a national approach to pest animal management, while acknowledging and maintaining the important contribution made by local and regional groups.

1.32 Prevention of pest species from entering Australia, or from spreading once arrived, is far preferable to dealing with pest populations once they have become established. Chapter 5 examines existing methods of prevention and detection of pest species and steps that can be taken to make these processes more effective.

1.33 Chapter 6 examines the methods currently in place for managing existing pest animal problems, and suggestions for changes and improvements in methods of pest control. In particular, this chapter examines the controversial use of 1080 poison as a means of controlling pest animal populations. The adequacy of state and territory government expenditure in the context of other natural resource and conservation management priorities is also considered.

1.34 A recurring theme throughout the inquiry was the need for all landholders to control pest animals on their land. Concerted efforts by a majority of landholders may be wasted if an adjoining landholder is careless or neglectful. Chapter 7 considers the need for pest animal management across tenures and strategies for its implementation.

1.35 Opportunities exist for landholders to utilise some pests, both exotic and native, as a resource by means of harvesting and hunting. Chapter 8 looks at ways in which landholders can manage pest animal populations while at the same time accessing a valuable resource to supplement income from agriculture.

1.36 Chapter 9 examines the research that has been conducted to date with regard to pest animal issues. It considers avenues for further research to be conducted, and opportunities for research and development corporations to become more involved. The need for national coordination of pest animal research is considered.

1.37 Chapter 10 considers the importance of public education in relation to pest animal management, and strategies for increasing public awareness and involvement.

2

Pest animal issues confronting agriculture

Overview

2.1 The committee's terms of reference for this inquiry refer to the identification of 'nationally significant pest issues'. The committee received a wide range of submissions dealing with a number of different pest animals. These include exotic vertebrate species, exotic invertebrate species and native species that are considered to pose a threat to agriculture.

2.2 The pest animal issues that were identified in evidence presented to the committee are outlined below. Of these issues, some are of national significance in the sense that they pose a problem across most states and territories of Australia. Wild dogs, feral pigs, rabbits and foxes are four examples of pest animals that have a significant impact across much of Australia.

2.3 Other pest animal issues are of national significance in the sense that they seriously impact on Australian agriculture, which has adverse implications for the national economy. Although these animals may constitute a problem only in certain areas, the impact that they have on productivity in the agricultural sector justifies their identification as pest animals of national significance. This is also the case with pest animals that impact on the environment.

2.4 While defining the term 'pest animals of national significance' broadly, the committee considers that the worst pest animal issues facing Australian farmers relate to wild dogs, feral pigs, rabbits and foxes. The committee has, accordingly, placed emphasis on issues relating to control of these animals in preparing its report.

2.5 The committee's terms of reference refer to pest animals that have an impact on agriculture. The committee notes, however, that many of the pest animal species that impact on agriculture also cause serious damage to the environment and, indeed, many submissions referred to environmental impacts. The committee has therefore made reference to these environmental impacts in its outline of pest species below.

Definition of 'pest animal'

2.6 It is important to identify at the outset of this report what is meant by the term 'pest animal'. Making recommendations in relation to pest animal problems is complicated by the fact that there is no uniform national view in relation to the pest status of particular animals. A useful example is the feral horse, or 'brumby' as it is commonly known, which is variously considered to be a pest, a valuable resource and a national icon.[1]

2.7 The evidence received by the committee identified a range of species categorised by various individuals and organisations as pest animals. A consideration of this evidence naturally must commence with a definition of the term 'pest'.

2.8 The Bureau of Rural Sciences (BRS), in an appendix to its submission, included the following definition of a pest:

> The word 'pest' is generally used to describe an animal that conflicts with human interests. Such a pest may be destructive, a nuisance, smelly, noisy, out of place or simply not wanted. A more precise and workable definition includes only those animals that cause serious damage to a valued resource. A pest may be an animal that was originally spread by humans to new lands – this is particularly the case in Australia. Or, it might be a native animal such as a kangaroo, possum or parrot.[2]

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1 Associate Professor AW English, *Report on the Management of Feral Horses in National Parks in New South Wales*, NSW NPWS, 2001, viewed 21 September 2005, <http://www.nationalparks.nsw.gov.au/PDFs/english_report_final.pdf>, p. 13.

2 BRS, *Submission 76*, Attachment E, P Olsen, *Australia's Pest Animals: New Solutions to Old Problems,* BRS, Canberra, 1998, p. 13.

2.9 The committee considers this definition to be a useful one for the purposes of this inquiry. In accordance with the terms of reference for the inquiry, a pest animal is any animal which causes serious damage to resources valued by those involved in the agricultural industry. It includes animals which harm or destroy livestock, eat pasture or crops, pollute water holes, damage fences and farming property, and otherwise hinder farmers and pastoralists in pursuit of their livelihoods.

2.10 Animals that adversely impact on the environment can also be characterised as pest animals under this definition, because they adversely impact on native flora and fauna and biodiversity. Some pest animals, such as wild dogs, have an impact on both agriculture and the environment, while others, such as cane toads, primarily affect the environment. Native species can also have a detrimental effect on both agriculture and the environment, for example by browsing crops and native vegetation and causing damage to fences.

2.11 The committee received a number of submissions indicating that native species can constitute pest animals or have pest impacts.[3] Some submissions pointed to the fact that native species can alter their behaviour due to changes in their environment, which may be caused by drought and other factors; this sometimes leads to localised explosions in the populations of those animals.[4]

2.12 The committee acknowledges that native species are considered by some to be pest animals. Throughout this report, therefore, references to 'pest animals' may include native species that have pest impacts. The committee agrees, however, with the submission of Animal Control Technologies, that native species that have pest impacts in certain areas are better characterised as 'local pest problems' rather than 'pest animals' generally.[5] The committee emphasises that native species such as kangaroos and possums should not be characterised as pest animals generally, however they may be considered as pests in local areas where they have an impact on rural enterprises.

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3 *Submissions 1*, *8, 9*, *15,* p. 1, *18, 31*, p. 7, *44*, p. 3, *46*, *59*, p. 10, *66*, *67*, *70*, p. 6, *71*, *77*, pp. 2-3, *78*, p. 3, *80*, p. 5, *84*, p. 17, *92*, p. 2, *100*, p. 3, Mr Graham Hillyer, Bombala RLPB, *Transcript of evidence,* 9 September 2005, p. 1, Mr Jack Jones, Ovens Landcare Network, *Transcript of evidence,* 18 June 2004, p. 2, Mr Christopher Gibson, VFF Wangaratta Branch, *Transcript of evidence*, 18 June 2004, p. 14.

4 *Submissions 5*, pp. 4-5, *52*, p. 3, *84*, pp. 17-18, *90*, *100*, Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, pp. 4-5.

5 *Submission 84*, p. 18.

2.13 The committee acknowledges that classification of native species as 'pests' is a controversial issue. The Conservation Council of Western Australia (CCWA) and the federal Department of Environment and Heritage (DEH) both gave evidence that they preferred the term 'resources' rather than 'pests' for over-abundant native species.[6]

2.14 The committee agrees that, where the potential exists for native species to be utilised for benefit, they are indeed a valuable resource. The term 'resource' is therefore appropriate when referring to over-abundant populations of kangaroos, possums and other native species that can be commercially harvested. Although in a general way, it is appropriate to refer to all native species as 'resources', because of their inherent value as Australia's native species, this report uses the word 'pest' to refer to both exotic and native species that have pest impacts.

2.15 While acknowledging that native species can be considered as pest animals in some circumstances, the committee notes that the focus with a native pest species will be to manage impacts while conserving the population generally. The ultimate goal with exotic pest species will be the elimination or removal of the species.

2.16 Set out below are descriptions of the major pest species impacting on agriculture in Australia. Some species are specific to a particular region, while others have an impact across several states and territories. For each pest species, known information about population density and distribution, the nature of the damage caused and methods used to control populations are included. Although most evidence received focused on the impact of vertebrate pest species, invertebrate pests also have a serious impact on Australian agriculture.

Pest animals in Australia

2.17 Currently there are more than 70 introduced animal species that have established wild populations on mainland Australia, including 25 mammal, 20 bird, four reptile, one amphibian and at least 23 freshwater fish species.[7]

6 Mr Chris Tallentire, CCWA, *Transcript of evidence*, 11 April 2005, p. 2, Mr Mick Trimmer, Wildlife Trade and Sustainable Fisheries Branch, DEH, *Transcript of evidence*, 1 June 2005, p. 1.

7 Q Hart, 'Managing Pest Animals in Australia', *Science for Decision Makers*, DAFF, Canberra, November 2002, viewed 28 September 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=E23D076B-FF78-43B6-BFAAC1E07FB3EAD7>, p. 2.

2.18 Various species have been introduced to Australia for a number of reasons including for the provision of transport (horses, camels), food (cows, pigs, goats), wool (sheep, llamas), leather (cows), sport (deer, rabbits) or pets (cats, dogs). Foxes, rabbits and trout were legally released to provide sport. Some species, such as the Indian myna, have been released illegally.[8] While animals such as cows and sheep provide the basis for important agricultural industries, other species such as foxes and rabbits have become serious pests, while still others are both valuable domestic animals and pests, for example pigs, horses, deer and goats.

Vertebrate Pests

Wild dogs

2.19 Wild dogs and dingoes are distributed across most of the Australian mainland, with the exception of sheep and cereal growing areas of south-eastern Australia.[9] Wild dogs commonly attack sheep, but also prey on cattle and goats.[10] Sheep that are killed are often left uneaten, meaning that even relatively low dog populations can result in high stock losses. The committee heard evidence that a single dog can cause between $50,000 and $120,000 damage to a farmer's livestock production in one year.[11]

2.20 A complicating factor associated with wild dog control is their inter-breeding with dingoes, which were introduced to Australia approximately 4,000 years ago and are considered by many to be a native species. Frequent inter-breeding between wild dogs and dingoes is a threat to the survival of the pure-bred dingo. Accordingly, some groups in the community have concerns about the impact of wild dog control on dingoes.

8 Hart, p. 2.

9 Except where otherwise indicated, information about wild dogs taken from BRS, *Submission 76*, Attachment G, P Fleming, L Corbett, R Harden and P Thomson, *Managing the Impacts of Dingoes and Other Wild Dogs*, BRS, Canberra, 2001, pp. 1-3, 23, 72.

10 *Submissions 3*, *4*, *5*, pp. 2-3, *7*, *10*, *11*, *18*, *19*, p. 2, *26*, *27*, pp. 1-3, *39*, *51*, *53*, p. 1, *65*, *74*, *83*, *102, 103*.

11 Ms Noeline Franklin, Victorian and NSW Wild Dog Coordinating Committee, *Transcript of evidence*, 11 August 2004, p. 16.

2.21 The committee received some evidence indicating that the dilution of the dingo gene pool is such that the pure-bred dingo may no longer exist in the wild.[12] In Western Australia, however, the committee was told it is likely that populations of pure-bred dingoes still exist in the north Kimberley region.[13]

2.22 In the New South Wales Kosciusko region, skin samples are taken from all dogs trapped or shot within the Tumbarumba Working Group area and analysed at the University of New South Wales. This is intended to provide some indication of the level of cross-breeding in the wild dog population.[14]

2.23 The principal control techniques used for wild dogs are exclusion fencing, shooting, trapping and poisoning (usually with 1080 poison). While bounties have also been used as a means of control since 1836, studies have found them to be largely ineffective.

2.24 Wild dogs are increasingly becoming a problem in urban areas as populations move into rural areas due to urban sprawl, and people make lifestyle choices to move from the city to the country. Limited control methods are available in these areas due to restrictions on the use of poisons, traps and firearms in heavily populated regions.[15]

2.25 Some of the evidence received by the committee relating to wild dogs indicated that the problem has increased significantly over the last decade or so and is continuing to increase.[16] Evidence points to both an increase in the numbers of dogs in many areas, and also the fact that dogs are exhibiting bolder behaviour in terms of their attacks on sheep and cattle, and menacing humans.[17]

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12 N Ward, 'Summation', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

13 Mr Michael Everett, DAWA, *Transcript of evidence*, 22 July 2005, p. 19.

14 *Exhibit 7,* TFAWG, *Co-operative Wild Dog/Fox Management Program*, Draft no. 5, March 2002, p. 6.

15 C McGaw, 'Wild Dogs: a Queensland Agency Perspective', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

16 *Submissions 11*, *35*, *40*, *42*, *65*, *73*, *83*, *85*, *86*, p. 3, *93,* Mr Russell Murdoch, New South Wales Upper Murray Graziers, *Transcript of evidence*, 18 June 2004, p. 42, Mrs Alison Burston, *Transcript of evidence,* 18 June 2004, p. 59.

17 J Thistleton, 'Fatal dog attacks certain: farmers', *The Canberra Times*, 22 June 2005, p. 9.

2.26 Mr Rodger Connley, a farmer near Omeo in Victoria, stated:

> [Y]ou would hardly see a dog during the daytime before. You can just about go out to the bush at any time of the day now and you will see dogs, whether you are driving along the road or you are riding your horse through the bush.[18]

2.27 Mr Edgar Richardson, of the Western Australian Pastoralists and Graziers Association (PGA), told the committee that when dogs are seen in the daytime, this indicates that they are present in large numbers.[19]

2.28 The seriousness of the wild dog problem is illustrated by the fact that, even where major efforts have been made to control the dog population, sheep farmers are still having their stock destroyed by attacks. Mrs Alison Burston, a farmer from Benambra in Victoria, gave evidence that despite more than 730 dogs being destroyed between April 2003 and 2004, there was no corresponding decrease in sheep attacks or dog sightings.[20]

2.29 In Cooma, the committee received the following evidence from Mrs Marion Kennedy, Chairperson of the Adaminaby Yaouk Wild Dog Committee:

> Over the years [the wild dog problem] has cost us thousands of dollars through sheep losses, wool losses and lamb losses. Future breeders have been killed and ewes have been killed through not joining up and the dogs chasing them. We have cut our sheep numbers by over half. You can stand only so much loss from your income. It is very depressing going into your paddocks when the dogs are killing. It becomes very emotional. We should be able to make a living from our properties, and we should not be handicapped because we live next door to national parks. I think that some compensation should be paid for stock losses.[21]

2.30 The committee also heard evidence of people who are being forced out of sheep due to the wild dog problem, and how this in itself can hide the true extent of the problem:

> Further to Harley [Hedger]'s comments, the stock losses are not necessarily increasing. The authorities can say, 'The losses are not all that great,' but they are not so big because of what Harley has just indicated: people are going out of sheep. There are huge areas

18 *Transcript of evidence*, 18 June 2004, p. 60.

19 *Transcript of evidence*, 20 July 2005, p. 5.

20 *Transcript of evidence*, 18 June 2004, p. 59.

21 *Transcript of evidence,* 9 September 2005, pp. 40-41.

> where this is happening … and people have had to give up running sheep there because the dogs caused too big a loss.[22]

2.31 Wild dogs are carriers of hydatids, which are a risk to human health and cause production losses in cattle and sheep. Feral dogs also carry the virus *Neospora caninum* which induces abortion in cattle. The committee received evidence that *Neospora* is having a serious impact on cattle farmers throughout Australia.[23] For example, Mr Geoff Burston, a farmer at Benambra, told the committee:

> Our main concerns at Camerons are the loss of calves, two dogs and the introduction of Neospora. In areas of Queensland and northern New South Wales and in the Bega area, it is mainly seen in dairy herds where the farmers are handling the cattle all the time. The calving percentage is on average down between 15 and 35 per cent, with the other cattle aborting, and in some instances they have had up to 80 per cent abortions.[24]

2.32 AgForce, the peak rural lobby group in Queensland, stated in its submission that feral dogs are estimated to cost the cattle industry at least $9 million per annum through the spread of these diseases.

> Neospora caninum, a microscopic parasite … has been shown to be a significant cause of bovine abortion, lower milk production and reduced weight gain in cattle throughout the world.
>
> In some areas such as the north coast of NSW, neospora caninum is thought to be responsible for over 30% of abortions in cattle and initial investigations in northern Queensland dairy herds estimated that over 25% of these cattle are infected with this parasite. The extent of the impact of neospora caninum on the Queensland beef industry is yet to be fully investigated.[25]

2.33 Although some sheep farmers have switched to cattle due to problems experienced with wild dogs, this is not necessarily a solution because dogs also attack cattle. Dogs will eat most of the cow or calf that they attack, so there is often no evidence once a kill has taken place, however farmers have witnessed dogs attacking cattle and so know that it occurs.[26]

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22 Mr John Alcock, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 21.

23 *Submissions 4*, *11*, *22*, *27*, p. 2, *35*, *39,* Mrs Ellen Green, NSWFACDC, *Transcript of evidence,* 9 September 2005, p. 25, Mr Michael Hartmann, CCA, *Transcript of evidence*, 15 June 2005, p. 9.

24 *Transcript of evidence*, 18 June 2004, p. 58.

25 *Submission 27*, p. 2.

26 *Submissions 10*, *35*, *86*, p. 3, Mr Phillip Coysh, *Transcript of evidence*, 18 June 2004, p. 48, Discussions at Warrawagine Station, Western Australia, 21 July 2005, Roundtable with Leonora pastoralists, 12 April 2005.

Proceedings from the Wodonga Wild Dog Summit, held in February 2002, indicate that wild dogs can cause up to 30 percent predation loss of calves.[27]

2.34 An additional problem with wild dogs is that, because they only take certain parts of sheep that they have killed, the rest of the carcass is left behind and provides food for a number of other pest animals, including pigs, foxes and eagles.[28]

2.35 Feral dogs also have a serious environmental impact because they prey on native fauna.[29] This is not only a problem in itself; the reduction in the native browsing population also increases the amount of vegetation on forest floors, which is dangerous because it creates increased fuel loads for bushfires.[30]

2.36 The committee considers that feral dogs are the most serious pest animal currently facing Australian sheep and cattle farmers. They are also one of the most significant pest animal problems for Australian agriculture generally.

Feral pigs

2.37 Feral pigs are widely distributed throughout Queensland, the Northern Territory, New South Wales and the Australian Capital Territory, with isolated populations in Victoria, Kangaroo Island, in Western Australia and on Flinders Island.[31] Estimations of the feral pig population range from 3.5 million to 23.5 million, however the population varies each year according to environmental conditions.

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27 L Allen, 'Managing wild Dog Impacts', *in Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

28 Ms Noeline Franklin, Victorian and NSW Wild Dog Coordinating Committee, *Transcript of evidence*, 11 August 2004, p. 4.

29 Mr John Alcock, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 14, Mrs Betty Murtagh, VFF Barnawartha Branch, *Transcript of evidence*, 18 June 2004, p. 23, Mr John Sinclair, *Transcript of evidence,* 18 June 2004, p. 73.

30 Victorian and NSW Wild Dog Coordinating Committee, *Submission 66*, Mrs Alison Burston, *Transcript of evidence*, 18 June 2004, p. 59.

31 Except where otherwise indicated, information about feral pigs taken from BRS, *Submission 76*, Attachment F, D Choquenot, J McIlroy and T Korn, *Managing Vertebrate Pests: Feral Pigs*, Bureau of Resource Sciences, Australian Government Publishing Services, Canberra, 1996, pp. 1-3, 13, 43.

2.38 Feral pigs attack lambs, trample and feed on crops, damage fences and water sources, reduce crop yields for sugarcane and some tropical fruits, and cause land degradation.[32] They also consume native plants and animals, including frogs, lizards, snakes, turtles and ground nesting birds.

2.39 There is potential for feral pigs to spread exotic diseases, particularly foot-and-mouth disease, which could have disastrous consequences for the Australian meat export market in the event of a break-out. Feral pigs are also vectors of diseases and parasites that can affect livestock and humans, the main ones being leptospirosis, brucellosis, melioidosis, tuberculosis and sparganosis.

2.40 A number of submissions received by the committee expressed concern about the issue of foot-and-mouth disease.[33] The Hume Rural Lands Protection Board (RLPB) stated:

> The large Feral Pig population in Australia will prove to be a National Disaster in the event that an Exotic Disease such as Foot and Mouth Disease is introduced. The Feral Pig population will act as a reservoir of infection and make it almost impossible for Australia to achieve a free status in the eyes of the International Community, especially in those countries that would benefit from the agricultural trading restrictions that would be placed on Australia. The loss of export income to Australia combined with the huge expense required to implement a nation wide eradication for pest animals including Feral Pigs, Deer and Goats would be catastrophic.[34]

2.41 Poisoning is a widely-used control method for wild pigs, particularly using 1080. Aerial and on-ground shooting are also common, however populations recover quickly following shooting programs. Trapping is also practised, however the results are variable.

2.42 There is significant export of wild pig meat to Europe and there is also a strong pig-hunting industry in Australia.

32 *Submissions 4*, *5*, p. 4, *19*, p. 2, *27*, p. 3, *49*, p. 2, *78*, p. 2, *82*.

33 *Submissions 19*, p. 2, *58*, pp. 1-2, *77*, p. 2, *78*, p. 2, *81*, p. 3.

34 *Submission 77*, p. 2.

European rabbit

2.43 Rabbits are one of the most widely distributed mammal populations in Australia and are found in most land types south of the Tropic of Capricorn. North of the Tropic of Capricorn they are generally restricted to deep or shaded warrens in fertile soil areas or areas with a shallow watertable.[35] Because rabbit abundance varies greatly with seasonal conditions, it is difficult to provide a reliable population estimate.

2.44 Mr Terry Hore submitted that the rabbit population in the area of Glastonbury in the Shire of Cooloola, Queensland, has markedly increased in the last four years.[36]

2.45 As well as constituting a serious threat to the survival of some native plant species, rabbits compete with sheep for pasture, especially during and immediately after drought. This results in fewer livestock, lower wool clip per sheep, lower lambing percentages, lower weight gain, breaks in wool and earlier stock deaths in time of drought. Rabbits also cause significant crop losses.[37] Environmental problems caused by rabbits include soil erosion resulting from burrowing, and threats to the survival of native species due to competition for food and shelter.

2.46 Foxes and feral cats are major predators of rabbits, and populations of both may rapidly decrease following a decline in the rabbit population. In some areas, there is also a correlation between the rabbit population and the wild dog population.

2.47 Rabbit numbers dropped significantly following the introduction of myxomatosis in 1950. It is estimated that current densities are about five percent of pre-myxomatosis densities in higher rainfall areas and about 25 percent in rangelands areas.

2.48 Rabbit Calicivirus, also known as Rabbit Haemorrhagic Disease (RHD) has also had a tremendous impact on the rabbit population in Australia. RHD escaped from off-shore quarantine in late 1995 and rapidly established itself throughout mainland Australia. It has had most impact in drier regions where in some areas it initially reduced rabbit populations by up to 90 percent and populations have remained at 15-20 percent of pre-RHD

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35 Except where otherwise indicated, information about rabbits taken from BRS, *Submission 76*, Attachment H, K Williams, I Parer, BJ Coman, J Burley and ML Braysher, *Managing Vertebrate Pests: Rabbits*, Bureau of Resource Sciences/CSIRO Division of Wildlife and Ecology, Australian Government Publishing Service, Canberra, 1995, pp. 21-23, 40-1, 43, 57-59, 60, 83, 114.

36 *Submission 93*. See also Carboor/Bobinawarrah Landcare Group, *Submission 54*, p. 2.

37 AgForce, *Submission 27*, p. 4, Cobar RLPB, *Submission 78*, p. 2.

densities. RHD has had less impact in more temperate areas, with populations in some areas largely unaffected by the virus.[38]

2.49 Rabbits are most effectively controlled by clearing of harbour vegetation and warren ripping, combined with regular maintenance. Poisoning may be effectively applied as an initial 'knock-down' technique, but must be used in combination with the other two methods.

2.50 Rabbit harvesting is worth approximately $10 million per annum (1995 figures) however commercial harvesting does not contribute significantly to pest control because it is mainly opportunistic and does not reduce rabbit densities to manageable levels. The industry is also subject to fluctuations in supply and demand.

European red fox

2.51 The European red fox is distributed throughout southern Australia and can be found in most habitats.[39] Foxes are often found in agricultural areas, which offer a range of cover, food and den sites. Due to the nocturnal and elusive nature of the fox, population density is difficult to determine.

2.52 As well as preying on a number of native species, foxes feed on lambs and other livestock. It has been suggested that foxes may take between 10 and 30 percent of lambs in some areas. They also pose a threat as potential vectors of rabies, and diseases such as mange and hydatids.[40]

2.53 Fox control has traditionally involved a combination of bounty schemes, shooting, poisoning and trapping. Although hunters may assist individual landholders in dealing with fox problems, it is considered unlikely that hunting can play a major role in controlling fox population levels.

2.54 Foxes can be harvested for their fur. Australia had a flourishing fox pelt industry during the early 1980s, however prices have subsequently dropped and demand fluctuates from time to time.

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38 G Saunders and B Kay, *Rabbit Calicivirus Disease Program Report 5: Implications for Agricultural Production in Australia*, Commonwealth of Australia, Canberra, 1999, p. 2, HM Neave, *Rabbit Calicivirus Disease Program Report 1: Overview of Effects on Australian Wild Rabbit Populations and Implications for Agriculture and Biodiversity*, Commonwealth of Australia, Canberra, 1999, p. 43.

39 Except where otherwise indicated, information about European red fox taken from BRS, *Submission 76*, Attachment I, G Saunders, B Coman, J Kinnear and M Braysher, *Managing Vertebrate Pests: Foxes*, Australian Government Publishing Service, Canberra, 1995, pp. 1, 2, 11, 16-17, 27, 41, 43, 48, 56.

40 *Submissions 5*, *11*, *14*, *17*, *19*, p. 2, *27*, p. 3, *41*, *54*, p. 1, *78*, p. 2, *83*.

Mouse and rat

2.55 There are several different rodent species that constitute a problem for agricultural industries. They are the house mouse (*Mus domesticus*) (an introduced species), and two native species, the canefield rat (*R. sordidus*) and the grassland melomys (*Melomys burtoni*). House mice occur throughout Australia and build up in agricultural regions when conditions are favourable. The other two species occur naturally in tall coastal grasslands in tropical and subtropical areas. The black rat (introduced), the pale field-rat (native) and the long-haired rat (native) also cause damage to agriculture.[41]

2.56 In agricultural terms, the most significant impact of rodents is on grain crops in eastern Australia. As well as feeding on crops, mice damage farm machinery and electrical equipment, and damage insulation in ceilings and walls. During plagues, mice also consume and spoil feed and attack livestock in piggeries and poultry sheds. They also cause damage to orchards and vegetable crops by feeding on and fouling crops. The canefield rat and the grassland melomys feed on sugarcane stalks, allowing bacteria, fungi and insects to set in. Black rats impact mainly on macadamia, banana and avocado plantations by eating maturing fruits.

2.57 Rodents are vectors of a number of diseases that affect livestock and humans. These include leptospirosis, salmonellosis and toxoplasmosis (affect humans) and swine encephalomyocarditis (livestock). The banana industry in Queensland currently experiences health issues associated with leptospirosis carried by introduced and native rats. In grain growing regions of Queensland, predominantly the Darling Downs, mice are capable of transmitting salmonella, which poses risks to crops and stored produce and is also a risk to human health.[42]

2.58 Poison is the traditional method for dealing with rodents, although few rodenticides are registered for in-crop use. Other control measures involve reducing habitat favourable to rodents by grazing, spraying and slashing. Cropping techniques, such as not sowing grain until soil is moist enough to allow rapid germination and planting seeds deeper, can also minimise

41 Except where otherwise indicated, information about mice and rats taken from BRS, *Submission 76,* Attachment K, J Caughley, M Bomford, B Parker, R Sinclair, J Griffiths and D Kelly, *Managing Vertebrate Pests: Rodents*, Bureau of Resource Sciences and Grains RDC, Canberra, 1998, pp. 1-5, 12, 49.

42 QFF, *Submission 59*, p. 8.

crop damage. Rodent-proofing buildings and storage facilities during construction also helps to protect stocks and equipment. As rodents are highly mobile, it is necessary for control programs to be cooperative arrangements covering large areas.

Feral goat

2.59 A number of submissions made reference to the impacts feral goats have on agriculture.[43] There are estimated to be about 2.6 million feral goats spread across all states and territories except the Northern Territory and mainly concentrated in western New South Wales, southern Queensland, central eastern South Australia and Western Australia.[44]

2.60 Goats compete with livestock for feed and water and damage fences. They cause land degradation through soil damage, overgrazing and browsing established trees and shrubs. They are also potential carriers of diseases such as foot-and-mouth.

2.61 Feral goats are a commercial resource and approximately one million goats are mustered or shot each year. Mustering and shooting, along with trapping and the use of radio-telemetered Judas goats are the main control techniques.[45]

Feral deer

2.62 Feral deer appear to constitute an emerging pest animal problem in several regions of Australia.[46] The committee was provided with evidence that they cause problems for farmers by eating pasture and damaging fences.[47] In environmental terms, deer trample and graze native vegetation, accelerate erosion and foul waterholes. Deer are also susceptible to diseases such as footrot and Johnes disease, which are a significant threat to Australia's meat export industry.[48]

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43 *Submissions 71*, *77*, p. 3, *78*, p. 3, Mr David Saxton, TFAWG, *Transcript of evidence*, 18 June 2004, p. 68.

44 Except where otherwise indicated, information about feral goats taken from BRS, *Submission 76,* Attachment J, J Parkes, R Henzell and G Pickles, *Managing Vertebrate Pests: Feral Goats*, Australian Government Publishing Service, Canberra, 1996, pp. iii, 1-3.

45 The use of radio-telemetry and Judas animals is explained in more detail in Chapter 6.

46 *Submissions 23*, *27*, p. 4, *34*, *38*, *44*, p. 5, *62*, *72*, p. 2, *77*, p. 3, Mr Graham Hillyer, Bombala RLPB, *Transcript of evidence,* 9 September 2005, p. 2, Mr David Saxton, TFAWG, *Transcript of evidence*, 18 June 2004, p. 68, Inspection at Connorville Station, Tasmania, 29 March 2005.

47 *Submissions 23*, *25*, *27*, *62*.

48 Hume RLPB, *Submission 77*, p. 3.

2.63 David and Penny Shaw, from Malanda in Queensland, made a submission in relation to the emerging problem of deer infestations in northern Queensland. They attributed this to a series of escapes from deer farms established in the region.[49]

Feral horse

2.64 The feral horse is considered by the BRS to constitute a main introduced pest species of concern.[50] There are an estimated 300,000 feral horses in Australia, concentrated in the Northern Territory, Queensland, parts of Western Australia and South Australia and small scattered populations in New South Wales and Victoria.[51] Australia has the largest population of feral horses in the world.[52]

2.65 Feral horses cause both environmental and agricultural damage. They foul waterholes, accelerate erosion, trample and consume native vegetation, spread weeds through dung and mane, and compete with cattle for food and water, particularly during times of drought. Feral horses are also vectors of exotic diseases such as equine influenza and African horse sickness, and disturb cattle musters and damage fences and troughs.

2.66 Major control techniques for feral horses include trapping, helicopter mustering and aerial and ground shooting. High levels of feral horse populations during times of drought can result in animal welfare issues, as horses may suffer from thirst, starvation and consumption of toxic plants. Fertility control has also been used for feral horses, but there is no reliable data as to its effectiveness.[53]

2.67 Feral horses also constitute a valuable resource with products including meat for human consumption, pet meat, pharmaceutical products and hair for musical instruments, brushes and car upholstery. Feral horse populations maintained in the wild also have potential tourism value.

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49 David and Penny Shaw, *Submission 34*.

50 NRM, *Selected Ecologically Significant Invasive Species Extent and Impact: Vertebrate Pests (indicator status: for advice)*, NRM, Canberra, viewed 21 September 2005, <http://www.nrm.gov.au/monitoring/indicators/pubs/vertebrate.pdf>, p. 2.

51 Except where otherwise indicated, information about feral horses taken from BRS, *Submission 76,* Attachment M, WR Dobbie, D McK Berman and ML Braysher, *Managing Vertebrate Pests: Feral Horses*, Australian Government Publishing Service, Canberra, 1992, pp. xiii-xvi, 23, 26.

52 English, p. 12.

53 English, p. 9.

2.68 In New South Wales, a management program has been adopted for feral horse populations in national parks. This initially involved aerial culling, but this method was banned due to adverse public perceptions about its humaneness. A Code of Practice exists for the capture and transport of feral horses.[54]

Feral camel

2.69 The feral camel is considered by the BRS to be a main introduced pest species of concern.[55] The Northern Territory Government submitted that the feral camel, once largely confined to outback areas, is now encroaching on pastoral areas.[56] The population of camels in mainland Australia is estimated to be at least 300,000, with the population approximately doubling in size every eight years.[57]

2.70 Camels have a number of impacts on agriculture and the environment, particularly the desert environment. As well as browsing several native shrub and tree species, feral camels foul waterholes, contribute to erosion and damage stock fences and infrastructure at cattle watering points. They compete with stock for water, particularly in summer months, making it sometimes necessary to pump water for stock.[58] There is the potential for adverse effects on the tourism industry as pristine areas of native wildlife are damaged or destroyed by camel browsing.

2.71 The committee received evidence that camels also cause economic loss to Aboriginal communities in Western Australia through destruction of toilets, water troughs and other infrastructure.[59]

2.72 Current methods of camel management are largely *ad hoc* and include fencing off key areas, live harvest for commercial sale and ground-based and aerial shooting.[60]

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54 English, pp. 3, 5.

55 NRM, p. 2.

56 *Submission 72,* p. 1, also Discussions at Warrawagine Station, Western Australia, 21 July 2005.

57 GP Edwards, K Saalfeld and B Clifford, *Population trend of feral camels in the Northern Territory, Australia*, paper forwarded by Robin Mills of Warrawagine Station.

58 Letter from Clyde Kenneth Hall, provided to Committee at Warrawagine Station, Western Australia, 21 July 2005, NHT, *The Feral Camel*, Fact Sheet, 2004, viewed 21 September 2005, <http://www.deh.gov.au/biodiversity/invasive/publications/camel/pubs/camel.pdf>.

59 Discussions at Warrawagine Station, Western Australia, 21 July 2005.

60 Edwards et al.

Feral donkey

2.73 Field officers from the Western Australian Government gave evidence that feral donkeys constitute a pest in north-west Western Australia.[61] Feral donkeys, which are in significant numbers there, damage fences, compete with stock for water and pasture, contribute to erosion, and can impact on horses through their aggressive nature.[62]

2.74 In Western Australia, donkeys were controlled primarily through aerial culling between 1978 and 1994, followed by a radio telemetry program that still operates. Eighty-one thousand, four hundred and ninety-six donkeys have been eradicated in the eleven years that the Judas donkey program has been operating.[63] Donkeys have been locally eradicated on some 23 properties in the Kimberley, equating to 72,300 square kilometres.[64]

Feral cat

2.75 The feral cat can survive in all climatic conditions and can be found throughout Australia. It is estimated that there could be as many as 12 million feral cats in Australia currently.[65]

2.76 The major impact of feral cats is on the environment rather than on agriculture. Feral cats prey on a number of native species and also carry a parasite called toxoplasmosis, which causes blindness, paralysis and other adverse effects in some native species.[66]

2.77 With regard to the impact on agriculture, the committee received evidence that cats prey on newly-born livestock and are potential carriers of exotic diseases such as rabies, toxoplasmosis and sarcosporidiosis.[67]

2.78 Although feral cats prey on rabbits, they act as a control on rabbit populations only at times of low rabbit densities. At other times, rabbits simply help to support an increased cat population.[68]

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61 Mr Richard Watkins, DAWA, *Transcript of evidence*, 22 July 2005, pp. 1-2.

62 Mr Richard Watkins, DAWA, *Transcript of evidence*, 22 July 2005, p. 8, BRS, *Submission 76,* Attachment B, M Bomford and Q Hart, 'Non-indigenous vertebrates in Australia' in Dr D Pimentel (ed), *Biological Invasions: Economic and Environmental Costs of Alien Plant, Animal, and Microbe Species*, CRC Press, New York, 2002, pp. 36-37.

63 Powerpoint presentation by Mick Everett at public hearing, 22 July 2005.

64 APB, *Annual Report 2002-2003*, APB, South Perth, p. 21.

65 NSW NPWS, *Feral Cats,* DEC, 16 December 2004, viewed 13 October 2005, <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Feral+cats>.

66 CWA NSW, *Submission 19*, p. 2, Land Protection, *NRM Facts: Feral cat ecology and control*, Queensland Government DNRM, June 2003, viewed 21 September 2005, <http://www.nrm.qld.gov.au/factsheets/pdf/pest/PA26.pdf>.

67 Cobar RLPB, *Submission 78*, p. 3.

2.79 Major control methods for feral cats are fencing, shooting, poisoning and trapping.[69]

Cane toad

2.80 The committee is aware of the significant environmental threat posed by the cane toad,[70] and a number of submissions addressed this issue.[71] Although the impact of the cane toad is not completely known, cane toads may compete with native species for habitat and can poison native predators that attempt to eat them.[72]

2.81 The committee notes that funding is being injected into cane toad control. As an example, the Western Australian Government is providing $600,000 towards mapping impacts of the cane toad on biodiversity in the Kimberley.[73]

2.82 Mr Gordon Wyre, from the Western Australian Department of Conservation and Land Management (CALM), gave the following evidence about cane toads:

> A cane toad is a classic example of an almost perfect invasive species. It breeds phenomenally, it can travel anywhere, it can aestivate when conditions get dry and it kills everything that tries to eat it. You would be hard-pressed to design something that was better as an invasive species. Having said that, a lot of research has been done. I was involved in the early days in the eighties when the Commonwealth was funding research through CSIRO and James Cook University to look at stemming the tide of cane toads. You can never have enough research until you actually find whatever the key factor is that is going to be the weakness in cane toads, but unfortunately to date none of the research has found that key factor.[74]

68 Land Protection Factsheet, p. 3.

69 Land Protection Factsheet, p. 3.

70 Mr Chris Tallentire, CCWA, *Transcript of evidence*, 11 April 2005, p. 1.

71 *Submissions 50*, *55*, p. 5, *70*, p. 11.

72 BRS, *Submission 76,* Attachment B, p. 37.

73 Mr Chris Tallentire, CCWA, *Transcript of evidence*, 11 April 2005, p. 10.

74 *Transcript of evidence*, 11 April 2005, p. 19.

Native species having pest impacts

Kangaroo

2.83 The committee received several submissions indicating that red and grey kangaroo populations are exploding in certain areas,[75] although this suggestion was refuted by Wildlife Advocate Incorporated.[76] In some circumstances, changes in land conditions such as increased food and water supply lead to over-abundance in kangaroo populations, which can result in damage to agriculture and the environment.[77]

2.84 The committee received a good deal of evidence regarding the problems posed by kangaroos for agriculturalists. Grey kangaroos eat pasture and crops, cause fence damage, and can be road hazards, often resulting in serious damage to vehicles.[78]

2.85 The primary form of control for kangaroos having a pest impact is shooting. A commercial industry for eastern grey kangaroos exists in some states.[79] The committee received evidence that there are some problems with the commercial harvest of kangaroos, including insufficient harvesting quotas, fickle export demand and the labour-intensive nature of ground-shooting programs.[80]

Emu

2.86 Emus are responsible for grazing pressure on pastoral land, competing with sheep for feed, and damage to fences.[81] They are a particular problem in Western Australia, where the existing State Barrier Fence helps to protect crops from emus. The Western Australian Agriculture Protection Board (APB) Annual Report notes that 50,000 emus migrated to the Barrier

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75 *Submissions 27*, p. 3, *77*, p. 2, *78*, p. 3, *80*, p. 5, *84*, pp. 17-18, *100*, p. 11, Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, pp. 4-5, Mr Ian Lobban, VFF Barnawartha Branch, *Transcript of evidence*, 18 June 2004, p. 27.

76 *Submission 91*, p. 1.

77 ACT Government, *Submission 63,* Appendix, Environment Act, *ACT Vertebrate Pest Management Strategy*, ACT Government, 2002, p. 20, Mr Ian Lobban, VFF Barnawartha Branch, *Transcript of evidence*, 18 June 2004, p. 27, Hart, p. 4.

78 *Submissions 8*, p. 1, *18*, *19*, p. 2, *27*, p. 3, *36*, *54*, p. 1, *74*, *77*, p. 2, *78*, p. 3, *80*, p. 5, Mr Douglas Paton, VFF, *Transcript of evidence*, 18 June 2004, p. 47.

79 SSAA and FGA, *Submission 90*.

80 BRS, *Submission 76*, p. 8.

81 *Submissions 19*, p. 2, *36*, *78*, p. 3, Mr Ian Paton, VFF Corryong Branch, *Transcript of evidence*, 18 June 2004, p. 47.

Fence between July and November 2002, with approximately 20,000 of these dying from exhaustion adjacent to the fence.[82]

2.87 Committee members were provided with information at an inspection conducted at Yuin Station in Western Australia that despite emus having at times reached plague proportions, pastoralists are limited in their control options as they are a protected species.[83]

2.88 Representatives of the Western Australian Government indicated that emus can be destroyed in areas where they are impacting on agriculture. Commercial use of emus, however, requires a commercial licence, the issuing of which was suspended when emus began to be farmed commercially in Western Australia.[84]

Wallaby

2.89 A few submissions noted that wallabies are considered pest animals in some areas.[85] In Tasmania, Bennett's wallaby, along with the brushtail possum and the pademelon, is considered a pest for the damage that it causes to forestry plantations by browsing on leaves and shoots from newly planted seedlings.[86]

2.90 Bennett's wallabies in Tasmania are poisoned and culled under crop protection permits on agricultural and forestry lands.[87] Fencing is also used widely to protect forestry plantations.[88] Plastic tree guards to protect forestry plantations have been trialled but are not always effective in deterring browsing by wallabies.[89]

2.91 Wallabies are also harvested commercially. The committee received evidence regarding commercial use of wallabies in Tasmania for export meat products under Tasmanian Government-approved Wildlife Trade Management Plans. The potential also exists for export of skins and fur.[90]

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82 APB, p. 25.

83 Inspection at Yuin Station, Western Australia, 12 April 2005.

84 *Transcript of evidence*, 20 July 2005, pp. 13-14.

85 *Submissions 56*, *71,* Mr Ian Whyte, TFGA, *Transcript of evidence*, 29 March 2005, pp. 15-16, Inspection at Elverton Pastoral Company, Tasmania, 30 March 2005.

86 *Exhibit 12*, Dr T Wardlaw, *Developing alternatives to 1080 for managing browsing*, unpublished, presented to committee 29 March 2005, p. 4.

87 DPIWE, *Tasmania's Nature Conservation Strategy 2002-2006*, Tasmanian Government, viewed 21 September 2005, <http://www.dpiwe.tas.gov.au/inter.nsf/Attachments/JCOK-5L2664/$FILE/NCS%20Final%20Report%202003.pdf>, p. 41.

88 Mr Rupert Gregg, TFGA, *Transcript of evidence*, 29 March 2005, p. 10.

89 TFGA, *Submission 56*.

90 Inspection at Lenah Game Meats, Tasmania, 30 March 2005.

2.92 The committee notes that it is important to distinguish Bennett's wallaby from other species of wallaby, such as the yellow-footed rock wallaby, black-striped wallaby, spectacled-hare wallaby and brush-tailed rock wallaby, which are not considered to be pest animals.

Possum

2.93 Brushtail possums pose a serious problem for farmers and forestry in some areas, particularly in Tasmania. Possums have a severe impact on crops and forestry plantations, and faecal matter from possums reduces feed intake and can taint the milk produced by dairy cattle.[91]

2.94 Possums in high numbers may also constitute a pest in parts of Queensland.[92] Both brush and ring tail possums are in high abundance in some urban areas.[93] Possums are also responsible for defoliation of native forests in areas of Tasmania.[94]

2.95 In Tasmania, fencing (conventional and electric), shooting and poisoning with 1080 are the most common control methods.[95] Possums are culled and poisoned under crop protection permits, mainly on agricultural and forestry land.[96] Brush tail possums are also commercially harvested for export meat products.

Wombat

2.96 Wombats cause problems for many farmers, particularly when population numbers increase. A significant number of submissions noted that wombats dig holes under rabbit-proof fences, cause land damage and degradation, undermine buildings and affect gateways and stockyards.[97]

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91 TFGA, *Submission 56*, Mr Rupert Gregg, TFGA, *Transcript of evidence*, 29 March 2005, p. 17, Inspection at Elverton Pastoral Company, Tasmania, 30 March 2005.

92 MS O'Keeffe and CS Walton, V*ertebrate pests of built-up areas in Queensland*, DNRM Queensland, June 2001, viewed 27 September 2005, <http://www.nrm.qld.gov.au/pests/management_plans/pdf/vertebratepests_psa.pdf>, p. 14.

93 Animal Control Technologies, *Submission 84*, p. 17.

94 Forestry Tasmania, *Submission 67*.

95 TFGA, *Submission 56*.

96 DPIWE, p. 41.

97 *Submissions 1*, *5*, p. 4, *8*, p. 1, *15*, *18*, *19*, p. 2, *24*, p. 1, *30*, *51*, *53*, *54*, p. 1, *56*, *71*, *74*, *80*, p. 5, Mr Brian Clifford, Cooma RLPB, *Transcript of evidence,* 9 September 2005, p. 2, Mr Anthony Griffiths, VFF Wangaratta Branch, *Transcript of evidence*, 18 June 2004, p. 15.

Grey-headed flying fox

2.97 A submission received from Mr Ed Biel of Oakdale in New South Wales discussed the impact of the grey-headed flying fox.[98] The grey-headed flying fox is a native species which attacks deciduous trees and tropical fruit plantations.

2.98 Mr Biel's submission indicates that where the region around Oakdale, Camden, Wedderburn and Thirlmere in New South Wales once supported in excess of 100 orchards, there are now only 10 or 11 orchards operating in the region, due largely to problems caused by the grey-headed flying fox. Levels of damage to crops in the vicinity of 20 to 40 percent are common.[99]

2.99 Mr Biel's evidence was supported by the New South Wales Farmers' Association (NSWFA), which reported that grey-headed flying foxes damaged between 10 and 60 percent of New South Wales' east coast fruit industry crops and caused an estimated $32 million loss in 2002-03.[100] Other submissions supported the argument that grey-headed flying foxes are a pest to fruit growers and orchardists.[101]

2.100 Humane Society International emphasised that populations of grey-headed flying foxes are at low levels, and that culling of the species is therefore unacceptable.[102]

Pest birds

Wedge-tail eagle

2.101 A number of submissions drew attention to the problem of wedge-tail eagles preying on livestock, particularly lambs, but also sheep and goats.[103] Wedge-tail eagles are a protected species in some states and territories, making options for control limited. Prior to protection, control was effected using a combination of poison baits and shooting. Netting of farms is not a practical option due to the extensive area of farms for which eagles constitute a problem.[104]

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98 *Submission 21*.

99 Mr Ed Biel, *Submission 21*, p. 2.

100 NSWFA, *Submission 31*, p. 7.

101 *Submissions 59*, pp. 8-9, *84*, p. 37, *90*.

102 *Submission 88*, pp. 3-4.

103 *Submissions 5*, p. 4, *31*, p. 19, *36*, *78*, Mr Bart Jones, PGA, *Transcript of evidence*, 20 July 2005, p. 11, Mr Geoffrey Burston, *Transcript of evidence*, 18 June 2004, p. 57.

104 NSWFA, *Submission 31*, pp. 7-8, 13.

2.102 It was also suggested that population numbers of wedge-tail eagles are not clearly known and that adequate population monitoring needs to be put in place.[105]

Starling

2.103 The committee received evidence about the impact of starlings on agriculture. Mr Bernie Masters, formerly the member for the seat of Vasse in the Western Australian Parliament, described how starlings plague soft fruit and cereal crops, and destroy food crops by defecating on them.[106]

2.104 Dr Andrew Woolnough, from the Vertebrate Pest Research Section of the Department of Agriculture, Western Australia (DAWA), discussed starlings' impact on high-value crops, particularly in horticulture, grape and apple crops, contamination of sheep fleeces and consumption of stock feed in feedlots. Starlings also impact on structures such as silos by nesting in them.[107] Starlings carry diseases and parasites that pose health risks to people, poultry and possibly native bird species.[108]

2.105 A Judas starling program, which involves tagging a number of birds to locate starling populations and roosting areas, has been successfully conducted in South Australia.[109] In Western Australia, continual surveillance for starlings is carried out, and starlings are systematically trapped and shot. A total of 491 starlings were destroyed between 2002 and 2003.[110] Since 1976, an eradication program has been in place at Eucla and Esperance, which has so far prevented starlings from becoming established in Western Australia.[111]

2.106 There may also be means of diverting starlings away from grape-growing properties to non-grape growing areas or to adjoining non-viticultural properties.[112]

105 NSWFA, *Submission 31*, p. 19.

106 Mr Bernie Masters MLA, *Submission 6,* Attachment, p. 2.

107 *Transcript of evidence*, 11 April 2005, pp. 21-22.

108 BRS, *Submission 76,* Attachment N, M Bomford, *Risk Assessment for the Import and Keeping of Exotic Vertebrates in Australia*, BRS, Canberra, 2003, p. 54.

109 APB, p. 18.

110 APB, p. 24.

111 BRS, *Submission 76*, p. 14.

112 APCCSA, *Operational Plan for 2001-2003*, South Australian Government, p. 23.

Sulphur-crested cockatoo

2.107 A few submissions made reference to the sulphur-crested cockatoo as constituting a pest species during times of population abundance.[113] It was reported that cockatoos increase in number each year and damage horticultural crops, irrigation paddocks and trees.[114]

2.108 At Warrawagine Station in Western Australia, committee members witnessed hordes of cockatoos in hay sheds on the property. The committee was told that cockatoos accessing hay sheds and feeding on hay intended for livestock is a serious problem.[115]

Long-billed corella

2.109 The committee received some evidence that long-billed corellas constitute a pest species in some areas of Australia.[116] The long-billed corella is found in a range of habitats, particularly in grassy woodland areas in southern Queensland, New South Wales, parts of Victoria and south-eastern South Australia. Long-billed corellas feed on cereal crops, particularly oat crops, harm seedlings, and also cause damage to coaxial cables, antennae and other communications equipment.[117]

2.110 Because long-billed corellas are a protected native species in many areas, methods used to control their populations are limited. Control methods include scaring, visual barriers, chemical deterrents, exclusion, shooting, poisoning, fertility control and trapping.

Invertebrate pests

2.111 Although the committee did not receive a great deal of evidence about invertebrate pests, it is clear from the submissions received that they have the potential to impact seriously on Australian agriculture.

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113 *Submissions 18*, *19*, p. 3, *54*, p. 1, *80*, p. 5, Mr Graham Hillyer, Bombala RLPB, *Transcript of evidence,* 9 September 2005, p. 1, Inspection at Elverton Pastoral Company, Tasmania, 30 March 2005.

114 Carboor/Bobinawarrah Landcare Group, *Submission 54*, pp. 1-2.

115 Discussions at Warrawagine Station, Western Australia, 21 July 2005.

116 *Submission 19,* p. 3, Ms Noeline Franklin, *Transcript of evidence,* 11 August 2004, p. 15, Mr Antony Plowman, Member for Benambra, Victorian Parliament, *Transcript of evidence,* 18 June 2004, p. 37.

117 Information about corellas taken from Environment and Natural Resources Committee, *Problems in Victoria caused by Long-billed Corellas, Sulphur-Crested Cockatoos and Galahs*, Parliament of Victoria, November 1995, pp. xv, 15, 58, 66.

2.112 Mr Dick Bashford, of Forestry Tasmania, indicated to the committee that the absence of monitoring systems around port of entry sites in Australia provides the potential for exotic insect species to establish themselves near the port of entry sites.[118]

2.113 Since forestry plantations in many parts of Australia are located within or close to a five kilometre radius zone of entry ports, the potential for exotic invertebrate infestations of forestry plantations is significant.[119]

2.114 An example of exotic insect establishment in Australia is the Red Imported Fire Ant (RIFA), which established itself in the Brisbane City area over a five-year period before it was detected in 1999. The current eradication program for RIFA is budgeted at $175.4 million over a five-year period.[120] RIFA also has the potential to cause serious environmental impacts on native invertebrates, small ground-dwelling vertebrates and large vertebrates including deer.[121]

2.115 The committee also received evidence about the impact that wingless grasshoppers have on crops in parts of Australia. Mr Ernie Constance, a farmer in the Eastern Monaro region, gave evidence that wingless grasshopper plagues in 1982 to 1983 and 1995 to 1996 wiped out pasture at huge cost to farmers.[122]

2.116 Locusts were also cited as a problem by the Country Women's Association of New South Wales (CWA), which pointed to devastating effects on crops following a recent plague in New South Wales.[123] Locusts have also caused recent crop devastation in Queensland, according to AgForce.[124]

2.117 Mr Craig Allen, of Jindabyne in New South Wales, submitted that the European Wasp poses a threat to agriculture and the environment. In particular, he noted that European Wasps have spread through parts of the Monaro in New South Wales and through the Australian Alps into Victoria. He called for a coordinated national approach to their control and eradication.[125]

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118 *Submission 2*.

119 Mr Dick Bashford, *Submission 2*.

120 DAWA, *Submission 98*, p. 12.

121 DAWA, *Submission 98*, p. 12.

122 Mr Ernie Constance, *Submission 5*.

123 CWA, *Submission 19*, p. 2.

124 *Submission 27*, p. 4.

125 *Submission 94,* see also Mr John Gell, *Submission 83*.

2.118 DAWA provided a detailed submission in relation to invertebrate pests. They stated that invertebrate pest animals impact significantly on broad-acre agriculture, bulk grain storage, animal husbandry, horticulture and forestry, as well as the natural and urban environments.[126]

2.119 A number of insect pests pose a serious threat to timber production systems, including the Asian gypsy moth and the Asian longicorn beetle. These pests can seriously affect native and exotic trees. Pests of softwood timber have the potential to cause serious damage to end-use timber; it is estimated that there is $2.8 billion of timber in building construction at risk in Western Australia.[127]

2.120 DAWA also called for more research into the impacts of feral European honey bees and the exotic Bumble bee, *Bombus terrestris*, recently introduced into Tasmania. Feral bees pose a significant environmental threat because they occupy tree hollows, ousting native birds, and contribute greatly to the spread of weeds.[128]

126 DAWA, *Submission 98*, pp. 5-6.

127 DAWA, *Submission 98*, p. 9.

128 DAWA, *Submission 98*, pp. 18-19, Material forwarded to committee by CCWA, 12 May 2005.

3

Economic, environmental and social impacts of pest animals

Overview

3.1 Landholders suffer significant losses due to pest animal predation of livestock and destruction of crops and pasture. There are also tremendous costs involved in attempting to control pest animal populations, and the cost of time spent in pest control which could be productively utilised elsewhere.

3.2 The committee notes with concern the terrible social impact that pest animals are having on rural families and communities. This is manifested in a number of ways: through the physical and psychological stress for families of having to deal with pest problems, distress caused by constantly witnessing attacks on livestock and family pets, and in some cases the heartbreak of having to leave family properties due to a combination of drought, pest animals and weeds, and other problems.

3.3 Although it is not a focus of the terms of reference, the committee also notes that a substantial amount of evidence received focused on the environmental consequences of pest animals. The committee considers that the best outcome for all will be achieved if pest animal strategies take into account both agricultural and environmental impacts of pest animals. This will enable the true scope of the

problem to be ascertained, and appropriate strategies for dealing with it to be developed.

Economic impacts

3.4 Although pest animal control is expensive, it is a smart investment in terms of the benefits it brings to both industry and the public. Although it is difficult to calculate exactly the return on investment, a Queensland study found that every dollar invested in weed and pest animal management yielded between $4.30 and $6.40 in benefits.[1] In 2002, the Prime Minister's Science, Engineering and Innovation Council identified invasive species as one of four areas likely to provide the greatest return on investment in helping to stop the diminishing value of Australia's natural systems and biodiversity.[2] Having a clear picture of the economic impacts of pest animals enables an understanding of the significant benefits that can be derived from investment in pest animal control.

3.5 The committee notes that the economic impacts of pest animals can be assessed at two levels. The first is the level of scientific research, which seeks to quantify the economic cost of pest animals across Australia. Although such analyses can never be complete, due to the difficulties of quantifying things such as time spent on pest animal control and social impacts, the committee acknowledges that it is important to try to achieve a broad view picture of the impact of pest animals.

3.6 The second level is the experience of individual farmers, families and communities experiencing problems with pest animals. Many of the submissions received by the committee discussed the enormous economic, physical and psychological cost of having to deal with pest animal problems. The committee notes that these individual accounts are equally as important as scientific research in attempting to understand the cost to Australia of the pest animal problem.

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1 *Exhibit 1,* AEC Group, *Economic Impact of State and Local Government Expenditure on Weed and Pest Animal Management in Queensland*, Local Government Association of Queensland, Fortitude Valley, October 2002, p. 99.

2 Prime Minister's Science, Engineering and Innovation Council, *Records of Eighth Meeting, 31 May 2002,* DEST, Canberra, viewed 13 October 2005, <http://www.dest.gov.au/NR/rdonlyres/EE0F827A-94BB-4E0C-80F5-A058293F190C/2014/Sustaining_our_Natural_Systems_and_Biodiversity_Wo.pdf>, p. 14.

Research into impact of pest animals

3.7 The most comprehensive recent figures that provide an indication of the economic cost of pest animals in Australia come from the Pest Animal Control Cooperative Research Centre (PAC CRC). In its report, *Counting the Cost: Impact of Invasive Animals in Australia, 2004* (the McLeod Report), it estimates that exotic pest animals cost the Australian economy $720 million per annum, as indicated in the table below.

Table 1: Annual Impact of Pest Species (order of cost)

		Triple Bottom Line Impact		
	Total ($m)	**Economic ($m)**	**Environmental ($m)**	**Social ($m)**
Fox	227.5	37.5	190.0	Nq
Feral Cats	146.0	2.0	144.0	Nq
Rabbit	113.1	113.1	Nq	Nq
Feral Pigs	106.5	106.5	Nq	Nq
Dogs	66.3	66.3	Nq	Nq
Mouse	35.6	35.6	Nq	Nq
Carp	15.8	4.0	11.8	Nq
Feral Goats	7.7	7.7	Nq	Nq
Cane Toads	0.5	0.5	Nq	Nq
Wild Horses	0.5	0.5	Nq	Nq
Camels	0.2	0.2	Nq	Nq
Total	719.7	373.9	345.8	

Source *McLeod, R. (2004) Counting the Cost: Impact of Invasive Animals in Australia 2004. Cooperative Research Centre for Pest Animal Control. Canberra.*

3.8 This table is based on 'triple bottom line' reporting, that is, an attempt to quantify the social and environmental impacts of pest animals as well as the economic cost. Included in the economic cost calculation are control costs (baiting, fencing, shooting and research), production losses for sheep, cattle and cropping industries, and public sector research and management costs.

3.9 It is important to note that the figure of $720 million per annum does not represent the total economic cost of pest animals to Australia. First, this figure represents only the costs of the 11 major introduced vertebrate pests studied in the report, not the impacts of *all* pest animals in Australia. It does not include the costs of many other pest species about which the committee received evidence, in particular a range of native pest species, bird pests and invertebrate pests.

3.10 Secondly, although the report attempts to provide a triple bottom line analysis, the environmental costs for most species, and the social costs of all species have not been quantified, and are presented in the report only in qualitative terms. It is evident, therefore, that the real cost of pest animals to the Australian economy is much greater than the $720 million estimate.

3.11 Taking into consideration the economic impact alone, it is apparent from Table 1 that rabbits have the highest economic cost of any pest animal. Representatives of the BRS estimated the economic cost of rabbits at even higher than that estimated in the McLeod Report:

> **Mr Quentin Hart**: Basically, even with RCD (Rabbit Calicivirus Disease), we still estimated that rabbits were having the major impact. In some ways it is unfortunate that with RCD a lot of focus has gone off rabbits, because there is certainly a need for further routine control there. We estimated $200 million for rabbits, and we made a very conservative estimate of $40 million for foxes. That was based on a five per cent impact on land production, which would probably be considered quite conservative in some areas.
>
> **Dr Bomford**: You will appreciate that these are just agricultural impacts in our report. If you start looking at the effects of foxes on native species, you are going into a different ballpark.[3]

3.12 The committee notes that, because economic costs include control costs as well as production losses, it is perhaps not quite accurate to say that rabbits are the most serious pest animal problem in Australia currently. A breakdown of these figures shows that the annual loss to agricultural production from pigs is $100 million compared to $88.11 million for rabbits, but only $6.5 million annually is spent on management and research for pigs compared to $25 million for rabbits.[4] Although rabbits certainly do pose a serious problem for agriculture, other pest species such as wild dogs, foxes and feral pigs also appear to be pest animals of particular significance in terms of the damage that they cause.

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3 *Transcript of evidence*, 16 February 2005, p. 7.

4 R McLeod, *Counting the Cost: Impact of Invasive Animals in Australia*, PAC CRC, Canberra, 2004, pp. 14, 26.

3.13 The Commonwealth Scientific and Industrial Research Organisation (CSIRO) gave evidence that the impacts of several pest species are even worse than indicated in the research from the PAC CRC. Their submission suggests that the annual economic impact of some major pests is $115 million for rabbits (lost wool production), $500-750 million for foxes (control costs), more than $100 million for pigs (lost production) and more than $200 million for rodents (lost production per mouse plague).[5] The committee notes that the figures estimated for foxes and rodents are substantially more than those provided by the PAC CRC.

3.14 Some pest animals have a particularly devastating effect in certain areas of Australia. The Queensland Farmers' Federation (QFF) noted that feral pigs are estimated to cost $50 million per year through predation, competition and destruction of crops and pastures in Queensland.[6] That is approximately half the national economic cost for feral pigs quoted by the PAC CRC.

3.15 The economic cost to producers of pest animals often extends far beyond the costs of lost production and direct control costs. Much time and labour is expended on baiting and other control measures. A face-to-face survey conducted in South Australia during the 1993 mouse plague revealed that the most significant cost of control was the labour needed for mouse-proofing, baiting, trapping, cleaning and disposing of carcasses.[7]

3.16 The authors of a recent report prepared for DEH surveyed the relevant literature and were unable to find any quantification of the economic impacts of animal diseases and invertebrate pests. For the purposes of the report, however, they assumed that animal diseases and invertebrate pests of animals cause a five percent yield loss through mortality, reduced growth rates and reduced quality. Based on a figure of $16.8 billion as the gross value of Australian livestock slaughterings and products for 2002 to 2003, this generated a conservative estimate impact of $840 million. Adding sales of animal health products of $382.5 million (for 2001), the total estimated annual impact of diseases and invertebrates was $1.2 billion. This figure does

5 *Submission 55*, p. 3.

6 *Submission 59*, p. 2.

7 BRS, *Submission 76,* Attachment K, J Caughley, M Bomford, B Parker, R Sinclair, J Griffiths and D Kelly, *Managing Vertebrate Pests: Rodents*, Bureau of Resource Sciences and Grains RDC, Canberra, 1998, pp. 28-29.

not include the economic impact of invertebrate pests on native plants and the commercial plant industry.[8]

Individual accounts of economic impact

3.17 In addition to the comprehensive examination of economic costs conducted by the PAC CRC, the committee received a substantial amount of evidence from individual landholders and organisations about the impacts of pest animals on them and their communities.

3.18 Much of the evidence regarding the economic impact of pest animals was from pastoralists affected by wild dogs.[9] Ms Noeline Franklin, from Brindabella in the ACT, who has worked for several years with families affected by wild dogs in the south-east of Australia, described some of the issues faced by people on the land, which provide the background for an examination of the losses being suffered:

> I will raise some of the sorts of issues that our people are facing all too often. They have sheep and goats that they are trying to manage, as well as vegetation. They are trying to get equilibrium. Sheep and goats are massacred all too regularly, despite the fact that we have huge trapping and poisoning efforts. Dairy and beef cattle are chased over fences and harassed off pasture. Calves are taken as they are being born. Cows are starting to lose calves—they are having late-stage abortions—through neospora. Calves are turning into blood-stained dirt. We go to authorities and they say, 'Where's the proof?' Do we take them a shovelful of dirt? What do we do?[10]

8 Agtrans Research in conjunction with Noel Dawson, *Review of Progress on Invasive Species – Final Report to Department of Environment and Heritage*, DEH, Canberra, 12 April 2005, viewed 21 September 2005, <http://deh.gov.au/biodiversity/invasive/publications/review/pubs/review-full.pdf>, p. 18.

9 *Submissions 10*, *22*, *26*, *35*, *39*, *42*, *45*, *51*, *86*, *102, 103,* Mr Harley Hedger, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 20.

10 *Transcript of evidence*, 11 August 2004, p. 2.

3.19 The BRS provided evidence that pest animal control for non-indigenous species costs governments and landholders in excess of $60 million per annum.[11] Landholders have to shoulder the costs of baiting, trapping, shooting, fencing, veterinary costs, and other costs associated with injuries and preventing disease spread.[12] In itself, this is a significant cost, however individual submitters to the inquiry focused more on production losses caused by pest animals, particularly wild dogs.

3.20 Mr Geoff Burston, from Benambra in Victoria, described the economic impact that wild dogs have had on his family's sheep enterprise:

> There is an economic impact on us. Our property is in three parts—Camerons, the home block and Hinnomunjie—which are about 18 kilometres apart. Over the past five years we have averaged only about 31 per cent lambs weaned as opposed to the 76-plus percentage earlier, although we have had a fairly big fox-baiting program. We calculate the reduced income from this, with not having the excess sheep to sell and the average age of the flock getting older, is about $21,000 on a 650-ewe flock. The wool from those sheep this year made $26,500. We are suffering about a 44 per cent loss in that area.[13]

3.21 Mrs Marion Kennedy, of Yaouk Valley, stated:

> Trying to make a living out of sheep in the Yaouk Valley has nearly become impossible. Over the last six months I have lost to wild dogs 110 ewes and lambs and … 678 sheep over the years.[14]

3.22 Mr Peter Spencer, from Shannons Flat in New South Wales, submitted that last year 300 fine wool Saxon sheep were killed by wild dogs. The loss of the flock, which had a seven-year production capacity, removed from the enterprise an earning capacity of $1 million.[15]

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11 *Submission 76*, p. 14.

12 Braidwood RLPB, *Submission 71*, *Exhibit 15, Survey – Wild Dogs*, September 2002, provided by Michael and Susan Litchfield.

13 *Transcript of evidence*, 18 June 2004, p. 57.

14 *Submission 16*.

15 *Submission 100*, p. 10.

3.23 Kathy and Malcolm Boladeras, from Wonganoo Station in Western Australia, gave the following evidence:

> Our family has lost 5,600 sheep to wild dog predation in the last 3 years. Since the first significant losses were felt in 2003 we have spent 3 days of every week, just trapping and baiting. If we didn't, we wouldn't have any sheep left at all by now. Over 100 dogs have been trapped on our property alone, and the figures for some of our neighbours are similar.[16]

3.24 The PGA gave evidence that in fringe areas directly north of Esperance, lambing percentages are down to 20 or 30 percent due to the effect of wild dog attacks and predation of lambs by wedge-tail eagles.[17]

3.25 Mr Ernie Constance, whose farm covers approximately 2,200 hectares on the escarpment of the Eastern Monaro, estimated that the personal cost to him of the wild dog problem had been more than $200,000 over a four-year period from 2000 to 2004. This figure included the value of replacement sheep for those killed, lost wool production, loss of production due to changes in stocking options, time spent checking and moving sheep and baiting, and vehicle costs.[18]

3.26 A number of sheep farmers gave evidence that problems with wild dogs have forced them to change from sheep to cattle.[19] This has a tremendous impact on farmers themselves, as well as having serious implications for the future of the Australian wool industry. Mr Bart Jones, a pastoralist from the Eastern Goldfields region of Western Australia, anticipated that, without action to curb the wild dog problem in the region, his family would have no sheep left within five years.[20]

16 *Submission 87*, p. 1.

17 *Transcript of evidence*, 20 July 2005, p. 2.

18 *Submission 5*, p. 2.

19 *Submissions 39*, *87*, p. 1, *103, Exhibit 2,* TFAWG, *Submission*, General Purpose Standing Committee No 5 Inquiry into Feral Animals, August 2001, p. 4.

20 *Transcript of evidence*, 20 July 2005, p. 7.

3.27 AgForce stated in its submission that producers are being forced out of the sheep industry and into cattle production, resulting in broad scale unemployment in Queensland agricultural communities and forcing families to leave towns.[21]

3.28 Mr John Sinclair, a farmer from Yea-Alexandra, described some of the economic implications of switching from sheep to cattle, particularly on smaller properties:

> In relation to agricultural viability, the gross margin for sheep as against cattle in our particular high-rainfall areas is sheep at a base one and cattle about two-thirds. So the profit from cattle on a gross margin basis is about two-thirds of what it is for sheep. With the wild dog problem influencing people to move from sheep enterprises into cattle enterprises, the viability of our farms is being affected. Where farms are of a marginal size, and there are many of those, a family farm moving from sheep into cattle can certainly tip its viability over the balance. I would have thought that is of great concern not only for the people concerned but also for the Australian economy.[22]

3.29 Mr Russell Murdoch, from the New South Wales Upper Murray Graziers, indicated that he stopped running sheep last year due to the dog problem.[23]

3.30 The committee is aware that the cost of pest animal control for all pest animals is a significant burden on landholders. This includes not only wild dogs, but also foxes, feral pigs, rabbits and kangaroos.[24]

3.31 It is apparent that pest animals have a significant economic impact, both at the national level and at the level of the individual farmer and grazier. These impacts have reached the point where some pastoralists are being forced to leave their enterprises as they are no longer economically viable. The means of addressing these problems, through enhanced prevention and detection, and improved control measures, are considered in Chapters 5 and 6.

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21 *Submission 27*, p. 2.

22 *Transcript of evidence*, 18 June 2004, p. 73.

23 *Transcript of evidence*, 18 June 2004, p. 44.

24 Hume RLPB, *Submission 77*, p. 1.

Social impacts

3.32 Much of the evidence received by the committee referred not only to the economic impact of pest animals, but also the social consequences of having to deal with them on a day-to-day basis. These consequences are wide-ranging and include stress and family breakdown, problems associated with financial difficulty, lifestyle changes and unemployment.[25]

3.33 Some of these problems were described by the State Council for the RLPB of New South Wales, in its submission:

> Impacts that also need to be taken into account, but you can't place an economic price on are social aspects on the affected landholder – not just the cost of control in terms of materials and time or labour, but the emotional stress associated with survival in their chosen industry, fear and anguish, frustration, the loss of productive land, the sleepless nights wondering when the next attack will happen, family and community breakdown, loss of self esteem or face in the community etc.[26]

3.34 The impact of feral animals is also manifested in the increased pressure that is placed on landowners to manage pest animal problems on their land. Landowners are required to find additional time in their busy days to deal with attacks on stock, to undertake control measures and fulfil administrative requirements. Additionally, feelings of helplessness and lack of control are experienced by many who are faced with pest animal problems on a regular basis.[27]

3.35 A number of submissions pointed to the significant health implications of pest animals, including depression and thoughts of suicide that are brought on by constantly having to deal with problems associated with living on the land.[28] Bruce and

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25 *Submissions 31*, p. 2, *40*, *42*, *76*, p. 6, *81*, p. 5, Mrs Marion Kennedy, Adaminaby Yaouk Wild Dog Committee, *Transcript of evidence,* 9 September 2005, p. 40, Mr Douglas Paton, VFF Corryong Branch, *Transcript of evidence*, 18 June 2004, p. 46.

26 *Submission 81*, p. 5.

27 *Exhibit 10*, R Hunt and Brindabella and Wee Jasper Valley wild Dog/Fox Working Group, *Brindabella and Wee Jasper Valleys Cooperative Wild Dog-Fox Control Plan July 2002-June 2005*, 2002, p. 8.

28 *Submissions 35, 42, 78, 80,* p. 5, *81,* p. 5, Mr Michael Hartmann, CCA, *Transcript of evidence*, 15 June 2005, p. 2.

Barbara Reid, Victorian sheep farmers, described some of the health implications for farmers of constantly having to deal with the after-effects of wild dog attacks:

> There is nothing more depressing for a sheep farmer than to find sheep with their intestines hanging out. I am forced to deal with these animals straight away, and the only quick and humane thing to do is to cut the suffering animal's throat. Needless suffering by these poor sheep, and me being forced to slaughter them immediately, have taken their toll on my health. I have often doubted whether I should keep farming or not.[29]

3.36 Similar evidence was provided by Mrs Betty Murtagh, Secretary and Treasurer of the Barnawartha Branch of the Victorian Farmers Federation (VFF):

> The conclusion can be drawn from this that there are considerable health risks to people as well as financial and traumatic effects on the rural industry and the rural community. To come out one beautiful morning to find lambs torn to pieces and their mothers endeavouring to drag themselves around is an experience that is very hard to put out of mind. You then go on to depression and heartache and a breakdown of the family circle in rural areas because of the unnecessary tension and stress that is put on many families.[30]

3.37 Mr Noel Cheshire, a third-generation farmer in the north-east of Victoria, spoke to the committee about the consequences of not taking action to control the wild dog problem:

> We would be looking at probably 100,000 sheep, conservatively, in the north-east of Victoria. If we could get more sheep in our area, it would have enormous on-flow to the local people. You would have more shearers. You would have more people employed on farms. … More shopkeepers. Your hospitals would be doing better. Your vet would be doing better. You would have more people in your corner stores. You would have a viable industry. But at the moment these dogs are eroding our values and our trying to keep on our farms. We were talking about the next generation of farmers. If we do not do something, we will not have another

29 *Submission 42*.

30 *Transcript of evidence*, 18 June 2004, pp. 23-24.

> generation of farmers because there will be nothing left. These animals are controlling our destiny, and we have to do something seriously about it.[31]

3.38 The committee acknowledges the enormous social impact that pest animals have had on rural communities. Although social impacts are difficult, if not impossible, to quantify, it is important to note that they are part of the total cost to Australia of pest animal issues.

Environmental impacts

3.39 Although not part of its terms of reference, the committee considers it appropriate to include some of the evidence that was presented in relation to the environmental impact of pest animals. Ultimately, the committee believes that the environmental impacts and impacts on agriculture of pest animals must be dealt with together, if a proper solution to the problem is to be found.

3.40 Research provided by the BRS pointed to the environmental impacts of some major pest species:[32]

- Rabbits feed on native plants and threaten native species through competition for food and habitat destruction. They have been responsible for the extinction of an endemic parrot and two endemic plants on Phillip Island. The cost of rabbit control is estimated at more than $20 million per year.
- Foxes prey on a number of native species, including rock wallaby, numbat and mallee fowl. Estimated cost of control is $7 million per year with an additional $4 million for research.
- Feral goats compete with native fauna for food, water and shelter, and contribute to ecosystem changes. Approximately $2 million per annum is spent on feral goat control, with about $1.5 million in research.

31 *Transcript of evidence*, 18 June 2004, pp. 50-51.

32 BRS, *Submission 76,* Attachment B, M Bomford and Q Hart, 'Non-indigenous vertebrates in Australia' in Dr D Pimentel (ed), *Biological Invasions: Economic and Environmental Costs of Alien Plant, Animal, and Microbe Species*, CRC Press, New York, 2002, pp. 30-36.

- Feral cats cause major declines in small vertebrate native species populations. Nineteen species of endangered or vulnerable mammals, six species of endangered birds and two species of endangered or vulnerable reptiles are at high risk from predation by feral cats. At least $1 million annually is spent on feral cat control, with an equivalent amount spent on research.

3.41 Ms Noeline Franklin provided evidence about the contribution of pest animals to the destruction of native fauna and to the devastating bushfires which ravaged the Snowy Mountain region in 2002 and 2003. She argued that wild dogs deplete stocks of grazing animals, which allows ground foliage to build up to dangerous levels, constituting a fire hazard.[33]

3.42 The evidence outlined above represents only a fraction of the toll that pest animals take on the Australian environment. The Senate Environment, Communications, Information Technology and the Arts References Committee inquiry into invasive species dealt with the environmental impact of pest animals in much greater detail than this committee was able to, due to the scope of its terms of reference. The Senate committee found that the invasion of native ecosystems by invasive species is regarded as a major threat to biological diversity worldwide. Environmental impacts were found to include hybridisation of native and introduced species, reduction in native wildlife populations, soil erosion and impacts on native vegetation.[34]

3.43 The committee believes that it is important to refer to environmental impacts, as well as agricultural impacts, in order to obtain a broad picture of the total cost of pest animal damage. The solution to pest animal problems must ultimately encompass both types of damage.

3.44 The tremendous costs of pest animals in Australia – economic, social and environmental – are the reason for this inquiry and provide the context for the recommendations that follow in Chapters 4 to 10.

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33 *Transcript of evidence*, 11 August 2004, pp. 2-3.

34 Senate Environment, Communications, Information Technology and the Arts References Committee, *Report on the regulation, control and management of invasive species and the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002*, Commonwealth of Australia, Canberra, December 2004, pp. 14-23.

4

National coordination

Overview

4.1 In determining the best management approaches for pest animal issues, it is important to recognise that pest animals do not acknowledge or respect borders.[1] The issue of pest animals, and the problems that they cause to agriculture and to the environment, is one that concerns the entire nation.

4.2 Although each state and territory is faced with its own particular pest animal problems, there are a number of pest species that are spread widely across the country, such as wild dogs, rabbits and feral pigs. There are also pest animals that, although largely confined to areas within one or two states or territories, have a significant impact on the national economy through the damage they inflict on agriculture and the environment. The committee considers, accordingly, that pest animal issues require coordination at the national level.

4.3 The committee received overwhelming evidence supporting the need for more involvement at the federal level. Although submitters differed in their opinions as to the desirable extent and character of federal involvement, most who canvassed the issue were in support of national coordination.

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1 *Submissions 15*, p. 1, *26*, *27*, p. 4, *40*, *60*, *77*, p. 3, *86*, p. 3, Mr Antony Plowman, Member for Benambra, Victorian Parliament, *Transcript of evidence*, 18 June 2004, p. 35.

Current national programs

4.4 Although pest animal issues are not currently coordinated at a national level, there are a number of national initiatives in place. The Vertebrate Pests Committee (VPC) and the National Feral Animal Control Program (NFACP) both play a part in giving a national focus to pest animal issues. A national Pest Animal Strategy and a National Invasive Species Framework are both under development at the time of writing this report. National biosecurity and disease control responses are in place through Animal Health Australia (AHA), the Australian Wildlife Health Network, Product Integrity/Animal and Plant Health (PIAPH), Plant Health Australia (PHA) and Biosecurity Australia. Each of these initiatives has its part to play in terms of an overall national strategy for pest animal control.

4.5 While recognising the need for national coordination, the committee is cognisant of the excellent pest animal control work already being conducted by local and regional groups. The committee acknowledges that it is important that any national approach harnesses the efforts and expertise of these local and regional groups in the fight against pest animals.

Vertebrate Pests Committee

4.6 The VPC is an Australasian body that provides coordinated policy and planning solutions to pest animal issues. It operates in accordance with terms of reference developed by the Natural Resource Management Standing Committee (NRMSC) of the Natural Resource Management Ministerial Council (NRMMC). The VPC reports to that Committee through the Natural Resources Policies and Programs Committee.[2]

4.7 The VPC has the following members:

- New South Wales Department of Primary Industries;
- Environment ACT;
- Queensland Department of Natural Resources and Mines (DNRM);
- Victorian Department of Sustainability and Environment (DSE);
- Tasmanian Department of Primary Industries, Water and Environment (DPIWE);

2 Lapidge, Bourne, Braysher, and Sarre (2004-present) feral.org.au [Online], viewed 21 September 2005, <http://www.feral.org.au>.

- South Australian Department of Water, Land and Biodiversity Conservation;
- Northern Territory Parks and Wildlife Commission;
- DAWA;
- Australian Government Department of Agriculture, Fisheries and Forestry (DAFF);
- DEH;
- New Zealand Landcare Research (Manaaki Whenua); and
- CSIRO Division of Sustainable Ecosystems (observer).

4.8 The chairpersonship of the VPC is rotated between the states every three years. The host state for that period provides the secretariat for the VPC. The terms of reference for the VPC are:

> Ensure an integrated approach to all aspects of vertebrate pest management by:
>
> 1. Providing national policy and planning solutions to vertebrate pest issues.
> 2. Developing a National Vertebrate Pest Strategy and planning, coordinating and monitoring its implementation.
> 3. Providing policy and planning advice to Natural Resource Management Standing Committee (NRMSC) and Primary Industries Standing Committee (PISC) on national vertebrate pest issues or as directed by NRMSC. Identify and facilitate implementation of action on significant vertebrate pest issues.
> 4. Building linkages with NRMSC, PISC, Plant Health Australia, Animal Health Australia, and fisheries and research agencies in Australia and New Zealand on vertebrate pest issues.
> 5. Identifying potential and emerging vertebrate pest problems and recommend appropriate actions to NRMSC.
> 6. Identifying and facilitating development, planning, coordination, implementation and monitoring of consistent national approaches to vertebrate pest management including:
>   - National strategies
>   - Codes of Practice

- Vertebrate Pest Threat Abatement Plans
- Biological control programs
- Harmonisation of relevant legislation
- Vertebrate risk assessment processes
- Research, education, extension and training
- Harmonisation of vertebrate pest data collection and management systems
- Response to emergency vertebrate pest incursions.

7. To promote consistent approaches to vertebrate pest issues across all relevant jurisdictions, including:
   - prevention;
   - preparedness for new incursions;
   - reduction of the impact of established populations;
   - consistent, co-ordinated and strategic approaches to management of the economic, environmental and social impacts;
   - eradication of infestations where feasible and appropriate; and
   - standards for management responses.
8. Developing a communications strategy for increasing the profile of vertebrate pests throughout the community, government and key stakeholders.

4.9 A number of deficiencies with the VPC in its current form were identified in various submissions received by the committee. These perceived deficiencies include that the VPC:

- only deals with exotic pest animals and not native species regarded by some as pests;[3]
- has terms of reference that only allow it to deal with vertebrate pests, not invertebrate pests;[4]
- is inadequately funded to perform its functions;[5] and
- has no permanent secretariat.[6]

3 Western Australian Government, *Submission 70*, p. 6.
4 CSIRO, *Submission 55,* p. 5.
5 Western Australian Government, *Submission 70*, p. 6.
6 Animal Control Technologies, *Submission 84*, p. 41.

National Feral Animal Control Program

4.10 The NFACP was established under the Natural Heritage Trust to develop and implement programs to reduce pest animal damage to agriculture in cooperation with state, territory and local governments. Since 1996, it has been administered by the BRS.[7]

4.11 The main objectives of the NFACP are to:

- develop integrated, strategic approaches to manage the impacts of nationally significant pest animals;
- improve the effectiveness of control techniques and strategies for reducing pest animal impact; and
- produce guidelines for the management of nationally significant pest animals.[8]

4.12 The program provides support for a range of activities, including large and small scale field studies, extension activities and development of more efficacious, cost-effective and humane control techniques.

4.13 The NFACP has available funding of approximately $500,000 per annum, and applicants are required to match funds provided by direct financial contributions. Preference is given to projects that involve collaboration between government and non-government agencies and community groups.[9]

National Pest Animal Strategy

4.14 It is expected that the National Pest Animal Strategy currently under development by a sub-committee of the VPC will be provided to the NRMMC for its approval some time in April 2006. A draft strategy is expected to be available for public comment later this year, although at the time of writing this report, the draft had not been released. The national strategy is being drafted in response to a recommendation made by the Senate Environment, Communications, Information Technology and the Arts References Committee.[10] It will serve a similar purpose to the

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7 BRS, *Submission 76*, p. 4.

8 DAFF, *National Feral Animal Control Program*, DAFF, Canberra, 21 September 2005, viewed 21 September 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=D2C48F86-BA1A-11A1-A2200060B0A06278#what>.

9 DAFF, *National Feral Animal Control Program*.

10 Senate Environment, Communications, Information Technology and the Arts References Committee, *Report on the regulation, control and management of invasive species and the*

National Weeds Strategy, developed by the Australian Weeds Committee. The National Weeds Strategy provides a framework for reducing the impact of weeds on agriculture and the environment.

4.15 The following terms of reference were established by the VPC to guide development of a national strategy:

- Develop a national framework for managing the impacts of pest animal species in Australia;
- Ensure consistency and links with other national and state invasive species strategies;
- Clearly define the scope of the strategy in terms of the species and issues included and excluded;
- Identify clear roles and responsibilities for pest management;
- Ensure the strategy identifies prevention, detection, intervention, eradication and control processes; and
- Ensure that the risk posed by the importation of exotic species is assessed.[11]

4.16 The strategy will include vertebrate pests and problem native vertebrate species that cause negative economic, social and environmental impacts. It will be aimed at ensuring that new incursions are prevented, that pests are managed in infested areas and that there is limited movement between infested and uninfested areas. The strategy will not address exotic diseases, invertebrates or marine species.[12]

National Invasive Species Framework

4.17 The committee notes that, in addition to a National Pest Animal Strategy, a National Invasive Species Framework is also under development. The Framework is being developed by the NRMSC Invasive Species Task Group, and is aimed at preventing the establishment of significant new invasive species and reducing the impacts of current major pests. The Framework will incorporate both pest animals and pest weeds.

Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002, Commonwealth Parliament, Canberra, December 2004, Recommendation 11.

11 R Enright, C Walton, F Keenan and J Thompson, *National Pest Animal Strategy – Discussion Paper*, February 2005, p. 2.

12 Enright et al, p. 2.

4.18 It is expected that the framework will set out the roles and responsibilities of governments, landholders, non-government organisations and community groups; identify key invasive species issues facing Australia; and outline and describe desirable arrangements and interactions necessary for a coordinated national approach to pest animals and weeds.[13]

4.19 The NRMSC is developing the national framework in cooperation with the Primary Industries Standing Committee (PISC), which is developing a National Biosecurity System for managing biosecurity issues in relation to the management of animal, plant and marine pest and disease incursions. This will ensure that there is a proper linkage between the two frameworks.[14]

4.20 A research paper has been prepared by Agtrans Research in conjunction with Noel Dawson at the direction of the NRMSC Invasive Species Task Group (the Agtrans Report). The committee takes note of this research paper, the purpose of which is to assess progress that has been made over the past ten years in the prevention and control of pests and weeds.[15]

4.21 The committee approves of the amalgamation of pest animal and weed issues into one national framework. It is appropriate and efficient to deal with both issues together, as the two are sometimes related (for example, pest weeds and plants can provide harbour for some pest animals). Combining the two issues into one framework can also result in economies of scale (for example, by conducting control programs for pest animals and weeds in the one area at the same time, where appropriate).

4.22 In line with the new National Invasive Species Framework, the committee considers that pest animal and pest weed issues should be managed by a single national coordinating body. The issue of an appropriate body is considered later in this chapter.

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13 Mr Ian Thompson, NRM, DAFF, *Transcript of evidence*, 16 February 2005, p. 3.

14 *NRMMC Resolution No. 6.8*, 16 April 2004, *PIMC Resolution No. 5.5*, 19 May 2004.

15 Agtrans Research in conjunction with Noel Dawson, *Review of Progress on Invasive Species – Final Report to Department of Environment and Heritage*, DEH, Canberra, 12 April 2005, viewed 21 September 2005, <http://deh.gov.au/biodiversity/invasive/publications/review/pubs/review-full.pdf> (Agtrans Report).

Biosecurity and disease control responses

Animal Health Australia

4.23 AHA was established by the federal, state and territory governments and major national livestock industry organisations.[16] Its role is to ensure that the national animal health system delivers a competitive advantage and preferred market access for Australian livestock industries. AHA has 24 member organisations that fund company activities via annual subscriptions.

4.24 The Animal Disease Surveillance Program provides a nationally integrated surveillance system for animal health. Detailed reports on livestock health and status are available through the National Animal Health Information System.

4.25 The Emergency Animal Disease Preparedness Program combines biosecurity planning to reduce the risk of entry and spread of emergency animal disease with disaster preparedness planning. AUSVETPLAN is a series of technical response plans that set out how Australia would respond in the event of an exotic disease outbreak.

Australian Wildlife Health Network

4.26 The role of the Australian Wildlife Health Network is to promote and facilitate collaborative links in the investigation and management of wildlife health.[17] The organisation operates a national database of wildlife health information and provides information about wildlife health to the community. Key stakeholders include federal and state agriculture departments, primary industries, veterinary laboratories, wildlife, conservation and environmental protection groups and public health agencies.

16 AHA, AHA, Canberra, 1 July 2005, viewed 21 September 2005, <http://www.animalhealthaustralia.com.au>.

17 Australian Fauna Care, *Australian Wildlife Health Network factsheet*, Australian Fauna Care, December 2004, viewed 21 September 2005, <http://www.fauna.org.au/Downloads/AWHN%20fact%20Sheet.doc>.

Product Integrity / Animal and Plant Health

4.27 Product Integrity/Animal and Plant Health (PIAPH) works to improve the health and welfare of Australian farm animals and commercial and native plants.[18] One of its major concerns is how to minimise the impact of pests and diseases on agriculture, fisheries and forestry. It falls under the umbrella of DAFF.

4.28 Branches of PIAPH include the Office of the Chief Veterinary Officer and the Office of the Chief Plant Protection Officer. The Office of the Chief Veterinary Officer is concerned with international animal disease coordination, emergency disease response and preparedness and endemic animal disease programs. The role of the Office of the Chief Plant Protection Officer is to protect Australian plant industries from incursions of invertebrate pests.

Plant Health Australia

4.29 PHA is an industry-government company, which aims to protect Australia's plant industries from the risks posed by organisms, including invertebrate pests.[19] It is a national coordinating body that identifies and commissions projects and coordinates policy development nationally.

4.30 Company activities are funded from annual member subscriptions. Members include the federal government, all state and territory governments and national representative plant industry organisations.

4.31 The mission of PHA is to, inter alia, be the key adviser to industry, governments and stakeholders on national plant health policy; commission, coordinate, facilitate and manage agreed national plant health programs; and complement the work of industry and government groups.

18 DAFF, *PIAPH*, DAFF, Canberra, 26 August 2005, viewed 21 September 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=3E48F86-AA1A-11A1-B6300060B0AA00002>.

19 PHA, PHA, Canberra, 18 June 2003, viewed 21 September 2005, <http://www.planthealthaustralia.com.au>.

Biosecurity Australia

4.32 Biosecurity Australia is an independent agency within the federal DAFF portfolio.[20] Its role is to provide science-based quarantine assessments and policy advice to protect Australia's favourable pest and disease status. It assists in the development of international quarantine standards.

4.33 Animal Biosecurity is a branch of Biosecurity Australia. It develops quarantine policies that protect Australia's farmed, domestic and wild animals and natural environments from exotic pests and diseases. Plant Biosecurity is another branch that develops quarantine policies protecting Australia's horticultural industries and the natural environment from pests and diseases.

4.34 Biosecurity Australia is responsible for conducting import risk analyses in relation to new imports. An import risk analysis is required where there is no quarantine policy or a significant change in existing quarantine policy is to be considered in relation to an import.

A new approach to national coordination of pest issues

4.35 The committee agrees with the overwhelming majority of submissions addressing the issue that argued for a national approach to the issue of pest animals.[21] A national approach has a number of perceived advantages, which include increased consistency of approach, national best practice implementation, national direction, increased knowledge about pest animal populations and distribution, and more efficient use of resources.

4.36 Problems with the absence of a national approach to pest animal management manifest themselves in a lack of consistency in how control measures are implemented in different states and territories. An example was provided at the Wodonga Wild Dog Summit in February 2002. The

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20 DAFF, *Biosecurity Australia*, DAFF, Canberra, 21 September 2005, viewed 21 September 2005, <http://www.affa.gov.au/biosecurityaustralia>.

21 *Submissions 6*, *11*, *15*, p. 2, *22*, *27*, p. 4, *34*, *35*, *43*, p. 2, *47*, p. 2, *49*, p. 1, *52*, p. 1, *54*, p. 3, *55*, pp. 4-5, *60*, *64*, *66*, *70*, p. 4, *71*, *77*, p. 3, *78*, p. 4, *81*, p. 5, *84*, p. 41, *90*, *94*, Mr Brian Clifford, Cooma RLPB, *Transcript of evidence,* 9 September 2005, p. 6, Dr Ashley Mercy, DAWA, *Transcript of evidence*, 11 April 2005, pp. 14, 20, Mr Keiran McNamara, CALM, *Transcript of evidence,* 11 April 2005, p. 26, Mr Antony Plowman, Member for Benambra, Victorian Parliament, *Transcript of evidence,* 18 June 2004, p. 35, Mr John Sinclair, *Transcript of evidence*, 18 June 2004, p. 72, N Ward, 'Summation', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

proceedings of the Summit discuss the different approaches to wild dog management across states and territories. While Queensland was shown to be proactive and progressive in its wild dog management, frustration was expressed at the lack of management in Victoria. There were also different approaches in relation to the use of aerial baiting, with some states permitting it and others prohibiting the practice.[22]

4.37 The Western Australian Government, in its submission, highlighted the need for national coordination through a body such as the VPC:

> Through national coordination and increased Commonwealth funding, the impacts of pest animals can be better managed. There is a need for a national body, such as the Vertebrate Pest Committee (VPC), to provide guidance at a national level. The role of the VPC should extend to developing national and uniform pest animal policies, standardisation of control techniques and strategies, directing where research efforts should be heading, providing expert advice, and monitoring and reporting of pest animal impacts. This is not achievable without commitment of funds by the Commonwealth and in principle support of such a body by the States.[23]

4.38 Mr Michael Hartmann, of the Cattle Council of Australia (CCA), discussed the need for a national approach in the context of the feral pig problem:

> We need to stop thinking about it on a state-by-state basis. We need to think of ourselves as a country, focusing, firstly, on the areas where there are not many pigs, putting in baiting programs and the like and using surveillance to ensure the pigs are not repopulating, and then focusing into the really hot spots.[24]

4.39 Mr Andy McMillan, of the Western Australian Farmers Federation (WAFF), discussed the potential for reducing duplication of resources at a state level through a national approach:

> Even though they will deny it, CALM and the APB here have competing agendas. There are resources being duplicated, particularly in the administrative function, that would be better spent through a joint approach to pest management, achieving

22 N Ward, 'Summation', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

23 *Submission 70*, pp. 4-5.

24 *Transcript of evidence*, 15 June 2005, p. 8.

> some on-ground results. So if there is some way of that being controlled from a federal point of view, that would be good.[25]

4.40 The Discussion Paper arising out of the RSPCA Australia joint workshop on humane vertebrate pest control called for a national approach to address humaneness of control methods:

> Pest animal control is a national problem that cuts across government departments and State and Federal jurisdictions. Yet it is clear that the development of an implementation process to tackle this problem cannot rely solely on existing mechanisms. Improving the humaneness of control methods is a challenge that needs to be addressed by a coordinated national approach, but without a national body to provide this coordination, there is no identifiable means of advancing the priorities and actions set out in this document.[26]

4.41 A few people expressed concern about potential problems with a national approach. In particular, concern was expressed that Western Australia would obtain little benefit from participation in a national effort, due to its isolation from most other states and territories and the unique nature of problems experienced in entry of new pest species through western coastal ports.[27] At Warrawagine Station, pastoralists were concerned that a national approach would divert money away from on-ground control and towards administrative costs.[28]

4.42 The committee acknowledges these concerns in relation to a national approach, and recognises the need for them to be addressed. On balance, however, the committee believes that the pest animal problem in Australia is of such significance that a national approach to the issue is essential. The committee considers that a national approach will be of particular benefit in helping to address pest animals that cross state and territory boundaries, such as wild dogs, feral pigs, camels and foxes. The committee believes there is a need for a national body to coordinate pest animal control and management across the country.

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25 *Transcript of evidence*, 20 July 2005, pp. 38-39.

26 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 36.

27 Mr Gordon Wyre, CALM and Mr David Leake, WAFF, *Transcript of evidence*, 20 July 2005, pp. 27, 39.

28 Discussions at Warrawagine Station, Western Australia, 21 July 2005.

The need for integrated control

4.43 The committee notes that it is important to ensure that pest animal problems are not managed in isolation from other issues relating to land management, including other pest animal and weed issues.

4.44 CSIRO, in its submission, stated:

> A common policy framework is required for dealing with invasive species across the spectrum, from prevention through rapid response to new incursions to long-term control and eradication.
>
> A national strategy for invasive species should be developed to reflect this policy framework, incorporating weeds, invertebrates and vertebrate pests.[29]

4.45 The committee notes that the National Invasive Species Framework, currently being developed by the NRMSC Invasive Species Task Group, should go some way towards addressing the issue of a lack of a national strategy incorporating both pest animal and weed issues.

4.46 The committee notes the complex interaction and inter-relationships that may exist between pest animal species, between pests and non-pests and between pest weeds and animals. It was noted in a number of submissions and other evidence to the inquiry that reduction in population numbers of one pest animal species may lead to a corresponding increase in the population of another pest species.[30] As an example, it has been noted that where fox control is undertaken, the benefits of that control can be outweighed by the cost of increased rabbit abundance, as foxes are a major predator of rabbits.[31]

4.47 In Western Australia, Mr Pete de Long, a property owner, stated his opinion that the successful Judas donkey program that has operated in regions of the state has increased the population of wild dogs, as donkeys that have been shot are left in paddocks and provide a food source for the dogs.[32]

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29 *Submission 55*, p. 8.

30 *Submissions 4, 46, 76*, Attachment H, K Williams, I Parer, BJ Coman, J Burley and ML Braysher, *Managing Vertebrate Pests: Rabbits*, Bureau of Resource Sciences/CSIRO Division of Wildlife and Ecology, Australian Government Publishing Service, Canberra, 1995, p. 41.

31 ACT Government, *Submission 63,* Appendix, Environment ACT, *ACT Vertebrate Pest Management Strategy*, ACT Government, Canberra, 2002, p. 11.

32 *Transcript of evidence*, 22 July 2005, p. 20.

4.48 The committee was told that infestations of blackberry (an introduced plant species) serve as harbour for dogs, pigs, cats and foxes, which then use that harbour as 'stockyards' to capture native wildlife.[33]

4.49 Because of these inter-relationships, the committee believes that the most effective way to manage pest problems is to vest responsibility for pest animal and weed issues in one national body. It is also important that any body set up to coordinate pest animal issues at the national level be in a position to address the problem of local pest problems with native species, such as possums and kangaroos. The committee notes that the new National Pest Animal Strategy being developed by the VPC will include native species and believes that this is a positive development towards integrated consideration of pest issues.

A new National Pest Animals and Weeds Committee

4.50 The committee notes that it is likely the Invasive Species Framework, due to be released next year, will propose new administrative arrangements for management of invasive species. The committee has not had the benefit of access to detail about the framework at this stage, but hopes that the framework will be consistent with the recommendations for national coordination contained in this report.

4.51 A number of different possibilities for a national coordinating body were presented to the committee. In summary, these bodies were:

- the existing VPC;[34]
- a National Pest Species Council;[35]
- an invasives group dealing with both pest animals and weeds;[36]
- a national body modelled on the Western Australian Weeds Committee;[37]
- a new body modelled on the Berryman Institute in the United States;[38]

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33 Victorian and NSW Wild Dog Coordinating Committee, *Submission 66*.

34 *Submissions 70*, pp. 4-5, *84*, p. 41, Dr Linton Staples, Animal Control Technologies, *Transcript of evidence,* 15 June 2005, p. 13, Mr Keiran McNamara, CALM, *Transcript of evidence*, 11 April 2005, p. 26, *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 26.

35 Ms Noeline Franklin, *Submission 35*.

36 Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, p. 15.

37 Ms Anna-Marie Penna, CCWA, *Transcript of evidence*, 11 April 2005, p. 5.

38 Dr Graham Hall, *Transcript of evidence*, 29 March 2005, p. 33.

- a Federal Ministerial Council to ensure consistency of wild dog control programs between states and territories;[39]
- a Feral Pig Control Coordination Committee to develop and manage a national plan for feral pig control through a Feral Pig Operations Committee.[40]

4.52 Taking into account these suggestions, and existing arrangements, the committee believes that the best option is to amalgamate the VPC and the Australian Weeds Committee to form one national body responsible for management of pest animals and plants (a National Pest Animals and Weeds Committee).

4.53 Amalgamation of the two bodies should be simplified by the fact that the terms of reference for the committees are virtually identical (except that they relate to weeds and pest animals respectively) and the membership of both bodies is also similar. Membership would *not* be reduced from its current level, that is, each state and relevant agency would contribute one representative in relation to weeds and one representative in relation to pest animals.

4.54 It has been noted that the management of pest animals, to be most effective, should be integrated into a whole-of-system approach that takes into consideration both the social and economic implications of pest management as well as environmental considerations.[41] As has been pointed out by the Australian Biosecurity Group, where environmental and agricultural pests are dealt with separately, the same pest is often targeted by different groups working in isolation.[42] The report on the management of feral animals by the New South Wales National Parks and Wildlife Service (NPWS) considered that, "Feral animal control should be viewed as one element of a whole system approach to land management, and addressed in the context of land degradation and habitat fragmentation."[43]

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39 'Copy of motions', Motion Four, in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

40 CCA/AVA, *Submission 49*, p. 6.

41 ACT Government, *Submission 63,* Appendix, p. 1.

42 Australian Biosecurity Group, *Invasive Weeds, Pests and Diseases: Solutions to Secure Australia*, PAC CRC, CRC for Australian Weed Management and WWF, Canberra, 2005, p. 14.

43 Associate Professor AW English and Dr RS Chapple, *A Report on the Management of Feral Animals by the New South Wales National Parks and Wildlife Service*, Executive Summary, NSW NPWS, 5 July 2002, viewed 23 September 2005, <http://www.nationalparks.nsw.gov.au/PDFs/english_report_pest_animal_progs_execsum.pdf>, p. 7.

4.55 Although the focus of this report is on pest animals and their impact on agriculture, the committee considers that the most useful approach is to have one committee managing economic and environmental impacts of both animal and plant pests. The proposed National Pest Animals and Weeds Committee would serve this function. The committee notes that the Australian Weeds Committee already deals with both economic and environmental impacts of weeds.

4.56 The establishment of a combined Pest Animals and Weeds Committee would also be timely, given the impending release of the National Invasive Species Framework being prepared by the NRMSC Invasive Species Task Group. This framework will cover both pest animal and weed issues, and it is apt that a national body responsible for dealing with both issues be established at the same time.

4.57 As indicated above, the VPC, as the name suggests, performs its functions only in relation to vertebrate and not invertebrate pests. The scope of the National Invasive Species Framework will extend to invertebrate pests, and it is apt, therefore, that the National Pest Animals and Weeds Committee also coordinate invertebrate pest issues. The committee considers it appropriate that additional representation be provided from each state and territory to ensure that the committee has the benefit of relevant expertise on invertebrate pest issues.

4.58 The committee notes that the National Pest Animal Strategy, currently under development, will not cover invertebrate pests, as this is not part of the terms of reference for development of the strategy. The Australian Biosecurity Group, a collection of Australia's leading invasive species scientists and policy specialists, has stated:

> Australia has no database of introduced insects, spiders, snails, nematodes and other invertebrate pests, much less a proper understanding of their impacts, nor a coherent strategy for their detection and eradication. Given the enormous drain on the economy attributed to such pests, this is a foolish oversight.[44]

4.59 Although the National Pest Animal Strategy is already in the process of development, the committee believes it would be appropriate to expand the scope of the strategy to include invertebrate pests, although this may delay the submission of the strategy to the NRMMC.

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44 Australian Biosecurity Group, p. 14.

Recommendation 1

4.60 **The committee recommends that the Natural Resource Management Ministerial Council amalgamate the Vertebrate Pests Committee and the Australian Weeds Committee to form one National Pest Animals and Weeds Committee, with representation from Australian Government and state and territory governments in the areas of weeds, vertebrate pests and invertebrate pests.**

4.61 Possible terms of reference for the committee are set out in Appendix F to this report.

Recommendation 2

4.62 **The committee recommends that the terms of reference for the new National Pest Animals and Weeds Committee refer to 'pest animals', including both vertebrate and invertebrate pests.**

4.63 As noted in paragraph 4.59, the committee takes the view that the terms of reference for the National Pest Animal Strategy should be extended to include invertebrate pests. As the terms of reference have already been prepared by the VPC, and the National Strategy is due to be released in the first half of 2006, it is recommended that the VPC take steps to amend the strategy as soon as possible.

Recommendation 3

4.64 **The committee recommends that the Vertebrate Pests Committee extend the terms of reference for development of a National Pest Animal Strategy to include invertebrate pests.**

4.65 Problems with the VPC in its current form were discussed in evidence provided to the committee.[45] A number of changes to current arrangements were suggested to ensure that the national committee responsible for pest animal management is adequately equipped to perform this role:

- increase in the budget of the joint committee;
- the provision of secretariat support;
- expanded representation.[46]

Budgetary considerations

4.66 It was suggested that the VPC in its current form requires increased funding in order to perform effectively as a national pest coordinating body.[47]

4.67 Animal Control Technologies called for an expanded budget for the VPC in two major respects. The first was to enable the Committee to call for expert reports on particular issues where that is necessary. The second was to enable the Committee to run the Vertebrate Pest Conference, and to do so on a bi-annual basis.[48]

4.68 The committee notes that the amalgamation of the VPC with the Australian Weeds Committee will not alleviate the need for further funding. Pest animal issues, as indicated in Chapter 3, have a significant impact on the Australian economy, and it is necessary that appropriate funds be set aside for dealing with these issues.

4.69 The committee considers that the Australian Government should negotiate with state and territory governments to work out a suitable joint funding arrangement to expand the combined budgets of the VPC and Australian Weeds Committee. An appropriate amount of this funding must be set aside specifically for the purpose of pest animal coordination.

4.70 The committee wishes to emphasise that any funding provided to the proposed National Pest Animals and Weeds Committee must be used for practical pest animal control operations and research. The committee is concerned by evidence that funding for pest animal operations is too

45 *Submissions 70*, p. 6, *81*, p. 6, Dr Kevin Doyle, AVA, *Transcript of evidence*, 15 June 2005, p. 11.

46 Animal Control Technologies, *Submission 84,* p. 41, Dr Linton Staples, Animal Control Technologies, *Transcript of evidence*, 15 June 2005, p. 13.

47 Western Australian Government, *Submission 70*, p. 6.

48 *Submission 84*, p. 41.

frequently siphoned off for various bureaucratic and administrative purposes, rather than being directed to people on the ground, where the funding is most urgently needed. These concerns are dealt with more fully in Chapter 6. The committee recommends that any funding to be administered by the proposed National Committee be placed in a separate account and managed in such a way as to avoid the diversion of funds to which the committee has referred.

Recommendation 4

4.71 **The committee recommends that the Australian Government negotiate with state and territory governments to agree on a suitable joint funding arrangement to expand the funding available to the Australian Pest Animals and Weeds Committee.**

Secretariat support

4.72 The committee notes that the VPC, unlike the National Weeds Committee, does not have a permanent secretariat. Permanent secretariat support was seen as being crucial for the fulfilment of a national coordination role by the VPC.[49] The existence of secretariat support was perceived by one submitter as being a critical component of the success of the National Weeds Committee.[50]

4.73 The committee is aware that the National Weeds Committee is currently serviced by a part-time secretariat funded by member states. The committee believes that the Australian Government should match current state and territory government funding to establish a full-time secretariat capable of servicing the new amalgamated body. This would help to ensure that the current imbalance in attention given to pest animals as opposed to weeds is addressed.

49 PAC CRC, *Submission 33*, Animal Control Technologies, *Submission 84*, p. 41.

50 Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, p. 15.

Recommendation 5

4.74 **The committee recommends that the Australian Government match the current funding provided by states and territories towards the Australian Weeds Committee Secretariat, to establish a full-time secretariat servicing the proposed National Pest Animals and Weeds Committee.**

Representation

4.75 It was suggested to the committee that the representation of the VPC should be expanded.[51]

4.76 The committee emphasises the importance of utilising the expertise and experience of local and community groups involved in pest animal management. In particular, the committee has noted the contributions of local pest management groups, such as the landcare and wild dog management groups that gave evidence in relation to this inquiry.

4.77 The committee considers, however, that the involvement of such groups, along with industry, conservation, land management and animal welfare groups, would be more appropriate through a national advisory committee, rather than membership of the national coordinating committee itself. The function and constitution of such an advisory group is considered below.

Tasks for the National Pest Animals and Weeds Committee

4.78 DAWA called for a national centralised database to record breach incursions by exotic invertebrates. The submission states that there is currently an unacceptable level of breaches of exotic wood-boring insects via the regulated timber trade routes. A national database would enable the cause of each breach to be determined and recorded, and acted upon.[52]

51 Dr Linton Staples, Animal Control Technologies, *Transcript of evidence*, 15 June 2005, p. 13.

52 DAWA, *Submission 98*, p. 3.

4.79 The Western Australian Government also noted the absence of a national reporting system for new and established pest animals.[53] A national Pest Animal Database incorporating both invertebrate and vertebrate pests would be useful in assisting landholders and organisations to determine where pest animal populations are located and assist in coordinating control measures across jurisdictional boundaries.[54]

4.80 A need was identified for national coordination of a risk assessment process for all exotic species currently existing in Australia but not yet established.[55] This would enable identification of species that pose the greatest threats of establishing populations in Australia. This need was also identified in the Agtrans Report prepared for the National Invasive Species Task Group.[56]

4.81 Animal Control Technologies suggested that removal of inconsistencies in pest animal management between states and territories would be an important function of the VPC. This would facilitate coordination of control across state and territory borders, and would also increase economies of scale for industry, for example for bait manufacturers who currently have to comply with different requirements in different jurisdictions.[57]

4.82 The Western Australian Government called for a national body to play a role in standardising control techniques across jurisdictions and formulating national pest animal policy and strategy. This would also include national standards in relation to animal welfare.[58]

4.83 A function of the national body would also be the coordination of a national pest animal awareness campaign. This would highlight to the community the benefits of pest animal control, including increased productivity and benefits to the environment.[59]

53 *Submission 70*, pp. 8-9.

54 State Council for RLPB, *Submission 81*, p. 6, Mr John King, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 16.

55 BRS, *Submission 76*, p. 12.

56 Agtrans Report, p. 77.

57 *Submission 84*, pp. 41, 60.

58 *Submission 70*, pp. 4-5, 10.

59 Braidwood RLPB, *Submission 71*.

4.84 Some of the suggestions referred to are already included in the existing terms of reference for the VPC. The committee notes, however, that in order to implement these recommendations, the terms of reference will need to be amended to include:

- the establishment of a national database to record exotic invertebrate breaches and incursions, and to map populations of vertebrate and invertebrate pests;
- development of risk assessment processes for pest species existing in Australia but not yet established; and
- development of national pest animal welfare standards.

The proposed terms of reference, as amended to include the above, are set out at Appendix F.

4.85 The committee emphasises that it would not be the role of the Australian Pest Animal and Weeds Committee to coordinate research; rather the committee recommends in Chapter 9 that this will be the role of the new Australasian Invasive Animals Cooperative Research Centre (AIA CRC). It is important, however, that the Committee be kept informed of developments in research and improvements into control methods across the country. Accordingly, the committee considers that the AIA CRC should have membership of the national advisory body discussed below to ensure that the Committee is kept informed of latest developments in the field of pest animal control.

Recommendation 6

4.86 **The committee recommends that the proposed National Pest Animals and Weeds Committee:**

- **establish a national database to record exotic invertebrate breaches and incursions, and to map populations of vertebrate and invertebrate pests;**
- **develop a risk assessment process for pest species existing in Australia but not yet established; and**
- **develop national pest animal welfare standards.**

4.87 Some submissions noted inconsistencies between states and territories in legislation dealing with pest animal management.[60] A summary of key pest animal legislation in each jurisdiction is set out in Appendix E. These inconsistencies can lead to fragmentation of the approach to pest animal management and hinder efforts to coordinate management efforts across borders.

4.88 The committee considers that an important role of the proposed National Pest Animals and Weeds Committee will be to examine where important inconsistencies in legislation arise and to negotiate with state and territory representatives to achieve, as far as possible, uniformity in relation to pest animal control and management.

Recommendation 7

4.89 **The committee recommends that the proposed National Pest Animals and Weeds Committee discuss with state and territory representatives ways to improve consistency of pest animal legislation across jurisdictions, where appropriate.**

National Pest Animals Advisory Committee

4.90 The committee is aware of the recent establishment of the National Weeds Advisory Group. This was announced on 7 June 2005 jointly by the Minister for the Environment and Heritage and the Minister for Fisheries, Forestry and Conservation. The group comprises representatives of agriculture, conservation bodies, local and state governments, landcare and the plant nursery industry. Its function is to advise the ministers on the management and direction of the government's new $40 million Defeating the Weed Menace Program.[61]

60 *Submissions 41*, *70*, p. 6, *80*, p. 1, *98*, pp. 10-12, Mr Robert Delane, DAWA, *Transcript of evidence*, 20 July 2005, p. 27, Dr Ashley Mercy, DAWA, *Transcript of evidence*, 11 April 2005, p. 14, Australian Biosecurity Group, p. 35.

61 Joint Statement, Australian Minister for Fisheries, Forestry and Conservation and Australian Minister for the Environment and Heritage, *National Weeds Advisory Group Announced,* 7 June 2005, viewed 23 September 2005, <http://www.mffc.gov.au/releases/2005/05109mj.html>.

4.91 The establishment of a national invasive species advisory group for pest animals, comprising representatives of federal, state and local governments, as well as non-government organisations and community groups, was suggested by the CCWA.[62] Membership of the pest animals advisory body should include representation from private sector companies researching, developing and distributing pest animal products. Animal Control Technologies, a company responsible for producing many well-known pest animal products such as FOXOFF and RABBAIT, suggested that it could provide support in a consultative role.[63] It was recommended that industry groups, such as the CCA, also have a role to play in a coordinating pest animals body.[64]

4.92 The committee believes that the establishment of a National Pest Animals Advisory Group would be of benefit to the management of pest animal issues. Although the economic impact of weeds in Australia is greater than that caused by pest animals, the economic impact of pest animals, as demonstrated in Chapter 3 of this report, is significant. It is, therefore, fitting that there be a pest animals counterpart to the newly-established National Weeds Advisory Committee.

4.93 Modelled on the National Weeds Advisory Group, the National Pest Animals Advisory Committee would utilise the expertise of local and state government bodies experienced in the management of pest animal issues. It would consist of representatives of local and state governments, representatives of agricultural and pastoral industries, landcare and conservation groups, industry groups, research organisations, animal welfare groups and local pest animal groups such as the Victorian and New South Wales Wild Dog Coordinating Committee.

4.94 The Advisory Group should also include member representatives from the national initiatives for pest animals considered above, including the NFACP, AHA, Australian Wildlife Health Network, PHA and Biosecurity Australia. As noted above, membership should also extend to the AIA CRC.

62 *Submission 37*, p. 2.

63 *Transcript of evidence*, 15 June 2005, p. 16.

64 *Transcript of evidence*, 15 June 2005, p. 16.

Recommendation 8

4.95 **The committee recommends that a Pest Animals Advisory Committee be established to provide advice and assistance to the proposed National Pest Animals and Weeds Committee and that it include representatives of agriculture and pastoral industries, conservation bodies, local and state government, industry groups, research organisations, landcare, animal welfare and pest animal management groups. Membership should also include the National Feral Animal Control Program, Animal Health Australia, Australian Wildlife Health Network, Product Integrity/Animal and Plant Health, Plant Health Australia, Biosecurity Australia and the AIA CRC.**

Inter-state cost-sharing arrangements

4.96 There are currently national cost-sharing arrangements in place for eradication programs that are conducted in only one state or territory, but are considered to have benefits for other jurisdictions. The Agtrans Report notes that these arrangements are in place for animal diseases, and under development for plant pests, but do not apply to weeds, vertebrate or aquatic pests.[65]

4.97 The committee was informed that the National Invasive Species Task Group has recognised the need for national cost-sharing arrangements for eradication programs as a priority.[66]

4.98 DAWA points out that these arrangements only apply to programs for eradication and not for containment, despite the fact that other states and territories may benefit greatly from containment operations conducted in one jurisdiction.[67]

4.99 The committee considers that a containment or eradication program conducted in one state or territory may be the most cost-effective means of controlling or removing a pest species at a national level. Cost-sharing arrangements should therefore be extended to containment operations as well as eradication programs. The committee also considers that cost-

65 Agtrans Report, p. 83.

66 DAWA, *Submission 98*, p. 12.

67 *Submission 98*, pp. 17-18.

sharing arrangements should be extended to vertebrate pests, to enable sharing of costs between governments in relation to pests of national distribution.

Recommendation 9

4.100 **The committee recommends that cost-sharing arrangements be included in the National Invasive Species Framework, currently under development, and be extended to:**

- **vertebrate pests, as well as animal diseases and plant pests; and**
- **containment as well as eradication activities.**

State and territory coordination of pest animal issues

4.101 Pest animal control is coordinated at the state or territory level through a range of different approaches and agencies. While the committee acknowledges that it is the responsibility of each state or territory to coordinate pest animal management as it sees fit, it notes with concern that a lack of consistency across jurisdictions creates difficulties in terms of a coordinated approach to pest animal control.[68]

4.102 Each state and territory has at least one government body the responsibility of which is to control pest animal management in that state or territory's jurisdiction. The responsible body will usually administer relevant legislation, carry out pest animal control functions, liaise with other government agencies, local government and community organisations, and undertake extension and public education activities.

4.103 In some jurisdictions, it appears that responsibility for the control of feral animals vests in a number of different government bodies and agencies without any effective means of coordinating control efforts across these various agencies.[69] Evidence given by WAFF (quoted above) indicates that the agencies responsible for pest animal management in that state have competing agendas and that duplication of resources occurs.[70]

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68 Western Australian Government, *Submission 70*, p. 6, Animal Control Technologies, *Submission 84*, p. 59.

69 *Submissions 6*, *28*, *36*, *43*, *54*, p. 2, *80*, p. 2.

70 *Transcript of evidence*, 20 July 2005, pp. 38-39.

4.104 The committee believes that inconsistencies in management of pest animal issues within individual states and territories should be resolved by the appointment of a single body to oversee pest animal management in each jurisdiction. In Queensland, the committee was told that an Interdepartmental Pest Management Committee, with representatives from state agencies including the Department of Premier and Cabinet, Queensland Treasury and the Department of Local Government, Planning and Sport and Recreation, was formed in 2002. Its role is to improve the coordination of management of pest animals and weeds.[71]

4.105 In New South Wales, the Pest Animal Council is an *ad hoc* committee that serves as an advisory body to the New South Wales Government. The role of the council is to identify pest animal species, encourage the development and application of best practice techniques, disseminate knowledge about pest control and advise ministers and non-government organisations on pest animal issues.

4.106 The Legislative Council General Purpose Standing Committee that conducted an inquiry into feral animals in New South Wales recommended that the Pest Animal Council be made a statutory body responsible for coordinating feral animal control across the state and that it administer a fund for feral animal control.[72] To the committee's knowledge, however, the Pest Animal Council remains an *ad hoc* committee with no statutory basis and the absence of coordination across government agencies continues in New South Wales.

4.107 If the problems identified by the New South Wales General Purpose Standing Committee were addressed, the committee believes that the Pest Animal Council would provide a useful model for pest animal coordination at the state level in other states and territories, as would the Queensland Interdepartmental Pest Management Committee. Although a number of state government departments and agencies would still have responsibility for pest animal control on their lands, coordination through one central body would enable consistency to be achieved across tenures in each state and territory. The responsible body would then be able to contribute effectively on behalf of its host state or territory to both the National Pest Animals and Weeds Committee and the National Pest Animals Advisory Committee.

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71 QFF, *Submission 59*, p. 6.

72 General Purpose Standing Committee No. 5 (NSW Legislative Council), *Feral Animals*, Parliamentary Paper No. 158, New South Wales Government, October 2002, p. xvii.

Recommendation 10

4.108 **The committee recommends that the Australian Government encourage states and territories to appoint a single body responsible for coordinating pest animal management in each jurisdiction. This body would then contribute to a national pest animal effort through membership of the proposed National Pest Animals and Weeds Committee and the proposed National Pest Animals Advisory Committee.**

5

Prevention and early detection of pest species

Overview

5.1 It is apparent from evidence received by the committee that prevention of new pest species entering the country or moving into new regions, and early detection and eradication, are far simpler and more cost-effective than managing a pest species once it has become established. Although detection and prevention measures may initially be expensive, they are less costly than programs to control pest species whose populations have escalated.[1]

5.2 The obvious starting point for the prevention of new pest animal species entering Australia is entry point surveillance and quarantine. It is vital that items entering Australia through ports and airports are subject to adequate inspections and testing, which would alert authorities to the presence of potential pest species. Adequate screening of postal items is also necessary, especially to prevent the spread of exotic insects that are difficult to detect once they have escaped.

5.3 Most of the serious pest animal species currently plaguing Australian farmers, such as wild dogs, foxes and rabbits, have been introduced to Australia through legal means. Although well-intentioned, these introductions have resulted in immeasurable damage to the environment, and billions of dollars in lost production and control costs since these

1 *Submissions 33*, *34*, *46*, *52*, p. 1, *59*, p. 13, *70*, p. 8, *76*, p. 4, *84*, p. 38.

species were introduced. Laws that regulate the introduction of exotic species into Australia play an important part in ensuring that further pest animal species are not introduced.

5.4 It is also necessary to prevent the spread of pest species between states and territories, or between regions. A pest species which has established itself in a particular area may be containable, but can elude control once it spreads to several areas. The deliberate introduction of pest animals into Australia, or into a region where that pest previously did not exist, is a particularly reprehensible act and must be subject to adequate regulation and enforcement.

5.5 Despite best efforts at prevention, new pest species will be introduced. Once a pest species has entered the country, or entered a particular region, there is still the possibility of containment if it is identified and destroyed quickly. Rapid detection and eradication will be facilitated if there is consistency across jurisdictions in recognising and declaring pest species.

5.6 Adequate means of detection and reporting must be put in place to enable early establishments of pest species to be eliminated before they become a serious problem. This requires that members of the public be aware of pests and able to identify them, and that adequate reporting systems are in place to alert authorities to the presence of potential pests. Early warning systems and means of identifying sleeper populations before they become pests can also assist in this regard.

5.7 Effective detection, reporting and recording systems at a national level will facilitate monitoring and mapping of pest animal species. Creating a clear picture of the distribution and abundance of pest animal populations across the country enables those responsible for control to plan and target activities more effectively. In cases where infestations are detected early on, eradication of the species, or local eradication, may be possible.

Prevention

5.8 A number of submissions emphasised the importance of prevention, due to the difficulties and expense involved in controlling established species.[2] Preventing entry by new populations and expansion of existing pest

2 *Submissions 34*, *46*, *52*, p. 1, *59*, p. 13, *84*, p. 38.

species has the added advantage of having fewer animal welfare implications than ongoing control.[3]

5.9 Although the benefits of prevention are difficult to quantify, a study conducted for the Local Governments Association of Queensland estimated that for every dollar invested in weed and pest animal prevention activities, a return of between $26 and $38 was achieved. The benefit accruing from prevention activities was greater than the return on eradication activities, which was greater in turn than containment activities which occurred after species had become widespread.[4]

Entry point surveillance and quarantine

5.10 Ports and airports provide the first possible port of entry for many potential pest species into Australia. It is vital that adequate checks and safeguards be put in place to ensure that cargo entering Australia on ships and planes is free from exotic species that might establish themselves as pest animals.

5.11 This is particularly important in the case of invertebrate pests, the presence of which may not be immediately obvious to the naked eye. DAWA estimated that maintaining freedom from Emergency Plant Pests saves the state's plant industry over $0.6 billion per annum in avoided control costs.[5]

Quarantine

5.12 The importance of quarantine surveillance in preventing new pest species from entering Australia was emphasised in a number of submissions.[6] Mr Matthew Arkinstall, of Rathdowney in Queensland, described quarantine as "… insurance of our vital rural industries and also our way of life".[7]

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3 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 23.

4 *Exhibit 1,* AEC Group, *Economic Impact of State and Local Government Expenditure on Weed and Pest Animal Management in Queensland*, Local Government Association of Queensland, Fortitude Valley, October 2002, pp. 23, 100.

5 DAWA, *Submission 98*, p. 5.

6 *Submissions 11*, *43*, p. 2, *46*, *48*, *59*, p. 12, Mr Michael Litchfield, NSWFACDC, *Transcript of evidence,* 9 September 2005, p. 25, Mr Quentin Hart, BRS, *Transcript of evidence*, 16 February 2005, p. 3.

7 *Submission 82*.

5.13 Quarantine services are the responsibility of the Australian Quarantine and Inspection Service (AQIS), which monitors incoming cargo, luggage, mail, animals, plants, and their products. AQIS falls under the responsibility of DAFF.[8]

5.14 The north of Australia is strategically important in terms of quarantine risk. For that reason, the Northern Australia Quarantine Strategy (NAQS) has been developed for the area from Broome to Cairns and above. NAQS identifies and evaluates quarantine risks for the region and provides early detection of new pest incursions by conducting scientific surveys and monitoring, border activities and public awareness. It also carries out animal and plant health surveys in neighbouring countries.[9]

5.15 DAWA, in its submission, drew attention to the Breach Database managed by AQIS, which records incidents of exotic insect incursions at quarantine checkpoints. DAWA called for the database records to be made accessible to all states and territories to provide a complete picture of invertebrate pest risks posed by imports.[10]

5.16 The Agtrans Report prepared for the National Invasive Species Task Group, in a review of recent progress made in the delivery of quarantine services, stated:

> … (O)verall few specific results of analyses of border protection interception data or breach follow up data to identify high risk locations or means of entry were sighted in the material reviewed. No doubt this exists in AQIS or NAQS databases and is analysed in order to assess strategies and priorities.[11]

5.17 DAWA also drew attention to current uncertainties in the delineation of responsibility between AQIS and state and territory governments. It is commonly accepted that AQIS is responsible for quarantine breaches (organism detected in an item but not established outside the item), while states and territories are responsible for incursions (organism detected and

8 DAFF, *Australian Quarantine and Inspection Service,* DAFF, Canberra, 30 September 2005, viewed 21 October 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=3E48F86-AA1A-11A1-B6300060B0AA00014>.

9 DAFF, *Northern Australia Quarantine Strategy (NAQS),* DAFF, Canberra, 25 March 2004, viewed 21 October 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=4043ACCA-1540-4945-9FE2C20733351712>.

10 *Submission 98*, p. 15.

11 Agtrans Research in conjunction with Noel Dawson, *Review of Progress on Invasive Species – Final Report to Department of Environment and Heritage*, DEH, Canberra, 12 April 2005, viewed 21 September 2005, <http://deh.gov.au/biodiversity/invasive/publications/review/pubs/review-full.pdf> (Agtrans Report), p. 61.

established outside the imported item). There is, however, an area in between in which there is only a risk that the exotic organism has been established outside the imported item. That situation may require additional measures such as fumigation of a house or vehicle. DAWA called for AQIS to be made responsible for funding of activities to ensure that breaches do not become incursions.[12]

5.18 The committee notes the important role that quarantine plays in ensuring that new pest species do not enter Australia, particularly in relation to invertebrate pests. The committee recommended in Chapter 4 that the proposed National Pest Animals and Weeds Committee establish a central database of exotic pest animal breaches and incursions.[13] AQIS records should be made available to the committee proposed in Chapter 4 to enable it to compile such a database.

5.19 The committee also believes that it is important that a clear delineation of responsibility between AQIS and state and territory governments be established. If there is uncertainty as to the division of responsibilities, this may result in vital pest animal control activities not being carried out.

Fumigation and inspection of containers

5.20 Inspection and fumigation of containers entering Australian ports is one means of providing some assurance that cargo does not contain exotic insects.

5.21 AQIS has a range of measures in place to reduce the risk of new pest animal species entering Australia. These include:

- General surveillance is carried out at wharves and airports of cargo not in containers;
- Consignments are randomly targeted for further examination;
- External surfaces of incoming containers are examined for potential quarantine risk material;
- Containerised consignments destined for rural areas are mandatorily examined; and
- Quarantine Approved Premises are used for unloading and examining at-risk consignments.[14]

12 *Submission 98*, p. 16.

13 Chapter 4, Recommendation no. 6.

14 Agtrans Report, p. 59.

5.22 The committee is aware that AQIS has developed the Australian Fumigation Accreditation Scheme (AFAS), which targets countries from which a disproportionate number of ineffectively fumigated cargoes are received. The scheme aims to enhance the technical expertise of overseas fumigation providers and assist them to comply with AQIS requirements. Overseas fumigation companies who can demonstrate access to methyl bromide and necessary equipment and have at least one AFAS-trained fumigator present at all export fumigations are recognised as registered off-shore fumigation companies by AQIS.[15]

5.23 Despite these measures, there are still problems with exotic invertebrates entering Australia, as pointed out by Mr Dick Bashford of Forestry Tasmania:

> The main problem with the inspection of containers is that there are so many containers coming into Australia. Something like five to 10 per cent are actually inspected. The cost of fumigation is very high. You have to have special containers that you can fumigate. Because of the cost of sending goods, it has to be a pretty good case to warrant full inspection, fumigation—all those other things. The better way to do it is have the goods certified before they leave the country of origin, and that is the approach being taken at the moment. But the countries of origin do not necessarily have the same standards of packing materials as other countries.[16]

5.24 The problems associated with certification standards in other countries mean that inspection of containers on entry into Australia is important. The committee received evidence indicating that, in recent times, extra emphasis has been placed on examining pallet wood, packing crates and airport warehouses for potential pests.[17]

5.25 Despite these increased efforts and the AFAS, DAWA gave evidence that there has been a steady increase in the amount of furniture imported from south-east Asia that is found to be infested with exotic powderpost and other beetles. In Western Australia, borers are reported in furniture on an almost weekly basis.[18]

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15 DAFF, *Australian Fumigation Accreditation Scheme (AFAS)*, DAFF, Canberra, 18 August 2005, viewed 21 September 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=953B6214-FEEB-45FA-95552C43ED1E0A31&contType=outputs>.

16 *Transcript of evidence*, 29 March 2005, p. 5.

17 Mr Dick Bashford, *Submission 2*.

18 *Submission 98*, pp. 11, 13.

5.26 The Breach Database established in Western Australia to show breaches of quarantine by exotic pests gave a record of 273 possible barrier breaches over a 20-month period. One hundred and forty-seven of these involved exotic insects, and of these, 145 were associated with wood, cane or bamboo products imported into Australia.[19]

5.27 DAWA stated, "Pathway analysis of potential avenues for the introduction of pests into Australia is a logical and effective strategy for reducing the risk of exotic pests gaining entry into Australia."[20] The suggested approach is to require unique identifying codes to be affixed to imported furniture to allow identification of companies that fail to provide effective fumigation:

> Despite a theoretical capacity of AQIS to 'black-ban' fumigation companies whose fumigations fail, in practice this is impractical and ineffective because there is currently no capacity to trace an infested item back to a particular shipment and therefore to a failed fumigation and hence the fumigation company cannot be identified. For new furniture at least, unique identifying codes are required to be fixed to each individual item to enable this 'trace-back' with resultant 'black-banning' of companies who consistently fail to provide effective fumigations.[21]

5.28 The committee believes that this would be an effective means of reducing the importation of exotic invertebrates through wooden furniture and personal effects.

5.29 DAWA also identified perceived inadequacies in the inspection procedures for wooden personal effects:

> In the case of personal effects, AQIS standard operating procedures (SOP) are considered inadequate to satisfactorily manage the risk of exotic invertebrates entering Australia. The case for this assessment can be summarised as follows:
>
> - Personal effects are the recognised prime pathway for the spread of drywood borers and drywood termites.
> - AQIS allows the importation of personal effects from countries it knows are infested with serious wood boring pests including EHB (European House Borer) and West Indian drywood Termites (WIDT).
> - AQIS protocols for personal effects only require visual inspection on arrival in Australia.

19 *Submission 98*, p. 13.

20 *Submission 98*, p. 13.

21 *Submission 98*, pp. 13-14.

- AQIS knows that visual inspection is an ineffective method for the detection of wood boring insects.[22]

5.30 The committee notes that, if these perceived deficiencies in the inspection process do exist, this creates an unacceptable risk of invertebrate pest species entering Australia via imported personal effects. DAWA's comments should be investigated by DAFF with a view to amending procedures for inspection if necessary.

Rules for introducing new species into Australia

5.31 The entry of live plants and animals into the country is regulated by the *Quarantine Act 1908* (Cth) and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). A live species can only be imported into Australia if it appears on the live import list established under the *Environment Protection and Biodiversity Conservation Act 1999* and it is also permitted for import by DAFF or AQIS. If an importer wishes to import a new species, an application can be made to DEH, which will conduct an environmental risk assessment. If the Minister for Environment and Heritage approves the species' inclusion on the live import list, a permit is still required from DAFF and Biosecurity Australia will conduct an import risk analysis for that purpose.[23]

5.32 The committee received evidence that under the current process for importing potential pest animal species into Australia, applicants are required to assess the risks of importing new species themselves.[24] This leads to an obvious conflict of interest, as applicants have an interest in minimising the apparent risks of importation in order to ensure approval of applications.

5.33 The BRS has developed a risk assessment model that assesses the potential threat of certain exotic vertebrate species becoming invasive species if introduced into Australia.[25] The model takes into account such factors as the climate match between a species' overseas range and Australia and whether the species has a history of becoming a pest in other countries. The BRS noted:

> It is … essential that all risk assessments on species be conducted by appropriate experts who act independently of either those

22 *Submission 98*, p. 14.

23 Agtrans Report, p. 61.

24 Western Australian Government, *Submission 70*, p. 6.

25 BRS, *Submission 76,* Attachment N, M Bomford, *Risk Assessment for the Import and Keeping of Exotic Vertebrates in Australia*, BRS, Canberra, 2003.

> applying to import or keep them or others with a vested interest in the outcome of the risk assessment. Therefore, if the applicant pays for a risk assessment, it is desirable that this is done through an independent authority that arranges for an independent risk assessment. Such arrangements are not yet in place in Australia to ensure this independence is achieved for the import of exotic vertebrates and this can put at risk the integrity of the risk assessment process.[26]

5.34 The QFF expressed concern at some aspects of the procedures relating to importation of new species:

> QFF supports the process of animal risk assessment undertaken by Biosecurity Australia (BA) and considers the agency's performance as satisfactory, though found highly questionable the conclusions of the recent import risk analysis (IRA) report for pig meat importations as well as revised draft IRA reports for apples and bananas. QFF is aware that both DEH and BA do not currently carry out full risk assessment processes on all proposed import species. For example recent risk assessment for deer species by BA did not take account for (sic) the pest potential of the imported deer species.[27]

5.35 This issue was considered by the Senate Environment, Communications, Information Technology and the Arts References Committee in its invasive species inquiry. The committee noted that the then Minister for Agriculture, Fisheries and Forestry, the Honourable Warren Truss MP, announced in July 2004 new measures to boost confidence in the import risk analysis process.[28] The committee also recommended that "the import risk analysis process be modified to guarantee greater independence in their preparation".[29]

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26 *Submission 76*, p. 11.

27 *Submission 59*, p. 12.

28 Biosecurity Australia, *New Arrangements to Strengthen Import Risk Analysis*, Animal Biosecurity Memorandum 2004/15, Plant Biosecurity Policy Memorandum 2004/22, DAFF, Canberra, 16 August 2004, viewed 27 September 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=AA1B7E9A-FBD2-40F1-AF26ED8B7AEF7ECB>.

29 Senate Environment, Communications, Information Technology and the Arts References Committee, *Report on the regulation, control and management of invasive species and the Environment Protection and Biodiversity Conservation Amendment (Invasive Species) Bill 2002*, Commonwealth of Australia, Canberra, December 2004, p. 163 and Recommendation 17. Also see CCWA, *Submission 37*.

5.36 The committee acknowledges that the measures announced by Minister Truss will hopefully have gone some way towards making the import risk analysis process more rigorous. It considers it appropriate, however, to recommend that DAFF investigate whether the procedures for import risk analysis need to be tightened, in light of evidence provided to the committee.

Recommendation 11

5.37 **The committee recommends that the Australian Government Department of Agriculture, Fisheries and Forestry:**

- **provide the proposed National Pest Animals and Weeds Committee with access to appropriate Australian Quarantine and Inspection Service and Northern Australia Quarantine Strategy records to enable it to establish a central database of quarantine breaches and incursions;**
- **liaise with state and territory governments to agree on a clear delineation of responsibility for breaches and incursions between the Australian Quarantine and Inspection Service and state and territory governments, including responsibility for containment of potential incursions;**
- **investigate perceived deficiencies in the quarantine inspection process for wooden personal effects and make amendments if necessary to ensure that the risk of allowing entry of invertebrate pests is minimised;**
- **investigate the possibility of requiring wooden items to be affixed with a unique identifying code to enable tracing of companies responsible for ineffective fumigation practices; and**
- **investigate whether procedures for import risk analysis need to be made more rigorous.**

Measures to reduce release of pest species into new areas

5.38 The possibility of pest animal species moving interstate, or between areas or regions within a state or territory, is also problematic. Any expansion in the population of a pest animal species makes it more difficult to control. Measures must be taken to prevent the spread of pest animal species beyond their established domain.

Measures in relation to hunting and keeping of pest species

5.39 A number of submissions suggested that hunters contribute towards the growth and spread of pest animals in two ways: first, by losing dogs while hunting, which then breed with wild dogs,[30] and secondly, by deliberately introducing pest animals to pest-free areas for the purpose of building up populations of prey.[31] In Cooma, the committee received evidence that some hunters remove the ears from sows before releasing them, so that they cannot be caught by dogs, in order to build up populations of feral pigs for hunting.[32]

5.40 The Curdies Valley Landcare Group gave evidence that populations of wild deer in the Curdies Valley have largely established due to escape from local deer farms and deliberate release by deer hunters and more recently the 'safari-styled hunt/guiding industry'.[33]

5.41 The PAC CRC cited DNA evidence that pigs have been moved from the north to the south of Perth, although this was the only evidence they were aware of that there is a deliberate effort to spread pests between areas.[34]

5.42 On the other hand, representatives of the Sporting Shooters Association of Australia (SSAA) and Field and Game Australia (FGA) questioned whether there was any evidence of transfer of animals by hunters, but emphasised that their organisations did not support the practice in any way.[35]

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30 VFF Corryong Branch, *Submission 39,* Mr David Saxton, TFAWG, *Transcript of evidence*, 18 June 2004, p. 68.

31 *Submissions 39*, *68*, *70*, p. 12, *72*, p. 2, *77*, p. 2, *81*, p. 10.

32 Mr John Alcock, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 14.

33 *Submission 38*.

34 *Transcript of evidence*, 11 May 2005, p. 5.

35 *Transcript of evidence*, 25 May 2005, p. 5.

5.43 Severe penalties were suggested for anybody introducing pest animals into new areas,[36] or anyone allowing potential pest species to escape from confinement.[37] The Western Australian Government noted that, when new animal industries are developed, for example deer farming, contingency planning and exit strategies must be put in place to ensure that the newly-farmed species does not itself become a pest species.[38]

5.44 The committee notes that in New South Wales, the *Game and Feral Animal Control Act 2002* expressly makes it an offence to release animals for the purpose of hunting. The maximum penalty for doing so is 50 penalty units, amounting to a fine of over $5,000.[39] The committee considers that a provision such as this should be enacted in each jurisdiction that has not already done so, to ensure that there are measures for prosecution of persons where deliberate release of animals for hunting purposes is occurring. Adequate measures should also be taken to ensure that, where potential pest species are being farmed, proper measures to keep them from escaping are implemented.

Recommendation 12

5.45 **The committee recommends that the Australian Government:**

- **encourage state and territory governments to implement minimum containment requirements for the control of animals that have the potential to become pests to ensure that they are properly confined and are not released to establish populations in the wild; and**
- **encourage state and territory governments that have not done so to enact provisions similar to section 55 of the *Game and Feral Animal Control Act 2002* (NSW), making it an offence to deliberately release a potential pest animal for the purpose of hunting, and imposing comparable penalties.**

36 *Submissions 13*, *48*, *49*, p. 5, *72*, p. 2, *77*, p. 2.

37 Bombala RLPB, *Submission 80*, p. 2.

38 *Submission 70*, p. 8. Also see David and Penny Shaw, *Submission 34*.

39 *Game and Feral Animal Control Act 2002* (NSW), s 55 and *Crimes (Sentencing Procedure) Act 1999* (NSW), s 17.

Mail inspection services

5.46 The CCWA called for the introduction of interstate mail quarantine services (for example, sniffer dogs) to detect pest plants and pest species that the mail may be harbouring.[40]

5.47 The committee notes that the Western Australian Government used to scan interstate mail for quarantine risk material. This practice was stopped, however, due to an inconsistency between Western Australia's *Plant Diseases Act 1914* and the Commonwealth *Australian Postal Corporation Act 1989*, which states that mail can only be inspected by customs officials, federal police and AQIS. As a result of this inconsistency, the state government is no longer permitted to scan interstate mail.[41]

5.48 The committee believes that interstate scanning of postal items is an additional level of protection preventing the spread of pest animal and plant species across borders and that, where states are prepared to conduct inspections of interstate mail, they should be entitled to do so.

Recommendation 13

5.49 **The committee recommends that the Australian Government amend the *Australian Postal Corporation Act 1989* to allow state and territory governments to inspect interstate mail for quarantine purposes.**

Detection

5.50 Despite the best efforts of those involved in preventing the entry of new pest species, it is inevitable that in a country as big as Australia, some species will slip through the net. At any point in time, there will be a range of pest species existing in Australia, ranging from newly-arrived species that have the potential to be eradicated, through to widely-established species such as wild dogs and feral pigs, that require ongoing control.

40 *Transcript of evidence*, 11 April 2005, p. 10. See also Australian Biosecurity Group, *Invasive Weeds, Pests and Diseases: Solutions to Secure Australia*, PAC CRC, CRC for Australian Weed Management and WWF, Canberra, 2005, p. 35.

41 Western Australian Government, *Submission 70*, Appendix 1 (Submission to Senate Invasive Species Inquiry), p. 26.

5.51 Because of the significant damage that pest species cause to the environment and to agriculture, and because it is more cost-effective to eradicate new pest species early, it is vital that processes be put in place that allow early detection and control of species that have crossed our borders. It is also important that steps be taken to monitor populations of all existing pest animal species, so that the most effective means of control can be undertaken.

Declaration of pest species

5.52 Each state and territory has its own system for declaring pest species. These systems are obviously an important aspect of overall pest animal management, as they determine which animals are to be treated as pests, and monitored and controlled accordingly.

5.53 The committee received some evidence that there is a need for reconsideration of the systems for declaring pest animals. For example, Mr Rodney Chevis, of Oakdale in New South Wales, noted in his submission:

> … only feral pigs, wild dogs and rabbits are declared pest species in NSW. This leaves foxes and feral cats, both significant predators, not officially recognised as pests, even though 1,000,000 fox baits were issued to landholders in NSW, during 2002. … Goats and deer living in the wild are of concern and should be considered along with the other pests, while the cost of recurrent mouse plagues should be documented and work undertaken to anticipate and combat future population explosions. … It would appear that NSW is in need of a new mechanism for recognising, declaring and attacking species that have become pests.[42]

5.54 The committee recognises the importance of ensuring that there is consistent identification across state and territory borders of pest animal species. Although each state and territory will have different pest animal problems, it is important that the criteria for recognition and identification of pest species be as uniform as possible. To this end, the committee recommended in Chapter 4 that the proposed National Pest Animals and Weeds Committee liaise with state and territory representatives to improve consistency of pest animal legislation.

42 *Submission 44*, p. 3.

5.55 The committee also notes the recommendation of the Australian Biosecurity Group for the development of an agreed list of 'Invasive Species of National Importance', which would include a National Quarantine List, National Alert List and a National Control List.[43] The committee agrees with the recommendation and believes that this would be an excellent means of uniformly identifying pests and potential pest species across state and territory borders. The list could be used to improve consistency across jurisdictions in the declaration of pest species. It would also be useful as a list of species to be targeted for surveillance by AQIS and NAQS.

Recommendation 14

5.56 **The committee recommends that the National Invasive Species Task Group create a 'List of Invasive Species of National Importance', including a National Quarantine List, a National Alert List and a National Control List.**

Community awareness

5.57 Community awareness of pest animal issues is one of the most important factors in ensuring that the importation of new pest species into Australia, and into new areas within Australia, is limited as much as possible.[44]

5.58 The Northern Territory Government, in its submission, pointed to the need for public education at both state and national levels to assist people to detect new pest establishments and prevent movements of pest species between jurisdictions.[45]

5.59 Representatives of the Western Australian Government also discussed the important role to be played by the community in early detection and reporting of pest animals:

> Australia … puts itself forward as having a very effective quarantine service where, in effect, nothing gets through. That can never be the case. If you put yourself forward in that way then you lull the community into a false sense of security and a false sense

43 Australian Biosecurity Group, p. 21.

44 PAC CRC, *Submission 33*.

45 *Submission 72*, p. 2.

> that they do not have a role to play and that everything is okay. There is ample evidence that that is not the case; unless we double the size of the quarantine service again, there will always be things, whether they are cryptic termites or other things, which will evade inspection or other measures at the border. We need that second or third tier all the way to an individual person in their house, on their farm, at their business to play that important role.[46]

5.60 To this end, the Western Australian Government provides a free identification and advisory service to the public, pest control industry and some agricultural industries. The community is encouraged to submit suspect specimens, which are then identified free of charge.[47] In this way, the services of the public in helping to identify and detect pest animal species are utilised. It was suggested in the Agtrans Report to the Invasive Species Task Group that charging for identification services operates as a disincentive to people to submit suspected pests for identification.[48]

5.61 The committee believes that identification and advisory services are vital in ensuring that quarantine breaches and incursions are detected as early as possible, so that they can be effectively dealt with.

Reporting systems

5.62 A number of submitters were supportive of the need for effective systems to be put in place for reporting of pest animals.[49] Reporting systems allow government agencies and private landholders to identify more clearly the location of pest animal populations and therefore to plan control more effectively.[50]

5.63 Reporting also enables control and even eradication of pest species populations where they have not yet become established. DAWA noted, for example, that reporting by members of the public following an information campaign prevented the establishment of the European wasp in Western Australia.[51]

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46 Mr Robert Delane, DAWA, *Transcript of evidence*, 20 July 2005, p. 23.

47 DAWA, *Submission 98*, p. 20.

48 Agtrans Report, p. 69.

49 *Submissions 6*, *43*, p. 2, *44*, p. 5, *49*, pp. 5-6, *76*, p. 12, *78*, p. 4, *80*, p. 2, *98*, p. 19.

50 SSAA and FGA, *Submission 90*, Mr Graham Hillyer, Bombala RLPB, *Transcript of evidence,* 9 September 2005, p. 5.

51 *Submission 98*, p. 20.

5.64 The need for reporting from the community is especially great with regard to pest species whose populations cannot be monitored in any other way. Mr Robert Delane, Executive Director of Biosecurity and Research with DAWA, stated:

> We have exotic fruit fly monitoring traps—I think we have 2,000 pheromone traps—that we monitor around the state. Asian gypsy moth traps have been monitored for quite a number of years. We monitor for interstate movement of coddling moth. So there are opportunities for all of those. But, of course, then there are issues like dry wood termites where you actually need people monitoring what is going on in their houses because you are very unlikely to pick it up through a trapping mechanism.[52]

5.65 Each state and territory currently has its own reporting system for pest animals in place. For example, the State Council for the RLPB of New South Wales indicated that the Software Application Suite, due to be available in the middle of this year, would include a Pest Animal Database, allowing boards to record any sightings or occurrences of pest animals as well as the distribution of bait.[53]

5.66 Cooloola Shire Council in Queensland collects data from primary producers on levels of wild dog predation and stock losses, which is then used to plan baiting programs on public and private lands. They indicated that this may soon form part of a regional multi-shire approach to wild dog reporting.[54]

5.67 In addition to these state and territory initiatives, the committee is aware of a national Exotic Plant Pest Hotline set up by PHA. This is a freecall service provided for members of Australia's plant production sectors and plant health services, which enables them to report suspected detections of unusual plant pests and diseases.[55]

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52 *Transcript of evidence*, 20 July 2005, p. 22.

53 *Submission 81*, p. 6.

54 *Submission 95*.

55 PHA, *Exotic Plant Pest Hotline,* PHA, Canberra, 22 July 2005, viewed 27 September 2005, <http://www.planthealthaustralia.com.au/our_projects/display_project.asp?ID=107&Category=1>.

5.68 The committee received a number of submissions indicating the need for a nationally uniform detection and reporting system to operate throughout Australian states and territories.[56] The committee was told that DAWA and New South Wales Department of Agriculture are coordinating to establish a national reporting system.[57]

5.69 The Western Australian Government gave evidence about a new national system for reporting that could be applied to pest animal management. The system, known as the National Surveillance, Quarantine, Control and Recovery System (SQCR) was instigated by the National Information Manager's Technical Group (NIMTG) under the Primary Industries Health Committee, and allows for standardised data collection.[58]

5.70 The committee notes that the terms of reference for the proposed National Pest Animals and Weeds Committee include the harmonisation of pest animal data collection. The committee anticipates that this will include a strategy for pest animal reporting that can be implemented in all states and territories. Given the work of the NIMTG in relation to standardised data collection, consultation with that group would be beneficial.

5.71 In its submission, DAWA discussed perceived problems with the process for public reporting of exotic insect infestations to AQIS. The public is currently encouraged to report quarantine breaches to AQIS, for example through television advertisements featuring the 'Crocodile Hunter', Steve Irwin. When breaches are reported, AQIS seeks to recover the costs of treating infested goods from the person who has reported the breach, under its cost-recovery policy.

5.72 As DAWA's submission points out, the cost-recovery policy effectively discourages the public and pest control industry from reporting breaches. This is unfortunate, given that eradication programs are most cost-effective when conducted early at the breach stage, rather than once the pest has become established.[59]

56 *Submissions 15*, p. 2, *70*, pp. 8-9, *78*, p. 4.

57 Western Australian Government, *Submission 70*, p. 7.

58 *Submission 70*, p. 9.

59 *Submission 98*, p. 16.

5.73 The committee agrees with DAWA that the policy of recovering costs from individuals who report quarantine breaches is unfortunate and operates as a disincentive to the public to report pest animal incursions in imported products. The committee considers that, despite the additional expense that would be incurred by AQIS following the removal of this policy, this is still significantly less expensive than the costs of control once a pest has become established.

Recommendation 15

5.74 **The committee recommends that the Australian Government:**

- **encourage state and territory governments that do not currently do so to provide free species identification and advisory services to the public and industry, to enable early identification of potential pest animal species; and**
- **dispense with the policy of cost recovery by the Australian Quarantine and Inspection Service for the costs of treatment for pest infestations from those who report the presence of pest animals in imported goods.**

Recommendation 16

5.75 **The committee recommends that the proposed National Pest Animals and Weeds Committee establish a national reporting system for pest animals and consult with the National Information Manager's Technical Group in relation to possible application of the National Surveillance, Quarantine, Control and Recovery System for this purpose.**

Early warning systems

5.76 Mr Dick Bashford, of Forestry Tasmania, made a very useful submission regarding the need for a monitoring system near Australian ports to provide early warning of the presence and possible establishment of new insect pests.[60]

60 *Submission 2.*

5.77 Mr Bashford's submission pointed out that initial establishment of exotic pest species usually occurs within a five kilometre zone around port of entry sites (ports and airports). If the pest is not contained within this area within two years of establishment, then eradication will be virtually impossible. Monitoring systems established in these zones would enable early detection of exotic insect species that have escaped from entry port areas.[61]

5.78 The committee was provided with evidence in relation to exotic invertebrate surveillance conducted in two states. Formal surveys, funded in part by DAFF, have been carried out in Tasmania to monitor Asian Gypsy Moth. A total of 120 traps were placed at Burnie, Devonport, Bell Bay, Triabunna and Hobart at a cost of $16,600 for 2003-2004.[62] DAWA also has in place targeted surveillance systems for a range of exotic invertebrates, including Qfly, screw-worm flies, Codling moth, Asian Gypsy Moth, resistant grain insects, grain borers and European wasps.[63]

5.79 Despite these initiatives, QFF expressed concern about perceived inadequacies for early warning systems for pest animals in Australia. The organisation stated:

> Successful containment and eradication is contingent upon early detection and although national surveillance is carried out for high-risk plant pests including exotic fruit flies, screw worm flies and Asian Gypsy Moth, early detection systems for pest animals are generally under-developed, under resourced, and require far better coordination.[64]

5.80 Forestry Tasmania also noted that current systems for post-barrier protection against establishment of insect pests are limited, and target only Asian Gypsy Moth.[65] The lack of a comprehensive national early warning system was one of the reasons RIFA were able to establish in Brisbane, creating the need for a very expensive eradication campaign.[66]

61 *Submission 2*.

62 *Submission 2*, *Transcript of evidence*, 29 March 2005, p. 2.

63 DAWA, *Submission 98*, p. 20.

64 *Submission 59*, p. 13.

65 *Submission 67*.

66 Australian Biosecurity Group, p. 14.

5.81 The committee is concerned that Australia currently has little in the way of a formal national monitoring system in place for the detection of exotic insects within the five kilometre entry zone. Some of the systems trialled in Tasmania may provide models for similar systems in other parts of the country.

5.82 Static trapping is a low-maintenance means of detecting the existence of an exotic insect species before it becomes established. Forestry Tasmania has conducted a series of trials at several northern seaports and Hobart Airport, at a cost of $18,888 in the first year and $11,048 plus GST for subsequent years.[67]

5.83 Blitz surveys are annual examinations conducted at a site for pathogen detection and tree damage. A blitz survey carried out at Bell Bay and Hobart Airport in 2002-2003 cost approximately $5,000 per site.

5.84 The sentinel planting plots method involves planting small plots of varied tree species at a site, including commercial timber and dominant urban tree species. The plots can be quickly and thoroughly examined for the presence of exotic insect species. Sentinel planting plots have not been trialled or costed in Australia.[68]

5.85 The committee is aware that NAQS already uses traps and sentinel animals to locate exotic invertebrate incursions in regions of northern Australia.[69] The committee considers that there would be merit in expanding trapping and monitoring systems to other coastal regions.

5.86 The committee notes that the costs of these trapping programs are not significant, especially when compared with the potential damage that might be caused by exotic pest incursions to forestry plantations and native trees.

Recommendation 17

5.87 **The committee recommends that the Australian Government Department of Agriculture, Fisheries and Forestry work with state and territory government agencies to examine the port surround monitoring system trialled by Forestry Tasmania with a view to implementing similar systems at strategic port entry sites throughout Australia.**

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67 Mr Dick Bashford, *Submission 2*.

68 Mr Dick Bashford, *Submission 2*.

69 DAFF, *Activities of NAQS,* DAFF, Canberra, 18 February 2005, viewed 21 October 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=72DC0D3B-DAEC-417A-AB012CEEFCD590C0>.

Identification of sleeper populations of pest species

5.88 It is important that appropriate procedures be put in place for recognising 'sleeper populations' of pest species, that is, species that already exist in Australia and have the potential to constitute a pest at some point in the future.[70]

5.89 A number of different species were identified as sleeper species in submissions, including magpie geese and maned geese (wood duck); feral deer; rainbow lorikeets; eastern long-billed corellas; ferrets; black rat; red fox in Tasmania and tropical Australia; cockatoos; and indian mynas. [71]

5.90 QFF stated:

> In addition to the management of the impacts of established pest species and the control and eradication of exotic species incursions, QFF considers the threat from exotic species found already in the country but not yet considered to be a widespread problem (so called 'sleeper species' and the like) as high and a significant pest animal issue warranting a national focus. Whilst the most effective response to a pest animal is ideally to prevent them from entering the country, early rapid detection of any newly introduced or spread of established pest animal is the key to timely and cost effective intervention and provides the best opportunity for eradication and containment.[72]

5.91 Sleeper species should be closely observed and their population levels recorded at regular intervals. This will ensure that intervention can occur as soon as the population of a potential pest begins to expand, rather than waiting until the species has caused serious environmental or economic damage. Close monitoring and recording of sleeper populations can help to provide early warning of any expansion in the population.[73]

5.92 The committee also notes that a project assessing the threat posed to agriculture by a selection of exotic vertebrates already present in Australia is ongoing under the NFACP.[74] The committee believes that projects such as these are important in ensuring that the relevant authorities and

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70 CSIRO, *Submission 55*, pp. 5-6.

71 *Submissions 54*, p. 2, *55*, p. 6, *70*, p. 9, *90*.

72 *Submission 59*, p. 11.

73 SSAA, *Submission 20*, p. 2.

74 DAFF, *National Feral Animal Control Program Projects*, DAFF, Canberra, 8 July 2005, viewed 21 September 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=DDAFD1FF-AD40-46DA-933393C42AA69A29>.

potentially-affected landowners are in a position to take measures to protect themselves against new pest animal threats.

5.93 The committee notes that the identification of 'emerging pest species' is part of the terms of reference for the VPC and will therefore constitute part of the terms of reference for the proposed National Pest Animals and Weeds Committee, if the committee's recommendation is acted upon. The committee believes that the proposed National Pest Animals and Weeds Committee should prepare a list of sleeper animal species with a view to ensuring that populations of those species are closely monitored.

Recommendation 18

5.94 **The committee recommends that the proposed National Pest Animals and Weeds Committee compile a list of sleeper pest species.**

Monitoring of pest animal populations

5.95 A number of submissions pointed to the need to map incidences and density of pest animal species, to enable more effective control and planning.[75] The general lack of awareness of the scale of pest animal problems was pointed out by Dr Jeanine Baker, President of the SSAA (South Australia):

> There is also a lack of information on pest numbers and distribution and the actual impact that they cause. Added to that is the fact that often the information we have is fragmented or uncoordinated on a national and local scale. This causes big problems when we are looking at emerging or new pest animals because we often do not identify them in time. It also causes problems if we are looking at national or regional coordinated programs.[76]

75 *Submissions 15*, p. 2, *34*, *44*, p. 4, *52*, pp. 1-2, *80*, p. 2, Mr Jack Jones, Ovens Landcare Network, *Transcript of evidence*, 18 June 2004, p. 2. See also *Exhibit 1,* AEC Group, *Economic Impact of State and Local Government Expenditure on Weed and Pest Animal Management in Queensland*, Local Government Association of Queensland, October 2002, p. 101.

76 *Transcript of evidence*, 25 May 2005, p. 1.

5.96 Lack of knowledge of the abundance, ecology, movements and impacts of pest animals can be an impediment to the implementation of control measures for that species.[77] On the other hand, knowledge about population levels of a pest species and its correlation with damage caused can help to pinpoint more effective control strategies. Dr Tim Wardlaw, Principal Scientist, Biology and Conservation with Forestry Tasmania, gave the following evidence in relation to control of browsing mammals in forestry plantations:

> It is fair to say that in situations where traditionally we have used 1080 it has not been the most effective treatment. I am talking here about situations of extreme browsing risk where, no matter how many times you go and poison an area, you are still going to have browsing problems. You end up with plantations that have a halo of damage around the perimeter. If you measure some of those areas you might find 10 or 15 per cent of the plantation has failed to establish even with the application of 1080. So there are situations where 1080 is not the best option for managing browsing. By going to this risk based approach we are able to better target specific actions for certain situations of browsing risk.[78]

5.97 Monitoring conditions such as pest animal density, native flora composition and agricultural productivity both before and after pest animal control activities helps to determine the relationship between pest animal density and resource damage. It also assists in determining whether the type of control activity being used is having an impact, or whether alternative measures should be considered.[79] It enables those responsible for control to determine whether control targets have been met.

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77 *Exhibit 7,* TFAWG, *Cooperative Wild Dog/Fox Management Program*, Draft no. 5, March 2002, p. 11.

78 *Transcript of evidence*, 29 March 2005, p. 23.

79 NRM, *Selected Ecologically Significant Invasive Species Extent and Impact: Vertebrate Pests (indicator status: for advice)*, NRM, Canberra, viewed 21 September 2005, <http://www.nrm.gov.au/monitoring/indicators/pubs/vertebrate.pdf>, p. 2.

5.98 Monitoring of pest animal populations, including mapping populations, and defining and measuring impacts of pests, is consistent with existing pest animal strategies operating in states and territories.[80] There is, however, currently no standardised framework for measuring pest animal distribution, density and impact in operation across the states and territories.[81] A standardised framework would allow data to be collected and collated at a national level.

5.99 Monitoring of native pest species is important because, at times of significant population growth, it may be appropriate to increase quotas of animals which can be harvested commercially. Alternatively, at times when populations have stabilised at normal levels, quotas may need to be reduced.

5.100 Monitoring pest animal populations for incidence of disease is also important to enable disease outbreaks to be identified and dealt with quickly. The collection of samples from feral populations for disease monitoring was recommended by the Victorian and New South Wales Wild Dog Coordinating Committee.[82]

5.101 In Chapter 4, the committee recommended that the proposed National Pest Animals and Weeds Committee be tasked to establish a National Pest Animal Database, to be contributed to by state and territory governments, and local governments and pest animal control groups. The committee anticipates that this database will provide a means of monitoring pest animal density and distribution on a national scale.

Early eradication

5.102 Early eradication of populations established in small areas may be possible if detection occurs early enough. This may prevent the need for large-scale, costly control programs that are required when pest species become established throughout a region. Several submissions received were supportive of early eradication programs.[83]

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80 ACT Government, *Submission 63,* Appendix, Environment Act, *ACT Vertebrate Pest Management Strategy*, ACT Government, Canberra, 2002, pp. xi, 12, Queensland Government, *Queensland Pest Animal Strategy 2002-2006*, DNRM, viewed 5 October 2005, <http://www.nrm.qld.gov.au/pests/management_plans/pdf/qld_animal_strategy.pdf>, p. 12, NRM, pp. 9-12.

81 NRM, p. 3.

82 *Submission 66*.

83 *Submissions 34*, *48*, *55*, p. 7, *59*, p. 13, *70*, p. 9, *76*, p. 12, *78*, p. 4, *98*, p. 14.

5.103 In its submission, CSIRO pointed to the lack of an efficient process for responding rapidly and appropriately to animal pest incursions. As an example, they pointed to the lapse in time between the reported presence of foxes in Tasmania and the development of detection and reporting systems.[84]

5.104 The BRS, in its submission to the inquiry, referred to the six criteria that must be satisfied if an eradication program is to be successful:

1. rate of removal must exceed the rate of increase at all population densities;
2. immigration is zero;
3. all animals are at risk from control measures;
4. animals can be detected at low densities;
5. discounted cost-benefit analysis favours eradication over control; and
6. a suitable socio-political environment exists.[85]

5.105 These six criteria may be met in the case of localised populations of newly-established pest animals,[86] and eradication may therefore be a feasible alternative.

5.106 QFF referred to the action taken in relation to the incursion of RIFA in Queensland and noted that:

> … the fragmented reactive response to the Fire Ant incursion has been less than ideal and illustrates the need for clarity in the roles and responsibilities between the Commonwealth and States and between Qld government agencies in the event of nationally significant pest animal incursion in the State.[87]

5.107 The Western Australian Government, in its submission, noted that the capacity to strike quickly is critical to the eradication of local infestations of pest animals. There is a need for plans and funding arrangements to be in place prior to undertaking eradication operations. On that basis, the Western Australian Government called for the development of an eradication protocol as part of the National Pest Animal Strategy, and suggested AUSVETPLAN as a model.[88]

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84 *Submission 55*, p. 7.
85 *Submission 76*, Attachment C.
86 *Submission 76*, p. 12.
87 *Submission 59*, p. 13.
88 *Submission 70*, pp. 9-10.

5.108 The committee takes on board these considerations and notes that an eradication protocol would facilitate eradication programs, particularly where there is an urgent need to deal with a pest animal incursion. An eradication protocol should be developed as part of the National Pest Animal Strategy.

Recommendation 19

5.109 **The committee recommends that the National Pest Animal Strategy, currently under development, include an eradication protocol to be used where required for early eradication of newly-established pest animal infestations.**

6

Methods for controlling pest animals

Overview

6.1 As discussed in Chapter 5, early detection and eradication of a pest species is far simpler and more cost effective than managing a pest animal species that has become established widely.

6.2 As many pest animal species are already established in regions of Australia, there is a need for effective, long-term strategies for pest animal control. Eradication of exotic pests is the ideal, however the committee received evidence that this will not be a feasible alternative for many species.[1] As stated in one submission:

> There will always be re-introductions, edge effects and imperfect control operations. The best we can hope for is for low concentrations of pest animals to be sustained over large areas of management. Certainly if the damage is reduced then it may not be important that every last animal is eliminated, even if this is a commendable goal in principle. Significant economic and environmental outcomes will be achieved by substantial reductions of pest animals in local areas. This should be the real focus.[2]

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1 *Submissions 15*, p. 2, *72*, p. 2, *78*, p. 4, *84*, p. 38, Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, p. 14.

2 Animal Control Technologies, *Submission 84*, p. 38.

6.3 While acknowledging that eradication will be difficult and sometimes impossible, to the extent that eradication is a viable alternative, the committee believes that should be pursued. Local eradication of feral donkeys, for example, is occurring progressively in the Kimberley and the Pilbara region in Western Australia through the Judas donkey program coordinated by the Western Australian Government.[3]

6.4 Eradication is, of course, not appropriate as a strategy for native animals that are considered to be pest species. Population management and damage minimisation can be the only feasible strategies for native species.

6.5 The committee is aware that the responsibility for pest animal control on private land has progressively been transferred from state governments to private landowners. The committee is therefore concerned to ensure that a wide range of cost-effective methods is available to all land managers and that barriers to effective pest animal control are minimised as far as possible. The committee notes that no single control technique is likely to be effective in isolation, and land managers therefore need access to a range of methods.[4]

6.6 The committee is also concerned about inadequacies in funding for management of pest animal issues by state and territory governments. These concerns relate both to the quantum of funding and its distribution. The committee also considers that a substantial investment by the Australian Government into programs to eliminate wild dogs, feral pigs, rabbits and foxes is urgently required.

6.7 The committee believes that the proposed National Pest Animals and Weeds Committee will play an important role in coordinating change across states and territories where that is necessary to achieve more efficient and economical pest animal control.

3 Mr Richard Watkins, DAWA, *Transcript of evidence*, 22 July 2005, p. 15.

4 FGA, *Submission 29,* Animal Control Technologies, *Submission 84,* p. 29.

Animal welfare issues

6.8 The committee is cognisant of concerns held by sections of the community about the welfare implications of pest animal control. These concerns were expressed in a number of submissions.[5] While emphasising the need for a range of cost-effective control methods to be available to landholders and governments, the committee acknowledges that as far as is practically possible, humane vertebrate pest control is an ideal that should be pursued.

6.9 A definition of 'humane vertebrate pest control' is provided in the Discussion Paper arising from proceedings of a workshop conducted jointly by RSPCA Australia, the Animal Welfare Centre and the Vertebrate Pests Committee in 2003:

> Humane vertebrate pest control (HVPC) is the development and selection of feasible control programs and techniques that avoid or minimise pain, suffering and distress to target and non-target animals.[6]

6.10 The committee also agrees with the workshop's approach to balancing humaneness against efficacy. The Discussion Paper notes:

> It was generally agreed that the selection of the most appropriate vertebrate pest control technique required consideration of both humaneness and efficacy: decision-making concerning the continued use or specific need for using particular techniques could not be based upon humaneness alone. In the absence of a humane alternative, especially in the face of a valid need to address high priority needs, a technique that is considered to have poor humaneness may be justifiable if it has high efficacy. Conversely, some techniques that are considered humane may have low efficacy and cannot therefore be justified in any circumstances where desired objectives cannot be met.[7]

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5 *Submissions 6*, Attachment, p. 3, *32*, *47*, *68*, p. 2, *69*, *70*, p. 10, *71*, *72*, p. 1, *76*, p. 16, *84*, pp. 21-22, *88*, *90*.

6 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 4.

7 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 12.

6.11 The committee notes that, in addition to the welfare of pest animals, the welfare of livestock preyed upon by pest animals should be taken into consideration. The committee received some disturbing evidence about the effects of attacks by wild dogs and foxes on livestock, particularly lambs.[8] The need to take account of animal welfare impacts of attacks on livestock has been recognised by animal welfare organisations.[9]

6.12 The committee recommended in Chapter 4 that the development of national pest animal welfare standards be included as part of the terms of reference for the proposed National Pest Animals and Weeds Committee.

6.13 While acknowledging the need to take animal welfare into consideration, the committee strongly rejects the following suggestion made by Animals Australia in its submission:

> Species which cannot survive in the altered environment should be permitted to achieve the peace of extinction. Species which are here to stay because we have made this place such an ideal habitat for them must be permitted to settle into their new niches and stabilise their populations with a minimum of human interference.[10]

6.14 The committee emphasises the importance of pest animal control in helping to protect Australia's native flora and fauna. The committee objects to the idea that pest animals should be allowed to 'stabilise their populations'. Although pest animal control should be carried out as humanely as possible, the ultimate goal must be removal of feral species.

Environmental laws

6.15 The ability of some landholders to control pest animals by means of shooting and hunting is limited due to environmental regulations. For example, fruit farmers around the Oakdale region in New South Wales are subject to strict limitations on the numbers of grey-headed flying foxes they can shoot, because the grey-headed flying fox is listed as a 'vulnerable species' under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) and under the *Threatened Species Conservation Act 1995* (NSW).[11]

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8 Bruce and Barbara Reid, *Submission 42,* Mr Edgar Richardson, PGA, *Transcript of evidence*, 20 July 2005, p. 2, Mr Michael Hartmann, CCA, *Transcript of evidence*, 15 June 2005, p. 1.

9 Mr Mark Pearson, Animals Australia, *Transcript of evidence*, 16 March 2005, p. 10.

10 *Submission 32,* p. 5.

11 Mr Ed Biel, *Submission 21*, p. 4.

6.16 Similarly, landholders in Western Australia are limited in the actions they can take to control wedge-tail eagles that prey on lambs. Because eagles are a protected species, the permission of an officer from CALM is required before shooting can occur. In remote areas, such as Leonora, officers are not readily available to visit properties, meaning that landowners are largely powerless to legally protect their livestock.[12] Eagles are also a problem in New South Wales.[13]

6.17 Where a species, while 'vulnerable' in terms of population at a national level, is abundant in a particular locale, the committee believes it would be useful if measures could be taken to control the population locally, while preserving the 'vulnerable' status of the species nationally.

Recommendation 20

6.18 **The committee recommends that the proposed National Pest Animals and Weeds Committee work with state and territory governments to ensure that effective measures are available to control species classified as 'vulnerable' or 'threatened' where they constitute pests.**

Hunting

6.19 Despite the widespread use of baiting and fencing, shooting is still an important part of many programs for dealing with pest animals, particularly large animals such as dogs, pigs, donkeys, camels and goats, and native species such as possums and kangaroos. The committee received a substantial amount of evidence regarding the use of hunting and shooting, and impediments to their effective use as part of pest control strategies.

Hunting and sporting organisations

6.20 FGA and the SSAA provided evidence to the committee in relation to the contributions their organisations have made to pest animal control. These comprise not only reduction of pest animal numbers through shooting and hunting, but also work in monitoring population numbers of pest species.

12 Roundtable discussion with Leonora pastoralists, 12 April 2005.

13 Mr Ernie Constance, *Transcript of evidence*, 9 September 2005, p. 47.

6.21 As an example of this contribution, SSAA gave evidence that its Hunting and Conservation Branch has a national program that monitors vertebrate pest animal populations. The Hunting and Conservation Branch coordinates with national parks and private landholders to assess levels of pest infestation and reduce pest animal numbers.[14] Similarly, FGA has been collecting data on pest animal hunting activity from its members for more than a decade.[15]

6.22 Hunting organisations have also made important contributions to pest animal control efforts in particular regions. For example, Victorian hunters from FGA participated in a fox bounty trial that destroyed more than 198,000 foxes in just over twelve months.[16] Members of the SSAA have culled more than 25,000 wild goats in the Flinders Ranges since 1992.[17]

6.23 One of the advantages of utilising sporting and hunting organisations is that their members are usually accredited and have undergone some kind of training. Members of the SSAA, for example, undergo an accreditation course before going out to private lands, which includes training in ethical hunting, firearm handling, bushcraft and first aid.[18] Hunting organisations generally operate under codes of practice, which ensure that best practice with regard to animal welfare is followed.[19]

6.24 Some landholders and organisations were supportive of the use of hunters to help control pest animal numbers.[20] It was suggested that responsible shooting organisations could be supported to conduct control operations, possibly through subsidisation of ammunition.[21]

6.25 SSAA gave evidence that legislative restraints and problems with insurance prevent landholders in some jurisdictions offering recreational hunting on their properties.[22] The current insurance situation is that, although members of a sporting shooters group are covered by the insurance policy for their organisation, this does not guarantee that the insurer will not pursue landholders for reimbursement regarding accidents occurring on their property. Many farmers' insurance policies would not extend to a claim for negligence in respect of a hunting

14 *Submission 20*, p. 1.
15 FGA, *Submission 29*.
16 *Submission 29*.
17 *Submission 20*, p. 3.
18 Letter from Dr Jeanine Baker, SSAA, to the Committee, 16 July 2005.
19 Mr Rodney Drew, FGA, *Transcript of evidence*, 25 May 2005, p. 4.
20 *Submissions 1*, *4*, *44*, p. 5, *84*, p. 29.
21 Animal Control Technologies, *Submission 84*, p. 29.
22 *Submission 20*, p. 4, Dr Jeanine Baker, SSAA, *Transcript of evidence,* 25 May 2005, p. 10.

accident, as hunting is not regarded as a farming activity. This has lead to reluctance on the part of some landholders to allow hunting to take place on their properties.

6.26 SSAA has advised the committee that it has discussed with its insurance broker the possibility of providing coverage for property owners in return for an increased premium.[23] This is a potential solution to the problem of insurance cover however the committee notes that in the absence of cooperation by insurance companies, state and territory governments may need to negotiate alternative arrangements to ensure that landholders are able to access the services of hunting and shooting groups for pest animal control.

Recommendation 21

6.27 **The committee recommends that the Australian Government, through the Coalition of Australian Governments, encourage states and territories to amend legislation and to find solutions for insurance problems experienced by hunting and shooting organisations where legislation and insurance problems preclude the organisations from assisting landholders with pest control activities.**

Individual hunters and shooters

6.28 The committee notes that individual hunters and shooters who are not part of organised sporting shooters' groups can also assist landowners in controlling pest animal problems on their land. The committee believes, however, that there must be guidelines in place as to acceptable hunting practices.

6.29 As discussed in Chapter 5, there was some evidence provided to the committee in relation to alleged irresponsible behaviour by hunters, such as releasing feral pigs and other animals into areas not already populated by those species, in order to build up new populations for hunting.[24]

23 Letter from Dr Jeanine Baker, SSAA, to the Committee, 16 July 2005.

24 *Submissions 38*, p. 2, *39*, *70*, p. 12, *72*, p. 2, *76*, p. 13, *77*, p. 2, Mr John Alcock, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, pp. 14-15, Mr Mark Pearson, Animals Australia, *Transcript of evidence*, 16 March 2005, p. 9.

6.30 The committee also took note of evidence provided by the Tumbarumba Feral Animal Working Group (TFAWG) to the New South Wales Standing Committee No. 5 Inquiry into Feral Animals about the practice of pig dogging, which involves the use of hunting dogs to attack feral pigs. This practice is not only inhumane, but dogs used for this purpose may also escape and join populations of wild dogs.[25]

6.31 Humane Society International expressed concern in its submission about the potential animal welfare impacts of hunting by inexperienced shooters.[26]

6.32 Although the committee supports the use of individual hunters to assist landowners in controlling pest animals on their land, hunting must be appropriately regulated to ensure that it is conducted safely, humanely and responsibly. An effective way of regulating individual hunting, as well as managing hunting by organised groups, is through the implementation of Property-based Game Management Plans. These are discussed in Chapter 8.

6.33 The committee also received evidence about the involvement of private shooters in pest animal control through bounties. Bounty schemes involve a price per head being fixed for a particular species of pest animal, which is paid upon delivery of a carcass, or part of a carcass.

6.34 Some submissions were supportive of a bounty program.[27] Ms Denise Brien, of Oberon in New South Wales, suggested that a bounty be introduced to help control foxes, which prey on lambs in her region.[28] A bounty for foxes, cats and rabbits was also recommended by Transport Concepts (Qld) Pty Ltd.[29] Bill and Gloria Gossage, farmers to the south-west of Gulgong in New South Wales, recommended introducing a bounty on pigs.[30] Kathy and Malcolm Boladeras, of Wonganoo Station, called for a bounty to cut back dog numbers in the north-east Goldfields region of Western Australia.[31]

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25 *Exhibit 2,* TFAWG, *Submission to the New South Wales General Purpose Standing Committee No 5 Inquiry into Feral Animals*, August 2001, pp. 6-7.

26 *Submission 88*, p. 1.

27 *Submissions 58*, p. 3, *83*, *87*, pp. 2-3.

28 *Submission 14*.

29 *Submission 13*.

30 *Submission 58*, p. 3.

31 *Submission 87,* pp. 2-3.

6.35 A joint submission from FGA and the SSAA, gave the following evidence in support of bounties:

> Bounties are a controversial method of animal control, but clearly have a role if instigated with the support of the community and recognition of their limitations if undertaken on a small scale. Whilst debate will continue on the effectiveness or otherwise of "Bounties", Australian landholders should have access to a variety of eradication and control tools to combat pest animals, and shooting is one of these. Whilst we recognise that this method is not appropriate for every situation, shooting programs can be highly effective, species specific, cost efficient with an immediate measurable reduction in pest animal damage, particularly when combined with other techniques as part of a coordinated pest animal control plan.[32]

6.36 A number of submissions pointed to the need for bounties to be operated on a national scale, or at least with consistency across regions, for them to be effective as a means of reducing pest animal population levels.[33]

6.37 The committee notes with interest the comments made by Mr Trevor de Landgrafft, President of WAFF, in relation to the utilisation of bounties:

> What it really is a reaction to is the lack of training and preparation by the agencies in having doggers available to undertake the task. They are hoping that perhaps, if they put a bounty out, it might attract some enterprising people to go out there and make a living. It is quite clear that that is not going to happen and it does not appear to ever be going to work. Nothing is going to replace continual training in and funding of these dogging experts to go out and do that.[34]

6.38 Research provided by the BRS, and other evidence provided to the committee, indicates that bounties are generally ineffective as a means of control.[35] This may be due to a number of factors, including fraudulent practices, failure in terms of providing long-term relief, high costs of administering schemes and selective removal of surplus animals. Animals shot as part of a bounty scheme are often targeted in areas of high density

32 *Submission 90*.

33 *Submissions 46*, *83*, *90*, *95*, Mr Ian Lobban, VFF Barnawartha Branch, *Transcript of evidence*, 18 June 2004, p. 27.

34 *Transcript of evidence*, 20 July 2005, p. 31.

35 *Submissions 17*, *84,* p. 28, BRS, *Submission 76,* Attachment E, P Olsen, *Australia's pest animals: new solutions to old problems*, Commonwealth of Australia, Canberra, 1998, pp. 26-27, Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, p. 5.

where they are easily caught, which means that the problem animals in an area are not removed.[36]

6.39 Despite the submissions in support of bounties referred to above, the committee is of the view that bounty schemes generally need to be implemented at a national level, or at least across state borders, in order to be effective. The committee considers that the resources necessary to fund an inter-state bounty would be more usefully spent on the employment of more on-ground controllers such as dog trappers. The committee notes, however, that bounty schemes may be appropriate in particular circumstances, and may therefore play a role in local and regional pest animal management strategies, for example in the control of foxes and feral cats.

Baiting and poisoning

6.40 The committee received evidence that baiting is an effective method of pest animal control, particularly over large areas, where hunting and trapping may be difficult and impractical. It is also a necessary part of pest animal control in areas where residential build-up precludes shooting and hunting.[37] Baiting can generally play an important part as an element of an overall pest animal control strategy.[38]

6.41 The Western Australian Government provided evidence that its Western Shield 1080 baiting program has been successful in turning around the trend towards extinction of a number of native animals that are preyed upon by foxes. The program involves routine baiting of approximately 3.5 million hectares four times a year and sometimes more often in smaller areas and on the margins of agricultural land.[39]

36 BRS, *Submission 76*, Attachment I, G Saunders, B Coman, J Kinnear and M Braysher, *Managing Vertebrate Pests: Foxes*, Australian Government Publishing Service, Canberra, 1995, pp. 56-57.

37 *Submissions 23, 31,* p. 11, *84,* p. 34.

38 Mr Colin Clift, *Submission 12,* District Council of Grant, *Submission 17*, Mr Keiran McNamara, CALM, *Transcript of evidence*, 11 April 2005, p. 25.

39 Mr Keiran McNamara, CALM, *Transcript of evidence*, 11 April 2005, p. 25.

6.42 In New South Wales, similarly, 'Outfox the Fox' is a large, coordinated fox baiting program that commenced in September 1999. It now has more than 1,400 participating landholders, several New South Wales National Parks and Wildlife regions, state forests, crown land and reserve trust areas involved. Baiting is conducted twice a year, with around 50,000 baits placed each time.[40]

6.43 Most submissions in relation to baiting and poisoning included evidence in relation to the use of 1080 poison and aerial baiting.

Benefits of 1080 poison

6.44 A range of evidence was received in support of the continued availability of 1080 poison, with many landholders and organisations noting that 1080 is an important part of strategies to control pest animals such as wild dogs and foxes, and in Tasmania, possums and wallabies.[41]

6.45 The State Council for the RLPB of New South Wales had the following to say about 1080:

> Of major relevance in pest animal management is the use of 1080 poison to control various pest species. The crucial importance of this chemical in pest species control cannot be overemphasised. In many ways it is the primary tool in controlling such pests. Without the continued availability of 1080 poison for this purpose, the deleterious effects of the pest species would no doubt increase to disastrous levels. State Council and Boards are aware of the opposition to the use of 1080 which comes from various individuals and organisations. However, the benefits of use of the chemical for pest control far outweigh any problems associated with its use.[42]

6.46 Executive Director of CALM, Mr Keiran McNamara, indicated that he considers 1080 to be "… an absolutely essential part of our armoury …" and that he favours the continued use of 1080 in Western Australia.[43]

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40 State Council for RLPB New South Wales, *Submission 81*, p. 8.

41 *Submissions 12*, *18*, *36*, Attachment, *54*, p. 3, *56*, *81,* p. 11, *82*, Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, p. 10, Mr Chris Tallentire, CCWA, *Transcript of evidence*, 11 April 2005, p. 1, Mr Ian Lobban, VFF Barnawartha Branch, *Transcript of evidence*, 18 June 2004, p. 26, Mrs Alison Burston, *Transcript of evidence,* 18 June 2004, p. 59.

42 *Submission 81*, p. 11.

43 *Transcript of evidence*, 11 April 2005, p. 34.

6.47 The Tasmanian Farmers and Graziers Association (TFGA) expressed the advantages of 1080 over other poisons as follows:

> Among available poisons 1080 is preferable to other options because:
>
> - it is a naturally occurring substance
> - it is easily administered
> - it does not accumulate in body tissues
> - it is biodegradable in soil and water
> - it is far less indiscriminate in its effects than options such as strychnine and arsenic.[44]

Animal welfare considerations and non-target impacts

6.48 In contrast to the positive evidence provided about 1080, a number of submissions expressed concern about the continued availability of 1080, because of perceived animal welfare issues associated with its use.[45]

6.49 Animals Australia gave the following evidence:

> Animals poisoned by 1080 scream, vomit, defecate and suffer violent seizures. They remain conscious even after the toxin, which disrupts their energy metabolism, denies them the ability to move or escape from predators. The poison has been tested thoroughly, but not for humaneness. Apart from the obvious severe physical pain, the animal experiences stress, fear and mental suffering up until it loses consciousness. So it is impossible to claim that 1080 is a humane poison.[46]

6.50 Contrasting evidence was presented to the effect that, despite the appearance that animals poisoned by 1080 have seizures and appear to be distressed, there is actually little or no pain and suffering involved.[47]

6.51 Mr Clive Marks, of Nocturnal Wildlife Research, who has researched the impact of 1080 on animals, gave evidence that most people who believe that 1080 does not cause pain and suffering focus on the final, convulsive stage of 1080 poisoning in animals, which probably does not cause any pain or distress. Mr Marks indicated that it is the penultimate stage, in which the poisoned animal may exhibit manic running, retching and

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44 *Submission 56*.

45 *Submissions 69*, *88*, p. 1, *89*, Dr Kevin Doyle, AVA, *Transcript of evidence*, 15 June 2005, p. 5.

46 Ms Kristi-Anna Brydon, Animals Australia, *Transcript of evidence*, 16 March 2005, p. 3.

47 Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, pp. 10-11, Mr Rupert Gregg, TFGA, *Transcript of evidence*, 29 March 2005, p. 14.

distressed vocalisation, which probably does cause pain and suffering for the poisoned animal.[48]

6.52 In other evidence, the view was expressed that 1080 baits are ingested by a range of native species including possums, potoroos, wombats and eastern quolls, and should be banned for that reason.[49] Other non-target species, such as wedge-tail eagles, may be indirectly poisoned by feeding on the carcasses of animals poisoned by 1080.[50] Another submission indicated that the impact of 1080 baiting on native species is largely unknown.[51]

6.53 The Tasmanian Conservation Trust, in documents provided to the committee, expressed opposition to the use of 1080 poison to control native browsing and grazing animals in Australia. They supported the federal government's 2004 election commitment to phase out the use of 1080 poison against native wildlife by December 2005.[52]

6.54 Other submissions expressed the opposing view that 1080 causes no harm to non-target native species, or that any direct effects are outweighed by the effects of predation and competition on native species by ferals.[53] Mr Antony Plowman, the member for Benambra in the Victorian Parliament, gave evidence in relation to an aerial baiting experiment conducted in New South Wales in which seventy tagged quolls were found to be still alive after baiting had occurred.[54] Mr Rupert Gregg, President of the TFGA, told the committee that effects on non-target species are minimal due to the control measures that are taken, such as cleaning up carcasses and clearing uneaten baits.[55]

48 *Transcript of evidence*, 15 June 2005, p. 21.

49 *Submissions 69*, *88*, p. 2, *89*, Attachments, *91*, p. 4.

50 *Submissions 69*, *96*, Ms Kristi-Anna Brydon, Animals Australia, *Transcript of evidence*, 16 March 2005, p. 3.

51 Bombala RLPB, *Submission 80*, p. 4.

52 *Submission 89*, Attachments.

53 *Submissions 31*, p. 9, *56,* Mr Michael Litchfield, *Transcript of evidence,* 9 September 2005, p. 29, Mr Rupert Gregg, TFGA, *Transcript of evidence*, 29 March 2005, p. 11, B Moore, 'Address', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002, p. 2, DAWA, CALM, Department of Health Western Australia, *1080: Summary Information*, June 2002, p. 10.

54 *Transcript of evidence*, 18 June 2004, p. 35.

55 *Transcript of evidence*, 29 March 2005, p. 11.

6.55 The committee notes that Western Australia is in a special position with regard to the impact of 1080 on native species. This is because a key component of 1080 occurs naturally in Western Australian flora, which means that native species particularly in the south-west of that state possess a natural resistance to the poison.[56] Mr Keiran McNamara explained this as follows:

> The active ingredient in 1080 is sodium monofluoro-acetate, which exists in a family of plants known as the poison plants of the genus Gastrolobium, which is fairly widespread in the South-West. The early settlers did and farmers still do talk of poison country with gastrolobium on it. Because of that, there is a natural tolerance in the fauna of the South-West, at least from about Shark Bay to the Esperance area, to 1080. Without having the figures at my fingertips, that tolerance shows that baits can be used quite readily for foxes and not be of harm to native carnivores and so on.[57]

6.56 The committee had regard to the preliminary findings of the Australian Pesticides and Veterinary Medicines Authority's (APVMA) review of the use of 1080 poison. The review found that, although 1080 can have an impact on individual non-target animals, it does not have an impact at the population level. The review also indicated that 1080 is readily degraded in surface soil, waters and living organisms, and therefore significant contamination of air, soil and water is not an issue. Animal welfare was not considered as part of the review.[58]

6.57 The committee notes that the APVMA's preliminary findings include a number of recommendations for improvements in the labelling of 1080 products to reduce the potential for non-target effects and the general safety of 1080 use. The recommended changes to labels are as follows:

- deletion of general terminology 'vermin' and replacement with specific target animals;
- neighbour notification about imminent baiting;
- minimum distance requirements for bait placement;
- requirement of signage in baiting locations;
- inclusion of 1080 dose rates;

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56 LE Twigg and DR King, 'The Impact of fluoracetate-bearing vegetation on native Australian fauna: a review', *Oikos,* vol. 61, 1991, pp. 412-430.

57 *Transcript of evidence*, 11 April 2005, p. 33.

58 Dr Joe Smith, APVMA, *Transcript of evidence*, 1 June 2005, p. 15.

- specifications as to bait materials and size;
- instructions on bait preparation; and
- information about storage and transportation of baits.[59]

6.58 The committee takes the view that implementation of these changes to labelling of 1080 products will enhance the safety and effectiveness of the poison, which constitutes an important tool for landholders as part of their overall pest animal management strategies.

6.59 The review's preliminary findings indicate that risks of non-target species being affected by baiting can often be minimised by following careful procedures associated with the laying of different types of bait. As an example, where native birds may be likely to ingest rabbit baits, baiting should occur late in the day so that rabbits can take the baits overnight and minimise the number left for birds to take the next day.[60]

6.60 While the RSPCA, Animal Welfare Centre and Vertebrate Pests Committee joint workshop discussion paper states that the relative humaneness of 1080 is not clear, it indicates that the implementation of standard operating procedures is essential in ensuring that 1080 is administered according to best practice standards.[61] The committee agrees that the administration of 1080 according to recognised best practice should be a priority.

6.61 The committee also noted evidence that a private research company, Nocturnal Wildlife Research, has developed an agent that will greatly reduce the symptoms associated with distress in the use of 1080 poison.[62] Research of this nature was supported by Animals Australia and RSPCA Australia in their evidence to the inquiry.[63] The committee considers that implementation of this research will go a long way towards removing some of the controversy surrounding the use of 1080 and that development of this important research should be supported.

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59 APVMA, *The Reconsideration of Registration of Products containing Sodium Fluoroacetate (1080) and their Associated Labels: Preliminary Review Findings,* APVMA, Canberra, May 2005, viewed 11 October 2005, <http://www.apvma.gov.au/chemrev/1080_prelim_review_findings.pdf>.

60 APVMA, p. 36.

61 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, pp. 13-14.

62 Mr Clive Marks, Nocturnal Wildlife Research, *Transcript of evidence*, 15 June 2005, p. 22.

63 *Transcript of evidence*, 16 March 2005, pp. 5, 7.

6.62 The committee acknowledges that research in relation to 1080 points to opposing conclusions both in relation to the humaneness of 1080 and its impact on non-target native species. The committee notes that research into the impact of 1080 on non-target species is continuing and considers that is important in resolving the issue.[64] The committee considers, however, that until such research is conducted, 1080 must remain available to landholders to control pest animal problems on their properties.

6.63 The committee takes particular note of preliminary findings that have emerged from research in Queensland and New South Wales on the impacts of 1080 baiting on spotted-tailed quolls. Although final analyses are still outstanding, the results of this research indicate that quoll mortality rates from 1080 are much lower than previously thought. The Steering Committee involved in the research has agreed that aerial baiting should be used as an additional control technique where appropriate.[65] The committee hopes that state governments that currently place restrictions on the use of 1080 will take this research into account and formulate appropriate policy changes to enable the more effective use of this poison.

Problems with availability and use of 1080

6.64 Some landholders currently experience administrative problems in accessing and using 1080. For example, Steven Plozza, a producer and landholder in the Atherton Tablelands Region of Queensland, noted that the local Department of Natural Resources and Mines (DNRM) employee responsible for the distribution of 1080 does not have time to support landholders in ongoing 1080 programs. A suggestion that 1080 be distributed to farmers through the local council was turned down by council.[66] Cooloola Shire Council, also in Queensland, gave evidence that regulations governing the use of 1080 are too restrictive, particularly in beef and dairy producing areas with farm size of below 250 hectares.[67]

64 Mr Quentin Hart, BRS, *Transcript of evidence*, 16 February 2005, p. 16.

65 Mr Tim Seears, Cooma RLPB, *Transcript of evidence,* 9 September 2005, pp. 1-2, NPWS, *Aerial baiting for wild dogs: the impact on spotted-tailed quoll populations,* NPWS, 14 September 2005, viewed 6 October 2005, <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/aerial_baiting_quolls>.

66 *Submission 4*.

67 *Submission 95*.

6.65 The Carboor/Bobinawarrah Landcare Group of north-east Victoria discussed in its submission the need for a simplified process for farmers to obtain a permit to lay 1080 baits for foxes and rabbits. Currently, farmers are required to attend a two-day course that provides little information about how to bait using 1080. The group recommended a simplified course that would focus on methods of baiting and also include information about other methods of control.[68]

6.66 The committee notes that the Tasmanian Government has resolved to end the use of 1080 on Crown land by the end of 2005. It also notes that the federal government made a commitment to phasing out the use of 1080 poison on both government and private land in Tasmania as part of its 2004 election policy.[69]

6.67 Concerns expressed in relation to the phasing out of 1080 in Tasmania are that there is currently no suitable, cost-effective alternative with which to manage browsing populations such as possums and wallabies.[70] Some submitters stated that the removal of 1080 would force landowners to illegally turn to more dangerous poisons such as strychnine to control pest animals on their land.[71]

6.68 The TFGA, in its submission to the inquiry, pointed out that the use of 1080 in Tasmania has already been reduced to less than 10 kilograms per annum, divided fairly evenly between farmers and forestry industries. The use of 1080 in Tasmania is also heavily regulated and this itself is an impediment to the control of pest animal problems by landowners.[72]

6.69 The committee is concerned that landholders in some areas are having problems accessing 1080. Although a degree of regulation is acceptable and necessary to ensure 1080 is used safely, there is a need for red-tape to be removed if it is preventing farmers from accessing 1080.

6.70 It is also of great concern to the committee that the Tasmanian Government plans to phase out the use of 1080 on government-owned lands by the end of the year, despite the absence of any cost-effective alternative for use in baiting programs. The committee believes that this may well lead to problems in relation to the Tasmanian Government, and

68 *Submission 54*, p. 5.

69 The Nationals, *The Coalition Government Election 2004 Policy*, The Nationals, viewed 27 September 2005, <http://www.nationals.org.au/downloads/A_Sustainable_Future_for_Tasmanina_Policy_Document.pdf>, p. 6.

70 TFGA, *Submission 56,* Mr Rupert Gregg, TFGA, *Transcript of evidence,* 29 March 2005, p. 13.

71 TFGA, *Submission 56*, Mr Rupert Gregg, TFGA, *Transcript of evidence,* 29 March 2005, p. 11.

72 *Submission 56,* Mr Rupert Gregg, TFGA, *Transcript of evidence*, 29 March 2005, pp. 11, 16.

in particular state forests, fulfilling their obligations to control pest animal problems on their land. The committee is also of the view that the federal government should reconsider its expressed commitment to phasing out the use of 1080 in Tasmania.

Inconsistencies in bait requirements

6.71 In its submission to the inquiry, Animal Control Technologies, a leading Australian manufacturer of baits, discussed the problems caused by inconsistent requirements in bait composition between states and territories. These inconsistencies lead to reduced economies of scale for the company, cause problems with registering baits through the APVMA, and cause confusion amongst landholders:

> … when we first started to manufacture fox baits in Victoria we were advised that the then recommended dose of 1080 in Victoria was 3.3mg/bait. In most other states the recommended dose was 3mg/bait but was 4.5mg/bait in WA due to lower sensitivities of non-target animals in that state. The recommended dose for dog baits indicated by the Vertebrate Pest Committee at the time was 6mg/bait and we have adopted this in our bait products for wild dog control. The Victorian Department of Primary industries has now adopted 4mg/bait or 4.5mg/bait for wild dogs, yet we hold a valid registration for a 6mg bait approved by the APVMA and supported at the time of registration by Victoria. The goal posts seem to have moved, presumably as a result of re-consideration of potential non-target impact of potent baits. … We are unaware as to the scientific basis for the recommendation of a 4 or 4.5mg wild dog bait in Victoria in the face of a VPC recommendation of 6mg per bait. … Manufacturers can easily prepare baits to any specification but it would be helpful if there was some consistency in this area.[73]

6.72 The committee notes that differences in bait composition requirements between states and territories may have a scientific rationale, for example, a higher dosage rate in Western Australia due to natural resistance to 1080 in native species in that state. To the extent possible, however, the committee considers that it would be useful if requirements for bait composition across states and territories could be standardised.

73 *Submission 84*, pp. 39-40.

Aerial baiting

6.73 Many submitters advocated the use of aerial baiting to control feral pigs, foxes and dogs.[74] The committee received evidence that aerial baiting is necessary to control dog populations in some areas because dogs learn to avoid baits left at bait stations. Aerial baiting also enables the baiting of areas that would otherwise be inaccessible for ground baiting, or where ground baiting would not be practical or economically viable.[75]

6.74 Because of concerns in relation to the effect of aerial baiting on non-target species, aerial baiting has been stopped in some areas in New South Wales and Victoria. NSWFA gave evidence that aerial baiting was banned in southern NPWS areas in 1997.[76]

6.75 Some submissions were critical of this cessation of aerial baiting.[77] For example, the committee received evidence from Ms Noeline Franklin, a Brindabella, ACT farmer, that aerial baiting was stopped in 1996 in Kosciusko National Park due to fears of its effect on quolls. Since then, Ms Franklin estimates that the increase in the number of dogs has been somewhere in the order of 300 to 400 percent.[78]

6.76 In Cooma, the committee received a substantial amount of evidence pointing to the need for effective aerial baiting programs to be recommenced.[79] The committee was informed that aerial baiting would have a huge advantage, both for producers and for native wildlife, by reducing the area's wild dog population. Aerial baiting was submitted to be both more effective, and less expensive, than the use of bait stations. Mr Bob Maguire, a farmer in the Cooma region, told the committee:

> The bait stations are a waste of bloody time. All they do is cost you $600 a day to maintain, and they educate uneducated dogs. At the moment, there is no reason why we cannot aerial bait, because the

74 *Submissions 5*, p. 3, *11*, *18*, *22*, *35*, *60*, *61*, *66*, *75*, *77*, p. 2, Mrs Marion Kennedy, *Transcript of evidence,* 9 September 2005, p. 40.

75 *Submissions 45*, *84*, p. 34, B Moore, 'Address', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002, pp. 1-2.

76 *Submission 31*, p. 9.

77 *Submissions 22*, *31*, p. 5, *45*, *103*, Mr Antony Plowman, Member for Benambra, Victorian Parliament, *Transcript of evidence*, 18 June 2004, p. 36.

78 *Transcript of evidence*, 11 August 2004, p. 10.

79 Mr Tim Seears, Cooma RLPB, *Transcript of evidence,* 9 September 2005, p. 3, Mr John King, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, pp. 13, 22, Mr Michael Litchfield, NSWFACDC, *Transcript of evidence,* 9 September 2005, p. 25, Mrs Ellen Green, NSWFACDC, *Transcript of evidence,* 9 September 2005, p. 25, Mrs Sylvia Golby, NSWFACDC, *Transcript of evidence,* 9 September 2005, p. 33, Mrs Marion Kennedy, *Transcript of evidence,* 9 September 2005, p. 40.

> quoll trials have been finished. … In April 2004 the minister approved 1080 for Adaminaby-Yaouk. It has been done once, and that is a bloody disgrace because once is just no good at all. The first application knocked the dogs, but they are back in greater numbers. Something like 500 sheep have been killed in the area this year, which is far greater than last year.[80]

6.77 At the National Wild Dog Summit in February 2002, all but two of the 400 people present voted in favour of the reintroduction of aerial baiting across the wild dog breeding areas of all mainland states and territories.[81] The participants called for review and alignment of aerial baiting practices across all states and territories, to remove inconsistencies that currently exist.[82] A motion to call for reintroduction of aerial baiting in Victoria was unanimously passed at a Wild Dog meeting held in Albury in June 2004.[83]

6.78 The committee notes that the New South Wales General Purpose Standing Committee inquiry into feral animals recommended that the precautionary principle should prevail in the absence of conclusive research into non-target impacts of 1080 and whether alternatives to aerial baiting are as effective in controlling wild dogs.[84]

6.79 The committee is aware that aerial baiting in Kosciusko National Park was resumed in late 2004.[85] Attendees at the 2005 New South Wales Pest Animal Control Conference were told about the success of aerial baiting to control wild dogs in eleven RLPB areas, including Armidale, Tamworth, Northern New England, Gloucester, Grafton, Kempsey, Mudgee, Hunter, Maitland, Cooma and Braidwood.[86]

6.80 Although this would appear to be a step in the right direction, the committee received evidence in Cooma that the reintroduction of aerial baiting in these areas has been a 'token' effort, and that there has been little real attempt to reintroduce aerial baiting, particularly in national parks.[87] The committee is hopeful that an effective aerial baiting campaign will

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80 *Transcript of evidence,* 9 September 2005, p. 41.

81 'Copy of Motions', Motion One, in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

82 N Ward, 'Summation', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

83 *Exhibit 4, Motions for Wild Dog Meeting*, Albury, 17 June 2004, Motion No. 3.

84 General Purpose Standing Committee No. 5 (NSW Legislative Council), *Feral Animals*, Parliamentary Paper No. 158, New South Wales Government, October 2002, p. xvi.

85 Mr Tim Seears, Cooma RLPB, *Transcript of evidence,* 9 September 2005, p. 4.

86 'Aerial baiting hits feral dogs', *The Border Mail*, 9 July 2005.

87 Mr Tim Seears, Cooma RLPB, *Transcript of evidence,* 9 September 2005, p. 3, Mrs Susan Litchfield, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 18.

resume following the release of research showing that dog baits do not harm native wildlife.[88]

6.81 The committee also notes that a press release by the VFF on 13 May 2005 indicates that attempts by the Federation to reinitiate aerial baiting programs in Victoria have stalled.[89]

6.82 Animal Control Technologies provided the following evidence in relation to aerial baiting:

> … without any doubt, the nation must face the reality of aerial baiting campaigns if we seek to make a serious impact on the pest problems in larges (sic) areas of low human density or inaccessible country and where budgetary constraints limit other options. The only debate is on how to best mange (sic) the slightly higher non-target risk that may be associated with such baiting. In doing so the analysis should not only consider the risk but also the benefits from the control operation. The do-nothing option is always risk free but the downside is that there are no benefits either. This is the current approach at many sites and it is a totally reprehensible abrogation of responsibility.[90]

6.83 As with the use of 1080 generally, the committee considers that it is important not to withdraw a method of control that is effective in reducing pest animal populations where there is no solid evidence to support the need for withdrawal. Although the committee understands the rationale behind adopting a precautionary approach, the committee notes that native species populations are already being adversely affected by wild dogs. Aerial baiting should accordingly be available as a control method in all states and territories, with local pest animal groups responsible for determining on an individual basis whether aerial baiting should be used in a particular area. The potential for non-target impacts can be taken into account at the local or regional level in deciding whether or not to conduct aerial baiting campaigns.

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88 ABC Rural, 'Aerial baiting resumes in NSW', ABC, 14 September 2005, viewed 27 September 2005, <http://www.abc.net.au/rural/content/2005/s1460071.htm>, ABC News Online, 'More national parks to be subject to wild dog baiting', ABC News Online, 14 September 2005, viewed 27 September 2005, <http://www.abc.net.au/news/newsitems/200509/s1459810.htm>, 'Wild dog baits to be extended', *The Border Mail*, 13 October 2005, viewed 18 October 2005, <http://www.bordermail.com.au/newsflow/pageitem?page_id=1067747>.

89 VFF, 'Thwaites: Killer dogs more precious than people', Press Release, 13 May 2005, viewed 11 October 2005, <http://www.vff.org.au/index.php?id=70233>.

90 *Submission 84*, p. 35.

6.84 Some concern was expressed about the impacts of aerial baiting with 1080 on non-target species.[91] Other, conflicting evidence was provided that aerial baiting *increases* the population of native wildlife.[92] The committee was informed at Cooma about recent research indicating that aerial baiting has a minimal impact on spotted-tailed quolls.[93] The committee believes that the AIA CRC should consolidate existing research and conduct further research if necessary to determine the impacts of aerial baiting on non-target species, but in the meantime that aerial baiting should remain as an option for pest animal control where it is needed.

Recommendation 22

6.85 **The committee recommends that the Australian Government:**

- **reconsider its commitment to phasing out the use of 1080 poison and facilitate discussions with state and territory governments to encourage the continued availability of 1080 poison and the removal of unnecessary restrictions and administrative red-tape where that is hindering access by landholders to 1080;**
- **encourage the New South Wales and Victorian Governments to remove prohibitions on aerial baiting; and**
- **encourage state and territory governments to make local pest animal control groups responsible for decisions about whether aerial baiting should be conducted.**

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91 Humane Society International, *Submission 88*, Attachment, p. 7, Colong Foundation for Wilderness, *Environment Minister introduces Quoll and Dingo extinction program*, Media Release, Colong Foundation for Wilderness, 24 August 2004, viewed 27 September 2005, <http://www.colongwilderness.org.au/media_releases/MR04082400.html>.

92 Mr John King, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 13, Mrs Susan Litchfield, NSWFACDC, *Transcript of evidence,* 9 September 2005, p. 29, Mr Ian Lobban, VFF Barnawartha Branch, *Transcript of evidence*, 18 June 2004, p. 26, Mr Antony Plowman, Member for Benambra, Victorian Parliament, *Transcript of evidence,* 18 June 2004, pp. 35-36.

93 Mr Tim Seears, Cooma RLPB, *Transcript of evidence,* 9 September 2005, p. 1, DEC, *Research suggests wild dog baiting doesn't harm quolls,* Media Release, DEC, Sydney, 24 August 2004, viewed 27 September 2005, <http://www3.environment.nsw.gov.au/npws.nsf/Content/media_240804_dogbaitingquolls>.

Recommendation 23

6.86 **The committee recommends that the Australasian Invasive Animals Cooperative Research Centre:**

- **consider ways to provide support to Nocturnal Wildlife Research and other companies investigating the use of anxiety-reducing agents in conjunction with 1080 and other poisons; and**
- **consolidate existing research and conduct further research if required to determine the comparative advantages and disadvantages of aerial baiting in remote areas where that is the only feasible alternative for feral animal control.**

Recommendation 24

6.87 **The committee recommends that the proposed National Pest Animals and Weeds Committee:**

- **take steps to ensure that the final recommendations of the Australian Pesticides and Veterinary Medicines Authority in relation to use of 1080, when released, are implemented and that best practice for 1080 use is followed in all 1080 baiting campaigns; and**
- **coordinate with state and territory representatives to achieve standardised baiting composition requirements across jurisdictions.**

Trapping

6.88 Although trapping did not feature significantly in evidence presented to the inquiry, some submissions referred to trapping as one of the methods that contributes to an effective pest animal control strategy.[94] Trapping is currently the only organised method of killing cane toads; the toads are trapped and then collected and gassed with carbon dioxide.[95]

6.89 The BRS noted that trapping is not always effective, poses some non-target risks and is labour-intensive and therefore expensive.[96] The NSWFA gave the following evidence in relation to trapping:

> Trapping can be a useful method for wild dog control but only when used in conjunction with strategic aerial and ground baiting programs. Trapping is principally used for targeting specific 'problem' wild dogs rather than general population control.[97]

6.90 Dr Bidda Jones, of RSPCA Australia, told the committee:

> I think one of the issues is that a method in itself can be more or less humane depending on how it is applied. An example of that is the use of leg-hold traps. Putting aside steel-jawed traps, if you are using a padded leg-hold trap to catch a wild dog and you are checking the trap on a regular basis— say, at least every 24 hours— then that is a relatively humane method. If you are not checking that trap for a week, it is an extremely inhumane method because the animal is going to die a very painful death before you have got to it. So how the method is applied is very important.[98]

94 *Submissions 31*, p. 11, *35*, *59*, p. 16, *66*, *71*, *77*, p. 1, *95*, Mr Trevor Barnes, FFIC, *Transcript of evidence*, 29 March 2005, p. 43.

95 A Wahlquist, 'Sentenced to Death', *The Australian*, 9 August 2005, viewed 11 October 2005, <http://www.theaustralian.news.com.au/common/story_page/0,5744,16193840%255E28737,00.html>.

96 *Submission 76*, p. 6.

97 *Submission 31*, p. 11.

98 *Transcript of evidence*, 16 March 2005, p. 15.

6.91 The committee notes that animal welfare concerns have been expressed about the use of steel-jawed traps.[99] To the extent that these can be made more humane, for example by rubber-padding, the committee believes that this should occur. In relation to other traps, best practice should always be followed to ensure that trapping is as humane as possible.

Recommendation 25

6.92 **The committee recommends that the proposed National Pest Animals and Weeds Committee ensure that best practice is always followed in relation to the use of trapping to ensure that it is conducted as humanely as possible.**

Doggers and other pest animal controllers

6.93 The committee received a substantial amount of evidence emphasising the need to employ trained, experienced doggers to deal with the wild dog problems experienced by sheep and cattle farmers.[100] Doggers perform on-ground control, destroy animals that will not take baits, and also play a vital role in helping to strategically plan aerial and ground baiting exercises, because of their special knowledge of the habits of wild dogs.

6.94 Mr Clive Anderson, who farms on the outskirts of the Benambra township in Victoria, gave evidence that the local dogger in his area trapped more than forty wild dogs within 10 kilometres of his property and more than 80 wild dogs in the local area within about a year following the January 2003 bushfires.[101] This is only one example of a number of submissions received

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99 Animal Control Technologies, *Submission 84*, p. 21, Dr Bidda Jones, RSPCA Australia, *Transcript of evidence*, 16 March 2005, p. 2, *Exhibit 11, A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 15.

100 *Submissions 7*, *10*, *11*, p. 2, *22*, *26*, *30*, p. 2, *36*, Attachment, *39*, *40*, p. 4, *42*, *51*, *53*, p. 3, *61*, *65*, p. 2, *66*, *74*, *77*, p. 2, *83*, *85*, *86*, p. 3, *87*, p. 2, *101*, Ms Noeline Franklin, *Transcript of evidence*, 11 August 2004, p. 11, Mr Russell Murdoch, New South Wales Upper Murray Graziers, *Transcript of evidence*, 18 June 2004, pp. 42-43, Mr Douglas Paton, VFF Corryong Branch, *Transcript of evidence,* 18 June 2004, p. 47, Mr John Sinclair, *Transcript of evidence,* 18 June 2004, p. 73, *Exhibit 2,* TFAWG, *Submission to the New South Wales General Purpose Standing Committee No 5 Inquiry into Feral Animals*, August 2001, p. 5, *Exhibit 4, Motions for Wild Dog Meeting*, Albury, 17 June 2004, Motion No. 3.

101 *Submission 65*, p. 2.

indicating the important role that dog trappers play in helping to control wild dog numbers in rural areas.

6.95 Much of the evidence received pointed to the need for governments to commit funds for the employment of doggers over an extended period.[102] The sporadic nature of funding is an ongoing problem in relation to the continued employment of experienced doggers. When new doggers come to an area, it takes time for them to learn about the area and where the dogs are located. The short-term nature of funding for doggers means that doggers are sometimes moved on just as they are beginning to know the area and to have a positive impact on the pest animal problem.[103]

6.96 Mr John Sinclair, a private farmer from Yea-Alexandra, discussed the problem with short-term funding:

> If I went out to trap a dog, all I would catch would be a cold at the ends of my fingers. It is a very skilful business when you are trying to get a dog in thousands of hectares to put his foot on a plate about that big. … It is a very skilled task. If we lose good people because they are on short-term contracts and suddenly the money runs out for a short period and then say, 'Heck, we want him back again,' guess what: we cannot get him back again.[104]

6.97 Kathy and Malcolm Boladeras, from the north-east Goldfields region in Western Australia, stated:

> Each year the Kalgoorlie ZCA (Zone Control Authority) has to decide how best to allocate funding among its various interest groups, and each year it is a battle to make the funding go far enough.
>
> Last year all dogging groups were allocated $40,000, which is only enough to employ a full-time dogger for 6 months.
>
> Some areas may only require a part-time dogger if dog activity is spasmodic, but our situation remains constant until the number of dogs is drastically reduced.[105]

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102 Kathy and Malcolm Boladeras, *Submission 87,* p. 3, Mr Russell Murdoch, New South Wales Upper Murray Graziers, *Transcript of evidence*, 18 June 2004, p. 42, Mr Geoffrey Burston, *Transcript of evidence,* 18 June 2004, p. 61, M Litchfield, B Jamieson, J Coman, G Hillyer and W Phillips, 'Summary of the Wild Dog Situation in the Cooma Rural Lands Protection Board District', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

103 Mr John Sinclair, *Transcript of evidence*, 18 June 2004, pp. 80-81.

104 *Transcript of evidence*, 18 June 2004, pp. 80-81.

105 *Submission 87*, p. 3.

6.98 Proceedings from the National Wild Dog Summit in Wodonga noted that, in order to carry out their operations effectively and economically, doggers require appropriate vehicles, baits, traps and other equipment; adequate support from government organisations; security of employment; rates of pay that recognise the expertise involved; and formalised and recognised training for apprentices.[106]

6.99 Although submissions varied in their estimates of the amount required per annum for the employment of a dogger,[107] the average appears to be in the vicinity of $80,000. This figure should be applied in determining funding for additional doggers in regions where feral dogs are a particularly serious problem.

6.100 The committee is convinced that the employment of doggers on a regular and continuous basis is an indispensable part of a concerted effort to control the wild dog population in Australia. Government funds must be committed for the purpose of employing doggers on an ongoing basis in regions where wild dogs are a significant problem for sheep and cattle farmers. Measures must also be taken to ensure that adequate numbers of new doggers are being trained in the skills of dog hunting and trapping.

6.101 The committee was also told that some areas may benefit from funding to enable the employment of pest animal controllers on a contract basis to undertake short-term control operations where required for other species. At Warrawagine Station in Western Australia, the committee took evidence that pastoralists do not have the time necessary for controlling feral camels on the property and have difficulties finding people willing to come to the area for employment.[108]

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106 M Litchfield, B Jamieson, J Coman, G Hillyer and W Phillips, 'Summary of the Wild Dog Situation in the Cooma Rural Lands Protection Board District', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002. See also Mr John W Gell, *Submission 83*.

107 $100,000 (Victorian and NSW Wild Dog Coordinating Committee, *Submission 66*), $80,000 (Hume RLPB, *Submission 77*), $100,000 (Mr Bart Jones, PGA, *Transcript of evidence*, 20 July 2005, p. 5), $40,000-80,000 (Mr Antony Plowman, Member for Benambra, Victorian Parliament, *Transcript of evidence*, 18 June 2004, p. 38), $80,000 (Mr Russell Murdoch, New South Wales Upper Murray Graziers, *Transcript of evidence*, 18 June 2004, p. 41), $60,000-70,000 (Roundtable with Leonora pastoralists, 12 April 2005).

108 Discussions at Warrawagine Station, Western Australia, 21 July 2005.

6.102 The Wodonga District Council of the VFF called for a federally-funded apprenticeship scheme to train pest animal control officers who would have the ability to travel widely and move into problem areas.[109]

6.103 The Victorian and New South Wales Wild Dog Coordinating Committee requested that the federal government form a Pest Animal Control Unit to employ experienced and professional pest animal control staff. These staff would be funded to carry out pest animal control across all land titles and boundaries.[110]

6.104 The committee considers that the proposed National Pest Animals and Weeds Committee should administer a special fund contributed to by DAFF, and state and territory governments on a dollar for dollar basis. The fund would be used for the employment and training of full-time doggers in areas where they are most needed, and for the employment of pest animal control officers to carry out pest animal control activities as required. Community groups and local governments in affected areas could bid for available funds on the basis of evidence of need. The proposed National Pest Animals Advisory Committee would advise the Committee as to the appropriate distribution of funding. The committee emphasises that this funding must be directed at on-ground control and not administrative expenses.

Recommendation 26

6.105 **The committee recommends that the Australian Government Department of Agriculture, Fisheries and Forestry coordinate with state and territory governments to provide dollar for dollar funding to a special fund to be administered by the proposed National Pest Animals and Weeds Committee, to be used solely for the purposes of:**

- **employing doggers on a regular and ongoing basis in areas where wild dogs are a serious problem;**
- **providing programs for skilled doggers to train new doggers by means of an apprenticeship or other training scheme; and**
- **employing pest animal controllers on a contract basis where they are needed to carry out *ad hoc* pest animal control activities.**

109 *Submission 53*, p. 2.

110 *Submission 66*.

Fencing

6.106 Evidence in relation to the efficacy of fencing as a control measure was mixed. Some people indicated that it is effective at helping to keep pest animals away from crops and livestock.[111] Other submissions indicated that fences are either ineffective or simply divert pest animals from one area to another, without actually dealing with the problem.[112] The high cost associated with erecting and maintaining fences was also an important consideration for many people.[113]

6.107 Some of the problems associated with fencing as a means of pest animal control were discussed in the submission from the TFGA:

> Fencing is a practical option in particular situations, and is widely used, but has characteristics which make it impractical elsewhere.
>
> - Effective fencing is a relatively expensive option (installation cost of up to $3 000/km), because it needs to be netting fencing of a relatively small mesh, effectively fastened to the ground (if not buried in the ground) along its entire length, and with a "floppy" top where possums are a problem.
> - Fencing needs ongoing inspection and maintenance in light of possible damage from wombats and falling trees and tree limbs.
> - In more remote areas fencing materials are liable to theft.[114]

6.108 The committee acknowledges that fencing in itself is not a solution to pest animal problems. In certain circumstances, however, the committee considers that fencing can be a vital tool in helping to control pest animal populations. This is particularly so in areas where pest animals are native species that cannot be dealt with by other means.

6.109 Where fencing is an integral aspect of pest animal control, it is important that it be constructed and maintained properly and to appropriate standards.[115] Fencing is expensive, and although the benefits in terms of protection of crops and livestock can be significant, there is the potential for enormous waste of resources if fencing is not built and maintained properly.

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111 *Submissions 40*, *56*, p. 3, Mr John Alcock, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 17, Mr Quentin Hart, BRS, *Transcript of evidence*, 16 February 2005, p. 12.

112 *Submissions 74*, *83*, Mr James Neary, Ovens Landcare Network, *Transcript of evidence*, 18 June 2004, p. 5.

113 *Submissions 56*, *76*, p. 14, *81*, p. 11.

114 *Submission 56*.

115 Mr Noel Cheshire, *Submission 73*.

6.110 Mr Noel Cheshire, a third-generation farmer in the north-east of Victoria at Burrowye, gave evidence that electric fences are often not constructed to an appropriate standard. He suggested that a standard be set that must be met in order for the person constructing the fence to receive funding.[116]

6.111 The committee also received evidence that in Victoria, for example, it is not feasible to rely upon a continuous electrified boundary due to different fence management between properties, lack of interest and initiative by some landholders and lack of power within government departments to enforce fence maintenance.[117]

6.112 The committee received evidence from a number of sources that government regulations in some jurisdictions impede landholders in constructing and maintaining fences. Mr Neil Clydsdale, a grazier in the Tintaldra area, stated:

> In terms of wildfire and those sorts of issues, you are not allowed to clear back from that boundary fence properly. There is no access along that boundary fence, so you cannot do control burning from that point. There are all those sorts of issues. So it is not just one issue; it is a whole host of issues. If you want to put up an adequate electric fencing system to keep out not only wild dogs but also other animals, it is very difficult to do that.[118]

6.113 A number of submitters gave evidence that overregulation and restrictions on clearing adequate boundaries are an impediment to constructing and maintaining effective fencing.[119]

6.114 The committee received a submission from Mr Peter Spencer, a sheep farmer at Shannons Flat in New South Wales. Mr Spencer pointed out how the problem of wild dogs coming from national parks, combined with restrictive native vegetation clearing laws, makes sheep grazing virtually impossible:

> As the kangaroos (from adjoining National Park area) enter the farm they do not eat the native grass they prefer to eat the improved grass and the dogs follow them. The dog's (sic) eat, traumatise and scatter through the forests the sheep and then the native vegetation, *which sheep are no longer there to eat*, re-grows.

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116 *Transcript of evidence*, 18 June 2004, p. 49.

117 Geoff and Alison Burston, *Submission 22*.

118 *Transcript of evidence*, 18 June 2004, p. 47.

119 Mr Garry Breadon, *Submission 3*, Dr Colin Grant, BRS, *Transcript of evidence*, 16 February 2005, p. 17, Mr Ronald Briggs, VFF Wangaratta Branch, *Transcript of evidence*, 18 June 2004, p. 14, Mr Fraser Barry, *Transcript of evidence,* 18 June 2004, p. 57.

> I am not permitted to clear the re-establishing regrowth as a right and each year more and more is regrowing as I cannot put the sheep back due (sic) the wild dogs being more prevalent as the native vegetation becomes more dense. This becomes thicker and provides more habitats for more fauna including Pests.[120]

6.115 The committee notes that, where fencing is an important part of the strategy to control pest animals, it must be properly constructed and maintained. The proposed National Pest Animals and Weeds Committee should coordinate between states and territories to agree on guidelines for fence construction and maintenance and remove regulatory impediments to land clearing required for construction of appropriate fencing.

Recommendation 27

6.116 **The committee recommends that the proposed National Pest Animals and Weeds Committee work with government representatives to agree on appropriate guidelines for the construction and maintenance of exclusion fencing and remove regulatory impediments to land clearing required specifically for fencing for the purposes of pest animal control.**

Dog fencing in Western Australia

6.117 The committee notes that, due to its large land mass and topography, Western Australia is in a different position to most other states and territories in relation to pest animal issues.

6.118 In particular, the committee notes that pastoralists must rely heavily on fencing as a means of controlling pest animals, particularly dogs and emus, as opposed to other methods that are difficult to utilise over large areas of land.

6.119 The committee received evidence in relation to two different dog fences in Western Australia. The existing fence includes portions of the original rabbit proof fence constructed in the early 1900s. The fence starts at Kalbarri, north of Geraldton, runs east towards Yalgoo, then moves south through Morawa and out south-east between Southern Cross and Coolgardie. There is a gap in the fence of 30 to 40 kilometres and then a

120 *Submission 100*, p. 9.

different section of the fence begins at about Lake Grace and runs down towards the coast to just between Ravensthorpe and Hopetoun.[121]

6.120 WAFF gave evidence that the barrier fence has deteriorated to the extent that it is ineffective in many areas of the state.[122] Pastoralists at Yuin Station, where the committee visited in April, indicated that sections of the existing fence need to be upgraded from emu-proof to a dog-proof standard, at a cost of $13,000 per kilometre. This could be achieved, for example, by the insertion of an outrigger wire about a foot out from the existing fence, which would have the added benefit of deterring kangaroos.[123]

6.121 Mr Bart Jones, a member of the PGA, whose family farms in the Eastern Goldfields region, told the committee that the existing fence should be extended by constructing a barrier fence that begins at Esperance and comes up to Madoonia Downs and out to Cunyu Station, north of Wiluna. The fence would be an estimated total distance of 1,500 kilometres and would cost roughly $15 million.[124]

6.122 The second fence has been proposed by ZCA Number 9 in the north-eastern sector of the state to assist with the significant dog problems being experienced there, which are the worst they have been for years.[125] The proposed new fence would run roughly from Port Hedland south to the Kalgoorlie area then east to Mundrabilla, allowing for natural barriers. It is estimated that the fence would be approximately 3,000 kilometres long and cost $10,000 per kilometre, at a total cost of $30 million. The fence would also assist in the control of feral donkeys and camels. It was proposed that construction of the fence be funded through a combination of rating all land users, community rates and state or federal government assistance.[126]

6.123 The committee considers that there is merit in these proposals for fence upgrade and construction in Western Australia. The committee notes, however, that the amount of funding required for these purposes is substantial, and must be compared with the cost of alternative control measures, for example the employment of doggers. It is significant that alternative means such as baiting, trapping and shooting have the

121 Mr Edgar Richardson, PGA, *Transcript of evidence*, 20 July 2005, p. 3.

122 *Submission 36*.

123 Inspection at Yuin Station, Western Australia, 12 April 2005.

124 *Transcript of evidence*, 20 July 2005, p. 6.

125 Peter and Flora Axford, *Submission 86*, p. 3.

126 *Wild Dog Problem and Solutions in the Goldfields (Zone 9 ZCA)*, material provided by Edgar Richardson, 9 March 2005.

potential to reduce pest animal populations, rather than simply confining them to an area. The committee believes that fencing may be an appropriate project for funding under the Australian Government's Regional Partnerships Program. The committee believes that the Australian Government should ensure that available tax concessions for landcare operations apply to pastoralists who contribute funds for pest animal exclusion fences.

Recommendation 28

6.124 **The committee recommends that local governments and declared animal groups in areas requiring pest exclusion or barrier fencing upgrades or construction apply for funding under the Australian Government's Regional Partnerships Program.**

Recommendation 29

6.125 **The committee recommends that the Australian Government ensure that available tax concessions for landcare operations apply to pastoralists who contribute funds for pest animal exclusion fences.**

Netting to protect crops from grey-headed flying fox

6.126 In the case of the grey-headed flying fox, netting is virtually the only method of control open to fruit farmers to protect their crops, as widespread culling of the grey-headed flying fox is prohibited.[127]

6.127 The erection of netting as a control method was supported by Humane Society International, which expressed concern about culling of grey-headed flying foxes due to their protected status.[128]

6.128 The cost of exclusion netting is between $20,000 and $35,000 per hectare, which is prohibitive to growers.[129]

127 NSWFA, *Submission 31,* pp. 15-16.

128 *Submission 88*, pp. 3-4.

129 Mr Ed Biel, *Submission 21*, p. 4.

6.129 The committee considers that problems experienced by fruit farmers with grey-headed flying foxes may be alleviated if its recommendations in relation to shooting of localised pest species are implemented. However, given that this process may take some time, the committee considers that fruit farmers should be provided with tax relief in relation to construction of netting to protect their crops from damage. This may take the form of allowing farmers to claim immediate depreciation for the costs of purchasing and erecting exclusion netting.

Recommendation 30

6.130 **The committee recommends that the Australian Government provide favourable taxation treatment to fruit farmers purchasing netting to exclude grey-headed flying foxes.**

Other methods

6.131 The committee also received evidence about a range of different methods that are capable of being used in conjunction with, or as alternatives to, the methods considered above.

Radio telemetry

6.132 Mr David Saxton, of TFAWG, described how the group has been working on the use of radio-tracking collars in conjunction with state forests and national parks in New South Wales. This entails capturing pigs and dogs, radio collaring them and releasing them. This enables colonies of animals to be located and eliminated.[130]

6.133 The committee received more detailed advice about the use of tracking collars at a public hearing held in Broome.[131] Field officers from DAWA attended and provided evidence to the committee in relation to the Department's Judas donkey program. The program involves trapping donkeys and fitting them with an electronic collar that can be monitored from the air. The donkey is released and will usually seek out other donkeys to travel with. The collared donkey is located and the other donkeys running with it are destroyed by aerial shooting. The Judas

130 *Transcript of evidence*, 18 June 2004, p. 67.

131 Mr Richard Watkins, DAWA, *Transcript of evidence*, 22 July 2005, pp. 4-13.

donkey is then released to seek out other donkeys and the process is repeated at regular intervals.

6.134 Approximately 81,000 donkeys have been culled since the Judas donkey program commenced in 1994. Local eradication of donkeys has occurred on approximately 50 percent of targeted properties in the region. During aerial shooting campaigns, other pest animals, such as feral horses, pigs and camels are also shot. The radio telemetry system has the potential to be used for camels, and is currently being used in Western Australia for starlings. Judas collars, used in combination with harnesses, have also been trialled on feral pigs in Guy Fawkes River National Park.[132]

6.135 The committee considers that it would be useful if the Western Australian Judas program were documented to provide guidance for similar programs targeting other pest animals. It was indicated that so far little documentation has occurred in relation to this particular program.[133]

Recommendation 31

6.136 **The committee recommends that the proposed National Pest Animals and Weeds Committee encourage the representative from Western Australia to arrange documentation of the Judas donkey program, so that the program can be considered for implementation with other animals, such as camels, in other states and territories.**

Guard animals

6.137 Animal Liberation provided evidence that the use of Maremma guard dogs, alpacas and llamas with sheep flocks can reduce predation by foxes, pigs and dogs and increase lambing percentages.[134] They stated:

> [Alpacas and llamas] are very effective in protecting sheep flocks. They keep sheep and lambs together, patrol constantly and remain alert. Putting two mature alpaca wethers in with ewes a few weeks

132 S Boyd-Law and R Spark, 'The Practical Viability of Ground Tracking Judas Pigs to Reduce Feral Pig Densities in the Guy Fawkes River National Park', in S Balogh (ed), *Proceedings of the Third NSW Pest Animal Control Conference*, NSW Department of Primary Industries, 4-7 July 2005, pp. 43-47.

133 Mr Richard Watkins, DAWA, *Transcript of evidence*, 22 July 2005, p. 5.

134 *Submission 69.* See also Carboor/Bobinawarrah Landcare Group, *Submission 54*, p. 3, *Exhibit 7,* TFAWG, *Co-operative Wild Dog/Fox Management Program*, Draft no. 5, March 2002, p. 21.

> before lambing and leaving them there until weaning, can solve the problem of lamb losses to foxes. Farmers have observed alpacas and llamas chasing foxes away. It is their natural instinct to chase and trample.
>
> Use of Alpacas and llamas reduces the need for poisoning or shooting. They protect the animals against predators and have been seen standing guard over a lamb whose mother had died. Farmers using these animals report an improved lambing rate from 80% to more than 120%. Alpacas and Llamas are also used to protect goats, poultry and even cows when they are calving.[135]

6.138 The following evidence was provided to the New South Wales General Purpose Standing Committee inquiry into feral animals in relation to how alpacas and llamas deter predators:

> Their attitude towards predators is something that is quite interesting. They tend to eyeball predators—for instance, a dog or a fox—and if that does not work, they tend to scream at them. They call it the alarm call. They will give chase and they will stamp on them and they will swing their necks at them, so there is a variety of things that they do.[136]

6.139 A Queensland Government DNRM document listed the advantages of using guard animals as a high public acceptance, being useful on the urban fringe, and having the potential for adding income. Among the disadvantages are high costs, difficulties in obtaining suitable animals, and a high level of animal training required.[137]

6.140 A number of organisations indicated that more research is required into the use of guard animals to determine whether it is in fact an effective method of control.[138]

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135 *Submission 69*.

136 Evidence of Ms Glynda Bluhm, alpaca and llama producer, *Transcript of evidence,* Sutton, 7 February 2005, p. 58, cited in General Purpose Standing Committee No. 5 (NSW Legislative Council), p. 75.

137 MS O'Keeffe and CS Walton, V*ertebrate pests of built-up areas in Queensland,* DNRM Queensland, June 2001, viewed 27 September 2005, <http://www.nrm.qld.gov.au/pests/management_plans/pdf/vertebratepests_psa.pdf>, p. 43.

138 NSWFA, *Submission 31,* p. 11, General Purpose Standing Committee No. 5 (NSW Legislative Council), Recommendation no. 15.

6.141 The committee believes that the available evidence in relation to the use of guard animals to protect livestock is interesting, but inconclusive. The committee agrees with the New South Wales General Purpose Standing Committee that further research in this area is warranted.

Biological and fertility control

6.142 The committee received some evidence in relation to biological and fertility control. The most successful example of biological control in pest animals to date has been the rabbit calicivirus, also known as rabbit haemorrhagic disease (RHD). Its success was noted in a number of submissions.[139]

6.143 The Foundation for a Rabbit-Free Australia, in its submission, noted the existence of a 'post-RHD complacency', leading to neglect in research and development to continue controlling rabbits, which are one of Australia's most significant pest animals. A workshop on rabbit research and development directions, held in Adelaide in May, recommended that new biological controls for rabbits be sought.[140]

6.144 The committee notes the excellent results that have been achieved by myxomatosis and RHD in helping to reduce rabbit populations. Although research into biological controls is expensive and requires long-term investment, the benefits are likely to exceed costs where there are extensive infestations of a pest species.[141] In particular, the committee notes the urgent need for a biological control to halt the rapid spread of cane toads throughout Australia. The committee was pleased to hear of the federal government's recent commitment of $3 million for CSIRO research to finding a biological control solution to toads, in addition to funding for other cane toad research programs.[142]

139 *Submissions 55*, p. 9, *81*, p. 3, *84*, p. 17, *97*.

140 *Submission 97* and Attachment 1.

141 CSIRO, *Submission 55*, p. 7.

142 Letter from Senator the Honourable Ian Campbell, Minister for the Environment and Heritage, received 5 September 2005.

6.145 Some people were positive about the potential for use of fertility control as a pest animal control measure,[143] particularly in relation to the advantages from an animal welfare perspective.[144] The committee notes that research into fertility control is currently being undertaken by a number of organisations, including CSIRO and the New South Wales NPWS.[145]

6.146 Mr Quentin Hart, from the BRS, gave the following evidence in relation to Australian progress on fertility control:

> A hell of a lot of money has been spent by the federal government in the last 10 years on fertility control. That has not to date yielded anything. When I say 'not anything', I mean progress has been made but it certainly has not resulted in a technique that can be applied as yet. Some good progress has been made for mice, but for rabbits and foxes the work has not been so promising. There are currently high-tech solutions proposed for carp management and also for cane toads, but this sort of research is expensive, it is high risk and it is long term. It often sets up an expectation that the silver bullet is just around the corner but, as I said, with 10 years of fertility control work that has not proved to be the case.[146]

6.147 Even if research into fertility control reaches the stage at which it can be effectively implemented, this form of control does not address the problems of damage caused by existing adult animals within the species. There are, in addition, a number of difficult issues associated with fertility control that must be addressed before it can be successfully used as a means of control:

> The development of a genetically engineered virus to carry anti-fertility vaccination agent was always an extraordinarily high risk approach.
>
> Such a virus is not only difficult to construct but there are a vast array of practical questions that needed to be answered before such an approach would ever have been deemed effective. Questions such as what antigen should the virus be coded to express, when

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143 Dr Kevin Doyle, AVA, *Transcript of evidence*, 15 June 2005, p. 10, Ms Kristi-Anna Brydon, Animals Australia, *Transcript of evidence*, 16 March 2005, p. 7.

144 Animal Liberation, *Submission 69*.

145 CSIRO, *Submission 55,* p. 8, Associate Professor AW English and Dr RS Chapple, *A Report on the Management of Feral Animals by the New South Wales National Parks and Wildlife Service*, 5 July 2002, viewed 27 September 2005, <http://www.nationalparks.nsw.gov.au/PDFs/english_report_pest_animal_progs_fullreport.pdf>, p. 26.

146 *Transcript of evidence*, 16 February 2005, pp. 11-12.

> should the virus express it, how reliably will the target immune system respond with the right type of immune response, will the response be at the right time of the season, will the response last for a long time or require annual boosters, is the carrier virus reliably infective to the target animals, what is the risk of resistance or pre-existing immunity, what is the reliability of the technique across seasons, what is the risk of attenuation or further mutation, what are the transmission rates, how specific is the carrier virus and the immunising protein to the target host, what is the persistence of the virus in the field and what proportion of targets need to be sterilised to achieve adequate levels of pest management? This is a massive research undertaking.[147]

6.148 The committee notes that the efforts to date with fertility control appear to have been largely without a successful outcome. As discussed above, the committee is aware of the tremendous success of RHD for rabbits and supports further research into biological controls, in particular for rabbits and cane toads. The committee recommends that the AIA CRC give priority to further research into biological controls, where there is reason to believe that is a feasible control option.

Habitat reduction and fumigation

6.149 The Bombala RLPB emphasised that habitat and harbour reduction should not be overlooked as an important aspect of pest animal control programs.[148]

6.150 The committee notes that animal welfare concerns exist in relation to the use of fumigants and warren-ripping for rabbit control. The inhumane effects of warren ripping can be minimised by conducting operations at times when rabbit numbers are lowest and soil conditions and equipment are optimal.[149]

147 Animal Control Technologies, *Submission 84*, pp. 15-16.

148 *Submission 80*, p. 2.

149 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 14.

6.151 The committee was provided with disturbing evidence about the welfare impacts of fumigation with chloropicrin:

> Chloropicrin is a rabbit warren fumigant. This is a World War I warfare agent that is still registered in Australia. It is blown down rabbit warrens. It causes immediate irritation to mucus membranes on contact. It is a tear gas. The animal effectively drowns in its lung secretions. It does cause extreme distress for a prolonged period before death. … Recent scientific literature suggests that there are human health impacts associated with accidental exposure to chloropicrin. Chronic exposure at levels which are not detectable—in other words, with a tear gas which will not cause your eyes to water— may be associated with disease.[150]

6.152 The committee understands that a carbon monoxide fumigator has been developed to replace chloropicrin as a more humane form of fumigation, however financial support is required to achieve registration, manufacture and distribution.[151] The committee believes that the AIA CRC should investigate how support can be provided to further develop this research to the application stage.

Recommendation 32

6.153 **The committee recommends that the Australasian Invasive Animals Cooperative Research Centre:**

- **coordinate research into the use of guard animals, such as llamas, alpacas and Maremma dogs, to protect livestock;**
- **give priority to research into biological controls, where that is believed to be a feasible control option for a species; and**
- **provide support for implementation of existing research work into the development of an alternative to chloropicrin for rabbit control.**

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150 Mr Clive Marks, Nocturnal Wildlife Research, *Transcript of evidence*, 15 June 2005, pp. 21-22. See also Animals Australia, *Submission 32,* Attachment, G Oogjes, *The ANZFAS View of Vertebrate Pest Control using Chloropicrin and 1080 Poisoning*, 27 March 1996, pp. 3-4.

151 Mr Clive Marks, Nocturnal Wildlife Research, *Transcript of evidence,* 15 June 2005, pp. 22-23, *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, pp. 13-14, F Gigliotti, 'Development of a Carbon Monoxide power fumigator for rabbit warrens', in S Balogh (ed), *Proceedings of the third NSW Pest Animal Control Conference*, NSW Department of Primary Industries, 4-7 July 2005, p. 41.

Monitoring results of control programs

6.154 As with any program, it is important to know whether measures being taken for pest animal control are having a positive effect in terms of population reduction and harm minimisation.

6.155 In relation to the effects of pest animal control on native ecosystems, DEH commissioned the Arthur Rylah Institute for Environmental Research to undertake a project aimed at improving understanding about the effectiveness of feral animal control. The second stage of that program identified gaps in knowledge on control activities.[152]

6.156 The report highlighted the need for monitoring changes in the abundance of the pest animal species and the benefits of pest animal control for native species and ecological communities.

6.157 The committee notes that the need for monitoring the effectiveness of pest animal control techniques applies to pest control directed at agriculture, as well as the environment. The committee considers that appropriate measures should be taken to ensure that, wherever possible, pest animal control techniques are monitored and evaluated for their effectiveness.

Recommendation 33

6.158 **The committee recommends that the proposed National Pest Animals and Weeds Committee investigate how pest animal control programs can be monitored for effectiveness, in particular by the development of standard protocols for estimating pest animal population reduction and overall benefit.**

152 B Reddiex and DM Forsyth, *Review of existing Red Fox, Feral Cat, Feral Rabbit, Feral Pig and Feral Goat control in Australia. II. Information Gaps*, DEH, Canberra, 2004, viewed 27 September 2005, <http://www.deh.gov.au/biodiversity/invasive/publications/information-gaps/>, Executive Summary.

Government funding for pest animal control

6.159 A number of submissions drew attention to inadequate expenditure by governments on pest animal issues.[153] The committee believes that the threat to agriculture and the environment posed by pest animals is so significant that it is vital that additional resources be directed at the problem. Part of the problem associated with funding is the lack of understanding about who has responsibility for managing and funding pest animal control.

6.160 Another aspect of the problem identified by individuals and organisations that made submissions to the inquiry is the diversion of funds away from on-ground control and into the upper echelons of management. Frustration has been expressed that a large percentage of funding allocated to pest animal management is 'skimmed off' the top, limiting the funds ultimately available for management and control.[154] The issue of distribution of funding has therefore also been considered by the committee.

Allocation of responsibility for funding

6.161 One of the difficulties associated with ensuring that pest animal management is properly funded is determining who has the responsibility to pay for what. Integral to this difficulty is the fact that control or destruction of pest animals can benefit private landholders, but also has a public benefit in terms of protection of the environment and growth in the agricultural sector. This was summarised by the Western Australian Government in its submission when it stated:

> The issue of 'user pays' versus 'public good' is central to how resources will be allocated to the management of pest animals in the future. This issue requires clarification and commitment from stakeholders, the broader community and all levels of government. Until issues of long-term resourcing commitments are made clear and ongoing control funds are increased, there remains the real problem that ground control of pest animals on both private and public lands will continue to be less than is required.[155]

153 *Submissions 3*, *22*, *36*, *59*, p. 15, *74*, *79*, *90*, p. 8.

154 Mr Greg O'Brien, Mansfield Wild Dog Group, *Transcript of evidence*, 18 June 2004, p. 75.

155 *Submission 70*, p. 7.

6.162 The committee agrees that, although allocating responsibility for funding pest animal issues is not an easy task, it is vital to ensure that there is a clear delineation of responsibilities amongst stakeholders. The committee believes that allocation of funding responsibilities should be addressed in the national strategy being developed for pest animals.

Recommendation 34

6.163 **The committee recommends that the National Pest Animal Strategy, currently under development, address the issue of appropriate allocation of funding responsibility amongst stakeholders.**

Amount of available funding

6.164 A number of submissions expressed the view that the funding allocated to pest animal problems is generally inadequate.[156] The problem of insufficient funding was particularly emphasised in relation to control of pest animal issues on government lands, which is addressed in Chapter 7.

6.165 The North East Pest Animal Advisory Committee called for a review of the way that RLPBs are funded, by increasing both the ratepayer base and the amount of additional government funding provided.[157]

6.166 In New South Wales, General Purpose Standing Committee No. 5 in its report on feral animals found a need for increased funding for feral animal control in the state. In particular, the committee expressed concern about the level of funding committed to feral animal control by the Department of Land and Water Conservation, State Forests and, despite the provision of significant funding by them, NPWS.[158]

6.167 Victorian Government expenditure on pest animal issues was referred to by one submitter as "… abysmal compared with that spent by other State Governments".[159]

156 *Submissions 22*, *27*, p. 5, *36*, *59*, p. 15, *74*, *79*, *90*, p. 8.

157 *Submission 57*.

158 General Purpose Standing Committee No. 5 (NSW Legislative Council), Chapter 4.

159 Mr Garry Breadon, *Submission 3*.

6.168 QFF calculated annual expenditure by DNRM and local governments on pest plants and animals to be $22 million. This was considered inadequate given the large economic cost of pest animal problems, even with an announced $6 million boost to funding for fire, weed and feral animal management over three years.[160]

6.169 The Shire of Laverton in Western Australia indicated in its submission that both the APB and DAWA appear to have insufficient resources to prevent the establishment of new pest plants or animals in WA.[161]

6.170 Some submissions called for funding of pest animal issues to be consistent and ongoing.[162] The Western Australian Government noted that 'stop-start' control strategies, where a flush of control activity is followed by a lack of action, need to be avoided.[163]

6.171 The evidence presented to the committee demonstrates that state and territory government expenditure on pest animal issues is inadequate. Given the tremendous impact of pest animals on the Australian economy and on the environment, a much stronger commitment to addressing these issues is required at all levels of government. The committee believes that the Australian Government should strongly urge state and territory governments to substantially increase funding for on-ground pest animal control operations, in addition to the funding for employment of doggers and pest animal controllers recommended above.

6.172 The committee took note of evidence received from Western Australia about the success of programs such as the Judas donkey program. This program has been funded using levies from landholders, matched dollar for dollar by government contributions. With the addition of some other *ad hoc* funding, this money has funded the removal of approximately 80,000 donkeys from the Kimberley and Pilbara regions.[164]

6.173 The committee believes that there is much to commend the approach of joint community and government funding. DAWA also provides dollar for dollar funding to the state's Declared Species Groups, and noted in its submission to the inquiry:

> These initiatives enable community groups to take ownership of their pest animal problems, and need to be encouraged by

160 *Submission 59*, p. 15.

161 *Submission 7*.

162 *Submissions 3*, *54*, p. 4, *80*, p. 3.

163 *Submission 70*, p. 7.

164 *Transcript of evidence*, 22 July 2005, pp. 2, 11.

minimising bureaucracy and providing the necessary technical guidance.[165]

6.174 The committee considers that the proposed National Pest Animals and Weeds Committee should examine ways in which joint community and government-funded schemes can be utilised in all states and territories, whether those are in the form of Declared Animal Groups, Landcare or other organisations.

Recommendation 35

6.175 **The committee recommends that the Australian Government strongly urge state and territory governments to substantially increase funding for pest animal control, in addition to providing funding for the employment of doggers and pest animal controllers, and that this funding be directed towards on-ground control operations.**

Recommendation 36

6.176 **The committee recommends that the proposed National Pest Animals and Weeds Committee liaise with state and territory representatives to determine how joint community and government-funded schemes can be utilised to facilitate pest animal control.**

Distribution of funding

6.177 The committee has concerns that a significant portion of the funding available for pest control is swallowed up through a system of 'top-down' rather than 'bottom-up' bureaucracy. The committee believes that it is vital that much-needed funds for pest animal control be delivered to the local and community groups responsible for control, rather than disappearing in administration costs.

165 *Submission 70*, p. 14.

6.178 The committee received several submissions expressing concern about the lack of funding which filters through to on-ground controllers.[166] In relation to wild dogs, the nature of the problem was discussed by Mr Phillip Coysh, a farmer in the Tintaldra district of Victoria. He gave the following evidence:

> The chap who spoke from Khancoban, Mr Murdoch, made a very valid point when he said that an amount of money had been set aside, yet only $40,000 of it got across this side of the divide. A lot of the funding for these wild dogmen they have put on since the fires— because obviously the dog problem has been exacerbated because the dogs have been pushed out of fire areas—must get chewed up in bureaucracy. We know it does. … Perhaps, rather than this money being channelled into the Department of Sustainability and Environment, that money should be channelled to our local dog group to be spent as it sees fit.[167]

6.179 Ms Noeline Franklin, of Brindabella in the ACT, made a similar point in relation to funding for doggers:

> We need funding. We need to reduce the length of the food chain. We have people administering these things, taking a few dollars off as it goes down. We need a more streamlined management structure so that funding from the Commonwealth and/or state is actually going on the ground, as opposed to getting carried around and then the dog trapper has to have a lamington drive to organise some new tyres for his vehicle, and that is basically what is happening at the moment.[168]

6.180 It was submitted that there is also a lack of funding for on-ground government pest control officers to monitor compliance with landholder obligations and enforce them where necessary:

> The state of Victoria is extremely legislated for. If we had the law enforcement on the ground to assist the land-holders and Landcare groups, we should not have a rabbit or a pest or a weed problem because everything is in place to do it. There just are not enough people on the ground or the priority areas are too small and too defined to support the positive land-holders doing the work. This

166 *Submissions 19*, p. 3, *43*, p. 2, *60*, *73*, *84*, p. 12, Mrs Coral Talbot, *Transcript of evidence,* 9 September 2005, p. 48, Dr Linton Staples, Animal Control Technologies, *Transcript of evidence*, 15 June 2005, p. 14, Mr Phillip Coysh, *Transcript of evidence*, 18 June 2004, p. 52, Discussions at Warrawagine Station, Western Australia, 21 July 2005.

167 *Transcript of evidence*, 18 June 2004, p. 52.

168 *Transcript of evidence*, 11 August 2004, p. 15.

> does not mean to say that we need people out there in uniforms prosecuting everybody, but at least they need to be there directing people to do it or directing people to be responsible for their land and carrying out feral animal and pest works.[169]

6.181 Dr Graham Hall, who works for the Tasmanian Game Management Services Unit (TGMSU), also spoke in a private capacity about the gradual phasing out of extension officers in government departments over the last twenty years, which has deprived landholders of a valuable source of advice and information.[170] The phasing out of extension services in Western Australia was also discussed.[171]

6.182 The committee believes that the allocation of funding to address pest animal issues is meaningless unless the vast majority of those funds are directed towards on-ground control and extension services rather than bureaucracy. To that end, as indicated in Recommendation 35, the committee believes the Australian Government should encourage state and territory governments to increase the amount of on-ground funding available for pest animal control.

6.183 The committee notes that there is a lack of available information about the level and distribution of state and territory government expenditure on pest animal issues. A report prepared by the AEC Group for the Local Government Association of Queensland in October 2002 indicated that a comparison of Queensland expenditure with other states and territories was difficult due to the fact that responsibility in other states and territories was allocated across a range of government departments and local government areas.[172] To address this problem, the committee recommends that state and territory government representatives of the proposed National Pest Animals and Weeds Committee provide an annual statement to that Committee indicating the level and break-down of funding that has been provided to address pest animal issues.

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169 Mr Alby McIntosh, Ovens Landcare Network, *Transcript of evidence*, 18 June 2004, pp. 2-3.

170 *Transcript of evidence*, 29 March 2005, p. 34.

171 Ms Anna-Marie Penna, CCWA, *Transcript of evidence*, 11 April 2005, pp. 4-5, Roundtable with Leonora pastoralists, 12 April 2005.

172 *Exhibit 1,* AEC Group, *Economic Impact of State and Local Government Expenditure on Weed and Pest Animal Management in Queensland*, Local Government Association of Queensland, October 2002, p. 8.

Recommendation 37

6.184 **The committee recommends that state and territory representatives of the proposed National Pest Animals and Weeds Committee provide annual reports to the Committee indicating their state or territory's level and breakdown of funding for pest animal issues.**

6.185 From all the information received by the committee, it is apparent that wild dogs, feral pigs, rabbits and foxes are the most significant national pest animal problems that Australian farmers currently face. Each of these species causes serious economic and environmental damage, and wild dogs and feral pigs in particular pose a huge threat of disease spread, which can no longer be ignored. The committee believes that a large-scale, coordinated effort aimed at combating these species is urgently required.

6.186 In the interests of initiating a campaign against these four target species, the committee recommends that the Australian Government make a substantial investment towards on-ground campaigns to eliminate these species. This would be in addition to providing funding for the employment of doggers and pest animal controllers as recommended above. Taking into account the evidence reviewed above about the need to channel funds towards on-ground control, this funding should be directed at local, regional and community groups responsible for pest animal control programs, which may bid for funds on the basis of established need. The proposed National Pest Animals Advisory Committee could advise on the distribution of funding.

Recommendation 38

6.187 **The committee recommends that, in addition to providing funding for the employment of doggers and pest animal controllers, the Australian Government make a significant investment towards on-ground control of wild dogs, feral pigs, rabbits and foxes, to be directed at local, regional and community groups responsible for pest animal control on the basis of established need.**

7

Control across tenures

Overview

7.1 Many people who gave evidence to the committee drew attention to the need for management of pest animals across all land, regardless of tenure.[1]

7.2 A great deal of frustration was evident in submissions made by landholders who go to great lengths to control pest animals on their properties, only to experience new incursions by pest animals from neighbouring lands where proper control is not exercised.

7.3 It is apparent to the committee that effective pest animal control requires that measures be taken by all affected individuals and groups. A few landholders who are ignorant or neglectful of their obligations can jeopardise the success of an otherwise well-managed program.

7.4 From the evidence received by the committee, it is apparent that two groups are perceived as being responsible for failing to properly manage pest animal issues on their properties. The first of these is government land owners and managers, particularly national parks, and the second is non-complying private landholders, particularly those new to rural areas who do not necessarily have any experience with pest animal issues.

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1 *Submissions 15*, p. 1, *33*, p. 2, *70*, p. 15, *72*, p. 2, *76*, p. 6, *78*, p. 5, *97*, p. 3.

Management of Crown land and national parks

7.5 There was overwhelming evidence presented to the committee that pest animals are not being controlled properly on government land, including state forests and national parks.[2] This perceived lack of management frustrates many landholders, whose efforts to control pest animals on their own land are being thwarted due to the neglect of government land managers. National parks were referred to by one submitter as a "neighbour from hell".[3]

7.6 Mr Garry Breadon, a farmer in Mansfield, Victoria, gave the following evidence:

> State boundaries are no barrier to wild dogs nor are National or State Park boundaries. If the Australian public continues to demand more and more land to be "locked up" for the public good then they must be prepared to pay for the management of the pest animals which inhabit those areas. Wild dogs in particular will breed very well in these areas as they are at the top of the food chain. This fact must be addressed now before these public lands increase to unmanageable sizes and the full breeding potential of these animals is reached. Good Neighbour Policies and the like seem to be a one way street with public land managers enforcing regulations on private land managers with out the same regulations being enforced on themselves. Restrictions on boundary fence clearing and fence construction expenses are a typical example.[4]

2 *Submissions 3*, *4*, *11*, *19*, p. 2, *25*, p. 1, *26*, *31*, p. 14, *34*, *35*, *36*, *39*, *43*, p. 3, *45*, *46*, *52*, p. 2, *53*, p. 4, *60*, *66*, *71*, *74*, *78*, p. 4, *80*, p. 1, *95*, *96*, *100*, p. 3, Mr John Alcock, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 14, Mr Alby McIntosh, Ovens Landcare Network, *Transcript of evidence*, 18 June 2004, p. 3, Ms Suzanne Briggs, Carboor/Bobinawarrah Landcare Group, *Transcript of evidence,* 18 June 2004, p. 5, Mr Ian Lobban, VFF Barnawartha Branch, *Transcript of evidence,* 18 June 2004, p. 27, Mr Russell Murdoch, New South Wales Upper Murray Graziers, *Transcript of evidence,* 18 June 2004, p. 42, Mr Fraser Barry, *Transcript of evidence,* 18 June 2004, p. 56, Mr John Sinclair, *Transcript of evidence,* 18 June 2004, p. 72, 'Wild Dog Responsibilities and Perspective in the Western Division of New South Wales', in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

3 Mr Peter Spencer, *Submission 100*, p. 8.

4 *Submission 3*.

7.7 At Warrawagine Station in Western Australia, local pastoralists expressed concern that camel shooting is not allowed in national parks. The committee was informed that huge populations of feral camels are building up in national parks, where they cause tremendous environmental damage. The committee was shown photographs of camels that have fallen into waterholes and cannot escape, leading to pollution of the waterholes and making them unusable.[5]

7.8 From Queensland, Burdekin Productivity Services Ltd made the following submission:

> There is no visible control in the national park areas located in the Lower Burdekin region. The parks act as a reservoir of pest animals, particularly feral pigs that cause serious environmental damage as well as serious crop damage.[6]

7.9 The frustration felt by landholders is compounded because they themselves cannot undertake control measures on government land.[7] Ms Noeline Franklin, a farmer from Brindabella, gave the following evidence:

> When we, as affected farmers, have gone to parks authorities and said, 'Listen, guys, you have some dogs in there,' they say, 'No, I don't know whether we have.' We say, 'I'm sure you have.' After decades, we have convinced them that they do have dogs. We have a flow of dogs out of there. Yes, they now acknowledge that, particularly since the New South Wales *Rural Lands Protection Board Act 1998*. We say, 'Can you do anything about it?' They say, 'Sorry, we don't have the budget.' We say, 'Can we go in there and do something about it?' They say, 'No, you are not allowed in there with traps, poisons and whatever.' The local community have basically been stopped from doing their own work, for whatever reasons— policy reasons.[8]

7.10 The obligation of state government agencies not to allow pest animals on their land to cause nuisance for adjoining landholders has been given judicial recognition in Victoria. In the Supreme Court case of *Stockwell v State of Victoria*,[9] the plaintiff Ron Stockwell sued the Victorian

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5 Discussions at Warrawagine Station, Western Australia, 21 July 2005.

6 *Submission 25*.

7 VFF Barnawartha Branch, *Submission 11*, Mr Noel Cheshire, *Transcript of evidence*, 18 June 2004, p. 53.

8 *Transcript of evidence*, 11 August 2004, p. 7.

9 [2001] VSC 497.

Government for failing to properly control wild dogs on its land. The Stockwells had lost substantial numbers of stock as a result of the build-up of dogs on neighbouring Crown property. The court held that the government was liable for private nuisance and common law negligence because it knew of the presence of the wild dogs, it was foreseeable that the Stockwells would suffer damage if nothing was done, and the government failed to take reasonable measures to rectify the problem.[10]

7.11 It appears, however, that *Stockwell* is a fairly unique example of enforcement of the obligations of state land managers. Mr Pat Larkin, a member of the Wangaratta Branch of the VFF, mentioned that some of the lands owned by VicRoads "are considered to be pretty adequate fox harbours", but that there is nothing any other government agency can do to force VicRoads to remove that habitat.[11] He called for government agencies to be given the power to enforce compliance with pest animal control obligations of other government agencies.

7.12 WAFF noted that the APB has no power to compel other government agencies in Western Australia to meet control obligations on lands under their jurisdiction.[12] Mr Peter Spencer, a sheep farmer from Shannons Flat in New South Wales, recommended legislative amendments to ensure that national parks and wilderness areas are not exempted from having to conform to planning regulations and other land-management requirements.[13]

7.13 At the National Wild Dog Summit, in February 2002, the 400 people present unanimously voted to call on all governments to enforce that all public land managers be responsible, transparent and openly accountable for pest animals on government land.[14]

7.14 The committee emphasises that *all* land managers, be they individuals, industry or government, have responsibilities to manage their land properly, including taking proper measures to control and destroy pest animals on that land. Although it appears that state and territory legislation allows obligations to be enforced on individual landholders, it seems that there is a lack of appropriate enforcement measures against state and territory government agencies that fail to fulfil their responsibilities. Where legislation and policy do not provide for

10 Animal Control Technologies, *Submission 84*, pp. 30-33.

11 *Transcript of evidence*, 18 June 2004, p. 19.

12 *Submission 36*, Attachment.

13 *Submission 100*, p. 15 and see VFF Barnawartha Branch, *Submission 11*.

14 'Copy of Motions', Motion Two, in *Exhibit 3, Proceedings of the National Wild Dog Summit*, Wodonga, 22 February 2002.

appropriate enforcement measures against government land managers, they should be amended.

7.15 It appears that the failure of public land managers to address pest animal problems on their land can be partly attributed to a lack of funding.[15] The CWA, in its submission, stated the issue very well:

> It should be possible for Agriculture and National Parks to exist in harmony however, it will be necessary for Government to do a lot more than merely annexing areas for National Parks. The cost of a National Park is a lot greater and more ongoing than seems to be considered by Government when they announce the acquisitions of more land to be set aside as National Parks. These announcements are sure-fire vote winners, and maps issued showing the percentage of a state given aside to National Parks are certainly impressive. The question is, can Governments afford to operate these vast areas in a (sic) ecologically sound and sustainable manner?[16]

7.16 The submission from the Cobar RLPB stated:

> NPWS (National Parks and Wildlife Services) has acquired large tracts of land, and concerns have been raised that matching budgets have not been forthcoming for adequate pest animal control within these Parks. It is felt that adequate budgets should be provided and managed more efficiently for these Parks. Government and Community have a duty of care to manage and control pest animals.[17]

7.17 The NSWFA, in its submission, explained some of the problems related to funding of the NPWS in New South Wales:

> The Association understands that in 2003-04, the DEC (Department of Environment and Conservation) will spend an estimated $3.2 million on "on-the-ground" control programs targeting pest animals such as wild dogs, foxes and feral pigs. Significantly, of the $3.2 million planned expenditure on operational programs, only $1.2 million has been allocated for the control of wild dogs.

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15 *Submissions 3*, *19*, p. 2, *29*, *36*, *40*, *41*, *46*, *54*, p. 3, *57*, *71*, *78*, p. 4, *87*, p. 2, *95*, *100*, p. 13, Mr John King and Mrs Susan Litchfield, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, pp. 18-19, Mr Peter Spencer, *Transcript of evidence,* 9 September 2005, p. 37, Mr Chris Tallentire, CCWA, *Transcript of evidence*, 11 April 2005, p. 11.

16 *Submission 19,* p. 2.

17 *Submission 78*, p. 4.

> The Association is also concerned that the $1.2 million may include expenditure on NPWS salaries related to research into the impact of aerial wild dog baiting on spotted-tailed quolls. If this is the case, potentially less than $1 million is being spent on actually killing wild dogs that prey on native fauna and farm animals.[18]

7.18 Similarly, a lack of funding appears to be hindering government land managers in their control of pest animals in Victoria. The Carboor/Bobinawarrah Landcare Group of Victoria gave evidence that:

> The Carboor / Bobinawarrah Landcare Group coordinated a fox baiting program this autumn. It was run concurrently with four neighbouring Landcare Groups baiting programs. However this program was an initiative of the Landcare Groups and funding for the program came from each individual Landcare Group. … A letter was distributed to Hancock Pines (owners of the privately operated pine plantation) and the Department of Sustainability and Environment (managers of the significant hectares of crown land neighbouring the Carboor / Bobinawarrah area), asking if they would participate in the fox baiting program. Hancock Pines responded and were involved in the fox baiting program. *There was no response from the Department of Sustainability and Environment and when contacted, they indicated they did not have the recourses* (sic) *or the funding to participate.*[19]

7.19 Neil and Marilyn Clydsdale, graziers in the Tintaldra area of Victoria, gave the following evidence:

> The proclamation of National Parks which most citizens applaud, has not been resourced at the level required, so with a lack of funding to employ adequate staff to control issues such as weeds, wild dogs, foxes and other emerging pest animals, coupled with under funding to provide baits, traps and chemicals the situation continues to get out of control year after year. If private citizens managed their land as poorly as crown owned land, they would be fined or put in jail.[20]

18 *Submission 31*, p. 14.

19 *Submission 54*, p. 2.

20 *Submission 40*.

7.20 Similar evidence was also received from the QFF:

> Current QPWS (Queensland Parks and Wildlife Service) staffing and budget constraints do not allow for control of feral animals (unless deemed for conservation purposes as part of species recovery plans) on parkland and so large parcels of land in the district are not being addressed in regard to feral pig management. Thus strategic control cannot be achieved. It should be recognised that farmers and QPWS would achieve optimal outcomes in a collaborative effort in control of these pests.[21]

7.21 The committee also received evidence that lack of expenditure on pest animal control within national parks is a major issue in both South Australia and Western Australia.[22]

7.22 When questioned about problems with government land management in Western Australia, the response of the Western Australian Government was that of the 110 million hectares of land for which CALM has responsibility, approximately 89 million hectares are unallocated crown land, for which it is not necessarily fair to require government to bear all the costs.[23]

7.23 Not all submissions received by the committee were critical of government landholders and their control of pest animal problems. State Council for the RLPB of New South Wales gave evidence that " … generally the NPWS, RLPBs and other pest animal and insect stakeholders are building up a good working relationship when it comes to pest management."[24] The North East Pest Animal Advisory Committee was also supportive of the role played by NPWS, although they pointed out the need for substantial budget increases.[25]

7.24 The committee also received evidence from the SSAA that its members have recently been allowed into Victorian national parks to conduct coordinated operations to cull goats, foxes and pigs. A formal memorandum of understanding with Parks Victoria in relation to the program was pending at the time of writing this report.[26]

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21 *Submission 59*, p. 16.

22 SAFF, *Submission 46*, Discussions at Warrawagine Station, Western Australia, 21 July 2005.

23 *Transcript of evidence*, 20 July 2005, p. 18.

24 *Submission 81*, p. 7.

25 *Submission 57*.

26 *Transcript of evidence*, 25 May 2005, p. 9, Personal communication with Mr Colin Wood, 16 September 2005.

7.25 The committee considers that, despite such examples of positive efforts to control pest animals in national parks, the majority of evidence indicates that state and territory government land managers are neglecting their responsibilities to control pest animals on their lands.

7.26 The committee believes that a principal factor in the problems with pest animals on government land is the practice of state governments declaring land as national parks or wilderness areas without providing appropriate funds for management of that land.

7.27 The committee acknowledges the need to set aside areas of land for environmental and conservation purposes however such allocations must only be made to the extent that appropriate funding has been set aside for management of that land.

7.28 Mr John Sinclair, of Yea-Alexandra in Victoria, summed up the issue in his evidence as follows:

> The federal government should ensure that the authorities that control public land acknowledge their responsibilities with regard to pest animals and plants on that land. Just as I would be responsible for my dog eating, for example, my neighbour's sheep, I see no difference whatsoever in relation to public land managers. This is the key to what I wish to say. It is only through acknowledging that responsibility that suitable funding and management of that problem can be achieved.[27]

7.29 The committee believes that future declarations of national parks and wilderness areas should only be made where adequate funds are available for management of that land, including pest animal problems.

7.30 Governments should also assess current landholdings and determine how pest animal problems are to be managed on that land. This may be by means of providing additional funding for management of that land, or opening up possibilities for individuals and organisations to be involved with pest animal management on government-owned land. To ensure that proper control is carried out by government agencies, the committee believes that Australian Government environment funding for states and territories should be made conditional on them achieving agreed targets for control and destruction of pest animals on government land.

27 *Transcript of evidence*, 18 June 2004, p. 72.

Recommendation 39

7.31 **The committee recommends that the Australian Government:**

- **ensure that state and territory governments amend legislation and policy where necessary to ensure that pest animal control obligations are the same for government land managers as for private landholders, and that these obligations are enforced against government land managers;**
- **encourage state and territory governments to commit adequate funds for management of government-owned and controlled land, including pest animal control;**
- **emphasise to state and territory governments that future declarations of national parks and wilderness areas should only be made once management needs for that land have been assessed and adequate funds have been set aside for that purpose; and**
- **make environment funding to states and territories conditional on them achieving agreed targets for control of pest animals on government land.**

Non-complying landholders

7.32 Although legislation varies from state to state, generally landholders have an obligation to control declared pest species on their lands.[28] A number of submissions pointed to problems caused by absentee landholders and new landholders who are not always aware of these responsibilities.[29] This issue arises partly due to the migration of 'lifestyle landowners' to the country, and partly through the increasing encroachment of urban and residential developments on agricultural areas.[30]

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28 For example see *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), Part 8, *Catchment and Land Protection Act 1994* (Vic), s 20, *Rural Lands Protection Act 1998* (NSW), Part 11.

29 *Submissions 5*, p. 5, *18*, *22*, *24*, p. 2, *52*, p. 2, *71*, *82*, *92*, p. 3, *101*, Mr Alby McIntosh, Ovens Landcare Network, *Transcript of evidence*, 18 June 2004, p. 9.

30 State Council for the RLPB, *Submission 81*, p. 9, Mr John King, Monaro Merino Association, *Transcript of evidence,* 9 September 2005, p. 19.

7.33 Mr Pat Larkin discussed the increase in 'lifestyle' land managers in rural areas. His submission pointed to the need for promotion of landholder responsibilities through real estate agents, local government and community groups to counter the problems associated with inexperienced landholders not properly managing pest animals on their properties.[31]

7.34 A similar recommendation was made by the Braidwood RLPB in its submission to the inquiry:

> Large areas of rural land are now owned and "managed" by members of the community who do not necessarily have a rural background and may not share the objectives and values of those who are dependant (sic) on the land. Many of these smaller landholders are not ratepayers to the RLPB system and are often unaware of the impact of their activities on their rural blocks and the wider community. A national approach to capturing these landholders and gaining their support in the pursuit of national objectives is required. Some RLPBs now run field days for small landholders. Pest animal control solutions that are appropriate to smaller holdings and acceptable in closely settled areas should be developed and applied.[32]

7.35 The evidence received indicates that some landholders may be aware of their responsibilities, but still fail to fulfil their obligations.[33] This may be due to a lack of awareness of the nature of the pest animal problem and the consequences of not managing populations properly. It was also noted that hobby farmers often have hectic lifestyles and sometimes refuse to participate in baiting programs because they have lifestyle animals present on the property.[34]

7.36 The Ovens Landcare Network of north-eastern Victoria indicated that there is a need for a strong enforcement program to ensure that landholders who neglect to control pest animal populations on their properties are made to fulfil their obligations. The committee was told that the number of people employed to enforce landholder obligations has been reduced significantly over the last two decades.[35] Pastoralists in the Eastern Goldfields region of Western Australia also discussed the need for

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31 *Submission 48*.

32 *Submission 71*.

33 Kathy and Malcolm Boladeras, *Submission 87*, p. 2.

34 Mr Alby McIntosh, Ovens Landcare Network, *Transcript of evidence*, 18 June 2004, pp. 9-10.

35 Ovens Landcare Network, *Submission 52*, p. 2, Mr Jack Jones, Ovens Landcare Network, *Transcript of evidence*, 18 June 2004, p. 7.

enforcement of landholders' responsibilities to control wild dogs on their lands.[36]

7.37 The committee believes that these problems are best addressed by a three-fold strategy including informing prospective purchasers about pest animal problems, educating existing landowners and enforcing obligations on those who neglect their responsibilities. Strategies for educating existing landowners about the importance of controlling pest animals on their land are discussed in Chapter 10.

7.38 In relation to informing prospective purchasers about their obligations, the committee believes it would be useful if prospective purchasers of rural land could conduct searches for pest animal problems in the same way that they can currently search for outstanding rates, caveats and environmental declarations. Local governments should be encouraged to maintain a database of pest animal problems on local land, which can be searched by prospective purchasers. This will enable landowners to decide in advance of purchase whether they have adequate resources to fulfil their pest animal responsibilities.

7.39 The committee also considers that obligations to control pest animals should be enforced more rigorously. In many cases, it is hoped, better performance in terms of pest control will be achieved through improved education and awareness. Where there is blatant disregard of the obligation to control pest animals, however, steps should be taken to enforce those obligations to ensure that the efforts of neighbouring landholders are not jeopardised.

Strategies for control across tenures

7.40 The committee is aware that strategies for the effective control of pest animal issues across a range of tenures are already in existence. In particular, the committee notes evidence received about the wild dog and fox control programs coordinated by the TFAWG and the Brindabella and Wee Jasper Wild Dog/Fox Working Group. These programs involved coordinated dog and fox control implemented by private landholders, RLPBs, State Forests and NPWS in New South Wales.[37]

36 Roundtable with Leonora pastoralists, 12 April 2005.

37 *Exhibit 10*, R Hunt and Brindabella and Wee Jasper Valley wild Dog/Fox Working Group, *Brindabella and Wee Jasper Valleys Cooperative Wild Dog-Fox Control Plan July 2002-June 2005*, 2002, *Exhibit 7,* TFAWG, *Cooperative Wild Dog/Fox Management Program*, Draft no. 5, March 2002.

7.41 The Brindabella Wee Jasper wild dog/fox program is an example of a 'nil tenure' approach to pest animal management.[38] The Brindabella Wee Jasper wild dog/fox working group first met in December 2000. The economic and social impacts of wild dog and fox attacks were identified. A map was prepared showing historic stock loss areas and access routes used by wild dogs. A baiting and trapping program was then developed and implemented, without reference to land tenure. Land manager costs were calculated by overlaying a tenure map onto the control map. The program was highly successful, with stock losses being reduced by an average of 75 percent per year for three years following an initial trial year in 2001.

7.42 The committee also heard evidence in relation to a good neighbour policy currently under development between WAFF and CALM. Although the committee heard that that program has not to date been as successful as might have been hoped, WAFF noted that a successful good neighbour policy would encourage all parties to understand other viewpoints and to have a proper understanding of their responsibilities.[39] The committee believes that such programs would be to the benefit of pest animal control generally, and that the proposed National Pest Animals and Weeds Committee should encourage the development of good neighbour programs and policies in each jurisdiction.

7.43 In Cooma, the committee heard evidence of an Interstate Pest Animal Working Group involving representatives from the Department of Primary Industries and Parks Victoria, and RLPBs, NPWS and state forests in New South Wales. All representatives are involved in on-the-ground control in their respective jurisdictions. The program has been operating for a number of years and has had some success, particularly in coordinating wild dog baiting across borders and sharing expertise in relation to feral pig control.[40] The committee believes that efforts at interstate coordination of pest animal control, such as this one, should be encouraged by the proposed National Pest Animals and Weeds Committee, as they provide opportunities for achieving greater consistency in control measures across jurisdictions.

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38 R Hunt and Brindabella Wee Jasper wild dog/fox working group, 'The *nil tenure* approach to a landscape issue (wild dogs)' in S Balogh (ed), *Proceedings of the third NSW Pest Animal Control Conference*, NSW Department of Primary Industries, 4-7 July 2005, pp. 16-19.

39 *Transcript of evidence*, 20 July 2005, pp. 29-30, 37.

40 Mr Graham Hillyer, Bombala RLPB, *Transcript of evidence*, 9 September 2005, pp. 6-8, *Minutes*, Interstate Pest Animal Working Group, 15 September 2005, forwarded to Committee by Mr Graham Hillyer, Bombala RLPB.

Recommendation 40

7.44 **The committee recommends that the proposed National Pest Animals and Weeds Committee:**

- **seek advice from the National Pest Animals Advisory Committee as to how local governments can set up pest animal databases that can be searched by prospective purchasers of rural land;**
- **encourage state and territory representatives to investigate options for more rigorous enforcement of pest animal control obligations on private land;**
- **discuss with state and territory representatives how governments can develop and implement agreements with local governments and community groups and, where appropriate, develop good neighbour policies with adjoining landowners; and**
- **encourage the development of interstate cooperative pest animal control arrangements, involving people engaged in on-the-ground control.**

8

Pests as resources

Overview

8.1 An interesting aspect of this inquiry has been the concept that some pest animals, rather than being considered as 'pests', should be treated as resources. It was argued by one submitter that abundant species are more appropriately managed when they are treated as a source of income, rather than a problem to be eliminated.[1] This might occur through harvesting pest animals for meat or skins, or by charging hunters a fee for the right to hunt pest animals on private or state-owned property.

8.2 The committee acknowledges that this approach does not work across the broad spectrum of pest animals that currently exists in Australia. The committee is not aware, for example, of any commercial use or benefit that can be obtained from wild dogs, feral cats or cane toads. Where the approach is applicable, however, the committee believes that it has a part to play in the control and management of pest animal species.

8.3 As pointed out in Chapter 6 of this report, it is important that landholders have available to them a range of methods and approaches for dealing with pest animal problems. Within this range of available methods, utilising pest animals as a resource has the potential to assist in reducing pest populations while also generating additional revenue for farmers and other landholders.

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1 TGMSU, *Submission 68*.

8.4 In particular, the committee considers that harvesting of pest animals is a useful and desirable strategy with regard to native species considered by some to be pests. The committee received evidence that programs for harvesting kangaroos, wallabies and possums are already in place. The committee is of the view that there is potential for further expansion and development of these programs.

8.5 In relation to introduced pest species, the committee emphasises that the 'pests as resources' strategy is not, in and of itself, a solution to the problem. It is important that, where species are commercially used or harvested, that does not result in attempts to sustain populations of pest animals for the purpose of industry. Commercial use is only a useful strategy for pest animal control if it is used as part of an integrated program to reduce pest animal numbers.

Rationale for utilising pests as resources

8.6 A number of submissions were made in support of the use of pest animals as resources.[2] This was conditional, for some witnesses, on harvesting being conducted humanely and, where native species are involved, compliance with conservation objectives and plans.[3]

8.7 The commercial use of some pest species constitutes a lucrative business. The export of wild pig meat, for example, has generated between $3 and $5 million annually in revenue over the last few years,[4] while the recreational pig-hunting industry is valued at $200 million per year.[5] The Australian kangaroo industry has an estimated value of $100 million annually.[6] Exports of goat meat are currently at record levels, with $31 million worth

2 *Submissions 18*, *19*, p. 3, *31*, p. 4, *46*, *77*, p. 3, *78*, p. 3, *86*, p. 4, *90*, Dr Kevin Doyle, AVA, *Transcript of evidence*, 15 June 2005, p. 7, Dr Linton Staples, Animal Control Technologies, *Transcript of evidence,* 15 June 2005, p. 15, Mr Rod Drew, FGA, *Transcript of evidence*, 25 May 2005, p. 7, Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, pp. 4-5, Mr Chris Tallentire, CCWA, *Transcript of evidence*, 11 April 2005, p. 2, Mr Ian Whyte, TFGA, *Transcript of evidence*, 29 March 2005, p. 18, Mr Ian Lobban, VFF Barnawartha Branch, *Transcript of evidence*, 18 June 2004, p. 27.

3 Dr Kevin Doyle, AVA, *Transcript of evidence*, 15 June 2005, p. 7, Mr Mick Trimmer, DEH, *Transcript of evidence*, 1 June 2005.

4 QFF, *Submission 59*, p. 11.

5 TGMSU, *Submission 68*.

6 TGMSU, *Submission 68*.

of goat meat exported during the first five months of 2005, representing an increase of more than 50 percent from 2004.[7]

8.8 It was submitted that the characterisation of certain animals as 'resources' rather than 'pests' allows for better management of those species. This was explained by Dr Graham Hall, Senior Game Management Services Officer of the TGMSU, who gave the following evidence in a private capacity:

> When I read the terms of inquiry, the first point that raised in my mind was: what is a pest? I think that is a fundamental issue in terms of how we manage wildlife in Australia. What is a pest to one may be a resource to somebody else. There are a number of occasions where so-called pests are actually quite economically valuable species. Kangaroos are a pest to some and an iconic species to others—and are obviously on the coat of arms. We can talk about rabbits being pests, yet the rabbit industry is probably worth several million dollars. We can talk about feral pigs as pests, but pig-hunting is worth probably $200 million a year. The definition of a pest is not merely a pedantic point but, if we talk about resources rather than pests, then we can manage for all sorts of outcomes.[8]

8.9 Although native species, like introduced species, have the capacity to be harvested for profit, it appears that there are some impediments to the commercial use of native species. The committee believes that, as indicated in a number of submissions, where the potential exists for landholders to profit from pest animals, shooting and leaving them to rot is a waste of a valuable resource.[9] The Hume RLPB gave the following evidence:

> It seems to be quite ridiculous that Kangaroos may be shot and harvested for both human consumption and pet food manufacture in a large area of NSW, but the area along the Southern Tablelands in NSW is gazetted as a non harvest zone. Farmers adversely affected by Kangaroos can apply for a permit to cull Kangaroos on their properties, the carcass is then required to be tagged and left to rot in the paddock and in many cases to provide easy food for foxes, feral pigs and wild dogs. Where is the logic in this, surely if thousands of Kangaroos are being culled every year, why not

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7 ABC Rural, *Goat meat proves golden to exporters*, ABC Rural, 27 July 2005, viewed 27 September 2005, <http://www.abc.net.au/rural/content/2005/s1423563.htm>.

8 *Transcript of evidence*, 29 March 2005, p. 31.

9 *Submissions 77*, *100*, pp. 6-7, Mr Colin Wood, SSAA, *Transcript of evidence*, 25 May 2005, p. 3, Mr Anthony Griffiths, VFF Wangaratta Branch, *Transcript of evidence*, 18 June 2004, pp. 15-16.

> utilise the carcass to at least cover the costs involved in the culling process.[10]

8.10 It appears that in Victoria also, kangaroo carcasses must be left to rot, rather than being utilised for skins and meat.[11]

8.11 Similar evidence was provided to the committee in a joint submission by FGA and the SSAA, who stated:

> While pest destruction permits offer a practical solution it often takes time to obtain them, the numbers issued are inadequate and current destruction permits demands (sic) wastage of culled animals. The wastage of resources, even those resulting from culled animals, is ethically unsustainable. Furthermore, it can lead to an increase in other pest populations by providing a ready resource which encourages an increase in numbers, e.g. the fox accessing carrion from discarded carcases.[12]

8.12 The committee spoke with landholders at Yuin Station in Western Australia, where emus at times reach plague proportions. Pastoralists there expressed frustration that they are not able to make commercial use of emus, which can be used for eggs, crayfish bait and emu oil. The committee was told that by the time emus reach plague proportions they are in such poor condition that no commercially effective use can be made of them.[13]

8.13 When questioned in relation to this problem, Mr Gordon Wyre, Acting Director of Nature Conservation in CALM, responded:

> Emus are declared under the *Agriculture and Related Resources Protection Act*. They can be taken under damage licence in pastoral areas where they are impacting on agriculture. However, where they are to be commercially utilised a specific authorisation is required. We have done this from time to time over the last 10 years or so but mainly it happens when you get what is called a 'migration' of emus coming back into the agricultural country and they aggregate around the barrier fence. There you get sufficient volume of emus—all of poor quality—that can be used for crayfish bait and things like that, and we do have commercial licences in those areas. The commercial taking from the wild was brought to a close at the time that the state was developing an emu farming

10 *Submission 77*, p. 3.

11 Mr Ian Lobban, VFF Barnawartha Branch, *Transcript of evidence*, 18 June 2004, p. 27.

12 *Submission 90*.

13 Inspection at Yuin Station, Western Australia, 12 April 2005.

industry, because it was seen to be potentially unfair competition if people were putting the effort into raising emus on farm.[14]

8.14 The committee notes that the Senate Rural and Regional Affairs and Transport References Committee has considered the issue of commercial utilisation of native species. In its report, it indicated that there are several benefits of commercial use, including the provision of opportunities for struggling rural businesses to broaden their income-base.[15]

8.15 The Senate Committee noted potential commercial uses for a number of native species considered by some to be pest animals, including kangaroos, possums, emus, flying foxes and some native bird species. Some of these animals are already commercially harvested, however, the committee believes that there is potential for commercial wildlife trade to be expanded and utilised as part of a broader strategy of dealing with overabundant species.

8.16 The committee believes that commercial use of pest animals and native resources can play a useful part in an overall pest animal control strategy. The committee considers that state and territory governments should take steps to create more possibilities for commercial use of pest animals, particularly native species, where existing regulations constitute an impediment.

Possibilities for using pests as resources

Department of Environment and Heritage – Wildlife Trade Management Plans

8.17 Overseas market demand exists for the products of some native species that are abundant in Australia, like possums and kangaroos. In order to export products from native species, it is necessary to obtain a permit from DEH. Generally, a permit will only be granted if the export operation is organised under the auspices of an approved wildlife trade management plan or approved wildlife trade operation.[16]

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14 *Transcript of evidence*, 20 July 2005, p. 13.

15 Senate Rural and Regional Affairs and Transport References Committee, *Commercial Utilisation of Australian Native Wildlife*, Commonwealth of Australia, June 1998, pp. xiii-xiv.

16 DEH, *Wildlife Trade Guidelines: How to Apply for Approval of a Wildlife Trade Operation*, DEH, viewed 13 October 2005, <http://www.deh.gov.au/biodiversity/trade-use/sources/pubs/wto.pdf>.

8.18 Approved wildlife trade operations apply mainly to market-testing and small-scale operations. Wildlife trade management plans are for larger scale harvesting operations. A different process applies to operations involving the export of freshwater and marine plants and animals.[17]

8.19 Management plans and operations are usually submitted by state and territory governments and approved by the federal Minister for Environment and Heritage. A management program can only be approved if effective state and territory legislation is in place for the conservation and management of the species in question.

8.20 To be approved, a wildlife trade management plan must assess the environmental impact on a species of the proposed use and provide management controls to ensure that the impact is ecologically sustainable. Monitoring to identify, mitigate and minimise environmental change must be put in place, and animal welfare requirements must be met.

8.21 At an inspection in Tasmania, the committee heard from a representative of Lenah Game Meats, which produces wallaby and possum meat, about difficulties experienced in exporting skins and furs from wallabies and possums due to the absence of a relevant wildlife trade management plan in Tasmania.[18]

8.22 Although there is nothing to prevent an individual or company submitting a plan of its own for federal approval, the committee heard that:

> **Mr Trimmer:** … [G]enerally speaking you just do not get that sort of approach coming from the private sector, mainly because private people tend to be focusing on a particular area or localised industry, whereas the state produces the plan in order to cover all activities within its jurisdiction to allow the industry or industries within its jurisdiction to develop and prosper. …
>
> **Mrs Steensby:** If somebody in Victoria wanted to harvest kangaroos or somebody in South Australia wanted to harvest cockatoos for meat, it would be harder to do because those animals are protected under state legislation and, therefore, you would have to have that state licence to be able to do it. So a state might not want to do a management plan but, in the case of an animal

17 Mr Mick Trimmer, DEH, *Transcript of evidence*, 1 June 2005, p. 2, DEH, *Application for approval of wildlife program,* DEH, 1 July 2004, viewed 13 October 2005, <http://www.deh.gov.au/biodiversity/trade-use/sources/forms/wildlife-programs.html#download>, DEH, *Wild harvest of native species,* DEH, 20 June 2004, viewed 13 October 2005, <http://www.deh.gov.au/biodiversity/trade-use/wild-harvest/>.

18 Inspection at Lenah Game Meats, Tasmania, 30 March 2005.

> that is protected in that state which requires a permit to be able to kill, injure or take, they would have to demonstrate that they have got that state approval.[19]

8.23 The role of state and territory governments in the export of wildlife products is of great significance. Without the cooperation of the relevant state or territory government in submitting a wildlife trade management plan for approval, would-be exporters are seriously limited in the measures they can take to export wildlife products overseas. The Senate Rural and Regional Affairs and Transport References Committee noted in its report that government should make efforts to ensure that there are no unnecessary barriers to impede commercial utilisation of native pest species.[20] The committee agrees with this recommendation.

Recommendation 41

8.24 **The committee recommends that the Australian Government encourage state and territory governments to remove existing impediments to the commercial utilisation of native pest species, whether those impediments be economic, legal or administrative.**

Tasmanian Property-based Game Management Plans

8.25 The committee heard evidence in relation to a Tasmanian program which is aimed at managing game species that have acquired pest status for hunting.[21] Property-based Game Management Plans are written plans that are developed and implemented by private landholders with the assistance of the TGMSU and provide a basis for hunters and shooters to hunt pest animals on the property. This assists landholders in managing pest animal problems on their land while also, in some cases, providing a source of revenue through payments made by hunters in return for the opportunity to shoot. Organised hunting and sporting organisations are also involved in these programs.[22]

19 Mr Mick Trimmer and Mrs Cindy Steensby, DEH, *Transcript of evidence*, 1 June 2005, pp. 5-6.

20 Senate Rural and Regional Affairs and Transport References Committee, Recommendation 5.

21 TGMSU, *Submission 68*.

22 Dr Graham Hall, *Transcript of evidence*, 29 March 2005, p. 37.

8.26 In March 2005, the committee conducted an inspection of Connorville Station, a 44,000 acre property 14 kilometres south of Cressy in Tasmania. Deer are a major problem at the station, trampling crops and competing with livestock for feed. The owner of the station, Roderick O'Connor, informed the committee that Connorville Station has had a Property-based Game Management Plan in place for over ten years. Shooters are required to pay an annual fee, and must observe rules while hunting on the property, including rules about the age, size and sex of animals that can be killed. Each year, approximately 500 deer are shot, in addition to approximately 4,000 wallabies and 4,000 possums, which are also considered pest animals in the area.[23]

8.27 Connorville Station has experienced problems with poachers, who threaten and intimidate other shooters, and private security arrangements have been put in place to deal with these problems, in addition to visits from police task forces.

8.28 The Tasmanian Government, through the TGMSU, has helped to implement these plans on over 500 properties in Tasmania spread across 1.5 million hectares. The program has also been successfully exported to approximately 600,000 hectares in New South Wales and Queensland.[24]

8.29 Mr Colin Wood, from the SSAA, indicated that plans of the kind developed in Tasmania have been considered in the Victorian context, and are considered by the organisation to be a good model for game management.[25]

8.30 The committee notes that in New South Wales, the Game Council facilitates involvement of licensed hunters in community-based game and feral animal control programs. An example is the coordination by the Game Council of deer management by members of the Mid North Coast Deer Working Group in July 2004. The programs between hunters, landholders and government agencies are modelled on the Tasmanian program.[26]

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23 Inspection at Connorville Station, Tasmania, 29 March 2005, Information provided by Mr Roderick O'Connor.

24 Dr Graham Hall, *Transcript of evidence*, 29 March 2005, p. 35.

25 *Transcript of evidence*, 25 May 2005, p. 12.

26 C Henderson, 'Private hunter involvement in community-based feral animal control programs', in S Balogh (ed), *Proceedings of the third NSW Pest Animal Control Conference*, NSW Department of Primary Industries, 4-7 July 2005, pp. 23-26.

8.31 The committee also notes with approval that the Rural Industries RDC is currently supporting trials that will investigate whether utilising wildlife through tourism or commercial use can act as an incentive to landholders to restore on-farm habitat. It is anticipated that up to six such trials will be established in 2006.[27] This is a positive development that will hopefully go some way towards extending the potential for sustainable use of native species, particularly where they constitute a pest to farmers.

8.32 The committee is impressed by the success of the Tasmanian model in allowing the involvement of private hunters in helping to reduce pest animal numbers. The committee believes that the proposed National Pest Animals and Weeds Committee should explore possibilities for expanding this program further throughout mainland Australia.

Concerns with commercial use of pest animals

8.33 Some people expressed concern with the resource-based approach to pest animal management on the basis that allowing pest animals to be used as resources may encourage those who derive a benefit to maintain exotic pest populations at sustainable levels.[28] Some submitters who were supportive of commercial uses emphasised that their support was conditional on commercial use being part of an overarching strategy to reduce pest numbers but not being used to create sustainable industries.[29]

8.34 The committee received evidence, for example, from field officers in DAWA, that its donkey culling program had been opposed by some within the pet meat industry who rely on a continuing source of donkeys, and from landholders wanting to maintain a donkey population for the benefit of tourism enterprises on their lands.[30]

27 GR Wilson and B Mitchell, *A Strategic Plan for Trialling Sustainable Wildlife Enterprises*: *Guidelines for conservation-based enterprises as an incentive to restore on-farm habitat*, Rural Industries RDC, Canberra, July 2005, viewed 27 September 2005, <http://www.rirdc.gov.au/reports/RWS/05-106.pdf>.

28 *Submissions 59*, p. 11, *84*, pp. 28, 33.

29 Ms Noeline Franklin, *Submission 35*, Dr Linton Staples, Animal Control Technologies, *Transcript of evidence*, 15 June 2005, p. 15.

30 *Transcript of evidence*, 22 July 2005, p. 16.

8.35 Mr Quentin Hart, from the BRS, stated:

> There is no doubt that in times of drought things like feral goat harvesting and feral pig shooting can inject some significant resources into some communities, but they also cause a fair bit of conflict between land-holders—for example, land-holders who want to drive goats down to very low numbers versus land-holders who want to keep them as a sustainable resource so they can continually harvest them.[31]

8.36 Dr Kevin Doyle, of the Australian Veterinary Association (AVA), was supportive of commercial harvesting but noted that industries developed for commercial harvesting could not constitute a reason for sustaining populations of feral animals.[32] This is particularly the case where commercial use of pest animals only has the potential to remove very small numbers of animals within a pest animal species.

8.37 The committee is aware of recent endeavours in the Northern Territory to harvest live camels for export and for camel meat and other products.[33] The committee was told at Warrawagine Station in Western Australia that, despite the existence of some operations to use camels for tourism and produce camel products, it is very difficult to operate a camel industry in remote areas due to logistical difficulties such as high transport costs. Although camels may provide a useful resource for a number of operators, commercial harvesting and use of camels does not have the potential to play a large role in the control of feral camels.[34]

8.38 Dr Tony Peacock, from the AIA CRC, stated:

> I think New South Wales has gone a bit too far in trying to get the Game Council to control feral animals and I think they will run into problems with the deer situation. There is now a real tension between controlling deer because they should not be there and the need to have them there for people to hunt. So you have to be careful what you set up, but you cannot exclude commercial control.[35]

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31 *Transcript of evidence*, 16 February 2005, p. 9.

32 *Transcript of evidence*, 15 June 2005, p. 7.

33 'Camel farm dream becomes reality', *7.30 Report*, television program, Australian Broadcasting Corporation, Canberra, 23 August 2005, *ABC News,* television program, Australian Broadcasting Corporation, Canberra, 13 April 2005.

34 Discussions at Warrawagine Station, Western Australia, 21 July 2005.

35 *Transcript of evidence*, 11 May 2005, p. 5.

8.39 Although the committee acknowledges that some pest animals have the potential to generate revenue for landholders, the committee emphasises that commercial use of introduced pest animals must never be used as a rationale for sustaining pest animal populations. The commercial benefits of pig hunting in Australia, for example, amount to approximately $200 million per annum,[36] but this figure pales in comparison with the cost to agriculture and the environment caused by these feral animals, and in particular with the estimated cost to agriculture in the event of a foot-and-mouth disease outbreak.[37] The committee takes note of the McLeod Report's findings that, although some pest species may have value as commercial resources, benefits are relatively minor in comparison to cost impacts in most cases.[38]

8.40 The proposed National Pest Animals and Weeds Committee should encourage the commercial use of pest animals where appropriate, but on the basis that population reduction and eradication should be the key objectives of introduced pest animal control.

Recommendation 42

8.41 **The committee recommends that the proposed National Pest Animals and Weeds Committee:**

- **coordinate the development and implementation of pest animal management programs modelled on the Tasmanian Property-based Game Management Plan program; and**
- **encourage commercial use of pest animals, but on the proviso that commercial use not be used as a reason to sustain populations of introduced pest animal species.**

36 Dr Graham Hall, *Transcript of evidence*, 29 March 2005, p. 31.

37 BRS, *Submission 76*, Attachment F, D Choquenot, J McIlroy and T Korn, *Managing Vertebrate Pests: Feral Pigs*, Bureau of Resource Sciences, Australian Government Publishing Services, Canberra, 1996, p. 45.

38 R McLeod, *Counting the Cost: Impact of Invasive Animals in Australia*, PAC CRC, Canberra, 2004, p. 7.

8.42 The committee notes that in relation to native pest resources, the emphasis in commercial use must be placed upon sustainability. The Senate Rural and Regional Affairs and Transport References Committee recognised this in its inquiry into the commercial utilisation of native wildlife, stating:

> The principle of ecologically sustainable development should underpin any assessment of commercial use of wildlife and before any approval is given for commercial utilisation of wildlife, it should be proven beyond reasonable doubt that such use will be ecologically sustainable.[39]

8.43 The committee notes that this is already an important consideration in the granting of approval for Wildlife Trade Management Plans through DEH.[40] The committee encourages commercial utilisation of native species as part of a broader approach to pest animal management, but emphasises that ecological sustainability must remain the primary focus of these programs.

39 Senate Rural and Regional Affairs and Transport References Committee, p. xxv.

40 Mr Mick Trimmer, DEH, *Transcript of evidence*, 1 June 2005, p. 2.

9

Research and development

Overview

9.1 Although many effective methods for pest animal control are currently used in Australia, the committee notes that there is always room for improvement. That may come in many forms, including changes to the composition of baits to make them more target-specific, increased knowledge about the weaknesses of particular pest species and ways to make trapping and shooting more humane. Research has already produced many successful outcomes in Australia; some of the recent developments are considered in this chapter.

9.2 The committee notes that some of the techniques used for pest animal control are based on relatively old technology.[1] There are also gaps in existing knowledge that can only be filled through research. One such gap is the need for a way to deal with cane toads and sleeper populations that are only beginning to emerge as a real problem. Many submissions to the committee referred to areas where further research would be of benefit; these are considered below.

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1 Mr Clive Marks, Nocturnal Wildlife Research, *Transcript of evidence*, 15 June 2005, p. 20.

9.3 The lack of coordination of research priorities at a national level is of concern, as it may result in unnecessary duplication of research and wastage of limited funds. To ensure the most efficient use of resources, the committee considers that there is a need for research coordination at the national level. There is also a need for properly-coordinated funding of research and for the role of research and development corporations to be maximised.

9.4 Once research has produced successful results, processes must be put in place to ensure that they are turned into products that people can use. Appropriate funding is required for this purpose. It is also important that the registration process for new agricultural chemical products be as simple and expeditious as possible.

Research coordination and funding

Coordination

9.5 In Australia, there is a national focus on pest animal research through a number of bodies, including the AIA CRC, formerly the PAC CRC, the CSIRO, the NFACP and the various research and development corporations (RDCs) that deal with pest animal issues as part of their work to improve conditions for industry.

9.6 The AIA CRC came into effect on 1 July 2005 and aims to counteract the impact of invasive animals through developing and applying new technologies, and by integrating approaches across agencies and jurisdictions.[2] It is a collaborative effort between research, industry, environmental, commercial and government agencies, funded and supported by the Australian Government's Cooperative Research Centres Program. Core participants include state government agencies, the BRS, CSIRO, DEH, universities and industry participants including Animal Control Technologies, the AVA and the CCA. RDC participants include Australian Wool Innovation Ltd, Grains RDC and Meat and Livestock Australia. There are also a number of international participants.

2 Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, p. 1, PAC CRC, *Australasian Invasive Animal CRC: a new offensive against pest animals*, PAC CRC, Canberra, viewed 27 September 2005, <http://www.pestanimal.crc.org.au/info/PACtoAIA.pdf>.

9.7 The participants of the AIA CRC have together committed almost $100 million over the next seven years for pest animal control research and development directed at 13 operational targets.[3] Almost $30 million of that funding has been contributed by the Australian Government.[4]

9.8 RDCs represent an alliance between industry and government to pursue research and development to advance the interests of industry and the wider public.[5] RDCs prepare strategic plans that outline their objectives and strategies for five-year periods. Funding is by way of industry research and development levies, matched dollar-for-dollar by government funding. Current statutory RDCs include the Forest and Wood Products RDC, Grains RDC, Grape and Wine RDC and Rural Industries RDC, while industry-owned companies include Australian Pork Limited, Australian Wool Innovation Pty Ltd, Dairy Australia, Horticulture Australia Limited and Meat and Livestock Australia.

9.9 There is currently no set of national priorities for pest control research and development, nor is there a process for coordinating existing resources.[6] As a result, states and territories are independently funding research projects that may have relevance across several jurisdictions, without any formal processes for actively sharing those research outcomes with other states and territories.[7]

9.10 A complicating factor that may also lead to duplication is that responsibility for research funding into pest animals is divided at a federal level between DAFF and DEH.[8] Although each department is concerned with different impacts of pest animals (the former on agriculture and the latter on the environment), to some extent these issues will overlap. It is important that research priorities be coordinated between these two departments.

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3 Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, p. 1.

4 Senator the Honourable Ian Macdonald, *States and Industry must support new Invasive Animals CRC,* Press Release, 16 August 2005, viewed 27 September 2005, <http://www.mffc.gov.au/releases/2005/05161m.html>.

5 DAFF, *The RDC Model,* DAFF, Canberra, 10 May 2004, viewed 27 September 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=D2C48F86-BA1A-11A1-A2200060B0A03879>.

6 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 21.

7 DAWA, *Submission 98,* p. 6, Mr Chris Tallentire, CCWA, *Transcript of evidence*, 11 April 2005, p. 5.

8 Dr Bidda Jones, RSPCA Australia, *Transcript of evidence*, 16 March 2005, p. 16.

9.11 A disadvantage associated with a lack of national coordination is that certain research imperatives may fall through the cracks if they do not significantly impact on a particular industry. The Western Australian Government noted in its submission that some pest species, for example European starlings, affect many agricultural activities, but do not necessarily impact on any *one* industry significantly. Because RDCs tend to focus on a single industry, they are often reluctant to allocate resources to a problem if it only affects their industry in a minor way.[9] Coordination between industry groups and RDCs would enable a common focus and pooling of resources so that research in relation to these pest animal issues would not be overlooked.

9.12 It was suggested to the committee that some sort of national framework for coordination of research funding and priorities should be developed.[10] The committee agrees that a national approach to coordination of research would allow sharing of research outcomes across jurisdictions and reduce the risk of project duplication.

9.13 It was submitted by a number of organisations that the new AIA CRC is the appropriate body to undertake responsibility for national coordination.[11]

9.14 Animal Control Technologies, a company that manufactures baits, gave the following evidence prior to the approval of the bid for the new CRC:

> We anticipate the new AIA CRC (if successful) will be able to provide a research coordination role that appropriately involves a wide range of significant stakeholders working in cooperation rather than competition. The development of the bid has been a commendable effort in this direction.
>
> This does not mean that all research will be managed or worse still controlled by the AIA CRC and that research outside the CRC should not also be supported. However, because of the sheer size and depth of the collaboration embodied within the AIA CRC proposal, it raises the first opportunity for coordinated and focused research capability on pest animals in Australia.[12]

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9 Western Australian Government, *Submission 70*, p. 13, Dr Ashley Mercy, DAWA, *Transcript of evidence*, 11 April 2005, p. 22.

10 *Submissions 59*, p. 12, *70*, pp. 4-5, *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 21.

11 *Submission 49*, p. 9, *84*, p. 42, *97*, p. 3, Dr Kevin Doyle, AVA, *Transcript of evidence*, 15 June 2005, p. 11.

12 *Submission 84*, p. 42.

9.15 Dr Tony Peacock, Chief Executive Officer of the old PAC CRC, had the following to say about the role of the new AIA CRC:

> When we put our heads together we get a better result than we had in the past. The new CRC has a motto: together create and apply solutions. We believe that bringing people together for the planning and the execution of R&D and the execution of control programs is an absolute imperative. Pest animals always beat us when we work alone, either as a nation on R&D or in local control programs. So the key issue for us is bringing people together to work in groups, whether it is in the R&D area, where we have a very low critical mass of researchers, or in control programs, where one landholder's actions are negated if the neighbours are not doing the right thing.[13]

9.16 The committee agrees that the AIA CRC is the appropriate body to take responsibility for national coordination of pest animal research, given its existing focus on collaboration with community groups, government agencies, RDCs, industry, research providers and educational and training institutions.

9.17 The committee notes that the core participants of the AIA CRC include both agricultural and environmental government agencies of most states and territories. At the federal level, participants include the BRS, DEH and the CSIRO. Although the BRS falls under the umbrella of DAFF, that agency is not itself a participant in the AIA CRC. The committee believes that to properly facilitate research coordination and ensure that research is not duplicated at the federal level, DAFF should become a core participant of the AIA CRC.

9.18 It was also suggested that a national research database be constructed and maintained. This database would record details of all past and ongoing pest animal research to enable all interested parties to determine whether there is a need for a particular research project.[14]

Funding

9.19 The committee notes that around $20 million is currently spent on pest animal research each year for the control of vertebrate pests.[15] As noted above, the Australian Government has recently committed $30 million over seven years to the AIA CRC. According to the BRS, however, the

13 *Transcript of evidence*, 11 May 2005, p. 3.

14 *Submissions 27*, p. 5, *81*, p. 5.

15 BRS, *Submission 76*, p. 4.

amount of government expenditure on control and research in Australia is less than that spent in New Zealand, which has a much smaller land mass.[16] The Northern Territory Government and DAWA both called for increased federal government funding for pest animal research.[17]

9.20 The then PAC CRC noted in its submission that the budget for the NFACP, which is funded through the Natural Heritage Trust to provide support for research projects, has been progressively reduced from $1.1 million in 2001-2002, to $750,000 in 2002-2003 and $600,000 in 2003-2004.[18] The NFACP currently has available funds of approximately $500,000.[19]

9.21 The committee received some other evidence that research bodies struggle to access available funding. Dr Andrew Woolnough, from the Western Australian Government Vertebrate Pest Research Section, told the committee that government funding mainly goes towards salaries, while funding for research is derived primarily from the AIA CRC and the NFACP. He noted that a lot of time within the department was spent in search of research funds.[20]

9.22 One submission pointed to the need for continual, long-term funding for pest animal research rather than once-only initiatives provided on a reactionary basis.[21] Dr Tony Peacock gave evidence that long-term funding is preferable for research, because it enables researchers to develop long-term strategies and maintain staff motivation.[22]

9.23 The committee recognises the need to ensure that research into pest animal issues is properly funded. In many cases, that funding will be provided by industry, however it is also necessary for governments at both state and federal levels to make a commitment to funding research.

9.24 The Australian Government has already made a firm commitment to supporting pest animal research through its contribution to the AIA CRC. The committee notes that the need for funding should be closely monitored by the Australian Government, and, if necessary, additional funding may be required to ensure that long-term research planning can occur.

16 *Submission 76*, p. 17.

17 *Submissions 70*, p. 15, *72*, p. 1.

18 *Submission 33*.

19 DAFF, *National Feral Animal Control Program,* DAFF, Canberra, 22 June 2005, viewed 14 October 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=D2C48F86-BA1A-11A1-A2200060B0A06278>.

20 *Transcript of evidence*, 11 April 2005, pp. 22-23.

21 Mr Garry Breadon, *Submission 3*.

22 *Transcript of evidence*, 11 May 2005, p. 16.

9.25 The committee is concerned, however, that the funding provided to the NFACP, which facilitates joint community and government initiatives for improving pest animal control techniques, has been progressively reduced to the extent that it is currently less than half what it was in 2001-2002. The committee believes that, given that pest animal problems are increasing, it is illogical for government funding for the program to be reduced in this way.

9.26 The committee also notes that funding for the Natural Heritage Trust is due to be phased out in 2007-2008.[23] It is imperative that funding for the NFACP continue after this time, and the committee recommends that the Australian Government investigate a means of relocating the NFACP to ensure its continued funding.

Recommendation 43

9.27 **The committee recommends that the Australian Government:**

- **provide certainty of funding to the Australasian Invasive Animals Cooperative Research Centre to enable it to undertake long-term research and to provide national leadership in pest animal research; and**
- **through the Natural Heritage Trust, immediately increase research funding to the National Feral Animal Control Program to $1 million, and investigate possibilities for relocating the National Feral Animal Control Program to ensure its continued funding after 2007-2008.**

Involvement of RDCs and private research companies

9.28 A number of submissions called for the increased involvement of RDCs in pest animal research initiatives.[24]

9.29 The committee notes that RDCs have been positively involved in initiatives for control of pest animal populations. As an example, the committee was told that Meat and Livestock Australia and Australian

23 *2005-2006 Budget Paper No. 1: Budget Strategy and Outlook 2005-06*, Commonwealth of Australia, Canberra, 2005, viewed 14 October 2005, <http://www.budget.gov.au/2005-06/bp1/download/bp1.pdf>, p. 6-14.

24 *Submissions 48*, *70*, p. 13, *80*, p. 4.

Wool Innovation recently released a joint consultancy brief for a strategic review of rabbit research, development and extension requirements.[25] These two organisations have also made major commitments to the AIA CRC in respect of feral pig and dog control.[26]

9.30 The submission from the Tamworth RLPB indicated that industry groups are unlikely to sponsor research and development unless they will receive a monetary return, or the research will provide a benefit for the industry they are involved with.[27] It is therefore important to coordinate research funding so that government-funded research is focused on those areas that will not be willingly taken up by industry groups.

9.31 It was submitted that the involvement of RDCs might be increased by the provision of government sponsorship and incentives.[28] It was also suggested by Dr Tony Peacock that the federal Minister for Agriculture, Fisheries and Forestry should outline pest animal research and development as a priority for rural RDCs:

> We get really good support from Meat and Livestock Australia and particularly from Australian Wool Innovation. The fish R&D corporation gives us a little bit of support in PhDs in the carp area. My concern is that, when you look at the impact of rabbits on the forestry industry or pest wallabies and possums and things like that, it is often a second- or third-order issue for their corporations. I used to run the pig R&D corporation and we put a little bit into this CRC. But they would not really recognise it. It is not really their thing. There is a case for the minister not to direct them but to say, 'With regard to the priorities, make sure you're supporting any national effort in this area in both weeds and pests.' It affects everyone.[29]

9.32 The committee believes that RDCs have an important contribution to make to pest animal research and development. To the extent that that involvement can be improved or increased by the provision of incentives or by outlining pest animal research as a priority, that should occur.

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25 Foundation for a Rabbit-Free Australia, *Submission 97*, p. 2.

26 BRS, *Submission 76*, p. 17.

27 *Submission 79*, p. 2.

28 State Council for the RLPB, *Submission 81*, p. 9.

29 *Transcript of evidence*, 11 May 2005, p. 10.

Recommendation 44

9.33 **The committee recommends that the Australian Government Minister for Agriculture, Fisheries and Forestry:**

- **arrange for the Department of Agriculture, Fisheries and Forestry to become a core participant of the Australasian Invasive Animals Cooperative Research Centre; and**
- **investigate ways to enhance the involvement of rural research and development corporations in pest animal research and development, in particular, by including pest animal research in the statement of government priorities for rural research and development.**

9.34 The committee also believes that great results can be achieved by involving the private sector in pest animal control research and development. It notes, however, that this involvement is most appropriate where there is profit to be made from the sale of new products. Mr Clive Marks, of Nocturnal Wildlife Research, noted:

> … we are lacking private industry involvement and that nexus between research outcomes being picked up by private industry, especially in the area of private industry failure, where it will not be possible to make huge amounts of money out of these products. When we have state governments trying to commercialise something which should never be commercialised, because if it is private industry sitting around waiting for someone to come and pick this up commercially, run with it, make a loss and go bust, it is a little bit ridiculous. So we need to have a reality check on what we are doing with all of these technologies, why we are doing it, what we are doing in the interest of the public and what we are doing that can be picked up by private industry. We need to follow that with sensible adoption strategies and reality checks.[30]

9.35 The committee believes that part of a strategy for involving private research companies in pest animal research and development is to ensure that they are provided with the necessary support where they lack the resources to implement a full testing program for a new product. Dr Peacock, discussing the feral pig bait developed through the AIA CRC and Animal Control Technologies, said:

30 *Transcript of evidence*, 15 June 2005, p. 23.

> It is also a classic area of market failure. There are no private companies that are singing out to do this. We work with a private company to get it manufactured. He can make it worth his while to produce the baits and get them out to the public, but there is no way he could bear the cost of the massive field trials we need to do. The field trialling for that is over tens of thousands of square kilometres …[31]

9.36 The committee considers that coordination of research priorities through the AIA CRC, as recommended above, will reduce the amount of duplication in pest animal research and ultimately lead to more efficient application of existing research funds. It will also ensure that private research companies can become involved in projects in situations where they are not able to independently fund the full product development process.

9.37 The committee notes that, where the potential for commercialisation of products exists, involvement of private sector research groups should be encouraged. In this regard, the committee notes that Animal Control Technologies, a leading private sector developer and supplier of pest animal management technology, is the principal commercial partner of the AIA CRC.[32]

Recent developments in pest animal research

9.38 The committee was informed of a number of promising developments in pest animal research. Dr Tony Peacock informed the committee about three new products being developed in collaboration with the AIA CRC. These are FeralMone, a product made of synthetic fermented egg that attracts dogs to bait; a shelf-ready pig bait that has knocked down approximately 80 percent of pigs in trials; and PAPP, an alternative to 1080 poison which effectively puts dogs and foxes to sleep permanently and avoids some of the unpleasant side-effects that have been associated with 1080.[33]

31 *Transcript of evidence*, 11 May 2005, p. 7.

32 Dr Linton Staples, Animal Control Technologies, *Transcript of evidence*, 15 June 2005, p. 13.

33 *Transcript of evidence*, 11 May 2005, pp. 2-3.

9.39 Dr Peacock also indicated that the new AIA CRC will be funding research into the commercial use of pest vertebrates.[34] As discussed in Chapter 8, this is an area the committee feels is deserving of further attention and the committee notes with approval plans for further research in this area.

9.40 The committee was provided with evidence of research being conducted into alternatives to 1080 poison. Much of this research has been conducted in Tasmania, where the state government has committed to phasing out the use of 1080 on government lands by the end of 2005. Some of the alternatives that have been investigated include making shooting more effective, using repellents to protect forestry plantations, and manipulating genetic and environmental factors to make plants more resistant to browsing. The use of crop covers, such as bitter lupin and thistles, to make seedlings less palatable, is also being investigated.[35] Although the committee has recommended the continued availability of 1080 poison, it considers that research initiatives such as these will be important in minimising damage where 1080 is no longer available.

9.41 CSIRO's submission to the committee included references to a number of ongoing research projects including development of biological control methods for rabbits, foxes, cane toads, mice and carp; population modelling and epidemiology of vertebrate pests; genetic control of insect pests; and development of biologically based products to replace chemical pesticides in horticulture.[36]

9.42 The committee also notes that a number of research projects are being conducted under the NFACP, including:

- review of fox baiting strategies to increase cost-effectiveness and reduce non-target risks;
- assessment of the risks of wild deer in Australia, including impacts and review of control techniques;
- monitoring the impact of 1080 dog baiting on spotted-tail quolls;

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34 *Transcript of evidence*, 11 May 2005, p. 6.

35 Dr Tim Wardlaw, Forestry Tasmania, *Transcript of evidence*, 29 March 2005, pp. 23-24, Mr Trevor Bird, FFIC, *Transcript of evidence*, 29 March 2005, pp. 42-43, *Exhibit 12*, Dr Tim Wardlaw, *Developing alternatives to 1080 for managing browsing*, *Exhibit 13* documents, JM O'Reilly-Wapstra, C McArthur and BM Potts, 'Genetic variation in resistance of Eucalyptus globulus to marsupial browsers' *Oceologia*, vol. 130, 2002, pp. 289-296, C McArthur, NR Marsh, DC Close, A Walsh, S Paterson, H Fitzgerald and NW Davies, 'Nursery conditions affect seedling chemistry, morphology and herbivore preferences for Eucalyptus nitens', *Forest Ecology and Management*, Vol. 176, 2003, pp. 585-594.

36 *Submission 55*.

- assessing the impact of feral horses and donkeys in north-west Australia; and
- developing a coordinated and strategic program for managing the impacts of feral camels.[37]

9.43 The committee is also aware of research being conducted through CSIRO and DEH into a genetically-modified organism that would interfere with the development of the cane toad.[38] National ICT Australia also made a submission detailing its research into the development of detection and monitoring sensor networks for tracking the movement of cane toads in Kakadu National Park.[39]

9.44 The committee took note of a recent competition to find effective cane toad traps and attractants conducted by the Northern Territory Government and sponsored in part by the AIA CRC. The winning entry, invented by Mr Paul Baker, attracts insects with light; toads come to feed on the insects, jump onto a ramp and step on a weight trap, which deposits them into a cage. Funding is now being provided by the AIA CRC to assist in commercialisation of the design.[40] The committee believes that initiatives such as this one are important in yielding practical solutions to pest animal problems. Assisting researchers and inventors to develop their products beyond the initial planning and testing stages is a crucial step in the national fight against pest animals.

9.45 Although this is only a sample of recent developments, the committee notes that these are promising innovations in the field of pest animal control. These innovations are proof that continued research into new and improved pest animal control techniques is worthwhile and must be supported.

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37 DAFF, *National Feral Animal Control Program Projects,* DAFF, Canberra, 8 July 2005, viewed 17 October 2005, <http://www.affa.gov.au/content/output.cfm?ObjectID=DDAFD1FF-AD40-46DA-933393C42AA69A29>.

38 R Taylor and G Edwards (eds), *A Review of the Impact and Control of Cane Toads in Australia with Recommendations for Future Research and Management Approaches: a Report to the Vertebrate Pests Committee from the National Cane Toad Taskforce*, www.feral.org.au (online resource), June 2005, viewed 27 September 2005, <http://www.feral.org.au/ref_docs_images/CaneToadReport2.pdf>, p. viii.

39 *Submission 50*.

40 Rachel Carbonell, 'Mechanic wins Cane Toad Trap Competition', *ABC Online*, 29 April 2005, viewed 14 October 2005, <http://www.abc.net.au/pm/content/2005/s1356797.htm>, Northern Territory Minister for Parks and Wildlife, 'Government launches Cane Toad Trap Competition', Press release, Northern Territory Government, 9 December 2004, <http://www.nt.gov.au/ocm/media_releases/2004/20041209_cb_ToadTrap.shtml>.

Further areas for research and development

9.46 Various submissions were made to the committee about the need for research to fill gaps in particular areas of pest animal management. These suggested areas of research covered a wide range of topics; they are set out in summary below.

9.47 One of the suggested research areas focused on improving general knowledge about pest animals and their movements. For example, according to the South Australian Farmers Federation (SAFF), more scientific research on pests and their ecological impact is required. This would enable a more comprehensive understanding of effective mechanisms to control or eliminate pest animal populations.[41] The Western Australian Government called for similar research to improve knowledge about the overall economic costs of pest animals in Australia.[42]

9.48 Evidence was given that research is needed to improve knowledge about emerging pest animal threats. QFF's submission discussed threats of growth in agricultural parasites that may arise due to climate change. More research was called for in this area.[43]

9.49 Mrs Betty Murtagh, Secretary of the Barnawartha Branch of the VFF, suggested that further research is needed into *Neospora* disease carried by wild dogs, due to the potential effects on animal and human health, and the Australian export market.[44] Cooloola Shire Council noted the need for further research into the home range of wild dog packs in rural and semi-rural areas adjoining large tracts of state land.[45]

9.50 Representatives from DAWA pointed to the need for research into feral pig control, given the threat of disease spread that they pose.[46] This was supported by the CCA and AVA.[47]

41 *Submission 46*.

42 *Submission 70*, p. 7.

43 *Submission 59*, p. 11.

44 *Transcript of evidence*, 18 June 2004, p. 28. See also Mrs Ellen Green, NSWFACDC, *Transcript of evidence,* 9 September 2005, p. 32.

45 *Submission 95*.

46 *Transcript of evidence*, 22 July 2005, pp. 16-17.

47 *Submission 49*, p. 3.

9.51 Some submitters were of the opinion that research and development should focus on improvements to current methods of pest control, by making them more efficient, more cost-effective and more humane.[48] The RSPCA Australia, Animal Welfare Centre and Vertebrate Pest Committee joint workshop identified continuous improvement in humaneness of control techniques and programs as an ongoing research priority.[49] Although some research is already underway in this area, it is not generally attractive to private companies due to the small market demand for products, and therefore is dependent on public support.[50]

9.52 AgForce and the Foundation for a Rabbit-Free Australia called for continued research, development and implementation of rabbit control measures, pointing to the negative impact rabbits still have on agriculture, despite the implementation of various programs for their control.[51]

9.53 Mr Ed Biel, of Wanaka Orchard, gave evidence that research is needed into methods of deterring grey-headed flying foxes from attacking fruit crops. The only method currently available to farmers is exclusion netting, which is prohibitively expensive.[52]

9.54 DAWA gave evidence that long-term research into management of slug damage to seedling crops would benefit several states, including Victoria, South Australia and Tasmania. Funding for research in this area has, to date, been sporadic and short term.[53] They also called for research into the impacts of feral European honey bees on native flora and fauna.[54]

9.55 The committee notes that further consideration is required as to the priorities for these and other proposed research projects. The committee notes the importance of involving the community in developing priorities for research. It was suggested that industry groups, such as farming

48 *Submissions 15*, p. 3, *80*, p. 3, *84*, pp. 12, 21.

49 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 10.

50 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 19.

51 *Submissions 27*, p. 4, *97*.

52 *Submission 21*.

53 *Submission 98*, p. 6.

54 *Submission 98*, p. 4.

bodies, and landcare and environmental groups, should be closely involved in allocating priorities for research funding.[55] It was also suggested that stronger links need to be forged between agricultural and community groups and research organisations.[56]

9.56 The Cobar RLPB suggested that a research officer be funded to consult with community groups in relation to research priorities.[57] The committee considers that community consultation is important in determining research priorities. Funding should, accordingly, be allocated to the AIA CRC for the employment of a person to liaise with individuals, farmers and industry groups, private research groups, community groups and governments in determining research priorities and funding allocations.

Development

9.57 It was submitted that too much emphasis is currently placed on research, without a corresponding focus on extension and development. More of an effort needs to be made to apply techniques based on existing research, rather than placing all the emphasis on the promise of new control techniques and further research.[58]

9.58 Mr Clive Marks, from Nocturnal Wildlife Research, stated:

> I believe that there has often been a huge gap between research outcomes and product development and commercialisation in this area. This is where we have fallen down. Quite often it is not the failure of research to come up with answers but the failure that we mostly find in state governments, for many of the reasons … about coordination and appropriate use of funds, so that we have no adoption strategies, generally, to follow. We have governments that have attempted to privatise areas of research like this when really there are not very many people that are willing to pick up and pay for things which are going to be in the public interest or to develop techniques for animal welfare reasons.[59]

55 Animal Control Technologies, *Submission 84*, p. 11.

56 CCWA, *Submission 37*.

57 *Submission 78*, p. 5.

58 Animal Control Technologies, *Submission 84*, p. 56.

59 *Transcript of evidence*, 15 June 2005, pp. 22-23.

9.59 The committee notes that providing funding for implementing research outcomes is just as important as funding research in the first place. The committee was provided with evidence that some research projects have been successful, but have not been implemented due to lack of commercial interest or funding to take the project beyond the research stage.[60]

9.60 The committee believes, therefore, that bodies such as the AIA CRC and NFACP should give serious consideration to achieving an appropriate balance between funding for new research and funding to improve existing methods and develop research outcomes into tangible solutions.

Recommendation 45

9.61 **The committee recommends that the Australasian Invasive Animals Cooperative Research Centre:**

- **coordinate with all stakeholders to develop research priorities for national pest animal research;**
- **establish a national database recording all significant past and ongoing pest animal research;**
- **collaborate with research and development corporations and private sector research groups to ensure that the potential for involvement of these groups in pest animal research and development is maximised;**
- **be provided with funding from the Australian Government to employ a person to liaise with individuals, farmers and industry groups, private research groups, community groups and governments in relation to determining research priorities and funding allocations; and**
- **together with the National Feral Animal Control Program develop appropriate frameworks for balancing funding between research and development and implementation of existing research outcomes.**

60 Mr Clive Marks, Nocturnal Wildlife Research, *Transcript of evidence*, 15 June 2005, p. 22.

Registration of new products

9.62 When new agricultural chemical products are created, most will need to become registered before they can be distributed legally. The registration process is currently administered by the APVMA.

9.63 The committee received evidence that the registration process for new agricultural chemical products is lengthy and expensive, and is unnecessarily complex:[61]

> [I]t is the nightmare of the registration process, it is the lack of clarity of the registration process, it is the lack of marriage of need and outcome with assistance and the extended time lines and the cost of trying to service those. It is difficult enough to do the research and development and bring a product to the market, but when you cannot really predict what you need, where the review process is a bit murky and where the goalposts keep moving, it is a tough ask.[62]

9.64 Actual times for the registration of new products were given as varying between one and three years, depending on the nature of the project.[63]

9.65 Similar evidence was provided by DAWA in relation to the granting of a permit to use baits for the eradication of fire ants in wetland areas. Approval did not occur until two years into the three-year eradication program, which jeopardised the $145 million investment in the program.[64]

9.66 Part of the reason for these delays, as explained by Dr Peacock of the AIA CRC, may be that each time a new product is registered, it is compared with the position from scratch, rather than being compared with existing control methods. Dr Peacock stated:

> At the moment, a farmer will organise his neighbours, they will rent a helicopter and they will go and shoot a heap of horses, butcher them up into chunks of meat and, with an authorised officer, inject them with the same amount of 1080 as is in these baits. They will throw them out of the plane. The registration process does not really take account of what is happening now. You are being compared with the position from scratch each time

61 Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, pp. 7-8.

62 Mr Clive Marks, Nocturnal Wildlife Research, *Transcript of evidence*, 15 June 2005, p. 24.

63 Dr Linton Staples, Animal Control Technologies, *Transcript of evidence*, 15 June 2005, p. 17.

64 *Submission 98*, p. 17.

> rather than with whether it is better than what is currently happening.[65]

9.67 The APVMA, in evidence presented to the committee, stated that the time-frames as set out in the *Agricultural and Veterinary Chemicals Code Regulations* range from three months to a maximum of 15 months for a brand new product. Historically, more than 90 percent of applications have been completed within the legislative time frames.[66]

9.68 According to the APVMA, the reason for delays in the registration process is often that there are deficiencies in applications. It may take several months for applicants to supply additional information required to address these deficiencies, which contributes to delays. It was also suggested that, in relation to restricted chemical products that can only be administered by people authorised at a state level, the consultation process with states and territories is a factor responsible for delay.[67]

9.69 Other evidence provided to the committee indicated that application deficiencies may in turn be due to complexities in the application process and resulting uncertainty about what needs to be included in application materials.[68]

9.70 The committee wrote to the then Minister for Agriculture, Fisheries and Forestry, Warren Truss MP on 23 June 2005, requesting a response as to how the length of time and costs involved in registration could be reduced, and the registration process simplified.

9.71 The response, from Senator the Honourable Richard Colbeck, Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry, indicated that registration times and costs are low in Australia, compared to some other countries. As an example, an application to the United States Environmental Protection Agency to register a new product would cost US$475,000 with a timeframe of 24 to 32 months, compared to AUS$48,860 and 15 months for the APVMA.

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65 *Transcript of evidence*, 11 May 2005, p. 8.

66 Dr Joe Smith, APVMA, *Transcript of evidence*, 1 June 2005, pp. 16-17.

67 Dr Joe Smith, APVMA, *Transcript of evidence*, 1 June 2005, pp. 16-17.

68 Mr Clive Marks, Nocturnal Wildlife Research, *Transcript of evidence*, 15 June 2005, p. 24.

9.72 The response went on to note that the APVMA is pursuing operational reforms to make improvements, particularly in relation to efficiencies with regulation of low risk products, approval of product labels and non-technical amendments to product registration. The Auditor-General, Mr Ian McPhee, has also been asked to conduct an audit into the APVMA's performance.[69]

9.73 It is the committee's view, despite this response, that there is still room for improvement in the performance of the APVMA. The fact that its performance measures up favourably against the poor performance of the United States in this area is not a reason to avoid making necessary improvements in the efficiency and cost-effectiveness of the registration process.

9.74 The committee believes that it is important that the process for registration of new chemical pest animal control products be as simple and expeditious as possible. The committee acknowledges the APVMA's record in complying with its statutory time frame for registration and the relative brevity of that timeframe compared with the comparable system in the United States. The committee is concerned, however, that some new products have been subject to unacceptable delays in progressing from the research stage to the market.

9.75 The committee is in agreement, therefore, that the APVMA should be encouraged to review its process for registration of products and, where possible, to simplify that process with a view to reducing delays involved in applications and deficiencies in information. The committee notes that the APVMA is currently in the process of developing standards for listed registration of lower risk products, which would streamline the registration process for products that carry a lower risk to health and safety and the environment.[70] Recent improvements in the process were noted by Animal Control Technologies, in particular, the issuing of experimental and emergency use permits for the use of some products.[71] This is considered to be a positive development, however further improvements in the registration process are needed.

69 Correspondence from Senator the Honourable Richard Colbeck, Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry, 21 July 2005 and 11 August 2005.

70 Dr Joe Smith, APVMA, *Transcript of evidence*, 1 June 2005, p. 22.

71 *Transcript of evidence*, 15 June 2005, p. 14.

9.76 An additional factor leading to delays in new innovations making it onto the market is the fact that the legislative criteria under which the APVMA operates do not include animal welfare considerations. This means that animal welfare considerations are not taken into account at the registration stage, leading to delays if the humaneness of the product is challenged subsequent to registration. The inclusion of animal welfare criteria consideration as part of the APVMA's role was recommended by the Discussion Group arising out of the RSPCA Australia joint workshop, held in August 2003.[72]

9.77 The committee considers that the efficiency of the registration process would be increased if humaneness were included within the APVMA's legislative criteria.

Recommendation 46

9.78 **The committee recommends that the Australian Government:**

- **direct the Australian Pesticides and Veterinary Medicines Authority to review the process for registration of chemical pest animal control methods to ensure that procedures are as simple and as expeditious as possible; and**
- **amend the legislative criteria under which the Australian Pesticides and Veterinary Medicines Authority operates to expressly include consideration of animal welfare at the time registration is first considered to avoid separate consideration at a later date.**

72 *Exhibit 11*, *A National approach towards humane vertebrate pest control*, Discussion paper arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, Melbourne, 4-5 August 2003, p. 24, see also Mr Clive Marks, Nocturnal Wildlife Research, *Transcript of evidence*, 15 June 2005, p. 24, Animals Australia, *Submission 32,* Attachment, F Seymour and G Oogjes, *The Risky Politics of Scape-Goating the Victim*.

10

Community education and awareness about pest animals

Overview

10.1 Some submissions to the inquiry indicated that there is a general lack of public awareness about pest animal issues in the community. Various gaps in awareness, both general and specific, were identified.

10.2 Suggested target areas for public education and awareness campaigns are set out below. These include education about the general effects of pest animals, including the true costs of pest management, the impact of pest animals on agriculture and the environment, and the fact that pest animals are vectors of serious diseases.

10.3 The committee also received evidence that members of the broader community, and in particular new landholders in rural areas, need to be made aware of their responsibilities in terms of controlling pest animals on their own properties and ensuring that domestic animals do not escape and themselves contribute to pest animal problems.

10.4 A number of useful suggestions for educational strategies were made, including pest animal awareness days, newspaper and television promotions, and school education programs.

General community awareness

10.5 Many submissions to the committee indicated that there needs to be more community awareness about pest animal issues.

10.6 In particular, it was suggested that the community needs to be educated about what species are pest animals, the damage they cause to agriculture and the environment, the steps people can take to monitor and report pest animals in their community, and public responsibilities in relation to pest animal control.[1]

10.7 The committee was told that the community also needs to be made aware of the true costs of pest management. This would include informing the public about the costs of disease transmission, reduced agricultural production, social impacts and other costs.[2] It is also important that the public is aware of the contribution that agricultural industries make to the Australian economy,[3] and the adverse consequences that will result from failing to properly manage pest animal problems.

10.8 The committee notes that there is a tendency in some areas to suppress information about the unattractive aspects of pest animal problems. A news item from June of this year reported that the Tenterfield Shire Council is considering stopping the practice of hanging dead wild dogs near main roads following complaints from tourists.[4] The committee also heard from pastoralists in the Western Australian town of Leonora that local newspapers refuse to publish pictures of livestock killed by wild dogs due to concerns about readers' squeamishness.[5]

10.9 The committee understands concerns about public exposure to unpleasant sights such as dead animals. The committee believes, however, that the reluctance to show evidence of pest animals and the damage that they cause contributes to the wider problem of a lack of public awareness about pest animal problems and the need for solutions. Hiding issues from the community will not help to make people more aware of the serious nature

1 *Submissions 15*, *28*, *34*, *40*, *44*, p. 1, *52*, p. 2, *71*, *78*, p. 5, *95*.

2 *Submissions 34*, *40*, *78*, p. 5, *80*, p. 5.

3 Monaro Merino Association, *Submission 60*, p. 3.

4 ABC News Online, *Tourists complain about dead dogs hung from trees*, ABC, 7 June 2005, viewed 17 October 2005, <http://www.abc.net.au/news/newsitems/200506/s1386007.htm>.

5 Roundtable with Leonora pastoralists, 12 April 2005.

of the pest animal problem. Some of the photographs shown to the committee, for example, were images of living sheep with their insides exposed by wild dog attack; although graphic, these pictures brought home to the committee in a compelling way the significant damage that these animals do.

10.10 It is important that information provided to the community on pest animal issues be accurate, balanced and well-informed. It was pointed out to the committee that a lot of unnecessary time and money is involved in dispelling community misconceptions that arise from the spreading of "folklore evidence".[6]

10.11 It was suggested that community hostility toward some forms of pest animal control is based on a lack of understanding about the nature of the pest animal problem and the impact that it has on farmers and rural communities generally.[7] It was felt that educating the general public about the need for humane, lethal control would address this issue.[8]

10.12 An example is the culling of feral horses in national parks in New South Wales. The committee received evidence that community education and consultation are vital in programs such as these so that the public understands the need for control to be carried out. Although culling can invoke an emotional response in many people, particularly when the animal involved is one like the wild horse, herds of unmanaged animals can cause tremendous environmental damage. Population build-ups can also result in starvation of the animals when numbers reach unsustainable levels.[9]

10.13 The committee believes it is vital that the community be properly informed about pest animals and their impact on agriculture and the environment. As well as facilitating an understanding of the need for pest animal control, this is also important to ensure that members of the public are able to fulfil their own responsibilities in terms of detecting and reporting pest species.[10]

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6 Animal Control Technologies, *Submission 84*, p. 11.

7 Animal Control Technologies, *Submission 84*, pp. 23-24, Professor AW English and Dr RS Chapple, *A Report on the Management of Feral Animals by the New South Wales National Parks and Wildlife Service*, NSW NPWS, 5 July 2002, viewed 27 September 2005, <http://www.nationalparks.nsw.gov.au/PDFs/english_report_pest_animal_progs_fullreport.pdf>, p. 47.

8 BRS, *Submission 76*, p. 17.

9 Associate Professor AW English, *Report on the Management of Feral Horses in National Parks in New South Wales*, New South Wales NPWS, 2001, viewed 21 September 2005, <http://www.nationalparks.nsw.gov.au/PDFs/english_report_final.pdf>, pp. 19-20.

10 *Submissions 72*, p. 2, *80*, p. 3.

10.14 The committee is aware that AQIS is currently engaged in providing information to the public to enable people to identify new pest animal species and about what to do in the event of a sighting through the 'Quarantine Matters' campaign featuring popular television figure Steve Irwin.[11] The committee was also provided with evidence in relation to current education and awareness programs being run by organisations such as Animal Control Technologies and the BRS,[12] regional pest animal coordination groups,[13] and state government departments. [14]

10.15 Some submissions recommended particular strategies for increasing community awareness about pest animal issues, including:

- standard educational processes, such as posters, stamps, television and radio advertising;[15]
- national awareness programs, focusing on community involvement;[16]
- national pest weeks,[17] which might include award ceremonies, clean-ups, field days and competitions;
- establishment of experimental plots to record progressive damage caused by feral animals, and to chart recovery progress when animals are removed;[18]
- circulation of illustrations of pest species and information on their biology, preferred habitat and behavioural patterns;[19]

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11 DAFF, *Quarantine Matters! Public awareness campaign,* DAFF, Canberra, 27 August 2003, viewed 17 October 2005, <http://www.daff.gov.au/content/output.cfm?ObjectID=DB25D064-9DC1-48A0-BA0422BDDB86B0FE&contType=outputs>.

12 *Submission 84*, p. 8, Lapidge, Bourne, Braysher, and Sarre (2004-present) feral.org.au [Online], <http://www.feral.org.au>.

13 *Exhibit 7,* TFAWG, *Co-operative Wild Dog/Fox Management Program*, Draft no. 5, March 2002, p. 18.

14 DAWA, *Submission 98,* p. 20, Queensland Government, *Queensland Pest Animal Strategy 2002-2006*, DNRM, viewed 5 October 2005, <http://www.nrm.qld.gov.au/pests/management_plans/pdf/qld_animal_strategy.pdf>, p. 27.

15 *Submissions 34*, *80*, p. 4, *95*.

16 *Submissions 59*, p. 18, *71*.

17 David and Penny Shaw, *Submission 34*, Ms Anna-Marie Penna, CCWA, *Transcript of evidence*, 11 April 2005, p. 9, *Exhibit 1,* AEC Group, *Economic Impact of State and Local Government Expenditure on Weed and Pest Animal Management in Queensland*, Local Government Association of Queensland, October 2002, pp. 56-63.

18 Mr Rodney Chevis, *Submission 44*, p. 7.

19 Mr Pat Larkin, *Submission 48*.

- advertising in newspapers and on radio to build the knowledge of landholders about wild dogs and the need to report sightings and attacks;[20] and
- balanced education about pest animal issues through schools and tertiary institutions.[21]

10.16 The BRS and the AIA CRC have a website called feral.org.au that is a reference point for the public and for researchers and pest animal controllers.[22] Dr Jeanine Baker, of the SSAA, suggested that the AIA CRC should utilise its extension program to distribute information to the public about the need for pest animal control to counter the 'cute and furry' image that many people seem to have of pest animals.[23]

10.17 The committee agrees that there is a need to develop strategies for improving general community awareness about the issues raised in submissions. The committee believes that the proposed National Pest Animals Advisory Committee will be ideally positioned to investigate methods of educating the community about pest animal issues.

Specific education and awareness issues

10.18 As well as general awareness of pest animal issues, the committee received submissions indicating that information campaigns need to be targeted at particular persons or about particular issues. These include education of non-farming landholders in rural areas, education about urban pests, increasing public awareness about commercial use of pest animals and providing information to the public about issues such as release of immunocontraceptive viruses.

Non-farming landholders in rural areas

10.19 As indicated in Chapter 7, farmers frequently experience problems with neighbouring landholders who are not aware of their responsibilities in relation to pest animal management. The committee believes that education plays an important part in ensuring that all landholders fulfil their land management obligations.

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20 Cooloola Shire Council, *Submission 95*.

21 Bombala RLPB, *Submission 80*, p. 4.

22 Dr Tony Peacock, PAC CRC, *Transcript of evidence*, 11 May 2005, p. 6.

23 *Transcript of evidence*, 25 May 2005, p. 5.

10.20 Some submitters pointed to the need for education of landholders who move to rural areas or live in regions where urban areas encroach on agricultural areas.[24] Landholders new to the area may be unfamiliar with issues common to rural areas, such as the importance of managing pest animal and plant issues on their properties.

10.21 Educating people about the problems pest animals cause is important in ensuring that they understand the need for pest animal control. Mr Pat Larkin, a member of the Wangaratta Branch of the VFF, stated:

> Part of the education processes identifying pests is to educate people who come to the bush … (f)rom the city, and even from some of the larger regional centres. I have seen estate agent ads—not recently, I must admit, but some years ago—in which rocks and rabbits were part of a feature to attract people to buy a nice, little piece of paradise: 'Rabbits are nice, cuddly, little things.' A lot of people have strong humane values and have great difficulty with poisoning rabbits and shooting kangaroos. That is to be respected. Part of the education process is (1) to identify the animal, (2) to identify the habitat it is most likely to be found in and (3) to show some illustration of what damage that animal can cause to other living things—not just predatory animals but animals such as the rabbit that outcompete sheep or native animals. Rabbits could probably be just as responsible as foxes for eradicating bandicoots by taking their food resource and by outcompeting them on harbour. That cycle is generally unknown not so much to long-term, full-time farm residents but to lifestyle people coming in now. There has not been much education.[25]

10.22 People also need to be made aware of the dangers of releasing animal species into the wrong habitat.[26] For example, it is important that people be cognisant of the need to properly restrain dogs in rural areas so that they do not escape and attack livestock or inter-breed with the wild dog population. The State Council for the RLPB reported that there had been more than 80 confirmed cases of livestock attacks by domestic dogs in the Goulburn RLPB District during 2002.[27]

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24 *Submissions 48*, *71*, *81*, p. 5, *82*.

25 *Transcript of evidence*, 18 June 2004, pp. 21-22.

26 *Submissions 4*, *15*, *40*, *80*, p. 2, *81*, p. 9.

27 *Submission 81*, p. 10.

10.23 A particular incident of livestock destruction by domestic dogs was relayed to the committee by Mr Michael Hartmann of the CCA:

> A really good example I can give is with wild dogs, which are an enormous problem for us. One of the issues we have is with domestic dogs that go walkabout at night time. They have savaged a whole bunch of sheep and the next day they have gone back to the front porch and nobody would believe that little fluffy would have done that. In our area I know of a sausage dog that was the leader of the pack. He was not killing any sheep; he was getting all his mates and they were all going and doing the killing. Once we got rid of the sausage dog we solved the sheep killing problem.[28]

10.24 Awareness promotion for local landholders could take a variety of forms. One possibility is field days for local landholders in which pest animal management is explained, like those run by the RLPB in New South Wales in some areas.[29]

10.25 The Carboor/Bobinawarrah Landcare Group suggested that landholders be provided with short training courses in administration of specific baits. This would remove the need for landholders to obtain a full Farm Chemical Users' Certificate prior to being able to lay baits on their lands.[30]

10.26 It was also suggested by Sandy Creek Catchment Landcare that landholder education could occur by means of councils distributing handbooks for new landowners, including pest animal control information and contacts.[31]

10.27 The committee notes the important role that education plays in ensuring that landholders, particularly those new to rural areas, are aware of and fulfil their responsibilities in relation to pest animal management. The committee believes that the proposed National Pest Animals Advisory Committee should investigate ways to promote pest animal issues to purchasers of land and new rural landholders.

28 *Transcript of evidence*, 15 June 2005, pp. 8-9.

29 Braidwood RLPB, *Submission 71*.

30 *Submission 54*, p. 5.

31 *Submission 43*, p. 3.

Urban pests

10.28 The QFF pointed to the need to raise public awareness about urban pests, such as birds, pigs, dogs and cats. They pointed out that these animals cause damage to the environment, and also affect small urban-fringe agricultural pursuits such as market gardens. They suggested that education campaigns focus on the effects that these pests have on the community, for example, increasing the cost of local produce.[32]

10.29 Other submissions discussed urban pests such as starlings, indian mynas and brush-tail possums, and pointed to the need to educate urban residents about the damage caused by these species.[33]

10.30 Education of urban communities is also important because ports of entry are often located in city areas, and the community plays an important part in helping to identify incursions of exotic insects.[34] Some exotic invertebrates, like the Asian gypsy moth, attack trees and plants in urban areas, and insects like RIFA can cause serious problems for urban landholders.[35] DAWA stated:

- Cities are transport endpoints – the portal through which most exotic pests enter a country.
- Cities contain a great diversity of plant hosts (especially exotic species) capable of acting as hosts for exotic insects and diseases.
- Cities contain a great diversity of habitats from natural ecosystems through to highly artificial irrigated and reticulated gardens.
- High value vegetable and fruit crops are grown on the outskirts of major cities. If a pest is going to be a problem it is likely to be a problem first in someone's backyard in the city.
- Cities also have one other feature – a high human population which we can engage in surveillance.[36]

10.31 The committee notes that it is important for urban residents to be involved in awareness campaigns about pest animals. Pest animal issues arise in urban as well as rural areas, particularly in relation to potential incursions of exotic insects.

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32 *Submission 59*, p. 18. Also see Ovens Landcare Network, *Submission 52*.

33 *Submissions 6*, Attachment, p. 4, *29*, *48*, *78*, *84*, pp. 18, 37.

34 DAWA, *Submission 98*, pp. 4, 21.

35 DAWA, *Submission 98*, pp. 11-12.

36 *Submission 98*, p. 21.

Community perceptions of wildlife trade

10.32 The committee was told that the public needs more information about the impacts that native species have on agriculture and the environment.[37]

10.33 The committee was advised, in particular, that community perceptions about wildlife trade can be an impediment to the commercial utilisation of pest animal species.[38] This means that animals that might otherwise have been used for commercial benefit through sale of skins or meat may simply be killed and left to rot.

10.34 This passage from the submission made by FGA and the SSAA illustrates the point very well:

> There have been scant resources dedicated to educating the community on the interaction between animal and human species. Killing of animals is something that some people may find abhorrent, even though it is necessary for food production and conservation and biodiversity management. There is also confusion about what constitutes pest animal management and what consists of unnecessary slaughter. This confusion is exploited by radical Animal Rights extremists. …
>
> [An example] relates to the damage caused by koalas on Kangaroo Island, South Australia. This damage has been acknowledged by ecologists and wildlife biologists for almost 50 years, yet we have avoided addressing the problem. The result is a management problem requiring the harvesting of overwhelming numbers of koalas in order to leave a sustainable population. The community is shocked by the scale of the planned culling but, at the same time has not been provided with the knowledge to appreciate that a healthy ecosystem or that the koala population itself will only survive into the future if a reduction in total koala numbers is undertaken.[39]

10.35 While the committee acknowledges the need for harvesting of native animals to be as humane as possible, it also notes that commercial wildlife enterprises may be adversely affected by incorrect perceptions about the 'cruelty' of killing native animals for profit.[40] This may mean that farmers who are struggling financially due to drought, pest animal and other

37 QFF, *Submission 59*, p. 18.

38 FGA and SSAA, *Submission 90.*

39 *Submission 90*.

40 Senate Rural and Regional Affairs and Transport References Committee, *Commercial Utilisation of Australian Native Wildlife*, Commonwealth of Australia, June 1998, p. xxvii.

problems, are deprived of a supplementary source of income through the commercial use of pest animals.

10.36 Mr Rupert Gregg, President of the TFGA, spoke to the committee about the need for a community focus on the issue in the Tasmanian context:

> Wildlife populations are universal and widely dispersed in Tasmania. They are a community problem, and we need a community focus on how those populations are managed, in the same way as we manage our livestock populations, the trout population, and so on. It is no longer satisfactory to regard the wallaby population problem as being a problem just for farmers. It is a problem for all of us.[41]

10.37 The committee believes there is a need for the community to be educated about the adverse effects that native wildlife can have for both agriculture and the environment. People should be provided with information necessary for them to understand the consequences if native populations are allowed to thrive unchecked, and the benefits that may arise from commercial utilisation.

Informing the public about pest control measures

10.38 With so many diseases and viruses posing a threat to both humans and animals in modern society, the public is understandably wary about releasing new diseases and viruses, even where the rationale for that is a worthy objective such as controlling pest animal populations.[42]

10.39 It is, therefore, important the public receive as much information as possible prior to the undertaking of control programs that involve the release of substances such as biological agents for rabbit control. Community involvement and consultation is the key to success and acceptance of such programs.[43] Initiating community awareness campaigns now will enable public debate to occur prior to these kinds of measures being ready for implementation.

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41 *Transcript of evidence*, 29 March 2005, p. 10.

42 Animal Control Technologies, *Submission 84,* p. 17.

43 BRS, *Submission 76*, Attachment H, CK Williams, I Parer, BJ Coman, J Burley and ML Braysher, *Managing Vertebrate Pests: Rabbits*, Bureau of Resource Sciences/CSIRO Division of Wildlife and Ecology, Australian Government Publishing Service, Canberra, 1995, pp. 9, 98, Foundation for a Rabbit-Free Australia, *Submission 97,* p. 6.

Recommendation 47

10.40 **The committee recommends that the proposed National Pest Animals Advisory Committee:**

- **develop a national strategy for improving and promoting community awareness about pest animal issues;**
- **investigate ways to promote pest animal issues to purchasers of land and new rural landholders;**
- **investigate ways to educate urban residents about pest animal issues;**
- **examine ways to promote the benefits of sustainable commercial use of native wildlife to the community; and**
- **investigate the need for community awareness about controversial measures of controlling pest animals,**

and report to the proposed National Pest Animals and Weeds Committee.

Alby Schultz MP

Committee Chair

2 November 2005

A

Appendix A – List of submissions

Number	Individual/Organisation
1	Timms, Mr Robert
2	Bashford, Mr Dick
3	Breadon, Mr Garry
4	Plozza, Mr Steven
5	Constance, Mr Ernie
6	Masters MLA, Mr Bernie
7	Shire of Laverton
8	Sleeman, Mr Braham
9	Threadgold, Mr R W
10	Coysh, Mr Phillip
11	Victorian Farmers Federation – Barnawartha Branch
12	Clift, Mr Colin
13	Transport Concepts (Qld) Pty Ltd
14	Brien, Ms Denise
15	Cooma Rural Lands Protection Board
16	Kennedy, Ms Marion

17 District Council of Grant

18 Victorian Farmers Federation – Wangaratta Branch

19 Country Women's Association of New South Wales

20 Sporting Shooters Association of Australia

21 Biel, Mr Ed

22 Burston, Geoff & Alison

23 Mowbray, Dr G

24 Talbot, Mrs Coral

25 Burdekin Productivity Services Ltd

26 Barry, Mr Fraser

27 AgForce

28 O'Brien, Mr Greg

29 Field and Game Australia

30 Flannagan, J E

31 NSW Farmers' Association

32 Animals Australia

33 Pest Animal Control Cooperative Research Centre

34 Shaw, David & Penny

35 Franklin, Ms Noeline

36 Western Australian Farmers Federation

37 Conservation Council of Western Australia

38 Curdies Valley Landcare Group

39 Victorian Farmers Federation – Corryong Branch

40 Clydsdale, Neil & Marilyn

41 Northern Slopes Rural Lands Protection Board

42 Reid, Bruce & Barbara

43 Sandy Creek Catchment Landcare

44 Chevis, Mr R A F

45	Maguire, Mr Robert
46	South Australian Farmers Federation
47	RSPCA Australia
48	Larkin, Mr Pat
49	Cattle Council of Australia and the Australian Veterinary Association
50	National ICT Australia Ltd
51	Connley, Rodger & Yvonne
52	Ovens Landcare Network
53	Victorian Farmers Federation – Wodonga District Council
54	Carboor / Bobinawarrah Landcare Group (North East Victoria)
55	CSIRO
56	Tasmanian Farmers and Graziers Association
57	North East Pest Animal Advisory Committee
58	Gossage, Bill and Gloria
59	Queensland Farmers' Federation
60	Monaro Merino Association
61	Foster, Mr Peter
62	Timboon Bushland Co-operative
63	ACT Government
64	Sinclair, Mr John
65	Anderson, C E & D G
66	Victorian and NSW Wild Dog Coordinating Committee
67	Forestry Tasmania
68	Tasmanian Game Management Services Unit
69	Animal Liberation
70	Western Australian Government
71	Braidwood Rural Lands Protection Board
72	Northern Territory Government

73	Cheshire, Mr Noel
74	Jarvis, Graeme & Carol and Galbraith, Glenn & Carolyn
75	NSW Farmers' Association – Cooma District Council
76	Bureau of Rural Sciences
77	Hume Rural Lands Protection Board
78	Cobar Rural Lands Protection Board
79	Tamworth Rural Lands Protection Board
80	Bombala Rural Lands Protection Board
81	State Council for the Rural Lands Protection Board NSW
82	Arkinstall, Mr Matthew
83	Gell, Mr John W
84	Animal Control Technologies
85	Lee, Mr Robert
86	Axford, Peter & Flora
87	Boladeras, Kathy & Malcolm
88	Humane Society International
89	Tasmanian Conservation Trust
90	Sporting Shooters Association of Australia and Field and Game Australia (supplementary submission to sub 20 and 29)
91	Wildlife Advocate Inc.
92	Name withheld
93	Hore, Mr Terry
94	Allen, Mr Craig
95	Cooloola Shire Council
96	Eveleigh, Mr Reginald
97	Foundation for a Rabbit-Free Australia
98	Western Australian Government, Department of Agriculture (supplementary submission to sub 70)
99	Nocturnal Wildlife Research Pty Ltd

100	Spencer, Mr Peter
101	Talbot, Mrs Coral (supplementary submission to sub 24)
102	Hedger, Mr Harley
103	Green, Ms Ellen

B

Appendix B – List of exhibits

1 Report 'Economic Impact of State and Local Government Expenditure on Weed and Pest Management in Queensland', forwarded by the Local Government Association of Queensland.

2 Copy of submission to the NSW Legislative Council General Purpose Standing Committee No. 5 Inquiry into Feral Animals, August 2001 by the Tumbarumba Shire Feral Animal Working Group, presented by Mr David Saxton.

3 The National Wild Dog Summit, Wodonga Civic Centre, 22nd February 2002, Conference Proceedings, presented by Ms Betty Murtagh, Albury, 18 June 2004.

4 Motions passed at Tallangatta meeting of landholders, 17 June 2004, presented by Mr Brian Fraser, Albury, 18 June 2004.

5 'Farmers wild over killer dogs', *Herald Sun*, 15 May 2004, presented by Mrs Alison Burston, Albury, 18 June 2004.

6 Photographs (3) of feral pig killed in Gippsland, 17 June 2004, presented by Mr Fraser Barry, Albury, 18 June 2004.

7 Tumbarumba Shire Feral Animal Working Group, 'Draft Co-operative Wild Dog/Fox Management Program', presented by Mr David Saxton, Albury, 18 June 2004.

8 'Gravy train of inexperience', presented by Mr Tuckey, Albury, 18 June 2004.

9 Information about Wild Dog Management Groups and a proposed national Competency Standard for Vertebrate Pest Management, presented by Mr Geoff Burston, Benambra.

10 Wild dog/fox working group, Cooperative Wild Dog/Fox Control Plan, July 2002 – June 2005, tabled by Mr Schultz, 16 February 2005.

11 'A national approach towards humane vertebrate pest control: 'Discussion paper', arising from the proceedings of an RSPCA Australia/AWC/VPC joint workshop, 4-5 August 2003, Melbourne, forwarded by RSPCA Australia.

12 'Developing alternatives to 1080 for managing browsing', Tim Wardlaw, Principal Scientist (Biology & Conservation), Forestry Tasmania, presented by Mr Tim Wardlaw, Longford, 29 March 2005.

13 'State of the Forests Report 2002' and other documents presented by Mr Trevor Bird, Longford, 29 March 2005.

14 Documents and correspondence presented during discussions at Warrawagine Station – 21 July 2005.

15 'Survey – Wild Dogs', September 2002, presented by Michael and Susan Litchfield, Cooma, 9 September 2005.

16 Articles on *Neospora caninum* and other documents presented by Mrs Ellen Green, Cooma, 9 September 2005.

17 Wild dog articles and photos presented by Mrs Sylvia Golby, Cooma, 9 September 2005.

18 'Report on material presented and recommendations, in the matter of the Wild Dog Advisory panel Meeting, Queanbeyan, 4 September 2001', presented by Mr Bob Maguire, Cooma, 9 September 2005.

19 Maps and correspondence related to sheep kills by wild dogs, presented by Mr Bob Maguire, Cooma, 9 September 2005.

20 '3-Year Cooperative Wild Dog/Fox Plan for Rocky Plain/Snowy Plain', presented by Mr Bob Maguire, Cooma, 9 September 2005.

C

Appendix C – List of public hearings

Friday, 18 June 2004 - Albury

Individuals

Mr Fraser Barry

Mr Garry Breadon

Mr Geoffrey Burston

Mrs Alison Burston

Mr Noel Cheshire

Mr Neil Clydsdale

Mr Rodger Connley

Mr Phillip Coysh

Mr John Sinclair

Mr Antony Plowman, Member for Benambra, Victorian Parliament

Carboor / Bobinawarrah Landcare Group

Ms Suzanne Briggs, Co-ordinator

Mansfield Wild Dog Group

Mr Greg O'Brien, Chairman

Mid Ovens Landcare

Mr Ronald Briggs, Rabbit Coordinator

New South Wales Upper Murray Graziers

Mr Russell Murdoch, Nominated Representative

Ovens Landcare Network

Mr Jack Jones, Chair

Mr Alby McIntosh, Pest & Weeds Coordinator

Mr James Neary, Committee Member

Tumbarumba Feral Animal Working Group

Mr David Saxton, Landholder Member

Victorian Farmers Federation - Corryong Branch

Mr Douglas Paton, Member

Victorian Farmers Federation - Wangaratta Branch

Mr Ronald Briggs, Pest Plants Coordinator

Mr Christopher Gibson, Secretary

Mr Anthony Griffiths, Member

Mr Pat Larkin, Member

Victorian Farmers Federation – Barnawartha Branch

Mrs Betty Murtagh, Secretary/Treasurer

Mr Ian Lobban, Member VFF & Member of Wodonga Livestock D.C.

Victorian Farmers Federation – Wodonga District Council

Mr Brian Fraser, President VFF/Chairman WDC

Wednesday, 11 August 2004 - Canberra

Victorian and NSW Wild Dog Coordinating Committee

Ms Noeline Franklin

Wednesday, 16 February 2005 - Canberra

Bureau of Rural Sciences

Dr Mary Bomford, Principal Scientist

Dr Colin Grant, Deputy Executive Director

Mr Quentin Hart, Project Manager, National Feral Animal Control Program

Dr Kim Ritman, Program Leader

Department of Agriculture, Fisheries and Forestry - Australia

Mr Ian Thompson, Executive Manager, Natural Resources Management

Mr Simon Veitch, Manager, Sustainable Industry Initiatives

Wednesday, 16 March 2005 - Canberra

Animals Australia

Ms Kristi-Anna Brydon, Executive

Mr Mark Pearson, Vice President, Farm Animals Division

RSPCA Australia

Dr Bidda Jones, Scientific Officer

Tuesday, 29 March 2005 - Longford

Individuals

Dr Graham Hall

Forest Industries Association of Tasmania

Mr Chris Barnes

Forestry Tasmania

Mr Richard Bashford, Snr Silvicultural Technician, Forest Entomology

Dr Timothy Wardlaw, Principal Scientist, Biology and Conservation

Forests & Forest Industry Council

Mr Trevor Bird, General Manager

Tasmanian Conservation Trust

Mr Alistair Graham

Tasmanian Farmers and Graziers Association

Mr Rupert Gregg, President

Mr Ian Whyte, Executive Officer, Natural Resource Management

Monday, 11 April 2005 - Perth

Conservation Council of WA

Ms Anna-Marie Penna, Salinity and Rural Liaison Officer

Mr Chris Tallentire, Director

Western Australian Government, Department of Agriculture

Dr Andrew Woolnough, Research Officer, Vertebrate Pest Research Section

Dr Ashley Mercy, Acting Executive Director, Animal Industries

Western Australian Government, Department of Conservation and Land Management

Mr Keiran McNamara, Executive Director

Mr Gordon Wyre, Acting Director of Nature Conservation

Wednesday, 11 May 2005 - Canberra

Pest Animal Control Cooperative Research Centre

Dr Tony Peacock, Chief Executive Officer

Wednesday, 25 May 2005 - Canberra

Field & Game Australia Inc.

Mr Rod Drew, Chief Executive Officer

Sporting Shooters Association of Australia

Dr Jeanine Baker, President, Branch & Research Coordinator

Mr Colin Wood, Hunting and Conservation Consultant

Wednesday, 1 June 2005 - Canberra

Australian Pesticides and Veterinary Medicines Authority

Dr Eva Bennet-Jenkins, Program Manager, Pesticides

Dr Joe Smith, Chief Executive Officer

Department of the Environment and Heritage

Dr Ian Pitt, Assessor, Chemical Assessment Section, Environment Protection Branch

Mrs Cindy Steensby, Acting Director, Sustainable Wildlife Industries

Mr Mick Trimmer, Acting Assistant Secretary, Wildlife Trade and Sustainable Fisheries Branch

Wednesday, 15 June 2005 - Canberra

Animal Control Technologies

Dr Linton Staples, Managing Director

Australian Veterinary Association

Dr Kevin Doyle, Veterinary Director

Cattle Council of Australia

Mr Michael Hartmann, Acting Executive Director

Nocturnal Wildlife Research Pty Ltd

Mr Clive Marks, Director

Wednesday, 20 July 2005 - Perth

Agriculture Protection Board

Mr Chris Richardson, Chairman

Western Australian Government, Department of Agriculture

Mr Peter Davis, Senior Entomologist

Mr Robert Delane, Executive Director, Biosecurity and Research

Pastoralists and Graziers Association

Mr Bart Jones, Member

Mr Edgar Richardson, Director, Pastoral and Wool

Western Australian Farmers Federation

Mr David Leake, Vice President and Agriculture Protection Portfolio Holder

Mr Trevor De Landgrafft, President

Mr Andrew McMillan, Director of Policy

Western Australian Government, Department of Conservation and Land Management

Mr Gordon Wyre, Acting Director, Nature Conservation

Friday, 22 July 2005 - Broome

Western Australian Government, Department of Agriculture

Mr Michael Everett, Biosecurity Officer

Mr Richard Watkins, District Manager, Pilbara

Kimberly Zone Control Authority

Mr Pete De Long, Member ZCA

Friday, 9 September 2005 - Cooma

Individuals

Mr Ernie Constance

Mr Peter Spencer

Mrs Coral Talbot

Adaminaby Yaouk Wild Dog Committee

Mrs Marion Kennedy, Chairperson

Bombala Rural Lands Protection Board

Mr Graham Hillyer, Ranger

Mr Stephen Ingram, Deputy Chairman

Cooma Rural Lands Protection Board

Mr Brian Clifford, Chairman

Mr Tim Seears, Managing Ranger

Monaro Merino Association

Mr John Alcock, Member, Stud Breeder

Mr Harley Hedger, Member

Mr John King, President, Stud Breeder

Mrs Susan Litchfield, Former Secretary

NSW Farmers' Association - Cooma District Council

Mrs Sylvia Golby, Member

Mrs Ellen Green, Member

Mr William Green, Member

Mr Michael Litchfield, Area Representative

Mrs Susan Litchfield, Member

Rocky Plain-Snowy Plain Co-Operative Wild Dog Working Group

Mr Robert Maguire, Representative

D

Appendix D – Inspections and discussions

Longford, Tasmania - Tuesday, 29 March 2005

Inspections

The committee travelled to Cressy and conducted an inspection of 'Connorville' station.

Meeting and discussions in Cressy with:

Dr Graham Hall
Mr Roderick O'Connor
Mr Ian Whyte

Blessington, Tasmania - Wednesday, 30 March 2005

Inspections

The committee travelled to Blessington and conducted an inspection of Elverton Pastoral Co.

Meeting and discussions in Blessington with:

Mr Ian Dickenson
Mr Ian Whyte

Rocherlea, Tasmania - Wednesday, 30 March 2005

Inspections

The committee travelled to Rocherlea and conducted an inspection of the premises of Lenah Game Meats.

Meeting and discussions in Rocherlea with:

Mr John Kelly

Yuin, Western Australia – Tuesday, 12 April 2005

Inspections

The committee travelled to Yuin and conducted an inspection of the Barrier Fence at Yuin Station.

Meeting and discussions with:

Mrs Emma Foulkes–Taylor
Mrs Jano Foulkes–Taylor
Mr Michael Foulkes–Taylor
Mr Ross Foulkes–Taylor
Mr Mark Halleen
Mr Jack Kellogg
Mr Graham Wilkes

Leonora, Western Australia – Tuesday, 12 April 2005

Meeting and roundtable discussions with:

Local landholders and interested persons

Warrawagine Station – Thursday 21 July 2005

Meeting and discussions with:

Mr Don Hoare
Mr Barry Gratte
Mr Geoff Mills
Ms Jacinta Mills
Mrs Lyle Mills
Mrs Lynda Mills
Mr Robin Mills

E

Appendix E - Primary legislation for pest animal control

Federal

Quarantine Act 1908

The *Quarantine Act 1908* (Cth) sets out powers relating to the entry of humans, animals, plants and other objects into Australia. The Act is implemented by AQIS, which comes under the umbrella of DAFF.

A pest may be declared a quarantinable pest by proclamation of the Governor-General. All goods infected with a quarantinable disease or pest are subject to quarantine. The Governor-General may also by proclamation prohibit the importation or bringing into Australia of any plant, animal, pest, disease or anything likely to carry a pest or disease.[1]

The Act also provides the Director of Quarantine with a number of powers relating to vessels and aircraft entering Australia. Every overseas vessel that has not been released from quarantine, and any vessel on which a quarantinable pest or disease is found, is subject to quarantine. The Director of Quarantine may order certain vessels to carry on board disinfecting equipment, make orders about the control of an animal found on board the

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1 *Quarantine Act 1908* (Cth), ss 13(1)(ca) - 13(1)(fa), 18(2)(ba).

vessel or aircraft, or order a vessel that has been to a declared place not to land at its port of destination.[2]

Quarantine officers are also given powers under the Act relevant to prevention of pest animals entering Australia. A quarantine officer may require the master of an overseas vessel or aircraft to answer questions in relation to prescribed information about the vessel or aircraft. A vessel or goods that are likely to be infected with a quarantinable pest or disease may be ordered into quarantine. The quarantine officer may order goods to be detained, treated or moved, and may order an animal into quarantine where it is suspected of having or carrying a disease. Any imported goods, including animals and plants, that contain a disease or pest, or are likely to be infected with a disease or pest, can be ordered into quarantine.[3]

If a quarantine officer believes that a vehicle or vessel contains infected goods or goods subject to quarantine that might result in the introduction, spread or establishment of a pest, the quarantine officer may make appropriate orders, including orders in relation to the movement of the vehicle and treatment of the goods. If a quarantine officer believes that an Australian vessel, or an overseas vessel in the internal waters of a state or territory travelling to a port of the Commonwealth is carrying a disease or pest, the officer may make directions to the master of the vessel to carry out specified actions.[4]

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) makes provision for the movement of species into and out of Australia. Chapter 5, Part 13, Division 6A allows regulations to be made establishing a list of species (other than native species) that do or may threaten biodiversity. These species may be prohibited from being brought into Australia or traded between jurisdictions within Australia.

Part 13A of Chapter 5 deals with the international movement of wildlife specimens. The Minister must establish a list of species included in the *Convention on International Trade in Endangered Species* (CITES); export or import of a species on that list is prohibited without a permit.[5]

The Act also makes provision for the export of 'regulated native specimens', being specimens derived from native plants or animals and not falling within the exemption list created by the Minister. It is an offence, punishable by 10

2 *Quarantine Act 1908* (Cth), ss 17, 15, 29B(1), 32A.
3 *Quarantine Act 1908* (Cth), ss 28, 35, 48, 52, 55A.
4 *Quarantine Act 1908* (Cth), ss 74D, 78A.
5 *EPBC Act 1999* (Cth), Chapter 5, Part 13A, Division 2.

years in prison or 1,000 penalty units, to export a regulated native specimen without a permit. Permits may be issued, inter alia, for export under an approved wildlife trade operation or an approved wildlife trade management plan. An approved wildlife trade operation is for small-scale or provisional operations, while an approved wildlife trade management plan is for larger-scale commercial operations. The Minister, before approving either type of program, must be satisfied of conditions relating to conservation of the species and effects of export on the species and biodiversity.[6]

Specimens (not live specimens) can also be exported under an accredited wildlife trade management plan. Plans must satisfy a range of conditions, including that the plan must be in place under a law of a state or territory or the Commonwealth.[7]

The Act also contains provisions relating to the importation of exotic species. Section 303EB provides that the Minister must publish in the Gazette a live import list in two parts: a list of unregulated specimens and a list of allowable regulated specimens. Part 13A, Division 4 of Chapter 5 provides for the importation of 'regulated live specimens', being live animals or plants not included on the first list (the unregulated specimens list). A person can apply to have a species included on the live import list and must provide a report detailing any environmental impact importation may have. It is an offence to import a regulated live specimen unless it appears on the list of allowable regulated specimens and the importer has a permit. A standard permit will only be granted if the species is listed as an allowable regulated specimen and the Minister is satisfied that conditions relating to biodiversity and conservation will be satisfied if the species is imported. It is an offence to be recklessly in possession of a CITES specimen or a regulated live specimen not included on the live import list. It is also an offence to be recklessly in possession of a specimen that does appear on the allowable regulated specimens list, where the specimen has been imported unlawfully.[8] Special measures are applicable in relation to actions that are likely to have a significant impact on endangered and vulnerable species.[9]

The Act also makes provision for import and export for non-commercial purposes including research, exhibition and education.[10]

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6 *EPBC Act 1999* (Cth), Chapter 5, Part 13A, Division 3, ss 303FN and 303 FO.

7 *EPBC Act 1999* (Cth), ss 303DD, 303FP.

8 *EPBC Act 1999* (Cth), ss 303EE, 303EK, 303EN and 303GN.

9 *EPBC Act 1999* (Cth), ss 18, 67, 303GA.

10 *EPBC Act 1999* (Cth), Part 13A, Division 5.

Legislation across jurisdictions

Biological control legislation

Biological Control Acts have been enacted in all states and territories.[11] The Acts make provision for the declaration of target organisms (pests), being organisms that cause harm in a particular state or territory. The Acts also provide for biological control of target organisms by permitting the release of agent organisms in certain circumstances.

The *Biological Control Act 1984* (Cth) makes provision for the biological control of pests in the ACT.

Australian Capital Territory

Pest Plants and Animals Act 2005

This Act had not commenced at the time of drafting this report. It was due to commence on 12 November 2005. The Act repeals certain provisions of the *Land (Planning and Environment) Act 1991* (ACT) that previously dealt with pest animal management.[12]

Part 2 of the Act deals with pest plants, while Part 3 deals with pest animal species. The Minister may make a declaration that a pest animal is a 'notifiable pest animal' (presence must be notified) or a 'prohibited pest animal' (sale and keeping is prohibited).[13]

It is an offence to fail to notify the presence of a notifiable pest species, or to supply a prohibited pest species, although a permit to supply can be applied for. It is also an offence to use machinery or equipment that is inhabited by a prohibited pest species in a way that is reckless as to the potential for that use to spread the pest species. Keeping or disposing of a prohibited pest species is an offence if the person responsible is reckless as to whether the animal is a pest species and as to whether keeping or disposing of the species would be likely to result in the spread of the species.[14]

11 *Biological Control Act 1984* (Cth), *Biological Control Act 1985* (NSW), *Biological Control Act 1986* (NT), *Biological Control Act 1987* (Qld), *Biological Control Act 1986* (SA), *Biological Control Act 1986* (Tas), *Biological Control Act 1986* (Vic), *Biological Control Act 1986* (WA).

12 *Pest Plants and Animals Act 2005* (ACT), Schedule 1, Part 1.1.

13 *Pest Plants and Animals Act 2005* (ACT), s 16.

14 *Pest Plants and Animals Act 2005* (ACT), ss 18-24.

The Minister may prepare a Pest Management Plan for the control and management of a declared pest species. If the chief executive believes a person has not complied with a pest management plan, the chief executive may give the person a written 'pest management direction' in relation to the control of pest species on that land. It is an offence to contravene a pest management direction. If there is a failure to comply, the relevant authority may enter the land, carry out the required work and the landowner must reimburse the costs of that work.[15]

Nature Conservation Act 1980

The *Nature Conservation Act 1980* (ACT) makes it an offence to keep, import or export, sell or release animals (other than exempt species) without a licence. A person cannot kill or take native species without a licence. The Act also prohibits taking an animal (other than a native animal) into a reserved area.[16]

New South Wales

Wild Dog Destruction Act 1921

The *Wild Dog Destruction Act 1921* (NSW) applies in the western division of New South Wales. The Act establishes a Wild Dog Destruction Board, which consists of members nominated by rural interest groups including various Rural Lands Protection Boards. The Act imposes a duty on all landowners and occupiers to destroy wild dogs on their land, and gives the Board powers to oversee the destruction of wild dogs. In particular, if a person has failed to comply with their obligation to destroy wild dogs, and a notice requiring them to remedy has been issued, the Board may require the payment of a sum of up to $1,000 into the Wild Dog Destruction Fund, or perform the obligation itself and recover the costs of doing so.[17]

The Act also gives the Board the power to enter on any land in the vicinity of either the Queensland Border Fence or the South Australian Border Fence to erect or maintain a dog-proof fence.[18]

The Board has the power to levy rates for its Wild Dog Destruction Fund, and to determine a rate of payment for wild dog scalps. It is an offence to make a

15 *Pest Plants and Animals Act 2005* (ACT), ss 17, 25-28.

16 *Nature Conservation Act 1980* (ACT), ss 44-49, 68.

17 *Wild Dog Destruction Act 1921* (NSW), ss 2, 3A, 4, 8, 11.

18 *Wild Dog Destruction Act 1921* (NSW), s 9A.

false statement in relation to scalps or to attempt to obtain payment for a scalp that has already been paid for. It is also an offence to destroy part of a dog-proof fence or a trap, leave open a gate on a dog-proof fence or bring a dog into the western division.[19]

Companion Animals Act 1998

The *Companion Animals Act 1998* (NSW) makes provision for ownership and control of companion animals. The owner of a dog is guilty of an offence if the dog attacks, chases or harasses any person or animal. It also makes the owner of a dog liable for injury to other animals caused by the dog.[20] Part 5 Division 1 of the Act gives councils the power to declare a dog dangerous and require measures for the dog to be kept under control.

Rural Lands Protection Act 1998

The *Rural Lands Protection Act 1998* (NSW) provides for the establishment of rural lands protection districts and regions.[21] Rural Lands Protection Boards are established and are answerable to the State Council of Rural Lands Protection Boards, established under Part 5 of the Act. Rural Lands Protection Boards are given the power to levy rates on lands within their districts, including a general rate, an animal health rate and also special purpose rates.[22]

Part 11 of the Act provides for the control of pests, and is binding on the Crown as well as individual landowners. The Minister has the power to declare any animal to be a pest on particular land, and to impose a variety of obligations with respect to control of that pest. It is an offence not to comply with certain obligations under the Act. These obligations include a general destruction obligation (obligation to eradicate), a limited destruction obligation (obligation to eradicate at specified points of the animal's lifecycle) and notification obligations (obligation to notify of the pest's existence). Additionally, the Minister may confer power on Boards to serve an individual order to eradicate or a general order within their district. Occupiers of public land have similar obligations, but qualified by the words "to the extent necessary to minimise the risk of the pest causing damage on any land". An authorised officer may enter land and perform necessary pest animal control

19 *Wild Dog Destruction Act 1921* (NSW), ss 12, 21, 25, 27-28.

20 *Companion Animals Act 1998* (NSW), ss 16, 27.

21 *Rural Lands Protection Act 1998* (NSW), Part 2.

22 *Rural Lands Protection Act 1998* (NSW), Part 7.

work if there is an order to that effect, or if the occupier of land has failed to comply with a pest control order. [23]

The Minister may require a public authority to eradicate a pest animal on its land, on the recommendation of a board, but it must consult with the public authority first. Boards are empowered to conduct campaigns for the eradication of pest animals, including arrangements with other state, territory and Commonwealth governments.[24]

A person can apply to a board for permission to keep a declared pest in captivity. Without a permit, it is an offence to keep a declared pest in captivity or to release it. It is also an offence to interfere with pest barrier fences or to transport live pests.[25]

The Minister is required to consult with the Minister for the Environment before declaring a native species to be a pest and with the Game Council of New South Wales before declaring a game animal a pest.[26]

Non-Indigenous Animals Act 1987

This Act regulates the introduction into, and movement within New South Wales of, non-indigenous animals. Regulations under the Act may prescribe categories of controlled species as high-risk or low-risk, having regard to classifications by the VPC.[27]

The Act makes it an offence to import, keep or move without a permit, or release a controlled species, of either high-risk or low-risk category. The Act provides for the issuing of licences for keeping controlled categories of species, and permits for importation and movement of animals.[28]

Game and Feral Animal Control Act 2002

The *Game and Feral Animal Control Act 2002* (NSW) establishes the NSW Game Council. The Game Council's functions include:

- representing the interests of licensed game hunters in matters arising under the legislation;
- administering the licensing system under the Act for game hunters;

23 *Rural Lands Protection Act 1998* (NSW), ss 142-143, 155-156, 169.

24 *Rural Lands Protection Act 1998* (NSW), ss 166, 180.

25 *Rural Lands Protection Act 1998* (NSW), ss 174, 176, 178.

26 *Rural Lands Protection Act 1998* (NSW), s 144.

27 *Non-Indigenous Animals Act 1987* (NSW), ss 6, 6A.

28 *Non-Indigenous Animals Act 1987* (NSW), ss 10-13, 15, 19.

- providing advice to the Minister for Agriculture on game and feral animal control; and
- promoting and funding research into game and feral animal control issues.[29]

'Game animals' under the Act fall into two categories. Animals in the first category are deer, California quail, pheasant, partridge, peafowl and turkey. Animals in the second category are pigs, dogs (not dingoes), cats, goats, rabbits, hares and foxes. Hunting animals in the second category does not require a licence on private land. It is an offence to release a game animal into the wild for the purpose of hunting.[30]

The Act provides for two different categories of licence: a general game licence that entitles the holder to hunt on private land and a restricted game licence, which allows hunting on private and some public land. A restricted game licence will not be granted unless the applicant is a member of a hunting club or approved organisation and has undertaken the requisite training. It is a condition of any licence that the holder complies with a code of practice that is approved by the Minister.[31]

National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NSW) makes it unlawful to harm protected fauna, or to buy, sell or possess protected fauna, without a licence. It is also an offence to import or export protected fauna (other than specified categories) without a licence. 'Protected fauna' includes all fauna except for species designated as 'unprotected fauna' in Schedule 11 of the Act.[32] It is also an offence to liberate an animal anywhere in New South Wales without a licence to do so.[33]

The Act also provides for the granting of a number of different types of licence, including a general licence (to harm protected fauna for a specified purpose), an occupier's licence (to harm a specified number of a species on occupied lands), a fauna dealer's licence (to deal in fauna) or an import or export licence (to import or export protected fauna).[34]

29 *Game and Feral Animal Control Act 2002* (NSW), s 9.
30 *Game and Feral Animal Control Act 2002* (NSW), ss 5, 55.
31 *Game and Feral Animal Control Act 2002* (NSW), ss 15, 19, 24.
32 *National Parks and Wildlife Act 1974* (NSW), ss 5, 98, 101, 106.
33 *National Parks and Wildlife Act 1974* (NSW), s 109.
34 *National Parks and Wildlife Act 1974* (NSW), Part 9, Division 2.

Northern Territory

Territory Parks and Wildlife Conservation Act 2001

The Act provides that feral animals are to be managed in a way that reduces their population and extent within the Northern Territory and controls any detrimental effect they have on wildlife and the land. Agreements may be formed with any other state or territory government, or the federal government, in relation to the management of feral animals.[35]

The Act also provides for the declaration of protected wildlife, and allows the Minister to authorise killing of protected wildlife under permit and in compliance with a range of conditions, including numbers that may be killed. It is an offence to take or interfere with protected wildlife, or to release protected wildlife into the Territory except as authorised under the Act. It is also an offence to take or interfere with unprotected wildlife without authorisation. A person can apply to the Director for a permit to deal with protected wildlife, including taking them for commercial purposes.[36]

Division 4 of Part 4 of the Act deals with the control of feral animals. The Minister may declare an animal to be a 'feral animal'. The Minister may also declare 'feral animal control areas', which are areas threatened or soon to be threatened by a feral animal. An occupier within a feral animal control area may be issued with a notice requiring control or eradication of feral animals on the land, or a Conservation officer may enter the land and carry out the work.[37]

All animals not indigenous to the Northern Territory, unless exempt, are 'prohibited entrants', and once they escape, are classified as feral animals. It is an offence to release a feral animal, or to release or keep a prohibited entrant without authorisation.[38]

If the Director is satisfied that the native wildlife or habitat of a national park, reserve or sanctuary is threatened by feral animals, the Director may authorise the destruction of feral animals in that area.[39]

35 *Territory Parks and Wildlife Conservation Act 2001* (NT), ss 31, 32.
36 *Territory Parks and Wildlife Conservation Act 2001* (NT), ss 45, 55, 66, 67.
37 *Territory Parks and Wildlife Conservation Act 2001* (NT), ss 47-51.
38 *Territory Parks and Wildlife Conservation Act 2001* (NT), ss 52, 54, 67A and 67B.
39 *Territory Parks and Wildlife Conservation Act 2001* (NT), s 113.

Queensland

Land Protection (Pest and Stock Route Management) Act 2002

The *Land Protection (Pest and Stock Route Management) Act 2002* (Qld) provides for pest animal and plant management. The Act provides for the declaration of pest animals and plants and restricts the introduction, keeping, sale and spread of declared pests. A Land Protection (Pest and Stock Route Management) Council is established to provide advice and recommendations to the Minister in relation to pest management.[40]

The principles of pest management set out in the Act are:

- Pest management is an integral part of managing natural resources and agricultural systems;
- Public awareness and knowledge of pests must be raised to increase the capacity and willingness of individuals to manage pests;
- Effective pest management requires a long-term commitment to pest management by the community, industry groups and government entities;
- Consultation and partnership arrangements between local communities, industry groups, State government agencies and local governments must be established to achieve a collaborative approach to pest management;
- Pest management planning must be consistent at local, regional, State and national levels to ensure resources target priorities for pest management identified at each level;
- Preventative pest management is achieved by preventing the spread of pests, early detection and intervention;
- Pest management must be based on ecologically and socially responsible pest management practices that protect the environment and the productive capacity of natural resources; and
- Research about pests, and regular monitoring and evaluation of pest control activities, is necessary to improve pest management practices.[41]

40 *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), Chapter 5.

41 *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), s 9.

Part 2, Division 1 of Chapter 2 provides for the creation of State Pest Management Strategies for pest animals and plants, which may include detection, monitoring and management strategies, research and community education. A Strategy lasts for up to five years. Guidelines may also be prepared for the management of pests.[42]

Government departments responsible for managing state-controlled land are required to develop plans for the management of pests on that land, and educate the community about those plans. A pest management committee is established to oversee the implementation of these plans and to coordinate pest management across state-controlled lands. Local governments are also required to develop pest management plans for declared pests in their areas. Local governments are required to implement these plans. Chapter 6 provides that a regulation may establish a pest operational board, which is responsible for the management of a declared pest in a particular area.[43]

Pests can be declared by regulation, or by emergency notice when the need arises. Declared pest animals in Queensland include all mammals, amphibians and reptiles not native to Queensland, with the exception of some domestic animals. Some pest species, such as cane toads, and two species of deer, are not classified as pest species in the legislation.[44]

Part 5, Division 2 of Chapter 2 creates offences in relation to declared pests, including introducing, feeding, keeping and selling declared pests.

Part 6, Division 1 of Chapter 2 provides for regulations to establish the building line of a declared pest fence to stop pests crossing from one area to another. The fence will be constructed by the chief executive, a pest operational board or a local government.

Chapter 2, Part 7 provides for the issuing of declared pest permits for the keeping of declared pests under certain conditions. Unless the owner of land is in possession of a declared pest permit, the owner has obligations to control specified categories of declared pests on the owner's land. Notices requiring the owner to control pests on the owner's land can be issued, and if no action is taken, the owner will be required to reimburse the local authority the costs of taking control measures on the land.[45]

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42 *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), Chapter 2, Part 2, Division 2.

43 *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), Chapter 2, Pt 3, Divs 1 and 2, Pt 4 and Chapter 6.

44 *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), Chapter 2, Pt 5, Div 1, *Land Protection (Pest and Stock Route Management) Regulation 2003* (Qld), Schedule 1.

45 *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), Chapter 2, Pt 8.

The Act also provides for the approval of pest survey programs, which allow authorised persons to enter land and monitor compliance with pest animal control, and to map pest animal populations.[46]

Part 10 of Chapter 2 allows an owner in a non-urban district to destroy a dog on the land if the owner reasonably believes the dog has no owner and the dog is about to attack stock.

The Act also sets up a Land Protection Fund, the purpose of which is to record amounts received for, and paid from, the fund to achieve the purposes of the Act.[47]

Nature Conservation Act 1992

The *Nature Conservation Act 1992* (Qld) regulates the taking of native wildlife. The taking or use of a 'protected animal' (threatened, rare, near threatened or least concern wildlife) without authorisation under the Act is prohibited. A person who applies for a permit to take or use protected wildlife may be required to prepare a draft conservation plan. Any commercial use of wildlife must be ecologically sustainable.[48]

Nature Conservation (Macropod) Conservation Plan 2005

The purpose of this plan is to provide more detailed regulation for the taking, keeping and use of macropods, to ensure that it is ecologically sustainable. The Plan stipulates conditions as to harvest periods, size and weight of animals taken and means of taking animals. The Act provides for both commercial wildlife harvesting licences and recreational wildlife harvesting licences. Damage mitigation permits are also covered by the legislation.[49]

South Australia

Natural Resources Management Act 2004

The Act establishes an NRM Council, which is required to prepare an NRM Plan for the State. The Plan must include policies for the control of pest animal and plant species. The Act also establishes a series of Regional NRM

46 *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), Chapter 7.

47 *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), ss 209, 210.

48 *Nature Conservation Act 1992* (Qld), ss 73, 88, 88A, 112.

49 *Nature Conservation (Macropod) Conservation Plan 2005* (Qld), s 4, Part 3, Pt 4, Divs 4, 5, 6.

Boards. Each Regional NRM Board is required to prepare and maintain a Regional NRM Plan for the region, which includes provisions as to how pest animal and plant species are to be managed.[50]

If an owner of land is in breach of the general statutory duty to act reasonably in relation to natural resource management, and that may lead to land degradation, or fails to take required steps to control pest animals and plants on the land, the land owner can be required to prepare an action plan for the land. If the owner fails to implement the plan as required, the owner commits an offence and the relevant authority may enter the land and carry out the required work, and recoup the cost from the owner.[51]

The Act allows for the Minister to declare a pest animal or plant species as Category 1, 2 or 3, and to prescribe the application of particular provisions of the Act to that species. The movement, keeping, sale and release of declared pests is prohibited, and penalties for contravention differ depending on the category of the species. Where it has been declared, an owner of land is required to destroy or control all pest animals of a particular species on their land. An owner must also comply with directions of an authorised officer in relation to keeping declared species in captivity. In taking measures to control declared plants and pests, a person must take all reasonable steps to ensure that native vegetation is not cleared except in accordance with guidelines set out by the Native Vegetation Council. NRM groups must carry out these obligations in relation to pest animals on road reserves. The Minister can also declare a quarantine area to prevent the spread of a pest, and can prohibit the declared species from being brought within that area, and require a landowner to take measures to control the spread of that species.[52]

The relevant authority may issue a permit allowing the movement, keeping or sale of a species where that would not otherwise be lawful.[53]

National Parks and Wildlife Act 1972

Part 5 of the *National Parks and Wildlife Act 1972* (SA) provides for the conservation of native wildlife. The Act makes it unlawful to take a protected animal. Where the Minister believes that members of a protected species (other than endangered, rare or vulnerable species) are causing or likely to cause damage to crops or other property, the Minister may declare that members of that species can be killed, after taking advice from the National

50 *Natural Resources Management Act 2004* (SA), ss 74, 75.

51 *Natural Resources Management Act 2004* (SA), ss 122, 123, 183.

52 *Natural Resources Management Act 2004* (SA), ss 174-177, 179, 181-182, 187, 192.

53 *Natural Resources Management Act 2004* (SA), s 188.

Parks and Wildlife Council. The Minister may also declare open season for taking of a particular protected species. The Minister may also grant permits for the taking of protected species, to prevent damage to the environment, crops or other property, or for some other approved purpose.[54]

Without authorisation, it is an offence to sell a protected animal or its carcass. It is also an offence to import or export a protected species without a permit; an application for a permit can be made to the Minister. A permit for farming protected animals can also be issued. At the time of writing, the only species for which commercial farming was permitted under the Act was the emu.[55]

Part 5, Division 4B of the Act provides for commercial harvesting of protected species. The Minister may declare that the Division applies to any one or more of the red, grey or euro kangaroo. A Plan of Management must be prepared for each species that is to be commercially harvested. Permits can then be issued for commercial harvesting of those species. A permit will only be granted if the Minister considers that it will not adversely affect the ecosystems to which the species belongs or the species as a renewable resource for the future. The Governor may declare that a royalty is payable in respect of harvested species. Permits can also be issued for hunting under Part 5A of the Act.[56]

Tasmania

Vermin Control Act 2000

The *Vermin Control Act 2000* (Tas) provides for the control of 'vermin'. 'Vermin' is defined to include rabbits, foxes and any other species declared by the Minister. The Minister may make an order specifying that vermin be destroyed on land specified in the order. An occupier of land may also be issued with a notice to destroy the vermin on that land. If an occupier fails to comply with an order or notice, an inspector may carry out the control operation and the occupier must pay the reasonable costs of that.[57]

Under the Act, there are prohibitions on keeping, releasing and carrying vermin, and introducing rabbits to any island in Tasmanian waters.[58]

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54 *National Parks and Wildlife Act 1972* (SA), ss 51-53.

55 *National Parks and Wildlife Act 1972* (SA), ss 58-59, 60C, Schedule 11.

56 *National Parks and Wildlife Act 1972* (SA), ss 60G, 60I, 60J, 61.

57 *Vermin Control Act 2000* (Tas), ss 5-7, 10.

58 *Vermin Control Act 2000* (Tas), ss 15, 17, 19, 20.

Dog Control Act 2000

Section 19 of the *Dog Control Act 2000* (Tas) provides that if a dog attacks an animal, the owner of the dog is guilty of an offence. A person carrying on the business of primary production can destroy any dog found at large on that land.[59]

Nature Conservation Act 2002

The *Nature Conservation Act 2002* (Tas) provides, inter alia, for the conservation of flora and fauna. Regulations under the Act may make provision for the taking, use or export of wildlife and wildlife products. A permit may also be granted for the taking of wildlife or wildlife products on specified lands. The Minister may make orders declaring seasons when the taking of partly protected wildlife is prohibited, or when it may start and stop.[60]

It is prohibited to bring animals into the state without an authority under the Act.[61]

Victoria

Catchment and Land Protection Act 1994

The *Catchment and Land Protection Act 1994* (Vic) sets up a framework for the control of pest animals and weeds in Victoria.

The Act imposes a duty on landowners to prevent the growth and spread of weeds and to prevent the spread of, and as far as possible eradicate, pest animals on their land. Landowners must also take all reasonable steps to prevent the spread of weeds and pest animals on roadside adjoining their lands.[62]

A land management notice can be served on a landowner who is not fulfilling obligations in relation to pest animals. If the notice requires the landowner to use dangerous chemicals to control pest animals, it must include prescribed information in relation to the chemical and require the landowner to put up signs and inform neighbours about the use of the chemical. Non-compliance

59 *Dog Control Act 2000* (Tas), s 41.

60 *Nature Conservation Act 2002* (Tas), ss 26, 29, 30.

61 *Nature Conservation Act 2002* (Tas), s 32.

62 *Catchment and Land Protection Act 1994* (Vic), s 20.

with a land management notice is an offence. It is prohibited to take a pest animal (including trapping or killing it in another way) from an area where a land management notice is in effect.[63]

Part 8 of the Act provides for the classification of pest animals and weeds. The Governor-in-Council, on the recommendation of the Minister, may declare an animal (excluding fish and invertebrates) to be a prohibited pest animal (importation, keeping and sale banned), controlled pest animal (only to be kept in approved, high security conditions), regulated pest animal (only to be kept in approved conditions) or an established pest animal (established widely in the wild and to be eradicated or controlled).[64] Classified pest animals are set out in sections 8 and 9 of Schedule 4 of the Act.

Before recommending a declaration, the Minister must take into account the need for national uniformity in classifying pest animals, and must take advice from the Victorian Catchment Management Council in recommending the declaration of an established pest animal.[65]

The Act makes it an offence to import, keep or sell declared pest animals, with the most serious offences in relation to prohibited pest animals and the least serious offences in relation to established pest animals. It is also an offence to release declared pest animals. Importation, sale, keeping and release of pest animals is permitted where a permit is held. Where a permit is held, it is an offence not to comply with the conditions contained in the permit.[66]

In addition to its obligations as a landowner, the Secretary to the Department of Natural Resources and the Environment has a duty to take all reasonable steps to eradicate State prohibited weeds from all lands in the State.[67]

The Act expressly binds the Crown.[68]

National Parks Act 1975

The *National Parks Act 1975* (Vic) permits the hunting of feral animals on national park land on the condition that the necessary permits to carry firearms have been issued and regulations are complied with.[69]

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63 *Catchment and Land Protection Act 1994* (Vic), ss 37, 38, 41, 74.

64 *Catchment and Land Protection Act 1994* (Vic), ss 58, 64-67.

65 *Catchment and Land Protection Act 1994* (Vic), s 69.

66 *Catchment and Land Protection Act 1994* (Vic), ss 75, 75A, 77, 77A.

67 *Catchment and Land Protection Act 1994* (Vic), s 21.

68 *Catchment and Land Protection Act 1994* (Vic), s 5.

69 *National Parks Act 1975* (Vic), ss 32G and 37.

Wildlife Act 1975

One of the purposes of the *Wildlife Act 1975* (Vic) is to prohibit and regulate the conduct of persons engaged in activities relating to wildlife. Part III of the Act allows the issuing of licences, including 'wildlife licences' for the taking, destruction, buying and selling of wildlife, and 'game licences' for the hunting, taking and destruction of game. An authorisation may also be given to hunt, destroy, buy or sell wildlife where that is necessary to protect buildings, crops, pastures and other property from damage by wildlife. It is an offence not to comply with conditions of the authorisation.[70]

It is an offence to hunt, destroy, take, buy or sell endangered, notable, or protected wildlife or game without a licence. It is also an offence to import or export wildlife to or from Victoria without a permit. Issuing of a permit is dependent on certain conditions, including that it will not adversely affect the population of that species in the wild. [71]

Western Australia

Agriculture and Related Resources Protection Act 1976

The *Agriculture and Related Resources Protection Act 1976* (WA) provides for the control, management and prevention of certain plant and animal species. The Act provides for the declaration of plant and animal species for all or part of the state, by the APB. Declared plants and animals are placed in a particular category or categories, including those that should be prohibited from being introduced in a particular area, those that should be eradicated in a particular area, and those that should be prohibited from being kept in an area. There is also a category for native species where the APB considers a special management program is warranted.[72]

Government departments and local governments are required to control declared plants and animals on land under their control. An occupier of private land must notify the APB of the presence of declared animals and plants on their land, and must control declared animals and plants on the land. It is an offence for a local government or an occupier of private land to fail to fulfil these obligations. An authorised person may serve a notice on the owner or occupier of land requiring them to control declared species; it is an

70 *Wildlife Act 1975* (Vic), ss 1A, 22, 22A, 28A, 28B.

71 *Wildlife Act 1975* (Vic), ss 41-47, 50.

72 *Agriculture and Related Resources Protection Act 1976* (WA), ss 35-37.

offence to fail to comply and the authorised person may carry out the work themselves at the occupier's expense.[73]

It is an offence to keep or introduce declared species for which keeping and introduction are prohibited, except in accordance with conditions set out for that purpose. It is also an offence to liberate a declared pest, or to fail to prevent the being at large of an animal that becomes a declared pest.[74]

Wildlife Conservation Act 1950

The *Wildlife Conservation Act 1950* (WA) protects native wildlife in the state. It is an offence to take protected fauna other than under a licence, or as authorised by the Act. It is also an offence to sell, or take for the purposes of sale, fauna, protected or unprotected, except under a licence. In particular, it is an offence to process fauna for the purposes of sale without a licence. Royalties are payable on the skins of fauna taken in the state. It is also an offence to release fauna in any part of the state where the species is not normally found at liberty.[75] There are plans to replace this legislation with a *Biodiversity Conservation Act* at some stage in the future, which will continue to allow commercial use of native resources, but also provide for accreditation of industries so that not all wildlife products require trade approval or licensing.[76]

73 *Agriculture and Related Resources Protection Act 1976* (WA), ss 39, 42, 48-52.

74 *Agriculture and Related Resources Protection Act 1976* (WA), ss 77-83.

75 *Wildlife Conservation Act 1950* (WA), ss 15-18.

76 Western Australian Government, *A Biodiversity Conservation Act for Western Australia: Consultation Paper,* Western Australian Government, December 2002, viewed 31 October 2005, <http://www.naturebase.net/biocon_act_consult.pdf>.

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Appendix F - Proposed National Pest Animals and Weeds Committee – Terms of Reference

Ensure an integrated approach to all aspects of pest animal and weed management by:

1. Providing national policy and planning solutions to pest animal and weed issues.
2. Planning, coordinating and monitoring the continued implementation of the National Pest Animals Strategy and the National Weeds Strategy.
3. Providing policy and planning advice to Natural Resource Management Standing Committee (NRMSC) and Primary Industries Standing Committee (PISC) on national pest animal and weed issues or as directed by NRMSC. Identify and facilitate implementation of action on significant pest animal and weed issues.
4. Building linkages with NRMSC, PISC, Australasian Invasive Animals CRC, Plant Health Australia, Animal Health Australia, CRC for Australian Weed Management and other pest animal and weed research agencies on pest animal and weed issues.
5. Identifying potential and emerging pest animal and weed problems and recommend appropriate actions to NRMSC.

6. Establishing a national database to record invertebrate pest breaches and incursions, and map populations of vertebrate and invertebrate pests.

7. Identifying and facilitating development, planning, coordination, implementation and monitoring of consistent national approaches to pest animal and weed management including:

   - National strategies
   - Codes of Practice
   - Animal welfare standards
   - Pest Animal Threat Abatement Plans
   - Biological control programs
   - Harmonisation of pest animals and weeds legislation
   - Pest Animals of National Significance and Weeds of National Significance
   - Pest animals and weed risk assessment processes, particularly for species existing in Australia but not yet established
   - Research, education, extension and training
   - Harmonisation of pest animal and weed data collection and management systems,
   - Response to emergency pest animal and weed incursions.

8. Developing a communications strategy for increasing the profile of pest animals and weeds throughout the community, government and key stakeholders.