Submission No 236

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

Organisation: Animal Protectors Alliance

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HEALTH AND WELLBEING OF KANGAROOS AND OTHER MACROPODS IN NEW SOUTH WALES:
SUBMISSION BY THE ANIMAL PROTECTORS ALLIANCE

This submission is made on behalf of the Animal Protectors Alliance (APA), an organisation based in the ACT but with members and supporters in all Australian jurisdictions, and overseas.

APA's membership includes animal advocates and protectors, wildlife rescuers, wildlife carers, and enlightened property owners who welcome kangaroos on their property, either out of basic human decency or because of the benefits kangaroos (a keystone species) bestow in sustaining the biodiversity of native habitat.

I am also making it on my own behalf as an environmental scientist, an animal advocate and rescuer, and a resident of the NSW border town of Queanbeyan for 35 years.

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.

APA believes, on the basis of all available, independent and informed scientific evidence, that all kangaroo species, including those generally (and erroneously) regarded as common or abundant are currently in a steep decline towards extinction – a decline which will be irreversible without immediate human interventions to save them.

Because APA is ACT based, most of our eye witness accounts come from the Southern Tablelands of NSW and the ACT. Since kangaroos do not recognise the railway line border between NSW and the ACT, any fluctuations in kangaroo populations in the ACT affect populations in NSW, and vice versa. Therefore, evidence from the ACT, being directly relevant to the issue of kangaroo survival in NSW, will be noted in this submission in that context.

Just by way of one eye witness example of this relationship between NSW and ACT kangaroos, about ten years ago, on a visit to the Queanbeyan Nature Reserve (NSW), I counted about 200 hundred kangaroos on that rather small triangle of grassland. The following day there were only ten kangaroos on the same reserve; the rest had hopped across the abandoned railway line into East Jerrabomberra Nature Reserve in the ACT. The next day about 100 of them had come back. I soon realised that these movements were routine, with kangaroos forming large mobs for social catch-ups at certain times, and dispersing to scatter across the length and breadth of the available habitat at other times.

I also note that Googong Dam Reserve in NSW is managed by the ACT government. Every kangaroo slaughtered there is replaced by a kangaroo from surrounding properties in NSW or from the Queanbeyan River corridor (in NSW).

Since 2000, the Southern Highlands of NSW and the ACT have suffered several devastating droughts. Kangaroo populations always crash during droughts, of course, largely due to cessation of breeding. However, over the last two decades these crashes have been exponentially multiplied by other unprecedented mortality factors.

- There has been almost an order of magnitude increase in the number of kangaroos the ACT government has licensed private landholders to kill.
- There has been ongoing loss of kangaroo (and other wildlife) habitat due to rampant urban development and road building in both NSW and the ACT.
- There has been further loss of habitat due the erection of exclusion fencing on both NSW and ACT nature reserves.
- All our members who are wildlife carers report that there are now few remnants of kangaroo habitat left where animals who have been nursed back to health after injury (at great expense to the carer, in both time and money), can be safely released (ie where they will be neither shot not killed on busy roads).
- There have been huge increases in road deaths, which is the inevitable result of ongoing road building in both surrounding NSW and the ACT.
- There have been devastating bushfires. Local kangaroo populations have not yet recovered from the 2003 fires which razed 90% of the ACT, while the 2019-20 fires in both the ACT and the Southern Highlands have killed millions more.
- The ACT government has been conducting mass slaughters of kangaroos on the suburban reserves (such as East Jerrabomberra, see above) of the Canberra Nature Park since 2010. These massacres have emptied the ACT reserves of kangaroos every years now for 12 years. By each following year, kangaroos from outside the reserves, including from surrounding NSW, have moved into them. It is likely that any kangaroo the ACT government has been able to find the shoot on ACT reserves in recent years has, in fact, been a refugee fleeing from fires, or development, or shooting in NSW.
- To finish off any surviving populations, unregulated slaughter of kangaroo has been permitted on NSW properties since 2018.
- Additionally, the commercial slaughter of kangaroos (according to the methodology described in the NSW management plan (see (b) below) is incapable of providing a credible or realistic estimate of actual kangaroo numbers in NSW.
- It should also be noted that, even when the droughts break, more kangaroos die, some in floods, some of the mysterious virus that has been reported, since the 1960s, as killing thousands of kangaroos after heavy rain.

Wildlife rescuers and property owners who are members of APA also report the "collateral" damage caused to kangaroos by the shooting: kangaroos fleeing onto roads into the path of oncoming cars; kangaroos fleeing into barbed wire fences to suffer horrific death essentially by crucifixion; kangaroos fleeing into dams and drowning.

On a recent visit to the two virtually treeless reserves of Queanbeyan Nature Reserve and East Jerrabomberra Grasslands Nature Reserve (where I saw at least 200 kangaroos in 2011 - see above), and where any kangaroo can be spotted easily from several kilometres away, I could not locate a single kangaroo. This is not surprising given the above list of overwhelming pressures currently being exerted on their populations.

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 methodology for estimating kangaroos populations, as explained in the 2018 Quota Report New South Wales Commercial Kangaroo Harvest Management Plan 2017–2021, is astonishingly simplistic and could not, by an competent ecologist, be considered capable of providing plausible estimate of actual kangaroo populations.

There are 15 kangaroo management zones in NSW, making up four regions: Western Plains, Northern Tablelands, South-East NSW and Central Tablelands.

On page 4, the quota report explains that the population estimates of Eastern Grey Kangaroos per zone are derived as follows *(sic)*:

- The aircraft flies at known specified speed and height, and the sighting distance on the ground is delineated by streamers or a boom.
- Trained observers record kangaroos seen from the aircraft within delineated distances from a transect. The ‘detection area’ is calculated mathematically from the data. The result is an estimated density of kangaroos.
- For each region of interest (e.g. a single commercial harvest zone), the total area of the region is known.
- The estimated density (e.g. the number of animals per square kilometre) is multiplied by the area of the region to calculate the population estimate.

There is nothing in this methodology for calculating the number of kangaroos per zone which takes account of different landscapes, land uses and other factors within the zone, and nothing which recognises the extreme improbability that the observed transect could possibly be representative of the entire zone. (The harvesting zones are around 530,000 $km^{2)}$.

The estimated number of kangaroos per zone, for each zone, certainly seem to confirm that the methodology really is as simplistic and implausible as it is described in the Management Plan; each estimated population per zone is very close to the figure you get when you multiply the transect average estimate per square kilometre by the number of kilometres in the zone. The estimates are never quite exactly the same; they are (bizarrely) usually slightly higher. (One assumes that the fact that there are any differences at all has something to do with certain mysterious "correction" factors.)

The implausibility of the counting methodology carries over into the biological impossibility of the trend data. All but one of the tables in the document indicate increases in kangaroo populations since the previous survey, and most of these increases are impossible by reproduction alone, even under ideal conditions. Sometimes these increases are attributed to internal migrations, sometimes to changes in survey methodology, and sometimes no explanation is suggested.

Since the maximum population increase rate of most kangaroos, even in ideal conditions, is 10% per year and, given that drought conditions have prevailed throughout most of the survey periods, the estimates should have shown dramatic population declines. The increases (if they are alleged to be actual increases rather than different methodologies for counting kangaroos) are therefore impossible.

Kangaroos are, of course, highly mobile and migration of large numbers across the artificial borders of zones is certainly possible. However, if there has been an increase in one zone due to migration, there has obviously been a decrease due to migration in the zone from which the kangaroos migrated. However, according to the Management Plan, even where increases are 6 or 10 times the increases that would be possible due to reproduction, there are no corresponding declines in adjacent zones.

In the Western Plains zones, between 2015 and 2016, red kangaroos (Table 8) were estimated to have increased by 8.1%, and western greys (Table 13) by 7.2%. Eastern greys (Table 9) are reported to have decreased by 0.5 %. These changes are attributed to use of the MRDS (ie two transect flights instead of one), implying that the counts in earlier years were underestimates, and/or perhaps that Reds or Western Greys were mistaken for Eastern Greys in the earlier surveys.

How can readers be expected to have confidence in the time series data using methodologies which changes from year to year.

In the Northern Tablelands zone, between 2015 and 2016 (Table 10), a 60% increase in Eastern Grey kangaroos is reported. This extraordinary increase, six times higher than is biologically possible by reproduction alone, and totally bizarre during a drought, is attributed to immigration, and (possibly) aspects of the survey design. If the discrepancy is attributed to immigration from another zone, then any increase within one zone would require a corresponding decline in another zone. No such decline is noted. If the discrepancy is attributed to migration from within the same zone, then any methodology which assumes that what you see in the transect area of a zone applies evenly across the zone, is obviously incorrect.

In South-East NSW, between 2015 and 2016 (Table 11) a huge increase in Eastern Grey kangaroos of 50% is reported. Again this is five times larger than is biologically possible; in fact, given the drought conditions, a 50% decrease at least would be expected. This increase is attributed to a larger area being surveyed, but there seems to be no reference to the population in other areas of other zones, or within the zone, having been correspondingly decreased.

On the Central Tablelands North and South between 2015 and 2016 (Table 12), an even more incomprehensible increase of 109% in Eastern Grey kangaroos (eleven times higher than is biologically possible under idea conditions) is reported, without any attempt at explanation.

On the Northern Tablelands, a similarly ridiculous 100% increase in wallaroos is reported, again without explanation.

Further evidence that the current NSW methodology for estimating kangaroo numbers for commercial killing purposes is inherently flawed is the fact that the suggested quotas are never met. Clearly, this is not because commercial kangaroo shooting is hard work so that not enough people are willing to do it. It is because the kangaroo populations estimated by the NSW government bear no resemblance whatsoever to actual kangaroo numbers.

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.

As mentioned above (see (a) above), threats to habitat form a substantial part of the current pressure on both the wellbeing on millions of individual kangaroos and the hope that any species of kangaroo will survive the current anthropogenic onslaught.

Kangaroos are well adapted to Australia's traditional cycles of drought. Adult kangaroos are able to survive because they can travel very long distances quickly and with relatively small energy expenditure to find food and water if they must. Additionally, because they do not procreate when the food supply is inadequate, they do not waste nutrition needed for their own survival by bearing young.

Now, however, anthropogenic climate change seems to be driving ever longer, more frequent and more severe droughts to which even kangaroos might not be able to adapt in time. Furthermore their capacity for reaching water and grazing over vast areas is being thwarted by new urban developments, land clearing for (yet more) agriculture, lethal roads, exclusion fencing, and properties where they are subject to unregulated shooting.

Kangaroo habitat has been further reduced by devastating bushfires. Yet more are likely to have died in floods and thousands of the mysterious virus that has been reported, since the 1960s, as killing thousands of kangaroos after heavy rain.

As mentioned above (see (a) above) all our members who are wildlife carers report that there are now few remnants of kangaroo habitat left where animals who have been nursed back to health after injury, can be safely released.

In The Queanbeyan and East Jerrabomberra Nature Reserves (see above) and also Goorooyarroo Nature Reserves which also overlaps with NSW, exclusion fencing has recently been erected (for no apparent reason) to prevent kangaroos from using this part of their already vastly reduced habitat.

While these fences are in the process of being erected, kangaroos are sometimes trapped inside them. I have seen mobs separated by these fences and kangaroos on both sides of the fence trying desperately to reach other. I have found a kangaroo actually trapped underneath one of these fences as he spent many hours of a freezing night desperately trying to dig his way out.

In another part of Queanbeyan, a new road, the Ellerton Drive Extension has been ripped across the almost pristine river corridor. A long standing mob of perhaps 50 kangaroos used to live in a sheltered valley near the southern most houses of Barracks Flat. That valley is now buried under a four lane major road. The mob that use to live there has not been seen since.

It is important to understand that when an area of habitat is destroyed, the populations of animals inhabiting that habitat either die straight away or move to nearby habitat where they must compete for resources with members of their own species (or other species) who are already present. Since any area of habitat can support only a limited number of any species, ultimately either the newcomers or the entrenched residents will die or be forced to move on again. Unless new habitat is created for them, a number of individuals pretty much equivalent to the number displaced from the original habitat, will die.

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

It is the lack of any management of licences to "cull" kangaroos in NSW that concerns APA.

The regulation of kangaroo killing by NSW farmers seems to have been removed as a blatant sacrifice of the lives of sentient beings for votes in the 2019 NSW election. Kangaroo numbers across Australia were estimated to have already plummeted to about 11% of their original numbers since white settlement, and have almost certainly crashed even lower in this Southern Tablelands region during the recent droughts and fires (compounded by the other factors mentioned above).

A principle reason for the decline since white settlement is, of course, the appropriation of kangaroo (and other wildlife) habitat for animal agriculture. Animal agriculture should never have been introduced in this hostile country. It is cruel to both the agricultural animals and the native animals they have displaced. Removing regulation of kangaroo killing in an attempt to buy votes from animal producers was, in short, ethically obscene.

This deregulation has not only put the survival of all kangaroo species (and, consequently, of the other native animals which depend on the keystone ecological services provided by kangaroos) at risk. It also means there is no attempt to monitor the capability or the will of killers to abide by the Code of Practice (even to the limited extent to which that Code provides any requirement intended to minimise suffering). There is no guarantee that farmers will hire shooters who are expert marksman, shooters who have the first idea of that the Code even exists, or shooters who would have the slightest interest in abiding by it if they did.

Not only has the NSW government very probably guaranteed the extinction of kangaroos in NSW (or at least the Southern Tablelands region); they have also ensured that that extinction will be achieved as carelessly, recklessly and/or with as much deliberate cruelty as possible.

Besides the obvious animal suffering, there is a huge toll being paid in human suffering. APA members who are property owners who welcome kangaroos on their properties and people who live close to properties where killing takes place, report their grief and trauma at being unable to protect their much loved kangaroo mobs. Carers report similar grief at not being able to find safe places to release kangaroos they have nursed back to health after injury.

Current government drought relief policies for farmers are useless, cruel and stupid. They facilitate inconceivable suffering for both farm animals and wild animals, and ultimately for the famers themselves.

There is no future for animal agriculture in the Australia. As climate change continues to bite, animal agriculture, and any other agriculture that fails to work with native ecosystems rather than against them, is economically and ecologically doomed.

Aside from (obviously) ending all and any slaughter of native animals, such as kangaroos, in NSW and, similarly, of ending all further removal of native habitat before it is too late, APA advocates that government drought assistance for farmers be designed to facilitate their transition to regenerative farming techniques, and that any further assistance must be dependent on being able to show they are implementing those techniques.

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.

The current government policies in regard to pouch and at-foot joeys are ethically despicable. The NSW "welfare" code requires that pouch joeys be decapitated or bludgeoned to death. Neither of these killing methods is ever likely to be either pain-free or terror-free.

At foot joeys are supposed to be killed as soon as possible after their mothers are killed but, even if shooters hired by land holders either know of care about what is required under the Code, in many, if not most cases, at-foot joeys escape before they can be killed.

In the ACT, the impacts of this shared policy are probably more visible but otherwise unlikely to be any different from the impacts in rural NSW. Since the ACT government began slaughtering kangaroos on urban reserves, I (and many others) have seen dozens of orphaned knee-high joey lining the fences of the reserves where they have fled from the shooting, waiting for mothers who will never come to collect them because their mothers are dead. These babies will all die of exposure, dehydration, starvation, myopathy, car strike or fox predation.

There is not a single logical reason to believe that this same cruelty, since it is also permitted in NSW under identical words in the Code, would not also routinely occur in NSW.

These cruel at-foot joey deaths are not recorded as kangaroos killed, even though they are just as surely killed as if they were head shot.

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

As mentioned above (see (d) above), drought assistance for farmers should be re-designed to facilitate a transition towards regenerative farming techniques. Any further assistance should be dependent on farmers being able to show they have implemented such techniques.

Regenerative farming means working with the native ecosystem and its crucial components, such as kangaroos. It would therefore include kangaroos living unmolested in the self-regulated populations that will result once all intentional killing of them is prohibited.

If farmers decline to transition to less destructive and doomed farming methods, their land should be resumed, restored, and preserved as wildlife habitat reserves. Promoted for ecotourism, these areas would soon pay for themselves.

All internal barbed wire and exclusion fencing should be removed from farm and reserve land, but wide, vegetated overpass corridors should be built over all roads that separate one area of wildlife habitat from another. As these safe wildlife corridors become available to wildlife, exclusion fencing

could be erected around the borders of farm properties and reserves so that wild animals needing to cross the roads can use only the established corridors.

Thank you for holding this enquiry and for the opportunity to comment on the desperate condition of NSW kangaroos. We hope that the current NSW government will be enlightened enough to finally try to undo the wrongs of the past and present, and to help build a brighter future for Australian wildlife.

The current extinction crisis, the threads and balances currently being ripped out of the global ecosystem, are just as potentially dangerous to human life as the climate crisis, which is itself only one of the drivers of this extinction event.

We urge you to please start saving the planet by saving the kangaroos of NSW.

Frankie Seymour
On behalf of the Animal Protectors Alliance
24 April 2021