

## Parliamentary Inquiry into the Health and Wellbeing of Kangaroos and Macropods in NSW

### Question taken on notice whilst giving evidence on Friday 11 June, 2021.

**The Hon. MARK PEARSON:** I am just interested in how much you take into account Indigenous connection with kangaroos. Do you think the kangaroo management task force is actually respectful of the place of kangaroos in Indigenous customs and lore. I have spoken with Elders who are saddened by the treatment of kangaroos and the destruction of their great migration pathways—I think this is where exclusion fencing comes in—in terms of what the Indigenous people see of the movement of kangaroos over a given space over hundreds of thousands of years. I have been informed that much of the Indigenous knowledge about the landscape is not taken into consideration. Can you tell us about whether the Indigenous customs and lore are taken into account by your task force and have you undertaken consultations with Elders when you are looking at this whole issue of our impact on kangaroos?

**Mr GRANT:** The kangaroo management task force does maintain Aboriginal membership, but we also receive advice from the Aboriginal Community Advisory Group and Western Local Land Services. So we use them as sounding boards for the information that we present and as much as possible we incorporate their advice—and that advice is obviously coming from their Elders.

**The Hon. MARK PEARSON:** Just on that point, can you give us an example of how you have taken on their advice and implemented it?

**Mr GRANT:** I will have to take that on notice. Certainly the participants in the task force have been supportive of our aims and what we are trying to achieve.

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### Kangaroo Management Taskforce Response

The Kangaroo Management Taskforce (KMT) disputes the idea of kangaroos having “great migration pathways” and feel this is an idea that has been conceived and promoted by those who perhaps don’t have access to the scientific data which demonstrates that kangaroos reside within “home ranges”. Migration infers a regular, repeated, seasonal mass movement of whole populations from one particular area to another and the KMT doesn’t accept that kangaroos “migrate” in the true meaning of the word. We do accept that kangaroos can move long distances in response to seasonal conditions and the availability of feed but generally remain within home ranges of differing sizes. However, if the Committee has access to any peer-reviewed scientific research underpinning the idea of kangaroos having “great migration pathways” the KMT would be interested in seeing it.

To the second part of this question, the Kangaroo Management Taskforce is immensely respectful of Indigenous custom and lore and from the date of our initial formation we identified the importance of ensuring that all our planning, recommendations and initiatives should be informed and underpinned by Indigenous input. The KMT recognises that incorporating Indigenous perspectives will never be a “one size fits all” approach as the needs and aspirations of different Indigenous communities will vary greatly according to mob, country and totem groups.

Below we have listed SOME of the things to demonstrate KMT efforts to ensure that our approaches are relevant and inclusive of Indigenous aspirations.

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1. At the original workshop in September 2016 when the Kangaroo Management Taskforce was formed, there were 42 people invited to represent different stakeholder groups and this included three representatives from Aboriginal Communities. They were the Chairs of the 3 x Western Local Land Services *Aboriginal Community Advisory Groups* at that time representing Aboriginal communities from western NSW, which covers around 40% of the state.
2. All three Aboriginal representatives stated at the workshop that they supported the idea of improved management as they didn't like seeing kangaroos die in droughts or get wasted under "shoot and let lie" permits. All three noted that for some Aboriginal people kangaroos are a totem and are not eaten, but for many in Western NSW and other inland communities' kangaroo has been a vital food source for tens of thousands of years. They stated that their local communities wished they could get regular access to kangaroos as a traditional food but could often only buy expensive pre-packaged kangaroo products in supermarkets and not the species or parts of kangaroo that their communities would have traditionally consumed.
3. When the Taskforce was formed at the end of the two-day workshop, Julie Knight, a proud Kamilaroi woman based in Bourke, was elected to represent Aboriginal Communities in the Kangaroo Management Taskforce.
4. One of the recommended actions to come out of that original 2016 workshop was that the KMT should work with Aboriginal Communities in Western NSW to hold an Aboriginal Community Kangaroo Forum. The KMT initiated conversations with Julie and the three Aboriginal Communities staff members of Western LLS: Guy Gibbs from Bourke/Brewarrina, Bert Gordon from Brewarrina/Walgett and Ronnie McDonald from Buronga to start planning for the forum. However, the KMT didn't have a Project Officer at that time and Julie was volunteering on a number of different groups and we didn't get the momentum to progress the forum concept.
5. In July 2018 Western Local Land Services employed a Project Officer to support the KMT and soon after starting in the role the KMT Project Officer travelled to Mutawintji National Park with a filmmaker and interviewed Traditional Owners (TOs) there about kangaroos. The Traditional Owners there live on country at Mutawintji and have hunting rights, regularly killing and eating both kangaroo and emu. While we were there young Keanu Bates brought in a kangaroo he had killed and worked with Leroy Johnson to prepare it for cooking into a delicious curry as shown in this [short film](#).
6. In 2019 the KMT held a National Kangaroo Symposium at the biennial conference of the Australian Rangeland Society in Canberra. The KMT Aboriginal Communities representative, Julie Knight, was unable to attend so we reached out to Mark Koolmatrie from SA, a *Tribal Owner of the Coorong, Lower Lakes, River Murray and the Sea Inc.* Prior to this event Mark had been working with ecologists in South Australia on increasing awareness of kangaroo management issues. The KMT supported Mark to come to Canberra to be on the 5-person Symposium Panel. Mark highlighted that one of the major issues for Aboriginal people was

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gaining access to kangaroo products. The KMT Project Officer has continued to liaise with Mark since that time.

7. At that event in Canberra, the PO also organised for Celebrity Aboriginal Chef, Mark Olive, to come to give a cooking demonstration at the end of the symposium. Mark talked about Aboriginal cultural values related to eating kangaroo as shown in this [short film](#).
8. Also in 2019 the KMT agreed that due to Julie Knight's other commitments making it difficult for her to attend meetings and maintain ongoing Indigenous input into the KMT, we should engage a *second* Aboriginal Communities representative to bolster Aboriginal input into Taskforce strategies. Joshua Clarke joined the Taskforce late in 2019. Josh is a proud *Ngiuampaa Wangaaypuwan* man from IPA property *Mawonga* near Hillston.
9. At the face-to-face KMT meeting in Dubbo on 7 February 2020 Josh led a Taskforce session discussing how better to engage with and meet the needs of Aboriginal Communities – we have included a summary of the discussions of that session in Attachment A at the end of this document.
10. At the 2020 face-to-face KMT meeting Josh clearly discouraged the idea of a single *Aboriginal Kangaroo Forum* and promoted instead the idea of smaller, grass-roots meetings across the Western region with maximum opportunities to “yarn” and minimal presence of “waratah (NSW Government) shirts” and it was agreed that Josh and the KMT Project Officer would begin developing this approach.
11. At that meeting in Dubbo Josh also put forward the idea of **Cultural Kangaroo Tags**. This concept involves an additional tag on top of the existing tags for commercial harvest and damage mitigation and would involve local Aboriginal communities being issued with tags to engage harvesters to provide those communities with specific kangaroo products upon request to meet cultural access requirements eg. Many Aboriginal Communities have expressed that they don't normally eat grey kangaroos but prefer “blue flyers”, young female red kangaroos. Josh explained that Aboriginal communities require access to kangaroo and emu for events like Sorry Business, NAIDOC and other gatherings but they often struggle to access them as they have issues with getting access to properties or gun licences. They also prefer getting whole kangaroos, or tails, rather than the cuts of kangaroo available in supermarkets. A cultural tag would give them an opportunity to request exactly what they need for their particular communities, for their particular events.
12. In March 2020 Josh and the KMT Project Officer attended the *Western LLS Aboriginal Community Advisory Group (ACAG)* meeting in Hillston to discuss kangaroo management issues and seek input on how the KMT could better engage with Aboriginal Communities to look for opportunities for Aboriginal employment and enterprise opportunities as well as further exploring the issue of Aboriginal Communities access to kangaroo products and other traditional foods. The ACAG members were very supportive of and agreed to help with planning the regional kangaroo forums and spread the word with their local communities.
13. Josh and the KMT Project Officer began planning three local forums for Aboriginal communities in the Western Region of NSW, but unfortunately these were postponed with the onset of Covid19. Since that time we have begun planning those workshops again but

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Covid issues have prevented them from progressing as we are acutely aware of the vulnerability of our Indigenous communities in Western NSW.

14. In 2020 and 2021 Josh Clarke and Fiona were planning to attend more meetings of Western Local Land Services Aboriginal Community Advisory Group (ACAG) and update them on progress of kangaroo management issues, but those meetings planned for late 2020, early 2021 and again on 17 June 2021 were all cancelled due to Covid19. Several ACAG members reside across the NSW/Victorian border in Mildura and were limited by lockdowns.
15. In 2020 Josh and the KMT Project Officer held a Zoom meeting with Bruce Hammond, an Eastern Arrernte man and the Healthy Landscapes Manager SA at *Bush Heritage Australia*. At this meeting they discussed the idea of Aboriginal ownership and promotion of kangaroo products and working towards the idea of developing an overarching *Traditional Owner/"TO" brand* for all kangaroo products from all regions of Australia. This brand would allow for local cultural sub-brands but avoid the issue of each Aboriginal nation across Australia having to set up their own business brand.
16. In recognition of the importance of incorporating Indigenous perspectives for improving kangaroo management, in 2020 the KMT Project Officer reached out to a number of high-profile Indigenous organisations including representatives from NAILSMA, ILSC and 10 Deserts. All showed some level of support for the idea of developing new approaches for improving kangaroo management in Australia and ensuring that such an approach included strong Indigenous representation.
17. Josh and the Project Officer are still discussing how to progress the local Aboriginal Kangaroo Forums, cultural tags, and Aboriginal employment opportunities and Josh continues to have conversations with Western region Aboriginal Community members about how they might want to engage in kangaroo management issues.
18. Josh was unable to attend the KMT face-to-face workshop in Dubbo on 11 June, otherwise we would have recommended that he be part of the KMT group giving evidence to the Parliamentary Inquiry.



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## Attachment A: Aboriginal Engagement - planning session (Dubbo, 7 February 2020)

Led by Josh Clarke

### Main Discussion Points

- What outcomes do we want for Aboriginal engagement with the Kangaroo Management Taskforce?
- What outcomes do we want from an Aboriginal Kangaroo Forum?
- How do we engage with Aboriginal communities to develop relationships with industry and landholders in the kangaroo harvesting space?
- How do we include Aboriginal support for kangaroo harvesting and demonstrate traditional use of kangaroos as a resource?
- What benefits could there be for Aboriginal communities and how can we help facilitate that?
  - Access to kangaroo and emu
  - Aboriginal employment and enterprise opportunities
  - Subsidized training opportunities
    - Firearms and how to obtain gun licences
    - Hunting for Aboriginal communities
    - Commercial kangaroo harvesting
- Third kangaroo tag option for Aboriginal Communities
  - Commercial tags
  - Non-commercial tags
  - **Cultural Use tags**
- Aboriginal input into cuts of kangaroo meat
- Kangaroo management trial at Mawonga
- Pilot program in Western NSW with team of Aboriginal harvesters and mobile chiller
- Case studies highlighting successful Indigenous businesses using traditional resources such as crocodiles – could invite a presenter from such a group to the second follow-up forum?

### Key Insight

Josh pointed out that Aboriginal land management approaches are currently receiving a lot of respect and recognition – particularly since the bushfire crisis in the summer of 2019/20 – making this an excellent time to build support for social licence for kangaroo management.

### Unanswered questions

- Barrier: Hygiene training is currently all online, which could be a major barrier for some Aboriginal communities wanting to access training
- Existing work: work by Dana Thomsen – why didn't it work?
- Will there be hygiene issues if cultural use approaches are implemented. How could those be overcome?

### Recommended approach

Josh and Fiona to design and host 2 – 3 local meetings in NSW – eg Cobar and Buronga to garner community input into developing concepts prior to taking to state/national level. Initial meetings should take place before June 2020 and include:

- Western LLS Aboriginal Communities Staff
- Western LLS Aboriginal Community Advisory Group members
- Representatives from local Aboriginal communities
- Local Aboriginal Land Council
- Local Aboriginal kangaroo harvesters

Once concepts have been developed with local Aboriginal input, hold follow up meetings including:

- NSW ALC
- ILSC
- Aboriginal Affairs
- Training Services NSW
- Relevant business development agencies

## KMT Question Taken on Notice – 11 June, 2021

**The Hon. MARK BUTTIGIEG:** I just want to tease out a theme which has sort of, I think—in my mind, anyways—emerged from today and it is somewhat cross-purposes. I will start by asking a simple question. We heard fairly compelling evidence this morning that there is a biological or physical limit, if you like, to the population growth rate based on fairly simple reproductive biology. That upper limit was 10 per cent. What do you say to that logic?

**Mr ZANKER:** I cannot understand the question.

**The Hon. MARK BUTTIGIEG:** The evidence we heard this morning from—I am just trying to remember the witness.

**The CHAIR:** Sorry. Are you saying it is a volume thing? Did you hear the question?

**Mr ZANKER:** No, you are coming through quite muffled.

**The Hon. MARK BUTTIGIEG:** I am sorry. Is that better?

**Mr ZANKER:** Not really.

**Dr WISE:** From what I understand of the question, we will need to take that on notice after we have got a chance to have seen the reference you are referring to.

The KMT representatives asked to take this question on notice during the evidence-giving session as they were unaware of the evidence the committee was referring to in the question and required time to look into it. The KMT asked to see the reference being referred to but without this being provided, our KMT searching through previous presenters to the Inquiry has assumed the “compelling evidence” referred to was that made by Mr Mjadwesh in his testimony.

We wish to be clear that it is beyond the scope or expertise of the KMT to undertake population modelling or even to review scientific models but we believe that the assertion of maximum breeding capacity of kangaroo populations being 10% is false and misleading and we found the explanation in the transcript of Mr Mjadwesh’s testimony to be simplistic at best. The testimony made by Mr Mjadwesh in relation to this maximum biological limit would also seem to be completely at odds with published scientific data and the KMT has not been able to locate any peer-reviewed scientifically credible references specifying a maximum annual rate of 10%, while there is published research which indicates that the reproduction rate of kangaroos can reach 30-40% in good seasons.

In further response to the question about the 10 per cent reproduction rate the KMT offers the following observations.

- Kangaroos do not have a “fairly simple reproductive biology”. They have a unique complex breeding capacity known as Embryonic Diapause or Suspended pregnancy (Dawson, 2012). This enables female kangaroos to have young in the pouch at the same time as holding an embryo in suspension in the uterus. As soon as the pouch joey leaves the pouch at around 8 months of age, the next foetus is ready to occupy that pouch under favourable seasonal conditions. If the pouch joey dies for any reason it can be immediately replaced. This means that female kangaroos can maximise their breeding potential in response to seasonal conditions. Embryonic diapause also allows female red kangaroos to reproduce after

drought breaking rains without needing to be mated – giving them a rare evolutionary advantage since males are often scarce after drought (large males are one of the first cohorts to die in a drought)

- It is an undisputed fact that following the break of any drought, when feed and water conditions are at their best and all livestock numbers are low, all animals (domestic, native and even introduced pest animals) will reproduce at their maximum rate and survival rates also increase. It is nature’s way of re-populating the species.
- The commercial harvest take has always comprised more males than females and currently sits at around approximately 70% males. In recent years under a “male only” that figure escalated to more than 90%. This had the effect of skewing the male/female ratio in the population more towards females and hence a higher breeding female proportion. (McLeod & Sharp, 2020)
- When seasonal conditions are suitable for breeding, a joey exits the pouch every 235-240 days. (depending on reference) and breeding rates are exponential. Populations grow as more females mature and start reproducing, and in turn their daughters and granddaughters mature and start reproducing.

Consider the kangaroo irruption cycle that started after the millennium drought bust in 2003 and ended with the mass starvation crash in 2020. The millennium drought broke at the end of 2009 and the beginning of 2010. 2011 was another very good season followed by average/ good seasons in 2012 and 2013. The population increases over those seasons are listed in Table 1 and illustrated in this graph taken from the 2021 Quota Report.

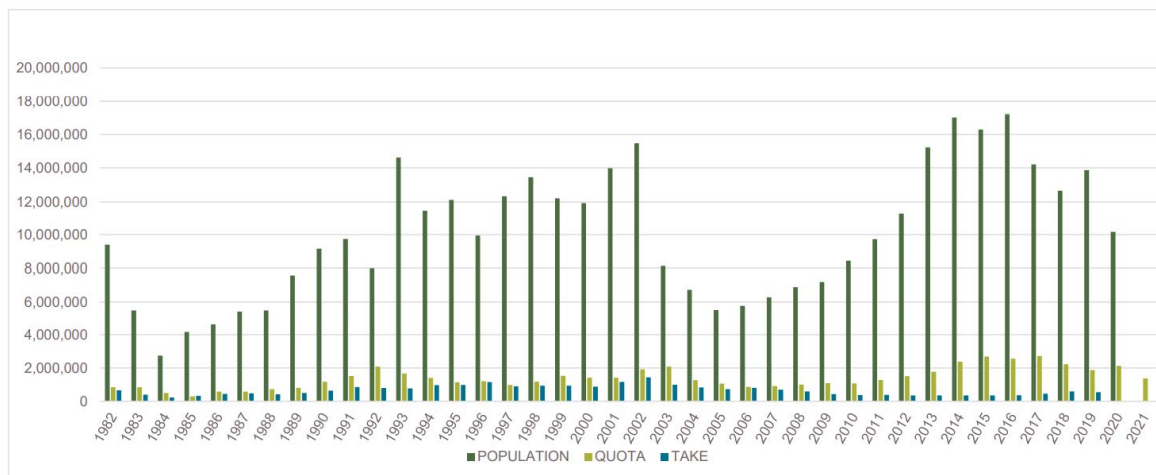


Figure 1 Graph demonstrates combined populations of reds and greys, quotas and takes from 1982 to 2021. Taken from the NSW Quota Report for the New South Wales Commercial Kangaroo Harvest Plan

As a % of the overall population the increases per annum range from 15.3% to 34.7%. If you consider the increase as a percentage of breeding females then the range is from 37% to 86% (based on 40% of population being breeding females). These figures highlight the fact that breeding females increase their breeding rates in response to those good seasons.

*Table 1: Kangaroo populations and percentage changes from 2003 to 2013, taken from the 2021 Quota Report:*

Year	Population	% increase from previous year
2003	8,127,976	
2004	6,732,789	(17.1% decrease)
2005	5,514,526	(18% decrease)
2006	5,772,567	4.6% increase
2007	6,286,831	8.9% increase
2008	6,894,305	9.7% increase
2009	7,088,320	2.8% increase
2010	8,433,682	19.5% increase
2011	9,726,685	15.3% increase
2012	11,302,163	16.1% increase
2013	15,229,573	34.7% increase

To reiterate, the KMT accepts the population figures taken from DPIE annual estimates, as scientific, peer-reviewed, best practice wildlife counting methodology and those figures simply do not support the concept of a maximum breeding rate of 10%.