Coastwatchers

Eurobodalla's environment group

Committee Secretary
Senate Standing Committee on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

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

Submitted online 7th February 2011

The Coastwatchers Association Inc. is the Eurobodalla (New South Wales) environment and climate change group. With a current membership of 125, Coastwatchers has been active in the Eurobodalla Shire for a quarter of a century, conducting research, liaison, advocacy and encouragement for initiatives aimed at protecting the natural environment.

In March 2010, Coastwatchers initiated a joint volunteer Eurobodalla Koalas project, aimed at investigating potential remnant populations, potential future habitat and issues related to koalas in Eurobodalla forests, including those on private land, State Forests and National Parks. The project has reached a point where some preliminary observations can be made. A preliminary discussion paper will be released publicly in March 2011. Coastwatchers welcomes the opportunity to provide these observations, and a set of recommendations, to the Senate Inquiry with a particular emphasis on the Eurobodalla.

Dr. Keith Joliffe, Treasurer, Coastwatchers, on behalf of Committee of Management
Coordinator, Eurobodalla Koalas project

Contents

1. General Remarks

The *National Koala Conservation and Management Strategy 2009 – 2014* provides the appropriate context for any consideration of the status and future of koalas within the boundaries of the Eurobodalla Shire, New South Wales.

Local research so far confirms the *National Strategy's* observations about koala history, lack of adequate data (historical and contemporary) and the need for conservation actions such as the rehabilitation and establishment of landscape-scale corridors across private and public land.

Eurobodalla Shire extends from Dignam's Creek in the South (close to the known small population of koalas at Bermagui/Murra in the Bega Valley Shire), includes substantial State Forest areas and National Parks from the coast through the Great Eastern Escarpment to the Monaro high country (where there also appear to be koalas extant), and abuts the Shoalhaven Shire at Durras in the North.

There seems no dispute that the Eurobodalla's remaining natural native forests have been altered significantly since white settlement, thanks to clearing for farming and three waves of systematic industrial logging, but examination so far of forest and eucalypt types suggests that although forestry, farming and urbanization have dramatically altered the nature of the forests and severely impacted on range and continuity, areas of koala-appropriate forest types still exist.

At this early stage of the Eurobodalla Koalas project, it has become clear the Eurobodalla sits at the very tipping point for koalas and is a representative example of the fundamental problem being experienced nationwide.

According to the work done so far, it seems reasonable to speculate that koalas are at best very rare if not extinct within the Eurobodalla in 2011.

> *"This is a great place for bears. You can hear them shouting in all directions at night…" [Ann Williams, Deua River Valley traveler, October 1882]*

Post-colonial human activity (hunting, forestry, farming, urbanization, introduced animals etc) is the greatest contributor, although other events not absolutely certain to be human-related, like fire and chlamydia have probably contributed.

The number of koalas now in Bermagui/Murra (Bega Valley Shire) is less than 50. Other than what is possibly also a very small population in Kooraban National Park (also Bega Valley Shire) and early indications of koalas persisting on the adjacent Monaro, there is no other evidence, including no firm evidence for koalas currently extant in the Eurobodalla. Local information suggests the last known koalas at Telegraph Road (near Moruya) for example, were wiped out by the 1967 fire.

Against this background, potentially contentious options like broad scale connectivity corridors, and/or reintroduction/translocation to specific sites need to be explored. Resources permitting, the Eurobodalla Koalas project will attempt this.

Combined with the DECCW NSW, *Approved Recovery plan for the koala (Phascolarctos cinereus), November 2008*, the *National Strategy* already contains

the appropriate framework for action. Coastwatchers considers that determined efforts supported by sufficient resources at all levels, including all tiers of government, is the only element lacking. Despite the national biodiversity priority, the Eurobodalla Koalas project was unsuccessful in its application for funding under the 2011 Caring For Our Country Community Grants program.

Coastwatchers fears that this lack of practical action reflects a lack of political will, and the influence of powerful vested interests, which in our Shire are played out against the background of extensive State Forests being vigorously harvested (contrary to Coastwatchers' policy of transition out of non-plantation logging), a well-connected local farming community wary of having its freedoms limited by environmental protection provisions, and booming human population with its accompanying urban development.

There is no shortage of agencies with responsibilities for native vegetation and fauna protection (albeit under-resourced) and no shortage of strategies, plans and inquiries, including the current Senate Inquiry. Why, then, is nothing apparently happening about protection or rehabilitation of the koala in the Eurobodalla?

2. Recommendations

(a) As a matter of urgency, sufficient Commonwealth and State government resources be applied to implement the *National Koala Conservation and Management Strategy 2009 – 2014* and the DECCW NSW, *Approved Recovery plan for the koala (Phascolarctos cinereus), November 2008* at local level.

(b) Access to these resources be made available to local government, non-government organizations and community groups, with an emphasis on joint ventures and negotiating and implementing solutions with private and public landholders.

(c) Some of these resources be targeted as incentives for farmers, other businesses and government enterprises (eg forestry and roads) to participate in the establishment of effective, landscape-scale habitat corridors and other koala protection or rehabilitation initiatives.

(d) Sufficient Commonwealth and State resources be applied to effectively implement the recommendations of the *Great Eastern Ranges Connectivity Corridors Initiative*, especially in respect of establishing district and regional-scale components through cooperation between government and private land-use entities.

(e) In the Eurobodalla, a government-funded collaboration between the NSW State Government, Eurobodalla Shire Council, private landholders, relevant non-government organizations, academics and community groups be established to carry out research-based negotiation and implementation of local area solutions, and that this collaboration be managed by a discrete entity within Eurobodalla Shire Council fully accountable to the whole range of participants and interested parties.

3. Local Information

The following detail is extracted from draft materials being prepared by the Eurobodalla Koalas project, and is provided to the Senate Inquiry in the hope that it will be of practical value. Aspects the Inquiry must consider are consistent with the detail and purposes of the Eurobodalla Koalas project, so the material is grouped according to the relevant aspects. The project's draft preliminary discussion paper (due for release in March 2011) and references, can be made available to the Senate Inquiry immediately, if required, and in its final form by 1st March 2011.

- **the iconic status of the koala and the history of its management**

Preliminary research has begun into koala history, koala life cycles and behaviours, range and connectivity of habitat, geology, forest and vegetation types, available maps, reported sightings, political considerations and the impacts of farming, forestry, urbanization and climate change. An initial Eurobodalla map of forest/vegetation types with some previous koala sightings overlaid, has been produced using simple GIS.

Extinction
The sub-title of the Eurobodalla Koalas project draft preliminary discussion paper poses the question – *does bringing the koala back from the brink in the Eurobodalla matter?* The paper also observes: *"It seems reasonable to speculate that koalas are at best very rare and on the brink of extinction within the Eurobodalla in 2011."* How can we be sure, in the absence of sufficient resources to conduct a full on-ground survey? In the twenty-first century context, where we are now used to rapid species extinctions and we expect huge further human population growth in the Eurobodalla, are there any convincing, underlying reasons for bothering? Is it too late?

Cost-benefits
Economic and other cost-benefits of preservation or reintroduction/translocation need to be established. The following might help.

Iconic status
At the cultural end of the spectrum, it might be argued the nationally iconic status of the koala and the special status of the Eurobodalla's relatively unspoiled but immediately threatened natural environment support the notion of a koala presence for heritage or even sentimental reasons alone.

Aboriginal heritage
The koala is a highly significant ancestor, a philosopher, astronomer and linguist, a wise elder responsible for bringing the spirit ancestors from the islands of the North to the Shoalhaven river mouth. In Sydney and Shoalhaven Aboriginal tradition, law allows the hunting of koala for food without natural penalty, provided the animal is not skinned. Europeans hunted the koala for skins, abandoning the meat or feeding it to their dogs. In the twenty-first century "reconciliation" context, should there be a spiritual atonement, in the interests of koalas themselves and the cultural health of local Aboriginal people, but also to enhance the cultural and spiritual health of the whole community?

Biodiversity
A little further along the non-commercial/commercial spectrum sits the question of whether koalas occupy an integral niche in the total biodiversity of our region. If biodiversity preservation or rehabilitation matters, to what extent must this include the revival of koala populations?

- **estimates of koala populations and the adequacy of current accounting methods**

As mentioned in *General Remarks*, the number of koalas now in Bermagui/Murra (Bega Valley Shire) is less than 50. Other than what is probably also a very small population in Kooraban National Park (also Bega Valley Shire) and early indications of apparent persistence nearby on the Monaro, there is no other evidence, including no firm evidence for koalas currently extant in the Eurobodalla. Local information suggests the last known koalas at Telegraph Road (near Moruya) for example, were wiped out by the 1967 fire.

Precise Eurobodalla sites of interest where small remnant populations might persist, or which show potential as habitat, have been identified by the Eurobodalla Koalas project so far, as follows:

- Belowra (recorded 1941 – 1970 sighting, and proximity to upper Tuross River, National Parks and Dampier State Forest);
- Nerrigundah (unconfirmed 2004 – 2005 sightings, unconfirmed sighting 2010 and anecdotal stories of koalas still persisting "higher up" near Nerrigundah;
- Tuross River Catchment and State Forests West of Bodalla and Narooma (recorded 1996 – 2000 sightings at three locations, and talk of an unconfirmed report as recently as 2007);
- Tilba Tilba at approx. Lat –36.1935 Long 150.0313 (Gulaga National Park 2001 – 2009 recorded sighting, and State Forest 1996 – 2000 recorded sighting);
- East Lynne at Big Bit (unconfirmed report of a sighting at Big Bit Lookout), Cockwhy Creek (appropriate forest types accessible on private land adjacent to State Forest), Benandarah Store area (strong local talk of an unconfirmed approx. 2000 sighting near Princes Highway) and nearby Blue Gum gullies, the Eucalypt Trail around Mount Agony Road in Murramarang National Park (appropriate eucalypt types, eg Monkey Gums), Skid Ridge Road, South Durras (unconfirmed sighting approx. 2005) and Shallow Crossing (unconfirmed sighting approx. 2008);
- The Deua/Moruya River, Buckenbowra River and Corn Trail areas (historical reports, fertile river valleys and potentially suitable forest types);
- Unspecified "Aboriginal land" East of Bodalla (unconfirmed report of night calls, date unclear).

In October 2010 an initial field trip was conducted at Kooraban National Park (Dignam's Creek) to demonstrate the RGBSAT (Regularised Grid Based Spot Assessment) survey technique. Eurobodalla Koalas project volunteers have participated by invitation in the Kooraban National Park surveys, eg 19th January 2011. On 29th January 2011, a highly productive field day was conducted at Old Store Creek, East Lynne, to share information, obtain local knowledge and

investigate eucalypt types on private land being returned to pre-logging, pre-mining condition.

Although the Eurobodalla appears once to have hosted healthy populations especially in certain areas (eg fertile river valleys), any remnant koala populations within the borders of the Eurobodalla Shire now would be of lower density amongst less favourable vegetation types (if they exist at all), and the few confident sightings of ten years ago would probably be small numbers of dispersing animals. In the past, there were higher densities in the more fertile parts of the South Coast region because of better nutrition and lower toxin, and lower density populations in much of the remaining forested areas. The *NSW 2008 Approved Recovery Plan (Section 3)* indicates that most of the flat river land, best suited to koalas, in our district has been cleared and that fertile land outside of National Parks is the important focus for conservation. The *Recovery Plan* lists the koala as one of the native animals requiring private landholders' involvement.

On the January 2011 site visit to Old Store Creek in the East Lynne area, project participants analysed the vegetation types and maps, and felt that this area may have sustained a low-density population, with resident animals occupying home range areas of approximately a koala per 20 to 30 hectares in its original state. In earlier times higher densities would have occurred along the nearby Clyde River valley, prior to the impacts of gold mining, logging, farming, more widespread intensive fires, introduced dogs etc. Family history in Cullendulla might be a productive source of knowledge about early development there and possibly depression-era koala hunting. Reputedly Kioloa was a koala hotspot, and a koala-skin tanning factory may have existed in Ulladulla perhaps 100 years ago.

Around 1850 to 1870 there was an apparent escalation in the koala population size, possibly because of European impact on Aboriginal hunting and dingo numbers. Stories of koalas in the main street of Bega and "a koala in every tree" on farms probably come from this period.

A population crash probably occurred around 1900, apparently caused by clearing of habitat on fertile soils, a chlamydia epidemic, hunting and drought. It is possible there has also been a further significant decline since about the 1980s, and that all unconfirmed sightings since about 2000 could be animals dispersing long distances (eg 50 km) from the maternal range in search of breeding groups, as mentioned above.

So far the Eurobodalla Koalas project has found no valid scientific data, historic or contemporary, of the size of the overall koala population in the Eurobodalla, past or present. The modest population near Bermagui is now well documented, displayed as clusters on the *Mumbulla* survey maps. The evidence of a few critically endangered koalas in *Kooraban National Park* is quite recent and the Kooraban survey is ongoing.

It seems reasonable to speculate that koalas are at best very rare and on the brink of extinction within the Eurobodalla in 2011.

It is as yet uncertain whether climate change has affected browse quality locally, although researcher Elly Stalenberg is looking at how leaf nutrient/toxins influence tree selection by koalas. One of her key questions is whether (and what proportions of) these compounds are changing, and will continue to change, as a result of CO2

levels; hence what impact will there be on browse quality. This work is addressed in more detail in the *National Koala Conservation and Management Strategy*.

- **knowledge of koala habitat**

As a rule of thumb based on the comprehensive *Mumbulla* survey and others, a breeding association consisting of a few breeding females, a dominant male and other associated koalas will require at least several hundred hectares of suitably large, healthy, mature and diverse eucalypt types. Therefore, it can be postulated that suitably located forest areas of at least ten square kilometers each need to be protected and effectively connected.

Safe (possibly fenced near highways) connectivity corridors (probably between half and a full kilometer wide at least, linked to range areas over distances to 50 kilometres), with protection of the complexity of the ecological mosaic, appear to be needed for koala breeding behaviours and genetic diversity.

In keeping with the *Implementation Plan* and *Actions* of the *National Koala Conservation and Management Strategy 2009 – 2014*, the Eurobodalla Koalas project is interested in analyzing and where necessary proposing koala-oriented, landscape-scale supplements, links and/or enhancements to existing connectivity corridors.

Pending further study, and advice from *NPWS* and *Forests NSW* specialists, the Eurobodalla Koalas project wants to verify and propose broad scale koala connectivity spaces reaching from Bermagui/Mumbulla (known population) via Kooraban (probable small critically endangered population) and Gulaga National Parks, probably through Bodalla, Wandella and Dampier State Forests, private land around Tinpot and Belowra, Deua National Park, then through Wandera, Bolaro and Currowan State Forests linking the Northern Eurobodalla and Southern Shoalhaven sites of interest amongst the Boyne, Shallow Crossing, Benandarah and South Brooman State Forest areas as well as Murramarang National Park. The following map uses the initial information outlined in the Eurobodalla Koalas project discussion paper to speculate on potential locations of range areas and corridors (on-ground species surveys and other practical matters notwithstanding), for discussion purposes.

It needs to be emphasized that this simple map is very much a work in progress, requires significant further refinement through better research, will probably evolve into a sophisticated and detailed GIS file when complete, and should not be interpreted as an item or article of Coastwatchers policy in its current form. On the other hand, even in incomplete form at short notice, Coastwatchers considers it important for the Senate Inquiry to see a local example.

Project participants have already pointed out that this local map does not yet match the Great Eastern Ranges concept maps, that it conflicts with Aboriginal-owned Gulaga-Biamanga National Park's Plan of Management proposal for a continuously linked Bermagui Forest amongst National Parks, and that certain State Forests (eg Moruya), if not all, ought to be fully included.

The concept of connectivity in an arc from Bermagui to the Shoalhaven Shire (via the high country as well as the other sites of interest listed previously) is reinforced by a report of a koala seen within the last twelve months in the Nerrigundah area ("unconfirmed sighting 2010"), a report that there are koalas on a farm 10 kilometres East of Numeralla (near Badja State Forest) and reported talk of koalas around the Tuross Falls area (*for a contextual outline of the Tuross Catchment including geology, vegetation and history,* see *NSW Wilderness Red Index*). DECCW scheduled public meetings at Bredbo, Cooma and Numeralla during early February 2011 to provide information about surveys to be conducted on the Monaro, as an extension of the South East Forests Koala survey. The associated media release (*January 19th 2011*) stated *"Preliminary surveys undertaken late last year indicate that koalas are persisting at least in some of these areas"*. Similarly, koalas reportedly exist on private property at the headwaters of the Shoalhaven River.

In February 2011, the Eurobodalla Koalas project was told there was potential collaboration beginning amongst "M2C" (Mountains to Coast [as distinct from "k2c" – Kosciusko to Coast] connectivity initiative), the National Conservation Council (NCC) and the National Parks Association (NPA) with a view to developing overarching corridors within the strategic ambit of the Great Eastern Ranges Initiative. Should this high-level corridor-mapping occur on a scientific basis, the Eurobodalla Koalas project would seek advice and guidance from these bodies, and would in return be able to contribute its local knowledge to their deliberations.

Bivariate analysis of koalas to tree species in the Mumbulla report (op cit) has shown that size matters, diversity matters and varying the toxic load is essential.

The most productive koala browse species occurring in our Shire can be postulated as some mix of the following, to permit sufficient variety of nutrients and toxins.

Strongest correlates with the presence of koala pellets in the Mumbulla survey:
Coast Grey Box (Eucalyptus bosistoana)
Yellow Stringybark (E. muelleriana)
Woollybutt (E. longifolia)
White Stringybark (E. globoidea)
Red Ironbark (E. tricarpa)

Others in the Mumbulla survey found to be associated with koala activity:
Monkey Gum/Mountain Grey Gum (E. cypellocarpa)
Silvertop Ash/Coat Ash (E. sieberi)
Rough-barked Apple (Angophora floribunda)
Blue-leaved Stringybark (E. agglomorata)
Black She-Oak (Allocasuarina littoralis)

Additional browse species identified by Phillips as occurring in the South Coast Management Area:
Primary Food Tree Species -
Cabbage Gum (E. amplifolia)
Ribbon Gum (E. viminalis)
Forest Red Gum (E. tereticornis)
Secondary Food Tree Species -
Yellow Box (E. melliodora)
Brittle Gum (E. mannifera)

Yertchuk (E. consideniana)
Swamp Gum (E. ovata)
Large-fruited Red Mahogany (E. scias)
Apple-topped Box (E. bridgesiana)
Maiden's Gum (E. maidenii)
Snow Gum (E. pauciflora)
Red Box (E. polyanthemos)
Blue Box (E. baueriana)
Bastard Eurabbie (E. pseudoglobulus)
Supplementary Food Tree Species –
Brown Stringybark (E. capitellata)
Southern White Stringybark (E. yangoura, E. baxteri – *Brooker & Kleinig differ slightly*)

Other Eurobodalla species known to be associated with koalas elsewhere:
Swamp Mahogany/Swamp Messmate (E. robusta)

Another Northern Eurobodalla species thought to be probably associated with koalas:
Sydney Blue Gum (E. saligna)

Continuing the theme of a potentially viable broad connectivity arc, the following species (some in the strongest *Mumbulla* correlates) extant in *Murramarang National Park* have been cross-referenced to this listing:
Rough-barked Apple (Angophora floribunda)
Black She-Oak (Allocasuarina littoralis) – *status as a correlate uncertain*
Yertchuk (Eucalyptus consideniana)
White Stringybark (E. globoidea)
Woollybutt (E. longifolia) and hybrid
Yellow Stringybark (E. muelleriana)
Swamp Gum (E. ovata)
Sydney Blue Gum (E. saligna) and hybrid
Silvertop Ash (E. sieberi)
Forest Red Gum (E. tereticornis)

Examination of amended maps and ecosystem descriptions in the *Report of the Eurobodalla LGA Vegetation Mapping Project*, supported by any future on-ground or local-scale validations, is expected to further reinforce and flesh out these potential connections, although it should be acknowledged the 1998 *Murramarang* source does not include koalas in its mammals lists.

Stalenberg investigated the effect of foliar chemistry on the use of resources by the Mumbulla/Bermagui koala population and identified a complex feeding strategy in which koalas consistently visited a diversity of eucalypt species with browse of higher quality (higher nitrogen levels in the case of the monocalypts and lower toxins in the case of the symphyomyrtles) when compared with neighbouring conspecifics that weren't visited. The strategy of feeding from a diversity of eucalypt species may occur because the foliage of eucalypt forest growing on low nutrient soils is usually more toxic than those growing on more fertile sites. In the former areas koalas may use similar strategies to those used by possums and switch between different food sources containing non-interacting toxic secondary metabolites to reduce the risk of poisoning from ingesting a single class of poison.

So farmers, loggers and other conservationists in the Eurobodalla should be preserving a mix of trees like the Box group and the smooth-barked eucalypts, as well as Stringybarks and Ashes. They should also keep any Red Gum growing in fertile soils, because for example the Forest Red Gum (E. tereticornis & subspecies E. mediana) is a primary food source for koalas. It is likely that epicormic shoots from a number of other species, including the Peppermints, may also be attractive to koalas.

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

Coastwatchers has a keen interest in the national Threatened Species Scientific Committee's attention to whether the koala should be considered vulnerable to extinction under the Environment Protection and Biodiversity Conservation Act 1999 (*It is understood the Threatened Species Scientific Committee delivered its advice to Minister Burke on 30 September 2010 - recommendation with Minister Burke at the time of writing*), and in the environmental and economic cost-benefits of finding remnant populations, refreshing and connecting koala habitat and/or reintroducing koalas to the Eurobodalla.

Economic cost-benefits

At the more economic end of the issues spectrum (as distinct from cultural and biodiversity aspects in ***the iconic status of the koala and the history of its management***, above), what benefits to the Eurobodalla (and Australia) might the koala provide as a tourist attraction, for example?

If the tourist industry and/or non-commercial motives are attractive, to what extent can these balance the perceived sacrifices private landholders, Forests NSW (and its private clients) and to some extent Eurobodalla Shire Council might make in their current or future enterprises (eg land clearing for further agriculture, urban infrastructure and building, and continued logging)?

Is the work required to protect or reintroduce/translocate koalas in the Eurobodalla easily within the bounds of current practice, or does it require a fundamental paradigm shift? For example, can Forests NSW operate its current logging model happily in conjunction with corridor protection on a landscape scale (*see map, above*)? Is our fire management science well enough developed, valid and widely enough accepted to adopt a forest-nurturing focus rather than a clearing mentality? Does NPWS have enough resources to control wild dogs effectively?

Can a hard-nosed business case for implementing koala-oriented, landscape-scale connectivity corridors be made? The total cost of implementing the *NSW 2008 Recovery Plan* was estimated as $1,230,000 plus additional funds for further work. To what extent is it being implemented? What further work needs to be done, unsullied by the intervention of politics, public relations campaigns and traditional vested interests, to analyse and integrate concepts of CO2 per cubic metre stored in growing koala-related forest species, $ per tonne returned to the economy through carbon capture in forests, $ per tourist, job numbers in a new "green" forest economy compared with job numbers in the existing structure, $ per litre of water saved and purified by conserving native forest and repairing its biodiversity, and (or perhaps underpinned by) the relationship between natural "amenity" and the economic productivity of humans?

Coastwatchers policy supports the protection of existing natural native forests (public and private), combined with restructuring of the forestry industry by transitioning out of industrial logging into alternate forest uses (eg nurturing for carbon storage, water filtering, ecological health in the light of climate change and timber production through plantations only) including the development of an alternate economy with a viable non-logging jobs base. Presumably this would include protection and rehabilitation of native animals such as koalas for biodiversity and tourism reasons.

Realistically, what level of community and government support for this notion is emerging, and what are the numbers in terms of monetary costs, social readjustment, employment, small town survival and the business bottom line?

Reintroduction/Translocation
It is understood the National Parks Advisory Committee favours translocation of koalas to the Eurobodalla's National Parks from overpopulated artificial sites like Kangaroo Island. While this option might look attractive on the surface, there are scientific reasons why it is risky. For example, how can social and range disruption of any remnant koalas be avoided if there is a translocation program? What might be the disease risk? Is there a genetic problem? How viable long-term is reintroduction/translocation if broad, landscape-scale connectivity corridors don't exist?

Translocation might best be considered a last resort post-extinction scenario, only undertaken as a desperation measure if there is no natural revival of populations after completion of a planned habitat preservation, rehabilitation and connectivity program. In any case, reintroduction/translocation would appear to be zoo-type solutions requiring regular refreshment.

- **the listing of the koala under the EPBC Act**

Coastwatchers supports listing the koala as vulnerable to extinction.

- **the adequacy of the National Koala Conservation and Management Strategy**

As mentioned in *General Remarks*, Coastwatchers considers the strategy as written more than adequate, but its implementation lacking sufficient momentum to produce the desired outcomes locally or nationally, despite isolated success stories.

- **appropriate future regulation for the protection of koala habitat**

A cohesive, national, underlying mindset needs to be achieved, for any effective action to be generated.
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A zoo or a natural biosystem?
Even on a national scale of the type envisioned by the Great Eastern Ranges Initiative, has the post-industrial line between zoos and natural biosystems become blurred, as a result of humanity's need to manage the total natural environment for mutual benefit, rather than to live as an organic part of it?

A contrary position to that of Coastwatchers might assert that humanity (in the Eurobodalla and elsewhere) has moved on from any notion of preserving its natural biosystem to the extent that koalas would be permitted to revive of their own accord. If in the near future it is found koalas are extinct here, it might follow pragmatically that private or entrepreneurist public landholders can earn income by replanting and establishing their own reserves, like those on Phillip and Fraser Islands (Mornington Peninsular, Victoria). Might it be a logical extension that even the Great Eastern Ranges Corridor in its entirety would simply be a big, managed zoo within the context of an irretrievably over-developed planet? This mindset might challenge contemporary green ideology, but if it prevails, it need not rule out the establishment of significant koala (or other fauna) corridors across all types of land use and ownership in the Eurobodalla (see *Billyrambija Joint Venture* [Wollondilly River landholders and Tarlo River National Park, West of Goulburn]).

Opportunities or barriers?

For the Eurobodalla Koalas project (and this submission contends, the *National Strategy*) to have any immediate practical benefit and to generate real, long term outcomes (especially the creation of landscape-scale corridors), the issue of conflicting opinions about land use, especially increased urbanization, private clearing for farming, and government enterprise logging, must be confronted. The separate conceptual starting points and the reality of entrenched vested interests, need to be approached as opportunities rather than barriers.

The argument that there is a disincentive for rural producers to declare their vegetation types lest they be restricted by preservation orders must be acknowledged as tangible and sincerely held amongst people of influence in the Eurobodalla. This opinion is expressed in tandem with support for translocation of koalas into the Eurobodalla's National Parks.

Similarly, while environmental activists want Forests NSW, South East Fibre Exports and the Regional Forest Agreements in their present form to go away, how likely is this? Is this "battle for land rights" between the conservationist movement (on behalf of the general public and biodiversity) and the forestry industry (effectively a publicly subsidized farmer of what is no longer genuinely natural bush) likely to take the direction of the Gunns compromise on Tasmanian old growth forests, or are the underlying political drivers (eg absence of a pulp mill proposal in the Eurobodalla, and the likelihood of a majority anti-Greens NSW government) different? The future of koalas in the Eurobodalla might have to be played out against a dominant ideology that in a nutshell sees this Shire as a mix of benign rural industry and "Canberra's Bondi", with a minority of local "hippies" stirring the pot.

The Eurobodalla Koalas preliminary discussion paper in its draft form (*still under consultation*), suggests that the future of the koala in the Eurobodalla ought to be decided separate from that ongoing conflict, and a sensible way to proceed is to apply the best available science and the precautionary principle to the full range of arguments, including acknowledgement that the dominant local socio/political paradigm probably sees nothing illogical about spatially insulated zoos and artificial koala translocations.

- **interaction of State and Federal laws and regulations**

Coastwatchers questions whether current legislative requirements are being complied with, regardless of whether they are already strong enough. This is against a background of the organisation's perception of inaction and lack of transparency at local government level, lack of resources for supervision at State level, and of documented breaches of Regional Forest Agreement (RFA) provisions by Forests NSW, currently the subject of legal action and community dispute.

To what extent do conservation groups' criticisms (and the NSW Auditor General's) of Forests NSW breaches of these detailed requirements under the RFA, as well as findings about the inadequacy of the *FRAMES database etc* for providing sufficient data in the South East, impact on the viability of koala populations, present or future? Similarly, to what extent are private landholders willing and able to adhere to the requirements of statutory protection?

- **any other related matters**

The Eurobodalla Koalas project articulates with other Coastwatchers activity such as its "community conversations" around the role of the natural environment in people's desire to live in the Eurobodalla. The natural environment as a community priority was also highlighted in responses to Eurobodalla Shire Council's "2030 Survey" on residents' aspirations for the future of the Shire.