Senate Standing Committee on Environment and Communications
Environment and Communications References Committee
Answers to questions on notice

The status, health and sustainability of Australia's koala population

Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Species listing		
Proof Hansard Page and Date *or* Written Question:	62 (19/5/11)		

Senator Brown asked:

We heard evidence this morning of 85 or 95 per cent loss of population in central-western Queensland in the last decade, and the figures are way over 50 per cent in the last decade nearly everywhere you look. We have had abundant evidence that loss of habitat, predation by dogs, car strikes and so on, and indeed drought, have all—it is a multi-factorial causation and there is disease within the population as well. So we do understand a lot of the factors. Do you know of any other species of which there has been such abundant evidence of loss of population but there has not been a recommendation for listing?

Ms Callister: Are a large number of species that are listed under the EPBC Act so I would have to take that on notice—

Senator BOB BROWN: Would you, please.

Ms Callister: and look at what data we have. Given that there is a very significant number it would be quite an exercise to do that but I am happy to take it on notice.

Answer:

The Threatened Species Scientific Committee has assessed the koala for possible national threatened species listing consistent with its regular practice and has recommended that the koala is not eligible for listing.

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Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Translocations		
Proof Hansard Page and Date *or* Written Question:	63 (19/5/11)		

Senator Brown asked:

We did have a very longstanding expert earlier in the day who said that he had seen koala translocations that were successful in two offshore islands but knew of no circumstance in which this had been successful in mainland Australia. Can you point to any circumstance in which it has been successful in mainland Australia?

Ms Dripps: Senator, Deb has explained that in her understanding of koala dynamics translocation is used where there are already overabundant koalas, to ensure that they do not subsequently perish or suffer inordinately because they have eaten too much of the trees that are there. There is quite a lot of koala translocation in Victoria. However, it is my belief and I think Deb has already stated that it is hers that that is not done with the intention to reintroduce koalas into areas where they are not.

Senator BOB BROWN: Do you know where that has been successful.

Ms Dripps: I would have to consult with state colleagues and probably take that on notice. I understand that in Victoria and South Australia they have translocated koalas to other places and I believe continue to do so, but I would prefer to take that on notice as it is a state-level matter—

Senator BOB BROWN: If you would. I would be very keen to receive evidence for the committee that showed that a translocation—and I think Dr Dripps is indicating that these are to areas which have extant koala populations—has actually been successful in increasing the koala population in the translocated place. We had a gentleman from Coffs Harbour here earlier talking about evidence that translocated animals will try to go back; they are territorial.

Ms Callister: I understand that you may be having some hearings in Victoria as well. That might be a matter that you would like to take up particularly with the Victorians, as I understand that that is one of the areas where translocation has occurred more often. We are happy to take it on notice and see what we can find but it may also be something you would like to explore with the Victorians.

Senator BOB BROWN: Thank you.

Answer:

Most koalas in mainland Victoria are derived from translocated populations. Victoria’s koala population was severely depleted by the 1920s due to hunting, habitat destruction and disease. Koalas have been re-established over most of their original Victorian range by

translocation from islands such as Phillip and French Islands to approximately 250 release sites. The Kangaroo Island, Eyre Peninsula and Mount Lofty Ranges populations in South Australia were also established through translocation of Victorian koalas. The population in the Narrandera Nature Reserve in New South Wales is unusual in that it has had koalas translocated from both Queensland and French Island in Victoria. Another small colony has been established in semi-natural conditions at Yanchep in Western Australia.

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Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Habitat trees		
Proof Hansard Page and Date *or* Written Question:	63-64 (19/5/11)		

Senator Brown asked:

Do you, or your department in its full wisdom—and you can take this on notice if you would—know of any case with any threatened species in Australia anywhere in history where habitat trees are removed to the benefit of the species that is threatened?

Ms Callister: I am happy to take that one on notice.

Ms Dripps: In so doing, Senator, there may be examples where changing the age class of a forest increases the supply of food for some species. We will look into that for you.

Answer:

A study of forest fauna abundance and distribution in north eastern New South Wales found that koalas were more abundant in forests that had been heavily logged (Kavanagh et al., 1995). However, whether the species in lower-elevation forests occur independently of logging intensity, or because these forests represent their preferred habitats, could not be determined. Another study in the Pilliga Forest of western New South Wales showed that selective removal of white cypress pine did not adversely affect koala populations (Kavanagh et al., 2007).

Kavanagh, R. P., S. Debus, T. Tweedie and R. Webster (1995). "Distribution of nocturnal forest birds and mammals in North-eastern New South Wales: Relationships with environmental variables and management history." Wildlife Research 22: 359-377.

Kavanagh, R. P., M. A. Stanton and T. E. Brassil (2007). "Koalas continue to occupy their previous home-ranges after selective logging in *Callitris-Eucalyptus* forest." Wildlife Research 34(2): 94-107.

Trials on ecological thinning - that is, the removal of some vegetation to improve the integrity of forests and woodlands and their associated flora and fauna, are being undertaken by Parks Victoria in Victoria’s redgum and box-ironbark forests. Further information is available on the Parks Victoria website at: http://www.parkweb.vic.gov.au/RRG/activeforesthealth.cfm

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Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	EPBC Act		
Proof Hansard Page and Date *or* Written Question:	64 (19/5/11)		

Senator Cameron asked:

I notice my language has been inconsistent because I am not sure of the definitions. Could the department put together a little summary of what is in the act and pull out for us those definitions in the various parts of the act to save me working through it?

Ms Callister: Certainly.

Senator CAMERON: And could you also provide copies of what the scientific committee is looking at as well?

Ms Callister: Yes.

Senator CAMERON: So it will be a little package of definitional material. Are there any other definitional things we should look at?

Ms Callister: We provided some of that with our submission but if we can perhaps package it so that it is under a heading so you know exactly what you are looking for. It is really those three key things: the sections of the act that point to both how you define them and what the committee and the minister can and cannot take into account in making their decisions, then the relevant regulations and then any guidelines that the TSSC has made publicly available about how it has interpreted the legislation.

Answer:

Relevant sections of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Environment Protection and Biodiversity Conservation Regulations 2000* are attached. The categories of threatened species under the EPBC Act are extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent. Broad definitions for each of these categories are found under Section 179 of the EPBC Act. Further information on the criteria for listing a native species in the critically endangered, endangered or vulnerable category is found under Part 7 of the *Environment Protection and Biodiversity Conservation Regulations 2000*.

Section 186(2) of the EPBC Act provides information <u>on the only matters the Minister may consider</u> when deciding whether to include a native species in a particular category (whether a result of a transfer or otherwise). Section 189 of the EPBC Act provides further clarification on the advice that must be considered by the Minister from the Threatened Species Scientific

Committee (TSSC) in relation to amending the list of threatened species. Section 194Q(6)(b) provides that the Minister may seek and have regard to advice from any other source.

The TSSC refers to the 'Guidelines for Assessing the Conservation Status of Native Species according to the *Environment Protection and Biodiversity Conservation Act 1999* and the *EPBC Regulations 2000*' (attached to the department's submission to the Inquiry). These guidelines provide an objective and transparent method for assessing a species' eligibility for listing. A native species is determined to be eligible for listing as critically endangered, endangered or vulnerable if it meets any of the five specific criteria described in these guidelines. The guidelines also outline how the TSSC defines terms that uses in assessing species' eligibility for listing, such as population, area of occupancy and extent of occurrence.

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Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Mumbulla Forest		
Proof Hansard Page and Date *or* Written Question:	65 (19/5/11)		

Senator Cameron asked:

Let me just take it step by step. Was the department aware that the koalas in Mumbulla forest were the last remnants of a subspecies of the koala?

Ms Dripps: I was not personally aware of that but I would like to take on notice whether the department was aware of it, because I do not know everything the department knows.

Senator CAMERON: And was the department aware that there are only 52 koalas left?

Ms Dripps: Again, I would give the same answer.

Senator CAMERON: Now you know that there has been evidence led that there are 52 koalas left in Mumbulla forest, that they are genetically quite unique and that they are in danger of extinction, what will the department do about that, if anything.

Ms Dripps: The first thing we would do is get the evidence you have referred to, which I am sure will be in the transcript of the hearing imminently. Then we would look at whether programs exist in that area already that are working towards addressing that particular problem. Then we would take it from there.

Answer:

The Threatened Species Scientific Committee considered draft reports addressing this issue as part of its population abundance workshop and again during the period of consultation on the nomination of the koala for possible threatened species listing.

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Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Regional Forest Agreements		
Proof Hansard Page and Date *or* Written Question:	66 (19/5/11)		

Senator Brown asked:

The regional forest agreement puts the safety of those koalas outside your administration of the EPBC?

Ms Dripps: That is correct.

Senator BOB BROWN: Thank you.

Senator CAMERON: Even if they are listed?

Ms Dripps: If they were listed, that information and conservation status would be fed into future regional forest agreement processes.

Senator CAMERON: So the forestry authorities can say 'We don't care—the 52 are gone'; is that correct?

Ms Dripps: I am not sure that that is exactly correct. I would like to take that question on notice.

Answer:

The Australian Government is committed to Regional Forest Agreements for the conservation and sustainable management of Australia's native forests. Each Regional Forest Agreement established a comprehensive, adequate and representative forest reserve system, based on scientifically sound, nationally agreed criteria. Under the Regional Forest Agreements, ongoing forest management - including the protection of threatened species - is the responsibility of the relevant state government.

Section 38 of the *Environment Protection and Biodiversity Conservation 1999* (Environment Protection and Biodiversity Conservation Act) provides, subject to certain requirements, that the requirement to obtain approval for actions that are likely to have a significant impact on a matter of national environmental significance does not apply in relation to a Regional Forest Agreement forestry operation (as defined under the *Regional Forest Agreements Act 2002*) when undertaken in accordance with a Regional Forest Agreement.

Following the Comprehensive Regional Assessments for Regional Forest Agreement regions, the clauses of Regional Forest Agreements have been designed to address the environmental, economic and social impacts of forestry operations and are intended to provide an effective level of equivalent protection for environmental matters as would otherwise be afforded by

the ordinary referral, assessment and approval regime set out in Chapter 4 of the Environment Protection and Biodiversity Conservation Act.

Forestry operations within the Mumbulla State Forest that are undertaken in accordance with the Eden Regional Forest Agreement are exempt from the approvals and enforcement provisions under the Environment Protection and Biodiversity Conservation Act. However, any forestry operation must be undertaken in accordance with relevant state legislation and its supporting regulatory framework.

At the Australian Government level, the Minister of Agriculture, Fisheries and Forestry has portfolio responsibility for administering the Regional Forest Agreement Act, including concerns about forestry operations impacting on threatened species in areas where operation are undertaken in accordance with an Regional Forest Agreement.

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Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Activities to protect the koala		
Proof Hansard Page and Date *or* Written Question:	66-67 (19/5/11)		

Senator Brown asked:

Can you tell the committee of any single act by the federal government in the last 10 years intended to protect or enhance the survival of koalas that has been carried into effect?

Ms Callister: Yes, I can. There have been a number of funding proposals that have been funded dealing with on-ground management of koalas through some of our programs including Caring for our Country and its predecessor the Natural Heritage Trust. There has been funding provided under the national reserve system has gone to some areas which have included koala habitat. We are also funding a project at the moment in collaboration with the New South Wales government and, I think, the University of Queensland which is aimed at testing what are some of the most effective management interventions for koalas. That project is due to finish at the end of this year. So, yes, there have been quite a number of actions by the government which are trying to improve the health and status of koalas.

Senator BOB BROWN: Could you provide those actions to the committee and the amount of money set aside?

Ms Callister: We will certainly do our best.

Answer:
The attached table summarises Australian Government funding related to the protection of the koala under the following programs:

National Environmental Research Program (NERP)(2010-11):	$359,632
Natural Heritage Trust (1997-2008):	$2,127,542
Caring for Our Country (2008-present):	$162,295
Australian Research Council (2004-present):	$3,485,490
Endangered Species Program (1995-96):	$165,000

Total Australian Government funding from these programs over the years totalled $6,299,959.

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Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	United States government listing of koalas		
Proof Hansard Page and Date *or* Written Question:	67 (19/5/11)		

Senator Brown asked:

Thank you. The United States has listed the koala as threatened. Can you tell us why they have done that but Australia has not?

Ms Callister: I am not fully familiar with the criteria that the United States government uses under its endangered species act to make determinations about whether species are threatened. Without knowing that and being able to compare whether their criteria as the same as or different from ours, I would not be able to answer that question.

Senator BOB BROWN: Is it possible that your department could find out and let the committee know about that.

Ms Callister: Yes, certainly.

Senator BOB BROWN: Thank you.

Answer:

The criteria for listing threatened species under the United States' *Endangered Species Act 1973* are less specific than the guidelines used by the Threatened Species Scientific Committee. For example, the United State's criteria do not specify a quantitative decline in population, nor the timeframe over which a decline must occur. The United State's 2000 listing was based on historical decline in habitat since European settlement, ongoing (at the time of listing) habitat clearance in Queensland and low genetic diversity of Victorian and South Australian populations.

Relevant sections of the EPBC Act and the EPBC Regulations

Environment Protection and Biodiversity Conservation Act 1999	
Part 13 – Species and Communities **Division 1 –** Listed threatened species and ecological communities **Subdivision A –** Listing **Section 178 –** Listing of threatened species	(1) The Minister must, by instrument published in the *Gazette*, establish a list of threatened species divided into the following categories: (a) extinct; (b) extinct in the wild; (c) critically endangered; (d) endangered; (e) vulnerable; (f) conservation dependent. (2) The list, as first established, must contain only the species contained in Schedule 1 to the *Endangered Species Protection Act 1992*, as in force immediately before the commencement of this Act. (3) The Minister must include: (a) in the extinct category of the list, as first established, only the species mentioned in subsection (2) that were listed as presumed extinct; and (b) in the endangered category of the list, as first established, only the native species mentioned in subsection (2) that were listed as endangered; and (c) in the vulnerable category of the list, as first established, only the species mentioned in subsection (2) that were listed as vulnerable. (4) If the Minister is satisfied that a species included in the list, as first established, in: (a) the extinct category; or (b) the endangered category; or (c) the vulnerable category; is not eligible to be included in that or any other category, or is eligible to be, or under subsection 186(3), (4) or (5) can be, included in another category, the Minister must, within 6 months after the commencement of this Act, amend the list accordingly in accordance with this Subdivision.
Part 13 – Species and Communities **Division 1 –** Listed threatened species and ecological communities **Subdivision A –** Listing **Section 179 –** Categories of threatened species	(1) A native species is eligible to be included in the ***extinct*** category at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died. (2) A native species is eligible to be included in the ***extinct in the wild*** category at a particular time if, at that time: (a) it is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or (b) it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form. (3) A native species is eligible to be included in the ***critically endangered*** category at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria. (4) A native species is eligible to be included in the ***endangered*** category at a particular time if, at that time: (a) it is not critically endangered; and (b) it is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria. (5) A native species is eligible to be included in the ***vulnerable*** category at a particular time if, at that time: (a) it is not critically endangered or endangered; and (b) it is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria. (6) A native species is eligible to be included in the ***conservation dependent*** category at a particular time if, at that time: (a) the species is the focus of a specific conservation program the cessation of which would result in the species becoming vulnerable, endangered or critically endangered; or

	(b) the following subparagraphs are satisfied: (i) the species is a species of fish; (ii) the species is the focus of a plan of management that provides for management actions necessary to stop the decline of, and support the recovery of, the species so that its chances of long term survival in nature are maximised; (iii) the plan of management is in force under a law of the Commonwealth or of a State or Territory; (iv) cessation of the plan of management would adversely affect the conservation status of the species. (7) In subsection (6): ***fish*** includes all species of bony fish, sharks, rays, crustaceans, molluscs and other marine organisms, but does not include marine mammals or marine reptiles.
Part 13 – Species and Communities **Division 1 –** Listed threatened species and ecological communities **Subdivision A –** Listing **Section 186 –** Amending list of threatened native species	*Including native species in a category* (1) Subject to subsections (3), (4) and (5), the Minister must not include (whether as a result of a transfer or otherwise) a native species in a particular category unless satisfied that the native species is eligible to be included in that category. (2) In deciding whether to include a native species in a particular category (whether as a result of a transfer or otherwise), the only matters the Minister may consider are matters relating to: (a) whether the native species is eligible to be included in that category; or (b) the effect that including the native species in that category could have on the survival of the native species. *Deleting native species from a category* (2A) The Minister must not delete (whether as a result of a transfer or otherwise) a native species from a particular category unless satisfied that: (a) the native species is no longer eligible to be included in that category; or (b) the inclusion of the native species in that category is not contributing, or will not contribute, to the survival of the native species. (2B) In deciding whether to delete a native species from a particular category (whether as a result of a transfer or otherwise), the only matters the Minister may consider are matters relating to: (a) whether the native species is eligible to be included in that category; or (b) the effect that the inclusion of the native species in that category is having, or could have, on the survival of the native species. *Including similar species to an eligible species* (3) The Minister may include a native species in the critically endangered category if satisfied that: (a) it so closely resembles in appearance, at any stage of its biological development, a species that is eligible to be included in that category (see subsection 179(3)) that it is difficult to differentiate between the 2 species; and (b) this difficulty poses an additional threat to the last-mentioned species; and (c) it would substantially promote the objects of this Act if the first-mentioned species were regarded as critically endangered. (4) The Minister may include a native species in the endangered category if satisfied that: (a) it so closely resembles in appearance, at any stage of its biological development, a species that is eligible to be included in that category (see subsection 179(4)) that it is difficult to differentiate between the 2 species; and (b) this difficulty poses an additional threat to the last-mentioned species; and (c) it would substantially promote the objects of this Act if the first-mentioned species were regarded as endangered. (5) The Minister may include a native species in the vulnerable category if satisfied that: (a) it so closely resembles in appearance, at any stage of its biological development, a species that is eligible to be included in that category (see subsection 179(5)) that it is difficult to differentiate between the 2 species; and (b) this difficulty poses an additional threat to the last-mentioned species; and (c) it would substantially promote the objects of this Act if the first-mentioned species were regarded as vulnerable.

Part 13 – Species and Communities **Division 1 –** Listed threatened species and ecological communities **Subdivision A –** Listing **Section 189 –** Minister must consider advice from Scientific Committee	(1) In deciding whether to make an amendment covered by paragraph 184(1)(aa), (b) or (d), the Minister must, in accordance with the regulations (if any), obtain and consider advice from the Scientific Committee on the proposed amendment. (1A) Subsection (1) has effect subject to section 192. (1B) If advice from the Scientific Committee for the purposes of subsection (1) is to the effect that a particular native species, or a particular ecological community, is eligible to be included in the relevant list in a particular category, the advice must also contain: (a) a statement that sets out: (i) the grounds on which the species or community is eligible to be included in the category; and (ii) the main factors that are the cause of it being so eligible; and (b) either: (i) information about what could appropriately be done to stop the decline of, or support the recovery of, the species or community; or (ii) a statement to the effect that there is nothing that could appropriately be done to stop the decline of, or support the recovery of, the species or community; and (c) a recommendation on the question whether there should be a recovery plan for the species or community. (2) In preparing advice under subsection (1), the Scientific Committee may obtain advice from a person with expertise relevant to the subject matter of the proposed amendment. (3) In preparing advice for a proposed amendment to delete an item: (a) included in a category of a list referred to in section 178 or 181; and (b) that had not been included in that category in accordance with subsection 186(3), (4) or (5); the only matters the Scientific Committee may consider are matters relating to: (c) the survival of the native species or ecological community concerned; or (d) the effect that the inclusion in the list of the native species or ecological community concerned is having, or could have, on the survival of that native species or ecological community. (3A) In preparing advice for a proposed amendment to: (a) include a native species in a category of the list referred to in section 178 in accordance with subsection 186(3), (4) or (5) because of the species' resemblance to another species; or (b) delete a native species from a category of the list referred to in section 178 that had been included in that category in accordance with subsection 186(3), (4) or (5) because of the species' resemblance to another species; the only matters the Scientific Committee may consider are matters relating to: (c) the survival of either species; or (d) the effect that the inclusion in the list of the first-mentioned species is having, or could have, on the survival of either species.

Environment Protection and Biodiversity Conservation Regulations 2000	
Part 7 – Species and Communities **Division 7.1 –** Listing **Regulation 7.01** – Criteria	For section 179 of the Act, a native species is in the critically endangered, endangered or vulnerable category if it meets any of the criteria for the category mentioned in the following table:

Item	**Criterion**	**Category**		
		Critically endangered	**Endangered**	**Vulnerable**
1	It has undergone, is suspected to have undergone or is likely to undergo in the immediate future:	a very severe reduction in numbers	a severe reduction in numbers	a substantial reduction in numbers
2	Its geographic distribution is precarious for the survival of the species and is:	very restricted	restricted	limited
3	The estimated total number of mature individuals is:	very low	low	limited
	and:			
	(a) evidence suggests that the number will continue to decline at:	a very high rate	a high rate	a substantial rate
	or			
	(b) the number is likely to continue to decline and its geographic distribution is:	precarious for its survival	precarious for its survival	precarious for its survival
4	The estimated total number of mature individuals is:	extremely low	very low	low
5	The probability of its extinction in the wild is at least:	50% in the immediate future	20% in the near future	10% in the medium-term future

Note The Scientific Committee is to advise the Minister on the amendment and updating of the list of critically endangered, endangered or vulnerable species — see Act, paragraph 503 (b).

Australian Government funding for koala conservation since 1995*

Sort	Fund	Application State	Fund	Funding Year	Application Title	Application Description	Approved	Total (per State)
10	ARC	National	ARC	2004 - 2007	The preservation and management of Koala genetic diversity using reproductive biotechnology and molecular genetics: A model for endangered Australian marsupials	Assisted breeding technology will provide a new paradigm for solving problems associated with the preservation and management of captive and wild Koala populations. This project aims to improve methods of koala sperm cryopreservation and its subsequent use in artificial insemination and to establish a functional frozen sperm bank screened for the most prevalent pathogens. Important outcomes will include (1) a reliable, cost effective and disease free approach to the transfer of Koala genetic material into international and national zoos; (2) a technique for the management of free-range genetically restricted Koala populations and (3) successful cryostorage of Koala spermatozoa for the long-term maintenance of genetic potential.	$318,424	
11	ARC	National	ARC	2004 - 2007	Understanding the role of a newly recognised retrovirus in the induction of cancer and immunosuppressive disease in koalas	Leukaemia, lymphoma and opportunistic infections are major causes of mortality in both captive and wild koala populations. It is our hypothesis that a recently discovered retrovirus is responsible for these disease syndromes. Using a multidisciplinary approach, this project will determine viral parameters that correlate with the disease status of koalas and lead to improvements in diagnosis and management of disease in koala populations. The planned research will also provide some insight into cross-species transmission of retroviruses.	$130,000	$448,424.00
9	ARC	National	ARC	2005 - 2008	Prevention and treatment of chlamydiosis and cryptococcosis in koalas	The koala is an icon of Australian wildlife and they are used to promote international tourism. The health of koalas is important to both Australians and the international community, having a direct economic effect on the Australian economy via the tourism sector. Unique animals have unique problems. This project addresses fatal diseases of the koala that affect sustainability of local koala populations. Consequently, it will assist in the conservation of genetic diversity of free-living koalas and the maintenance of health of captive koalas, thereby contributing to the enrichment of the environment and the community.	$392,262	
8	ARC	National	ARC	2005 - 2009	Fertility Management of Koalas, Kangaroos and Wallabies	How should Australia look after its kangaroos and koalas? How should it make sure that they breed enough to maintain their numbers but not so much that they threaten their own food supplies and the environment? How should Australia make sure that it maintains its international reputation as a green, caring country? An ARC funded program designed to develop fertility control methods for these animals is part of the answer. A small contraceptive implant, manufactured by an Australian biotech company, will keep them infertile for up to two years. Humane, economic delivery mechanisms will now be developed and could be used worldwide on other charimsmatic but overabundant species such as the elephant.	$1,400,000	
6	ARC	National	ARC	2008 - 2010	Retroviral invasion of the koala genome: Where did it come from and what is it doing now that its there?	Although some populations of free-ranging koalas are flourishing, many are in decline as a result of habitat loss and disease. We have shown that a recently identified virus that has infected koalas throughout most mainland Australian populations is associated with high rates of cancer in these animals. This project will study the growth properties of this virus and the mechanism by which it causes cancer in order to provide a foundation for developing intervention strategies for protection of this iconic Australian species.	$255,000	
7	ARC	National	ARC	2008 - 2011	The conservation of widely distributed species: implications of differences between western and eastern koala populations	Koalas are an iconic species in Australia, generating $2.5 billion in tourist income alone. This project will be a first to test cross-regional variations in koala-habitat relationships, with implications for conservation of other species occupying broad geographical ranges. It will also predict the effect of future climate change on western koala populations living at the margin of their ecological tolerances. It will provide regional natural resource management bodies and state conservation agencies with a sound ecological framework to conserve western koalas in the long term. Regional communities will benefit from involvement by incorporating new conservation knowledge into sub-catchment and property management planning.	$459,804	

4	ARC	National	ARC	2009 - 2012	Development of an anti-Chlamydia vaccine for the koala	The koala is one of Australia's main icons and a major drawcard for tourists. However, it suffers from debilitating disease due to the bacterium Chlamydia, which can lead to severe conjunctivitis, eventual blindness in both sexes, and the females develop untreatable cysts and can become infertile. This project will develop a Chlamydia vaccine to be administered to healthy and diseased koalas in zoos, sanctuaries, koala care centres, relocation programs and eventually perhaps even wild populations. The vaccine findings may also be transferable to other animals and may also even assist the development of a human Chlamydia vaccine.	$290,000	
5	ARC	National	ARC	2009 - 2012	Retroviral invasion of the koala genome: prevalence, transmission and role in immunosuppressive disease	Koalas are a national symbol yet many of their populations are in decline as a result of habitat loss and disease. Lymphoid cancers and opportunistic infections are significant diseases in both captive and wild koala populations. We previously demonstrated that the recently identified koala retrovirus is associated with lymphoid cancer in koalas. This project will determine the distribution of the virus in Australia, the mechanism of its spread and its effect on the immune function of koalas. This research will provide a foundation for better management of captive koalas and for conservation of wild koalas.	$240,000	
52	C4oC	NSW	C4oC	2009/2010	Enhancing Biodiversity Connectivity in the Bergen Op-Zoom Ohio (BOZO) District	The project will provide tree cover in an otherwise de-nuded area of the district. These corridors will lead to increased native species biodiversity, improved ground cover and water use efficiency. Over time the aim is for trees, shrubs and native grasses to regenerate naturally. The project will increase the extent, condition, connectivity and resilience of native habitat within the Bergen Op-zoom Ohio area. The biodiversity corridors will link up with existing areas of fenced off vegetation, improving the habitat of native species through improved connectivity. The corridors will improve habitat availability for Koala populations in the Bergen Op-zoom Ohio and Walcha areas.	$19,712.73	$3,505,202.73
51	C4oC	NSW	C4oC	2009/2010	Protection and expansion of the EEC Lowland Subtropical Rainforest on Floodplain through the restoration of Ringwood Creek	Ringwood Creek forms part of the Endangered Ecological Community of Lowland Subtropical Rainforest on Floodplain. The aim of the project is to protect and expand the area of this vegetation community through the restoration of the creek's riparian zone and to protect the habitat for the threatened species Ringwood (Syzygium anisatum), the Giant Barred Frog (Mixophyes iteratus), and the Koala (Phascolarctus cinereus), which have all been seen on site. The area is currently under threat from several weed species including three Weeds of National Significance, Salvinia, Lantana and Blackberry, in addition to Camphor laurel, Small-leaf privet, Cassia, Tradescantia, Silver-leaf desmodium, and Siratro.	$20,000.00	
80	C4oC	QLD	C4oC	2009/2010	Caring for Eprapah Creek Catchment - Kingfisher Crossing	The project is to restore a 2000m² section of riparian vegetation along Eprapah Creek which has been degraded by disturbance associated with the Kingfisher Road crossing. The area links to a large section of conservation reserve in a State Koala Conservation Area. Surrounding the degraded riparian lands are excellent examples of native vegetation and land under voluntary conservation agreements. Council has undertaken significant weed control in this area however some environmental weeds remain a threat in isolated pockets. Bare and eroding areas near the road and creek bank need to be stabilised and revegetated to lessen the edge effects on existing vegetation and improve water quality.	$5,845.91	$1,035,362.64
50	C4oC	NSW	C4oC	2010/2011	Northern Rivers - Protection and expansion of the EEC Lowland Subtropical Rainforest through the restoration of Ringwood Creek wetland area	Ringwood Creek forms part of the endangered ecological community of lowland subtropical rainforest on floodplain. The aim of the project is to expand the previously treated area and further protect this vegetation community through the restoration of the creek's riparian zone and wetland area, and revegetation using local native plant species. The project will protect the habitat of threatened flora and fauna including ringwood, giant barred frog and koala by controlling weed species, targetting weeds of national significance such as lantana, salvinia and blackberry. The project will also increase community engagement by holding workshops on native plant and weed identification and weed control techniques.	$18,150.00	

49	C4oC	NSW	C4oC	2010/2011	Hunter-Central Rivers - Pest species control in high conservation value riverine forest - Rabbit and weed control	Professional land management advisors will be used to guide environmentally sensitive rabbit and hare control measures. The subject land is a very high conservation value riverine forest. The species list of the forest has over 180 vascular plants as well as wedge tail eagles, water dragons, lace monitors and eastern grey kangaroos. There is also evidence of koalas. There are two major threats to this ecosystem; invasive weeds, especially lantana and giant Parramatta grass and rabbits. Benign trapping with potentially renewed introduction of calici virus will be used against the rabbits. This program will virtually eliminate lantana and giant parramatta grass over three years with a 60 per cent reduction in the first year, 30 per cent in the second and 10 per cent in the third. Both weed species are at an early stage of invasion when intervention is particularly effective. Association members and volunteers will be trained in pest control, and will develop operating manuals to inform future pest control activities.	$6,500.00	
76	C4oC	QLD	C4oC	2010/2011	Condamine - Enhancing biodiversity values on the urban fringe	This project will improve the condition and extent of remnant ecosystem on private land by controlling 20 ha of land containing weeds of national significance, followed by the revegetation with 250 local native plants. The targeted area is a recognized declining habitat for koalas. Revegetation with endemic plants will increase biodiversity and habitat values while increasing the extent of native vegetation on the escarpment. Delivery of this project will be achieved through the provision of workshops for best management weed control, development of individual property plans, implementation of 20 ha of lantana control and revegetation to replace areas of lantana habitat formally used by native fauna. A field day will be held to provide practical demonstrations for weed control and management, fire protection and management, habitat regeneration and plant identification across property boundaries. This will increase the knowledge and skills of peri-urban landholders and give them greater ability to conserve species across their properties.	$19,200.00	
77	C4oC	QLD	C4oC	2010/2011	Desert Channels - EGJAR - Ecology Group of the Jordon and Alice Rivers: Survey of biodiversity assets, threats and issues	Through this project the project officer and landholders of river bank country between Jericho and Barcaldine will survey the river country to share and document biodiversity assets, threats and issues. These include Alice River gums, koala and cane toad sightings, parthenium, pasture recovery and macropod densities. With the support of the Desert Uplands Committee the group will collect a range of data to help assess, monitor and manage ecosystems. A minimum of two representative monitoring sites will be set up through which the project officer will demonstrate methods of monitoring the environment and offer mentoring support for landholders. The resulting information will be collated into a group map and manual for inclusion in educational packs and launched at two field days. The project will provide more detailed and accurate information on biodiversity along the Alice and Jordan rivers and will also support a more proactive and cooperative approach to issues in the area.	$18,600.00	
78	C4oC	QLD	C4oC	2010/2011	South East Queensland - Rehabilitation of Environmental Corridors at Tingalpa	Tingalpa Wetlands lies at the heart of a regional environmental corridor linking the Koala Coast to the Brisbane River through the wetland and floodplain systems. This project aims to improve biodiversity in the area by increasing the extent, condition and connectivity of native habitat and reducing the impact of invasive weed species activities will include planting biodiversity species. Project corridors, protecting remaining vegetation, creating buffer zones around reserves, improving habitat for threatened species, revegetating river bank zones, and controlling weeds through spraying and manual removal. A community and school environmental education day will be held involving presentations about wildlife and Indigenous culture, weed control and an ecological walk to raise awareness of the importance of wetlands. Weed control and planting of native species will enhance habitat by providing food and shelter for native birds and animals. Volunteers from the catchment group will continue to monitor and maintain the sites.	$19,986.00	

79	C4oC	QLD	C4oC	2010/2011	South West - Wild dog control in the Balonne area to enhance biodiversity	This project will deliver four information workshops outlining the best management options for wild dog control at key venues within the Balonne Shire. Wild dogs have a major negative impact recipient biodiversity on fauna and stock. There has been a notable decline in fauna numbers, particularly koalas with the major increase in dog populations. Theoretical and practical workshops will focus on identifying tracks, injuries to fauna and stock, markings and scats. The community will undertake coordinated baiting activities on a regular basis and this activity will have positive outcomes for preserving the biodiversity and habitat values within the region. The main outcomes of this project will be increased awareness and skill level of local landholders in wild dog behaviour and management.	$14,400.00	
60	C4oC	VIC	C4oC	2010/2011	Preservation, protection, rehabilitation of habitat and, Biolink Corridor creation, remnant indigenous vegetation at Sunshine Reserve	The Sunshine Reserve Conservation and Fireguard Group will work with the Mornington Peninsula Shire Council to undertake the second stage of the biolink habitat and corridor restoration between Fairbairn Reserve and Upper Sunshine Reserve, including control of weeds of national significance blackberry and boneseed as well as fuel management. The group will also carry out a 13 month fauna survey of adjoining corridors and will work with members of the Mornington Peninsula Youth Enterprise and community volunteers to collect seed and propagate indigenous plants for revegetation. This project will increase habitat and Reserve biological linking corridors for endangered sugar gliders as well as the agile antechinus, koalas and echidnas. Native plantings on creek banks will reduce erosion and silt runoff into Port Phillip Bay.	$19,900.00	$122,581.91
12	ESP	NSW	ESP	1995/1996	NSW NPWS Koala Management	This project is being funded as part of the National Koala Conservation Strategy. NSW NPWS are currently developing a number of initiatives which will contribute towards a state-wideplan and ultimately the NKCS.	$15,000.00	
81	ESP	SA	ESP	1996/1997	Koala Management on Kangaroo Island		$150,000.00	$150,000.00
1	NERP	National	NERP	2011	Improve koala conservation	The CERF Koala project has two major aims: (1) to evaluate the effectiveness of measures taken to date to protect koalas, particularly from habitat loss, dog predation and vehicle strike, with a focus on coastal New South Wales; and (2) develop general approaches and principles for prioritising koala conservation measures and formulate these in a format that can be used by planners and policy makers. The primary outputs of the project will be robust tools for prioritising koala conservation measures and recommendations about the effectiveness of alternative conservation measures. This project is scheduled to be completed by the close of 2011.	$359,632.00	
13	NHT	NSW	NHT	1997/1998	Great Lakes Regional Vegetation Management Strategy/Action Plan	Develop a vegetation management strategy and action plan for the Great Lakes Region using the proven "Greening Plans" model.	$39,331.00	
16	NHT	NSW	NHT	1998/1999	Conserving Koala Habitat a Practical Model for Councils	The main aims of the project are to work with local government and involve the community to conserve remnant native vegetation in Coffs Harbour that has been identified as koala habitat.	$20,464.00	
14	NHT	NSW	NHT	1998/1999	Great Lakes Regional Vegetation Management Strategy/Action Plan	Develop a vegetation management strategy and action plan for the Great Lakes Region using the proven "Greening Plans" model.	$21,500.00	
18	NHT	NSW	NHT	1998/1999	Rous Riparian Corridor	The project involves riparian rehabilitation linking remnants of wet sclerophyl koala habitat to subtropical rainforest and world heritage subtemperate rainforest areas; enhancing habitat for rare and threatened species, biodiversity, soil, air and water.	$19,945.00	
17	NHT	NSW	NHT	1998/1999	Vehicle Barrier to Protect Koala Wetland		$10,000.00	
53	NHT	VIC	NHT	1998/1999	Integrated Large Scale Revegetation of Degraded Non-arable Land	This project will protect threatened vegetation remnants and expand vegetation links to allow for koala and other wildlife movement from the Brisbane Ranges National Park to adjoining reserves.	$50,000.00	
15	NHT	NSW	NHT	1999/2000	Great Lakes Regional Vegetation Management Strategy/Action Plan	Develop a vegetation management strategy and action plan for the Great Lakes Region using the proven "Greening Plans" model.	$15,000.00	
23	NHT	NSW	NHT	1999/2000	Kingscliff Koala Corridor	A project to undertake protection of remnant coastal vegetation and regeneration of important koala habitat.	$5,800.00	
21	NHT	NSW	NHT	1999/2000	Murrah Bunga Koala Recovery Forest Ecosystem and Riparian and Rehabilitation	The project is a collaborative initiative to address riparian degradation, koala habitat conservation and restoration and introduce new natural resource management techniques that will lead to long term on-ground improvements.	$44,500.00	

25	NHT	NSW	NHT	1999/2000	Port Stephens Koala Habitat Restoration	Reverse the decline in koala habitat in the Port Stephens LGA, by protecting and restoring koala habitat via a strategic approach that is based on the best scientific information available.	$51,800.00	
19	NHT	NSW	NHT	1999/2000	Rous Riparian Corridor	The project involves riparian rehabilitation linking remnants of wet sclerophyl koala habitat to subtropical rainforest and world heritage subtemperate rainforest areas; enhancing habitat for rare and threatened species, biodiversity, soil, air and water.	$11,200.00	
54	NHT	VIC	NHT	1999/2000	Integrated Large Scale Revegetation of Degraded Non-arable Land	This project will protect threatened vegetation remnants and expand vegetation links to allow for koala and other wildlife movement from the Brisbane Ranges National Park to adjoining reserves.	$50,000.00	
24	NHT	NSW	NHT	2000/2001	Kingscliff Koala Corridor	A project to undertake protection of remnant coastal vegetation and regeneration of important koala habitat.	$2,900.00	
22	NHT	NSW	NHT	2000/2001	Murrah Bunga Koala Recovery Forest Ecosystem and Riparian and Rehabilitation	The project is a collaborative initiative to address riparian degradation, koala habitat conservation and restoration and introduce new natural resource management techniques that will lead to long term onground improvements.	$71,300.00	
26	NHT	NSW	NHT	2000/2001	Port Stephens Koala Habitat Restoration	Reverse the decline in koala habitat in the Port Stephens LGA, by protecting and restoring koala habitat via a strategic approach that is based on the best scientific information available.	$74,400.00	
20	NHT	NSW	NHT	2000/2001	Rous Riparian Corridor	The project involves riparian rehabilitation linking remnants of wet sclerophyl koala habitat to subtropical rainforest and world heritage subtemperate rainforest areas; enhancing habitat for rare and threatened species, biodiversity, soil, air and water.	$12,600.00	
27	NHT	NSW	NHT	2000/2001	Wildlife Corridor Revegetation Project Coffs Creek Stage 2	This project is Stage 2 of regeneration and revegetation works for riparian vegetation and koala habitat on the north arm of Coffs Creek.	$13,000.00	
55	NHT	VIC	NHT	2000/2001	Integrated Large Scale Revegetation of Degraded Non-arable Land	This project will protect threatened vegetation remnants and expand vegetation links to allow for koala and other wildlife movement from the Brisbane Ranges National Park to adjoining reserves.	$50,000.00	
28	NHT	NSW	NHT	2001/2002	Wildlife Corridor Revegetation Project Coffs Creek Stage 2	This project is Stage 2 of regeneration and revegetation works for riparian vegetation and koala habitat on the north arm of Coffs Creek.	$10,000.00	
61	NHT	QLD	NHT	2001/2002	Conserving Remnant Vegetation in Pittsworth Shire through Community Action	The project aims to retain comprehensive representation of the Shire's vegetation resources including a network of corrdiors for movement of native fauna. High quality remnants and key linkages will be identified through analysis of State mapping.	$54,100.00	
32	NHT	NSW	NHT	2002/2003	Biodiversity and Habitat Enhancement of Sub-tropical Regenerating Rainforest	The project objectives include the restoration and enhancement of dry Eucalypt/wet sclerophyll and sub-tropical rainforest on an area already protected by a Wildlife Refuge Agreement.	$6,174.00	
34	NHT	NSW	NHT	2002/2003	Native Vegetation Grazing Pressure Protection Project	This project will limit stock access to 20ha of native vegetation stands containing threatened and endangered species and to re-growth areas on steep slopes by fencing off these areas utilising 1.5km of fence line.	$13,312.00	
30	NHT	NSW	NHT	2002/2003	Noggabri Landcare Group - Koala Corridors and Floodplain Revegetation Project	The project will aim to join up and build on successful corridor work done by other members of the group. The area is noted for koala population. One site is situated close to the Mooki River and provides the major water source for livestock and native animals.	$12,910.00	
33	NHT	NSW	NHT	2002/2003	Port Stephens Community Groups Environmental Program	The funds will be utilised by the 10 community groups for a range of projects including bush regeneration, protection of remnant native vegetation, weed control, revegetation, soil stabilisation, foreshore stabilisation and improving water quality.	$27,273.00	
29	NHT	NSW	NHT	2002/2003	Preserving & Restoring Koala Habitat Hawkes Nest NSW		$11,513.00	
62	NHT	QLD	NHT	2002/2003	Enhancing the Protection of Significant Koala Habitat	This project aims to enhance the conservation value and long-term management of habitat in an important koala area through fencing revegation of degraded areas improved fire management collection of baseline ecological data.	$16,240.00	
64	NHT	QLD	NHT	2002/2003	Koala Habitat Linkage: Maryborough to Tiaro	The project responds to the fragmentation of the koala corridor between Tiaro and Maryborough. The project will build up existing knowledge; revegetate; provide information to property owners; consult with land managers; and encourage local primary schools.	$13,092.00	
68	NHT	QLD	NHT	2002/2003	N337 - Rainforest Land Acquisition - Blackall Range (Booroobin) Site 2	Protection through acquisition of elevated rainforest on escarpments and tall open forest on the Blackall Range.	$684,600.00	
65	NHT	QLD	NHT	2002/2003	Rehabilitation of Bushland Adjacent to Kurwongbah SpillwaySideling Creek Petrie	The project will rehabilitate the bushland adjacent to the Kurwongbah Spillway Sideling Creek Petrie by protecting native vegetation for biodiversity conservation. Seeds will be sourced and germinated locally for replanting as seedlings.	$17,475.00	

38	NHT	NSW	NHT	2003/2004	Koala Habitat and Biodiversity Regeneration of Beranghi Cooperative	This project will enhance the biodiversity of Beranghi cooperative land and provide an enriched and enlarged habitat for the koala population.	$6,074.00	
35	NHT	NSW	NHT	2003/2004	Native Vegetation Grazing Pressure Protection Project	This project will limit stock access to 20ha of native vegetation stands containing threatened and endangered species and to re-growth areas on steep slopes by fencing off these areas utilising 1.5km of fence line.		
36	NHT	NSW	NHT	2003/2004	Rosebank Koala Monitoring and Semi Release Enclosure	This project will connect 500m of fragmented koala habitat in Rosebank to form a 50m wide corridor by planting 1000 trees. We will monitor the koala population throughout the year and prepare mapping of home ranges sightings and native vegetation.	$9,218.00	
37	NHT	NSW	NHT	2003/2004	Sustainable Water-Cycle Management and Enhanced Biodiversity on a Cattle Farm	This project will establish sustainable water-cycle management on a beef cattle farm and enhance biodiversity along 2.4km of riparian corridor of the Pappinbarra River establishing a stock exclusion area 30m from the river bank.	$25,272.73	
69	NHT	QLD	NHT	2003/2004	Lower Klein Creek Biodiversity Restoration Project	This project will address the range of environmental weeds that are threatening the biodiversity in the region as the project area contains significant riparian vegetation. Environmental weeds include privet cats claw creeper and prickly pear.	$16,682.00	
67	NHT	QLD	NHT	2003/2004	N334 - Coastal Lowland Rainforest Land Acquisition - Mooloolah Floodplain (Drinnan) Site 1	Protection through Acquisition of lowland subtropical rainforest interpersed with small areas of tall Melaleuca forest on the Mooloolah River floodplain.	$154,408.00	
70	NHT	QLD	NHT	2003/2004	Protection of Klein Creek Water Quality and Biodiversity Highfields Queensland	This project will establish a vegetation corridor containing 5000 local native plants including koala food trees between Wirraglen Reserve and Williams Park Reserve. The project will require specialised weed removal and treatment to 15ha.	$22,800.00	
46	NHT	NSW	NHT	2004/2005	Coolgardie Scrub Remnant Connectivity Project	This project will provide connectivity between two existing high conservation value bushland areas. It will reduce fragmentation and extend existing native forest boundaries and wildlife corridors.	$6,570.57	
39	NHT	NSW	NHT	2004/2005	Koala Habitat and Biodiversity Regeneration of Beranghi Cooperative	This project will enhance the biodiversity of Beranghi cooperative land and provide an enriched and enlarged habitat for the koala population.		
44	NHT	NSW	NHT	2004/2005	Myocum Koala Habitat Restoration	This project will create koala habitat and provide a focal point for potential wildlife corridors leading to surrounding properties. Revegetation with a total of 770 native plants will provide habitat and a food source for the local koala population.	$3,194.12	
42	NHT	NSW	NHT	2004/2005	Regeneration of Koala Habitat in Sub-Regional Vegetation Wildlife Corridor		$27,269.00	
41	NHT	NSW	NHT	2004/2005	Rehabilitation of Gully in Echidna Creek	This project will rehabilitate 12 acres of gullies springs and two creeks to re-establish indigenous rainforest and improve the quality of the water flowing into Marom Creek water catchment area.	$3,659.09	
45	NHT	NSW	NHT	2004/2005	Rehabilitation of Gundurimba Dry Rainforest Remnant and Koala Colony	This project will increase existing 9ha of remnant dry rainforest habitat by carrying out ongoing environmental weed control allowing for native plant regeneration.	$8,910.00	
40	NHT	NSW	NHT	2004/2005	Restoring Platypus Habitat and Biodiversity at Rosebank NSW	This project will protect platypus koala and waterbird habitat and restore and enhance biodiversity along 3km of Yankey Creek. It will plant 5500 local rainforest plants to establish corridors distribute local seeds and undertake bush regeneration.	$21,980.00	
43	NHT	NSW	NHT	2004/2005	Rosebank Dorroughby Koala and Wildlife Habitat Project	This project will provide an area of approximately 3 acres of prime koala food trees and 1 acre of riparian rainforest regeneration by planting 3000 native plants. It will enhance and extend a wildlife corridor which has been degraded.	$10,044.25	
72	NHT	QLD	NHT	2004/2005	Aboriginal Interpretation and Koala Habitat Restoration of Springsure Creek	This project will ensure that proposed rehabilitation beautification and interpretation of Springsure Creek within the town of Springsure maintains a strong aboriginal focus. The project will plant 1500 appropriate habitat species.	$10,700.00	
71	NHT	QLD	NHT	2004/2005	Tree Planting to Provide a Habitat for Koalas on our Property near Canungra, Queensland	This project will provide food for koalas. This project will plant and maintain 100 eucalypts suitable for koalas which will be encouraged to live in the area.	$370.00	
73	NHT	QLD	NHT	2004/2005	Wildlife Habitat and Riparian Revegetation Along Wallam Creek - Cashel Vale Bollon	This project will revegetate a riparian area 5km long on Wallam Creek increasing the health of the river and providing additional habitat for the local koala colony. Various techniques will be trialled to educate and assist in the design of future projects.	$44,905.45	

57	NHT	VIC	NHT	2004/2005	Community Driven Onground Works for River Health Vegetation and Wetland Improvements	The project shall support LandCare Groups undertake works at three sites and at a further two sites in conjunction with Parks Vic to enhance river terrestrial and wetland health within the Portland Coastal Basin.	$70,000.00	
58	NHT	VIC	NHT	2004/2005	Koala Habitat Recovery on the Southern Mornington	This project will provide 10000 koala habitat trees for the coastal reserves between Somers and Shoreham and for private landholders to restore or create suitable habitat to support a viable koala population and prevent the possibility of local extinction.	$15,000.00	
56	NHT	VIC	NHT	2004/2005	Qualitative and Quantitative Assessment of Koala Habitat in the Golden Plains Shire and Writing of a Habitat Atlas	This project will use vegetation surveys spot assessments GIS mapping and data analysis to conduct a qualitative and quantitative assessment of the approximate 90000ha of potential koala habitat in the Golden Plains Shire.	$25,059.09	
2	NHT	National	NHT	2005/2006	Koala Funding	Funds to NSW/QLD Governments to improve koala habitat and management	$50,000.00	
63	NHT	QLD	NHT	2005/2006	Enhancing the Protection of Significant Koala Habitat	This project aims to enhance the conservation value and long-term management of habitat in an important koala area through fencing revegation of degraded areas improved fire management collection of baseline ecological data.		
66	NHT	QLD	NHT	2005/2006	Rehabilitation of Bushland Adjacent to Kurwongbah SpillwaySideling Creek Petrie	The project will rehabilitate the bushland adjacent to the Kurwongbah Spillway Sideling Creek Petrie by protecting native vegetation for biodiversity conservation. Seeds will be sourced and germinated locally for replanting as seedlings.		
74	NHT	QLD	NHT	2005/2006	Restoration of Koala Habitat and Land Degradation at Lowena Pittsworth Old	This project will fence 25ac of property and plant 500 trees and shrubs following a water line that cuts through the property and requires concurrent earth works to address soil erosion.	$39,327.08	
3	NHT	National	NHT	2006/2007	Koala Funding	Funds to NSW/QLD Governments to improve koala habitat and management	$51,172.73	
31	NHT	NSW	NHT	2006/2007	Noggabri Landcare Group - Koala Corridors and Floodplain Revegetation Project	The project will aim to join up and build on successful corridor work done by other members of the group. The area is noted for koala population.		
75	NHT	QLD	NHT	2006/2007	Replanting Koala Food Trees and Other Natives at Les Hughes Sporting Complex	This project will plant koala food trees and other native species to increase the habitat for the existing koala population and other native fauna. Non-endemic tree species will be removed with the mulch from these trees.	$12,480.00	
48	NHT	NSW	NHT	2007/2008	The Regeneration of the Bridle Path, Nelson Bay	This project will protect and enhance the natural value of the Bridle Path area as part of the coastal koala habitat corridor that runs around the edge of Port Stephens. This project will also stabilise the steep slope either side of the path.	$11,716.73	
47	NHT	NSW	NHT	2007/2008	Wetland Rehabilitation at Boambee East	This project will rehabilitate a wetland area at Boambee East which is currently infested with weeds silt and debris. The wetland area is an endangered ecological community that provides habitat for the threatened koala and other native fauna.	$3,800.00	
59	NHT	VIC	NHT	2007/2008	Koaladoors Project - Establishment of Wildlife Corridors	This project aims to create a wildlife corridor along the Hopkins River and Mt Emu Creek between the Framlingham forest and Panmure. This will be achieved through erecting 8kms of fence and planting approximately 30000 native trees.	$46,500.00	
						GRAND TOTAL	**$6,299,958.48**	
		* Funding programs include Caring for our Country (C4oC), Natural Heritage Trust (NHT), National Environmental Research Program (NERP), Endangered Species Program (ESP) and Australian Research Council (ARC)						

Senate Standing Committee on Environment and Communications
Environment and Communications References Committee
Answers to questions on notice

The status, health and sustainability of Australia's koala population

Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Species listing		
Proof Hansard Page and Date *or* Written Question:	62 (19/5/11)		

Senator Brown asked:

We heard evidence this morning of 85 or 95 per cent loss of population in central-western Queensland in the last decade, and the figures are way over 50 per cent in the last decade nearly everywhere you look. We have had abundant evidence that loss of habitat, predation by dogs, car strikes and so on, and indeed drought, have all—it is a multi-factorial causation and there is disease within the population as well. So we do understand a lot of the factors. Do you know of any other species of which there has been such abundant evidence of loss of population but there has not been a recommendation for listing?

Ms Callister: Are a large number of species that are listed under the EPBC Act so I would have to take that on notice—

Senator BOB BROWN: Would you, please.

Ms Callister: and look at what data we have. Given that there is a very significant number it would be quite an exercise to do that but I am happy to take it on notice.

Answer:

The Threatened Species Scientific Committee has assessed the koala for possible national threatened species listing consistent with its regular practice and has recommended that the koala is not eligible for listing.

Senate Standing Committee on Environment and Communications
Environment and Communications References Committee
Answers to questions on notice

The status, health and sustainability of Australia's koala population

Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Translocations		
Proof Hansard Page and Date *or* Written Question:	63 (19/5/11)		

Senator Brown asked:

We did have a very longstanding expert earlier in the day who said that he had seen koala translocations that were successful in two offshore islands but knew of no circumstance in which this had been successful in mainland Australia. Can you point to any circumstance in which it has been successful in mainland Australia?

Ms Dripps: Senator, Deb has explained that in her understanding of koala dynamics translocation is used where there are already overabundant koalas, to ensure that they do not subsequently perish or suffer inordinately because they have eaten too much of the trees that are there. There is quite a lot of koala translocation in Victoria. However, it is my belief and I think Deb has already stated that it is hers that that is not done with the intention to reintroduce koalas into areas where they are not.

Senator BOB BROWN: Do you know where that has been successful.

Ms Dripps: I would have to consult with state colleagues and probably take that on notice. I understand that in Victoria and South Australia they have translocated koalas to other places and I believe continue to do so, but I would prefer to take that on notice as it is a state-level matter—

Senator BOB BROWN: If you would. I would be very keen to receive evidence for the committee that showed that a translocation—and I think Dr Dripps is indicating that these are to areas which have extant koala populations—has actually been successful in increasing the koala population in the translocated place. We had a gentleman from Coffs Harbour here earlier talking about evidence that translocated animals will try to go back; they are territorial.

Ms Callister: I understand that you may be having some hearings in Victoria as well. That might be a matter that you would like to take up particularly with the Victorians, as I understand that that is one of the areas where translocation has occurred more often. We are happy to take it on notice and see what we can find but it may also be something you would like to explore with the Victorians.

Senator BOB BROWN: Thank you.

Answer:

Most koalas in mainland Victoria are derived from translocated populations. Victoria’s koala population was severely depleted by the 1920s due to hunting, habitat destruction and disease. Koalas have been re-established over most of their original Victorian range by

translocation from islands such as Phillip and French Islands to approximately 250 release sites. The Kangaroo Island, Eyre Peninsula and Mount Lofty Ranges populations in South Australia were also established through translocation of Victorian koalas. The population in the Narrandera Nature Reserve in New South Wales is unusual in that it has had koalas translocated from both Queensland and French Island in Victoria. Another small colony has been established in semi-natural conditions at Yanchep in Western Australia.

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Answers to questions on notice

The status, health and sustainability of Australia's koala population

Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Habitat trees		
Proof Hansard Page and Date *or* Written Question:	63-64 (19/5/11)		

Senator Brown asked:

Do you, or your department in its full wisdom—and you can take this on notice if you would—know of any case with any threatened species in Australia anywhere in history where habitat trees are removed to the benefit of the species that is threatened?

Ms Callister: I am happy to take that one on notice.

Ms Dripps: In so doing, Senator, there may be examples where changing the age class of a forest increases the supply of food for some species. We will look into that for you.

Answer:

A study of forest fauna abundance and distribution in north eastern New South Wales found that koalas were more abundant in forests that had been heavily logged (Kavanagh et al., 1995). However, whether the species in lower-elevation forests occur independently of logging intensity, or because these forests represent their preferred habitats, could not be determined. Another study in the Pilliga Forest of western New South Wales showed that selective removal of white cypress pine did not adversely affect koala populations (Kavanagh et al., 2007).

Kavanagh, R. P., S. Debus, T. Tweedie and R. Webster (1995). "Distribution of nocturnal forest birds and mammals in North-eastern New South Wales: Relationships with environmental variables and management history." Wildlife Research 22: 359-377.

Kavanagh, R. P., M. A. Stanton and T. E. Brassil (2007). "Koalas continue to occupy their previous home-ranges after selective logging in *Callitris-Eucalyptus* forest." Wildlife Research 34(2): 94-107.

Trials on ecological thinning - that is, the removal of some vegetation to improve the integrity of forests and woodlands and their associated flora and fauna, are being undertaken by Parks Victoria in Victoria’s redgum and box-ironbark forests. Further information is available on the Parks Victoria website at: http://www.parkweb.vic.gov.au/RRG/activeforesthealth.cfm

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The status, health and sustainability of Australia's koala population

Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	EPBC Act		
Proof Hansard Page and Date *or* Written Question:	64 (19/5/11)		

Senator Cameron asked:

I notice my language has been inconsistent because I am not sure of the definitions. Could the department put together a little summary of what is in the act and pull out for us those definitions in the various parts of the act to save me working through it?

Ms Callister: Certainly.

Senator CAMERON: And could you also provide copies of what the scientific committee is looking at as well?

Ms Callister: Yes.

Senator CAMERON: So it will be a little package of definitional material. Are there any other definitional things we should look at?

Ms Callister: We provided some of that with our submission but if we can perhaps package it so that it is under a heading so you know exactly what you are looking for. It is really those three key things: the sections of the act that point to both how you define them and what the committee and the minister can and cannot take into account in making their decisions, then the relevant regulations and then any guidelines that the TSSC has made publicly available about how it has interpreted the legislation.

Answer:

Relevant sections of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and *Environment Protection and Biodiversity Conservation Regulations 2000* are attached. The categories of threatened species under the EPBC Act are extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent. Broad definitions for each of these categories are found under Section 179 of the EPBC Act. Further information on the criteria for listing a native species in the critically endangered, endangered or vulnerable category is found under Part 7 of the *Environment Protection and Biodiversity Conservation Regulations 2000*.

Section 186(2) of the EPBC Act provides information <u>on the only matters the Minister may consider</u> when deciding whether to include a native species in a particular category (whether a result of a transfer or otherwise). Section 189 of the EPBC Act provides further clarification on the advice that must be considered by the Minister from the Threatened Species Scientific

Committee (TSSC) in relation to amending the list of threatened species. Section 194Q(6)(b) provides that the Minister may seek and have regard to advice from any other source.

The TSSC refers to the 'Guidelines for Assessing the Conservation Status of Native Species according to the *Environment Protection and Biodiversity Conservation Act 1999* and the *EPBC Regulations 2000*' (attached to the department's submission to the Inquiry). These guidelines provide an objective and transparent method for assessing a species' eligibility for listing. A native species is determined to be eligible for listing as critically endangered, endangered or vulnerable if it meets any of the five specific criteria described in these guidelines. The guidelines also outline how the TSSC defines terms that uses in assessing species' eligibility for listing, such as population, area of occupancy and extent of occurrence.

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The status, health and sustainability of Australia's koala population

Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Mumbulla Forest		
Proof Hansard Page and Date *or* Written Question:	65 (19/5/11)		

Senator Cameron asked:

Let me just take it step by step. Was the department aware that the koalas in Mumbulla forest were the last remnants of a subspecies of the koala?

Ms Dripps: I was not personally aware of that but I would like to take on notice whether the department was aware of it, because I do not know everything the department knows.

Senator CAMERON: And was the department aware that there are only 52 koalas left?

Ms Dripps: Again, I would give the same answer.

Senator CAMERON: Now you know that there has been evidence led that there are 52 koalas left in Mumbulla forest, that they are genetically quite unique and that they are in danger of extinction, what will the department do about that, if anything.

Ms Dripps: The first thing we would do is get the evidence you have referred to, which I am sure will be in the transcript of the hearing imminently. Then we would look at whether programs exist in that area already that are working towards addressing that particular problem. Then we would take it from there.

Answer:

The Threatened Species Scientific Committee considered draft reports addressing this issue as part of its population abundance workshop and again during the period of consultation on the nomination of the koala for possible threatened species listing.

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Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Regional Forest Agreements		
Proof Hansard Page and Date *or* Written Question:	66 (19/5/11)		

Senator Brown asked:

The regional forest agreement puts the safety of those koalas outside your administration of the EPBC?

Ms Dripps: That is correct.

Senator BOB BROWN: Thank you.

Senator CAMERON: Even if they are listed?

Ms Dripps: If they were listed, that information and conservation status would be fed into future regional forest agreement processes.

Senator CAMERON: So the forestry authorities can say 'We don't care—the 52 are gone'; is that correct?

Ms Dripps: I am not sure that that is exactly correct. I would like to take that question on notice.

Answer:

The Australian Government is committed to Regional Forest Agreements for the conservation and sustainable management of Australia's native forests. Each Regional Forest Agreement established a comprehensive, adequate and representative forest reserve system, based on scientifically sound, nationally agreed criteria. Under the Regional Forest Agreements, ongoing forest management - including the protection of threatened species - is the responsibility of the relevant state government.

Section 38 of the *Environment Protection and Biodiversity Conservation 1999* (Environment Protection and Biodiversity Conservation Act) provides, subject to certain requirements, that the requirement to obtain approval for actions that are likely to have a significant impact on a matter of national environmental significance does not apply in relation to a Regional Forest Agreement forestry operation (as defined under the *Regional Forest Agreements Act 2002*) when undertaken in accordance with a Regional Forest Agreement.

Following the Comprehensive Regional Assessments for Regional Forest Agreement regions, the clauses of Regional Forest Agreements have been designed to address the environmental, economic and social impacts of forestry operations and are intended to provide an effective level of equivalent protection for environmental matters as would otherwise be afforded by

the ordinary referral, assessment and approval regime set out in Chapter 4 of the Environment Protection and Biodiversity Conservation Act.

Forestry operations within the Mumbulla State Forest that are undertaken in accordance with the Eden Regional Forest Agreement are exempt from the approvals and enforcement provisions under the Environment Protection and Biodiversity Conservation Act. However, any forestry operation must be undertaken in accordance with relevant state legislation and its supporting regulatory framework.

At the Australian Government level, the Minister of Agriculture, Fisheries and Forestry has portfolio responsibility for administering the Regional Forest Agreement Act, including concerns about forestry operations impacting on threatened species in areas where operation are undertaken in accordance with an Regional Forest Agreement.

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The status, health and sustainability of Australia's koala population

Public hearing, May 2011, Canberra

Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	Activities to protect the koala		
Proof Hansard Page and Date *or* Written Question:	66-67 (19/5/11)		

Senator Brown asked:

Can you tell the committee of any single act by the federal government in the last 10 years intended to protect or enhance the survival of koalas that has been carried into effect?

Ms Callister: Yes, I can. There have been a number of funding proposals that have been funded dealing with on-ground management of koalas through some of our programs including Caring for our Country and its predecessor the Natural Heritage Trust. There has been funding provided under the national reserve system has gone to some areas which have included koala habitat. We are also funding a project at the moment in collaboration with the New South Wales government and, I think, the University of Queensland which is aimed at testing what are some of the most effective management interventions for koalas. That project is due to finish at the end of this year. So, yes, there have been quite a number of actions by the government which are trying to improve the health and status of koalas.

Senator BOB BROWN: Could you provide those actions to the committee and the amount of money set aside?

Ms Callister: We will certainly do our best.

Answer:
The attached table summarises Australian Government funding related to the protection of the koala under the following programs:

National Environmental Research Program (NERP)(2010-11):	$359,632
Natural Heritage Trust (1997-2008):	$2,127,542
Caring for Our Country (2008-present):	$162,295
Australian Research Council (2004-present):	$3,485,490
Endangered Species Program (1995-96):	$165,000

Total Australian Government funding from these programs over the years totalled $6,299,959.

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Program: Division or Agency:	Department of Sustainability, Environment, Water, Population and Communities	**Question No:**	*tba
Topic:	United States government listing of koalas		
Proof Hansard Page and Date *or* Written Question:	67 (19/5/11)		

Senator Brown asked:

Thank you. The United States has listed the koala as threatened. Can you tell us why they have done that but Australia has not?

Ms Callister: I am not fully familiar with the criteria that the United States government uses under its endangered species act to make determinations about whether species are threatened. Without knowing that and being able to compare whether their criteria as the same as or different from ours, I would not be able to answer that question.

Senator BOB BROWN: Is it possible that your department could find out and let the committee know about that.

Ms Callister: Yes, certainly.

Senator BOB BROWN: Thank you.

Answer:

The criteria for listing threatened species under the United States' *Endangered Species Act 1973* are less specific than the guidelines used by the Threatened Species Scientific Committee. For example, the United State's criteria do not specify a quantitative decline in population, nor the timeframe over which a decline must occur. The United State's 2000 listing was based on historical decline in habitat since European settlement, ongoing (at the time of listing) habitat clearance in Queensland and low genetic diversity of Victorian and South Australian populations.