

Shooting our wildlife:

An analysis of the law and policy governing the killing of kangaroos

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THINKK



THINKK, the Kangaroo
Think Tank
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THINKK'S MISSION

The mission of THINKK is to foster understanding among Australians about kangaroos in a sustainable landscape, through critically reviewing the scientific evidence underpinning kangaroo management practices and exploring non-lethal management options that are consistent with ecology, animal welfare, human health and ethics.

THINKK SCIENCE AND POLICY

The think tank is governed by a Research Advisory Committee comprising of macropod experts, Dr Dror Ben-Ami and Dr Daniel Ramp, ISF sustainability expert Professor Stuart White and ISF animal and environmental law expert Keely Boom. ISF sustainability expert Louise Boronyak is THINKK's project manager. Expert advisors, macropod expert Dr David Croft, pioneering animal welfare expert Christine Townend and Indigenous elder Uncle Max Dulumunmun Harrison, inform and refine THINKK's research priorities and content.

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EXECUTIVE SUMMARY

Over the last decade in Australia, the Federal and State governments have approved an annual commercial kill of some four to six million kangaroos and wallabies each year.¹ On average three million kangaroos are actually 'harvested'/killed.² Around three hundred thousand young at foot and 800,000 pouch young are either killed or left to die each year as collateral of the commercial industry.³ In addition, up to 200,000 kangaroos and wallabies are killed for non-commercial reasons each year.⁴ A further unknown number are killed without government authorisation. **This is the largest land-based slaughter of wildlife in the world.**

This report provides an analysis of the law and policy governing the killing of kangaroos. It provides an historical outline of kangaroo killing in Australia and examines the reasons for and against the kill. The report describes and analyses the legislative and regulatory framework governing the killing of kangaroos, in order to assist policymakers understand an area which is complex and often misunderstood.

The **conclusion** of this report is that the current widespread commercial and non-commercial killing of kangaroos has yet to be proven necessary. Governments do not provide any clear justification for the killing such as through a proper consideration of the reasons for and against control. State governments once treated kangaroos as agricultural pests yet today they are treated as a resource. These practices result in poor welfare outcomes for many kangaroos and joeys and may pose a risk to Australia's sustainability.

HISTORY

1. Kangaroos evolved millions of years ago and make up part of the traditional diet of Aboriginal people.

It is estimated that the Macropodoidea (superfamily) first evolved 16 million years ago. Of the large kangaroos (i.e. red, eastern grey, western grey kangaroos, common wallaroo, Antilopine wallaroo, black wallaroos) the most recent (red kangaroo) evolved about a

million years ago but they go back 2.5 million years.⁵ The traditional diet of Aboriginal people varies across Australia. Australia is made of a varied landscape and Aboriginal nations have developed unique cultures that reflect this landscape. Kangaroo meat provided an important source of food.⁶

2. After colonisation, kangaroos were labelled as agricultural pests.

Kangaroos were first identified as pests to the pastoral industry in the latter part of the 19th century.⁷ It was argued that kangaroos had become more numerous in some areas than when Europeans first arrived, though it is unknown whether or not this was correct.⁸ By the 1880s, all the States in eastern Australia created legislation for the eradication of kangaroos.⁹ In NSW, kangaroos and wallabies were declared vermin and bounties were offered for the 'head of each grass-eating marsupial'.¹⁰ More recently, scientific research has refuted the notion that kangaroos need to be killed for pest control or damage mitigation purposes.¹¹ As a result of this research, the goals of government kangaroo management programs have shifted to treat kangaroos as a resource.¹²

3. Kangaroos have more recently been labelled as a resource and governments have attempted to both promote and regulate the commercial industry.

A trade in kangaroo meat had developed by the 1950s.¹³ Most of the kangaroo meat was sold for pet food but there has been an export trade for human consumption since 1955.¹⁴ In South Australia the use of kangaroo meat for human consumption has been legal since 1980, but in other states this was not legalised until 1993.¹⁵ In the 1970s, the number of red kangaroos dropped significantly due to hunting and drought. Prominent CSIRO researchers like Dr. John Calaby feared that the red kangaroo would become extinct.¹⁶ The US Government banned the import of kangaroo products in the 1970s.¹⁷ The Commonwealth banned the export of kangaroo products and took some control over state kangaroo management plans in relation

to the commercial harvest and export of kangaroo products.¹⁸ Currently, Australian governments seek to promote the kangaroo industry as a form of ecologically sustainable development.¹⁹

SUSTAINABILITY

4. The commercial and non-commercial killing of kangaroos may present a risk to the conservation of kangaroo species.

Research suggests that there may be widespread breaches of the law in South Australia by shooters (and landholders) through killing kangaroos from areas that are not provided for in their licences.²⁰ The case of *Morris v DECC*²¹ also indicates that shooters may be killing kangaroos of species that are different to those provided on their licence. Further research is required to determine the full impacts of these practices and the full extent of these practices however it is clear that they challenge current ideas about the sustainability of kangaroo killing.

5. Density trigger points for kangaroo populations are only provided in NSW.

In accordance with density trigger points, the shooting must stop once the population of a species falls to a certain level.²² In response to concern about diminishing kangaroo populations in NSW an Administrative Appeals Tribunal forced the inclusion of density trigger points for the four harvested species below which harvesting will cease.²³ Other states are yet to adapt such sensible regulatory measures.

6. The quota may not provide a reliable tool for managing the sustainability of the killing.

A national quota is set by the Commonwealth Government which is meant to represent the estimated sustained yield and upper harvest limit.²⁴ To highlight the sustainability of current kangaroo killing, it is sometimes stated that the national quota is never met. That is, the sustainable yield is never reached so the level of killing must be sustainable. However, this generalised statement fails to recognise that the quota is often met and sometimes exceeded in the smaller zones. For example, the quotas for eastern grey kangaroos in the Upper Hunter, NSW, and for red kangaroos in Bourke, NSW, were exceeded in 2006.²⁵ In addition, the quota numbers and population estimates do not take into account the killing of young and the non-commercial killing.²⁶

7. Significant growth in the kangaroo industry may result in over-exploitation.

The 2009 population estimate for kangaroos within the commercial harvest zones was 27,040,323.²⁷ Modelling has shown that to achieve a 3 per cent reduction in Australia's annual greenhouse gas emissions through replacing sheep and cattle with kangaroos would require the meat production of 175 million kangaroos with a total population of 220 million kangaroos.²⁸ Such numbers are impractical. As a result, significant growth in the kangaroo industry may result in over-exploitation.

ANIMAL CRUELTY

8. The current law and policy is a form of legalised cruelty against joeys.

Around 300,000 young at foot and 800,000 pouch young are either killed or left to die each year as a result of the commercial industry.²⁹ This equates to 11,000,000 joeys over 10 years. Furred pouch young are killed by a single forceful blow to the base of the skull (e.g. by a steel water pipe or the tow bar of a vehicle) and small furless pouch young are killed by decapitation or a single forceful blow to the base of the skull.³⁰ A number of studies have shown that there is doubt as to whether the current methods of killing joeys ensure a sudden and painless death.³¹ In many places, killing of young wildlife is considered an unacceptable practice, as evidenced by the banning of the products from Canadian Harp Seals in many countries, including the US, Mexico, Russia and the European Union.³²

9. The current law and policy is a form of legalised cruelty against adult kangaroos.

The Code stipulates that kangaroos are to be 'brain' shot and provides a diagram to demonstrate where the shooter should aim.³³ The objective is for the kangaroo to have an instantaneous loss of consciousness and rapid death without regaining consciousness. However, although instantaneous death for the kangaroo is the objective, this is certainly not achieved in all circumstances. In 1985, the RSPCA found that the overall proportion of head shot kangaroos was about 86% while in 2000/2002 this was 95.9%.³⁴ Between 2005 and 2008, Animal Liberation NSW identified that an average of 40% of kangaroos per chiller were neck shot.³⁵ Both the RSPCA and Animal Liberation estimates are limited by the fact that they have only assessed carcasses at meat processors/chillers. Based upon the RSPCA's 2002 research, at least 120,000 kangaroos are body shot each year.³⁶ Kangaroos that are body shot and left in the field are not included in these figures. Kangaroos that are body shot are likely to suffer slow and/or painful deaths.

10. Non-commercial shooting results in a high degree of inhumane killing.

The Non-Commercial Code permits shooters to use shotguns in certain circumstances instead of centrefire rifles.³⁷ However, the use of shotguns has been heavily criticised on the basis that there are too many variables associated with shotguns to ever achieve a high level of consistency in achieving brain shot outcomes.³⁸ The RSPCA has found that there are high levels of cruelty in the non-commercial killing of kangaroos and has called for the Commercial Code to apply universally.³⁹ This is likely to be due to the fact that the competency of non-commercial shooters is not tested and the non-commercial killing is even less regulated than commercial killing as the carcasses are not brought to processors.⁴⁰

11. The killing of joeys may be illegal in NSW.

The NSW conservation legislation does not provide an authorisation to kill joeys (unlike Queensland). It may be argued that there may be some sort of implied authority to kill joeys as this is required under the Codes for both commercial and non-commercial shooting. This raises the question of whether an actual licence is required to kill these animals. Section 5 of the *National Parks and Wildlife Act 1974* (NSW) provides that the young of kangaroos are protected fauna. Section 98 clearly provides that it is an offence to harm protected fauna without a general license (section 120), an occupier's license (section 121) or a commercial fauna harvester's licence (section 123). Therefore, there is a strong case to be made that a person must have a licence to kill a joey and that any killing of joeys without a licence is illegal.

12. The killing of kangaroos may not be necessary and thus may constitute an act of cruelty in certain circumstances.

In June 2010, the Australian Society for Kangaroos (ASK) alleged that the killing of kangaroos and joeys at Bathurst was unnecessary on the basis that there had been a successful herding of kangaroos in 2008.⁴¹ No kangaroos entered the race track of the Bathurst 1000 event in 2008. ASK alleged that the killing of these animals was unnecessary and therefore illegal under Section 4 of the *Prevention of Cruelty to Animal Act 1979* (NSW). Scientific research has refuted the notion that kangaroos need to be killed for pest control or damage mitigation purposes.⁴² The RSPCA has questioned whether the killing of kangaroos for commercial and non-commercial purposes is necessary and has called for this to be reviewed by the Commonwealth and State/Territory governments.⁴³

Even where there is a need to manage kangaroo populations, non-lethal methods may be a viable alternative to killing the animals. In addition, it is not clear how the killing of kangaroos is meant to achieve the object of ecologically sustainable development.⁴⁴ It is reasonable to conclude that the killing of kangaroos may not be necessary in many cases. At the very least, the research which refutes the notion that kangaroos need to be killed for pest control purposes creates a fairly large policy question as to why kangaroos are being killed on such a mass scale with its associated cruelty to adult kangaroos and joeys.

RULE OF LAW

13. The goal of ecologically sustainable development found in the kangaroo management plans conflicts with the implicit goal of managing kangaroos as agricultural pests.

The kangaroo management plans of New South Wales, Queensland, South Australia and Western Australia are all guided by the central goal of ecologically sustainable development.⁴⁵ Kangaroos are treated as a resource to be exploited. However, the applications for non-commercial occupier licences still ask landholders to list what damage kangaroos are causing to their land.⁴⁶ There is no system to check whether damage mitigation is needed or achieved.⁴⁷ It may be that Australia is seeking to establish the kangaroo industry as a leader in 'sustainable use' of wildlife. However, there is strong opposition to such an approach when it has no basis in damage mitigation.⁴⁸ It is also arguable that the two aims of exploiting kangaroos as a resource and managing kangaroos as a pest are mutually exclusive.⁴⁹

14. The Codes purport to protect the welfare of kangaroos but their substantive provisions legalise cruelty against these animals.

The 'minimum content' of the rule of law is generally understood to contain a number of key attributes (e.g. openness, certainty and access to the courts).⁵⁰ The law relating to kangaroos is marked by contradictory language and structure, a complex regulatory framework and heavy reliance upon regulations and codes of practice. Most importantly, the Codes seek to protect the welfare of kangaroos but at the same time legalise cruelty against these animals.

ANIMAL PROTECTION VS ENVIRONMENTAL CONSERVATION

15. Misconceptions about kangaroos create a perceived tension between animal protection and environmental conservation.

Commonly, environmental ethics and animal protection ethics conflict where there is a perceived need to protect ecosystems from individual animals or even species.⁵¹ The holistic approach found in environmentalism allows harm to occur to kangaroos and other animals to preserve the integrity of an ecosystem or simply where such harm will not compromise the integrity of the ecosystem. In accordance with such reasoning, sustainability can involve the mass killing of kangaroos provided that such killing does not damage the wider ecosystem. The key problem with adopting an approach informed only by environmental ethics is that it fails to adequately recognise the sentience of wild animals. Sentience, or consciousness, is the ability to perceive and feel. Through failing to adequately recognise the sentience of wild animals such as kangaroos, the law and policy pays insufficient regard to the ethical demands of kangaroos as sentient beings.

RECOMMENDATIONS

1. General:

- a. Current commercial and non-commercial kangaroo killing practices need to be drawn into question.

2. Legal reform:

- a. The law and policy that allows for and regulates the killing of kangaroos needs to provide clear justification for that killing through a proper consideration of the reasons for and against control.
- b. There are quantitative means of identifying damage to individual properties and these should be required for a cull/harvest licence on a case by case basis.
- c. Auditing and monitoring should be conducted of any killing to ensure that damage mitigation specific objectives are achieved.
- d. Density trigger points should be introduced for each species within all zones and be applicable to both commercial and non-commercial shooting.

- e. Female kangaroos should not be killed at all in order to prevent cruelty to joeys.
- f. The quota numbers and population estimates should take into account the killing of young and the non-commercial killing.
- g. The codes should be amended to clearly provide that neck shots are not compliant with the codes.
- h. The precautionary principle should gain greater prominence.
- i. The welfare and sentience of kangaroos as individual animals should gain greater currency.
- j. The commercial code should also apply to non-commercial shooting.

3. Further research is required:

- a. To determine the impact of breaches of the law by shooters upon the conservation of the relevant species.

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1. Introduction

Over the last decade in Australia, the Federal and State governments have approved an annual commercial kill of some four to six million kangaroos and wallabies each year.⁵³ On average three million kangaroos are actually 'harvested'/killed.⁵⁴ There has been a notable exception in 2010 with 1,000,000 wallabies shot in Tasmania.⁵⁵ Around three hundred thousand young at foot and 800,000 pouch young are either killed or left to die each year as collateral of the commercial industry.⁵⁶ In addition, up to 200,000 kangaroos and wallabies are killed for non-commercial reasons each year.⁵⁷ A further unknown number are killed without government authorisation. **This is the largest land-based slaughter of wildlife in the world.**

This report seeks to provide an analysis of the law and policy governing the killing of kangaroos and wallabies. This complex area of government regulation crosses issues of animal welfare, environmental sustainability, Indigenous rights and ethics. This report will focus upon the legal and regulatory issues that arise from the current practices of widespread killing for commercial and non-commercial purposes. A history of the law and policy governing this area and an overview of attitudes to killing kangaroos and wallabies are provided to support this analysis.

Australia is one of 12 countries which together hold more than 70 per cent of the world's biodiversity.⁵⁸ The most significant threat to biodiversity in Australia is land clearance and habitat destruction.⁵⁹ Climate change threatens to exacerbate these problems through 'adversely affecting all aspects of species' biology.'⁶⁰ Opposition to the killing of kangaroos and wallabies is based upon three key grounds: conservation, animal welfare and animal rights. However, there is also support for the killing on the basis of conservation.

The species to be harvested for commercial export in 2010 are:

- red kangaroo (*Macropus rufus*) in areas of Qld, NSW, SA, and WA
- eastern grey kangaroo (*M. giganteus*) in areas of Qld and NSW

- western grey kangaroo (*M. fuliginosus*) in areas of NSW, SA, and WA
- common wallaroo or euro (*M. robustus*) in areas of Qld, NSW and SA
- Bennett's wallaby (*M. rufogriseus rufogriseus*) in areas of King Island, Tasmania.⁶¹

A. Scope and Layout

This report seeks to spark a much needed dialogue about the adequacy of the current legislative and regulatory system. The report seeks to identify and examine the contradictions and weaknesses within the law and policy governing this large-scale killing of Australia's wildlife. To do so, the report has adopted a comprehensive approach to describing and analysing Australia's history of killing kangaroos and wallabies, the framework of the law and the law itself. This report seeks to provide information and clarity about some of the legal and policy issues that arise in this complex area. It does not seek to advocate a particular way forward, but does provide recommendations for law reform and further research.

The scope of the report has been limited in a number of ways. These are:

1. It does not cover **government culls** of kangaroos and wallabies such as in the ACT.⁶² These practices raise a separate set of issues which are not fully dealt with here.⁶³
2. It does not provide a full analysis of the possible **criminal offences** arising from the killing of kangaroos and wallabies. However an introduction is provided to these offences.
3. It does not provide a full analysis of the **enforcement** of the law relating to the killing of kangaroos and wallabies. Some reference is provided to the difficulties with enforcement where relevant.
4. It does not provide a full analysis of the complex biological and **conservation issues** relevant to this area. For example, the report does not discuss the impact of harvesting upon the evolutionary potential of macropods.⁶⁴

5. It provides only limited discussion of **future options** and does not seek to provide a full analysis of reform of the law or an ideal law. The report is limited to providing some recommendations which arise out of the analysis.
6. It does not provide a full analysis of the **Indigenous perspective** on the killing of kangaroos and wallabies.

B. Definitions

The terms surrounding the killing of kangaroos may be seen as highly subjective. Proponents of the industry may describe the killing as **'taking'** kangaroos while animal protection activists often describe the killing as **'slaughter'**. The commercial killing of kangaroos was for some time referred to as **'trapping'** and more recently has been called **'harvesting'**. The non-commercial slaughter of kangaroos is generally referred to as **'culling.'** The most widespread terms, 'harvesting' and 'culling,' may be criticised for advancing a positive image of the activities. In particular, harvesting may be used to avoid alerting the uninformed reader that these animals are being killed. Culling is perhaps an even more subjective term as it implies that there are too many kangaroos and that kangaroo populations need to be reduced.

Nonetheless, harvesting and culling are the terms that are used by government agencies and will be used in this report for consistency. Harvesting refers to 'the removal of animals that are living in a wild population, ... for direct use.'⁶⁵ Harvesting is used in this report to refer to the commercial killing of kangaroos whether for their meat and/or skin. Culling is used to refer to the non-commercial killing of kangaroos whether by government agencies, farmers or graziers. In addition, the terms 'harvesters' and 'licensed shooters' are taken to be interchangeable references to commercial shooters.

Finally, the term **'kangaroo'** is used in this report to refer to Macropodoidea (the whole superfamily). The scientifically correct term is **'macropod'**. The term kangaroo technically refers to macropods that have an average foot length of greater than 250 mm⁶⁶ and wallabies are macropods that have a smaller average foot length. The term macropod is used where required to explain the evolutionary history of these animals.

C. A brief history of the law and policy governing the killing of kangaroos

It is estimated that the Macropodoidea (superfamily) first evolved 16 million years ago. Of the large kangaroos (i.e. red, eastern grey, western grey kangaroos, common wallaroo, Antilopine wallaroo, black wallaroos) the most recent (red kangaroo) evolved about a million years ago but they go back 2.5 million years.⁶⁷ The animals have naturally adapted to the Australian landscape through their biology, reproductive systems and physiology. Diamond and Johnson have argued that the extinction of mega fauna in the late Pleistocene was caused by hunting by Indigenous peoples however there is some uncertainty particularly in relation to the continent species as opposed to island species.⁶⁸

The traditional diet of Aboriginal people varies across Australia. Australia is made of a varied landscape and Aboriginal nations have developed unique cultures that reflect this landscape. For many Aboriginal people, kangaroo meat was an important source of food. For example, Altman found that the Gunwinggu of western Arnhem Land consume seven species of kangaroos and seven other mammal species. These mammals provide up to 84% of energy intake in the mid-wet season and 91% of energy intake in the late dry season.⁶⁹ Kangaroo skins and other body parts have traditionally been used by Aboriginal people for tools, utensils, clothing and decorations.⁷⁰

The first European record of a kangaroo comes from 1606 when the Spaniard Diego de Prado y Tovar described an animal which he and his companions ate.⁷¹ The animal had been found somewhere in the Torres Strait. Early European records of kangaroos described the animal as being like a dog, civet-cat, hare, monkey, squirrel, rat and mouse.⁷² According to John Auty, historical record demonstrates that at the 'time of first European contact the kangaroo was numerous and abundant over the continent and Tasmania.'⁷³

After British colonisation in 1788, Europeans began killing kangaroos for food.⁷⁴ However, once the colony was established and had raised enough livestock, kangaroos 'were hunted more for recreational than culinary reasons.'⁷⁵ British royalty further aided the sport through joining kangaroo hunts while touring Australia in 1867 and 1881.⁷⁶ In the 1840s, the eastern grey kangaroos in Tasmania were reduced to relatively low numbers through large scale killing.⁷⁷

However, a shift occurred in the latter part of the 19th century, as kangaroos were identified as pests to the pastoral industry.⁷⁸ It was argued that kangaroos had become more numerous in some areas than when Europeans first arrived, though it is unknown whether or not this was correct.⁷⁹ In the 1860s, John Gould reported that Burrowing Bettongs were particularly destructive in the gardens of settlers in Western Australia.⁸⁰ In NSW, complaints were made to the Legislative Assembly in the 1870s that kangaroos were in large numbers.⁸¹

By the 1880s, all of the States in eastern Australia created legislation for the eradication of kangaroos. In NSW, kangaroos and wallabies were declared vermin⁸² under the *Pasture and Stock Protection Act 1880* (NSW). Bounties were offered for 'the head of each grass-eating marsupial'.⁸³ In 1884, 260,780 macropods were killed in the Tamworth district.⁸⁴ From 1883 to 1920, around 3 million bettongs and potoroos (Potoroids) were shot for bounties.⁸⁵ Three species are now extinct.⁸⁶ The brush-tailed rock-wallaby, which is now listed as vulnerable and is not found in most of its former range in NSW,⁸⁷ was extensively killed as part of this bounty program and for the trade in skins. From 1884 to 1914, at least 640,000 bounties were paid for heads of this species.⁸⁸ However, more animals were killed due to the demand for skins.⁸⁹ For instance, in the 1890s, 66,152 bounties were paid for this species but a further 144,000 skins were traded in Sydney.⁹⁰

The Tamworth Pasture Protection Board paid bounties on more than 100,000 kangaroo scalps annually in most of the early 1880s. In 1884, more than 86,000 bounties were paid for 'scrub wallaby' (Red-necked Wallaby) scalps and more than 250,000 bounties were paid for kangaroo scalps.⁹¹ In Queensland, almost 8 million kangaroos and wallaroos were killed for bounties from 1877 until 1907⁹² and 65 million kangaroos were killed in the period of 1877 to 1987.⁹³ In the period 1935 until 1936 1.25 million red kangaroo skins were traded from Western Australia into the Sydney market.⁹⁴

Although there was widespread support for the killing, it did attract some controversy even in these early days. For example, in the 1920s, Frederick Wood Jones expressed concern about the possible impact of killing on macropod populations. Jones noted that between 1919 and 1920 more than 1,763,826 pelts entered the fur market.⁹⁵

A trade in kangaroo meat had developed by the 1950s. This has been attributed to the collapse in rabbit numbers after myxomatosis was introduced as this released a large number of mobile chiller boxes.⁹⁶ These mobile chiller boxes are old, discarded shipping

containers where kangaroo carcasses are brought to be refrigerated. Most of the kangaroo meat was sold for pet food but there has been an export trade for human consumption since 1955.⁹⁷ In South Australia the use of kangaroo meat for human consumption has been legal since 1980, but in other states this was not legalised until 1993.⁹⁸

Australian Governments have sought to regulate the use of wildlife since the mid 19th century. Initially, State governments enacted a Game Act or Animal Protection Act which listed native and introduced animals and sought to protect these animals through an 'off season'.⁹⁹ This legislation assumed the continuation and validity of hunting and simply sought to ensure that such hunting was sustainable.¹⁰⁰ However, mass levels of exploitation of native and introduced animals continued. Ellis Troughton stated that:

As far back as 1906 appalling faunal destruction is indicated by the fact that over four million possum and 60,000 wallaby skins were marketed that year in London and New York alone. In 1924, the colossal total of over two million koala skins was exported; ... More recently, during the Queensland open season of 1927 approximately 600,000 koalas were massacred by 10,000 licensed trappers.¹⁰¹

Scientific study of kangaroos was developed in the twentieth century.¹⁰² Academics began reporting declines in the range and/or abundance of various species. This development in scientific understanding led to an increasing concern for the conservation of kangaroo species.¹⁰³ Leading scientists argued that the red kangaroo had become endangered due to 'uncontrolled meat hunting and drought'.¹⁰⁴ Prominent CSIRO researchers like Dr. John Calaby feared that the red kangaroo would become extinct, stating that 'Red Kangaroos are not nearly so abundant as is generally thought and that they are subject to great and sudden decline in numbers due both to overshooting and to drought; where both occur together there seems to be a very real chance that the species could be reduced to a level from which it cannot recover'.¹⁰⁵ However, Marion Hercock argued that these were 'subjective claims' that 'belied the population figures during the 1970s'.¹⁰⁶ From the 1970s, there has been a growing public opposition to the harvest and culling of kangaroos.¹⁰⁷ The source of this opposition has been an increased concern in the community about conservation, animal welfare and animal rights.¹⁰⁸

Eventually, a crisis point was reached which resulted in State governments enacting legislation to protect wildlife and manage kangaroo populations.¹⁰⁹

The United States and Europe raised concerns about Australia's killing of kangaroos. In 1974 the US Government banned the import of kangaroo products.¹¹⁰ As a result of widespread public concern, the Commonwealth banned the export of kangaroo products and took some control over state kangaroo management plans in relation to the commercial harvest and export of kangaroo products.¹¹¹ Most of the State governments placed a ban on the sale of kangaroo meat for human consumption.¹¹²

However, the Commonwealth Government allowed exports again in 1975¹¹³ but sought to regulate the industry through annual quotas, which have regulated the industry since this time.¹¹⁴ Administrative appeals were brought to challenge government decisions to continue the killing of kangaroos.¹¹⁵ The US Government continued its ban on kangaroo products until 1981 and some US states still maintain a ban.¹¹⁶

More recently, scientific research has refuted the notion that kangaroos need to be killed for pest control or damage mitigation purposes.¹¹⁷ Research suggests that kangaroos only compete with sheep in extreme drought conditions as they eat different food.¹¹⁸ This is highly significant as '[t]he main reason an industry is approved is almost certainly because of the extent to

which kangaroos are regarded as a pest'.¹¹⁹ As a result of this research, the goals of government kangaroo management programs (KMP) have shifted. For example, in NSW the goal of the KMP 1998-2001 was 'to minimise the adverse effects that certain densities of [kangaroos] may have on rangelands, on pastoral and agricultural production and other land uses.'¹²⁰ However, the goal of the current KMP is to 'maintain viable populations of kangaroos throughout their ranges in accordance with principles of ecologically sustainable development.'¹²¹ This shift in the goals emerged in response to a thorough review of the scientific literature in this area.¹²² This is a significant shift in the law and policy governing the killing of kangaroos. However, the perception that kangaroos are pests and need to be killed is still widespread even within the government.¹²³ This status has important implications for animal welfare because labelling an animal a 'pest' has the 'effect of demonising that species, and potentially encouraging cruel practices against those animals.'¹²⁴

In conclusion, this history shows how the trade in kangaroo meat has developed in Australia. Primarily, the trade has developed out of the perception that kangaroos are pests. A summary of this history is provided in the following timeline.

TIMELINE

Date/Period	Event
Millions of years ago	Kangaroos evolved in the Australian landscape.
Pre-European period	Aboriginal people used kangaroos for food, tools and other materials.
1060	First European record of a kangaroo by Spaniard Diego de Prado y Tovar
1788	British colonisation of Australia. Kangaroos were initially killed by the colonisers for food. Once livestock were established, the colonisers killed kangaroos mainly for recreation.
1840s	Eastern grey kangaroos in Tasmania reduced to relatively low numbers through large scale killing.
1867	Duke of Edinburgh joined kangaroo hunts while in Australia.
1881	Princes Edward and George joined kangaroo hunts while in Australia.
1880s	All States in eastern Australia introduced legislation for the eradication of kangaroos. NSW declared kangaroos and wallabies vermin and bounties were offered for 'the head of each grass-eating marsupial'.
1883-1920	Around 3 million bettongs and potoroos (Potoroids) were shot for bounties. Three of these species are now extinct.
1884-1914	More than 640,000 brush tailed rock-wallabies were shot for bounties. The brush-tailed rock-wallaby is now listed as vulnerable and is not found in most of its former range in NSW.
1890s	66,152 bounties were paid for the heads of brush-tailed rock-wallabies. 144,000 brush-tailed rock wallaby skins were traded in Sydney.
1877-1907	Almost 8 million kangaroos and wallaroos were killed for bounties in Queensland.

1935-1936	1.25 million Red kangaroo skins were traded from Western Australia into the Sydney market.
1950s	Trade in kangaroo meat developed.
1955	Export trade in kangaroo meat for human consumption began.
1970s	Leading scientists argued that the red kangaroo had become endangered due to 'uncontrolled meat hunting and drought.' Growing public opposition to the harvest and culling of kangaroos. US Government banned the import of kangaroo products. Australian government banned the export of kangaroo products and took some control from the states. Annual quotas introduced.
1980	Use of kangaroo meat for human consumption legalised in South Australia.
1980s	Scientific research began to focus upon potential environmental benefits from increased human consumption of kangaroo products.
1993	Use of kangaroo meat for human consumption legal in other Australian states.
2000	Scientific research refuted the notion that kangaroos needed to be killed for pest control or damage mitigation purposes.
2001-	Kangaroo management plans were modified to reflect this new research.

D. Parliamentary Inquiries

Between March 1968 and May 1970, Members of both sides of the House of Representatives presented 84 petitions 'expressing concern at commercial exploitation of kangaroos' and 'praying that the export of all kangaroo products be banned immediately.'¹²⁵ The House of Representatives Select Committee tabled a report in October 1972 called *Wildlife Conservation*.¹²⁶ This report supported the commercial exploit of kangaroos,¹²⁷ but noted a number of problems with the industry. In particular, the report stated:

That a nationwide census of kangaroo numbers at any one time is impossible, from both a practical and an economic point of view. A number of methods of estimating kangaroo numbers exists but each method is confined to a specific set of circumstances. The margins of error for each can be very large and no accurate method of census taking exists.¹²⁸

That due to habitat change, the spread of settlement and the operation of commercial harvesting, the kangaroo has in many areas become visually extinct.

That the claim by the kangaroo industry that its harvesting activities are self-regulatory and ensure the continued existence of the kangaroo does not stand up to scrutiny; particularly in areas where part-time shooters predominate.

That Commonwealth and State authorities cannot certify kangaroo meat as fit for human consumption, as the relevant regulations provide

that all such meat must be from animals killed under supervision in approved abattoirs and processed at the point of killing. Criticism of the Commonwealth Department of Primary Industry concerning its supposed unwillingness to certify kangaroo meat for export for human consumption is unjust, because the Department must certify exports in terms of the regulations of importing countries. The present methods of killing and processing cannot meet those requirements.

That the tourist potential of reserves for kangaroos is of great importance. Projections by the Australian Tourist Commission indicate earnings from tourism could approach \$300m a year in 1975. An important attraction to tourists from overseas is Australia's unique native fauna, particularly *the* kangaroo. Adverse publicity overseas concerning the commercial exploitation of native fauna, could have an effect on potential tourist development.

In September 1976, the House of Representative Standing Committee on Environment and Conservation tabled a report entitled *Trafficking in Fauna in Australia*.¹²⁹

In 1988, the Senate Select Committee on Animal Welfare tabled its report *Kangaroos*. The report found that '[t]o some extent, cruelty to kangaroos has become institutionalised through the system of kangaroo management.'¹³⁰ Further, one of the six members of the Committee published a minority report in which he stated that, 'For the welfare of the kangaroos, the industry should be closed.... The welfare of the kangaroo, our national animal, must be placed ahead

of commercial interests and inept bureaucrats. The present slaughter must cease.¹¹³¹ However, the majority supported the continuation of the industry.

The Senate Rural and Regional Affairs and Transport References Committee (RRAT) tabled a report in June 1998 entitled *Commercial Utilisation of Australian Native Wildlife*.¹³² Again, this report supported the commercial exploitation of kangaroos. This report listed a number of perceived benefits of wildlife utilisation, including:

- The provision of incentives for private landholders to retain and rehabilitate natural habitats;
- The undermining of illegal trade in wildlife;
- An increase in the amount of information gathered about the commercialised species;
- Financial returns from wildlife industries which may be used to assist other conservation objectives; and
- Ownership of the wildlife is returned to the people who own the land (or a quota is given) which may result in social and cultural benefits.

The following table lists these parliamentary inquiries.

Report	Year	Body
<i>Wildlife Conservation</i>	1972	House of Representatives Select Committee
<i>Trafficking in Fauna in Australia</i>	1976	House of Representative Standing Committee on Environment and Conservation
<i>Kangaroos</i>	1988	Senate Select Committee on Animal Welfare
<i>Commercial Utilisation of Australian Native Wildlife</i>	1998	Senate Rural and Regional Affairs and Transport References Committee (RRAT)

E. Approaches to kangaroos

The major stakeholders in the killing of kangaroos are landholders, animal welfare and conservation advocates and the kangaroo industry.¹³³ The main interest of landholders is to have fewer kangaroos in order to minimise impacts upon primary production. The main interest of animal welfare advocates is for no kangaroos to be commercially killed. The main aim of many conservation advocates is to promote kangaroo harvesting in the hope that pastoralists will shift their commercial practice to commercially killing kangaroos and decreasing livestock. The key interest of

the kangaroo industry is for a system that enables the industry to be profitable and experience growth. The following section considers the views of each of these stakeholders.

1. Pest Control or Damage Mitigation

Much of the Australian public holds the belief that kangaroos are pests in Australia and that the damage they cause needs to be mitigated through human intervention.¹³⁴ The origin of this belief can be found in the 1880s when all States in eastern Australia introduced legislation for the eradication of kangaroos. Kangaroos and wallabies were declared vermin and bounties were offered for their heads. While this era of kangaroo management led to the extinction and collapse of certain species, it also solidified the perception that kangaroos are pests.

The Australian government continues to contribute to this belief principally through presenting the issue as 'Australia's problem of abundant kangaroo species'.¹³⁵ The argument here is that the landscape alteration caused by European agricultural practices greatly benefited Australia's larger kangaroo species.¹³⁶ The key factors cited are the introduction of water points in arid areas and control of the dingo.¹³⁷ It is argued that the 'commercial harvest of kangaroos has proven to be an effective mechanism for managing Australia's overabundant kangaroo population'.¹³⁸ Thus, the perceived abundance of kangaroos is portrayed as an environmental issue that requires management, with killing an effective means of achieving this management.

More specifically, kangaroos are commonly viewed as *agricultural pests*:¹³⁹

Competition between certain wildlife and agriculture generally results in the persecution of the native species concerned and destruction of its habitat to reduce the conflict.¹⁴⁰

However, the kangaroo industry and some commentators have been trying to change the perception of kangaroos from 'pest' to 'resource'.¹⁴¹ This change in label is linked with the growing perception that kangaroos can be a sustainable food source.

2. Sustainable Use

The clearing of vegetation is 'the most significant threat to species and ecosystems in eastern Australia'.¹⁴² European land management practices have had profound effects upon ecosystems on arid zone fauna.¹⁴³ Since the late 1980s, Professor Gordon Grigg has suggested that graziers should be encouraged to reduce sheep and other hard-hoofed livestock and

replace them with kangaroos.¹⁴⁴ This theory of 'sheep replacement therapy' has recently been cited as a means to reduce Australia's greenhouse gas emissions as kangaroos do not emit methane whereas sheep and cattle do.¹⁴⁵

The 2009 population estimate for kangaroos within the commercial harvest zones was 27,040,323.¹⁴⁶ However, to achieve a 3 per cent reduction of Australia's annual greenhouse gas emissions through 'sheep replacement', the meat production of 175 million kangaroos would be required with a total population of 220 million kangaroos.¹⁴⁷ Grigg and others have argued that the practicality of having so many kangaroos in the Australian landscape (and harvesting them) is 'dubious'.¹⁴⁸ In addition, the National Farmers Federation (NFF) has stated that the idea of completely replacing the sheep and cattle industries with the kangaroo industry would be extremely unlikely. The NFF has called for market forces to decide the future of Australia's red meat industry rather than climate change policy.¹⁴⁹ Thus it appears that broad acceptance of sheep replacement therapy is unlikely.

However, sustainable use or conservation through sustainable use (CSU)¹⁵⁰ goes further than replacing sheep with kangaroos, but also involves the notion that commercial use of wildlife can provide a conservation tool. The rationale for commercial use providing a conservation tool is through:

1. In-situ conservation, by maintaining habitat in which a traded species exists, so there is maintenance of this species plus a flow on of benefits to other species; and/or
1. Tying profits from trade to go back into conservation management coffers; and/or
2. Buttressing the community stakeholding in local wildlife leading to more effective conservation management.¹⁵¹

In explaining the rationale of sustainable use, Grahame Webb argued:

The concept of conservation through the sustainable use of wildlife is about creating economic incentives for landowners to keep, maintain and nurture native habitats and species. The concept is simple, logical and pragmatic in its principles. But it ruffles the feathers of animal rights proponents, and creates dilemmas for some animal welfare proponents. It confuses some of our urban dwellers, and frightens our federal politicians. But so do many other things.¹⁵²

However, Thomas Struhsaker, a biologist at Duke University, has argued that commercial use is 'an activity whose objective is the material welfare of a select group of humans' without any necessary connection to conservation 'except in a coincidental and passive way.'¹⁵³ He further argued that 'most, if not all, attempts at sustainable harvesting have failed' and that to achieve 'effective conservation of old growth species ... there is no substitute for totally protected areas.'¹⁵⁴ Although Struhsaker is referring to old growth trees here, a similar situation is found with native animals.

Reliance on the market to provide a conservation tool raises the following key issues:

1. The market cannot *appropriately* reflect the true worth of wildlife, that is, its values are beyond commercial consideration; and
2. The market cannot *adequately* reflect the true worth of wildlife, that is, its price is higher than commercial considerations will allow.¹⁵⁵

A number of environmental groups in Australia have expressed opposition to the commercial harvest of kangaroos on environmental sustainability and animal welfare concerns. For example, the Australian Conservation Foundation (ACF) opposes the commercial harvest of kangaroos.¹⁵⁶ ACF's policy states that:

Wildlife populations have rights of their own to exist and flourish independently of human needs. Kangaroos and other wildlife species should not be regarded merely as a human resource and commercial exploitation should never be contemplated. Internationally the widespread protests against sealing and whaling and the growing protests against the commercial slaughter of kangaroos shows this is a widely held belief.¹⁵⁷

WWF does not support the commercial use of wildlife in Australia although the organisation is a 'technical partner' of the CITES Secretariat. In the RRAT Inquiry, WWF Australia acknowledged that consumptive use of wildlife in Australia was inevitable but stated that its objective was to 'ensure that such use approaches ecological sustainability.'¹⁵⁸

In its submission to the RRAT Inquiry, TRAFFIC (the wildlife trade monitoring network)¹⁵⁹ expressed strong opposition to the commercialisation of Australian wildlife, and stated that:

... it would seem unreasonable to expect the general public to subsidise, through taxes or other means, an industry from which it is unlikely to receive any benefit, and may even jeopardise the survival of some species in the wild.¹⁶⁰

In 2001, the Total Environment Centre, on behalf of the Australian Conservation Foundation, Humane Society International and others, objected to the NSW KMP and expressed the following concerns in its submission:¹⁶¹

1. The new KMP is driven by the kangaroo industry;
2. The National Parks role should be to protect and care for native wildlife not facilitate its killing for commercial gain;
3. Effective monitoring and policing of kangaroo numbers is impossible;
4. The KMP cannot be ecologically sustainable.

In 2009, Greenpeace Australia Pacific made a statement that the organisation 'does not advocate killing kangaroos or the consumption of kangaroo meat for any environmental purpose.'¹⁶² The media release further stated that there had been inaccurate reports that Greenpeace is calling for an increase in kangaroo meat consumption.

In their 1999 report, Pople and Grigg recognised public opposition to the kangaroo industry and described this opposition:

Any commercial harvest or pest destruction of wildlife is likely to be controversial, especially if the subjects are as appealing and as well known as Australia's kangaroos. That kangaroos are the most readily identified symbol of Australia, and that they are harvested by shooting, only exacerbates the concern...¹⁶³

This comment by Pople and Grigg highlights the importance of animal welfare and environmental conservation within public opposition to the harvest.

3. Ethics

It has been suggested that the moral and ethical concerns with kangaroo killing cannot be debated logically.¹⁶⁴ However, it is certainly possible to examine the ethics of the commercial and non-commercial killing of kangaroos. Axiology, which is the moral philosophy

area of 'value theory' requires consideration of non-consumptive use values and in particular the intrinsic value of kangaroos.¹⁶⁵ Intrinsic value refers to the concept that an object or subject has value as an end in itself. This may be compared to instrumental value where the object or subject has value as a means to some other end. Another understanding of intrinsic value is that it refers to an 'objective value' whereby the object or subject holds a value independently of the valuation of valuers.¹⁶⁶

Most people have an ambivalent attitude towards exploiting animals however public interest in animal welfare is at an all time high and is likely to continue to grow.¹⁶⁷ The Hon Michael Kirby, former justice of the High Court of Australia, stated 'concerns about animal welfare are clearly legitimate matters of public debate across the nation. So are concerns about the export of animals and animal products.'¹⁶⁸ This concern encompasses the welfare of kangaroos, though many people hold the (mistaken) belief that kangaroos are managed in fenced farms or 'free-ranged' on large properties.¹⁶⁹

Animal welfare refers to 'a state of body and mind as the sentient animal attempts to cope with its environment'¹⁷⁰ and 'good welfare' is where a sentient being is 'fit and happy.'¹⁷¹ In this sense, the way the animal feels may be important.

In relation to kangaroos, community concern relates not only to the welfare of the animals but also to their conservation. It has been argued that native wildlife are 'sacrosanct, not to be killed or interfered with in any way.'¹⁷² Community concern for wildlife appears to be growing not only for economic reasons, but also moral, ethical and symbolic grounds.¹⁷³

The deep ecology movement holds that equal rights belong to all living entities and that the equal right to live and blossom provides a value axiom. According to this movement, if the right to live and blossom is restricted to human beings alone, this will have 'detrimental effects upon the life quality of humans themselves.'¹⁷⁴ Professor Tom Regan argued that all human and non-human animals have equal inherent value and equal rights to be treated with respect.¹⁷⁵ However, Professor Catherine Redgwell said that Regan's approach would produce 'absurd results with his unitary approach to human and animal rights'.¹⁷⁶

Regan proposed principles for dealing with conflicts between (human and non-human) animals:

1. Where there is a choice between inflicting harm upon one animal (or a group of animals) or another, and there are *equally serious consequences* for either, the decision maker has a duty to choose the action which will cause harm to the least number.
2. Where there is a choice between inflicting harm upon one animal or another, and there are *more serious consequences* for one entity than another, then the decision maker has a duty to choose the action with the least serious consequences, even if more animals are adversely impacted.¹⁷⁷

Even if a rights approach is not adopted, the intrinsic value of wildlife can still be recognised:

What is important, on this view, is that wild species are valued for themselves, and not as mere instruments for the fulfilment of human needs and desires.¹⁷⁸

However, environmental ethics may conflict with a rights based approach. Aldo Leopold's classic statement on environmental ethics is that '[a] thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.'¹⁷⁹ A rights based approach would oppose the culling of animals for a perceived need to strengthen the species and conventional biological theory would support the community approach as it provides the 'moral underpinning to the conservation of biological diversity'.¹⁸⁰

The late Dr Peter Rawlinson argued that the killing of kangaroos was ethically unsound¹⁸¹ on the basis that kangaroos should be protected for their intrinsic value. The RRAT Inquiry found that the ethical response to commercial use of wildlife started with whether the individual thought it was right to use animals, and if so, 'whether "wildlife", as opposed to European agricultural species, should be subject to use.'¹⁸² It is clear that environmental ethics and animal ethics have the potential to conflict, particularly in relation to wildlife. Part 3 of this report discusses the impact of this conflict in further detail.

It has been argued that the welfare benefit obtained from reducing livestock is greater than the welfare cost incurred from harvesting kangaroos.¹⁸³ This is on the basis that kangaroos 'do not suffer the stress of being mustered, transported and penned before being killed' and because the shooters 'achieve a high rate of head shots during the harvest'.¹⁸⁴ This is an odd argument as there is no suggestion that a more humane option for domesticated animals is to shoot them in the paddock.

2. The Legislative and Regulatory Framework

A. Responsibility for kangaroos

1. Introduction

Law-making power in Australia is divided between Commonwealth and State governments. There has been an ongoing tension between the Commonwealth and State governments over wildlife as the Commonwealth does not have a clear legislative power to deal with environmental issues or animals.¹⁸⁵ Powers given to the Commonwealth Parliament are found in sections 51 and 52 of the Constitution. The Commonwealth Parliament generally relies upon the external affairs power (s51(xxix)), the trade and commerce power (s51(ii)) and the quarantine power (s51(ix)). The trade and commerce power (s 51(i)) provides the Commonwealth Parliament with the power to legislate with regard to the import and export of wildlife specimens. A significant proportion of kangaroo meat and skins are exported to overseas markets, which means that the Commonwealth has an important role to play.

The following section provides an overview of the historical tension between the Commonwealth and State Governments concerning kangaroo management.

2. Historical tension between the Commonwealth and State Governments concerning kangaroo management

Historically, the State governments were hostile to attempts by the Commonwealth Government to take power with regard to the exploitation of wildlife and in particular kangaroos. For example, in April 1924, the Commonwealth requested that the State governments refer applications for the export of marsupial skins to a State Advisory Committee.¹⁸⁶ This request was rejected by all the State governments. The responses of the NSW and Queensland State Premiers were:

- Queensland: ‘... this Government... cannot agree to the request.’¹⁸⁷

- New South Wales: acknowledged that export matters are ‘wholly for the Commonwealth Government to determine’ but that ‘legitimate trade should not be restricted in this State if an identical policy be not followed in the other States.’¹⁸⁸

In 1933, a State-centred export process was introduced whereby export applications were to be approved by State authorities, subject to final acceptance by the Commonwealth Minister.¹⁸⁹ However, in 1959 the Commonwealth again attempted to gain more power over the issue, calling for a common approach on the basis that the differences between State jurisdictions were causing problems. In particular, ‘whilst kangaroos were considered a menace in some States they were protected in Victoria’.¹⁹⁰ Eventually, the Australian National Parks and Wildlife Service (ANPWS) was created in 1975. This body was created by the *National Parks and Wildlife Conservation Act 1975* (Cth) which recognised the need for Commonwealth and State Government cooperation in wildlife protection.¹⁹¹ This Act was repealed by the *Environmental Reform (Consequential Provisions) Act 1999* (Cth). In 1993, the ANPWS changed its name to the Australian Nature Conservation Agency (ANCA). In 1996, the ANCA ceased to exist as an administrative entity and was replaced by Parks Australia as part of Environment Australia within the Department of the Environment and Heritage. Currently, the Department of Sustainability, Environment, Water, Population and Communities is responsible for the approval of exports and imports.

The following table provides an overview of the Commonwealth statutes that have attempted to govern the export of wildlife.

Commonwealth Statute	Comment
<i>Customs (Prohibited Export) Regulations 1935</i>	In place until 1976.
<i>Endangered Species Regulations 1976</i>	Promulgated under the <i>Customs Act 1901</i> (Cth). ¹⁹²
<i>Wildlife Protection (Regulation of Exports and Imports) Act 1982 (WPA)</i>	Implemented CITES. ¹⁹³
<i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i>	Came into force in July 2000.
<i>Environment Protection and Biodiversity Conservation Amendment (Wildlife Protection) Act 2001</i>	Came into force in January 2002. This amendment incorporated amended provisions of the WPA into the EPBC Act by the addition of Part 13A – International Movement of Wildlife Specimens.

3. Current division of power between the Commonwealth and State Governments for kangaroo management

At the Commonwealth level, the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and the *Export Control Act 1982* (Cth) are the most significant statutes. The EPBC Act aims to provide an overall framework for environmental protection. The *Export Control Act* and its relevant subsidiary legislation provide further requirements for the export of kangaroo products.¹⁹⁴

At the State and local government levels, there is further legislation and policy dealing with wild animals. Although each State government remains responsible for the management of kangaroos within its jurisdiction, any export of kangaroo products requires approval of the Commonwealth. The Commonwealth has exercised the external affairs power to legislate with regard to the welfare of kangaroos which are subject to international export and import.¹⁹⁵

The welfare of kangaroos is just one aspect of what the Commonwealth regulates with the main purpose of regulation being to control and promote exports. As a result, the welfare of kangaroos is subject to a national approach through the *National Codes of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial and Non-Commercial Purposes*.¹⁹⁶ However, the States and Territories animal protection laws still apply to wildlife, including kangaroos. Although a national approach to animal welfare is somewhat unusual, there are other areas where there is also the case (e.g. live export of animals and the slaughter of animals for meat for export).¹⁹⁷

B. International law

International law contains very little mention of animal welfare. Most of the international agreements which mention animal welfare are contained in instruments designed to meet conservation goals. One example of this is found in the *Convention on the International Trade in Endangered Species of Fauna and Flora* (CITES)¹⁹⁸ which provides for the humane transport and housing of animals. The *Agreement on Humane Trapping Standards* is the 'only international agreement which deals directly and predominantly with animal welfare.'¹⁹⁹ However, it has been proposed that the United Nations adopt a Universal Declaration on Animal Welfare.²⁰⁰

C. Domestic law

1. Common law

Under the common law, a landholder has the right to hunt and kill wildlife on their land.²⁰¹ There is no absolute property in live wild animals under the common law (*ferae naturae*).²⁰² If a landholder hunts and kills wild animals, then qualified property rights will arise.²⁰³ However, a multitude of statutes and regulatory instruments have been enacted to deal with kangaroos as a resource to be exploited. Some of these assert ownership by the Crown of wild animals²⁰⁴ which is contrary to the position at common law.²⁰⁵

2. Environmental law and policy

a. Legislation

The key environmental statute related to the killing of kangaroos is the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act). Part 13A of the EPBC Act regulates the international movement of wildlife specimens. Section 303DD provides that it is an offence to export without a permit, and that such a permit can be issued where the export is in accordance with the approved plan (see, e.g. section 303FJ). Section 303BA (a) provides the objects of Part 13A. Section 303DD (3) provides for the accreditation of wildlife trade management plans. State kangaroo management plans are accredited with the Commonwealth through this section which allows kangaroo products to be exported. Conditions for approval are set out in s 303FP. Further conditions for wildlife trade management plans are set out in section 303FO. Wildlife trade management plans must be consistent with the objects of Part 13A and must not cause detriment to the species covered in the specific plan. The states of New South Wales, Queensland, South Australia and Western Australia have approved wildlife trade plans.²⁰⁶ If states do not seek to export kangaroo products there is no requirement for their plans to be approved by the Commonwealth. The wildlife trade management plans currently approved are listed in the table below. In addition, the commercial harvest and export of Bennett's wallaby (*Macropus rufogriseus*) skins from Tasmania is an approved wildlife trade operation (subject to conditions).²⁰⁷

Approved Wildlife Trade Management Plans under the EPBC Act²⁰⁸

State	Program name	Species	Organisation	Approval period	
				From	To
NSW	Kangaroo	<i>Macropus rufus</i>	New South Wales	1 January	31 December
		<i>Macropus fuliginosus</i>	Department of	2007	2011
		<i>Macropus giganteus</i>	Environment and		
		<i>Macropus robustus</i>	Conservation		
		<i>Macropus robustus erubescens</i>			
Qld	Wildlife Trade Management Plan for Export – Commercially Harvested Macropods	<i>Macropus rufus</i>	Queensland	1 January	31 December
		<i>Macropus giganteus</i>	Environmental	2008	2012
		<i>Macropus robustus</i>	Protection Authority		
SA	The Kangaroo Conservation and Management Plan for South Australia	<i>Macropus rufus</i>	Department for	1 January	31 December
		<i>Macropus fuliginosus</i>	Environment and	2008	2012
		<i>Macropus robustus</i>	Heritage		
WA	Management Plan for the Commercial	<i>Macropus rufus</i>	Department of	1 January	31 December
		<i>Macropus fuliginosus</i>	Conservation and Land Management	2008	2012

State and Territory legislation provides that kangaroos and other wildlife are 'protected fauna' and it is an offence to kill or harm them. For this reason, where a management plan provides for the commercial or non-commercial killing of kangaroos, it is necessary for landholders and shooters to obtain licences to do so. It should be noted that the commercial killing of kangaroos for export only occurs in Queensland, New South Wales, South Australia, Western Australia and (most recently) Tasmania. The Victorian government claims there is no commercial killing of kangaroos in that State. The following table provides a summary of the relevant legislation.

State	Legislation	Relevant sections
New South Wales	<i>National Parks and Wildlife Act 1974</i> (NSW)	It is an offence to harm protected fauna without a licence. 'Harm' is defined to include hunting, shooting, poisoning, pursuing, capturing, injuring or killing: sections 5, 98. Section 72 allows the preparation of management plans. Sections 120 and 123 allows for licences to be granted.
	<i>National Parks and Wildlife Regulation 2009</i> (NSW)	Part 6 Division 1 regulates the issuing of licences.
Queensland	<i>Nature Conservation Act 1992</i> (Qld)	It is an offence for an unauthorised person to 'take' a protected animal: section 88. 'Taking' includes killing, injuring or harming an animal: s88(2), Dictionary.
	<i>Nature Conservation (Wildlife Management) Regulation 2006</i> (Qld)	Under Division 2 of Part 4, 'damage mitigation permits' may be granted which allow for the killing of a protected animal which is causing (or may cause) damage to property or represents 'a threat to human health or wellbeing.' Under this regulation, the red kangaroo, the eastern grey kangaroo and the common wallaroo are 'species of least concern' wildlife and may be subject to a declared harvest period.
	<i>Nature Conservation (Administration) Regulation 2006</i>	Regulation 11 provides that commercial wildlife harvesting licences may be granted for animals other than in a protected area.
	<i>Nature Conservation (Macropod Harvest Period 2010) Notice 2009</i>	The notice sets the harvest period, minimum area for skin of a harvested kangaroo (skin only), and the minimum weights for carcasses taken for its meat only or for its meat and skin.
	<i>Nature Conservation (Macropod) Conservation Plan 2005</i>	Regulation 9 provides that the holder of a macropod harvesting licence is authorised to take macropods, under the licence, only during a harvest period for macropods.
South Australia	<i>National Parks and Wildlife Act 1972</i> (SA)	It is an offence to interfere with, harass or molest a protected animal without legislative authority or a permit: s 68(1)(a). It is also an offence to 'undertake or continue or act or activity that is, or is likely to be, detrimental to the welfare of a protected animal after being directed by a warden not to undertake, or to stop, that act or ctivity.' (s 68(1)(b)). Section 53 provides that the Minister may grant a permit allowing the killing of a protected animal. Reasons include for the destruction or removal of animals that are causing (or likely to cause) damage to the environment, stock and crops. The Minister may grant a permit for the harvest of a protected species and the sale or use of the carcasses: s 60J.
	<i>National Parks and Wildlife (Kangaroo Harvesting) Regulations 2003</i> (SA)	Part 3 regulates and provides conditions for permits granted under s 60J.

Western Australia	<i>Wildlife Conservation Act 1950</i> (WA)	Section 16 provides that it is an offence to kill protected fauna without an appropriate licence.
	<i>Wildlife Conservation Regulations 1970</i> (WA)	Regulation 5 provides for the issue of licences for killing protected fauna where the animals are causing damage to property. Regulation 6 allows for the issue of licences permitting the commercial killing of kangaroos.
Tasmania	<i>Nature Conservation Act 2002</i> (Tas)	Part 4 provides for the conservation of flora and fauna. Section 30 provides that the Minister may determine open seasons for partly protected wildlife.
	<i>Wildlife Regulations 1999</i> (Tas)	Under regulations 15 to 17 it is an offence to kill specially protected, protected, or partly protected wildlife without an appropriate permit. Regulation 6 allows for the issuing of licences for the killing of wallabies. Regulation 13 provides for the issue of a permit to kill wildlife in order to prevent destruction of or injury to plants or stock.
Victoria	<i>Wildlife Act 1975</i> (Vic)	Under sections 41 to 43, it is an offence to kill 'endangered', 'notable' or 'protected wildlife'.
	<i>Wildlife (Game) Regulations 2004</i> (Vic)	Licence and control recreational and commercial hunting.
	<i>Wildlife Regulations 2001</i> (Vic)	
Northern Territory	<i>Territory Parks and Wildlife Conservation Act 1977</i> (NT)	It is an offence to kill protected wildlife without a permit: section 66. Section 55 provides that permits may be granted for the killing of protected wildlife, including for commercial purposes.
	Also see: <i>Territory Parks and Conservation Regulations</i> and <i>Territory Parks and Conservation By-laws</i> (NT)	
Australian Capital Territory	<i>Nature Conservation Act 1980</i> (ACT)	Sections 44 and 45 prohibit the killing and taking of wildlife.

b. Management Plans

The 'National Plan of Management for Kangaroos' (National Management Plan) provides guidelines for the State kangaroo management plans. The National Management Plan was approved by the Council of Nature Conservation Ministers (CONCOM)²⁰⁹ in May 1985 and replaced the previous guidelines entitled 'National Kangaroo Management Program'. The National Management Plan originally listed two aims of kangaroo management. In September 1990 a third aim was added. The aims of kangaroo management as set out in the National Management Plan are now:

1. To maintain populations of kangaroos over their natural ranges;
2. To contain the deleterious effects of kangaroos on other land management practices; and
3. Where possible, to maintain kangaroo species as a renewable natural resource providing the conservation of the species is not compromised.

In addition to the State management trade plans approved under the EPBC Act there is the *Wildlife Trade Management Plan for the Commercial Harvest of Bennett's Wallabies and Tasmanian Pademelons on Flinders Island, Tasmania 2005-2010* (Tas), *Wildlife Trade Management Plan for the Commercial Harvest of Bennett's Wallabies on King Island, Tasmania 2005-2010* (Tas) and the *ACT Kangaroo Management Plan*. The Northern Territory and Victoria do not have kangaroo management plans.

The approved State management trade plans must incorporate the National Codes. In 2008, the NSW kangaroo management plan was unsuccessfully challenged in *Wildlife Protection Association of Australia Inc v Minister for the Environment, Heritage and the Arts (Cth)*.²¹⁰ In this case, the applicant submitted that the Codes allow the inhumane and cruel treatment of kangaroos and joeys, noting that young at foot which are left behind are likely to die from predation, starvation or exposure. However, the Tribunal found that this did not amount to a failure to ensure that these animals were humanely killed and ruled that killing in compliance with the Code minimised pain and suffering to the kangaroos concerned (see analysis of this case in Part 3).²¹¹ Appeals of decisions made personally by the Minister in this regard are no longer possible under the current version of the Act.²¹²

In the case of *Re The Wildlife Protection Association of Australia Inc and Minister for Environment and Heritage*²¹³ the King Island and Flinders Island Management Plans for commercial killing of wallabies and pademelons were unsuccessfully challenged. The plaintiffs challenged the decision to permit the use of rimfire rifles on the basis that these weapons do not result in humane outcomes.²¹⁴

c. Environmental policy

The environmental policies most relevant to the killing of kangaroos are:

- *National Strategy for the Conservation of Australia's Biological Diversity* ('Biological Strategy')
- *National Strategy for Ecologically Sustainable Development* ('NSES D')
- *National Principles and Guidelines for Rangeland Management* ('Rangelands Guidelines')

The Rangelands Guidelines provide a definition for each of these documents:

- The NSES D provides 'broad strategic and policy framework under which all Commonwealth, State and Territory governments have agreed to cooperatively make decisions and take actions to pursue ecologically sustainable development in Australia.'
- The Biodiversity Strategy provides 'broad strategic and policy framework, by which the Commonwealth and all State and Territory governments have agreed to measures to protect Australia's biological diversity and maintain ecological processes and systems.'

- The Rangelands Guidelines 'builds on and allows for integration of these strategies in the rangeland context.'²¹⁵

However, the State of the Environment Advisory Council said that 'there is little evidence that these strategies affect decision making in any but the most perfunctory way.'²¹⁶

These environmental policies seek to establish the kangaroo industry as a sustainable commercial activity. For example, Objective 1.4 of the NSES D is:

...to improve kangaroo management at the national level, including the removal of impediments to a sustainable commercial kangaroo industry.

The NSES D further provides that to achieve this objective, Governments will:

...work towards an integrated, and coordinated kangaroo management strategy which is based on development of national guidelines for kangaroo management, the use of market mechanisms such as individual tradeable quotes and the early finalisation of National Game Meat Standards.²¹⁷

Similarly, Objective 2.7 of the Biodiversity Strategy is to:

Achieve the conservation of biological diversity through the adoption of ... ecologically sustainable wildlife management practices.²¹⁸

Evidently, the environmental policies relevant to the killing of kangaroos are concerned with the creation and development of a commercial kangaroo industry.

d. Population Modelling

Population surveys are used to determine estimated populations.²¹⁹ The States use varying methods of surveying populations and there is no agreed methodology. The frequency of population surveys also varies. Aerial and ground surveys are used. However, there are problems with these surveys because:

- Population surveys are an estimate of the population by spotting kangaroos from a plane. Although ground truthing has been undertaken to establish the most appropriate correction factors for unaccounted kangaroos, the population estimates still carry a wide error range and therefore are not accurate. At best, they inform on relative changes in estimated kangaroo numbers in specific locations from year to year.

- Correction factors have been revised continuously since aerial surveys commenced. Therefore it is not possible to compare current population estimates to estimates prior to 2001 (the last change).

e. *Quotas and harvest zones*

A national quota is set by the Commonwealth Government which is meant to represent the estimated sustained yield and upper harvest limit. This quota is further divided up by states. The states in which killing occurs are divided up into commercial and non-commercial zones and these are further divided up into smaller management zones. These zones are used for further quota-setting and monitoring.

The quotas are derived through a variety of means. The most important of these are estimates of population size from aerial and ground surveys. However, other factors are population trends, climatic conditions (especially rainfall) and changes in harvest statistics (such as carcass weight and sex ratio).²²⁰

In 2010, the harvest quota on the mainland has been set at just over 4 million. This represents about 14.9% (ranging from 10% - 20%²²¹ depending on species and state) of the estimated populations of the four commercially harvested species. In recent years, the quota has represented about 15% of the estimated population size but can range between 10% and 20%. [i] In the period 1980 to 2001, the national annual quota for all species has ranged from 1,988,000 to 5,682,146.²²² The quotas for mainland states are set on a calendar year basis while the Tasmanian quotas are set on a fiscal year basis (1 July – 30 June). In 2001-2009, the total number of kangaroos harvested has been 64% of the total annual quota over that period. State-wide quotas are rarely met however the quota is regularly met in some zones.

NSW and South Australia also have a 'special quota' which may be utilised where a management zone's harvest quota has been reached. In these instances, additional kangaroos may be shot for commercial purposes where there is 'a continuing damage mitigation need'.²²³ The South Australian special quota (all three harvested species) is 9,500 and the NSW special quota is 117,550.

f. *Permits*

Each participant in the killing of kangaroos and the processing and sale of kangaroo products is required to be licensed. Harvesters, landholders, meat processors, skin dealers and meat retailers are all required to obtain licences from the appropriate government agencies.

For example, in NSW, occupiers need to obtain a licence under s 121 of the *National Parks and Wildlife Act 1974* (NSW). Licences can be non-commercial or commercial. Applicants need to include the species and number of tags requested. In the case of non-commercial occupier licences, the application form requires the occupier to specify the damage caused by the native fauna by ticking one or more of the following options: damage to crops, damage to fences and competition for pastures and/or water.²²⁴ Tags are issued with each licence and must be attached to the carcasses of both commercial and non-commercially shot kangaroos. The licence will have an expiry date and a set of conditions attached. Commercial shooters are required to obtain a commercial fauna harvester's licence. A person may only obtain such a licence after completing the accreditation and meat handling course. Kangaroos must be shot in accordance with the Code of Practice for the Humane Shooting of Kangaroos. At the end of each month harvesters provide activity reports. The harvester's vehicle, meat processors, skin dealers and meat retailers must all also be licensed.²²⁵

g. *Weight restrictions*

In South Australia, meat processors have established an informal rule of accepting a minimum weight of 14 kg for carcasses²²⁶ however there is no legal requirement to adhere to this restriction. In contrast, a minimum carcass weight and skin size is set by the Queensland Government each year in the harvest period notice.²²⁷ In 2010 this was 20 kg for the minimum whole weight and 13 kg if the animal is fully dressed.²²⁸ The dressing of an animal refers to the removal of its gastrointestinal tract.

3. **Animal protection law and policy**

The literature on the welfare of wild animals is sparse and certainly far less developed than the literature on the welfare of agricultural or other domesticated animals. Professor Stuart Harrop has observed that this area of law often 'derives unobtrusively, incidentally or even accidentally from measures designed to conserve species.'²²⁹ This is particularly true with regard to kangaroos. The legislation related to kangaroos is primarily concerned with the conservation and exploitation of the different species, rather than regulating the welfare of the animals.

a. Application of animal cruelty law to kangaroo killing

Animal cruelty is prohibited throughout the States and Territories.²³⁰ There is no single definition of cruelty across Australia but all of the definitions include two key elements: (1) that an act has caused pain or suffering to an animal²³¹ and (2) that the act was unnecessary, unjustified and/or unreasonable.²³² Although ambiguous, the second of these elements has received little judicial interpretation²³³ with almost no consideration of wildlife.²³⁴ Generally, the determination of whether an act was unnecessary, unjustified and/or unreasonable is made through reference to proprietary and economic interests of people. Magistrates are often influenced by community perceptions of cruelty.²³⁵ However, if an animal has been killed without causing pain or suffering, then there will generally be no breach of the animal cruelty legislation. The killing of animals per se is not cruel at law.²³⁶

Animal protection legislation does not draw any particular distinction between domesticated animals and wild animals. Thus it is arguable that any acts of cruelty committed in the killing of kangaroos (whether for commercial or non-commercial purposes) would fall within the provisions of the animal protection legislation. Some animal cruelty offences only apply to persons who are the 'owner' or 'in charge' of the animal.²³⁷ These offences may not apply to the killing of wild animals where the person is not exercising any form of ownership over the animals, however most cruelty offences are likely to apply to persons mistreating wild animals at large.²³⁸

There are a number of barriers that may prevent the application of animal protection legislation to the killing of kangaroos. Firstly, animal protection legislation may 'operate subject to the application of nature conservation legislation.'²³⁹ This is the case in Queensland and Victoria where the relevant animal protection legislation provides that the cruelty and other offences do not apply to acts or omissions made in accordance with the nature conservation legislation.²⁴⁰

Secondly, animal protection legislation may provide exemptions for the hunting of wildlife. In NSW, this exemption applies where the hunting has occurred in a manner that inflicted no 'unnecessary pain upon the animal.'²⁴¹ A similar provision is found in Tasmania.²⁴² There are additional exemptions provided for the killing of pests²⁴³ and the killing of animals for food.²⁴⁴

Finally, animal protection legislation may provide that adherence to a code of conduct provides a defence or exemption to prosecution under the cruelty offences. However, these defence provisions relate only to Codes which have been adopted under the relevant legislation. The only jurisdiction which has adopted a relevant code is the ACT (this is the ACT code), so it is arguable that the National Codes are of no legal effect in relation to the animal protection law in the remaining States.²⁴⁵

b. Animal welfare provisions in the environmental law and policy governing the killing of kangaroos

The objects of Part 13A of the EPBC Act include the promotion of the humane treatment of wildlife.²⁴⁶ An interim report on a review of the EPBC Act emphasised the importance of this object and stated that it 'was specifically included in the Act due to concerns that it was not adequately addressed in previous legislation'.²⁴⁷ This 'inadequacy' may have been a reference to the difficulties associated with prosecuting offences under the *Wildlife Protection (Regulation of Exports and Imports) Act 1982* (Cth) which was the previous legislation.²⁴⁸ An added problem was that under this previous legislation, it was not necessary for the Minister to consider animal welfare in approving kangaroo management plans.²⁴⁹

Under the EPBC Act, the Minister must be satisfied that if an animal is to be killed this will be done in a manner that is generally accepted to minimise pain and suffering and that the method must be known to result in minimal stress and risk of injury to the animal.²⁵⁰ Before approving a wildlife trade management plan under s 303FO(2), the Minister, among other things, must be satisfied that the welfare requirements found in regulation 9A.05(4) are likely to be complied with.²⁵¹ This means that the Minister must be satisfied that 'if the animal is killed, it is done in a way that is generally accepted to minimise pain and suffering'.

Regulations that address the welfare of animals for which the Minister has issued a permit to export or import may be made under section 303GO. These regulations may include conditions 'eliminating or minimising the risk of ... injury to the animal ... adverse effects on the health of the animal ... or cruel treatment of the animal.'²⁵² In accordance with this section, regulation 9A.05(4)(b) states that 'if the animal is killed, it is done in a way that is generally accepted to minimise pain and suffering.'²⁵³

In all States that export kangaroo products (apart from Tasmania), compliance with the Code is a condition of licences.²⁵⁴ In Tasmania the *Animal Welfare Standard for the Hunting of Wallabies in Tasmania* provides the minimum standard. There are additional provisions pertaining to welfare. For instance, the *Nature Conservation (Macropods) Conservation Plan 2005* (Qld) provides that if a macropod is to be killed, the holder of an authority or the relevant person must kill the animal in a quick and humane way.²⁵⁵ This regulation also provides that compliance with the relevant code will be taken to show compliance with the regulation.²⁵⁶ Similarly, regulation 115 of the *Nature Conservation (Wildlife Management) Regulation 2006* (Qld) provides that if an animal is to be taken under a commercial wildlife harvesting licence the killing must be done in a quick and humane way.

c. *Animal welfare policy*

The national Australian Animal Welfare Strategy (AAWS) states that its vision of promoting animal welfare in Australia extends to the 'care, uses and direct and indirect impacts of human activity on all sentient species.'²⁵⁷ The AAWS has been established under the auspices of the Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF). The AAWS Advisory Committee is made up of representatives of the Commonwealth, State and Territory Governments, animal welfare groups, agriculture, veterinary teaching and research organisations.²⁵⁸

The AAWS process provided a review by Lindy Scott which reported on the animal welfare arrangements for animals in the wild.²⁵⁹ This report suggested that kangaroos could be considered pests 'in some situations'.²⁶⁰ However, the report noted that there was a need to complete the review of the Code of Practice.²⁶¹

Dr Malcolm Caulfield has criticised for the AAWS for undermining 'its credibility by its over-indulgence in breathless and enthusiastic prose' and that it appears to be 'a combined public relations exercise and procedure intended to endorse and insulate current animal farm industry practices.'²⁶² The key problem with the AAWS is that it is not an independent body as it is run by the Commonwealth government that looks after the animal farm industry rather than animal welfare.

3. Analysis

A. Introduction

This part of the report seeks to provide a discussion and deeper analysis of the law and policy discussed in Part 2. The focus of this discussion is on the key legal issues in particular whether the killing of joeys may be illegal, the legalisation of cruelty against kangaroos in commercial and non-commercial shooting, the contradictions found between the objects and purposes of the law and its substantive provisions, the risks to sustainability, and the fundamental question of balancing animal protection with environmental conservation.

B. Alleged illegal killing

In June 2010, the Australian Society for Kangaroos (ASK) submitted a letter to Commissioner Scipione calling for an investigation and legal action. This complaint argued that the killing of 228 kangaroos and joeys at Mount Panorama Bathurst in September 2009 was an offence under s 98 of the *National Parks and Wildlife Act 1974* (NSW) and s 4 of the *Prevention of Cruelty to Animals Act 1979* (NSW).²⁶³ The complaint was based upon professional legal advice and inspection of documents received under a Freedom of Information (FOI) request.

The nominated shooter had been provided a licence from the NSW Department of Environment and Climate Change to kill only 140 eastern grey kangaroos at Mt Panorama in 2009 under s 121 (Occupier's licence) *National Parks and Wildlife Act*. However, the documents obtained under the FOI request revealed that he killed 228 kangaroos, including 97 females, 43 males and 88 joeys.

ASK alleged that the killing of these animals was unnecessary and therefore illegal under Section 4 of the *Prevention of Cruelty to Animal Act 1979* (NSW) which provides:

(2) For the purposes of this Act, a reference to an act of cruelty committed upon an animal includes a reference to any act or omission as a consequence

of which the animal is **unreasonably, unnecessarily or unjustifiably:**

(a) beaten, kicked, **killed**, wounded, pinioned, mutilated, maimed, abused, tormented, tortured, terrified or infuriated,

And section 5 says:

(1) A person shall not commit an act of cruelty upon an animal.

The letter argued that the killing was unnecessary on the basis that there had been a successful herding of kangaroos in 2008 as no kangaroos entered the race track of the Bathurst 1000 event that year. That is, the killing was unnecessary and therefore illegal as there were viable non-lethal alternatives.

ASK also alleged that the killing of the animals breached section 98 of the *National Parks and Wildlife Act 1974* (NSW) which provides that:

...it is an offence to harm protected fauna without a general licence (section 120) or an occupier's licence (section 121)

Section 5 of the same Act provides (read with Schedule 11):

...“fauna” means any mammal...”; “protected fauna means fauna of a species not named in Schedule 11 [and kangaroos are not]; “mammal” means any mammal, whether native ... **and includes ... the young of a mammal.**’

On this basis, ASK argued that the killing of joeys is an offence under section 98 of the Act unless those joeys were killed under the authority of a licence. ASK alleged that the killing of the 88 joeys constitutes an offence under both ss 98 and 133 (conditions of the licence). The matter has yet to be resolved.

A similar argument has been made by the NSW Young Lawyers Animal Law Committee with relation to commercial killing. Section 123 of the *National Parks and Wildlife Act 1974* (NSW) states that a commercial

fauna harvester's licence may only be granted to 'authoris[e] a person to harm fauna of a species named therein for the purposes of sale.' Regulation 11 of the *Nature Conservation (Wildlife Management) Regulation 2006 (Qld)* states that a commercial wildlife harvesting licence 'is to allow a person to harvest protected animals for a commercial purpose.' The NSW Young Lawyers Animal Law Committee argues that shooters holding either of these licences are not permitted to harm or kill joeys unless they are harmed or killed *for the purpose of commercial sale*.²⁶⁴ Together these two states account for more than 75% of all commercial killings.²⁶⁵

In Queensland, regulation 8 of the *Nature Conservation (Macropod) Conservation Plan 2005* provides that the holder of a licence may kill a pouch young or a dependent young if that animal is found with a female kangaroo that has been killed under the authority. The regulation specifies that the joey may only be killed if this is done in accordance with the relevant Code and the shooter must leave the joey at the place it has been killed (i.e. must not take it). It appears that regulation 8 provides a licence to kill pouch young and dependent young when the mother of that animal has been killed under a licence.

However, in NSW there is no such authorisation provided in the conservation legislation. It may be argued that there may be some sort of implied authority to kill joeys as this is required under the Codes for both commercial and non-commercial shooting. This raises the question of whether an actual licence is required to kill these animals. Section 5 of the *National Parks and Wildlife Act 1974* (NSW) provides that the young of kangaroos are protected fauna. Section 98 clearly provides that it is an offence to harm protected fauna without a general license (section 120), an occupier's license (section 121) or a commercial fauna harvester's licence (section 123). Therefore, there is a strong case to be made that a person must have a licence to kill a joey and that any killing of joeys without a licence is illegal.

A separate issue is whether the killing of kangaroos and joeys is necessary. This is highly significant as the animal protection legislation provides that an act of cruelty is one that causes pain or suffering to an animal and that the act was unnecessary, unjustified and/or unreasonable. In the ASK letter, it was alleged that the 2009 killing in Bathurst was unnecessary as there were proven non-lethal alternatives available. Government authorisation alone does not make the act necessary.²⁶⁶

The Western Australian live export case considered the question of whether the animals were likely to suffer unnecessary harm.²⁶⁷ The leading case on this point is *Ford v Wiley*.²⁶⁸ In determining whether the act or omission was necessary, the first matter is to determine whether the relevant act carried out on the animal is to effect an 'adequate and reasonable object'. The second question is whether there is a proportion between the means and the object and 'the beneficial or useful ends sought to be attained must be reasonably proportionate to the extent of suffering caused and in no case can substantial suffering be inflicted unless necessity for its infliction can reasonably be said to exist.' In referring to *Ford v Wiley*, Crawford M stated that the commercial gain of the exporters needed to be balanced with the likelihood of pain, injury and death for the sheep. Crawford M concluded that any harm likely to be suffered by these sheep was unnecessary.²⁶⁹

Scientific research has refuted the notion that kangaroos need to be killed for pest control or damage mitigation purposes.²⁷⁰ The RSPCA has questioned whether the killing of kangaroos for commercial and non-commercial purposes is necessary and has called for this to be reviewed by the Commonwealth and State/Territory governments.²⁷¹ Even where there is a need to manage kangaroo populations, non-lethal methods may be a viable alternative to killing the animals (as highlighted in the ASK letter). In addition, it is not clear how the killing of kangaroos is meant to achieve the object of ecologically sustainable development.²⁷² It is reasonable to conclude that the killing of kangaroos may not be necessary in many cases. At the very least, the research which refutes the notion that kangaroos need to be killed for pest control purposes creates a fairly large policy question as to why kangaroos are being killed on such a mass scale with its associated cruelty to adult kangaroos and joeys.

C. Legalised cruelty

"We need a Mabo decision for Australia's wild animals, a legal recognition of their special status as original residents of Australia, alongside its original inhabitants."²⁷³

The National Codes condone cruelty towards kangaroos through a number of methods. The killing of joeys is the issue that has attracted the most criticism and concern both within Australia and internationally. However, this issue is closely followed by concern for kangaroos that are not killed instantaneously and the separate issues that arise around non-commercial shooting. These issues are discussed in the following sections.

1. Legalised cruelty against joeys

A large number of joeys are killed each year as part of the commercial and non-commercial kill. Around three hundred thousand young at foot and 800,000 pouch young are either killed or left to die each year as collateral of the commercial industry.²⁷⁴

The Codes prescribe methods of killing joeys which would be considered clear breaches of animal welfare law if committed against a range of other animals.²⁷⁵ The recommended methods of killing are:

- For furred pouch young: euthanasia by a single 'forceful blow to the base of the skull sufficient to destroy the functional capacity of the brain'²⁷⁶ (e.g. by a steel water pipe or the tow bar of a vehicle);
- For small furless pouch young (fits within the palm of the hand): 'stunning, immediately followed by decapitation by rapidly severing the head from the body with a sharp blade' or a 'single forceful blow to the base of the skull sufficient to destroy the functional capacity of the brain.'²⁷⁷

For young at foot the Code provides the following methods: 'Single shot to the brain or heart where it can be delivered accurately and in safety using the firearms and ammunition specified...'.²⁷⁸

A number of studies have shown that there is doubt as to whether the current methods of killing joeys ensure a sudden and painless death.²⁷⁹ The American Veterinary Medical Association (AVMA) Report of the AVMA Panel on Euthanasia stated '[p]ersonnel performing physical methods of euthanasia [such as a blow to the head or decapitation] must be well trained and monitored for each type of physical technique performed.'²⁸⁰ However, no formal training is required for the killing of joeys and these practices are virtually unmonitored.

The RSPCA's research on the Code revealed that shooters have difficulty catching young-at-foot and so these joeys are often left alive.²⁸¹ Many of these joeys later die from exposure, starvation or predation.²⁸² The RSPCA found that even if young-at-foot are captured by shooters, there is still difficulty in killing them.²⁸³ Research is currently being undertaken to determine if spring-loaded captive-bolt guns can be used to achieve improved welfare outcomes for joeys.

The NSW Young Lawyers Animal Law Committee has proposed that all of the current prescribed methods for killing joeys be replaced with the following requirement:

Shooters must administer lethal injection to pouch young and young at foot whose mothers have been killed. After administering the injection the shooter must be certain that the animal is dead ... The shooter must not dispose of the dead pouch joey or young at foot in any other manner other than: incineration by fire so that the entire carcass is destroyed or burying the carcass so that the top of the carcass is at least 30cm underground.²⁸⁴

The NSW Young Lawyers Animal Law Committee further proposed that it 'be mandatory that a qualified veterinarian supervise all shootings and administer the lethal injections.'²⁸⁵ However, it would appear that cruelty to joeys will continue unless the killing of female kangaroos ceases. Indeed, in many places, killing of young wildlife is considered an unacceptable practice, as evidenced by the banning of the products from Canadian Harp Seals in many countries, including the US, Mexico, Russia and the European Union.²⁸⁶ The NSW Young Lawyers Animal Law Committee and other groups such as the RSPCA have called for a ban on shooting female kangaroos in order to prevent the killing of and cruelty to joeys.²⁸⁷

However, the welfare issue with regard to joeys was unsuccessfully challenged in *Re Wildlife Protection Association of Australia Inc and Minister for the Environment, Heritage and the Arts*.²⁸⁸ In this case, the Wildlife Protection Association of Australia (WPAA) challenged the 'New South Wales Commercial Kangaroo Harvest Management Plan 2007-2011' on the basis that the Harvest Plan assumed that compliance with the Commercial Code would satisfy the statutory requirement for humane treatment. The applicant argued that the Code did not meet the statutory requirement because the joeys were treated inhumanely (left to starve or killed by a severe blow to the head) and because instantaneous death did not always occur. In relation to cruelty to joeys, the Tribunal stated that:

The concern of the [applicant] is directed particularly to those young at foot that are not able to be killed by the trapper following the killing of the mother ... Again, it may be accepted that there will be a very small number of instances where young at foot die [due to starving or being taken by predators], but we do not regard that fact, even in combination with the instances where an instantaneous killing of the adult is not possible,

as leading to the conclusion that the Plan does not satisfy the object of promoting the humane treatment of wildlife. We are satisfied that it does meet that object.²⁸⁹

The basis of the decision was that the Code should seek to provide the best welfare outcomes possible assuming that the commercial killing was to continue. Such reasoning ignores the possibility of improved welfare outcomes (e.g. through a male-only kill) or that the welfare outcomes for joeys may be unacceptable regardless.

2. Legalised cruelty against adult kangaroos

The Code stipulates that kangaroos are to be 'brain' shot and provides a diagram to demonstrate where the shooter should aim.²⁹⁰ The objective is for the kangaroo to have an instantaneous loss of consciousness and rapid death without regaining consciousness. It is generally considered that shooting a kangaroo in the brain will result in a sudden and painless death for the animal. However, although instantaneous death for the kangaroo is the objective, this is certainly not achieved in all circumstances.

In 1985, the RSPCA found that the overall proportion of head shot kangaroos was about 86% while in 2000/2002 this was 95.9%.²⁹¹ Between 2005 and 2008, Animal Liberation NSW identified that an average of 40% of kangaroos per chiller were neck shot.²⁹² Both the RSPCA and Animal Liberation estimates are limited by the fact that they have only assessed carcasses at meat processors/chillers. Based upon the RSPCA's 2002 research, at least 120,000 kangaroos are body shot each year.²⁹³ Kangaroos that are body shot and left in the field are not included in these figures.

In 2004, the NSW Young Lawyers Animal Rights Committee argued that 'often animals are shot in the head but not in the brain.'²⁹⁴ Where an instantaneous death is not achieved, and the shooter does not pursue and kill the animal, the animal is likely to experience a slow and painful death. The NSW Young Lawyers Committee called for a change in the text whereby where ever the term 'head' was used in the Code (in reference to shooting) that it should be replaced by the word 'brain'. They further recommended that better diagrams should be inserted to 'precisely indicate the size and location of the brain within the animal's head.'²⁹⁵ The Code has since been amended to use the term 'brain' rather than 'head'.

In *Re Wildlife Protection Association of Australia Inc and Minister for the Environment, Heritage and the Arts*,²⁹⁶ the Tribunal addressed the issue of kangaroos not being killed instantaneously and stated that:

As it seems to us, no system, short of absolute prohibition, could prevent instances where instantaneous death was not achieved. The question is whether the Plan, by accepting that these instances will occur, promotes the humane treatment of kangaroos. We think that it does ... It may be accepted that there will, nonetheless, be instances where instantaneous death by brain shot is not achieved ... Any management plan that involves the commercial killing of free-ranging animals will involve a risk that perfection is not always going to be achieved. What is required is that the Plan achieve as near to perfection as human frailty will permit. We are satisfied that the system of accreditation, licensing, and compliance management achieves that object.²⁹⁷

In critiquing this approach, White stated that:

...if, in the commercial 'harvesting' of kangaroos, it is not possible to avoid slow and/or painful deaths for even a small proportion of animals, the practice of commercial kangaroo hunting and killing per se needs to be drawn into question, rather than accepting welfare outcomes that 'in the circumstances [are] as humane as can be expected'.²⁹⁸

As is the case with cruelty to joeys, the acceptance of such cruelty to kangaroos reflects a deeper debate as to the appropriateness of killing kangaroos at all. If the most humane outcomes that can be expected result in adult kangaroos and joeys experiencing cruelty that would not be tolerated for livestock animals, then this again raises the issue of whether such killing is necessary.

3. Non-Commercial Shooting

The Non-Commercial Code permits shooters to use shotguns in certain circumstances instead of centrefire rifles.²⁹⁹ However, the use of shotguns has been heavily criticised on the basis that there are too many variables associated with shotguns to ever achieve a high level of consistency in achieving brain shot outcomes.³⁰⁰ The Code recognises that a shotgun will only 'cause a sudden and painless death if the pattern is centred on the head, neck or chest of the target animal' at 'ranges up to the maximum specified in Schedule 1.' Moreover, there are no competency requirements for non-commercial shooters.³⁰¹

The RSPCA Report of 2002 found that there were high levels of cruelty in the non-commercial killing of kangaroos and has called for the Commercial Code to apply universally.³⁰² The high levels of cruelty are likely to be due to the fact that the competency of non-commercial shooters is not tested and the non-commercial killing is even less regulated than commercial killing as the carcasses are not brought to a processor.³⁰³ Both the RSPCA and the NSW Young Lawyers Animal Law Committee have called for the Commercial Code to apply to non-commercial shooters in order to improve animal welfare outcomes.³⁰⁴

D. Objects and purposes

In the NSW Kangaroo Management Program effective 1 January 1998 to 31 December 2001, one of the goals was ‘to minimise the adverse effects that certain densities of [kangaroos] may have on rangelands, on pastoral and agricultural production and other land uses.’³⁰⁵ Licences were only granted if the killing could be justified on the basis of damage mitigation.³⁰⁶ However, the ‘overarching goal’ of the NSW Commercial Kangaroo Harvest Management Plan 2007-2011 is ‘to maintain viable populations of kangaroos throughout their natural ranges in accordance with the principles of ecologically sustainable development.’ This was a significant change in approach and provided a prima facie right for licences to be granted provided that the killing is ecologically sustainable.³⁰⁷

Section 1.8 of the KMP 1998-2002 provided:

Applications to take kangaroos must be justified on the basis that the numbers of kangaroos are such that significant damage to crops or pastoral production or rangeland is occurring or likely to occur. Landholders thus have no prima facie right to take kangaroos independently of this need to protect their rangelands, agricultural lands or pastoral production.

While it would be expected that such a regulation would require ‘both proof of damage and proof that culling kangaroos had alleviated the situation and actually reduced the damage’ the NSW KMP 1998-2002 ‘contained *no mechanisms* to identify where kangaroos had caused or would cause damage.’³⁰⁸ In particular, the regulation did not contain any mechanisms to audit whether damage mitigation outcomes had been achieved through the authorised kill.³⁰⁹ While Joshua Gilroy argued that this ‘core element of the program *could not* be audited’,³¹⁰ an assessment of damage mitigation outcomes is a core feature of pest control programs.

The change in goals in NSW reflects a comprehensive review of the scientific literature which found that killing of kangaroos cannot be justified on the basis of damage mitigation.³¹¹ In particular, the comprehensive study by Olsen and Braysher found that:

Although studies are few, kangaroos do not appear to impact greatly on wool production and compelling evidence of competition between kangaroos and sheep is lacking.³¹²

Simplistic removal of kangaroos will not necessarily allow replacement with the equivalent in stock or improvement of productivity (e.g. wool production).³¹³

The kangaroo management plans of Queensland, South Australia and Western Australia are also all guided by the central goal of ecologically sustainable development.³¹⁴ Kangaroos are treated as a resource to be exploited. It may be that Australia is seeking to establish the kangaroo industry as a leader in ‘sustainable use’. However, there is strong opposition to such an approach when it has no basis in damage mitigation. This opposition is found amongst animal welfare groups but also landholders who primarily perceive kangaroos as a pest, not a resource. The RSPCA has provided the following critique of Australia’s current killing of kangaroos:

...quotas are set for the commercial harvesting of kangaroos which *no longer relate population reduction directly to damage mitigation*. Kangaroo management plans treat kangaroos as a sustainable resource available for commercial use, rather than making a decision for control as a result of examining their impact on the environment. Given the effects of drought and climate change, there is debate about the effect of the current sustainable use approach on future populations of commercially exploited species.

RSPCA Australia believes that any measures taken to reduce kangaroo populations should first be proven to be *necessary* (through a proper consideration of the reasons for control). They must be conducted humanely and be under the direct supervision of the appropriate government authorities (as part of an approved kangaroo management program). Effective monitoring and auditing of such programs is vital to ensure that these conditions are met.³¹⁵

The applications for non-commercial occupier licences still ask landholders to list what damage kangaroos are causing to their land.³¹⁶ There is no system to check whether damage mitigation is needed or achieved.³¹⁷ It would appear as though many landholders still perceive kangaroos as 'pests' despite the current state of scientific knowledge. In this situation, government agencies are seeking to 'strike a balance between its aim of conserving all macropod species and the interests of landowners.'³¹⁸ Unfortunately, the notion that kangaroos are pests also remains widespread across the Australian public³¹⁹ so it is difficult for the public to engage in an informed debate as to whether the current law and policy is justified.

A further problem associated with the objects and purposes arises where the legislation purports to achieve the protection of animal welfare yet its substantive provisions legalise cruelty.³²⁰ As discussed above, the management plans approved for South Australia, Queensland and Western Australia were challenged in *Re Wildlife Protection Association of Australia Inc and Minister for the Environment and Heritage*³²¹ in 2004. Part of this challenge was on the basis that the plans were inconsistent with the objective of Part 13A of the EPBC Act to promote the humane treatment of wild animals. Although the plans incorporated a requirement for compliance with the Commercial Code, the applicant argued that the Code did not ensure humane killing of kangaroos (particularly for joeys) and that the Code was not adequately enforced. The Administrative Appeals Tribunal rejected the challenge and stated that the animal welfare provisions were 'as humane as can be expected.'³²²

The 'minimum content' of the rule of law is generally understood to contain a number of key attributes, among them generality, openness, certainty, impartiality and access to the courts.³²³ The rule of law provides an important means to constrain the exercise of executive power by the government. However, as with other areas of animal law, the law relating to kangaroos is marked by contradictory language and structure, a complex regulatory framework and heavy reliance upon regulations and codes of practice.³²⁴ Many codes of practice are developed with 'significant input from bodies whose interests are essentially antagonistic to those of animals'³²⁵ and this is also the case with kangaroos. This creates a dilemma as kangaroos are sentient creatures but they have no direct legal claim or capacity to articulate their suffering.

E. Sustainability

In the fairly recent NSW case of *Morris v DECC*³²⁶ a commercial shooter submitted that he had been pressured by landholders to shoot grey kangaroos although his licence was to shoot red kangaroos. His lawyer submitted that this was common. Sheanan J made a series of comments which provide some insight into the need for shooters to abide by their licence conditions to ensure the sustainability of the killing. These comments were:

It was a random audit/inspection by NPWS officers which uncovered these offences, which are universally regarded as almost impossible to detect.

...the entire system of regulation depends upon compliance with the licensing regime.

Sustainability of the species is a key objective of public policy and depends on kills occurring within the framework of commercial harvesting.

The industry is essentially self regulated.

In relation to the defendant's actions, Sheanan J stated:

Mr Morris has held a trapper's licence since 1995, but feels pressured to comply with the stipulations of the farmers or "cockies" who retain him, as to how he should cull the kangaroo population. Clearly those demands frequently conflict with the conditions of his licence, with licences being specific to various species and to zones. He was shooting on this occasion in zone 7 while he had grey kangaroo tags for zone 8.³²⁷

Thomsen and Davies have written that shooters in South Australia regularly harvest from properties which they perceive to have the greatest kangaroo density and simply attach tags that have been issued for another property.³²⁸ Thomsen and Davies argued that this practice occurs so that harvesters may 'maintain good relationships with landholders and ensure continued access to land and to quota for their harvest activities.'³²⁹ Rather than viewing this as an enforcement problem, Thomsen and Davies concluded that the kangaroo industry should be de-regulated to allow these illegal activities to occur more freely. The authors ask 'why there is a need for any commercial harvest quota to be imposed.'³³⁰

The research of Thomsen and Davies suggests that there may be widespread breaches of the law in South Australia by shooters (and landholders) through killing kangaroos from areas that are not provided for in their licences. The case of *Morris v DECC* also indicates that shooters may be killing kangaroos of species that are different to those provided on their licence. Further research is required to determine the full impacts of these practices and the full extent of these practices however it is clear that they challenge current ideas about the sustainability of kangaroo killing.

To highlight the sustainability of current kangaroo killing, it is sometimes stated that the national quota is never met. That is, the sustainable yield is never reached so the level of killing must be sustainable. However, this generalised statement fails to recognise that the quota is often met and sometimes exceeded in the smaller zones. For example, the quotas for Eastern grey kangaroos in the Upper Hunter, NSW, and for red kangaroos in Bourke, NSW, were exceeded in 2006.³³¹ In addition, the quota numbers and population estimates do not take into account the killing of young and the non-commercial killing.³³²

In accordance with density 'trigger points', the shooting must stop once the population of a species falls to a certain level.³³³ Trigger points are included in the NSW Kangaroo Management Plan as a result of the administrative law challenge in *Wildlife Protection Association of Australia Inc and Minister for the Environment, Heritage and the Arts*.³³⁴ If kangaroo populations decline to specific trigger points, then the commercial harvest of particular species in particular zones is to be suspended. These trigger points provide an important safeguard for the sustainability of the commercial harvesting, however this measure is unique to the commercial harvest in NSW.

The NSW Young Lawyers Animal Law Committee argued that the current killing practices expose kangaroos to the possibility of extinction:

The NSW and Qld Kangaroo Management Plans,³³⁵ for example, state that drought, disease, flood, habitat loss or modification, harvesting or predation are unlikely to be individual causes of species threat, but we believe that taken together these factors could threaten the *Macropus* specie.³³⁶

Their concerns are heightened by a number of factors, in particular:

- Changing and unpredictable weather patterns (greater than average heat and more than average flooding in some areas are both identified in the NSW Kangaroo Management Plan as causes of significant population decline);
- An artificial population estimation system that does not take into account factors such as damage mitigation and other non-commercial killings, drought, floods or agricultural land use;
- Unacceptably high dependence on self monitoring that assumes systemic implementation by shooters, fauna dealers and processors;
- A complete lack of regard to the Precautionary Principle in favour of short-sighted profit maximization, leading to the 2007 national quotas being 15.6% of the estimated commercial harvest population.³³⁷ This is of particular concern as the total estimated numbers of commercial harvested species of kangaroos, wallaroos and wallabies continues to reduce by approximately 1,000,000 annually (between 2004 – 2006)³³⁸;
- A lack of effective research regarding the sustainability of the kangaroo and wallaby killing industry and population projections; and
- A failure to quantify the number of non-commercial kills leading to consistently spurious data, posing a substantial risk to the survival of the species.³³⁹

The 2009 population estimate for kangaroos within the commercial harvest zones was 27,040,323.³⁴⁰ Modelling has shown that to achieve a 3 per cent reduction in Australia's annual greenhouse gas emissions through replacing sheep and cattle with kangaroos would require the meat production of 175 million kangaroos with a total population of 220 million kangaroos.³⁴¹ Such numbers are impractical. As a result, significant growth in the kangaroo industry may result in over-exploitation.

F. Animal protection versus environmental conservation

Despite the conservation concerns described above, there is still a notion that the commercial and non-commercial killing of kangaroos provides a means of environmental conservation or at least is compatible with environmental conservation (as may be seen in the current KMPs). Assuming that this is the case, this raises a fundamental question of how animal protection and environmental conservation may be balanced.

The focus of the EPBC Act and the NPWA are environmental conservation, not animal welfare. Species are the primary mode of classification within these Acts, not the individual animal. This is different to the *Prevention of Cruelty to Animals Act 1979* (NSW) and other animal welfare legislation which classify animals as individual animals. This difference in classification is a major distinction between environmental ethics and animal rights or animal welfare. Undoubtedly, this presents a tension between environmental conservation and animal protection.

Garner described this tension:

The dominant ways of thinking about wild animals do not sit easily with the theories [concerned with the moral status of animals]. This is primarily because the dominant mode of conservationism is holistic in nature. That is, attention, in theory and practice, is directed towards the protection of species or ecosystems and not to the protection and wellbeing of individual animals. It is therefore permissible in the case of a holistic conservation ethic to sacrifice the interests of individual animals if by so doing the integrity of a species or ecosystem is maintained.³⁴²

Similarly, Sandøe and Christiansen stated that:

From the point of view of animal ethics, an important shift of focus typically takes place when wild animals are on the agenda. In discussions of the protection of domestic animals, the focus is normally on *individual* animals. When it comes to wild animals, however, the focus is typically on the *species* or on a *population*. What often seems to matter here is that a sufficient number of animals survive in the wild and produce offspring. Whether individual animals or groups have a tough time matters less...³⁴³

Although there are two approaches in environmental ethics to wild animals, both of these approaches “focus on the plight of endangered species”, either out of human self-interest (anthropocentric) or because of their place in an intrinsically valuable ecosystem (ecocentric).³⁴⁴

In relation to how this tension manifests in Australia, Franklin stated that:

Australian environmentalists reserve the right to act on behalf of ecosystems, and this means reserving the right to destroy individual animals if they stray or are foolishly removed from their natural place, or to destroy entire species if they happen to be introduced. This is something animal rights organisations cannot countenance. As far as they are concerned, ecosystems are abstract ideas that do not have a being as such, whereas individual animals, and the manner of their relating to others around them, do.³⁴⁵

The holistic approach found in environmentalism allows harm to occur to kangaroos to preserve the integrity of an ecosystem or simply where such harm will not result compromise the integrity of the ecosystem. In accordance with such reasoning, sustainability can involve the mass killing of kangaroos provided that such killing does not damage the wider ecosystem.

The problem with adopting an holistic environmental ethic with regard to kangaroos is that it:

...fails to rigorously distinguish between plants and animals. This raises concern for a number of reasons, the most important being that it overlooks a central distinction between the two – sentience. This creates a policy and legal perspective which pays insufficient regard to the ethical demands of wild animals as sentient creatures.³⁴⁶

The importance of sentience has been recognised by environmentalists and a particularly telling example is found with whaling. The environmental campaigns against whaling have recognised the inherent cruelty involved in the industry and that whales are intelligent, sentient creatures who are experiencing subjects of life. It may be that the issue of kangaroos will provide a similar example of environmental ethics broadening to place value upon the sentience of animals. The misconceptions around kangaroos create a ‘wicked’ problem, involving fundamental questions about ethics and values.

4. Conclusion



Over the last decade in Australia, the Federal and State governments have approved an annual commercial kill of some four to six million kangaroos and wallabies each year. On average three million kangaroos are actually 'harvested'/killed. Around three hundred thousand young at foot and 800,000 pouch young are either killed or left to die each year as collateral of the commercial industry. In addition, around 200,000 kangaroos and wallabies are killed for non-commercial reasons each year. A further unknown number are killed without government authorisation.

This is the largest land-based slaughter of wildlife in the world.

This report provides an analysis of the law and policy governing the killing of kangaroos. It provides an historical outline of kangaroo killing in Australia and examines the reasons for and against the kill. The report describes and analyses the legislative and regulatory framework governing the killing of kangaroos, in order to assist policymakers understand an area which is complex and often misunderstood.

The **conclusion** of this report is that the current widespread commercial and non-commercial killing of kangaroos has yet to be proven necessary. Governments do not provide any clear justification for the killing such as through a proper consideration of the reasons for and against control. State governments once treated kangaroos as agricultural pests yet today they are treated as a resource. These practices result in poor welfare outcomes for many kangaroos and joeys and may pose a risk to Australia's sustainability.

5. Endnotes

- ¹ The annual approvals are available here: <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/quota/2010.html>> accessed 1 November 2010.
- ² The total number of kangaroos commercially killed is available here: <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/quota/2009.html>> accessed 1 November 2010.
- ³ Based on the Hacker et al. (Hacker R, McLeod SR, Druhan JP, Tenhumberg B, Pradhan U (2004) 'Kangaroo Management Options in the Murray-Darling Basin.' (Murray-Darling Basin Commission: Canberra)) with a 60% male harvest (or 40% female) the number of young-at-foot killed annually in the last decade is around 300,000 and the number of pouch young around 840,000. David Croft, (personal communication to authors, September 2010).
- ⁴ In 2000, 95,686 kangaroos were shot non-commercially in NSW, Queensland and South Australia. RSPCA Australia (2002) *Kangaroo Shooting Code Compliance: A survey of the extent of compliance with the requirements of the Code of Practice for the Humane Shooting of Kangaroos*. Prepared for Environment Australia (see <http://www.environment.gov.au/biodiversity/trade-use/publications/kangaroo-report/examination.html>) accessed 20 October 2010 (5 Other animal welfare issues relevant to the Code of Practice).
- ⁵ For a useful history of kangaroo ecology see Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010).
- ⁶ JC Altman, 'The dietary utilisation of flora and fauna by contemporary hunter-gatherers at Momega outstation, north-central Arnhem Land' (1984) 1 *Australian Aboriginal Studies* 35; JF O'Connell, 'Notes on the manufacture and use of a kangaroo skin waterbag' (1980) 13 *Australian Institute of Aboriginal Studies Newsletter N.S.* 26; SJ Meagher and WDL Ride, 'Use of natural resources by the Aborigines of south-western Australia' in RM Berndt and CH Berndt (eds), *Aborigines in the West: Their Past and Their Present* (1978) 66; Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999).
- ⁷ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999).
- ⁸ EC Rolls, *They All Ran Wild: The Animals and Plants That Plague Australia* (3rd ed, 1984); Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010).
- ⁹ David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005) ; EE Morris, *Australia's first century, 1788-1888* (1978).
- ¹⁰ *Pasture and Stock Protection Act 1880* (NSW); EE Morris, *Australia's first century, 1788-1888* (1978); David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005) .
- ¹¹ P Olsen and M Braysher, 'Situation analysis report: Current state of scientific knowledge on kangaroos in the environment, including ecological and economic impact and effect of culling' 2000 <<http://www.environment.nsw.gov.au/resources/nature/SituationAnalysisFinal.pdf>> at 4 August 2010.
- ¹² See e.g. New South Wales Kangaroo Management Program, effective 1 January 2007 to 31 December 2011.
- ¹³ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), chapter 5; EC Rolls, *They All Ran Wild: The Animals and Plants That Plague Australia* (3rd ed, 1984); I Hume et al, 'Macropodidae' in D Walton (ed), *Fauna of Australia. Volume 1B. Mammalia* (1989) 679.
- ¹⁴ P Corrigan, 'Export of kangaroo meat' (1988) 24 *Australian Zoologist* 179.
- ¹⁵ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), chapter 7.
- ¹⁶ Frith and Callaby, *Kangaroos* (1969), 38.
- ¹⁷ N Shepherd and G Caughley, 'Options for management of kangaroos' in G Caughley, N Shepherd and Jeff Short (eds), *Kangaroos: Their Ecology and Management in the Sheep Rangelands of Australia* (1987) 188.
- ¹⁸ David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005) .
- ¹⁹ The current kangaroo management plans are available here: <<http://www.ea.gov.au/biodiversity/trade-use/sources/index.html>> accessed 1 October 2010.
- ²⁰ D.A. Thomsen and J Davies, 'Rules, norms and strategies of kangaroo harvest' (2008) 14 *Australasian Journal of Environmental Management* 123.
- ²¹ *Morris v Department of Environment and Climate Change* [2008] NSWLEC 309.
- ²² New South Wales Kangaroo Management Program, effective 1 January 2007 to 31 December 2011.
- ²³ *Wildlife Protection Association of Australia Inc and Minister for the Environment, Heritage and the Arts* [2008] AATA 1079.
- ²⁴ See e.g. 2010 quota <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/quota/2010.html>> accessed 1 November 2010.
- ²⁵ 2006 Kangaroo Management Program – Kangaroo and Wallaroo Commercial Take.

- 26 NSW Young Lawyers Animal Law Committee, 'A submission to the NRMCC Working Group on the draft *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies*' (prepared by Amber Hall, John Mancy, Eve McWilliams and Angela Radich), March 2008, 5.
- 27 The population estimates are available here: <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/population/index.html>> accessed 1 November 2010.
- 28 In this scenario, sheep and beef cattle numbers would be reduced by 36 million and 7 million respectively. Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 185.
- 29 Based on the Hacker et al. (Hacker R, McLeod SR, Druhan JP, Tenhumberg B, Pradhan U (2004) 'Kangaroo Management Options in the Murray-Darling Basin.' (Murray-Darling Basin Commission: Canberra)) with a 60% male harvest (or 40% female) the number of young-at-foot killed annually in the last decade is around 300,000 and the number of pouch young around 840,000.
- 30 *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes*, Conditions 5.1.
- 31 See, e.g., the material referred to in RSPCA Australia, *The Kangaroo Code Compliance Report: A survey of the extent of compliance with the requirements of the Code of Practice for the Humane Shooting of Kangaroos*, prepared for Environment Australia, July 2002 <<http://www.deh.gov.au/biodiversity/trade-use/publications/kangaroo-report/summary.html#71>> accessed 8 October 2010 at 5.2.1.
- 32 Ben-Ami, Dror, *A Shot in the Dark: A Report on Kangaroo Harvesting* (Report prepared for Animal Liberation NSW, 2009); S. Fink, *Seals and Sealing in Canada* (International Fund for Animal Welfare, 2007) available at <http://www.ifaw.org/Publications/Program_Publications/Seals/asset_upload_file707_13735.pdf> accessed 1 November 2010.
- 33 Department of the Environment Water Heritage and the Arts, *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes* (2008) <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/pubs/code-of-conduct-commercial.pdf>> accessed 8 October 2010, Condition 2.4 (Point of aim) and Schedule 2.
- 34 RSPCA Australia (2002) *Kangaroo Shooting Code Compliance: A survey of the extent of compliance with the requirements of the Code of Practice for the Humane Shooting of Kangaroos*. Prepared for Environment Australia (see <http://www.environment.gov.au/biodiversity/trade-use/publications/kangaroo-report/examination.html>), Summary.
- 35 Ben-Ami, Dror, *A Shot in the Dark: A Report on Kangaroo Harvesting* (Report prepared for Animal Liberation NSW, 2009), 25.
- 36 On average 3 million kangaroos are shot commercially each year. Using the RSPCA's 2002 figure of 95.9% being head shot, this means that about 123,000 of the carcasses at chillers were not head shot. The actual total of body shot kangaroos would be higher as these carcasses should not be processed.
- 37 Department of the Environment Water Heritage and the Arts, *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-Commercial Purposes* (2008) <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/pubs/code-of-conduct-non-commercial.pdf>> accessed 8 October 2010.
- 38 RSPCA Australia (2002) *Kangaroo Shooting Code Compliance: A survey of the extent of compliance with the requirements of the Code of Practice for the Humane Shooting of Kangaroos*. Prepared for Environment Australia (see <http://www.environment.gov.au/biodiversity/trade-use/publications/kangaroo-report/examination.html>), 6.2.1.
- 39 RSPCA Australia, *What is the difference between non-commercial and commercial kangaroo shooting?* (Last updated 21 October 2009) <<http://kb.rspca.org.au/entry/78>> accessed 1 November 2010.
- 40 See Department of the Environment Water Heritage and the Arts, *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-Commercial Purposes* (2008) <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/pubs/code-of-conduct-non-commercial.pdf>> accessed 8 October 2010.
- 41 Australian Society for Kangaroos, *Complaint to Commissioner Andrew P Scipione APM* (on file with authors).
- 42 P Olsen and M Braysher, 'Situation analysis report: Current state of scientific knowledge on kangaroos in the environment, including ecological and economic impact and effect of culling' 2000 <<http://www.environment.nsw.gov.au/resources/nature/SituationAnalysisFinal.pdf>> at 4 August 2010.
- 43 RSPCA Australia, *Is there a need to kill kangaroos or wallabies* (Last updated 21 October 2009) available at <<http://kb.rspca.org.au/entry/77/>> accessed 10 November 2010.
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- 45 The current kangaroo management plans are available here: <<http://www.ea.gov.au/biodiversity/trade-use/sources/index.html>> accessed 1 October 2010.
- 46 See e.g. Application to Harm Protected Fauna in New South Wales – Section 121 Occupier's Licence – Non-commercial <<http://www.environment.nsw.gov.au/resources/nature/KMPApplicationS121Non-commercialHarm.pdf>> accessed 1 November 2010.
- 47 RSPCA Australia, *Is there a need to kill kangaroos or wallabies?* (Last updated 21 October 2009) <<http://kb.rspca.org.au/entry/77/>> accessed 1 November 2010.
- 48 RSPCA Australia, *Is there a need to kill kangaroos or wallabies?* (Last updated 21 October 2009) <<http://kb.rspca.org.au/entry/77/>> accessed 1 November 2010.
- 49 Ben-Ami, Dror, *A Shot in the Dark: A Report on Kangaroo Harvesting* (Report prepared for Animal Liberation NSW, 2009), 43.
- 50 Elizabeth Ellis, 'Making sausages and law: The failure of animal welfare laws to protect both animals and fundamental tenets of Australia's legal system' (2010) 4 *Australian Animal Protection Law Journal* 6, 6.
- 51 R. Garner, *Animal Ethics* (2005), 143.
- 52 Deborah Cao, *Animal Law in Australia and New Zealand* (2010), 236.
- 53 The annual approvals are available here: <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/quota/2010.html>> accessed 1 November 2010.
- 54 The total number of kangaroos commercially killed is available here: <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/quota/2009.html>> accessed 1 November 2010.

- ⁵⁵ News.com.au, 'A million wallabies and pademelons have been killed in a year in Tasmania' (5 August 2010) <<http://www.news.com.au/breaking-news/a-million-wallabies-and-pademelons-have-been-killed-in-a-year-in-tasmania/story-e6frku0-1225901570055>> accessed 5 October 2010; The Mercury, 'Tassie's huge wallaby cull' (5 October 2010) <http://www.themercury.com.au/article/2010/08/05/163751_tasmania-news.html> accessed 5 October 2010.
- ⁵⁶ Based on the Hacker et al. (Hacker R, McLeod SR, Druhan JP, Tenhumberg B, Pradhan U (2004) 'Kangaroo Management Options in the Murray-Darling Basin.' (Murray-Darling Basin Commission: Canberra)) with a 60% male harvest (or 40% female) the number of young-at-foot killed annually in the last decade is around 300,000 and the number of pouch young around 840,000. David Croft, (personal communication to authors, September 2010).
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- ⁶⁰ MacNully, R. et al, *Biodiversity and Climate Change* (Australian Centre for Biodiversity, Monash University, Commissioned for Garnaut Climate Change Review, June 2008) <<http://www.garnautreview.org.au>> accessed 29 September 2010, 2, 13.
- ⁶¹ Department of Sustainability, Environment, Water, Population and Communities, *2010 Commercial kangaroo and harvest quotas* available at <<http://www.environment.gov.au/biodiversity/trade-use/publications/kangaroo/quotas-background.html>> accessed 11 November 2010; The approved management plans are listed at: <<http://www.ea.gov.au/biodiversity/trade-use/sources/index.html>> accessed 1 October 2010.
- ⁶² ABC Online, 'Kangaroo cull mooted for Canberra', 13 May 2007 at <<http://www.abc.net.au/news/newsitems/200705/s1921538.htm>> accessed 30 September 2010; Adelaide Now, 'Roo cull "threatens whale ban"', 15 March 2008 at <<http://www.adelaidenow.com.au/roo-cull-threatens-whale-ban/story-e6frea6u-1111115808765>> accessed 30 September 2010.
- ⁶³ G Coulson et al, 'The kangaroos of Yan Yean: History of a problem population' (1999) 111 *Proceedings of the Royal Society of Victoria* 121.
- ⁶⁴ For a discussion of this issue see, e.g. D. B. Croft, 'Sustainable use of wildlife in western New South Wales: Possibilities and problems' (2000) 22(1) *Rangeland Journal* 88; D Croft, 'When big is beautiful: Some consequences of bias in kangaroo culling' in Maryland Wilson (ed), *The Kangaroo Betrayed: The World's Largest Wildlife Slaughter* (1999) ; Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999); P.T. Hale, 'Genetic effects of kangaroo harvesting' (2004) 26 *Australian Mammalogy* 75.
- ⁶⁵ ENRC Victoria: 2000, 'Inquiry into the Utilisation of Victorian Native Flora and Fauna,' Report June 2000, No. 30 Session 1999/2000, Environment and Natural Resources Committee, Victorian Government Printer, Melbourne, 92.
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- ⁶⁸ See C Johnson, *Australia's Mammal Extinctions: a 50 000 Year History* (2006); P Murray and G Chaloupka, 'The dreamtime animals: Extinct megafauna in Arnhem Land rock art' (1984) 19 *Archaeology in Oceania* 105; Jared Diamond, 'The golden age that never was' in Jared Diamond (ed), *The Rise and Fall of the Third Chimpanzee* (1992) ; R. Grün et al, 'ESR and U-series analyses of faunal material from Cuddie Springs, NSW, Australia: implications for the timing of the extinction of the Australian megafauna' (2010) 29 *Quaternary Science Reviews* 596.
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- ⁷³ John Auty, 'Red plague grey plague' in Maryland Wilson and David Croft (eds), *Kangaroos: Myths and Realities* (2005) , 56.
- ⁷⁴ AB Smyth, *The journal of Arthur Bowes Smyth, surgeon, Lady Penrhyn, 1787-1789* (1979), 58; WA Tench, *Sydney's first four years* (1961), 268. For a history of culling following European colonisation see WE Poole, Management of kangaroo harvesting (1984) *Australian National Parks and Wildlife Service* (Canberra); EC Rolls, *They All Ran Wild: The Animals and Plants That Plague Australia* (3rd ed, 1984); JD Robertshaw and RH Harden, 'Predation on Macropodoidea: A review' in G Grigg and P Jarman (eds), *Kangaroos, Wallabies and Rat-Kangaroos* (1989) vol 2, 735. For a history of the industry see T Livanes, 'Kangaroos as a resource' (1971) 16 *Australian Zoologist* 68 and TH Kirkpatrick and PJ Amos, 'The kangaroo industry' in HJ Lavery (ed), *The Kangaroo Keepers* (1985) 75 for Queensland and by RIT Prince, 'Exploitation of kangaroos and wallabies in Western Australia. I. Review to 1970, with special emphasis on the red and western grey kangaroos', *Wildlife Research Bulletin of Western Australia* No.13 (Department of Fish and Wildlife: Perth) and RIT Prince, 'Exploitation of kangaroos and wallabies

in Western Australia. I. Exploitation and management of the red kangaroo: 1970-1979', *Wildlife Research Bulletin of Western Australia* No.13 (Department of Fish and Wildlife: Perth) for Western Australia.

- ⁷⁵ David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005) , 26.
- ⁷⁶ David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005) , 26. In 1926, a 'Lieutenant-Colonel Le Souef' of the Zoological Gardens in Perth wrote a letter with regard to the 1927 visit of the Duke of York to Western Australia and suggested that 'a day's kangaroo shooting in the hills might appeal to His Royal Highness.' From Lieutenant-Colonel E.A. Le Souef, Zoological Gardens, South Perth, to Senator Pearce 30/9/1926. Cited in Linda Tucker, Australia's regulation of commercial use of wildlife: an absence of eco-logic, PhD Thesis, Faculty of Law, University of Wollongong, 2008 <http://ro.uow.edu.au/theses/789>, 189.
- ⁷⁷ RD Barker and G Caughley, 'Distribution and abundance of kangaroos (Marsupialia: Macropodidae) at the time of European contact: Victoria' (1992) 15 *Australian Mammalogy* 81. Pople and Grigg (1999) argue that 'It was not until the middle part of the 19th century that kangaroos were harvested in any great numbers' and that the reduction of eastern grey kangaroos in Tasmania was an exception. Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999).
- ⁷⁸ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), chapter 5.
- ⁷⁹ EC Rolls, *They All Ran Wild: The Animals and Plants That Plague Australia* (3rd ed, 1984); Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010).
- ⁸⁰ J Gould, *The Mammals of Australia* (1863). Also see F W Jones, *The Mammals of South Australia. Part II. The Bandicoots and Herbivorous Marsupials* (1924).
- ⁸¹ P J Jarman and K A Johnson (1977), 'Exotic mammals, indigenous mammals and land-use', *Proceedings of the Ecological Society of Australia* 10: 146-66.
- ⁸² David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005) , 26; EE Morris, *Australia's first century, 1788-1888* (1978), 312
- ⁸³ EE Morris, *Australia's first century, 1788-1888* (1978), 312.
- ⁸⁴ TH Kirkpatrick and PJ Amos, 'The kangaroo industry' in HJ Lavery (ed), *The Kangaroo Keepers* (1985) 75
- ⁸⁵ Jeff Short, 'The extinction of rat-kangaroos (Marsupialia:Potoroidea) in New South Wales, Australia ' (1998) 86 *Biological Conservation* 365. Rufus Bettong and other rat-kangaroos were considered to be in plague proportions and as a result were heavily hunted. A W Cameron, 'Changes in the wild life community of the Waterloo Valley Between 1866 and 1975' in *Agriculture, Forestry and Wildlife: Conflict or Coexistence* (1975) , 19-25. Between 1888 and 1914, almost a million bounties were paid for rat-kangaroo scalps on the New England Tableland. More than 100,000 bounties were paid in 1892.
- ⁸⁶ It has also been argued that the introduction of the red fox contribution to these extinctions. Jeff Short, 'The extinction of rat-kangaroos (Marsupialia:Potoroidea) in New South Wales, Australia ' (1998) 86 *Biological Conservation* 365.
- ⁸⁷ David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005) , 27.
- ⁸⁸ Jeff Short and George Milkovits, 'Distribution and status of the brush-tailed rock-wallaby in south-eastern Australia' (1990) 17 *Australian Wildlife Research* 169; Jeff Short, 'The extinction of rat-kangaroos (Marsupialia:Potoroidea) in New South Wales, Australia ' (1998) 86 *Biological Conservation* 365.
- ⁸⁹ The trade in skins probably arose from the abundance of kangaroo skins. The leather was exported to be used in fashion, for floor rugs and souvenirs. T Livanes, 'Kangaroos as a resource' (1971) 16 *Australian Zoologist* 68; G C Grigg, 'Kangaroos – a better economic base for our marginal grazing lands' (1987) 24 *Australian Zoologist* 73; Gordon Grigg, 'Kangaroo harvesting and the conservation of the sheep rangelands' (1988) 24 *Australian Zoologist* 124; TH Kirkpatrick and PJ Amos, 'The kangaroo industry' in HJ Lavery (ed), *The Kangaroo Keepers* (1985) 75; Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010).
- ⁹⁰ Dan Lunney, B Law and Rummyer C, 'An ecological interpretation of the historical decline of the brush-tailed rock-wallaby *petrogale penicillata* in New South Wales' (1997) 19 *Australian Mammalogy* 281.
- ⁹¹ P J Jarman and K A Johnson (1977), 'Exotic mammals, indigenous mammals and land-use', *Proceedings of the Ecological Society of Australia* 10: 146-66.
- ⁹² F Hrdina, 'Marsupial destruction in Queensland 1877-1930' (1997) 30 *Australian Zoologist* 272.
- ⁹³ JD Robertshaw and RH Harden, 'Predation on Macropodoidea: A review' in G Grigg and P Jarman (eds), *Kangaroos, Wallabies and Rat-Kangaroos* (1989) vol 2, 735.
- ⁹⁴ WE Poole, Management of kangaroo harvesting (1984) *Australian National Parks and Wildlife Service* (Canberra); RIT Prince, ' Exploitation of kangaroos and wallabies in Western Australia. I. Exploitation and management of the red kangaroo: 1970-1979', *Wildlife Research Bulletin of Western Australia* No.13 (Department of Fish and Wildlife: Perth). Also see TH Kirkpatrick and PJ Amos, 'The kangaroo industry' in HJ Lavery (ed), *The Kangaroo Keepers* (1985) 75; J Gould, *The Mammals of Australia* (1863); F W Jones, *The Mammals of South Australia. Part II. The Bandicoots and Herbivorous Marsupials* (1924); A W Cameron, 'Changes in the wild life community of the Waterloo Valley Between 1866 and 1975' in *Agriculture, Forestry and Wildlife: Conflict or Coexistence* (1975) .
- ⁹⁵ F W Jones, *The Mammals of South Australia. Part II. The Bandicoots and Herbivorous Marsupials* (1924).
- ⁹⁶ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), chapter 5. EC Rolls, *They All Ran Wild: The Animals and Plants That Plague Australia* (3rd ed, 1984); I Hume et al, 'Macropodidae' in D Walton (ed), *Fauna of Australia. Volume 1B. Mammalia* (1989) 679
- ⁹⁷ P Corrigan, 'Export of kangaroo meat' (1988) 24 *Australian Zoologist* 179; Macfarlane 1971.
- ⁹⁸ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), chapter 7.
- ⁹⁹ See for e.g. *Game Act 1867* (Victoria) which provided a single off-season from 1 August until 30 November. By 1915, this Act included black-faced, large red and large grey kangaroos.

- ¹⁰⁰ For example, the preamble to the *Animals Protection Act 1879* (NSW) states: 'Whereas it is expedient to encourage the importation and breeding of Game not indigenous to the Colony of New South Wales and also to prevent the destruction of Native Game during the breeding season...'
- ¹⁰¹ Ellis Troughton, *Furred Animals of Australia* (7th ed, 1962), xxvi.
- ¹⁰² David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005), 28. See e.g. Troughton and Le Soeuf (1928); EL Troughton 'The truth about marsupial birth' *Australian Museum Magazine* 20 November 1942, 40; H Waring, 'Marsupial studies in Western Australia' (1956) 18 *Australian Journal of Science* 66 Waring (1956); Gordon Grigg, Ian Hume and Peter Jarman, *Kangaroos, Wallabies and Rat-Kangaroos* (1989).
- ¹⁰³ See e.g. J Montgomery, 'Is it too late to save the Big Red?' (1969) 12 *Animals* 226. It has also been argued that the changes in population numbers and distribution can be attributed to changes in land use and environmental factors rather than harvesting per se: SC Cairns and RT Kingsford, 'Harvesting wildlife: kangaroos and waterfowl' in RA Bradstock et al (eds), *Conserving Biodiversity: Threats and Solutions* (1995) 260. The extinction of the Toolache Wallaby has been attributed to harvesting: G Caughley and A Gunn, *Conservation Biology in Theory and Practice* (1996).
- ¹⁰⁴ Harry Firth and John Calaby (1970), 33 stated that 'If any large species of kangaroo is endangered it is the Red Kangaroo, the symbol of the inland plains We have already seen Red Kangaroos in N.S.W. reduced to a fraction of their former numbers in only seven years of uncontrolled meat hunting and drought.' Also see Basil Marlow, 'Kangaroos and men: A symposium of the Royal Zoological Society of New South Wales, 4 July 1970, Australian Museum' (1971) 16 *Australian Zoologist* 1; Gordon Grigg, 'Kangaroo harvesting and the conservation of the sheep rangelands' (1988) 24 *Australian Zoologist* 124. Kirkpatrick and Amos (1985) have argued that the fluctuations in harvest of red and eastern grey kangaroos from 1954 were due to market demand and prevailing weather patterns. TH Kirkpatrick and PJ Amos, 'The kangaroo industry' in HJ Lavery (ed), *The Kangaroo Keepers* (1985) 75
- ¹⁰⁵ Frith & Callaby, *Kangaroos* (1969), 38.
- ¹⁰⁶ Marion Hercock, 'The wild kangaroo industry: Developing the potential for sustainability' (2004) 24 *The Environmentalist* 73, 76. Hercock states that 'in 1975, the population of red kangaroos in the 496,000 km² plains area of New South Wales was estimated at two million kangaroos. Of those numbers, only 2.3%, that is, 48,000 animals were licensed for harvesting under the harvest quota' (citing G Sharman, 'Red Kangaroo' in R Strahan (ed), *The Australian Museum Complete Book of Australian Mammals* (1983) 255).
- ¹⁰⁷ See e.g. Peter Rawlinson, 'Kangaroo conservation and kangaroo harvesting: Intrinsic value versus instrumental value of wildlife' (1988) 24 *Australian Zoologist* 129; S Arnold, 'The morality of harvesting kangaroos' (1988) 24 *Australian Zoologist* 143; Senate Select Committee on Animal Welfare, Parliament of the Commonwealth of Australia, Kangaroos (1988) [8.2] Cruelty to Kangaroos; P Preuss and J Rogers, 'Consumptive use of wildlife: conservation or exploitation?' in Gordon Grigg, PT Hale and D Lunney (eds), *Conservation Through Sustainable Use of Wildlife* (1995) 69; G Grigg, 'Roo harvesting: Are kangaroos really under threat?' (1984) 21(4) *Australian Natural History* 123; Maryland Wilson, *The Kangaroo Betrayed: World's Largest Wildlife Slaughter* (1999); Maryland Wilson and David Croft, *Kangaroos Myths and Realities* (3rd ed, 2005).
- ¹⁰⁸ See e.g. P O'Brien, 'Managing Australian wildlife' (1990) 21 *Search* 24.
- ¹⁰⁹ WE Poole, Management of kangaroo harvesting (1984) *Australian National Parks and Wildlife Service* (Canberra). CF Kirkpatrick and Amos (1985) who argued that regulation of the industry in Queensland preceded the community's concern about conservation and was driven by the need to conserve an economic resource. TH Kirkpatrick and PJ Amos, 'The kangaroo industry' in HJ Lavery (ed), *The Kangaroo Keepers* (1985) 75.
- ¹¹⁰ N Shepherd and G Caughley, 'Options for management of kangaroos' in G Caughley, N Shepherd and Jeff Short (eds), *Kangaroos: Their Ecology and Management in the Sheep Rangelands of Australia* (1987) 188.
- ¹¹¹ David Croft, 'Kangaroos maligned – 16 million years of evolution and two centuries of persecution' in Maryland Wilson and David Croft (eds), *Kangaroos Myths and Realities* (3rd ed, 2005), 29.
- ¹¹² Tasmania did not place a ban on the sale of kangaroo meat for human consumption. Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010).
- ¹¹³ Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 171.
- ¹¹⁴ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), chapter 5.
- ¹¹⁵ *Re Wildlife Protection Association of Australia Inc and Minister for the Environment and Heritage* [2004] AATA 1383: 250; *Re Wildlife Protection Association of Australia Inc and Minister for the Environment, Heritage and the Arts* [2008] AATA 717: 249.
- ¹¹⁶ Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 172; J D Macfarlane, 'Exports of kangaroo meat' (1971) 16 *Australian Zoologist* 62; P Corrigan, 'Export of kangaroo meat' (1988) 24 *Australian Zoologist* 179; N Shepherd and G Caughley, 'Options for management of kangaroos' in G Caughley, N Shepherd and Jeff Short (eds), *Kangaroos: Their Ecology and Management in the Sheep Rangelands of Australia* (1987) 188.
- ¹¹⁷ Olsen and Braysher stated that 'kangaroos cause far less damage to natural vegetation and pastures than do sheep, and then when conditions are poor due to drought or overstocking' and 'by pastoralists' estimates, which might be expected to be somewhat exaggerated, the total perceived losses to kangaroos was equivalent to 3% of gross agricultural production in the commercial zone.' P Olsen and M Braysher, 'Situation analysis report: Current state of scientific knowledge on kangaroos in the environment, including ecological and economic impact and effect of culling' 2000 <<http://www.environment.nsw.gov.au/resources/nature/SituationAnalysisFinal.pdf>> at 4 August 2010., 82. However, Olsen and Braysher also state that 'given the wide range and high numbers of kangaroos that need to be culled to protect environmental or grazing interests, shooting [is] the best option.' P Olsen and T Low, 'Update on Current State of Scientific Knowledge on Kangaroos in the Environment, Including Ecological and Economic Impact and Effect of Culling' (Kangaroo Management Advisory Panel, 2006), 11.
- ¹¹⁸ P Olsen and M Braysher, 'Situation analysis report: Current state of scientific knowledge on kangaroos in the environment, including ecological and economic impact and effect of culling' 2000 <<http://www.environment.nsw.gov.au/resources/nature/SituationAnalysisFinal.pdf>> at 4 August 2010. 84.

- ¹¹⁹ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), chapter 7.
- ¹²⁰ New South Wales Kangaroo Management Program, effective 1 January 1998 to 31 December 2001.
- ¹²¹ New South Wales Kangaroo Management Program, effective 1 January 2007 to 31 December 2011.
- ¹²² Circular: Explanatory Notes to support the Public Exhibition of NSW Kangaroo Management Program – A management program for the utilisation of four kangaroo species in New South Wales, 28.
- ¹²³ See e.g. Lindy Scott, Australian Animal Welfare Strategy, 'Final report – Animals in the wild sector: Review of the existing animal welfare arrangements' <http://www.daff.gov.au/_data/assets/pdf_file/0016/152107/aaws_stocktake_wildlife.pdf> accessed 1 September 2010, 2.
- ¹²⁴ Malcolm Caulfield, *Handbook of Australian Animal Cruelty Law* (2008), 148.
- ¹²⁵ Commonwealth, House of Representatives Select Committee, *Wildlife Conservation*, Parl Paper No 284 (1972) 10, Introduction, 7.
- ¹²⁶ House of Representatives Select Committee (1972), *Wildlife Conservation*. The terms of reference for the Select Committee were to inquire into and reports upon: the need for an urgent and comprehensive survey of wildlife populations including birds, mammals of the land and water, and reptiles, and their ecology to enable conservation measures to be effectively applied to threatened species; the adequacy of several systems of National Parks, Reserves, etc., of the States and Territories to ensure that at least minimum areas of the major animal habitats and the wildlife of the continent are preserved, held securely, and are properly managed in the national interest; the effects of pollution and the widespread use of pesticides on wildlife population; the effect on the population of kangaroos of the trade in meat and hides and the effect of other industrial exploitation on wildlife; the need for international and interstate agreements for the effective conservation of migratory animals; the threat presented to wildlife by the large numbers of domestic animals gone wild, particularly in Northern Australia; and the need for a Commonwealth wildlife conservation authority.
- ¹²⁷ The report stated 'That the basic justification for the kangaroo industry's continued existence is that kangaroos are, at certain times and in some places, sufficiently numerous to be regarded as pests and that it is justifiable to permit reduction of their numbers. This being the case, the greatest possible use should be made of those destroyed.' However, the report noted that there was 'much confusion about the degree of competition between kangaroos and domestic stock for feed.'
- ¹²⁸ House of Representatives Select Committee (1972), *Wildlife Conservation*. The report also noted that there was 'conflicting evidence concerning safe levels of harvesting of kangaroos'.
- ¹²⁹ Commonwealth of Australia, House of Representatives Standing Committee on Environment and Conservation (1976), *Trafficking in Fauna in Australia*, Parl Paper No 301. The Committee was required to report on the 'environmental aspects of legislative and administrative measures which would "ensure the wise and effective management of the Australian environment and of Australia's natural resources", at iii.
- ¹³⁰ Senate Select Committee on Animal Welfare, Parliament of the Commonwealth of Australia, *Kangaroos* (1988) [8.2] Cruelty to Kangaroos.
- ¹³¹ Senator Norm Sanders, pp 199–203 cited in Voiceless, *Kangaroos* at <http://www.voiceless.org.au/The_Issues/Fact_Sheets/kangaroos.html> accessed 1 October 2010.
- ¹³² Senate Rural and Regional Affairs and Transport Committee, 'Commercial Utilisation of Australian Native Wildlife, Executive Summary' (Parliament of Australia, Senate, 1998). The terms of reference were to report on: the potential impact which commercial utilisation of native wildlife might have on the Australian environment; the current and future economic viability of these commercial activities; and the adequacy of existing Federal Government regulations and controls to ensure biodiversity of any native species commercially utilised. At 8.
- ¹³³ Joshua Gilroy, 'New South Wales Kangaroo Management Program: 2002 and beyond' (2004) 26 *Australian Mammalogy* 3, 4.
- ¹³⁴ See e.g. Banyule & Nillumbik Weekly, *Watch out: Roos on the run* (26 October 2010) <<http://www.banyuleandnillumbikweekly.com.au/news/local/news/news-features/watch-out-roos-on-the-run/1978238.aspx>> accessed 10 November 2010.
- ¹³⁵ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), Chapter 1. Pople and Grigg also state that kangaroos are 'among the most abundant large mammals anywhere.'
- ¹³⁶ D.A. Thomsen and J Davies, 'Rules, norms and strategies of kangaroo harvest' (2008) 14 *Australasian Journal of Environmental Management* 123, 124.
- ¹³⁷ D.A. Thomsen and J Davies, 'Rules, norms and strategies of kangaroo harvest' (2008) 14 *Australasian Journal of Environmental Management* 123, 124; AE Newsome, 'An ecological comparison of the two arid-zone kangaroos of Australia and their anomalous prosperity since the introduction of ruminant stock to their environment' (1975) 50 *The Quarterly Review of Biology* 389; Low 2002.
- ¹³⁸ D.A. Thomsen and J Davies, 'Rules, norms and strategies of kangaroo harvest' (2008) 14 *Australasian Journal of Environmental Management* 123, 124; Alexander 1997.
- ¹³⁹ Peter Bridgewater, 'What conservation? Which species?' in G Grigg, P Hale and D Lunney (eds), *Conservation through Sustainable Use of Wildlife* (1995) 9, 11.
- ¹⁴⁰ Peter Bridgewater, 'What conservation? Which species?' in G Grigg, P Hale and D Lunney (eds), *Conservation through Sustainable Use of Wildlife* (1995) 9, 11.
- ¹⁴¹ The Future of Australia's Threatened Ecosystems (FATE) program at the University of New South Wales has been actively promoting the kangaroo harvest. FATE's website which was <www.fate.unsw.edu.au/detail/kangaroos.htm> has been recently been removed. See also P Ampt and A Bamber, 'Building Cooperation and Collaboration in the Kangaroo Industry' (Rural Industries Research and Development Cooperation, 2010)
- ¹⁴² Natural Heritage Trust, *Australian Terrestrial Biodiversity Assessment 2002* (released April 2003), vii.
- ¹⁴³ EK Christie, 'Ecosystem change and land degradation' in GH McTainsh and WC Boughton (eds), *Land Degradation Processes in Australia* (1993) 307, 335.
- ¹⁴⁴ G Grigg, 'Kangaroo harvesting and the conservation of arid and semi-arid rangelands' (1989) 3 *Conservation Biology* 194; Gordon Grigg, 'Kangaroo harvesting and the conservation of the sheep rangelands' (1988) 24 *Australian Zoologist* 124; Gordon Grigg, 'Kangaroo harvesting for conservation of rangelands, kangaroos and graziers' in G Grigg, PT Hale and D Lunney (eds), *Conservation Through Sustainable Use of Wildlife* (1995) 161; G C Grigg,

- 'Conservation benefit from harvesting kangaroos: status report at the start of a new millennium, a paper to stimulate discussion and research.' in D Lunney and C Dickman (eds), *A Zoological Revolution. Using native fauna to assist in its own survival* (2002) 53.
- ¹⁴⁵ R G Wilson and J M Edwards, 'Native wildlife on rangelands to minimize methane and produce lower-emission meat: kangaroos versus livestock' (2008) 1 *Conservation Letters* 119.
- ¹⁴⁶ Department of Sustainability, Environment, Water, Population and Communities, *Kangaroo population estimates* < <http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/population/index.html>> accessed 11 October 2010.
- ¹⁴⁷ Modelling has shown that in this scenario, sheep and beef cattle numbers would be reduced by 36 million and 7 million respectively. Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 185.
- ¹⁴⁸ Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 185 referring to Gordon Grigg, personal communication to K. Vernes 1 May 2010; R G Wilson and J M Edwards, 'Native wildlife on rangelands to minimize methane and produce lower-emission meat: kangaroos versus livestock' (2008) 1 *Conservation Letters* 119.
- ¹⁴⁹ ABC News, 'Roo industry backs climate change report' (2008) at <<http://www.abc.net.au/news/stories/2008/10/02/2379803.htm>> accessed 30 September 2010. Also see Ron Boswell, 'Media Release. Kangaroo Farms – A Eureka Moment from Garnaut' (2008) at <<http://ronboswell.com/small-business/2001-kangaroo-farms-%E2%80%93-a-eureka-moment-from-garnaut>> accessed 30 September 2010.
- ¹⁵⁰ Article 2 of the Convention on Biological Diversity (CBD) (adopted by the United Nations Conference on Environment and Development in June 1992, in Rio de Janeiro, UN Doc A/CONF.151/Rev.1, 31 ILM 874) provides the following definition of sustainable use: 'the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.' In 2004, the Secretariat of the CBD released the *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity* ('Addis Ababa Guidelines'). These guidelines provide a framework to act on the CBD's objectives.
- ¹⁵¹ Linda Tucker, *Australia's regulation of commercial use of wildlife: an absence of eco-logic* (PhD Thesis, PhD Thesis, University of Wollongong, 2008), 8.
- ¹⁵² Grahame Webb, 'Sustainable use of wildlife' (1997) 10(1) *Australian Biologist* 3, 3.
- ¹⁵³ Thomas Struhsaker, 'A biologists perspective on the role of sustainable harvesting in conservation' (1998) 12(4) *Conservation Biology* 930, 930.
- ¹⁵⁴ Thomas Struhsaker, 'A biologists perspective on the role of sustainable harvesting in conservation' (1998) 12(4) *Conservation Biology* 930, 931.
- ¹⁵⁵ Linda Tucker, *Australia's regulation of commercial use of wildlife: an absence of eco-logic* (PhD Thesis, PhD Thesis, University of Wollongong, 2008), 10.
- ¹⁵⁶ Australian Conservation Foundation, Policy Statement No. 39, *Kangaroo Harvesting*, March 1984, <http://acfonline.org.au/articles/news.asp?news_id=391> accessed 5 October 2010.
- ¹⁵⁷ Australian Conservation Foundation, Policy Statement No. 39, *Kangaroo Harvesting*, March 1984, <http://acfonline.org.au/articles/news.asp?news_id=391> accessed 5 October 2010, 2.1.
- ¹⁵⁸ Raymond Nias, World Wide Fund for Nature Australia, *Submission to the Senate References Committee Rural and Regional Affairs and Transport On the Inquiry Into Commercialisation of Australian Native Wildlife* (1997), 2.
- ¹⁵⁹ TRAFFIC's website is: <<http://www.traffic.org/>> accessed 11 November 2010.
- ¹⁶⁰ TRAFFIC Oceania, *Submission to the Senate References Committee Rural and Regional Affairs and Transportation On the Inquiry Into Commercialisation of Australian Native Wildlife* (1997), para 4.1.
- ¹⁶¹ Jeff Angel, *Submission opposing the NPWS Kangaroo Management Plan* (Total Environment Centre, 2001).
- ¹⁶² Greenpeace Australia Pacific, *Greenpeace does not advocate kangaroo meat consumption* (Media Release, 4 September 2009) available at <<http://www.greenpeace.org/australia/news-and-events/media/media-response/greenpeace-not-advocating-kang>> accessed 9 November 2010.
- ¹⁶³ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999), 2.
- ¹⁶⁴ Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999); Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 181.
- ¹⁶⁵ Rem Edwards, *Formal Axiology and Its Critics* (1995).
- ¹⁶⁶ John O'Neill, 'The Varieties of Intrinsic Value' (1992) *The Monist* 119, 119-120.
- ¹⁶⁷ Malcolm Caulfield, *Handbook of Australian Animal Cruelty Law* (2008), 9.
- ¹⁶⁸ *Australian Broadcasting Corporation v Lenah Game Meats Pty Ltd* (2001) 208 CLR 199.
- ¹⁶⁹ Peter Ampt and Kate Owen, 'Consumer attitudes to kangaroo meat products' (Rural Industries Research and Development Corporation, 2008), x.
- ¹⁷⁰ D Fraser and DB Broom, *Farm Animal Behaviour and Welfare* (1990).
- ¹⁷¹ A/JF Webster, *Animal Welfare: Limping Towards Eden* (2005).
- ¹⁷² Wilson, G, 'Cultural Values, Conservation and Management Legislation' in *Fauna of Australia* (AGPS, 1987) Vol 1A, 250.
- ¹⁷³ HJ Aslin and TW Norton, 'No One Answer – Sustainable Use of Wildlife in a Multicultural Society' in G Grigg, H Hale and D Lunney (eds), *Conservation Through Sustainable Use of Wildlife* (1995), 79.
- ¹⁷⁴ Arne Naess, 'The shallow and the deep, long-range ecology movement. A summary' (1972) 16 *Inquiry* 95, 96.
- ¹⁷⁵ Tom Regan, 'The case for animal rights' in Tom Regan and Peter Singer (eds), *Animal Rights and Human Obligations* (1989) 105, 113.
- ¹⁷⁶ Catherine Redgwell, *Life, the universe and everything: A critique of anthropocentric rights*, *Human Rights Approaches to Environmental Protection* (1996), 85.
- ¹⁷⁷ Tom Regan, *The Case for Animal Rights* (1983).
- ¹⁷⁸ Bryan Norton, 'The cultural approach to conservation biology' in D Western and M Pearl (eds), *Conservation for the Twenty-first Century* (1989) 241, 242.
- ¹⁷⁹ Aldo Leopold, *A Sand Country Almanac* (1966), 224.

- ¹⁸⁰ Catherine Redgwell, *Life, the universe and everything: A critique of anthropocentric rights*, Human Rights Approaches to Environmental Protection (1996), 81. Eugene Hargrove stated 'environmental ethics has thoroughly examined and dismissed the claim that nature has some kind of right to exist. Such a position would be infeasible if an environmental ethic could be constructed on animal liberation principles so that we always acted to preserve the rights and interests of every living organism in every species and in every ecosystem.... Put simply, the good of the species or the system is not often, and indeed is usually not at all, compatible with the interests of individual plants and animals.' Eugene Hargrove, 'An overview of conservation and human values: Are conservation goals merely cultural attitudes' in D Western and M Pearl (eds), *Conservation for the Twenty-first Century* (1989), 230. J. Baird Callicot stated that 'An imagined society in which all animals capable of sensibility received equal consideration would be so ludicrous that it might be more appropriately and effectively treated in satire than in political discussion.' J. Baird Callicot, 'Animal liberation: A triangular affair' in R. Elliot (ed), *Environmental Ethics* (1995) 29, 58.
- ¹⁸¹ Peter Rawlinson, 'Kangaroo conservation and kangaroo harvesting: Intrinsic value versus instrumental value of wildlife' (1988) 24 *Australian Zoologist* 129; S Arnold, 'The morality of harvesting kangaroos' (1988) 24 *Australian Zoologist* 143
- ¹⁸² Senate Rural and Regional Affairs and Transport Committee, 'Commercial Utilisation of Australian Native Wildlife, Executive Summary' (Parliament of Australia, Senate, 1998), 292.
- ¹⁸³ Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 182; D.R. Butcher, 'Animal welfare aspects of kangaroo management' (1988) 24 *Australian Zoologist* 164.
- ¹⁸⁴ Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 182-183.
- ¹⁸⁵ See discussion in PH Lane, 'The Federal Government's external affairs power: The Tasmanian Dam Case' (1983) 57 *Australian Law Journal* 554; Michael Coper, *The Franklin Dams Case* (1983); Philip Toyne, *The Reluctant Nation* (1994); Don Rothwell and Ben Boer, 'From the Franklin to Berlin' (1995) 17 *Sydney Law Review* 242.
- ¹⁸⁶ Linda Tucker, *Australia's regulation of commercial use of wildlife: an absence of eco-logic* (PhD Thesis, PhD Thesis, University of Wollongong, 2008), 194. The original letter from the Commonwealth is unavailable. The State Government responses are at National Archives of Australia: Prime Minister's Department, Series no. A364/2.
- ¹⁸⁷ WN Gillies, Acting Premier of Queensland, 17th April 1924.
- ¹⁸⁸ (unnamed official), Acting for George Warburton, Premier of NSW, 5th May 1924.
- ¹⁸⁹ Roger Beale, Department of Environment Sport and Territories, *Submission to the Senate References Committee Rural and Regional Affairs On the Inquiry Into Commercialisation of Australian Native Wildlife* (1997), 52.
- ¹⁹⁰ Roger Beale, Department of Environment Sport and Territories, *Submission to the Senate References Committee Rural and Regional Affairs On the Inquiry Into Commercialisation of Australian Native Wildlife* (1997), 53.
- ¹⁹¹ Section 19(1)(b) provides: 'The Director may co-operate with a State or the Northern Territory or with an authority of a State or of the Northern Territory in formulating and implementing programs for the purposes of the protection, conservation, management and control of wildlife.'
- ¹⁹² These regulations were in response to CITES. They were in force until a 1984 amendment (Prohibited Export Regulations, Statutory Rule no.63, 1984) when the WPA came into force.
- ¹⁹³ *Convention on International Trade in Endangered Species of Wild Flora and Fauna*.
- ¹⁹⁴ For example, the *Export Control Act 1982* and the Australian Standard for Construction of Premises Processing Meat for Human Consumption provide requirements for the construction of game processing establishments.
- ¹⁹⁵ *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth), s 9A.05.
- ¹⁹⁶ Department of the Environment Water Heritage and the Arts, *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes* (2008) <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/pubs/code-of-conduct-commercial.pdf>> accessed 8 October 2010; Department of the Environment Water Heritage and the Arts, *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-Commercial Purposes* (2008) <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/pubs/code-of-conduct-non-commercial.pdf>> accessed 8 October 2010.
- ¹⁹⁷ For an analysis of the live export of animals see Malcolm Caulfield, 'Live export of animals' in Peter Sankoff and Steven White (eds), *Animal Law in Australasia* (2009); Malcolm Caulfield, *Handbook of Australian Animal Cruelty Law* (2008).
- ¹⁹⁸ Harrop SR, "The Dynamics of Wild Animal Welfare Law", (1997) 9(2) *Journal of Environmental Law* 287, 289.
- ¹⁹⁹ Dominique Thiriet, 'Out of the "too hard basket" – Traditional hunting and animal welfare' (2007) 24 *Environment and Planning Law Journal* 59, 72; Harrop SR, "The International Regulation of Animal Welfare and Conservation Issues Through Standards Dealing with the Trapping of Mammals" (2000) 12(3) *JEL* 333, 354. There are a number of international conventions concerning the treatment of wildlife which are incorporated into Australian legislation, including the *Convention on International Trade in Endangered Species of Wild Flora and Fauna* (CITES), *Convention for the Conservation of Migratory Species of Wild Animals*, *Convention on Biological Diversity*, and *Convention for the Regulation of Whaling*.
- ²⁰⁰ World Society for the Protection of Animals (WSPA), *Universal Declaration* < http://www.wspa-usa.org/pages/1731_universal_declaration.cfm> accessed 11 November 2010.
- ²⁰¹ *Sutton v Moody* (1697) 91 ER 1063.
- ²⁰² *Case of Swans* (1592) 7 Co Rep cited in S Brooman and D Legge, *Law Relating to Animals* (1997), 327.
- ²⁰³ S Brooman and D Legge, *Law Relating to Animals* (1997). Brooman and Legge state that '[a]bsolute property can vest in an owner if the animal is dead. See also *Walden v Hensler* (1987) 163 CLR 561 at 565-567.
- ²⁰⁴ See e.g. s 83(1) of the *Nature Conservation Act 1992* (Qld) which provides that 'all protected animals are the property of the State'; s 97(2) of the *National Parks and Wildlife Act 1974* (NSW) provides that 'protected fauna... shall, until captured or killed, be deemed to be the property of the Crown'; s 22(1) of the *Wildlife Conservation Act 1950* (WA) provides that 'property in fauna, until lawfully taken is ... vested in the Crown'.

- ²⁰⁵ For a discussion of the validity of these claims see Steven White, 'Animals in the wild' in Peter Sankoff and Steven White (eds), *Animal Law in Australasia* (2009), 232-238. Also see generally D Favre, 'A new property status for animals' in Cass R. Sunstein and Martha C. Nussbaum (eds), *Animal Rights: Current Debates and New Directions* (2004); G Francione, *Animals, Property and the Law* (1995).
- ²⁰⁶ Department of the Environment, Water, Heritage and the Arts (DEWHA), *Approved wildlife management plans* <<http://www.environment.gov.au/biodiversity/trade-use/sources/management-plans/index.html>> accessed 1 September 2010.
- ²⁰⁷ Permit issued to Lenah Game Meats for the period 1 November 2009 until 31 October 2012: <<http://www.environment.gov.au/biodiversity/trade-use/sources/operations/index.html>> accessed 10 November 2010. Further details may be found here: <<http://www.environment.gov.au/biodiversity/trade-use/sources/operations/lenah-game-meats.html>> accessed 10 November 2010.
- ²⁰⁸ The approved wildlife trade management plans are listed here: <<http://www.environment.gov.au/biodiversity/trade-use/sources/management-plans/index.html>> accessed 10 November 2010.
- ²⁰⁹ Now the Australian and New Zealand Environment and Conservation Council (ANZECC).
- ²¹⁰ [2008] AATA 717. See submissions at <<http://www.kangaroo-protection-coalition.com/nswaatappeal2008.html>>.
- ²¹¹ The Tribunal referred to its earlier decision on this part of the Code in *Wildlife Protection Association of Australian Inc and Minister for the Environment and Heritage* [2004] AATA 1383.
- ²¹² Malcolm Caulfield, *Handbook of Australian Animal Cruelty Law* (2008), 152.
- ²¹³ [2006] AATA 953.
- ²¹⁴ For a discussion of the humaneness of rimfire rifles see NSW Young Lawyers Animal Law Committee, *Letter to the Hon. Ian Campbell, Minister for the Environment and Heritage: Commercial wallaby cull on King and Flinders Islands* (9 January 2007) available at <<http://www.lawsociety.com.au/idc/groups/public/documents/internetyounglawyers/023627.pdf>> accessed 11 November 2010.
- ²¹⁵ Australian & New Zealand Environment & Conservation Council (ANZECC) and Agriculture & Resource Management Council of Australia & New Zealand, *Managing Australia's Rangelands, National Principles and Guidelines for Rangeland Management* (1999), 2.
- ²¹⁶ State of the Environment Advisory Council, *State of the Environment* (1996), 10-28.
- ²¹⁷ Commonwealth of Australia (1992), *National Strategy for Ecologically Sustainable Development*, 24.
- ²¹⁸ Commonwealth of Australia (1996), *National Strategy for the Conservation of Australia's Biological Diversity*, 23. It further calls for the development of 'wildlife utilisation programs that create economic and other incentives for the retention, rehabilitation, maintenance and management of natural habitats.' Action 2.7.1.
- ²¹⁹ Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010).
- ²²⁰ Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010), 176.
- ²²¹ Stephen Jackson and Karl Vernes, *Kangaroo: Portrait of an Extraordinary Marsupial* (2010); G Caughley, 'Ecological relationships' in G Caughley, N Shepherd and J Short (eds), *Kangaroos: Their Ecology and Management in the Sheep Rangelands of Australia* (1987) 159; G Grigg, 'A crossroads in kangaroo politics' (1997) 10 *Australian Biologist* 12; Tony Pople and Gordon Grigg, 'Commercial harvesting of Kangaroos in Australia' (Department of Environment, Water, Heritage and the Arts, 1999).
- ²²² Department of Environment, Water and Heritage, 'Commercial kangaroo harvest quotas – National quotas' (Last updated 16 July 2000) at <<http://www.environment.gov.au/biodiversity/trade-use/wild-harvest/kangaroo/national.html>> accessed 30 September 2010.
- ²²³ Department of Environment, Water, Heritage and the Arts, 'Background Information: Commercial kangaroo and wallaby harvest quotas' <<http://www.environment.gov.au/biodiversity/trade-use/publications/kangaroo/pubs/2010-commercial-harvest-quotas.pdf>> accessed 31 August 2010, 3.
- ²²⁴ Application to Harm Protected Fauna in New South Wales – Section 121 Occupier's Licence – Non-commercial <<http://www.environment.nsw.gov.au/resources/nature/KMPApplicationS121Non-commercialHarm.pdf>> accessed 1 November 2010.
- ²²⁵ Department of Environment and Climate Change NSW, *Handbook for kangaroo harvesters* available at <<http://www.environment.nsw.gov.au/resources/nature/08413hbkangharvesters.pdf>> accessed 2 November 2010.
- ²²⁶ D.A. Thomsen and J Davies, 'Rules, norms and strategies of kangaroo harvest' (2008) 14 *Australasian Journal of Environmental Management* 123, 129.
- ²²⁷ Department of Environment and Resource Management, *Commercial harvesting of kangaroos and wallaroos in Queensland* <http://www.derm.qld.gov.au/wildlife-ecosystems/wildlife/wildlife_permits_and_licences/kangaroo_harvesting.html> accessed 1 September 2010.
- ²²⁸ *Nature Conservation (Macropod Harvest Period 2010) Notice 2009*, Subordinate Legislation 2009 No. 315, s 10. Available at <<http://www.legislation.qld.gov.au/LEGISLTN/SL/2009/09SL315.pdf>>.
- ²²⁹ Stuart Harrup, 'The dynamics of wild animal welfare law' (1997) 9 *Journal of Environmental Law* 287, 287.
- ²³⁰ *Animal Care and Protection Act 2001* (Qld), s 18; *Prevention of Cruelty to Animals Act 1985* (SA), s 13(1); *Prevention of Cruelty to Animals Act 1986* (Vic), s 9; *Prevention of Cruelty to Animals Act 1979* (NSW), s 5(1); *Animal Welfare Act 1999* (NT), s 6(1); *Animal Welfare Act 2002* (WA), s 19; *Animal Welfare Act 1992* (ACT), s 7; *Animal Welfare Act 1993* (Tas), s 8(1).
- ²³¹ *McNamara v Noble* (1937) 54 WN (NSW) 148. The level of pain is determined by species *RSPCA v Harrison* (Unreported, SA Supreme Court, No SCGRG-99-669 Judgment No S363, Martin J, 7 September 1999); *RSPCA v Evitts* Judgment No S3810 (Unreported, SA Supreme Court, No SCGRG 92/2774, Cox J, 17 February 1993).
- ²³² *Animal Care and Protection Act 2001* (Qld), s 18(2)(a); *Prevention of Cruelty to Animals Act 1985* (SA), s 13(2); *Prevention of Cruelty to Animals Act 1986* (Vic), s 9; *Prevention of Cruelty to Animals Act 1979* (NSW), s 4(2); *Animal Welfare Act 1999* (NT), s 6(3); *Animal Welfare Act 2002* (WA), s 19; *Animal Welfare Act 1992* (ACT), s 7; *Animal Welfare Act 1993* (Tas), s 8(1).
- ²³³ Wright S, *Nonhuman Animal Rights – Legislation, Ethics and Reform* (Honours Thesis, University of Western Australia, 2001), 37.

- ²³⁴ Dominique Thiriet, 'Out of the "too hard basket" – Traditional hunting and animal welfare' (2007) 24 *Environment and Planning Law Journal* 59, 66.
- ²³⁵ Jamieson P, "Duty and the Beast: The Movement in Reform of Animal Welfare Law" (1991) 16(2) UQLJ 238, 245. Also see Radford M, "'Unnecessary Suffering': The Cornerstone of Animal Protection Legislation Considered" (1999) *Criminal Law Review* 702 at 705.
- ²³⁶ However, note that in New South Wales there is a provision which effectively extends the definition of cruelty to include killing: *Prevention of Cruelty to Animals Act 1979* (NSW) s 4(2).
- ²³⁷ This is particularly relevant for the duty of care offences. See, for e.g., *Prevention of Cruelty to Animals Act 1979* (NSW) s 8; *Animal Care and Protection Act 2001* (Qld) s 17; *Animal Welfare Act 1985* (SA) s 13(3)(b); *Animal Welfare Act 1993* (Tas) s 6; *Prevention of Cruelty to Animals Act 1986* (Vic) s 9(1)(f); *Animal Welfare Act 2002* (WA) s 19(3); *Animal Welfare Act 1992* (ACT) s 8; *Animal Welfare Act 1999* (NT) s 8. It may be possible to argue that governments should be liable under the duty of care offences, however some jurisdictions 'make clear that animal welfare legislation does not apply to the State where it might otherwise be claiming property to wild animals in their natural environment. So, for example, in Queensland, s 6 of the *Animal Care and Protection Act 2001* has the effect that "the State will not be deemed to be in charge of a wild or protected animal that is at large merely because the animal is deemed to be the property of the State.' Steven White, 'Animals in the wild' in Peter Sankoff and Steven White (eds), *Animal Law in Australasia* (2009) , 239 citing Explanatory Note, *Animal Care and Protection Bill 2001* (Qld), 19.
- ²³⁸ Steven White, 'Animals in the wild' in Peter Sankoff and Steven White (eds), *Animal Law in Australasia* (2009) , 239. See e.g. *Prevention of Cruelty to Animals Act 1979* (NSW) s 5(1); *Animal Care and Protection Act 2001* (Qld) s 18; *Animal Welfare Act 1985* (SA) s 13(1); *Animal Welfare Act 1993* (Tas) s 8; *Prevention of Cruelty to Animals Act 1986* (Vic) s 9(1); *Animal Welfare Act 2002* (WA) s 19(1); *Animal Welfare Act 1992* (ACT) s 7; *Animal Welfare Act 1999* (NT) s 6(1).
- ²³⁹ Deborah Cao, *Animal Law in Australia and New Zealand* (2010), 231.
- ²⁴⁰ *Animal Care and Protection Act 2001* (Qld) s 7 grants an immunity for acts or omissions done in accordance with the *Nature Conservation Act 1992* (Qld); *Prevention of Cruelty to Animals Act 1986* (Vic) s 6(1B) provides that cruelty and other offences do not apply to anything done in accordance with the *Wildlife Act 1975* (Vic).
- ²⁴¹ *Prevention of Cruelty to Animals Act 1979* (NSW), s 24(1)(b) (i).
- ²⁴² *Animal Welfare Act 1993* (Tas), s 4(1).
- ²⁴³ Dominique Thiriet, 'In the spotlight – The welfare of wild introduced animals in Australia' (2007) 24 *Environment and Planning Law Journal* 417.
- ²⁴⁴ Katrina Sharman, 'Farm animals and welfare law: An unhappy union' in Peter Sankoff and Steven White (eds), *Animal Law in Australasia* (2009) 35.
- ²⁴⁵ Malcolm Caulfield, *Handbook of Australian Animal Cruelty Law* (2008), 150. Note that there may be further relevant provisions in the separate legislation. For example, section 34(3) of the *Prevention of Cruelty to Animals Act 1979* (NSW) provides that a person shall not be convicted under the Act or regulations where they have already been convicted under another act or regulation for that act or omission.
- ²⁴⁶ Section 303BA (1) EPBC Act.
- ²⁴⁷ Hawke, A., *Independent Review of the Environment Protection and Biodiversity Conservation Act 1999: Interim Report* (Commonwealth of Australia, Canberra, June 2009) <<http://www.environment.gov.au/epbc/review/publications/pubs/18-wildlife-trade.pdf>> accessed 29 September 2010, 271.
- ²⁴⁸ Cao, Deborah, *Animal Law in Australia and New Zealand* (2010), 240. See e.g. *R v Klein* (1989) A Crim R 332 (NSW Court of Criminal Appeal). This case concerned the import of seven parakeets from Singapore to Australia (without a permit). The birds had been drugged and caged and then abandoned at Sydney Airport. The appeal court described the sentencing judge's concerns about the cruelty involved as 'sentimentality'. At [334] (per Lee J, Campbell and Loveday JJ agreeing).
- ²⁴⁹ See e.g. *Re Wildlife Protection Association of Australia Inc and Minister for the Environment and Heritage* (2003) 73 ALD 446 at 453.
- ²⁵⁰ See Regulation 9A.05 *Environment Protection and Biodiversity Conservation Regulation 2000* (Cth) which sets out conditions for section 303FO (3)(f) of the EPBC Act.
- ²⁵¹ EPBC Act s 303FO(3)(f).
- ²⁵² EPBC Act s 303GO(2)(b).
- ²⁵³ The application of regulation 9A.05(3) was tested in *Re International Fund for Animal Welfare (Australia) Pty Ltd and Minister for Environment and Heritage* (2005) 41 AAR 508. This case concerned the conditions under which eight Asian elephants were to be kept in Taronga Zoo and Melbourne Zoo. Although not necessary, the Administrative Appeals Tribunal commented that 'A matter which should be borne in mind as part of the context is that the primary purpose of the Convention upon which the legislation is based is the conservation of threatened species and not the avoidance of cruelty to animals. State legislation, such as the *Exhibited Animals Protection Act 1986* (NSW), deal with the actual conditions of animals in zoos. Nevertheless, we accept that the legislation does address welfare issues and the avoidance of cruel treatment.' At [71].
- Regulation 9A.05(4)(a) provides that 'the animal is taken, transported and held in a way that is known to result in minimal stress and risk of injury to the animal'. However, it appears as though regulation 9QA.05(4)(a) does not apply to the killing of kangaroos. See *Re Wildlife Protection Association of Australia Inc and Minister for the Environment, Heritage and the Arts* [2008] AATA 717 at [52]. The word 'take' is not defined in the Regulations but is defined in s 303BC of the EPBC Act and for the purposes of Part 13A as including, 'unless the contrary intention appears', 'harvest, catch, capture, trap and kill'. The Tribunal stated that '[i]f the Regulations incorporate that definition, the presence of a separate use of "kill" expresses a contrary intention, that is, "take" in paragraph (a) does not include "kill". If the definition is not incorporated the same result is achieved by the expression *unius* of statutory construction. In either case we regard only paragraph (b) as having any application.'
- ²⁵⁴ *National Parks and Wildlife Act 1974* (NSW) s 133(4); *National Park and Wildlife Act 1972* (SA) s 60J(5); *Wildlife Conservation Regulations 1970* (WA) reg 5, 6; *Wildlife Regulations 1999* (Tas) reg 6.
- ²⁵⁵ Regulation 14(3).
- ²⁵⁶ Regulation 14(4).
- ²⁵⁷ The AAWS is available here: <<http://www.daff.gov.au/animal-plant-health/welfare/aaws>> accessed 1 October 2010.

- ²⁵⁸ Deborah Cao, *Animal Law in Australia and New Zealand* (2010), 101.
- ²⁵⁹ Lindy Scott, Australian Animal Welfare Strategy, 'Final report – Animals in the wild sector: Review of the existing animal welfare arrangements' <http://www.daff.gov.au/__data/assets/pdf_file/0016/152107/aaws_stocktake_wildlife.pdf> accessed 1 September 2010
- ²⁶⁰ Lindy Scott, Australian Animal Welfare Strategy, 'Final report – Animals in the wild sector: Review of the existing animal welfare arrangements' <http://www.daff.gov.au/__data/assets/pdf_file/0016/152107/aaws_stocktake_wildlife.pdf> accessed 1 September 2010, 2.
- ²⁶¹ Lindy Scott, Australian Animal Welfare Strategy, 'Final report – Animals in the wild sector: Review of the existing animal welfare arrangements' <http://www.daff.gov.au/__data/assets/pdf_file/0016/152107/aaws_stocktake_wildlife.pdf> accessed 1 September 2010, 13.
- ²⁶² Malcolm Caulfield, *Handbook of Australian Animal Cruelty Law* (2008), 16-17.
- ²⁶³ Australian Society for Kangaroos, *Complaint to Commissioner Andrew P Scipione APM* (on file with authors).
- ²⁶⁴ NSW Young Lawyers Animal Law Committee, 'A submission to the NRMCC Working Group on the draft *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies*' (prepared by Amber Hall, John Mancy, Eve McWilliams and Angela Radich), March 2008, 5.
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- ²⁶⁷ *State Solicitors Office v Daws & Ors* 2007 Magistrates Court of Western Australia FR9975-7/05; FR10225-7/05.
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