Submission to Senate Standing Committee on Environment and Communications.

Inquiry into the status, health and sustainability of Australia's koala population

I have been directed by the State Council of the Wildlife Preservation Society of Queensland (Wildlife Queensland) to forward a submission for consideration by the Senate Committee on the above topic. Wildlife Queensland is one of the longest established and most respected wildlife-focused conservation groups in Queensland. With over 4000 supporters spread across branches throughout the State, Wildlife Queensland is a strong voice for our wildlife and its habitat.

Wildlife Queensland is apolitical. Our aims include;

- Preserve the flora and fauna of Australia by all lawful means
- Educate the community in an understanding of the principles of conservation and preservation of the natural environment
- Discourage by all legal means, the possible destruction, exploitation and unnecessary development of any part of the natural environment.
- Encourage rational land use and proper land planning of existing and future development, and the use of the natural environment and its management.

Wildlife Queensland takes this opportunity to make a submission.

The koala is an iconic species and has been a component of our logo since the Society's inception.

The koala was, and hopefully will continue to be widespread in the eastern to southern mainland states in coastal and inland areas where suitable habitat exists. It is appreciated that populations in South Australia were severely impacted and koalas from Victoria were translocated to re-establish colonies.

Comments will be based primarily on Queensland experience. The form of this submission is a broad statement provided to give a better understanding of Wildlife Queensland's position with regard to the koala. This is followed by comments on some of the topics provided in the Terms of Reference.

Wildlife Queensland's position

Wildlife Queensland has made numerous submissions on the koala, its habitat and related matters in recent years. The status of the koala decline in Queensland has been documented by Gordon *et al* (2006).

Issues raised in the various submissions included that key habitat continues to be cleared and fragmented. Urban development is allowed to expand into known key habitat. Knowledge of

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the distribution of koala populations, their size and health status throughout the state is not known with any degree of certainty. Whether or not there has been a reduction in the range of the koala in Queensland is a matter of debate but there has been a reduction within the various populations within the range based on surveys and anecdotal comments.

For decades the threats to koala populations in SEQ have been well established. In spite of regulations and legislative powers, rarely or infrequently used, the population is crashing at an alarming rate. Threats can be considered as primary threats or secondary threats. The primary threat is the loss or fragmentation of habitat, while secondary threats include vehicle injury, domestic dogs and infectious disease. Although the threats to the koala have been known for many years it is only in recent times that the Government has taken real action. Funding in the order of $44m over 5 years has been made available. Research grants of $400 000 have been awarded to various institutions by the Government. Much stronger regulation is now in place to protect habitat. Action has occurred with the acquisition of 127 ha of land adjoining Daisy Hill Conservation Park for $5.4 m estimated to carry 30 koalas when fully rehabilitated. The Queensland Government is to be commended for these efforts in recent times - but is it too little too late?

In Queensland the Nature Conservation (Koala) Conservation Plan and Management Program 2006-2016 and more recently The South East Queensland Koala Conservation State Planning Regulatory Provision (SPRP) and State planning Policy 2/10: Koala Conservation in South East Queensland made under the *Sustainable Planning Act* 2009 (SPA) sets a framework for koala management. Unfortunately the guidelines for local authorities for the implementation of these planning policies are yet to see the light of day even though promised over a year ago. There are reports of inconsistency among local authorities in the application of the new State Planning Policy. The advantage of the new State Planning Policies made under the SPA is that local authorities are obliged to adhere to the planning policy where as previously only due regard had to be given and not necessarily followed. Will this bring a change? Regulation has been in place previously but not enforced as developers and the Government cleared koala habitat in the name of development. One example of this is bushland in the Ebenezer /Mt Forbes area near Ipswich was listed as essential koala habitat in 1999. It now appears as 'Regional bushland Industrial Investigation Area' under the SEQ Regional plan. In 2009 Wildlife Queensland wrote to the Queensland Government while acknowledging their efforts in koala protection outlined the following;

"…some feedback Wildlife Queensland has received highlighting the continued lack of commitment to koala conservation in SEQ.

- Contrary to State Government's promise in 2007 not to sell state government land supporting koala habitat, the Education Department sold a parcel of land supporting significant koala habitat in Cleveland to a private organisation.
- Queensland Rail cleared significant mature koala food trees in Ormiston, an area noted as a koala stronghold but under pressure from urban encroachment.
- Alleged illegal clearing has occurred in the Koala Conservation Area at Coomera.
- There has been an increase in koala deaths in the Coomera/Pimpama region.
- Wildlife Queensland understands that urban koala habitat, close to where the very popular Pan Da the Koala (who secured over 6,000 friends on Facebook) was released, has been cleared.

Koalas are being effectively eradicated from SEQ; Coomera, Brendale (66 -110 Kremzow Road; Moreton Bay Regional Council), Mt Cotton and North Stradbroke Island are some more recent examples where koala habitat is being handed over for housing, industrial estates, quarries and sand mining all under the watchful eyes of state government agencies. Development does not need to destroy koala habitat, there is already plenty of cleared land available for new housing and industrial estates within the region."

There is concern about the accuracy and scale of mapping of koala habitat and its relevance to site based decision making. While the *Vegetation Management Act* 1999 has reduced broad scale clearing, the many exceptions permit ongoing fragmentation of significant areas of koala habitat. In spite of the efforts to ensure that koala friendly design is incorporated at the planning stage of new and upgrades of major roads the koala continues to be impacted. Climate change and the resultant ever increasing natural disasters will continue to be a major challenge for the survival of the koala.

Current management strategies must change as existing approaches are simply not working. Wildlife Queensland is of the opinion that it is essential to know the size, class structure and distribution of what you are managing and establish base line data so that it can be assessed if the applied strategies are achieving the objectives. The taxonomic studies are interesting but will not save the koala. History has clearly demonstrated listing a species as vulnerable, endangered etc is no guarantee for its survival. Recovery plans are at times years in the making let alone implemented. Wildlife Queensland is of the opinion action and changed management strategies are required now particularly if the koala is to survive in Southeast Queensland. One aspect of research that needs to be continued and the findings applied is that of the genetic variation in different populations that has been clearly demonstrated (Lee *et al*, 2009). Reproductive isolation between conspecifics can undermine species persistence. Translocations are not the answer to survival as they are not always entirely successful as some unintended outcomes may surface.

Wildlife Queensland advocates:

- A thorough investigation of the status of koalas throughout their range is required so that it is known what has to be managed and the potential conservation status in the various localities.
- Baseline data is required so that impacts on their populations can be assessed.
- Reviews and monitoring must be implemented or continued, if in practice, to ensure the management strategies are effective.
- Accurate mapping at appropriate scales of koala habitat is required where not available
- Appropriate management strategies for various habitats must be implemented
- Increase in the amount of high quality koala habitat available is required as a priority
- Listing of koala habitat under the EPBC act if appropriate
- Known threats such as dogs, traffic and disease must be addressed and mitigation measures employed to reduce impacts.
- Other threats that can not necessarily be controlled such as bushfires, floods, storms/cyclones and climate change must be managed by building resilience..

Wildlife Queensland is not calling for an emotive listing of the conservation status of this species. It is well known that the population in southeast Queensland is at high risk of extinction and there are reports of serious decline in populations in central Queensland. Wildlife Queensland will rely and accept the findings of the scientific expert panel evaluating the conservation status of the koala.

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

Since the koala was first recorded by an European back in 1798 it has developed into an iconic and charismatic species, the subject of mythical tales, extreme curiosity, the model of much loved and treasured toys and scientific studies. In spite of the scientific endeavours accurate knowledge of this species, number, gender and age structure throughout its range is not accurately known.

Management strategies abound with the commonwealth, all states and even some regions within states producing such documents. The approach must change as these strategies simply are not working. The koala is in decline and in some areas the current situation is critical. With no real natural predators (depending on one's view of the status of the dingo) the solution appears to be relatively simple. An effective management strategy that would work is the preservation of large tracks of suitable habitat with threats appropriately managed and the introduction of appropriate habitat corridors. This has been known for some time but development pressure and valuing biodiversity in dollar terms inappropriately has placed the koala in its current predicament.

b. Estimates of koala populations and the adequacy counting methods

It is recognised the densest natural populations of koala are in southeast Queensland and northern New South Wales. There are several approaches to population estimations including strip or line transects as well as 'pellet' surveys. The Spot Assessment Technique (SAT) developed by Australia Koala Foundation in 1995 (Phillips and Callaghan, 1995) and updated regularly, the latest in 2009, identifies local koala tree species preferences. This focuses on identifying existing and or potential koala habitat. These approaches are all resource intensive. Modelling of populations has occurred (McAlpine *et al* 2008).

It is essential that koala populations are known because if you do not know what you are managing how do you know if your approach is appropriate. Not only do you need to know the size, an understanding of the age classes is essential for effective conservation and appropriate management. In spite of several studies in various regions of Queensland such as Sullivan *et al* (2002,2003) and Melzer and Lamb (1994), the population sizes throughout the State is not known with any certainty. Southeast Queensland is the exception.(Dique *et al* 2004, Environmental Protection Agency 2007, Department of Environment and Resource Management, 2009).

In Queensland the overall koala population is declining primarily due to continued clearing and fragmentation of its habitat. The koala has gone from common to vulnerable in southeast Queensland. The results of the State Government 2009 Koala Coast Koala Survey show a 51% decline in the population in less than three years and a 64% decline in 10 years. Once common throughout most of Central Queensland, koala numbers have also been severely reduced over past decades. It is Wildlife Queensland's understanding that various universities and other research institutes have undertaken various population studies but to the best of our knowledge such information has not necessarily been collated into a central data base. Wildlife Queensland has been recently advised that the Department of Environment and Resource Management has recommenced the transect studies of koala initiated by Dr Greg Gordon near Oakey on the Darling Downs Queensland. Dr Gordon has advised that those studies were initiated in 1972 and revisited at regular intervals well into the 1980s (*pers com.* 2011). Studies were discontinued and only recommenced recently. Furthermore Dr Gordon informed that initially there was a significant 'explosion' in numbers following excellent seasons of the 1950s and 1960s that possibly lead to an increase in fodder trees. Numbers of koalas dropped significantly over time and have stabilised at about 25% of the peak numbers.

While accurate estimations of koala populations and an understanding of age classes are highly desirable for appropriate management, the immediate action for the survival of the koala is to not only protect all existing koala habitat but expand quality habitat and ensure its protection.

c. Knowledge of the koala habitat

Koala habitat is not extensively represented in the Queensland Protected Area Estate with some exceptions such as Daisy Hill Conservation Park. Similarly in New South Wales the habitat is generally poorly represented in the State National Park and Reserve system (www.environment.nsw.gov.au/resources/pnf/037361 koala habitat.pdf).

The koala food trees are well known and have been documented in the literature (eg Hindell et al 1987, Phillips and Callaghan 2000, Phillips *et al* 2000). Obviously the fodder tree preference varies from region to region. Similarly individual koalas may have a preference for different tree species. From personal observations there may even be selection within the same apparent species of fodder tree. Two individual species of *Eucalyptus microcorys*, tallowwood, a favoured fodder tree in southeast Queensland, almost growing side by side, one is eaten readily the other not touched. In site of these challenges it is essential that all existing koala habitat is mapped and mapped accurately.

Studies abound in the mapping of koala habitat. Work in particular by the Australian Koala foundation in compiling the Koala Habitat Atlas for various regions in New South Wales, Victoria and Queensland is commendable. The Department of Environment and Resource Management has commissioned extensive studies such as the 2009 SEQ Koala Habitat Values Assessment and mapping project. The approach used according to the authors gave an overall mapping accuracy of 81% and '…a high degree of confidence that the final product identifies the great majority of koala habitat.' Vegetation mapping is a mixture of science and art and 100% accuracy is difficult to achieve depending on scale complexity of landscape, quality of imagery and variation between the various interpreters. This should not deter the efforts to map accurately and in an appropriate scale all existing koala habitat and wildlife corridors, particularly those in need of rehabilitation. Efforts should be focussed initially on areas where the greatest risk to koala survival exists.

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

The primary threat is loss or further fragmentation of koala habitat and the loss or severance of habitat corridors. The *Vegetation Management Act* 1999 in Queensland did bring to a close broad scale clearing in rural areas but much damage had already occurred. Furthermore, exemptions to the Act have reduced its effectiveness. In urban areas in southeast Queensland in spite of earlier regulations and alleged koala saving strategies habitat continued to be impacted at an alarming rate. Preece (2007) monitored and modelled threats to koala populations in rapidly urbanising landscapes in southeast Queensland.

Secondary threats can be divided into two categories those that may not be able to be controlled but need to be managed including climate change, natural disasters including fire and those can be controlled such as dogs, traffic and related infrastructure. Disease is another threat.

<u>Climate Change</u>

Climate change must be recognised as a threat to koalas. The major issue for climate change is that baseline datasets are needed for assessment of trends. The lack of this information will

make it impossible to gauge an understanding of the impact of climate change on koala populations and their habitat on which they depend. Changes in temperatures may influence flowering and the ability to produce viable seed with a potential risk for particular species to die out. This would necessitate the koalas to adapt to different fodder trees. The key to the management of climate change is habitat protection and the protection of corridors to facilitate movement and build resilience.

Natural Disasters

With the increasing impact of climate change, natural disasters such as drought and fire will become more prevalent. Fires in areas covered by introduced grasses (which because of their greater mass burn much hotter than native grasses) pose a greater threat to koalas and other wildlife. The management of introduced grasses within koala habitat needs to be addressed.

Wildlife Queensland raises the issue that prescribed burning, although not a natural disaster also causes high mortalities as well as destroying habitat. Strategies for the management of the direct and indirect impacts of prescribed burning on koalas and their habitat are needed.

Roads and Infrastructure

It is of our understanding that the Department of Environment and Resource Management is working with the Department of Transport and Main Roads to ensure that koala friendly design is incorporated at the planning stage in all new main roads and main road upgrades. There must be a clear transparent process by which to determine where wildlife friendly fencing is required. Wildlife Queensland advocates reduced speed limits (60km/hr) on roads located near or within koala habitat. Koalas injured in accidents where speeds of 60 km/hr or less are involved have a greater chance of recovery for release to the wild. Wildlife Queensland considers that infrastructure charging for fauna infrastructure should be put into Priority Infrastructure Plans (PIP) and other infrastructure charging mechanisms.

Dogs

Wildlife Queensland strongly advocates a dog policy within koala habitat. The restriction of large dogs or constraint by confining dogs to koala proof fenced areas in urban koala habitat is supported. This would require enforcement and monitoring. The recent drafting of a model local law aimed at assisting local governments reduce threats to koala by dogs is a step in the right direction. Wildlife Queensland believes that this must be adopted as a minimum standard in all local government authorities within areas of concern particularly SEQ.

Disease

Infectious disease especially Chlamydia can have a devastating impact on koala populations. In southeast Queensland, Wildlife Queensland has been advised that the incidence in the various populations is higher than what is considered to be naturally occurring. Koala retrovirus is also widespread in southeast Queensland but is not associated with the same level of morbidity or mortality as Chlamydia.

News of another disease that does not impact the koala itself but has the potential to impact the habitat is a potential concern. Myrtle rust that impacts species of the family Myrtaceae is spreading at a rapid rate in New South Wales and is recorded at several sites in Queensland and is of concern. Wildlife Queensland has been advised that it has been found on *Eucalyptus pilularis,* blackbutt in New South Wales. Biosecurity Queensland has advised that a decision has been taken nationally that it is not possible to eradicate the disease from Australia and Biosecurity Queensland is taking action to develop management strategies within Queensland.

What the impact, if any, of this rust may be is not known but it may be an additional threat the koala could do without.

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

Wildlife Queensland is prepared and willing to accept the findings of the expert scientific panel on this matter. It is noted that the panel was to report by September 2010 and if the panel did its findings have yet to be made public. As iconic and charismatic a species the koala is, its listing should be subject to the same criteria applied to all other Australian species.

Wildlife Queensland does advocate the listing of koala habitat regional ecosystems provided such listing satisfies the scientific and approved guidelines. Such action would enable these plant communities to be at least subject to control action whether or not koalas were present.

Undoubtedly the listing of the koala and its habitat would draw attention to their status but would it achieve an arrest to the decline of the koala let alone reverse the trend. Wildlife Queensland has reservations unless an appropriate recovery plan was not only developed but fully funded and implemented.

Wildlife Queensland has viewed with concern the lack of desire by the relevant responsible Ministers over time to use the powers that exist in the act for the benefit of the environment on far too many occasions. In addition the act does not have direct planning powers that is necessary for an effective outcome for the koala survival .

f. adequacy of National Koala Conservation and Management Strategy

Wildlife Queensland commends the Federal Government on the development of a strategy which demonstrates clear long and short term goals and incorporates an Implementation Plan that prioritises actions and includes responsible parties and time frames. A national strategy with legislative grounding that guides the states and delivers incentives to protect koalas and their habitat is exactly what is needed.

The strategy contains many positives. However we have seen many strategies simply collect dust. A review of the National Koala Conservation Strategy 1998 by Parsons Brinckerhoff in 2008 (Predavec, 2008) found ' …some work completed in achieving the aims and objectives of the strategy but the strategy itself was not properly implemented.'

This strategy must be adequately resourced and firm commitments made by all levels of Government for its implementation.

Taxonomy

Research papers such as Lee *et al* 2009, have demonstrated a genetic variation in the koalas that inhabit the koala coast in southeast Queensland that differentiates them from the broader koala population in Queensland. Other researchers such as Dr Frank Carrick suggestion that there may be 2 subspecies, those found in Queensland and New South Wales and those in Victoria and South Australia. This further emphasises the need to protect the koala populations from local extinction.

The taxonomy of koalas is interesting and worthy of resolving as it has implications for management. However it will do little in arresting the decline in populations in the short term.

Habitat loss, fragmentation and degradation

Throughout the koala's range, habitat and food sources have negligible protection. While the *Vegetation Management Act* 1999 in Queensland has banned broad-scale clearing and provided vegetation buffers to creeks, loss and fragmentation of koala habitat is still occurring at an alarming rate. Listing of threatened regional ecosystems on which the koala may depend under the EPBC Act would assist in addressing this issue.

Wildlife Queensland does not support the use of offsets as a conservation measure, particularly in South East Queensland where there is very little suitable habitat available. In other areas of the State there may be merit in such strategies. Areas that require rehabilitation following development such as coal and other mining industries encouraging the planting of koala fodder tree species where appropriate should be encouraged.

For many years Wildlife Queensland has campaigned for a landscape or multi-species approach to conservation and is reassured by the statements outlined in the strategy supporting Wildlife Queensland's views.

Over-browsing

Over-browsing is not a major problem in Queensland as a whole, but can be in some vegetation remnants. Wildlife Queensland does not believe translocation is a viable solution for over-browsing and should be a matter of last resort. This is particularly the case within southeast Queensland, where there are problems with overcrowding in most remaining koala habitat. The major difficulty with facilitating translocation is in locating appropriate habitat that isn't already occupied inducing stress to animals as a result of overcrowding. Wildlife Queensland is also concerned about the spread of disease as a result of translocation. Wildlife Queensland advocates the protection of koalas in their natural habitat and range.

Threats

It is appreciated that the strategy addresses threats and to avoid repetition no comment is provided as threats are more adequately addressed elsewhere.

Overall Wildlife Queensland supports the National Koala Conservation and Management Strategy and considers it a step in the right direction for the protection of koalas and their habitat throughout Australia. However it will achieve nothing unless resourced and implemented. The implementation, monitoring and review of this strategy will require substantial funding.

g. Appropriate future regulation for the protection of koala habitat

Wildlife Queensland advocates the listing of koala habitat under the EPBC Act if it satisfies the relevant criteria.

In addition Wildlife Queensland is lobbying the Queensland Government for several amendments to the *Nature Conservation Act* 1992. One of the proposed amendments is the ability to list regional ecosystems under threat. Should this be successful and the habitat satisfies the criteria for listing then that would provide further protection for koala habitat. There currently exists the ability to protect areas of High Environmental Value under the *Vegetation Management Act* 1999 in Queensland but this necessitates the purchase of such land within a given time frame and to the best of our knowledge has not been exercised by Government.

h. Interaction of state and federal laws and regulations

Wildlife Queensland elects not to comment on this aspect except to make the observation that to date legislation and regulation has not prevented a decrease in the koala population over time.

Conclusion

Wildlife Queensland thanks the committee for its interest in the matter. Wildlife Queensland is grateful for the opportunity to provide comment for consideration.

There exists more than enough evidence to confirm that at least some koala populations have crossed the tipping point and are crashing at an alarming rate. Whether or not this is the situation throughout its range is a matter that needs addressing. It is highly desirable that the extent and structure of koala populations throughout their range is known. It is essential that additional koala habitat is protected and all koala habitats must be mapped accurately at an appropriate scale. Management strategies must be reviewed because simply the existing approaches used during the twentieth centaury and the first few years of the twenty-first centaury have not worked in many areas. Research into genetic variation within populations should continue to assist in more effective management. The koala and its habitat should be listed if the appropriate criteria are satisfied.

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