

Submission
No 248

**INQUIRY INTO HEALTH AND WELLBEING OF
KANGAROOS AND OTHER MACROPODS IN NEW SOUTH
WALES**

Organisation: Animals Australia Inc.

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Portfolio Committee No. 7 - Planning and Environment
New South Wales Legislative Council
Parliament House – Sydney NSW

Submitted by email: portfoliocommittee7@parliament.nsw.gov.au

Dear Ms Faehrmann,

Animals Australia submission to the Inquiry into the health and wellbeing of kangaroos and other macropods in New South Wales

Thank you for the opportunity to provide a submission to the *Inquiry into the health and wellbeing of kangaroos and other macropods in New South Wales* (“the Inquiry”). Animals Australia is a peak animal protection organisation in Australia. On behalf of our individual members and supporters, we are pleased to be able to provide this submission.

The welfare of native wildlife is important to Australians and our unique macropods particularly are also internationally recognised and respected. Animals Australia’s own supporter base of almost two million has indicated that kangaroo welfare is a high priority, but remarkably we have observed many people are unaware of the commercial kangaroo meat and skin industry and the suffering which it inflicts. In addition to the serious concerns raised relating to the manner in which commercial killing occurs, the future of Australia’s kangaroo populations is also grave. Australia leads the world in mammal extinctions and this rate of decline will only continue with predicted increases in droughts and climate change.

As indicated in the content of this submission, on both animal welfare grounds and due to concern for the future of the species, Animals Australia opposes the killing of kangaroos for commercial, ‘pest’ control or due to drought relief/competition purposes. This submission is provided to explain the rationale for our opposition and to specifically respond to the Inquiry’s Terms of Reference; our engagement in this process must not be taken as tacit or other support of kangaroo killing.

(a) Historical and long-term health and wellbeing indicators of kangaroos, and other macropods, at the local, bioregional and state levels, including the risk of localised extinction in New South Wales.

(c) Threats to kangaroo, and other macropod, habitat, including the impact of:
(i) climate change, drought and diversion and depletion of surface water sources,
(ii) bushfires,
(iii) land clearing for agriculture, mining and urban development,
(iv) the growing prevalence of exclusion fencing which restricts and disrupts the movement of kangaroos.

We respond to TOR (a) and (c) together.

The first laws incentivising the killing of native marsupial mammals were brought into effect in the 1800s. The laws were enacted to deal with the perceived competition for feed between farmed animals, kangaroos and wallabies. In NSW in 1879, the Marsupial Destruction Bill was proposed and later incorporated into the *Pasture and Stock Protection Act 1880* - declaring macropods as ‘vermin’. Under

this Act, bounties were paid per head for 21 million kangaroos and wallabies and 3 million smaller marsupials over 20 years to 1901.¹

Concern for macropods followed these initial culls, with John See, the Premier of NSW in 1903, introducing a *Native Animals Protection Bill* and noting that millions of skins of kangaroos and other native animals had been exported for profit, placing them under threat of extinction.² In 1969, within the context of rising conservation activity, leading CSIRO scientists Harold Frith and John Calaby also raised concerns for macropods:

“... *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.*”³

Despite this prominent historic warning and concerns raised since, the NSW Government recently decided to “reduce red tape” and make the shooting of native kangaroos and wallabies as easy as possible for farmers during times of drought.⁴

In addition to kangaroo ‘culling’ - which has been occurring for some 140 years - all Australian wildlife are now facing unprecedented threats to their natural environments from climate change. Each year since 2013 is included in the ten warmest on record for Australia.

An extended period of heatwaves over much of the country began in early December 2018 and continued into 2019, which was also the driest year on record. High temperatures, rainfall deficit and prolonged drought resulted in an increased fuel availability and very high fire danger indexes. This set the scene for the 2019/20 ‘Black Summer’ bushfires, during which some 10,520 bushfires burnt through 5,595,739 hectares in NSW. Fires in NSW burned more area than any single fire season during the last 20 years. In addition to vast numbers of wildlife dying in the bushfires, many more animals suffered ongoing mortalities after the fires from starvation, lack of shelter, smoke inhalation and attacks from predators.⁵

The impacts of landscape modification by humans on biodiversity across the globe are being increasingly recognised, and urbanisation is known to be an anthropogenic driver of biodiversity loss.

Human population growth and urbanisation across the east coast of Australia has resulted in widespread changes to the natural habitat of eastern grey kangaroos. One of the first studies to analyse the impact of urbanisation on kangaroos⁶ was in South East Queensland and found that 42% of kangaroo populations identified in the region had undergone an overall decline in abundance from 2000 to 2018. The evidence analysed suggests that kangaroos have disappeared from some areas altogether, and that ongoing urbanisation in other areas in which kangaroo populations are apparently stable means they cannot be considered secure.

One further key cause of kangaroo deaths and population decline across Australia is kangaroo-vehicle collisions arising from the fragmentation of kangaroo home ranges with roads. Interstate studies have shown that the proportion of kangaroos dying from collisions with vehicles within urban populations may range from 47% to 73% of known deaths.^{7,8} These types of assessments are urgently required in NSW.

The use of exclusion fencing is another serious and largely unexamined cause of macropod deaths and adverse welfare outcomes. Fencing was first used to exclude dingoes from agricultural properties in the 1870s and its use was widespread by the middle of the 20th century. Fences currently being built in the

¹ Boom et al. (2013). ‘Pest’ and Resource: A Legal History of Australia’s Kangaroos. *Animal Studies Journal*, 1(1): 17-40.

² Ibid.

³ H. Frith & J. Calaby (1969). *Kangaroos*. Melbourne: Cheshire, 1969.

⁴ J. Ellicott, ‘*New measures mean farmers don’t need to tag roos shot on farm*’, 15 June 2018, *The Land*.

⁵ A. Filkov et al. (2020). Impact of Australia’s catastrophic 2019/20 bushfire season on communities and environment. Retrospective analysis and current trends. *Journal of Safety Science and Resilience*, 1: 44-56.

⁶ E. Brunton et al. (2018). Quantifying trends and predictors of decline in eastern grey kangaroo (*Macropus giganteus*) populations in a rapidly urbanizing landscape. *Pacific Conservation Biology*, 24: 63-73.

⁷ E. Brunton et al. (2018). Spatial ecology of an urban eastern grey kangaroo (*Macropus giganteus*) population: local decline driven by kangaroo-vehicle collisions. *Wildlife Research*, 45: 685-695.

⁸ G. Coulson et al. (2014). Hopping Down the Main Street: Eastern Grey Kangaroos at Home in an Urban Matrix. *Animals*, 4: 272-291.

eastern states of Australia are intended to restrict the movement of dingoes, kangaroos, emus and introduced herbivores like goats onto farmed lands - and may enclose a 'cluster' of properties.

A recent literature review found that fencing has myriad intended and unintended effects on many animals all over the world.⁹ Fencing is a major concern for kangaroo welfare because they can become entangled and injured in fences, and suffer slow, painful deaths. Fences also present an obvious (intended) barrier to movement for kangaroos, causing habitat fragmentation - which can lead to overgrazing and land degradation on one side of a fence. It can also have genetic consequences for (divided) populations and prevent them moving the large distances necessary in pursuit of resources to survive.

It is extremely concerning that no formal impact assessments of agricultural exclusion fencing on wildlife have been required or completed prior to their construction in Australia. Indeed to the contrary, following the recent bushfires that decimated wildlife - during a time when animals like kangaroos desperately need to be able to travel unimpeded in search of food and water - the NSW Government has offered grants to farmers to re-build exclusion fencing, providing up to \$5,000 per kilometre.¹⁰

A 2014 peer-reviewed feature article concludes with statements on exclusion fencing that are relevant to NSW and this Inquiry:

“Barrier fencing is a management tool from an era where much wildlife was considered ‘vermin’ with bounties paid for their destruction. Not only is this an archaic concept, its effectiveness and economic benefits are questionable. The push for a total barrier fence around south-western Australia promotes a future where agriculture is somehow barricaded against the natural flows and rhythms of the Australian continent, with larger Australian wildlife categorised as ‘pest species’ and dealt with through industry-determined, taxpayer-funded ‘invasive species’ programmes. Such a retrograde approach to integrating agricultural production and biodiversity values clearly requires rethinking.”¹¹

In summary, we consider it highly likely that kangaroos are being driven to local extinctions through the combined effects of commercial harvesting for profit, non-commercial killing by farmers, decreasing habitat availability and fragmentation, climate change and increasing conflict with humans.

(b) The accuracy with which kangaroo, and other macropod, numbers are calculated when determining population size, and the means by which the health and wellbeing of populations is assessed.

The rigorous analysis of population estimates and past harvest takes in NSW kangaroo management zones by wildlife ecologist Ray Mjadwesch in 2010 outlines a litany of problems and inaccuracies in the state's kangaroo population monitoring and scientific assessment activities. In particular, the continual changing of survey methodologies and use of arbitrary correction factors mean that long-term kangaroo population trends in NSW cannot be systematically and powerfully explored.¹²

In addition, we find the lack of rigorous publicly available information on exactly how kangaroo populations are now being estimated by the NSW Kangaroo Management Program to be concerning - noting the *NSW Commercial Kangaroo Harvest Management Plan 2017-2021* provides a link to 'detailed information' on survey methods, however the webpage link is broken¹³:

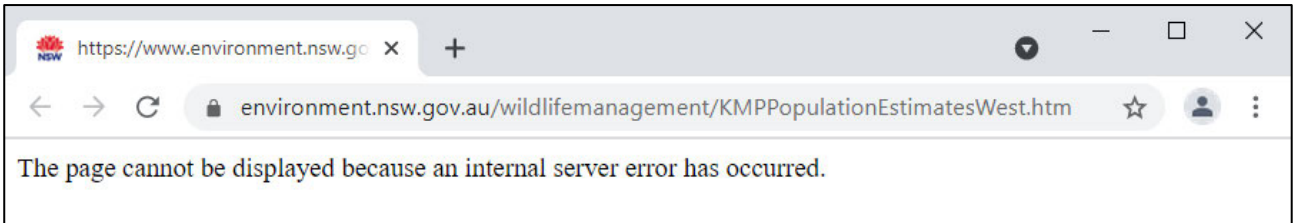
⁹ Smith *et al.* (2020). Impacts of exclusion fencing on target and non-target fauna: a global review. *Biological Reviews*, **95**: 1590-1606.

¹⁰ NSW Government's "Supporting our Neighbours" Grant, <https://www.waratahfencing.com.au/supporting-our-neighbours-project> (accessed: 18 April 2021).

¹¹ K. Bradby *et al.* (2014). Ecological connectivity or Barrier Fence? Critical choices on the agricultural margins of Western Australia. *Ecological Management & Restoration*, **15**(3): 180-190.

¹² Mjadwesch (2011). Nomination to List the Large Macropods as Threatened Species under the NSW Threatened Species Conservation Act 1995, MESS Bathurst.

¹³ NSW Commercial Kangaroo Harvest Management Plan 2017 2021, page 7.



The *NSW Kangaroo Management Program 2021 (Quota Report)* estimates eastern and western grey kangaroos to have a density of 0.12 kangaroos/km² in Tibooburra, 1.09 kangaroos/km² in Cobar and 0.75 kangaroos/km² in Bourke. The estimated density of red kangaroos is less than 3 kangaroos/km² in Cobar, Bourke, Narrabri, Coonabarabran and Griffith, and only 3.65 kangaroos/km² in Tibooburra.¹⁴ Kangaroo populations in large areas of NSW are therefore declining to a point where they are considered below the Department's thresholds and harvesting is then reduced or suspended - we suggest this situation is hardly indicative of a "sustainable" industry.

(d) Current government policies and programs for kangaroo management, including:
(i) the method used for setting quotas for kangaroo culling,
(ii) the management of licences to cull kangaroos,
(iii) temporary drought relief policies and programs.

On both animal welfare grounds and concern for the future of the species, we oppose the killing of kangaroos for any of these purposes – commercial, pest control or due to drought relief/competition purposes.

As explained in response to TOR (a) and (c), kangaroos require special support during drought conditions and the presence of drought should do more than place restrictions on kill quotas, the killing should cease altogether; this is critical to ensuring the survival of kangaroo species.

(e) Current government policies and programs in regards to 'in pouch' and 'at foot joeys' given the high infant mortality rate of joeys and the unrecorded deaths of orphaned young where females are killed.

Young kangaroos are routinely subjected to brutal practices and suffer inhumane deaths as an unavoidable and inherent consequence of the kangaroo shooting industry.

The National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes requires shooters to kill partially and fully furred pouch young as well as small, dependent young-at-foot with a concussive blow to the head. More specifically, the following method is detailed:

*"... hold the young firmly by the hindquarters (around the top of the back legs and base of tail) and then swing firmly and quickly in an arc so that the rear of the joey's head is hit against a large solid surface that will not move or compress during the impact (e.g. the tray of a utility vehicle)."*¹⁵

While it is possible that a firm and accurate concussive blow to the head - blunt force trauma - would cause immediate insensibility in joeys, there is no publicly available evidence to demonstrate that swinging a joey in an arc and smashing their head against a utility vehicle does reliably cause a firm and accurate blow, and by extension, a quick and painless death.

Further, the likelihood of a 'firm and accurate blow' is directly related to the skill of the person delivering it. The Code states that, *"The efficiency and humaneness of this method depends on the operator's skill and determination"*¹⁶ - yet despite this acknowledgement, there is no training, competency testing requirement or monitoring of the manner in which joeys are killed in the field.

¹⁴ NSW Kangaroo Management Program 2021 Quota Report, Table 52, page 64.

¹⁵ The National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes, page 32.

¹⁶ Ibid.

Many young-at-foot joeys flee when their mothers are shot and it is both difficult and time consuming to locate and catch them (and some will not be pursued or caught). If located, the killing method detailed above would be extremely unpleasant to perform. This ultimately means that shooters are likely to allow a proportion of orphaned young kangaroos to escape. Without their mothers, most if not all of these young kangaroos will slowly die from dehydration or starvation or succumb to exposure or predation.

The number of young animals experiencing these painful and protracted deaths each year can only be estimated because shooters - commercial and non-commercial - are not required to count and report the number of juvenile kangaroos they kill. In 2020, 31.2% of eastern grey kangaroos, 30.7% of western grey kangaroos and 35.9% of red kangaroos that were commercially harvested were female.¹⁷ Under typical conditions in north-western NSW, 50% of female red kangaroos and 60% of eastern and western grey kangaroo females are likely to have young-at-foot. A conservative estimate is that 25% of female kangaroos killed by commercial shooters have young-at-foot.¹⁸

(f) Regulatory and compliance mechanisms to ensure that commercial and non-commercial killing of kangaroos and other macropods is undertaken according to the Biodiversity Conservation Act 2016 and other relevant regulations and codes.

Under the *Biodiversity Conservation Act 2016*, it is an offence to harm (kill, injure or capture) a kangaroo or wallaby without a commercial or non-commercial licence. It is also illegal to buy or sell dead kangaroos and wallabies for commercial purposes without a licence. Such licences are dubiously termed 'biodiversity conservation licences' under the Act, despite granting the licensee permission to kill animals whose native status would ordinarily afford them legal protection and a right to live free from human-induced harm in their natural habitats.

Commercial Killing

Professional Harvester Licences are granted by the NSW Commercial Kangaroo Management Program and enable kangaroos to be killed in 'management zones' and sold for their meat and skins (leather). There are several relevant 'conditions' attached to this licence, including that licensees must 'harvest' kangaroos in accordance with the *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes*.

Importantly, the Code is flawed in areas key to animal welfare; these flaws were flagged by Animals Australia in its submission to the Code review process (January 2020) but not addressed. For example, the Code does not **require** that shooters avoid shooting females where it is obvious that they have pouch young or dependent young-at-foot; this would then avoid creating situations where young kangaroos "must" be killed with a brutal blow to the head. Owing to the difficulty in capturing young at foot, it is likely many orphaned young are not killed shortly after their mothers but instead suffer slowly from dehydration and starvation, exposure or predation.

The Code also contains inadequate competency testing requirements - including no testing at all in relation to the killing of young kangaroos and permitting prospective shooters to undertake shooting accuracy testing infinite times to obtain certification.

The Code does stipulate that kangaroos must be shot in the head, and several licence conditions relate to the shooting of kangaroos in their body - these kangaroos must be tagged and not removed from the location where they were shot. Shooters must record any kangaroo that is shot but left in the field in their monthly 'Harvesters Return'. Carcasses with body shots are also not allowed to be accepted by processors, and chiller's may be inspected by Government officers.

However, kangaroo heads are removed from the carcasses in the field, and where this includes some of the neck, there is then no trace of shots that penetrate the neck. This practice means that shooters can sell kangaroo carcasses that have been shot in the neck as the evidence has been removed. There is then no incentive to ensure head shots, nor reliable information on the portion of kangaroos that are not shot in the head (and thus a quick death).

¹⁷ 2020 Annual Report for NSW Commercial Kangaroo Harvest Management Plan 2017-21, Figure 3, page 11.

¹⁸ B. Ben-Ami *et al.* (2014). The welfare ethics of the commercial killing of free-ranging kangaroos: an evaluation of the benefits and costs of the industry. *Animal Welfare*, **23**: 1-10.

There are no independent officers/inspectors who periodically supervise the commercial shooting of kangaroos at night on properties, rangelands or bushlands across NSW, nor is there a feasible way for governments to provide a monitoring program at the point of kill for an adequate number of shooters and nights. The regulatory and compliance mechanisms for ensuring kangaroos and wallabies are killed quickly with a single shot to the brain are thus entirely reliant on self-reports by industry participants, who are undoubtedly aware that the chances of being caught leaving an untagged body-shot carcass in the field are slim to none. The current regime therefore lacks the anticipation of enforcement action that confers an ability to deter non-compliance.

Responsibility for enforcement of licence conditions rests primarily with the NSW Kangaroo Management Program. The ability and resolve of this agency to inspect, charge and prosecute offenders may be impeded by conflicts of interest - that is, operating a kangaroo management program and ensuring the welfare of kangaroos.¹⁹

Non-Commercial Killing

Landholders can apply to the NSW National Parks and Wildlife Service (NPWS) for a licence that enables kangaroos on their property to be legally killed if there is evidence that the kangaroos are damaging property, posing risks to safety or causing economic hardship.

A 'condition' of the licence requires kangaroos and dependent young to be killed in accordance with the *National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-commercial Purposes*. This licence condition is totally ineffectual considering there are no independent inspections of carcasses, nor killing competency tests, no requirements to keep records of how animals were killed, nor even avenues for self-reporting non-compliance with the Code to NPWS.

There are no clear regulatory or compliance mechanisms to ensure that kangaroos and wallabies killed under non-commercial licenses are killed in accordance with the relevant legislation, code and licence conditions.

(g) The impact of commercial and non-commercial killing of kangaroos and other macropods, including the difficulty of establishing numbers killed by landholders since the removal of the requirement for drop tags.

In NSW during 2020, over 380,000 adult macropods carcasses were 'processed' as part of the commercial 'harvest'.²⁰

In addition to this large commercial kill tally, kangaroos are killed by landholders and their 'associates' in unknown numbers, primarily to mitigate the perceived grazing competition that kangaroos present to cattle and sheep. Non-commercial licences for killing kangaroos each authorise landholders to kill a specified number of animals - that is, adult animals - as dependent young do not count towards the licence quota. Importantly (as above), there is no monitoring of shooting activity on private properties and licensees are only required to self-report the number of animals killed to NPWS within seven days of the licence expiry date. Non-commercial licensees are also no longer required to attach tags to carcasses and can have more than two associates kill kangaroos on their property under the one licence.²¹

As stated in response to TOR (a) and (c), we find it difficult to fathom how it can be argued that killing on such a large scale - combined with the effects of urbanisation and climate change - would have no significant impact on kangaroo populations.

It is likely that both commercial and non-commercial shooting of targeted kangaroos and other macropods causes extreme distress and suffering through inaccurate shots, wounding and also abandonment of young.

There is no comprehensive current research demonstrating the accuracy of an average professional or amateur shooter, and therefore no evidence to suggest that shooting is a reliably 'humane' method for killing kangaroos. A study published in 2019 discredited earlier research suggesting a high percentage of kangaroos who were shot at night died instantly - by showing that the sample size of 138 kangaroos

¹⁹ Boom et al. (2013). The role of inspections in the commercial kangaroo industry. *International Journal of Rural Law and Policy*, Occasional papers.

²⁰ NSW Commercial Kangaroo Management Plan, 2021 Quota Report, pages 1 and 3.

²¹ J. Ellicott, 'New measures mean farmers don't need to tag roos shot on farm', 15 June 2018, The Land.

was far too small to achieve the minimum levels of precision necessary - and that such a study would require a sample size of at least ~640 kangaroos.^{22,23} Meanwhile, evidence gathered by animal protection groups from carcasses found that up to 40% of kangaroos per chiller may have been shot in the neck.²⁴

(h) Current and alternative measures to provide an incentive for and accelerate public and private conservation of kangaroos and other macropods.

Since its beginnings in the 1800s, the 'culling' of macropods has primarily been due to a belief that they eat the grass on properties where cattle and sheep are raised. In particular, it is suggested that they contribute to the 'total grazing pressure' on pastures and will graze on paddocks being spelled by farmers when other resources are limited by low rainfall and high temperatures. In other words, animal agriculture has caused the direct deaths of millions of native animals.

We strongly submit that farmers and other landholders must learn to live with Australian wildlife (as a small number are starting to do). For others, financial and other incentives may be needed through Governments to promote the restoration of native habitats on farms and restore natural resources such as water to native animals during times of drought. This is in-line with community expectations for animal welfare and conservation of our unique biodiversity - as evidenced by the national and international outpouring of grief and strong desire to support animals through the 2019/20 bushfire crisis.

We commend to you the need for a new beginning of the human/animal relationship (in this case our unique native wildlife).

Please contact me if further clarification is required.

Yours sincerely,

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²² J. Hampton *et al.* (2019). How many to sample? Statistical guidelines for monitoring animal welfare outcomes. *PLoS ONE*, 14(1): e0211417.

²³ J. Hampton & D. Forsyth (2016). An assessment of animal welfare for the culling of peri-urban kangaroos. *Wildlife Research*, 43: 261-266.

²⁴ Ben-Ami D (2009). *A Shot in the Dark: A Report on Kangaroo Harvesting*. Animal Liberation NSW: Sydney, Australia.