Submission to Senate Inquiry on the status, health and sustainability of Australia's koala population

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BACKGROUND

The Koala Action Group (KAG) has been active for more than twenty years primarily in the Redlands district which is in the heart of the Koala Coast in South East Queensland (SEQ). This area has consistently been recognised as containing the most concentrated natural population of koalas in Australia.

This population is remarkable in that it is close to high densities of human populations which is not so surprising when we understand that koalas and humans prefer similar habitats, the fertile coastal alluvial soils. The conflicts between humans and koalas have been minimised in the Redlands with healthy populations of koalas continuing to thrive in urban areas until recent changes have led to a worrying decline. These changes include the upgrading of arterial roads, infill development removing isolated but vital trees and the declaration by the State Government of the previously protected creek corridors as Major Development Areas to fulfil their agenda of cramming more people into South East Queensland.

Nonetheless the State Government has been pro-active in planning for koalas with their development of State Planning Policies and Conservation Plans for koalas. This myriad of instruments has been spectacularly ineffective. Our group considers there are two main reasons for this: lack of a head of power from the Federal sphere and excessive influence on final drafts by the development industry. While some land in the Koala Coast has been quarantined from development, there has been very little effort towards conserving the urban koala populations. This is in spite of Department of Environment and Resource Management (DERM) research clearly indicating the importance of conserving urban populations.[1]

> *In the absence of conserving a viable urban koala population, adjacent bushland koala populations will continue to decline with consequences for the viability of the entire Koala Coast population.* [1]

Declaration of the coastal populations of koalas as Vulnerable or even Endangered under EPBC legislation would provide the head of power for these instruments to have more teeth. KAG believes there is more than enough scientific evidence to justify this declaration.

The scientific evidence has gained strength with the recent research into the genetics of koalas. Lee et al. (in press) have found the Koala Coast koala population to be distinct from other SEQ koalas.[2] Thus the IUCN criteria for listing as Endangered would be met given the rapid decline (64 per cent in ten years) shown in the DERM research.[1] With the rapid expansion of the human population in coastal areas, all koala populations on the coast are severely threatened. If the coastal koala populations of SEQ and Northern NSW are lost the whole koala species would be irrevocably changed by the loss of this extant genetic diversity.

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[1] (DERM 2009) Decline of the Koala Coast Koala Population: Population Status in 2008"

[2] Lee et al (in press) Genetic variation and structuring in the threatened koala populations of Southeast Queensland reveals a genetically distinct population in the Koala Coast.

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TERMS OF REFERENCE

a. the iconic status of the koala and the history of its management;

b. estimates of koala populations and the adequacy of current counting methods;

c. knowledge of koala habitat;

d. threats to koala habitat such as logging, land clearing, poor management, attacks from feral and domestic animals, disease, roads and urban development;

e. the listing of the koala under the *Environment Protection and Biodiversity Conservation Act 1999*;

f. the adequacy of the National Koala Conservation and Management Strategy;

g. appropriate future regulation for the protection of koala habitat;

h. interaction of state and federal laws and regulations; and

i. any other related matters.

Comments on each of the terms of reference follow below:

a. The iconic status of the koala and the history of its management

The iconic status of the koala is undeniable. It is a species of international significance as well as being an important part of the Australian psyche. Its economic value to Australia has been estimated as in the billions of dollars per year.

The history of its management has been a sorry tale of exploitation, cruelty – intentional and unintentional, ignorance and mismanagement. The koala had the disadvantage of having preferred habitat and being most numerous in the areas that were highly sought after for human settlement – the fertile flood plains. They were also easily hunted and killed to the extent that they became extinct or reduced to very low numbers in many areas. This makes the existing natural populations of immense value and places a great responsibility on Australians to protect them.

Many mistakes have been made in the past where humans thought they knew best leading to ill-considered translocations that have resulted in the almost total loss of genetic diversity in Victoria and South Australia. We must not repeat history and allow the existing natural populations (as opposed to translocated populations) to be lost.

b. Estimates of koala populations and the adequacy of current counting methods

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There is good information for some of the koala populations in SEQ (Koala Coast and Pine Rivers) but there are populations that have not been well studied. It is even more problematical west of the Great Divide where koala density is much lower and extrapolations are fraught with error. It is likely that in the past, populations have been over-estimated in these inland areas where habitat has not been stratified to a fine enough degree owing to the large areas involved.

The protocols produced by DERM QLD (field counting) give the only reliable estimates that KAG accepts.

c. Knowledge of koala habitat

This is another problematical area because koala habitat varies so much with the location. Local knowledge is paramount and should always be consulted. Species lists of preferred koala trees need to be localised and not seen as exclusive. Faecal pellet analysis is giving interesting indications of what koalas are actually eating but they may miss small components of the diet that possibly have an important role in absorbing toxins.

Another important factor especially in warmer climates is the need for roosting trees in addition to browse trees. Habitat is often misunderstood as koalas are often not seen in their primary browse trees during the day as there is a paucity of shade (sometimes because they are so heavily browsed!). Work on habitat use on St Bees Island off the coast of QLD shows the importance of roosting trees for thermo-regulation. [3]

KAG is highly concerned about the overlooking of habitat in the urban areas. Because individual trees do not fit in well with any indices of habitat assessment they are discounted and consequently not protected. This is highly damaging to urban koala populations that are highly dependent on being able to access trees in a "stepping stone" fashion. That is, urban koalas typically have a "chain" of trees they visit to feed in. The removal of one tree can remove a link or break the chain making it difficult if not impossible for them to visit the next link. With the multitude of "infill" developments especially in the Redlands, whereby owners are permitted to sub-divide into smaller lots, this inevitably leads to the loss of back-yard trees.

d. i) Threats to koala habitat in the Koala Coast

Under the State Planning Policy 2/2010 the Koala Coast is designated Koala Conservation Area with the exception of Urban Footprint areas which are either Sustainability Area or Urban Koala Area. However, in practice the habitat protection is illusory. Large areas of Koala Conservation Area are excised as Key Resource Areas (quarrying) and under the SEQ Regional Plan the rest is Rural Production Area. The latter land use allows clearing for farming and livestock. Within the Urban Koala Area, no tree is safe from development.

[3] Ellis *et al*. 2009 Spatiotemporal dynamics of habitat use by koalas: the checkerboard model

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ii) Attacks from domestic dogs in the Koala Coast

The Koala Coast is also exceptional because most koalas killed by dogs in the Redlands are killed in the dog's back yard. The Redland City Council has brought in local laws requiring dogs to be confined at night in the designated Koala Conservation Areas. This totally neglects the fact that most koalas are killed in urban areas. Data from Queensland Parks and Wildlife Services (QPWS) show hundreds of fatalities from 1997 to 2003 in established urban areas in the Redland Local Authority area. A disturbing fact is that it is possible that only one in every two attacks is reported which means the loss through dog attacks could be double that reported. Thus the hundreds of koalas lost in those years would represent a significant part of the population.

iii) Disease

The prevalence of Chlamydial infections appears to be directly related to habitat loss. There have been many increases in the expression of disease observed after clearing of habitat.[4] Further studies on the same site as in the cited paper (Ney Road) show that of the 70 koalas pre-development in 1995 there was an incidence of 5 percent with clinical signs of disease and 90 percent of females had young. After development in 2004 there were 15 koalas still on site of which 25 percent showed clinical signs of disease and less than 30 percent of females had young. More recent counts have shown fewer and fewer koalas on site. This was a supposedly "koala sensitive development" with 25 percent of the area protected for conservation purposes and another 25 percent with large lots allowing vegetation retention.[5]

iv) Roads and urban development

Two major arterial roads (Redland Bay and Boundary Roads) in the Redlands have been upgraded to four lanes in the last five years because of the increase in traffic volumes. This has to be one of the main causes of the catastrophic decline in koala numbers in this time. Some fauna underpasses have been installed but their effectiveness is unproven. It is far more likely that koalas will use overpasses so it is disappointing that none are planned for the Redlands in spite of there being excellent sites. There is an overpass planned for Mt Cotton Road, Burbank which is far from the urban koalas that are in such need of a safe crossing.

It is gratifying that 900 hectares has been removed from the Urban Footprint by the QLD State Government in the latest SEQ Regional Plan (2009). However this area is bounded by Boundary Road which is a real killing field for koalas. It seems shortsighted in the extreme to earmark this area for Koala Conservation Area without also providing protection for the koalas that will inevitably cross the road.

[4] Dique et al. 2003 Dispersal patterns in a regional koala population in South East Queensland
[5] QPWS Koala Database

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e The listing of the koala under the *Environment Protection and Biodiversity Conservation Act 1999*

It is to be hoped that the Scientific Panel will recommend the listing of the koala as at least Vulnerable in part of their range. It is inconceivable that scientists with a modicum of understanding of population genetics will allow the invaluable genetic diversity of the coastal koalas in SEQ and Northern NSW to be lost.

f The adequacy of the National Koala Conservation and Management Strategy

The National Koala Conservation and Management Strategy has been much improved in its most recent iteration (2009). It is a well-written document and has incorporated many of our suggestions. The inclusion of an Implementation Plan, desired outcomes and a reporting program should increase its value. But it is, at the end of the day only a strategy with its main output to "provide policy advice" and thus lacks the strength of legislative instruments. This is why it is so important for the koala to be listed under the EPBC Act.

g & h Appropriate future regulation for the protection of koala habitat and interaction of state and federal laws and regulations

The Queensland State Government has produced regulations which could provide a template as they are a good starting point. The main flaw is that it has been made too easy for developers to avoid regulations – too many exceptions and ways to circumvent the codes. An example of this is found in the Draft State Planning Policy and Draft State Planning Regulatory Provisions which were open for comment until February 2009. These regulations were substantially watered down after extensive consultation with development interests).

i Related matters

The "elephant in the room" is the unsustainable population growth that has been occurring in Australia in recent years. This is the direct cause of the unbridled urbanisation which destroys koala habitat leading to increased presence of disease and all the other threats such as traffic and dog attacks. The solution to this is very much in the federal sphere. Until this problem is addressed, pressure to develop unsustainably will be very difficult if not impossible to contain. Australians have made it clear that we are not prepared to lose a treasured icon to out of control population growth.

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