



# Pastoralists' Association

of West Darling Inc.

Registered under NSW Government Fair Trading

Inquiry into the health and wellbeing of kangaroos and other macropods in New South Wales.

## Answers to supplementary questions to the Pastoralists' Association of West Darling.

1. Given the WWF report on the impact of the 2020 bushfires states that 5 million kangaroos were killed because kangaroos could not 'outrun fires, can you provide evidence of your claim that the bushfire threat is overstated?

The evidence for PAWD's statement that the threat posed to kangaroos by bushfires is overstated was included in PAWD's submission to this Inquiry. Bearing in mind that PAWD's interest in kangaroo management is restricted to the four common species of kangaroos harvested in commercial kangaroo management zones in NSW, Figure 1 (below) clearly demonstrates that the 2019-20 Bushfires principally burnt areas excluded from commercial kangaroo harvesting in NSW, or National Parks within commercial kangaroo harvest management zones where harvesting is not allowed. By contrast, the extent of the [1974-1975 Australian bushfire season](#) was six times larger than the 2019-2020 fire season, with a large area of western NSW burnt out – where kangaroos are running rampant and most of the kangaroos harvested in NSW are sourced from. However, there isn't any evidence in the kangaroo population data that the massive 1974-1975 fires had any discernible impact on kangaroo numbers, and no one has ever raised any concerns regarding the impact of these fires on kangaroos, despite having 46 years to do so.

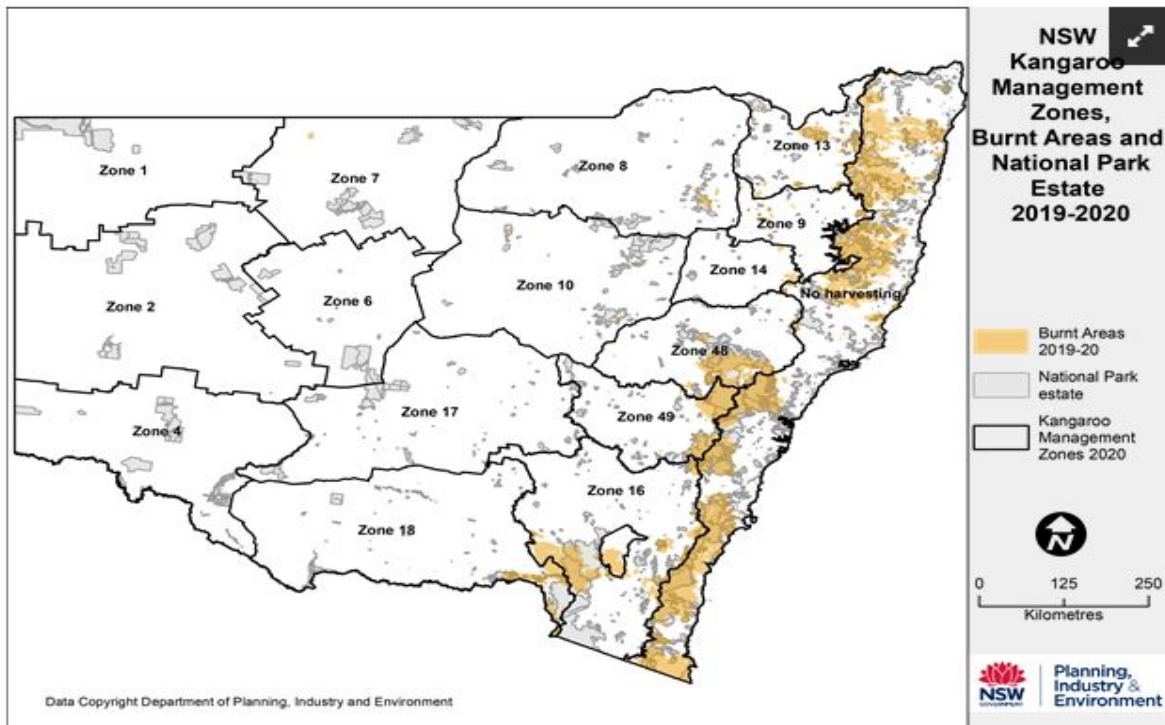


Figure 1

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As stated in PAWD's submission to this Inquiry, kangaroos are large, mobile animals, with the capacity to outrun fire. Furthermore, bushfire behaviour is such that fires typically only "run" at a speed that could overrun fleeing kangaroos for only part of the day (typically afternoons), and only on days when the weather was conducive to supporting extreme fire behaviour. Furthermore, kangaroos are only going to perish in a running fire if they move ahead of the fire in the same direction that it is travelling – if the animals turn left or right they will escape from the fire. Indeed, the "Extinction Rebellion Sydney" group posted a [video](#) showing that kangaroos do outrun fires on their Facebook page.

All this aside, the [WWF report](#) on the impact of the 2020 bushfires did not state that 5 million kangaroos were killed. What the WWF Report stated is that 4,963,000 kangaroos and wallabies (including rock-wallabies and pademelons) were estimated to be present within the 2019–2020 bushfire impact area. It is disappointing to see how the WWF's messaging on this issue has been misinterpreted, and the Committee should correct submissions and testimony to this Inquiry that include this error.

*2. Can you explain what you mean by this statement in your submission: "some examples of exclusion fencing touted as being disruptive to kangaroos have been identified in error"?*

A [document posted on this website](#) viewed by PAWD includes nine photos of different types of fences that are all characterised as exclusion fences. Only the first, seventh and eighth photos are true exclusion fences. However, the exclusion fence depicted in the eighth photo clearly cannot serve to exclude kangaroos from an area, because there is a lower fence tied off to the left hand side of the strainer post in the photo that is not completely kangaroo proof. The second, third, fourth and sixth photos depict Total Grazing Pressure (TGP) fences, which are typically 1000 – 1100mm high and not completely kangaroo proof. The fifth photo depicts a security fence designed to keep people out, and typically found around airports, prisons, industrial sites and public utilities. The ninth photo depicts a fence that would be found in an urban setting, around residential or commercial properties.

Disturbingly, the photos of the security fence and the urban fence both show live kangaroos hung up in the fences. The photos of the exclusion fences do not show any animals trapped in them. One thing that separates pastoralists and animal rights activists is that a pastoralist would move instantly to alleviate the suffering experienced by a kangaroo hung up in a fence. In the examples posted online the activist response to finding an animal in distress was to take photos. Hardly a compassionate response!

It is important to understand that fences are essential in both agricultural and urban settings. The principal reason for exclusion fencing is to protect livestock from dingoes and wild dogs – and the Inquiry has heard evidence how [exclusion fencing benefits kangaroos](#) from Dr Benjamin Allen. TGP fencing keeps crossbred sheep and goats where they should be. Security fencing keeps prisoners in jails and people out of dangerous places. Urban fencing keeps pets secure, children out of swimming pools and criminals out of homes and businesses. Seeking to ban fencing would be a completely ridiculous outcome of this Inquiry.

*3. Given your submission states that the density of kangaroos is much higher within the Dog Fence, what is the density of kangaroos within the fence compared to that outside?*

Research by [Pople et al \(2000\)](#) compared aerial survey data collected on both sides of the Dog Fence in South Australia over a number of years. The results clearly show that the density of kangaroos (and emus) is consistently higher inside the Dog Fence, where kangaroos are protected from the predations of dingoes. The [2020 Quota Report for the Commercial Kangaroo Harvest in South Australia](#) shows a kangaroo density of 3.17 kangaroos/km<sup>2</sup> inside the Dog Fence, and 1.02 kangaroos/km<sup>2</sup> outside the Dog Fence. A PAWD member worked outside the Dog Fence in the Cooper Basin (north east South Australia and south west Queensland) for five months, travelling long distances most days. In this time our member saw a total of five kangaroos, but many dingoes, including a pack of seventeen dingoes on one occasion.

Removal of the Dog Fence would expose all kangaroos (and other native animals such as emus and koalas) in south eastern Australia to dingo predation, as well as making it very difficult for the sheep and goat industry to survive in the long term. Dingo predation resulting from removal of exclusion fences would be an animal cruelty event on an unimaginable scale, for which someone would have to be accountable.

4. Given that your submission states the number of kangaroos harvested as a percentage of the available quota has been very low in recent years which you link to demand being suppressed, do you have specific data or information to back up this claim?

A graph (see Figure 2) was included in PAWD’s submission to this Inquiry. The estimated population of the four species of kangaroos harvested nationally is represented by the black line. The harvest quota is represented by the red line. The actual harvest is represented by the yellow line. Droughts (the main cause of kangaroo mortality) are depicted by the pink bars. This graph clearly demonstrates how the harvest as a percentage of the available quota has been low in recent years.

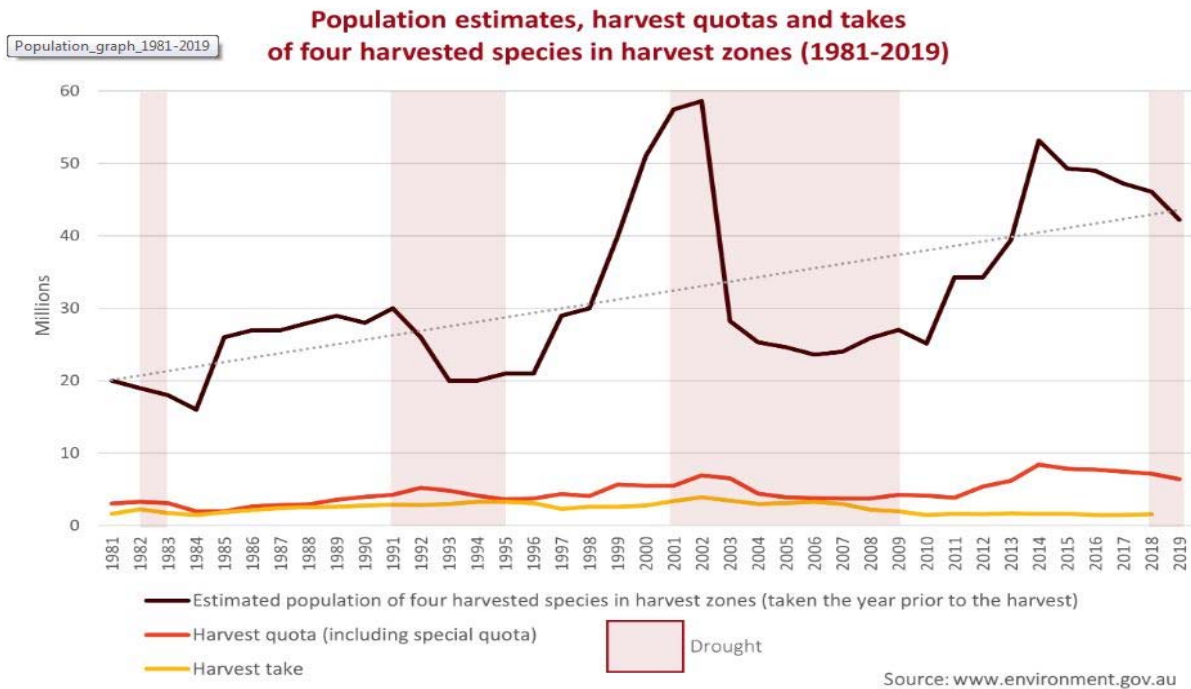


Figure 2

In New South Wales, the harvest data shows a similar trend, as depicted in Figure 3, sourced from the [New South Wales Commercial Kangaroo Harvest Management Plan Quota Report](#).

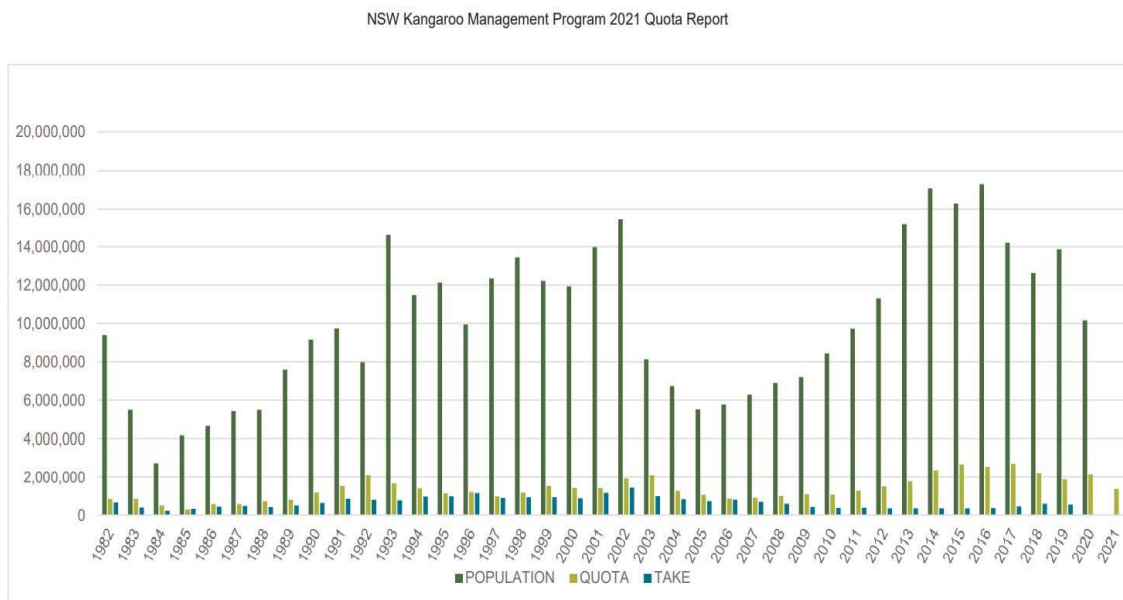


Figure 3 NSW combined red and grey kangaroo population estimates, authorised quotas and actual takes, 1982–2021.

The gap between the available quota and the actual harvest increased from 2008 onwards, when the \$180 million [trade with Russia was suspended](#) due to unacceptable levels of E.coli bacteria. However, an industry representative stated that Russia was using the wrong testing standards for kangaroo meat. More recently, the actions of animal rights activists have resulted in supermarkets in Britain [pulling kangaroo products](#) from their stores. A quick search of the internet will return more examples of demand being suppressed through the actions of animal rights activists.

It is worth noting that the uptake of non-commercial culling and fencing solutions has increased exponentially since 2008, when the commercial harvest ceased to be effective as the preferred method of managing kangaroo populations at sustainable levels. PAWD has always supported commercial harvesting as the most ethical and compassionate way of dealing with excessive numbers of kangaroos, but pastoralists will use alternative control methods when commercial harvesting becomes ineffective. Crushing demand for kangaroo products is the principal reason why commercial harvesting is no longer delivering effective population management. The irony is that drought kills far more kangaroos than commercial and non-commercial shooting put together does.

*5. Given your submission states that Total Grazing Pressure fences slow, but do not prevent the movement of kangaroos and that they will eventually find a way over, under or through a TGP fence, what is the evidence that they do not prevent movement or cause harm to kangaroos and other native species?*



This is a Total Grazing Pressure (TGP) fence on a PAWD member's property. The hole under the fence was dug by kangaroos. For comparison, the jam tin is 117mm high and the fence approximately 1070mm high. Clearly, kangaroos are using the hole they excavated under the fence with their front paws to move through the fence without sustaining injury. Frustratingly, kangaroo holes under TGP fences render them ineffective at containing goats; accordingly it is an ongoing task for the owner of the goats to backfill these holes. Kangaroos can also jump over a fence this high.

6. Given you express confidence in the NSW Kangaroo Management Program and note “a steady increase in the number of kangaroos over time”, are you able to explain how the population is calculated?

The Department of Planning, Industry and Environment conducts [low level aerial surveys](#) across western NSW and helicopter surveys in the Tablelands to count kangaroos, then applies the best available modelling to determine the number of kangaroos in the commercial harvest zones. The steady increase in the number of kangaroos over time is derived from Figure 2, where the [national](#) increase in kangaroo numbers between 1981 and 2019 is depicted by the dashed black line.

7. Given your submission states that “the most straightforward way of encouraging private conservation of kangaroos by pastoralists in western NSW would be to offer a financial incentive tied to the number of kangaroos grazing on their properties”, would it be fair to assume that the PAWD would fully support the adoption of this type of program?

PAWD would fully support the adoption of this type of program, conditional on the proviso that it was realistic in the amount of support that was offered to landholders. The cost of kangaroos on agriculture in NSW is significant. Example one: it is widely accepted that the onset of the Seventeen Twenty Drought was brought forward by six months due the impact of a record number of the four common species of kangaroos in the commercial harvest zones in NSW. Many PAWD members hand fed core breeding livestock to keep them alive during the drought. The cost of purchasing feed ran to \$3000/day for one PAWD member – or an additional \$540,000 in feeding costs for the extra six months of handfeeding associated with the impact of too many kangaroos on pastures, plus the uncoded impact of kangaroos on the environment and the work involved with removing bogged kangaroos from drying dams. Example two: [a grain grower in south west NSW lost almost \\$500,000](#) worth of crop to kangaroos in 2018. This is only two family owned and run properties who lost one million dollars to kangaroos in a six month period during the Seventeen Twenty Drought. Accordingly, a financial incentive sufficient to encourage the private conservation of kangaroos across NSW would require a significant investment by Government.

8. Given that your submission states that the take as a percentage of the quota is very low, yet you promote increasing the size of the commercial harvest, how would that help farmers if current quotas are not even close to being met?

In the short term increasing the size of the quota does not help farmers and graziers, but in the long term increasing the harvest quota as a percentage of the population (particularly when kangaroo numbers are above long term averages) gives industry the confidence to grow markets and build the value of kangaroo products. If this was to happen, kangaroos could become a viable alternative income stream to the production of traditional agricultural commodities, encouraging farmers and graziers to allow kangaroos to run on their properties and putting downward pressure on the adoption of non-commercial culling and fencing solutions.

9. Because many submissions to the Inquiry have pointed to the proliferation of goats in western NSW, do you consider that goats contribute to ‘Total Grazing Pressure’, and if so, to what degree in comparison to kangaroos?

PAWD understands that the goat population across the western plains of NSW was approximately one quarter to one third of the kangaroo population at the onset of the Seventeen Twenty Drought, at 3-4 million animals, against 12 million kangaroos. Published research by [Pahl \(2019\)](#) demonstrated that the Dry Sheep Equivalent (DSE) of a 50kg goat is the equivalent to that of a 50kg sheep (1.0 DSE), and the DSE of a 50kg kangaroo is 0.7 when fed high-quality forage, increasing to 1.0 when fed low-quality forage. Accordingly, as drought conditions spread across the landscape kangaroos increase their intake of forage as its quality declines, raising their DSE to 1.0. So, one goat = one sheep = one kangaroo during drought when total grazing pressure is a critical factor affecting agricultural and environmental values. Therefore, the grazing impact of kangaroos at the onset of the Seventeen Twenty Drought was three to four times higher than the impact of goats.

It is important to note that goats have become a valuable commodity over the last 25 years. Markets for goat meat have not been damaged by the attention of animal rights activists, which has allowed demand to grow and the value of goats to increase ten-fold. Over the same period, kangaroo meat has only doubled in value, and the value of kangaroo skins has declined by 80-100%. Accordingly, pastoralists have worked very hard to muster feral goats and their numbers have fallen across western NSW in recent years. At the same time, pastoralists have added managed goats to their production systems, and have transferred resources (land and water) from beef and sheep production into sustainable goat production. The increase in goatmeat values has secured their long-term future as part of the landscape in western NSW. However, kangaroos remain a low-value commodity that return little more than wages to the harvester and nothing to pastoralists, and as such there is no incentive to dedicate resources to supporting unsustainably high numbers of kangaroos in the landscape. The Committee should reflect on this reality.

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The conduct of commercial kangaroo harvesting in NSW exists in a virtual information vacuum. Details are available on the [kangaroo management program](#) website, but generally not in a format that is easily understood or shared. Nevertheless, the science supporting the program is robust and will stand up to an independent review. Unfortunately, over a number of years animal rights activists have sought to fill this information vacuum with a range of unreliable, unsubstantiated and misleading information, some of which has been presented to this Inquiry as evidence. The Committee should exercise caution as to the reliability and usefulness of evidence that has not been gleaned from generations of hands-on experience, or appropriately referenced, or independently reviewed.



This photo serves as a warning to the Committee. It was taken during the Seventeen Twenty Drought, on NPWS managed land in western NSW. Dozens of kangaroos bogged and died in this drying water source, and their carcasses were eaten by feral pigs. It demonstrates what happens when there is no kangaroo management – commercial or non-commercial. If the Inquiry Members resolve to recommend that kangaroos are not to be actively managed, then they – as representatives of the Crown (that owns the kangaroos) – must be prepared to wear the consequences and pick up the pieces when it all goes wrong. Alternatively, if the Committee wishes to be proactive and improve outcomes for kangaroos, other native animals, agriculture and the environment, then adoption of the recommendations contained in [PAWD's submission](#) to this Inquiry would be an excellent starting point.