December 14, 2012

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

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Re: The effectiveness of threatened species and ecological communities' protection in Australia

Dear Committee,

BirdLife Australia welcomes the opportunity to participate in this timely inquiry into the effectiveness of threatened species and ecological communities' protection in Australia. BirdLife Australia is a highly respected, science-based, not-for-profit conservation organisation. With our specialised knowledge and the commitment of our Australia-wide network of 10,000 members, and more than 25,000 volunteers and supporters, we are dedicated to achieving outstanding conservation results for our native birds and their habitats.

In the attached report, prepared by our threatened species scientific committee, we use examples to demonstrate that threatened species recovery works.

Our message is clear: recovery programs for threatened species are effective and can be cost efficient where adequate resources and expertise have been applied. However, despite the significant time that has been invested in listing and drafting recovery plans, progress in implementation has been poor. Progress in managing threats to threatened species has also been rated as poor nationally.

Given the escalating biodiversity crisis, responses will need to be substantially scaled up because the current level of conservation action is outweighed by the magnitude of threat. Resources available to the protection of Australia's threatened species are grossly inadequate to the task of preventing extinction and improving the conservation status of those species most in need.

In the attached report we provide details and recommendations in response to the inquiry's terms of reference.

We also refer to the committee an analysis of threatened species legislation and planning laws conducted by The Australian Network of Environmental Defenders Offices (ANEDO). They have also found that the problem lies in implementation: while the laws in some jurisdictions look good on paper, they are not effectively implemented. Time frames for action and performance indicators are largely absent. Effective implementation is further hampered by a lack of data and knowledge about the range and status of biodiversity across Australia. A clear finding of this report is that threatened species laws in all jurisdictions needed to be reviewed, strengthened, and fully resourced and implemented.

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Given the decline in biodiversity noted in each state and territory, combined with increasing population pressures, land clearing, invasive species and climate change, now is not the time to be streamlining and minimising legal requirements in relation to threatened species assessment.

Yours sincerely,

James O'Connor
CEO

Submission to the Environment and Communications References Committee for inquiry on “The effectiveness of threatened species and ecological communities' protection in Australia”

birds are in our nature

birdlife AUSTRALIA

Contents

BirdLife Australia Threatened Species Committee (Chaired by Professor Stephen Garnett) with additional input from:

- Hugh Ford
- Penny Olsen
- Gill Ainsworth
- Tim Holmes
- Judit Szabo
- Andrew Burbidge
- Peter Menkhorst

BirdLife Australia has played a major role in threatened species conservation throughout its 110 year history. Representations by BirdLife Australia (then the Royal Australasian Ornithologists Union) were instrumental in persuading the federal government to set up dedicated threatened species funding in the 1980s and its members have played important roles in ongoing conservation programs, particularly monitoring. The organisation published the first books covering all threatened birds in Australia and has recently been the major funding partner for an Australian Research Council project that aims to understand the factors underlying success in threatened species management. One of the outcomes of this project was the Action Plan for Australian Birds 2010, which provided the most comprehensive reviews of the status of all Australian bird species. This follows similar volumes in 2000 and 1992. We provide here summaries of our experience at BirdLife Australia on each of the main themes of the inquiry.

(a) Management of key threats to listed species and ecological communities

We think the best way of illustrating the effectiveness of management of key threats to listed species is through examples of successes and failures, with a set of recommendations at the end.

Successes

Australia would have lost many more bird species had it not been for the concerted efforts of organisations and individuals to save birds and the funding provided for threatened species recovery, mostly from the Commonwealth. We felt that it was important for the committee to realise that, contrary to common perception, Australia has been remarkably effective at conserving threatened bird species in the 20 years since dedicated funding has been provided. While it should be noted that all success is provisional, since new threats can arise and not all threats to these species have been mitigated, the following accounts give some idea of the range of successful conservation programs, which have involved managing or removing key threats.

1. Gould's Petrel: a small seabird that had only ever been known from a single island off Port Stephens, NSW, but where it was numerous. Research in the early 1990s by David Priddel and Nicholas Carlile of the NSW National Parks and Wildlife Service identified that rabbit grazing, currawong predation and the presence of Pisonia trees on Cabbage Tree Island were causing a rapid decline in the population. All three

threats were removed and the population started to recover. Further experimental research in which young were moved to other islands was also successful, minimising the risk from having all the birds on one island. The translocation technique developed has been used to save species elsewhere in the world. Management was based on first-rate research and proceeded using monitoring. While currently Vulnerable, it is likely that Gould's Petrel can be delisted by 2020. Active management has ceased and a relatively low frequency of monitoring is sufficient.

2. Albatrosses and petrels: the extent to which albatrosses and large petrels were being killed by long-line fishing was first exposed by Nigel Brothers of the Tasmanian Parks and Wildlife Service in 1991. By 2001 Australia had played a major part in negotiating the Agreement on the Conservation of Albatrosses and Petrels (ACAP), which is based in Tasmania. Since 2001 there appear to have been marked reductions in the extent to which albatrosses and petrels are being taken by fishing gear. The process has been marked by high quality peer-reviewed research, ongoing monitoring of fisheries for compliance with fishing techniques that reduce albatross deaths, particularly in Australian waters, and international negotiations to reduce albatross bycatch elsewhere. While threats to albatrosses and petrels persist, substantial progress has been made.

3. Wedge-tailed Eagle (Tasmanian): the Tasmanian subspecies of the largest Australian raptor, which naturally occurs in low numbers. In the 1990s Nick Mooney of the Tasmanian Parks and Wildlife Service and others, with Parks funding, identified that the eagle is sensitive to disturbance while nesting and declines were anticipated. The development of wind farms in Tasmania in the 2000s also resulted in the death of some eagles. Protocols were developed that reduced disturbance by forestry operations. As part of its permit conditions imposed by the Commonwealth and Tasmania, the major wind farm company has been purchasing land with nests on it and placing covenants on it to prevent clearing.

4. Lord Howe Woodhen: a flightless rail confined to Lord Howe Island. Surveys led by John Disney of the Australian Museum and Peter Fullagar of CSIRO in the 1960s identified that fewer than 10 pairs of woodhen persisted on the summit of Mt Gower. In the 1980s the principal threats to the birds, feral pigs and goats, were eliminated from the island by the NSW NPWS and captive bred birds were reintroduced to the lowlands. The woodhens thrived and are currently at about 71-74 pairs, which is considered about carrying capacity for the island.

5. Plains-wanderer: a small ground-dwelling grassland bird sparsely distributed from northern Victoria to central Queensland. Identified as having declined greatly in the 1980s, a Commonwealth funded research project by David Baker-Gabb in the 1980s identified the main habitat requirements of the species and major threats to it, particularly the loss of natural grasslands to agriculture and the need to manage grazing. Over the last few decades several large properties have been acquired in NSW, Victoria and Queensland on the basis of the Plains-wanderer habitat they contain, largely with Commonwealth funds. Constraints on agriculture and grazing have also been applied, though less successfully. Nevertheless, without the research and subsequent habitat protection, the species would be much less common.

6. Hooded Plover (eastern): a small beach-nesting shorebird distributed from southern NSW around Victoria to the Eyre Peninsula and around Tasmania. Monitoring had identified rapid declines in many locations due to high recreational beach use. Research then demonstrated that nests of this species and their contents were

destroyed by vehicles and unconstrained pet dogs or by predators due to parents being disturbed by people. Active protection of nests by volunteers is at least stemming an ongoing decline. The research was undertaken with a series of short-term government grants with volunteers substantially contributing to monitoring and management.

7. Glossy Black-Cockatoo (Kangaroo Island): a long-lived cockatoo that had been reduced over the previous century from a population of thousands distributed from western Victoria to the Mt Lofty Ranges to 150 individuals in 1995 found only on Kangaroo Island. Research in the 1990s by Lynn Pedler and others from the South Australian parks service on the basis of short term funds from the Commonwealth identified that Brush-tailed Possums were taking eggs and chicks from nest hollows. Possum numbers were probably inflated because Kangaroo Island lacks ground predators and so they were able to graze on fertilized clover in sheep paddocks. Assiduous searches for nest sites which could then be protected from possums with corrugated iron collars and by trimming tree tops to reduce possum predation. The population has thus than doubled over the last 15 years. It may be possible to downlist the subspecies from Endangered to Vulnerable by 2020. Ongoing protection of nests will be needed indefinitely, though how many has not yet been determined. Monitoring frequency, currently annual with assistance from volunteers, may also be needed less frequently.

8. Muir's Corella: this cockatoo, a subspecies of Western Corella, lives in a small area of farmland in south-west Western Australia. The population was reduced to about 100 birds in the 1940s as a result of poisoning and shooting by farmers. Sustained protection has allowed it to recover to over 10,000 individuals. While there are potential problems in the future with, for example, nest hollow shortage, the trends and population size allowed delisting on this taxon under the IUCN Red List criteria in 2010. The Western Australian Government has now shifted Muir's Corella from Schedule 1 (Fauna that is Rare or likely to become Extinct) to Schedule 4 (Other specially protected fauna).

9. Albert's Lyrebird: a ground-dwelling species of rainforest and very wet eucalypt forest found only in north-eastern NSW and south-eastern Queensland. Research by Sandy Gilmore as part of his PhD with ANU had identified that ongoing logging was continuing to cause declines of this rare species and it was listed as Vulnerable in 1990. The cessation of forestry operations on the Whian Whian Plateau removed the largest threat and the species was removed from the IUCN Red List. Ongoing monitoring by volunteers of an isolated lowland population on Mt Tambourine has identified that the species can persist in small numbers if not disturbed. There is currently no active conservation management of this species.

10. Noisy Scrub-bird, Western Bristlebird and Western Whipbird (heathland subspecies): three birds of dense heathland on the south coast of Western Australia. They were much more widely distributed in the 19th century but had severely constrained distributions by the start of the 20th century. Research by CSIRO from the late 1960s continued subsequently by the Western Australian Department of Conservation identified the extreme sensitivity of these species to fire and undertook a series of well-planned experiments to establish new populations. The translocation of the most endangered of the trio, the Noisy Scrub-bird, was particularly successful with a new population established on an offshore island where fire is highly unlikely. At the same time habitat was secured and fire was controlled as much as possible. This allowed the natural spread of the species. When uncontrollable fire did strike the original

population in 2006, the substantial losses were buffered because the population was much larger and spread over a larger area allowing gradual recolonisation of the burnt area. While threats persist, long-term investment in these species by the WA Department of Conservation supported by Commonwealth government funds and a strong body of local volunteers not only prevented extinction of the scrub-bird but also greatly reduced the threat from fire.

11. Eastern Bristlebird (southern): a small bird of heathlands in coastal New South Wales. Also used to occur in Gippsland, Victoria, but now only at the eastern extreme of that state, for reasons that are unknown. Research by Jack Baker of the NSW NPWS and others identified the fire sensitivity of the species, which may be compounded by fox and cat predation. Nevertheless, several new populations have been successfully established since 2000 in areas that the birds probably occupied previously but from which they had been eliminated by fire. It is anticipated that it will be possible to downlist the subspecies by 2020.

12. Helmeted Honeyeater: a sedentary honeyeater occurring naturally in one small reserve near Healesville and another where it has been re-introduced via the release of birds bred in captivity at Healesville Sanctuary. This subspecies would certainly have gone extinct without sustained intervention. Research, management and monitoring have successfully countered one threat after another, with strong support from a local volunteer group and substantial Commonwealth funding. While its future remains tenuous, and there is some criticism for the funds it has received relative to other full species, especially considering that it is a marginally distinct subspecies of the widespread Yellow-tufted Honeyeater, it can be said that it would have gone extinct without heavy investment. The same cannot be said for some other species in which the Commonwealth has invested heavily (see below).

13. Macquarie Island: the introduction of cats, rats, mice and rabbits to this isolated subantarctic island in the 19th century resulted in the loss of distinctive subspecies of Banded Rail and Red-crowned Parakeet, the loss of at least the Grey Petrel as a breeding species and the confinement to offshore rock stacks of several other small petrel species. A major federal funded project undertaken by the Tasmanian parks service eradicated cats in the late 1990s. Grey Petrels returned as a breeding species but rabbits proliferated, devastating the local vegetation. A $20 million program in 2010-2011 appears to have eradicated rabbits, rats and mice, with a rapid response from small petrels. It remains to be seen whether this second perturbation produces unintended consequences but indications from other sub-Antarctic islands with feral mammal eradications indicate sustained benefits with no need for future active management.

14. Heard and North Keeling Islands: Heard Island is one of the few sub-Antarctic islands lacking feral animals, despite 19th century harvests of seals and penguins. North Keeling supports a flightless rail (and many breeding seabirds) that has been eliminated from the rest of the Cocos (Keeling) group of islands. Strict quarantine regulations for the rare visits to both islands have maintained their pest free status, protecting thriving populations of seabirds and the rail.

Initial success but failure now imminent

1. Migratory shorebirds: small, mostly coastal, birds that breed in the high latitudes of the northern hemisphere and fly to Australia to spend the austral summer. Research since the 1980s, largely by volunteers but with substantial Commonwealth support, resulted in declaration of many Ramsar wetlands to protect shorebirds and stringent provisions under the EPBC Act to protect habitat in Australia. The Commonwealth also signed bilateral agreements with Japan, China and the Republic of South Korea. However the ongoing monitoring has now identified rapid declines in many species that can be directly attributed to destruction of coastal habitats in East Asia, particularly around the Yellow Sea between China and South Korea. Despite the international agreements, most effort to reduce this habitat loss has been through lobbying by non-government organisations. While the Commonwealth makes great efforts to reduce the loss of shorebird habitat in Australia, diplomatic efforts for these species in the East Asian flyway is limited and has not yet been effective.

2. Green Parrots on Norfolk Island were identified as declining in the 1980s and it was also discovered that only a single individual of the local subspecies of Boobook Owl was surviving. Intensive management of both species, including the introduction of some male New Zealand owls, allowed the population of both species to recover. In the last five years, however, funding shortfalls meant the cessation of the intensive management and effective monitoring. In the absence of evidence, anecdotal reports suggest that both species are now less common than a decade ago. In 2000 the parrot was downlisted to Endangered from Critically Endangered under the IUCN Red List criteria on the basis of ongoing population increases. In 2010 it was uplisted again. Like the Christmas Island Pipistrelle, the parrot and the owl are on a Commonwealth funded national park. Whilst there is no compelling evidence that extinction is imminent, it is at very high risk due to the small size of the population and on-going threats.

3. Western Ground Parrot: a ground-dwelling parrot that once occurred in heathland across southern south-west Australia. Fox baiting over the last ten years reduced predation on rare native mammals and initially appeared to have reversed long-term declines. However, it now appears to have allowed an increase in feral cats, which are more effective predators of ground-dwelling birds in thick vegetation. In the last decade ground parrots are now confined to Cape Arid National Park having disappeared from many areas where they were once thought to be relatively common. The most recent surveys by volunteers suggest that just 110 individuals survive. Some short-term funding has been made available for baiting cats. However there is almost none for research and monitoring to make sure the baiting is effective or efficient. More importantly, with so few birds left, there is no money for intensive emergency actions such as creating an insurance population of Western Ground Parrots maintained in captivity.

4. Christmas Island: in the Action Plan for Australian Birds 2000 all bird species and subspecies endemic to Christmas Island were listed as Critically Endangered. The main threat was the proliferation of Yellow Crazy Ants that had been uncovered by researchers from Monash University. The ants were having a devastating effect on the iconic red crabs that perform important ecological functions on the island and it was feared the ants would also affect the birds. The government response to the infestation was rapid and substantial with poisoning campaigns effectively controlling the ants in most parts of the island as determined by monitoring. While subsequent research showed that the birds would in fact have been affected by the ants over a

long time, if at all, the rapidity of the response has significantly limited the damage that might otherwise have been caused. The downside is that action on the ants was thought to be sufficient for all problems faced by Christmas Island fauna. For the Christmas Island Pipistrelle this was catastrophic - the species has gone extinct despite timely warnings about its rapid decline. This was a major failing for which there has been limited accountability. The species was on a Commonwealth funded national park. Decisions and advice given by a middle-ranking public servant effectively delayed action until it was too late. While the factors driving the rapid decline of the Pipistrelle were poorly understood, the final extinction, which could have been avoided by taking animals into captivity, was largely caused by excessive caution from one public servant. Non-ant threats to birds persist on Christmas Island, though are more dire for remaining mammals and reptiles, but the need to control ants has meant that few resources are made available for research, management or monitoring of other threats.

Failures

There have been few genuine failures in Australian bird conservation. Over the last 20 years, once the level of threat has been realised, there has usually been a commensurate response from the Commonwealth government with substantial assistance from volunteers. In many cases there will be failures if work is not continued. Similarly failures may occur before it is realised that species are threatened because of a failure to follow up on suspicions of decline. In few cases failure is imminent because of deliberate withdrawal of government support preventing effective conservation action.

1. Extinctions: Three subspecies and one species of Australian bird are thought to have gone extinct in the last two decades: Spotted Quail-thrush (Mt Lofty Ranges), Hooded Robin (Tiwi Islands), Star Finch (southern) and White-chested White-eye. All were seen in the 1980s or early 1990s but have not been located since. Although it has long been realised that they were scarce, little effort was made to find remaining populations, let alone undertake research, or identify and manage threats. For these taxa a consciousness of their level of threat, and political support for the protection of threatened species, came too late for effective action. In each case their scarcity may have required at least some level of captive breeding to ensure their persistence. Instead the occasional observations and warnings of likely extinction, evoked no action by responsible authorities.

2. Christmas Island Frigatebird, Thick-billed Grasswren (NW NSW), Brown Thornbill (King Island). All are Critically Endangered but for none is there active monitoring or management. A baseline survey of the Christmas Island Frigatebird was conducted in 2005/6 but has never been repeated. Unpublished research suggests the birds feed primarily in Indonesian waters and the South China Sea. Numbers may be continuing to decline but neither trends nor threats are known. About a dozen individuals of a subspecies of the Thick-billed Grasswren are known from one location, which is known to a few people. Almost nothing is known of this population – total size, habitat, threats, trends – yet it could blink out in an instant. Brown Thornbills on King Island have been seen once this century and only a few times last century. They may persist in the State forest or they may be extinct. In each case there has been a little bit of searching and monitoring but not enough to have any benefit.

3. Eastern Bristlebird (northern): a small bird found in grassland patchily distributed within rainforests in south-east Queensland and north-east NSW. One of Australia's most threatened birds with tiny populations readily eliminated by fire with little

prospect of recolonisation from adjacent patches. In NSW populations are monitored but there is no active management. In Queensland there were a few surveys and a captive population was established as a potential means of re-establishing the birds in places from which they had disappeared. The bird bred readily in captivity. The program was halted by two Queensland public servants who expressed a personal view that captive breeding should not be used for conservation and it was ordered that the captive birds be released. The two states could not agree on a recovery plan for the subspecies. There have been no recent surveys of the subspecies in Queensland and the subspecies is drifting towards extinction.

There are numerous Auditor General reports (such as the Auditor-General Commonwealth performance Audit Report (No.31) 2006–07; The Victorian Auditor-General 2009 performance audit of the FFG Act; Western Australian Auditor General's Report-Rich and Rare: Conservation of Threatened Species 2009; Tasmanian Auditor-General. 2009. Special Report 78: Management of Threatened Species) that have examined the effectiveness of state and Commonwealth management of key threats to threatened species. We refer these to the Senate Committee.

Recommendations:

1. Threatened species investments should be guaranteed over sufficiently long periods to allow recovery.

2. Success has been built on the back of high quality research, followed by bold management action and it has been confirmed by high quality sustained monitoring. Any management program should contain all of these.

3. Funding must be adequate. If too little money is provided then any gains are likely to be reversed rapidly or the knowledge obtained about the threatened species will be inadequate to mitigate threats. This can lead to an impression that funding spent on recovery activities have been ineffective. Substantial funding over extended periods can result in an improved status that can often be sustained with minimal input.

4. Successes often arose from the sustained commitment of key individuals, either belonging to government agencies, non government organisations or voluntary groups. Such individuals should be nurtured and given opportunities to mentor successors.

5. That said, there should be independent oversight of all threatened species programs, even those run by government. The personal judgements/opinions of key public servants sometimes have undue influence on funding allocations, which has then led to extinction or a high risk of extinction.

6. Government agencies should provide strong support of non-government organisations and community groups that are actively involved in conservation of threatened species.

7. A very real and sustained commitment to monitoring the status of threatened species and their response to management activities is desperately needed. The development of National Environmental Accounts that monitor the status of Matters of National Environmental Significance (such as nationally threatened species) should be fast-tracked.

(b) Development and implementation of recovery plans

A requirement to implement recovery plans would be one of the simplest and most direct ways to address the biodiversity crisis in Australia. Currently the EPBC Act requires that recovery plans be drafted and adopted for all listed taxa, but is silent about implementation.

There is currently no publicly available measure of recovery plan implementation

Currently it takes many years to produce an approved plan and adequate resourcing is required to clear the massive back-log of listed species that do not yet have recovery plans.

For example

- Only 9% of listed threatened species and communities have recovery plans NSW.
- Recovery plans were prepared for only 20% of listed species in Tasmania.
- And only 20% of threatened fauna and less than half of threatened flora have a recovery plan in Western Australia.

BirdLife Australia has actively participated in recovery teams and contributed to recovery plans since their inception in the 1980s. From our knowledge of effective recovery plans that contributed to species recovery we have the following recommendations:

8. Amend the EPBC Act to direct implementation of recovery plans.
9. Outcome-driven SMART objectives from which to evaluate success should be included in every recovery plan.
10. Plans should include research and monitoring components as well as a schedule of on-ground management.
11. Plans can be single species or multi-species. Multispecies plans should be either site/habitat based or deal with common threats. A review of multispecies plans should be conducted to ensure their efficacy.
12. Recovery Plans should be supported by a Recovery Team.
13. Recovery Teams should have both government and non-government representation and meet regularly to review research results and analyses of monitoring data. The experience with the Christmas Island Pipistrelle suggests that threatened species that occur only on protected areas should also have community membership on the Recovery Team.
14. Teams should have committed Chairs that will act in the best interest of the team (eg independent of the agency that they represent) and who can delegate effectively to team members.
15. Recovery Teams should be resourced and required to produce recovery plans within one year of listing.
16. A mechanism is needed to address situations where states either cannot reach agreement or intentionally hold up negotiations on finalisation of national recovery plans. It is common practice for some states to hold plans ‘hostage’ and ‘horse trade’.

(c) Management of critical habitat across all land tenures

Most threatened and Near Threatened bird species occur on public lands, including protected areas (Table 1) though substantial proportions of these taxa may also depend on private land outside of the reserve system.

Unfortunately there can be an impression that the threatened birds on public lands are safe. In reality these taxa usually require active management of threats. However there is very little funding available for state and territory governments to fund management of threatened species on public lands. For most of the last 20 years, states and territories have only invested in threatened species as part of co-funding arrangements with the Commonwealth. Recently the park management budgets of many parks services around the country have been slashed from already inadequate levels of funding. As has long been the case, parks budgets are largely directed at maintaining built infrastructure and servicing visitors rather than managing the natural 'infrastructure' such as threatened species that was often the basis of park declaration in the first place. For many parks the threatened species values are not known, and have no part in prioritising park management.

Where there is habitat management it tends to be driven by the attitude that landscapes and general threats should be the emphasis of conservation management, which has diluted the emphasis on managing critical habitat for threatened species. This applies to Commonwealth parks as much as to those managed by the states and territories. Thus Norfolk Island National Park is managed to reduce the density of cats and rats but without detailed management of the threatened species such as the Tasman Parakeet or the Norfolk Island Owl. Kakadu National Park has general fire management but no specific management for remnant populations of White-throated Grasswren or Yellow Chat. In fact there is almost no knowledge of where these species occur in the park. This attitude is also common in many state and territory parks.

Some 18% of threatened birds are mostly threatened by activity outside the Australian mainland, including seabirds affected by offshore fishing or at breeding sites, and migratory shorebirds affected primarily by habitat loss and modification along their migratory flyway.

Some 8% of threatened birds primarily depend on remnant habitat within intensively cultivated agricultural lands in the east or south-west, and a further 8% are scattered through the rangelands of northern Australia. Of this combined total just 20 taxa, 9%, are threatened, the remainder being listed as Near Threatened.

Table 1. Principal land use of habitat occupied by threatened Australian bird taxa (preliminary analysis)

Land use type	No. threatened bird taxa	%
Protected areas	125	59
Offshore threats (seabirds and shorebirds)	37	18
Intensive use agricultural lands	16	8
Rangelands	15	8
Boigu, Saibai and Tiwi Islands	6	3
Aquatic species	6	3
Remote arid lands	5	2
Total	211	

One fifth of species considered critically endangered have no formal protection in Australia. It is therefore also necessary to assess the effectiveness of threatened species laws outside the reserve system

However critical habitat declarations and provisions are rarely used in Australia. In Victoria, despite provisions for listing, only one Critical Habitat Determination has been made since the commencement of the FFG Act, and this declaration was revoked almost immediately. Listing of critical habitat is too discretionary and the political will does not exist.

In NSW there are currently only four areas declared as critical habitat under the *TSC Act*: the Wollemi Pine, the Gould's Petrel, Little Penguin population in Sydney Harbour, and the Mitchell's Rainforest Snail. The reason that there are very few critical habitats listed relates to the method of listing critical habitat under the Act which differs from the listing process for threatened species, and which allows economic considerations to be taken into account.

No critical habitats have been listed in Tasmania

The rest of the states and territories either have no provisions to list critical habitat or have no statutory requirements to do so.

Recommendations:

1. Commonwealth funds for threatened species habitat management on protected areas could usefully be made available to states and territories – allocated against a national prioritization schedule (i.e. equity between states should not be part of the funding formula, rather the conservation benefit that might derive from such investment). This fund could also be made available to the non-government conservation land management organisations, such as the Australian Wildlife Conservancy, Bush Heritage Trust and BirdLife Australia, which play an increasing role in the conservation of these taxa.

2. Specific actions for threatened species recovery should be incorporated into the management plans of all Commonwealth parks in addition to general habitat maintenance.

3. Management of critical habitat and favourable responses by threatened taxa should be part of the key performance indicators of all Commonwealth parks.

4. Make better use of listing critical habitat under the EPBC Act as well as state and territory legislation.

(d) Regulatory and funding arrangements at all levels of government

Regulatory arrangements:

The Australian Network of Environmental Defenders Offices (ANEDO) has conducted a thorough assessment of threatened species laws and planning legislation in each jurisdiction. We attach their report and refer it to the committee.

Further, we see a need for strong reform of EPBC Act. This should include removal of the provision for approval bilateral arrangements that would allow for the transfer of approval powers from the Federal Minister for the Environment, to states and territories. We also strongly feel that the government's response to the 2009 Hawke review of the EPBC Act requires significant revision to include some of the environment protection elements recommended by Dr Hawke rather than just the streamlining amendments put forward to

date. For example the Independent Environment Commission (Hawke Recommendation 71). Should be established to provide objective, science-based advice to the Minister to improve decision-making and ensure greater transparency and accountability This independence would promote removal of the commercial dependency between consultants and proponents to ensure best possible advice. The Independent Environment Commission should have a role in performance audits, monitoring and compliance to ensure proponents meet conditions and do not exceed impact thresholds while, at the same time, ensuring that conditions placed on development under the EPBC Act receive independent scientific review.

Inadequate resourcing restricts the operation of the Act. This in turn results in unnecessary delays in administration. Cost recovery mechanisms under the Act are needed to ensure that the Environment Department is adequately resourced to ensure operation of the Act and monitor performance (Recommendation 62) and a reparation fund should be established (Recommendation 60). It is also important that the approval process under the EPBC Act is better resourced so decisions can be independently reviewed in the context of local and expert knowledge. The Act should also require that national environmental accounts are developed (Recommendation 67) produced annually, and include Matters of National Environmental Significance such as trends in threatened species status.

Funding arrangements:

Commonwealth schemes for funding threatened species conservation were initiated in the early 1990s. They have varied in the extent to which they have considered threatened species, habitats, or landscape processes. They can be categorised as follows:

Idiosyncratic: the taxa receiving funds are not necessarily the taxa in greatest need and those that already have funded projects are more likely to receive additional funds. Some states have recently developed prioritisation processes with varying degrees of success. The Tasmanian process is a good example: it calculated that 171 threatened species on the priority list and could all be secured over a 50 year period for an estimated cost of approximately $155 million.

IT ALSO FOUND MANY SPECIES ARE SURPRISINGLY INEXPENSIVE TO SECURE OVER A 50 YEAR PERIOD: TO SECURE THE TOP 28 SPECIES WOULD COST LESS THAN $1 MILLION.

To secure the top-ranking 96% species would cost less than half that required to secure the remaining 4% of lowest-ranking species. Currently there are no available resources for implementing projects. The processes served to highlight the importance of long-term investment. It also excluded some species based on the premise that no project appropriate for funding in Tasmania alone could be identified that would reliably mitigate threats to the species. This includes the critically endangered orange-bellied parrot and endangered swift parrot, highlighting the importance of a national process.

Short-term: almost all threatened species projects have had to persist from grant to grant, few having commitments lasting for more than three years and most having to make annual bids for funding renewal, a frustrating and inefficient process. However, almost all conservation success stories have achieved results only after decades of research, adaptive management and monitoring. Success has usually been achieved because dedicated individuals have successfully navigated the shifting political tides that underpin funding priorities to maintain conservation effort. For most species it is entirely predictable that recovery will take decades but it has not been possible to negotiate long-term funding from government.

Poorly monitored: accountability for funding has generally been poor – either non-existent or poorly thought out so that the wrong things are reported. Some schemes have been roundly criticised by the Auditor-General (Auditor General 2004, Report no. 17, 2004–05; Auditor General 2008, Report no. 21, 2007–08). Few projects have published results beyond reports in the grey literature so that lessons are hard to extract, progress hard to ascertain, actions hard to understand and ongoing management is rarely built on regular analysis of monitoring results. Monitoring of threatened species is generally poor. For birds, the best monitored fauna in the country, an initial analysis of threatened taxa suggests that monitoring of most birds is insufficient to detect if the population has halved inside three generations, and for 16 there is no monitoring whatsoever (based on analysis of the *Action Plan for Australian Birds 2010*). Conversations with senior managers in conservation departments are generally negative about the need for monitoring. Such resistance to monitoring would be unheard of in health or education departments. A failure to monitor is at best a cavalier use of public funds.

Subject to capture by advocates: strong lobby groups have often captured funds far in excess of the amount that can be justified under any prioritization scheme. In all such cases identified during research for the *Action Plan for Australian Birds 2010*, research that might have refuted advocate's claims, and thus potentially reduced the allocation to a particular species, was avoided, or even actively discouraged by advocacy groups.

Caring for Our Country and the *Clean Energy Future - Biodiversity fund* are currently the primary funding vehicles to meet Australia's International obligations, (such as the UN Convention of Biological Diversity) to protect threatened species. Whilst these programs espouse the need to evaluate and improve on their delivery, adequate funding is needed to support the collection of data and good science to truly measure their contribution to threatened species outcomes. Currently appropriate indicators that measure progress towards achieving the objectives of the programs outcomes (rather than just the output based targets) are lacking. The programs are also regularly over-subscribed and require at least an order of magnitude increase in funding to deliver on our international obligations.

Recommendations:

1. Funding should be provided for up to eight years at a time with independent review and potential extension after four years.

2. Higher levels of investment in science and data collection are needed as part of funding programs such as Caring for Our Country, to ensure that on-ground activities are best practice: whilst many conservation activities appear straightforward, the actual and relative contribution to conservation of threatened species is often based on anecdotal evidence.

3. There should be a process of national prioritisation of recovery actions against agreed criteria. While there is fear by some that this will involve allowing some species to go extinct because they are too expensive to recover, the *laissez faire* approach currently used is doing that anyway, but without public consent. Rather it can help ensure that funds are directed to taxa genuinely in need to minimise the chances of further extinction. The process should involve a high degree of public participation and transparency (e.g. funding allocations should be published on an annual basis and open to public comment).

4. Investment in a national information system, including collection, management and distribution of information about threatened species management at local and regional

scales, and includes monitoring and evaluation is desperately needed. This sort of information should be publicly available.

5. Improved collaboration and co-ordination among states could lead to progress towards the management of species that require actions to occur in two or more states. Additional benefits of collaboration include the strengthening of linkages between funding sources and the conservation agencies that implement management as well as the strengthening linkages between governments and NGOs.

6. It should be a requirement of any threatened species project that there not only be an allocation for monitoring but there should be a plan developed in which monitoring results are analysed regularly and considered in ongoing management.

7. Reform of the EPBC Act should include removal of approval bilateral provisions and amendments that will strengthen protection for threatened species.

(e) Timeliness and risk management within the listings processes

Listing processes differ between jurisdictions. Most agencies are under resourced and thus lists are often out of date. The process can often be confused because the states and territories have different taxonomies and use different criteria. Fortunately Western Australia and the Northern Territory have had regular reviews to update lists using new knowledge based on the IUCN Red List criteria, and the Advisory List of Threatened Vertebrate Fauna in Victoria has been reviewed at regular 4-5 year intervals since 2003. The list attached to the EPBC Act arguably has greatest influence on habitat management decisions, however it requires significant updating. Table 2 describes the differences between the EPBC list (rows) and the latest IUCN Red List (columns) categories. Further details are provided in Appendices 1-4.

Table 2. Differences between EPBC status and latest IUCN red list status for Australian bird taxa

EPBC status	Critically Endangered	Endangered	Vulnerable	Not Threatened	Total
Critically Endangered	3	1	1	0	5
Endangered	11	22	6	5	44
Vulnerable	4	22	20	16	61
Not Listed	2	15	40	1071	1129
Total	20	60	67	1091	1239

A failure to list species can increase the risk that they are not considered at the time of new development proposals.

It also means that changes in the EPBC list cannot be used to assess progress with threatened species. The Australian Bureau of Statistics has been attempting to develop a set of environmental accounts that includes biodiversity stocks (4628.0.55.001 - Completing the Picture - Environmental Accounting in Practice, May 2012) but has had to use the IUCN Red List data because the EPBC Act data is too outdated. A comparison between the two is provided in Figure 1 that describes changes in an index of rarity (see Appendix 5 for further details). The Red List Index (RLI), which uses information from the IUCN Red List to track

trends in the projected overall extinction risk of sets of species, is among the indicators adopted by the world's governments to assess performance under the Convention on Biological Diversity and the United Nations Millennium Development Goals.

The Index calculated using the EPBC data is far more optimistic than that using the IUCN data for Australian birds. The Index for Australia is declining faster than global rates when migratory shorebirds and seabirds are included.

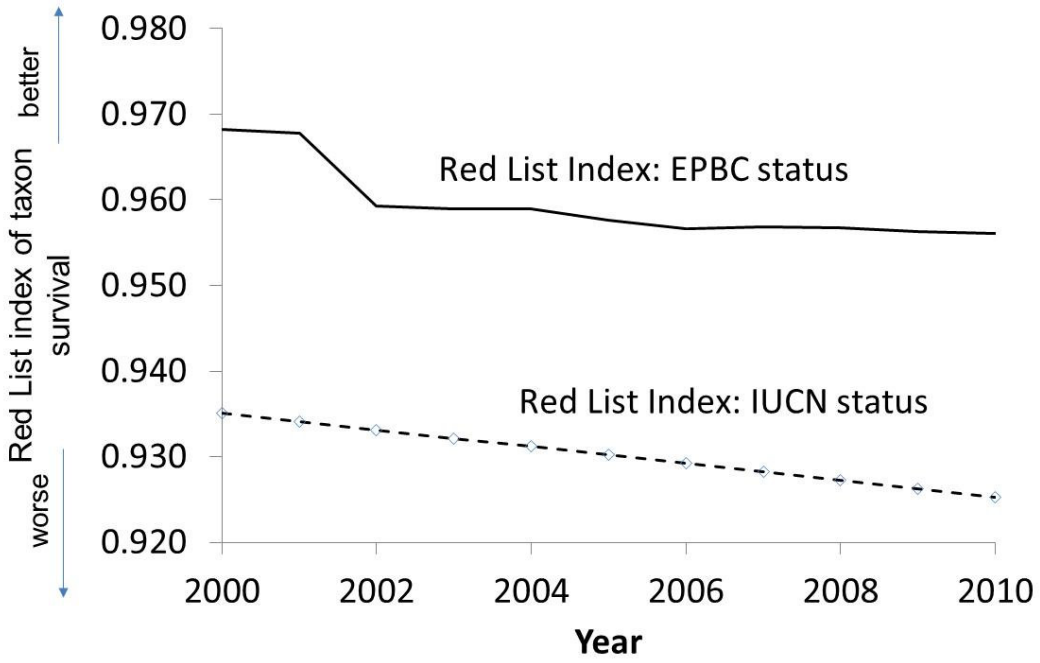


Figure 1. Changes in the IUCN Red List Index calculated from annual changes in status reflected in the EPBC Act list (top line) and the IUCN Red List Index (bottom line) calculated from assessments in 2000 and 2010.

The Threatened Species Scientific Committee has recently been attempting to accelerate changes to the EBPC Act to reflect new knowledge about currently listed species as well as accelerate listing of species currently omitted, but this has not yet eventuated.

Recommendations:

1. A streamlined process for recommending changes to the EPBC list should be adopted to ensure timely changes in status. This process could draw on the professional networks available to conservation NGOs and other professional bodies.

2. Independent scientific advice and public participation (eg public nominations) in the listing process are critical to maintaining the integrity of threatened species lists.

3. The changes to the EPBC Act list should be kept sufficiently current that they can be used by the Australian Bureau of Statistics to maintain annual accounts, or at least report every four years on changes to the national Red List Index for all faunal and floral groups for which there is adequate information.

(f) The historical record of state and territory governments on these matters

The ANEDO has conducted a thorough assessment of threatened species laws and planning legislation in each jurisdiction (see attached). It is clear that no state or territory planning laws meet best practice standards for environmental assessment and the failings of state and territory laws to effectively avoid and mitigate impacts on threatened species is most apparent in relation to provisions for the fast-tracking of environmental impact assessment for major projects.

Given the common failings of legislation in all jurisdictions, a clear finding of this report is that threatened species laws in all jurisdictions needed to be reviewed, strengthened, and fully resourced and implemented. Given the decline in biodiversity noted in each state and territory, combined with increasing population pressures, land clearing, invasive species and climate change, now is *not* the time to be streamlining and minimising legal requirements in relation to threatened species assessment.

STATES AND TERRITORIES ALSO CANNOT BE RELIED UPON TO ASSESS DEVELOPMENT PROPOSALS IN THE NATIONAL INTEREST SO IT IS IMPERATIVE THAT THE PROVISIONS FOR DELEGATING APPROVAL POWERS TO STATES ARE REMOVED FROM THE EPBC ACT.

Resourcing and funding arrangements:

The majority of states have recently had significant cuts to already lean environment departments.

States and territories have often had to rely on Commonwealth funding for most threatened species conservation management, although Recovery Teams have also cobbled together other monies from the private sector and have usually had access to volunteer labour.

The Commonwealth has been suspicious of the states and territories using threatened species funding to cover core activities. Sometimes this suspicion is justified. To get around this the Commonwealth has, in recent years, been funding threatened species projects haphazardly through Natural Resource/Catchment Management groups and greatly reducing the amount of money passing to the states and territories. The result has been reduced coordination of funding and the dissipation of much effort into small projects that deliver little benefit.

All states and territories have had individual members of staff dedicated to threatened species conservation for at least two decades. Such staff have repeatedly negotiated ongoing funding for multiple threatened species projects and have provided the institutional memory of conservation actions within their jurisdictions. For birds such continuity is least evident in Queensland and, at a head office level, in New South Wales, although there are some long–serving regional threatened species officers. Some of these officers have retired but continue to provide input to threatened species planning for many years afterwards.

(g) Any other related matter

1. Support for threatened species conservation.

There can be scepticism that the Australian public wishes to conserve birds. In 2011, Gill Ainsworth of Charles Darwin University conducted a survey of 638 respondents using a market research company to reduce bias. Of these 58% pay attention to birds wherever they go; 64% can identify common birds in their area; for 44% seeing a new bird fills them with excitement and just 20% were not really interested in birds. This translated into concern for threatened birds. Some 75% said they would become upset if a bird became extinct (compared to 7% who disagreed); 74% said that people have a moral obligation to protect threatened birds (compared with 5% who did not), and 47% said that the needs of threatened species can come ahead of people compared with 15% who thought the opposite. Older women were more likely than young men to favour threatened species and level of education was negatively correlated with concern (that is more educated people had less empathy with threatened species).

2. Wider benefits of threatened species conservation in rural, remote or regional Australia

Threatened species funding should not be considered in isolation. Many threatened species occur in rural, remote or regional areas with lower levels of income and higher levels of disadvantage than urban areas. There is a major opportunity to consider threatened species funding as part of portfolios of support for regions that have both threatened species needing management and qualify for other forms of support. The flow-on effects of employment in threatened species management are likely to be far greater in the smaller economies of rural and remote areas than urban areas while involvement of land managers in threatened species research is one of the most effective means of transforming land practice (see Garnett *et al* 2009 *Biotropica* 41: 571–577).

Appendix 1. Australian bird species/subspecies missing from the EPBC list but judged to be threatened by the IUCN Red List criteria[1]

Common name	Scientific name	IUCN Red List Category
White-tailed Tropicbird (Christmas Island)	*Phaethon lepturus fulvus*	Endangered
White-tailed Tropicbird (Indian Ocean)	*Phaethon lepturus lepturus*	Endangered
Matsudaira's Storm-Petrel	*Hydrobates matsudairae*	Vulnerable
Wilson's Storm-Petrel (subantarctic)	*Oceanites oceanicus oceanicus*	Vulnerable
Grey-backed Storm-Petrel	*Garrodia nereis*	Endangered
Light-mantled Albatross	*Phoebetria palpebrata*	Endangered
Antarctic Prion	*Pachyptila desolata*	Endangered
Fulmar Prion (southern)	*Pachyptila crassirostris eatoni*	Vulnerable
White-chinned Petrel	*Procellaria aequinoctialis*	Vulnerable
Westland Petrel	*Procellaria westlandica*	Vulnerable
Black Petrel	*Procellaria parkinsoni*	Vulnerable
Grey Petrel	*Procellaria cinerea*	Endangered
Buller's Shearwater	*Ardenna bulleri*	Vulnerable
Hutton's Shearwater	*Puffinus huttoni*	Endangered
Little Shearwater (Tasman Sea)	*Puffinus assimilis assimilis*	Vulnerable
White-headed Petrel	*Pterodroma lessonii*	Endangered
Providence Petrel	*Pterodroma solandri*	Vulnerable
Gould's Petrel (New Caledonian)	*Pterodroma leucoptera caledonica*	Vulnerable
White-necked Petrel (southern)	*Pterodroma cervicalis cervicalis*	Endangered
Common Diving-Petrel (southern)	*Pelecanoides urinatrix exsul*	Vulnerable
South Georgian Diving-Petrel	*Pelecanoides georgicus*	Vulnerable
Southern Rockhopper Penguin (eastern)	*Eudyptes chrysocome filholi*	Vulnerable
Grey Falcon	*Falco hypoleucos*	Vulnerable
Lewin's Rail (Tasmanian)	*Lewinia pectoralis brachipus*	Vulnerable
Black-faced Sheathbill (Heard Island)	*Chionis minor nasicornis*	Vulnerable
Lesser Sand Plover (Mongolian)	*Charadrius mongolus mongolus*	Endangered
Lesser Sand Plover (Kamchatkan)	*Charadrius mongolus stegmanni*	Endangered
Greater Sand Plover (Mongolian)	*Charadrius leschenaultii leschenaultii*	Vulnerable
Hooded Plover (eastern)	*Thinornis rubricollis rubricollis*	Vulnerable
Bar-tailed Godwit (western Alaskan)	*Limosa lapponica baueri*	Vulnerable
Bar-tailed Godwit (northern Siberian)	*Limosa lapponica menzbieri*	Vulnerable
Eastern Curlew	*Numenius madagascariensis*	Vulnerable
Great Knot	*Calidris tenuirostris*	Vulnerable
Red Knot (New Siberian islands)	*Calidris canutus piersmai*	Vulnerable
Red Knot (north-eastern Siberia)	*Calidris canutus rogersi*	Vulnerable
Curlew Sandpiper	*Calidris ferruginea*	Vulnerable

[1] Garnett, Szabo & Dutson. 2011. The Action Plan for Australian Birds 2010.

Common name	Scientific name	IUCN Red List Category
Fairy Tern (New Caledonian)	*Sternula nereis exsul*	Endangered
Palm Cockatoo (Australian)	*Probosciger aterrimus macgillivrayi*	Vulnerable
Green Rosella (King Island)	*Platycercus caledonicus brownii*	Vulnerable
Rufous Scrub-bird (southern)	*Atrichornis rufescens ferrieri*	Endangered
Rufous Scrub-bird (northern)	*Atrichornis rufescens rufescens*	Endangered
Variegated Fairy-wren (Shark Bay)	*Malurus lamberti bernieri*	Vulnerable
Southern Emu-wren (Dirk Hartog Island)	*Stipiturus malachurus hartogi*	Vulnerable
Short-tailed Grasswren (Flinders Ranges)	*Amytornis merrotsyi merrotsyi*	Vulnerable
Short-tailed Grasswren (Gawler Ranges)	*Amytornis merrotsyi pedleri*	Vulnerable
White-throated Grasswren	*Amytornis woodwardi*	Vulnerable
Western Grasswren (Gawler Ranges)	*Amytornis textilis myall*	Vulnerable
Chestnut-rumped Heathwren (Flinders Ranges)	*Hylacola pyrrhopygia pedleri*	Vulnerable
Rufous Fieldwren (Dorre Island)	*Calamanthus campestris dorrie*	Vulnerable
Rufous Fieldwren (Dirk Hartog Island)	*Calamanthus campestris hartogi*	Vulnerable
Slender-billed Thornbill (Gulf St Vincent)	*Acanthiza iredalei rosinae*	Vulnerable
Painted Honeyeater	*Grantiella picta*	Vulnerable
Black Currawong (King Island)	*Strepera fuliginosa colei*	Endangered
Horsfield's Bushlark (Tiwi Islands)	*Mirafra javanica melvillensis*	Vulnerable
Bassian Thrush (South Australian)	*Zoothera lunulata halmaturina*	Vulnerable

Appendix 2. Australian bird species/subspecies classified as threatened on the EPBC list but judged to be more threatened under the IUCN Red List criteria

Common name	Scientific name	EPBC Status	IUCN Red List Category
Wandering Albatross	*Diomedea exulans*	Vulnerable	Critically Endangered
Antipodean Albatross (Auckland Is.)	*Diomedea antipodensis gibsoni*	Vulnerable	Endangered
Black-browed Albatross	*Thalassarche melanophrys*	Vulnerable	Endangered
Grey-headed Albatross	*Thalassarche chrysostoma*	Endangered	Critically Endangered
Indian Yellow-nosed Albatross	*Thalassarche carteri*	Vulnerable	Endangered
Sooty Albatross	*Phoebetria fusca*	Vulnerable	Endangered
Blue Petrel	*Halobaena caerulea*	Vulnerable	Critically Endangered
Fairy Prion (southern)	*Pachyptila turtur subantarctica*	Vulnerable	Endangered
Kermadec Petrel (western)	*Pterodroma neglecta neglecta*	Vulnerable	Endangered
Soft-plumaged Petrel	*Pterodroma mollis mollis/dubia*	Vulnerable	Critically Endangered
Christmas Island Frigatebird	*Fregata andrewsi*	Vulnerable	Critically Endangered
Lord Howe Woodhen	*Gallirallus sylvestris*	Vulnerable	Endangered
Plains-wanderer	*Pedionomus torquatus*	Vulnerable	Endangered
Australian Painted Snipe	*Rostratula australis*	Vulnerable	Endangered
Painted Button-quail (Houtman Abrolhos)	*Turnix varius scintillans*	Vulnerable	Endangered
Lesser Noddy (Houtman Abrolhos)	*Anous tenuirostris melanops*	Vulnerable	Endangered
Antarctic Tern (Indian Ocean)	*Sterna vittata vittata*	Vulnerable	Endangered
Baudin's Black-Cockatoo	*Calyptorhynchus baudinii*	Vulnerable	Endangered
Regent Parrot (eastern)	*Polytelis anthopeplus monarchoides*	Vulnerable	Endangered
Tasman Parakeet (Norfolk Island)	*Cyanoramphus cookii cookii*	Endangered	Critically Endangered
Western Ground Parrot	*Pezoporus flaviventris*	Endangered	Critically Endangered
Southern Boobook (Norfolk Island x New Zealand)	*Ninox novaeseelandiae undulata*	Endangered	Critically Endangered
Masked Owl (Tasmanian)	*Tyto novaehollandiae castanops*	Vulnerable	Endangered
Noisy Scrub-bird	*Atrichornis clamosus*	Vulnerable	Endangered
Purple-crowned Fairy-wren (western)	*Malurus coronatus coronatus*	Vulnerable	Endangered
Southern Emu-wren (Eyre Peninsula)	*Stipiturus malachurus parimeda*	Vulnerable	Endangered

Common name	Scientific name	EPBC Status	IUCN Red List Category
Grey Grasswren (Bulloo)	*Amytornis barbatus barbatus*	Vulnerable	Endangered
Thick-billed Grasswren (NW NSW)	*Amytornis modestus obscurior*	Vulnerable	Critically Endangered
Eastern Bristlebird (northern)	*Dasyornis brachypterus monoides*	Endangered	Critically Endangered
Western Bristlebird	*Dasyornis longirostris*	Vulnerable	Endangered
Brown Thornbill (King Island)	*Acanthiza pusilla archibaldi*	Endangered	Critically Endangered
Yellow-tufted Honeyeater (Helmeted)	*Lichenostomus melanops cassidix*	Endangered	Critically Endangered
Regent Honeyeater	*Anthochaera phrygia*	Endangered	Critically Endangered
Spotted Quail-thrush (Mt Lofty Ranges)	*Cinclosoma punctatum anachoreta*	Critically Endangered	Critically Endangered (Possibly Extinct)
Pied Currawong (Lord Howe Island)	*Strepera graculina crissalis*	Vulnerable	Endangered
Scarlet Robin (Norfolk Island)	*Petroica multicolor multicolor*	Vulnerable	Endangered
Hooded Robin (Tiwi Islands)	*Melanodryas cucullata melvillensis*	Endangered	Critically Endangered (Possibly Extinct)
Star Finch (southern)	*Neochmia ruficauda ruficauda*	Endangered	Critically Endangered (Possibly Extinct)

Appendix 3. Australian bird species/subspecies present on the EPBC list but judged to be less threatened under the IUCN Red List criteria

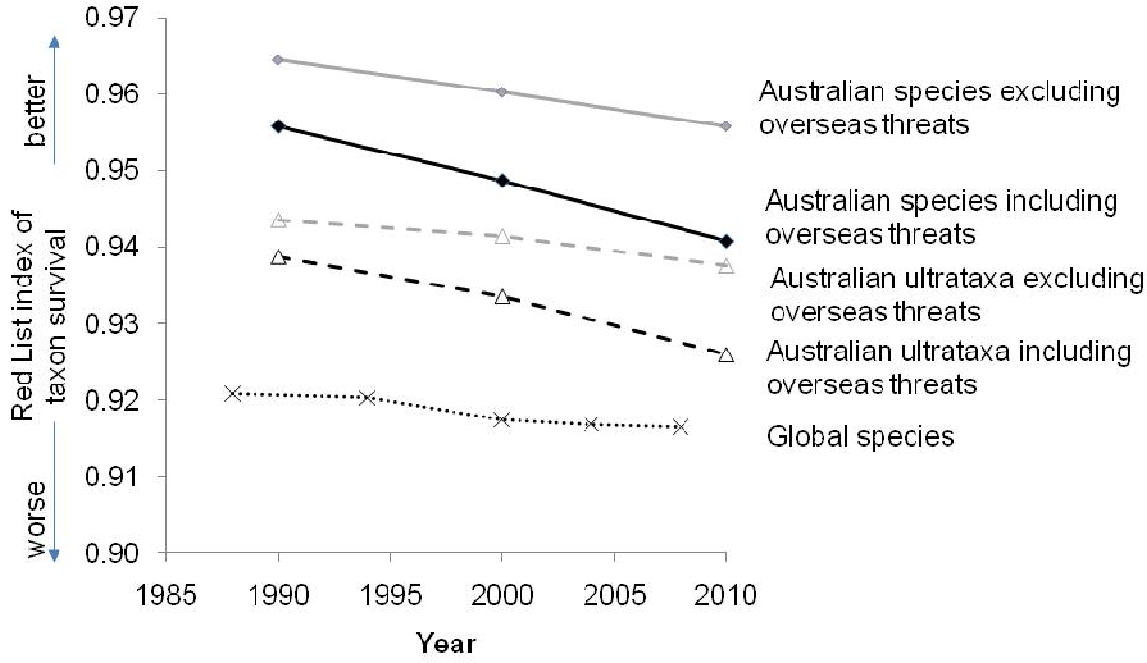
Common name	Scientific name	EPBC Status	IUCN Red List Category
Southern Cassowary (Australian)	*Casuarius casuarius johnsonii*	Endangered	Vulnerable
Herald Petrel	*Pterodroma heraldica*	Critically Endangered	Vulnerable
Gould's Petrel (Australian)	*Pterodroma leucoptera leucoptera*	Endangered	Vulnerable
Wedge-tailed Eagle (Tasmanian)	*Aquila audax fleayi*	Endangered	Vulnerable
Buff-banded Rail (Cocos Keeling Islands)	*Gallirallus philippensis andrewsi*	Endangered	Vulnerable
Azure Kingfisher (Tasmanian)	*Ceyx azureus diemenensis*	Endangered	Vulnerable
Yellow Chat (Capricorn)	*Epthianura crocea macgregori*	Critically Endangered	Endangered
White-chested White-eye	*Zosterops albogularis*	Extinct	Critically Endangered (Possibly Extinct)
Black-throated Finch (southern)	*Poephila cincta cincta*	Endangered	Vulnerable

Appendix 4. Australian bird species/subspecies present on the EPBC list but judged not to be threatened under the IUCN Red List criteria

Common name	Scientific name	EPBC Status	IUCN Red List Category
Emerald Dove (Christmas Island)	*Chalcophaps indica natalis*	Endangered	Near Threatened
Squatter Pigeon (southern)	*Geophaps scripta scripta*	Vulnerable	Least Concern
Amsterdam Albatross	*Diomedea amsterdamensis*	Endangered	Vagrant
Chatham Albatross	*Thalassarche eremita*	Endangered	Vagrant
Buller's Albatross (southern)	*Thalassarche bulleri bulleri*	Vulnerable	Near Threatened
Buller's Albatross (northern)	*Thalassarche bulleri platei*	Vulnerable	Near Threatened
Southern Giant-Petrel	*Macronectes giganteus*	Endangered	Least Concern
Northern Giant-Petrel	*Macronectes halli*	Vulnerable	Least Concern
Imperial Shag (Heard Island)	*Leucocarbo atriceps nivalis*	Vulnerable	Near Threatened
Red Goshawk	*Erythrotriorchis radiatus*	Vulnerable	Near Threatened
Black-breasted Button-quail	*Turnix melanogaster*	Vulnerable	Near Threatened
Western Corella (southern, Muir's)	*Cacatua pastinator pastinator*	Vulnerable	Least Concern
Superb Parrot	*Polytelis swainsonii*	Vulnerable	Least Concern
Princess Parrot	*Polytelis alexandrae*	Vulnerable	Near Threatened
Thick-billed Grasswren (western)	*Amytornis modestus indulkanna*	Vulnerable	Least Concern
Thick-billed Grasswren (Lake Frome Basin)	*Amytornis modestus curnamona*	Vulnerable	Near Threatened
Slender-billed Thornbill (western)	*Acanthiza iredalei iredalei*	Vulnerable	Least Concern
Crested Shrike-tit (northern)	*Falcunculus frontatus whitei*	Vulnerable	Least Concern
Golden Whistler (Norfolk Island)	*Pachycephala pectoralis xanthoprocta*	Vulnerable	Near Threatened
Island Thrush (Christmas Island)	*Turdus poliocephalus erythropleurus*	Endangered	Near Threatened
Crimson Finch (white-bellied)	*Neochmia phaeton evangelinae*	Vulnerable	Near Threatened
Gouldian Finch	*Erythrura gouldiae*	Endangered	Near Threatened

Appendix 5. Reporting and potential for national indicators of Biodiversity using the Red List Index

The Red List Index (RLI), which uses information from the IUCN Red List to track trends in the projected overall extinction risk of sets of species, is among the indicators adopted by the world's governments to assess performance under the Convention on Biological Diversity and the United Nations Millennium Development Goals. In 2011 the RLI trends in the status of Australian birds for 1990–2010 were calculated based on assessments of extinction risk at the national scale using IUCN's recommended methods. RLIs were calculated based on the number of taxa in each Red List category and the number that changed categories between assessments in 1990, 2000 and 2010 as a result of genuine improvement or deterioration in status. The RLI for Australia is declining faster than global rates when migratory shorebirds and seabirds are included, but not when changes resulting from threats in Australia alone are considered (Figure 1).



Appendix 5. Figure 1. Red List Index of survival for all bird species globally (n = 9853), Australian species (n = 710) and Australian ultrataxa (including both species and subspecies; n = 1238) for taxa with drivers of status change operating within Australia as well as overseas (black lines) and taxa changing status solely because of threats operating within Australia (grey lines). An RLI value of 1.0 equates to all taxa being categorised as Least Concern, and hence that none would be expected to go extinct in the near future. An RLI value of zero indicates that all taxa have gone Extinct. The n values are the number of taxa that are extant and not Data Deficient and at start of the period. (from Szabo, J.K., Butchart, S.H.M., Possingham, H.P. and Garnett, S.T. 2012. Adapting global biodiversity indicators to the national scale: a Red List Index for Australian birds. *Biological Conservation* 148: 61-68).