

**Submission
No 276**

INQUIRY INTO KOALA POPULATIONS AND HABITAT IN NEW SOUTH WALES

Organisation: International Fund for Animal Welfare

Date Received: 2 August 2019



RE: Submission to Inquiry into koala populations and habitat in New South Wales by Planning and Environment Committee of the Upper House of the NSW Parliament

Submitted to PortfolioCommittee7@parliament.nsw.gov.au

2nd August 2019

Dear Committee

Firstly I would like to thank you for initiating this important inquiry and IFAW welcomes the opportunity to make a submission.

Founded in 1969, the International Fund for Animal Welfare (IFAW) is a global non-profit organisation that protects animals and the places they call home. With offices in 14 countries and projects in over 40, we rescue, rehabilitate and release animals into secure landscapes around the world.

IFAW takes a compassionate conservation approach to wildlife protection, recognising the importance of the welfare of individual animals in sustaining healthy populations. IFAW Oceania has a long history of campaigning for better protection for native wildlife in Australia and one of our key focuses is on securing a future for koalas across all range states.

In New South Wales, IFAW works collaboratively with a broad range of environmental and conservation groups on koala conservation including Stand Up for Nature Alliance and the NSW Wildlife Council (NWC).

One of our key geographical focuses is the Northern Rivers region, where we are supporting a holistic project to rescue, rehabilitate and release koalas into secure habitats, partnering with Friends of the Koala to support the position of a veterinary nurse and working with Bangalow Koalas to restore a wildlife corridor in the region. IFAW also works closely with Port Macquarie Koala Hospital to build capacity and expertise amongst vets and vet nurses in treating koalas including through workshops. In Sydney, IFAW is also part of the Georges River Koala Network aimed at protecting the state's only growing koala population¹ from a large-scale housing development.

While IFAW recognises that the problem of koala protection is complex and threats are numerous, we also recognise that the core driver is habitat loss. So any meaningful and long-lasting solution needs to address this threat directly by protecting and restoring habitat and connectivity. In order

¹ McAlpine et. al. 2015. Conserving koalas: A review of the contrasting regional trends, outlooks and policy challenges. Biological Conservation 192 226-236.

to turn things around for koalas, the solution needs to be immediate and transformative and a bold all-of-government approach is required to protect and secure remaining koala habitat on both public and private land into the future.

Crucially, because koalas are a flagship species, by protecting them we will also be protecting countless other animals and birds.

This submission does not cover every aspect of the ToR as we recognise that there are other groups and individuals with expertise in those areas. IFAW has also inputted and signed on to Stand Up for Nature's detailed joint submission, so this submission will focus on those aspects that IFAW is directly involved in and has experience and knowledge in.

- a) **the status of koala populations and koala habitat in New South Wales, including trends, key threats, resource availability, adequacy of protections and areas for further research.**

Koala populations are coming under increasing threat and are now listed as Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in NSW, QLD and ACT as well as being listed as Vulnerable on the IUCN Red List and Threatened under the United States Endangered Species Act. They are also recognised by the IUCN (of which IFAW is a member) as one of the ten global species most vulnerable to climate change.²

In NSW, populations are plummeting. The NSW koala population is currently estimated by koala experts to be in the range of 15,000 to 25,000 animals³, much lower than the figure of 36,000 used in the recent NSW Koala Strategy. This represents a decline of between 20.4% and 52.3% since 1990⁴.

This steep decline means that NSW koalas face a high risk of extinction in the medium-term future. Local extinctions have already occurred, and koalas are projected to become extinct in the wild in NSW within 30 years (by as early as 2050) on current trends.

It is likely that koalas have already disappeared from large areas of their former range in western NSW and Queensland, suggesting habitat conditions in these areas are now inadequate to support koala populations. The pace of such local extinctions is growing, with climate change hastening declines. Many populations in coastal and western areas may already be functionally extinct. Remaining areas of potential koala habitat within their current range are often fragmented and reduced in size.

² Species and Climate Change: More than just the Polar Bear IUCN 2009
https://www.iucn.org/downloads/species_and_climate_change.pdf

³ Paull, D., Pugh, D., Sweeney, O., Taylor, M., Woosnam, O. and Hawes, W. 2019. *Koala habitat conservation plan. An action plan for legislative change and the identification of priority koala habitat necessary to protect and enhance koala habitat and populations in New South Wales and Queensland*. Report prepared for WWF-Australia and partner conservation organisations... Published by WWF-Australia, Sydney.

⁴ Calculated based upon a population of 31,400 in 1990. This figure is consistent with the population estimate contained in the *Advice to the Minister for Sustainability, Environment, Water, Population and Communities from the Threatened Species Scientific Committee (the Committee) on Amendment to the list of Threatened Species under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* in relation to koalas. The listing advice is available for download at http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=85104. Viewed 9 December 2018.

Recently, the NSW Government recognised that koala populations are in steep decline and developed a strategy to begin to address this. Unfortunately, this strategy, and current government policy, fails to address the number one threat to koala populations - habitat loss and fragmentation.

Koalas cannot be saved unless we ensure their remaining habitat is protected and restored, but right now the opposite is occurring.

Removal of koala habitat has a huge and long term impact on koalas who favour particular ranges and feed trees. When these are removed and the animals are displaced, evidence suggests⁵ the impact can cause stress for the animals which, can in turn, stimulates diseases such as Chlamydia and Retrovirus, outcomes which are often fatal. If treatable, koalas can undergo lengthy and sometimes successful rehabilitation processes and will ultimately need to be released back into the wild. However, from working with Friends of the Koala and other groups, IFAW is aware that sourcing suitable koala habitat where koalas can be released as close as possible to where they have been rescued is a challenge, particularly in urban and peri-urban areas where koalas tend to be rescued from.

In some areas, residential development has seen the removal of substantial koala habitat and FOK struggles to re-release koalas back into this area. A reasonable proportion of the koalas that FOK rescues have already been admitted, sometimes several times. Repeated rescues and releases has an inevitable impact on these already compromised koalas and many that are reported again, are often found dead, injured or are so affected by disease that they need to be humanely euthanased.

This dire situation in the region has been exacerbated by the additional impact of the construction of Stage 10 of the Woolgoolga to Ballina Pacific Highway upgrade. The road intersects core koala habitat and all signs and evidence point to the development having a significant impact on the health and wellbeing of this significant koala population in the long term, just as IFAW, FOK and ecologists predicted and lobbied at various levels of government to try to prevent.

IFAW and other groups fear that this could be repeated in South West Sydney where a healthy and recovering koala population is at direct risk of a large-scale housing development. A few koalas in the region survived the threat of extinction from the fur trade in the 1930s and have been slowly recovering in Holsworthy Army Base.

The re-emergence of this healthy, chlamydia-free koala population has unfortunately co-incided with the Greater MacArthur land release and large-scale urbanisation plans for the Greater MacArthur Growth area. Plans include the construction of 33,000 houses on land that includes important koala corridors and the associated widening of Appin Road from a two-lane to a six lane highway.

Development and planning submissions are being submitted and approved in a piecemeal approach with no consideration of the overall cumulative impact on the koala population. The RMS against expert advice⁶ plans to erect exclusion fencing along Appin Road with no consideration of

⁵Physiological stress levels in wild koala subpopulations facing anthropogenic induced environmental trauma and disease Dr Edward Narayan Western Sydney University <https://www.nature.com/articles/s41598-019-42448-8>

⁶ South Campbelltown Koala Habitat Connectivity Study, Dr. Steve Philips Biolink Dec 2017 (updated April 2018).

overpasses or underpasses. This will further bisect the population and prevent natural East-West movement of koalas. It will likely further accelerate contact with the chlamydia-infected areas further south in the Southern Highlands. It will also mean there are no east-west escapes/exits for koalas in case of a large fire or other threats emanating from the Holsworthy Army Base and will funnel them into one super koala highway, certain to increase koala stressors.⁷

Proposed mitigation measures to address impact on koala populations include off-setting. The current process is entirely inadequate as it allows critical koala habitat to be off-set anywhere else in the state, providing zero benefit for the koalas directly at risk.

A whole landscape proposition to accommodate koalas at this critical juncture is vital, before the piecemeal rezoning of Greater Macarthur ensures the slow eradication of koalas in this area, and their possible local extinction.

With increasingly less viable habitat available and that which remains becoming further fragmented, koalas are forced to be on the ground for longer, making them even more vulnerable to car strike, drowning in swimming pools, dog and cow attacks as well as stress-related disease.

As community frustration grows with the lack of leadership and action to protect threatened species and critical habitats, across NSW local community groups including IFAW's partner Bangalow Koalas, are forced to take things into their own hands to address the removal of koala trees and the lack of connectivity between remaining pockets of habitat by planting thousands more. Whilst this is admirable and effective and a great community engagement initiative, this benefit will not be felt immediately as young trees have to survive and take years to reach the maturity that koalas require.

Furthermore, IFAW questions why it should be left up to volunteers and private landowners to seek grant funding or self-finance the solution to address the large-scale destruction that the government has allowed by its permissive land-clearing laws. The most immediate, impactful and preventative solution would be to protect habitat from being destroyed in the first place.

Recommendations:

- Immediately prohibit the clearing of koala habitat, including legislative prohibitions on the destruction and degradation of mature forest and woodlands, and regrowth vegetation, used by koalas.
- Complete and fund Koala Plans of Management and koala habitat mapping state-wide.
- Amend relevant legislation to include a broader definition of koala habitat, which includes lands that support feed trees, shelter trees, dispersal corridors and climate refugia.
- Wildlife corridors need to be restored and regenerated to allow koalas and other native animals to move freely about the landscape and thus minimize the impact of human-wildlife conflict. This could be achieved through a combination of purchasing private land, changing the tenure of public land and through targeted habitat restoration.

⁷ South Campbelltown Koala Habitat Connectivity Study, Dr. Steve Philips Biolink Dec 2017 (updated April 2018).

Research

Post-monitoring of released koalas

Koala rescue and rehabilitation groups and wildlife hospitals treating sick, injured and orphaned koalas, would greatly benefit from conducting post-release monitoring of koalas in order to learn what happens to them after release to inform future rescue, rehabilitation and release methodology. While such research is considered necessary and a priority to achieve better animal welfare and conservation outcomes, this type of monitoring is usually cost prohibitive and only possible when research funds are available.

Recommendation:

IFAW would like to see clear government commitments to funding and research dedicated towards comprehensive post-release monitoring programs in collaboration with koala rehabilitation groups.

Stress research

Stress is a major factor impacting koalas and IFAW recently funded a research study into the causes of stress in koalas, undertaken by Dr Edward Narayan at Western Sydney University⁸. The study, published in Nature publication in April 2019 revealed that land-clearing is the number one cause of stress in koalas. Koalas found living in areas with land clearance showed significant chronic stress, indicated by high levels of the stress hormone cortisol found in faecal samples. Long-term stress caused by environmental trauma can lead to significant physical and psychological changes in koalas. These changes can result in increased signs of koala stress syndrome, increased risk of infection, suppressed reproduction, growth and development and high mortality rates. This research makes it evident that koalas living in areas of past or on-going habitat alteration will be most stressed and most vulnerable to extinction.

A related study⁹ by Dr Narayan published earlier in the year shows that koalas can live quite happily in semi urban areas, as long as they are given the trees and the spaces that they need.

IFAW would like to see this scientific evidence applied in future policy approaches, ensuring that the long term harm to individual animals and thus the wider population is considered in every planning project that involves removal of koala habitat and meaningful mitigation measures implemented that will truly protect koalas.

A national 'stress map' of koalas would also be a useful indicator of the hotspots and help inform protection and possible adaptation measures.

Recommendations:

- IFAW would like to see a wildlife-friendly approach to urban planning adopted as a mandatory requirement to ensure that plans incorporate dedicated green spaces and wildlife corridors suitable for koalas and other wildlife including, designated wildlife crossings to ensure safe passage across roads.

⁸ Physiological stress levels in wild koala sub-populations facing anthropogenic induced environmental trauma and disease. Dr Edward Narayan published in [Scientific Reports](#) April 2019

⁹ Physiological stress in rescued wild koalas are influenced by habitat demographics, environmental stressors and clinical intervention. Dr Edward Narayan and Tayla Vanderneut. Published in *Frontiers in Endocrinology* Jan 2019
<https://www.frontiersin.org/articles/10.3389/fendo.2019.00018/full>

- There should be no 'acceptable death or harm level' to koalas from development. Zero long-term harm needs to be the aim in order to both address short-term impact from construction and long-term cumulative impact on the health and stress levels of individual animals and populations. IFAW would also like to see planning authorities and developers required to monitor both the short and long-term the impact of their development on koalas, including monitoring of stress levels.

b) the impacts on koalas and koala habitat from:

- 1. the Coastal Integrated Forestry Operations Approvals and Regional Forest Agreements,**
- 2. the Private Native Forestry Code of Practice,**
- 3. the old growth forest remapping and rezoning program,**
- 4. the 2016 land management reforms, including the Local Land Services Amendment Act 2016 and associated regulations and codes**

For this ToR IFAW points to the detailed Stand up For Nature Alliance submission that we have added our support to an alliance of NSW conservation and animal welfare groups but supports the following recommendations.

Recommendations:

- An urgent transition plan needs to be developed end the logging of native forests on public land.
- Ensure private native forestry is subject to assessment and approval before licenses are granted, that logging is genuinely selective, and that self-assessable codes are not implemented.
- Reject the Government's proposal to open up thousands of hectares of old growth forests to logging on the NSW North Coast.

c) the effectiveness of State Environmental Planning Policy 44 - Koala Habitat Protection, the NSW Koala Strategy and the Biodiversity Conservation Act 2016, including the threatened species provisions and associated regulations, in protecting koala habitat and responding to key threats,

State Environmental planning policy 44- Koala Habitat protection

A review of SEPP 44 has been underway for some time, and is long overdue. However, as SEPP 44 interacts with many other pieces of legislation, unless the revised SEPP effectively deals with these interactions and confers the ability of local governments to effectively protect koalas, the revision will make little difference to the steep declines in koala populations across NSW. In particular, changing the definition of 'core' koala habitat has far reaching implications for CKPoMs, koala habitat mapping and Private Native Forestry and urgent consideration should be given as to how these implications are addressed.

Recommendation:

- SEPP 44 should be fully reviewed and overhauled and incorporated into a whole of Government approach to koala conservation as recommended by the Chief Scientist.

NSW Koala Strategy

IFAW welcomed the NSW Koala Strategy as the first substantial NSW State Government initiative to address some of the causes of koala population decline. The Strategy sets out a three-year plan to stabilise and increase koala populations across the state and has committed \$48m for this purpose, including \$20m to acquire land to protect koala habitat and \$24.7 to implement various actions to achieve this.

Funds for research and training of vets and vet nurses will be useful to address the need for more vets and vet nurses to treat koalas that have been injured or are diseased. Koalas are complex animals and unfortunately most vets do not receive adequate training in how to treat them, along with other wildlife. This is a critical knowledge gap and one that IFAW is actively working to address by capacity building and training.

For example, we are supporting the part-time position of an onsite veterinary nurse at Friends of the Koala's triage centre to allow for onsite assessment, treatment and monitoring of koalas to save them being transported to external vets. Currently, there is only one vet in Lismore that FOK relies on and most of the koalas are seen by this vet or are taken to Currumbin Wildlife Hospital in Queensland. The capacity for onsite treatment has already led to an increase in FOK's release rates, which we hope will increase further.

IFAW supports the design and roll out of the online vet course with Taronga Zoo but face to face training is also important. IFAW has facilitated a number of veterinary wildlife workshops, often in conjunction with the Australian Veterinary Association (AVA), which have been very well-attended and received. In February we held a specialist koala workshop in collaboration with Cheyne Flanagan, clinical director of Port Macquarie Koala Hospital, in south west Victoria for 52 vets and nurses and we are planning to replicate this later this year in the Lismore region.

However, whilst the strategy contains significant funding and some worthwhile actions, such as citizen science surveys, vet training and the creation of new National Parks and koala sanctuaries, some of which are beneficial for koalas in the long-term, IFAW supports the view that the Strategy largely addresses the symptoms of koala decline rather than the cause - habitat loss and fragmentation. Unless the Strategy is supported by legislative change to protect existing and future koala habitat it will have little meaningful impact.

Recommendation:

- A new NSW Koala Strategy is warranted which is truly whole-of-government, based on sound science, and addresses the major threat of widespread and escalating deforestation.

- d) **identification of key areas of koala habitat on private and public land that should be protected, including areas currently at risk of logging or clearing, and the likely impacts of climate change on koalas and koala distribution,**

Koala hubs have been spatially mapped by both NSW Government agencies and environment organisations. The *Koala Habitat Conservation Plan* by Paull et al.(2019) identifies priority areas for protection on public and private land, by amending koala hubs mapping developed by the NSW Government.

Climate change is making Australia's normally challenging weather for koalas more extreme by exacerbating droughts, heat stress and bushfires. This impacts koalas, whether directly through overheating and dehydration, or indirectly by degrading the eucalypt forests they live in.

Koalas were identified by the International Union for the Conservation of Nature in 2009 as being at risk from climate change¹⁰. The IUCN noted that:

- *Increasing atmospheric CO2 levels will reduce the nutritional quality of Eucalyptus leaves, causing nutrient shortages in the species that forage on them. As a result, Koalas may no longer be able to meet their nutritional demands, resulting in malnutrition and starvation.*
- *Increasing frequency and intensity of droughts can force Koalas to descend from trees in search of water or new habitats. This makes them particularly vulnerable to wild and domestic predators, as well as to road traffic, often resulting in death.*
- *Koala populations are reported to be declining probably due to malnutrition, the sexually-transmitted disease chlamydia, and habitat destruction.*
- *Koalas have very limited capability to adapt to rapid, human-induced climate change, making them very vulnerable to its negative impacts.*

Bushfires, which have already wiped out considerable populations of Koalas, are likely to increase in both frequency and severity with climate change. Koalas are particularly vulnerable to bushfires as their slow movement and tree-dwelling lifestyle makes it difficult for them to escape and their food supply can be destroyed. ¹¹ Extended drought across NSW and Queensland has already coincided with a decline in koala numbers, along with habitat losses, which reduces the resilience of populations. Climate modelling has also indicated a likely easterly shift in the range of koalas. Therefore protecting remaining habitat in eastern NSW and undertaking large-scale revegetation programs to link eastern and western populations is key to ensuring koalas can persist in the face of climate change.

Recommendation:

- Enhance funding to support restoration and expansion of koala habitat, including to build resilience to climate change, across land tenures and to ensure connectivity between existing habitat.

¹⁰ IUCN, 2009. *Koalas and Climate Change: Hungry for CO2 cuts*. Fact sheet produced by the International Union for the Conservation of Nature, Gland, Switzerland. Available for download at https://cmsdata.iucn.org/downloads/fact_sheet_red_list_koala_v2.pdf Downloaded 31 July 2019.

¹¹ Ibid

e) the environmental, social and economic impacts of establishing new protected areas to conserve koala habitat, including national parks,

The koala is considered a national and international icon and is estimated by to be worth \$3.2 billion a year to Australia's economy by the Australian Koala Foundation. Nature is one of the top reasons for people visiting Australia and nature-based tourism is worth around \$20 billion a year.¹²

The potential for further expanding koala-focused tourism is huge but, for that to happen, we need to maintain and increase koala numbers in the state by protecting habitat.

Currently most koalas in NSW live outside of protected areas and the current National Park network does not capture well the habitat that koalas prefer – fertile, coastal forests that produce more nutritious leaves.¹³ The creation of a new Great Koala National Park will provide koalas with the habitat they need to thrive again, by adding 175,000ha of state forests to existing protected areas to form a 315,000ha reserve in the Coffs Harbour hinterland.

Recommendations:

- Core koala habitat needs to be immediately and permanently protected and enhanced via the establishment of a connected system of existing and new national parks including the Great Koala National Park in NSW and the Georges River Koala National Park in South-West Sydney.
- Similar protected areas of core koala habitat in other range states should be established and protected into the future. Any new protected areas need to be genuine koala habitat not just token areas of land. All koala habitat in public state forests needs to be permanently protected in the reserve network and koala habitat should be exempt from code-based clearing under the current legislation.
- Wildlife corridors need to be restored and regenerated to allow koalas and other animals to move freely about the landscape and prevent human-wildlife conflict

Thank you for reading.

Yours sincerely

Josey Sharrad
Wildlife Campaigner, Oceania

¹² <https://www.destinationnsw.com.au/wp-content/uploads/2018/02/nature-based-tourism-to-nsw-snapshot-ye-sept-2017.pdf>

¹³ Effectiveness of protected areas in North Eastern NSW Biological Conservation 2002.
<https://www.sciencedirect.com/science/article/abs/pii/S0006320701002294>