Australia's Faunal Extinction Crisis Senate Inquiry Submission: The Wilderness Society

Summary

Our magnificent biodiversity and native animals are unique in the world, and have strong cultural and social value to Australians of all backgrounds. Australians depend on thriving ecosystems for their well-being and prosperity, and extinction fundamentally threatens the healthy functioning of those ecosystems.

Australia has one of the world's worst records for extinction and protection of animal species. Australia is ranked first in the world for mammal extinctions, second in the world for ongoing biodiversity loss, and the pace of our extinction crisis is quickening, with the extinction rate likely to double in the next 20 years.

Australia has significant international obligations to prevent the extinction of Australia's animal species. We are also morally, ethically, intergenerationally and practically obliged to end our extinction crisis.

However, systemic failures in current Commonwealth environment laws and protections for faunal species ensures we cannot meet those obligations. Under these laws, we have no enforceable mechanisms to end threats to animals and their habitat. Existing protection mechanisms like recovery plans and critical habitat listings are out of date, not implemented and not funded, if they exist at all. The National Reserve System remains important but offers minimal protection where our wildlife is most under threat from human activity. Most worryingly, we have so little data that we do not know the current status and trend of most Australian species, and monitoring of recovery actions is largely non-existent.

Australia needs to act quickly to stem the tide of extinction.

In the short term, Australia must implement and fully fund existing protection mechanisms and stop threats to wildlife habitat. However, in the medium term, The Wilderness Society strongly recommends a complete overhaul of Australia's national environment laws and the creation of strong and independent institutions to ensure the laws are implemented and environmental outcomes are significantly improved. Key elements of a new approach to the protection of threatened species are outlined in the recommendations section below.

Submission Contents

Introduction

The Wilderness Society is pleased to provide this submission into Senate Standing Committee on Environment and Communications Inquiry into Australia's Faunal Extinction Crisis.

The Wilderness Society is an independent environmental advocacy organisation supported by around 30,000 members and 500 000 supporters. The work we do leverages our strong base to build a mass movement for climate action and nature conservation in Australia.

Since 1976, we've stood at the forefront of the country's most historic campaigns, including the Franklin River, Fraser Island, Australia's Forests, James Price Point in the Kimberley and numerous World Heritage Areas. Today, we're training a new generation of environmental leaders with a sophisticated community organising program, while building support for effective and lasting change through our communications. Australia's natural environment and the life it supports is its great advantage. The Wilderness Society exists to protect it.

We know that everyday Australians want governments to take action to protect our nature and act on climate change. The Australian Electoral Study from the ANU shows that 47% of voters in 2016 saw the environment and global warming as "extremely important when voting"[1]. Further social research undertaken by The Wilderness Society and others shows that these Australians share deep concern for the access of future generations to native wildlife. Overwhelmingly, they see Australia's nature as fundamental to our future prosperity and expect the Federal Government to provide strong leadership on environmental protection.

In this submission, the Wilderness Society will make comment on Australia's faunal extinction crisis in relation to the terms of reference for the inquiry, with specific focus on the terms of reference as set out below:

- the ongoing decline in the population and conservation status of Australia's nearly 500 threatened fauna species;
- the wider ecological impact of faunal extinction;
- the international and domestic obligations of the Commonwealth Government in conserving threatened fauna;
- the adequacy of Commonwealth environment laws, including but not limited to the Environment Protection and Biodiversity Conservation Act 1999, in providing sufficient protections for threatened fauna and against key threatening processes;
- the adequacy and effectiveness of protections for critical habitat for threatened fauna under the *Environment Protection and Biodiversity Conservation Act* 1999;

[1] The Longitudinal Australian Electoral Study

- the adequacy of the management and extent of the National Reserve System, stewardship arrangements, covenants and connectivity through wildlife corridors in conserving threatened fauna;
- the adequacy of existing funding streams for implementing threatened species recovery plans and preventing threatened fauna loss in general;
- the adequacy of existing monitoring practices in relation to the threatened fauna assessment and adaptive management responses;
- the adequacy of existing compliance mechanisms for enforcing Commonwealth environment law; and
- other related matters.

Submission Detail

The impact of faunal extinction

Our biodiversity is magnificent, is rightly treasured by Australians and looked to by the rest of the world as unique. Australia is one of the world's megadiverse countries: we have around 10% of all the world's species. We have a very high level of endemism compared with other countries. For example, 46% of our birds, 87% of mammals, and 93% of reptiles are only found here[2].

Australians depend on thriving ecosystems for their well-being and prosperity. Extinction and species population loss reduces overall biodiversity in any ecosystem, reducing the stability of ecosystems and the efficiency by which ecological communities capture and recycle biologically essential nutrients. Emerging research shows that the impacts of diversity loss might be sufficiently large to rival the impacts of other global drivers of environmental change such as climate change - that is, diversity loss may have fundamental impacts on global life systems such as water exchange, nutrient cycling and climate[3].

Our unique animals and plants have cultural value to Australians of all backgrounds - they form a fundamental part of what makes Australia Australia. In particular Indigenous Australians have strong connections and obligations to biodiversity and all living things, arising from ancient connections to country, passed on through stories and songs over millenia.

Preventing the extinction of Australia's animal species is the right thing to do for a number of reasons: morally, ethically, intergenerationally and practically. And rather than simply protecting species, Australian society must look to something even better – to foster

[2] Cresswell D & Murphy H (2017) Australia state of the environment 2016: biodiversity Australian Government Department of the Environment and Energy, Canberra p4; Chapman, A. D. 2009 "Numbers of living species in Australia and the world" *Australian Biological Resources Study*, Canberra, Australia
[3] Cardinale et al (2012) "Biodiversity loss and its impact on humanity" *Nature* 486: 59–67

thriving ecosystems where threatened species can begin to thrive again. We must find ways for human activities to co-exist alongside the natural world so that both can flourish and thrive.

The ongoing decline of Australia's nearly 500 threatened fauna species

Australia has one of the world's worst records for extinction and protection of animal species. Australia is ranked first in the world for mammal extinctions[4], and forth in the world for overall plant and animal extinctions[5].

Australia's extinction crisis is not simply historical - Australia is ranked second in the world for ongoing biodiversity loss[6]. We can see the results of these failures in the ongoing decline of our threatened species:

- Since 2000 Australia's list of nationally threatened species and ecological communities has increased by more than 30%[7].
- At least three endemic animals have gone extinct in the last 10 years alone.
- A recent study found that unless management improves Australia's extinction rate will accelerate from a confirmed 6 extinctions in the twenty years to a probable seventeen in the next twenty[8].

The Australian Government's *State of the Environment 2016* Report noted that Australia's biodiversity is under increased threat and there is little evidence that the state or trend of most threatened species is improving. Since the National Threatened Species List commenced in 2000:

- An additional 199 animals have been listed as threatened;
- 6 animals declared have been extinct since list commenced[9] (although only three are reflected in current list with the Bramble Cay Melomys, Christmas island Forest Skink and Christmas Island Pipistrelle still listed as endangered/critically endangered despite consensus around their extinction);
- 46 (10%) species have been uplisted, mostly because of deterioration in population size;
- 402 (88%) species have stayed the same, although the vast majority have not been reassessed since 2000;

[4] Woinarski et al (2015) "Ongoing unraveling of a continental fauna: decline and extinction of Australian mammals since European settlement" *Proceedings of the National Academy of Sciences* 112(5): 4531-4540

[5] http://www.abc.net.au/news/2015-08-19/fact-check-does-australia-have-one-of-the-highest-extinction/6691026

[6] Waldron et al (2017) "Reductions in global biodiversity loss predicted from conservation spending" Nature 551: 364–367

[7] From 1,483 to 1,947 - as at 31 July 2018

[8] Gayle H et al (2018) "Quantifying extinction risk and forecasting the number of impending Australian bird and mammal extinctions" *Pacific Conservation Biology* 24:157–167

[9] Lake Pedder Earthworm, Lord Howe Long-eared Bat, Pedder Galaxias, Bramble Cays Melomys, Christmas island Forest Skink and Christmas Island Pipistrelle

- 20 (4%) animals were downlisted or delisted, largely owing to more information about new populations found since original listing;
- 1 animal - Muir's Corella - has been delisted because of conservation action (i.e. recovery)[10].

The *State of the Environment 2016* Report also found that:

- there is no indication that the major pressures impacting threatened species have decreased since the previous *State of the Environment* in 2011;
- Key drivers of species loss are well documented and include habitat clearing and fragmentation, invasive species, climate change, inappropriate fire regimes, disease, pollution and overexploitation; and
- Inadequate and failed environmental governance remains one of the top threats to species in Australia[11].

International and domestic obligations

International obligations

Australia also has substantial international obligations to preserve its unique animals under international agreements to which we are signatories, including but not limited to the:

- Convention on Biological Diversity (CBD) under which sits the Aichi Biodiversity Targets,
- Convention on Wetlands (Ramsar Convention),
- Conventions related to migratory wild species (Convention on the Conservation of Migratory Species of Wild Animals, JAMBA, CAMBA and ROKAMBA)
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Australia has generally performed poorly in fulfilling our international environmental obligations. Australia's *Biodiversity Conservation Strategy 2010-2030* was the guiding national framework for biodiversity conservation and was developed to ensure Australia could fulfil its obligations under the various international agreements, including actions towards the Aichi Biodiversity Targets, a number of which relate to the conservation of threatened species and their critical habitat. A full list of the Targets may be found in Appendix 1.

[10] Numbers from EPBC Act List of Threatened Fauna. It must be noted that the national threatened species list is unreliable as a measure compared with other lists such as the IUCN Red List (see section "Listing process and accuracy of EPBC Threatened Species List")

[11] Jackson et al (2017) *Australia state of the environment 2016: overview* Australian Government Department of the Environment and Energy, Canberra p14

The Strategy set out 10 interim national targets for conserving Australia's vital and unique biodiversity. Australia performed very poorly against the Aichi Targets, with Australia only achieving one of these national targets over the past decade.

The Strategy has been replaced with *Australia's Strategy for Nature 2018-2030*, a draft of which was released in March 2018. Unfortunately, the draft Strategy is deeply inadequate, contains no firm commitments or measurable targets, and overlooks a substantial amount of relevant scientific evidence. Adopting the draft Strategy in its current form as our national framework for species conservation will leave Australia at substantial risk of failing our international obligations.

We are also failing in relation to the Ramsar Convention and protection of migratory animal habitat under JAMBA, CAMBA and ROKAMBA. The *State of the Environment 2016* Report found that Australia's wetlands are either declining or stable, rather than improving, and that pressure from climate change and variability is a major threat to future viability[12]. Some areas continue to be severely affected and in serious danger of collapse, such as the Murray Darling Basin where continued extraction of unsustainable amounts of water for irrigation may lead to an extinction crisis in many of the Basin's Ramsar listed wetlands of international importance, such as the Lower Murray Lakes and Coorong estuary.

Domestic obligations and legislation

The Commonwealth has a substantial capacity to make laws concerning the environment under section 51 of the *Constitution*[13]. Australia's primary legislative mechanism for faunal species conservation and for realising the international obligations outlined above is the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC).

While multiple Aichi Targets cover threatened species protection, Target 12 requires Australia to *By 2020 (prevent) the extinction of known threatened species …. and (improve and sustain) their conservation status, particularly of those most in decline*.

In its current form, the EPBC establishes clear responsibilities for the Australian Government to regulate and provide for the protection of the environment, especially when it affects matters of national environmental significance such as threatened species and ecological communities, migratory species, critical habitat and World Heritage and National Heritage Areas.

[12] Argent R (2017) *Australia state of the environment 2016: inland water* Australian Government Department of the Environment and Energy, Canberra
[13] Australian Panel of Experts on Environmental Law (2017) *Environmental Governance* (Technical Paper 2), retrieved from http://apeel.org.au/papers/

The objects of the EPBC provide a clear role for the Australian Government to, among other things:

- 1(c): promote the conservation of biodiversity;
- 1(d): promote a co-operative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples;
- 1(e): assist in the co-operative implementation of Australia's international environmental responsibilities.

The EPBC notes that to achieve these objects, legislation should enable Australia to:

- 2(i): protect native species (and in particular prevent the extinction, and promote the recovery, of threatened species) and ensure the conservation of migratory species; and
- 2(iii): protect ecosystems by means that include the establishment and management of reserves, the recognition and protection of ecological communities and the promotion of off-reserve conservation measures;
- 2(iv): identify processes that threaten all levels of biodiversity and implement plans to address these processes.

However, Commonwealth environmental legislation is simply not up to the task of preventing the decline and extinction of Australia's threatened species. Assessments of the EPBC have noted its many problematic aspects, including:

- Over reliance on cooperative federalism with no one level of government responsible for halting species decline;
- Being too species focussed with minimal mechanisms to protect and sustain the natural landscapes and habitats on which species rely;
- Being too narrowly focussed on the conditions for approving projects without a framework for proactive protection of species and their habitat; and
- Containing major exemptions such as the Regional Forest Agreements which enable logging of old-growth forests and threatened species habitat.

Issues in the drafting of the legislation combined with substantial failures of implementation and enforcement are major drivers of Australia's ongoing extinction crisis. These issues are outlined in sections below.

'One-stop shop' approach

In 2014, the Australian Government announced its 'one-stop shop' policy, designed to delegate Federal Government responsibilities in managing matters of national environmental significance - including the protection of nationally threatened species - to state and territory authorities.

A 2014 report by the *Places You Love Alliance* found that no state or territory met all the core requirements of best practice threatened species legislation, nor even the standards of protection set by the EPBC[14]. The *State of the Environment 2016* Report found that "*(a)n overarching national policy that establishes a clear vision for the protection and sustainable management of Australia's environment to the year 2050 is lacking*" and that national leadership and collaboration is required to address threats to species and biodiversity.

Effectiveness of EPBC protections against key threatening processes

Habitat destruction and degradation is the greatest threat to our native wildlife, closely followed by invasive pests like cats and foxes, and is listed as a key threatening process under the EPBC.

Under Aichi Target 5, Australia is required to: *By 2020, (at least halve) the rate of loss of all natural habitats, including forests... and where feasible (bring) close to zero, and (significantly reduce) degradation and fragmentation.*

The 2018 University of Queensland study, commissioned by ACF, WWF and the Wilderness Society, found that since the EPBC came into effect, approximately 7.6 million hectares of threatened species habitat has been destroyed due to bulldozing or logging, an area of threatened species habitat larger than the state of Tasmania destroyed in just 17 years[15].

The loss and destruction of native bushland has serious implications for Australia's flora and fauna. The reality is that in addition to the many animals killed or maimed in the bulldozing of forest and woodland habitat, many more such as the Leadbeater's Possum or Swift Parrot are pushed to extinction by the destruction of their breeding, feeding and nesting sites.

Deforestation

A 2015 survey of Ecological Society of Australia members ranked land clearing and habitat disturbance as the biggest threat to biodiversity in Australia. Since European colonisation, approximately 104 million hectares of native vegetation (44%) have been cleared. This level of clearing has been only marginally offset by regrowth of 2.9% of the original cleared area.

In Queensland over the past 4 years, over 1.2 million hectares of forest and bushland were cleared, approximately 300,000 hectares each year[16]. Recently released figures show that

[14] Australian Network of Environmental Defenders Offices [ANEDO] (2014) *Assessment of the adequacy of threatened species and planning laws* Places You Love Alliance, Sydney
[15] Australian Conservation Foundation, WWF and The Wilderness Society Australia (2018) *Fast-tracking Extinction: Australia's national environmental law* Available online at https://www.acf.org.au/reports
[16] Qld Govt 'State Landcover & Trees Study' reports, 2012-16.

clearing of native vegetation in NSW has increased 800% in three years, with land restoration levels at less than half the decadal average[17].

Despite the threat posed by deforestation and land clearing to matters of national environmental significance, few referrals for assessment of the impacts have been made. Only five Queensland land clearing activities have been referred under the *EPBC Act* (according to the EPBC referrals list) in the last two years, despite almost 400,000 hectares of forest and bushland being cleared in 2015-16 in Queensland alone.[18]

Recent analysis by WWF-Australia has found that 76% of Queensland properties undertaking land clearing are doing so without EPBC assessment, despite the report's analysis that that assessment is warranted[19] The study found over half of the properties where MNES were potentially triggered fell in the catchment of the Great Barrier Reef. Further, a total of 106 threatened species (38 animals and 68 plants) were potentially affected through clearing of known and likely habitat.

Logging

Similarity, logging continues to impact on the survival of threatened species with numerous forest-dependent fauna being pushed ever closer to extinction due to logging-induced habitat loss.

Formal research, recovery plans, and other evidence highlights the significance impact of habitat loss for forest-dependent species and the need for additional habitat protection, via dedicated reserves and greater prescriptions. Species such as the Swift Parrot, Leadbeater's Possum, Greater Glider and giant freshwater lobster are regularly identified as icon species facing the ongoing loss of habitat due to logging.

Of particular concern is the exemption from the effect of the EPBC afforded all logging operations under a Regional Forest Agreements (RFA). With 10 RFAs covering over 21 million hectares of native forests, including some of the highest conservation value, this exemption is hampering conservation efforts and curtailing the capacity for federal intervention in the interest of securing the survival of a federally-listed species.

For example, a 2018 study found that twenty-five per cent of critically-endangered Swift Parrot breeding habitat in Tasmania had been logged since 1997, and that significant areas of swift parrot breeding habitat are earmarked for logging in the near future under

[17] https://www.theguardian.com/australia-news/2018/aug/04/clearing-of-native-vegetation-in-nsw-jumps-800-in-three-years

[18] http://epbcnotices.environment.gov.au/referralslist/

[19] WWF Australia (2017) *Pervasive inaction on national conservation law over tree-clearing law in Queensland 2013-16* Available online via http://www.wwf.org.au/knowledge-centre/resource-library#gs.qD39tiE

the Tasmanian Regional Forest Agreement[20]. These documented failures are not consistent with the Swift Parrot National Recovery Plan nor advice from the Tasmanian Threatened Fauna Advisor or scientists working to prevent the bird's extinction.

Adequacy and effectiveness of protections for critical habitat under the EPBC

The strong single species and assessment/approval focus of the EPBC does not integrate well with an ecosystem approach to conservation. The 2018 University of Queensland study found little evidence the the EPBC effectively protects threatened species habitats: out of more than 6,100 projects referred to the government for assessment, only 21 (less than 0.3%) have been refused[21].

The two primary failures of critical habitat protection under the EPBC have been 1. the lack of application of the law and 2. that limitation of protections to Commonwealth land.

Firstly, the EPBC has provisions to list 'critical habitat' (currently defined as habitat critical to the survival of a listed threatened species or ecological community), with the Minister afforded significant discretion under the EPBC regarding the rigour and manner with how these provisions are applied.

However, only five critical habitat listings under the EPBC Act have been made in the last 20 years. Given the broad discretion that applies to the listing of critical habitat, it would appear that the lack of effective application of critical habitat laws in Australia is primarily due to a lack of political will rather than regulatory oversight.

Critical habitat is similarly unprotected under National Recovery Plans (NRPs). A 2018 report found that, of all animals listed as endangered and critically endangered, only 55% had recovery plans, 45% had critical habitat clearly identified as essential to their survival and 10% had identified critical habitat that was wholly or partly located on Commonwealth land. However, only two species (<1%) had habitat listed on the national critical habitat register[22].

Secondly, inclusion on the register only makes damaging critical habitat an criminal offense if that habitat is on Commonwealth land. Under the EPBC Act, environmental impacts and development assessments and approvals are tenure blind, yet the critical habitat register is tenure constrained. The majority of critical habitat locations lie outside

[20] Webb M, Stojanovic D & Heinsohn R (2018) "Policy failure and conservation paralysis for the critically endangered swift parrot" Pacific Conservation Biology, In press. Available online at https://www.difficultbirds.com/research-output/

[21] Australian Conservation Foundation, WWF and The Wilderness Society Australia (2018) *Fast-tracking Extinction: Australia's national environmental law* Available online at https://www.acf.org.au/reports

[22] Australian Conservation Foundation (2018) *Australia's extinction crisis: Protecting critical habitat*. Available online at https://www.acf.org.au/reports

Commonwealth land and thus provisions to list and protect critical habitat are in urgent need of reform to ensure they apply across all jurisdictions.

Adequacy of data and monitoring

Under Aichi Target 19, Australia is required to: *By 2020 (improve, widely share and transfer, and apply the) knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss.*

Listing process and accuracy of the National Threatened Species List

Section 178 of the EPBC requires the Minister to establish a list of threatened species and ecological communities that functionally acts as a trigger for Federal regulation and oversight, including assessment and approval of activities that may impact threatened animals.

Inclusion on the National Threatened Species list results from assessment by the Threatened Species Scientific Committee which decides if a species meets a category of endangerment and makes a recommendation for action to the Minister. The EPBC listing categories are broadly similar to those for the IUCN Red List, which is commonly held to be more accurate (although is more precautionary in approach) and up-to-date in relation to listing status.

The 2012-13 Senate Inquiry into the effectiveness of threatened species and ecological communities' protection in Australia[23] found that the listing process was substantially flawed, including:

- The 2006 removal of the legislated requirement on the Minister to 'take all reasonably practical steps to amend, as necessary, the threatened species list', resulting in lengthy delays between nomination for listing, assessment and inclusion on the list, with Departmental reports indicating an average 2 year timeframe for listing and evaluation of existing listings; and
- Heavy reliance on public nomination to trigger an assessment for listing, leading to
    - a lack of proactive protection and
    - a heavy bias in the existing listing process towards species with higher public profile (mostly mammals and birds) resulting in a disproportionately low representation of invertebrates and some other taxonomic groups[24].

As a result, there is general consensus that the National Threatened Species list is out-of-date, incomplete, inaccurate and not reviewed on a regular basis. For example:

[23] Senate Environment and Communications References Committee (2013) *Inquiry Report: Effectiveness of threatened species and ecological communities' protection in Australia*

[24] Cresswell D & Murphy H (2017) *Australia state of the environment 2016: biodiversity* Australian Government Department of the Environment and Energy, Canberra p8

- *The Action plan for Australian birds 2010* identified 54 bird species that met the criteria for listing as threatened but that weren't on the list[25] and identified only a 50% overlap when the National Threatened Species listing for birds was compared with listing included in the IUCN Red List; and
- *The Action Plan for Australian Mammals 2012* identified 94 changes needed to mammal listings, noting that significant review of all listings was required. Worryingly, the *Action Plan* concluded that up to 40% more mammals may be extinct in Australia than currently recognised[26].

That the National Threatened Species list is both accurate and up-to-date is of vital importance given that the threatened species listing schedule, like all the schedules of the Act, fundamentally affects how the EPBC operates. Listing is the primary trigger for regulatory oversight, the creation of recovery plans and conservation advices, and the assessment of projects that may impact on a species survival. In addition, errors in listing may lead to a lack of credibility that undermines the importance of threatened species protections as a whole.

Data and monitoring

The *State of the Environment 2016* Report found while more data exists for mammals and birds, monitoring data for all species are largely inadequate to assess status of populations and trends. This lack of data is even more pronounced for amphibians, reptiles, and even more so for cryptic taxa such as freshwater fish, invertebrates and fungi, for which very little information is available to assess state and trends[27].

As a result of this paucity of data, Australia is unable to measure the effectiveness of most of our investments in biodiversity management or management of pressures. The *State of the Environment 2016* Report noted that outcomes of management actions are rarely monitored and reported for long enough to clearly demonstrate effectiveness.

A prime example is that some states, such as Western Australia, have no comprehensive data system to monitor changes in the extent and quality of native vegetation including unique flora and threatened species. On a state level, assessments and approvals of large scale bushland clearing and deforestation is gutting habitat - some critical to the survival of endangered species, yet without a nationally consistent approach and monitoring system; we are undermining the opportunities to reverse the fate of our most endangered and species.

[25] Garnett S et al (2011) *The action plan for Australian birds 2010* CSIRO Publishing, Melbourne
[26] Woinarski et al (2014) *The action plan for Australian mammals 2012* CSIRO Publishing, Melbourne
[27] Cresswell D & Murphy H (2017) *Australia state of the environment 2016: biodiversity* Australian Government Department of the Environment and Energy, Canberra

National Recovery Plans (NRPs) and Conservation Advices

Section 139 of the EPBC obliges the Australian Government to *implement a recovery plan within a government area and seek the cooperation of the states and territories in implementing a plan*, but there is no mechanism under the EPBC to enforce these obligations.

When the EPBC was first passed into law, the listing of a species as nationally threatened triggered a legal requirement for the development of a National Recovery Plan (NRP). In 2007, the EPBC Act was amended to allow the Minister to decide that an NRP is not required for individual listed species and that species without a recovery plan are now expected to have what is known as a conservation advice, which has no legal power to compel Australian governments to protect a species.

This has led to significant issues with the application of NRPs:

- As of 2016-17, of the 1,885 listed threatened entities in Australia, just 712, or 38%, were covered by recovery plans that are current.
- Four of Australia's seven critically endangered mammals (Northern Hairy-Nosed Wombat, Southern Bent-Wing Bat, Gilbert's Potoroo and Christmas Island Flying Fox) are listed as requiring recovery plans but don't have them either because they have never been written or have expired[28].
- The koala (combined populations in Queensland, New South Wales and the Australian Capital Territory) is federally listed as vulnerable but has been identified as requiring a recovery plan since 2014.
- The conservation status of Swift Parrots has worsened from Vulnerable to Critically Endangered since its listing in 1999, despite having a recovery plan since 2002, owing to exemptions on logging nesting habitat under the Tasmanian Regional Forest Agreement.
- The NRP for the Golden Shouldered Parrot is 14 years old, un-enforced and unfunded. The main objective of the NRP was to convert the listing status of the Parrot from endangered to vulnerable: this has not happened in this time, and now Federal Department of the Environment briefing documents acknowledge the Parrot is at "very high risk of extinction in the wild in the near future". There is currently an application to clear remaining Golden Shouldered Parrot habitat in Queensland before the Federal Environment Minister[29].

Even for those species with a current and valid NRP or conservation advice, research shows that they seem to have little impact the recovery or stabilisation of most species[30].

[28] This list excludes the Christmas Island Pipistrelle on the basis of extinction.

[29] https://www.smh.com.au/politics/federal/parrot-on-verge-of-annihilation-poses-first-hurdle-for-new-environment-minister-20180903-p501fk.html

[30] Bottrill M et al 2011 "Does recovery planning improve the status of threatened species?' *Biological Conservation* 144(5):1595–1601.

These documents are not enforceable, are often poorly coordinated and the recovery actions set out within them are not automatically funded or implemented.

For example, the Leadbeater's Possum has a NRP dated 1997, while a newer version remains in draft. The Leadbeater's Possum (*Gymnobelideus leadbeateri*) is Victoria's animal emblem and teeters on the brink of extinction, due to the loss of viable forest habitat for the animal to nest and breed in.[31]

In 2015, the Australian Government elevated the status of the species to Critically Endangered and the Australian Threatened Species Scientific Committee has recommended that "the most effective way to prevent further decline and rebuild the population of Leadbeater's Possum is to cease timber harvesting within the montane ash [mountain] forests of the Central Highlands."[32]

However, just 2,848 hectares of Ash forest is protected, which is equivalent to a mere 1.8% of the total 158,000 hectares of Ash forest available for logging across Victoria.[33] These measures are completely insufficient to ensure the long term survival of the Leadbeater's Possum, and experts recommend that the species' recovery requires the protection of all living and dead hollow-bearing trees and old-growth forest, and the end of clearfell logging within its habitat range.[34]

The conservation status of the Leadbeater's Possum is currently being reviewed, at the request of the then Agriculture Minister, Barnaby Joyce, as a result of agitation from the logging industry lobby. Draft advice from the Threatened Species Scientific Committee observes that the Possum meets at least one criteria for listing as critically endangered, but the Minister has yet to make a decision as of 10 September 2018.

Adequacy and extent of the National Reserve System, protected areas and other effective conservation measures

One key way of protecting and conserving threatened species is through the protection of their habitat in a well-connected network of appropriately scaled protected areas and

[31] Lindenmayer, D (1996) *Wildlife and Woodchips: Leadbeater's Possum, a Test Case of Sustainable Forestry* UNSW Press, Sydney; Lindenmayer D and Meggs R (1996) "Use of den trees by Leadbeater's Possum" *Australian Journal of Zoology* 44(6) 625 - 638; Lindenmayer et al (2015) *Mountain Ash: Fire, Logging and the Future of Victoria's Giant Forests*, CSIRO Press, Melbourne

[32] Commonwealth (2015) Gymnobelideus leadbeateri: Conservation Advice, p.33, available at: http://www.environment.gov.au/biodiversity/threatened/species/pubs/273-conservation-advice.pdf

[33] Department of Environment, Land, Water and Planning (2017) *A review of the effectiveness and impact of establishing timber harvesting exclusion zones around Leadbeater's Possum colonies*

[34] Lindenmayer D, Blair D, McBurney L and Banks S (2015) "Ignoring the science in failing to conserve a faunal icon – major political, policy and management problems in preventing the extinction of Leadbeater's possum" *Pacific Conservation Biology* 21(4) 257-265

other effective conservation mechanisms, specifically protected by law from threatening activities that impact biodiversity.

Under Aichi Target 11, by 2020 Australia is required to conserve: *at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services... through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.*

While Australia has, by area, a large protected area system (the National Reserve System), many of those protected areas are in large, remote places with few industrial threats and often in the least productive areas less likely to be exploited for other human uses[35]. As a result, the National Reserve System offers little protection where our wildlife is most under threat from human activity.

More than a quarter of Australian ecosystems remain unprotected and a 2010 study found that Australia's most endangered species are extremely poorly represented in the National Reserve System[36]. For example, in the Central Highlands of Victoria, the Mountain Ash forests occupy only 547,000 hectares or less than 7% of Victoria's total forest cover of 8.2 million hectares. Less than 33% of the this Critically Endangered Mountain Ash ecosystem is formally protected, with the rest in state forest and subject to ongoing logging.

WWF Australia[37] calculates that Australia's National Reserve System is underfunded by at least $170 million per year, comprising grants to public and private partners to purchase land for new protected areas; to establish and manage Indigenous Protected Areas (IPAs); and to establish and manage private land conservation covenants.

Existing conservation reserves provide some and important conservation security for some threatened species, particularly those most threatened by habitat loss. However, a consequence of insufficient management of the nation's conservation reserves, even the largest and most substantially funded, is that many are failing to secure, maintain or recover threatened species occurring in them, particularly those whose major threats are

[35] Pressey, R et al 1993 "Beyond opportunism: key principles for systematic reserve selection" Trends in Ecology & Evolution 8: 124-128
[36] Watson, J et al 2010 "The capacity of Australia's Protected Area System to represent threatened species" Conservation Biology 25(2):324-332
[37] Taylor M et al 2014 *Building Nature's Safety Net 2014: A decade of protected area achievements in Australia* WWF-Australia, Sydney www.wwf.org.au/buildingnaturesafetynet2014

introduced species. The conservation reserve system provides inadequate and unreliable security for many threatened species[38].

Funding

Federal funding for conservation is in significant decline, with spending for biodiversity programs expected to decrease by 45% on 2013 levels over the forward estimates. Funding for the Natural Heritage Trust (the primary funding vehicle for federal conservation programs) will have shrunk from $262m in 2013 to $146m by 2021[39].

The Federal Government has claimed it has spent more than $250 million on threatened species projects, however this amount is aggregated from general environmental spending, and does not represent an accurate account of threatened species funding. There have been serious questions raised as to the accuracy of this figure, especially in light of reports of infrastructure projects being counted toward the threatened species figure. Currently only $5 million is dedicated to a national Threatened Species Fund, with no dedicated funding available for implementing recovery plans or threat abatement plans[40].

Our current investments in biodiversity management are not keeping pace with the scale and magnitude of current pressures. Resources for managing biodiversity and for limiting the impact of key pressures mostly appear inadequate to arrest the declining status of many species. Biodiversity and broader conservation management will require major reinvestments across long timeframes to reverse deteriorating trends.

[38] Woinarski J (2018) *A bat's end: the Christmas Island pipistrelle and extinction in Australia* CSIRO Publishing: Melbourne; Woinarski et al (2010) "Monitoring indicates rapid and severe decline of native small mammals in Kakadu National Park, northern Australia" *Wildlife Research* 37: 116-126.
[39] Australian Conservation Foundation 2018 *Budget Submission 2018-19*. Available online https://www.acf.org.au/budget_2018_19_investment_in_a_healthy_environment_cut_to_bare_bones_while_fossil_fuel_subsidies_continue
[40] Legge et al (2018) *Monitoring Threatened Species and Ecological Communities* CSIRO Publishing, Melbourne

Recommendations

National leadership and laws

Under the EPBC, the Australian Government has a clear responsibility to regulate and provide for the protection of the environment, especially when it affects matters of national environmental significance such as threatened species and ecological communities, migratory species, critical habitat and World Heritage and National Heritage Areas.

In the immediate term, the EPBC must be enforced in its current form without exemption, and the Australian Government should make a major effort to ensure that all sectors are aware of their obligations regarding threatening activities to our terrestrial, freshwater and marine fauna and ensure that all sectors comply with them. Critical habitat for endangered and critically endangered species must be identified as a matter of urgency and listed on the critical habitat register.

We also recommend the Australian Government urgently conduct an independent audit and report publically on spending against Australia's Threatened Species Strategy, with a priority focus on impact and ensuring protections for endangered and critically endangered species are sufficient to ensure recovery of those species.

In the medium term The Wilderness Society strongly recommends a complete overhaul of Australia's national environment laws and the creation of strong and independent institutions to ensure the laws are implemented and environmental outcomes are significantly improved. Key elements of a new approach to the protection of threatened species are outlined below.

National Environment Plans

We believe that the Australian Government should lead the country in developing a National Environment Plan (NEP), reviewed on a five-yearly basis. The NEP should set out common goals and objectives for state and federal governments, including an end to faunal extinction, an (at least) a 50% reduction in land clearing and deforestation by 2020 and a policy goal of zero deforestation by 2025. The NEP should align Australia's species conservation efforts with our international obligations, including Aichi Targets 2, 5 and 12.

Strong laws to end threats to Australian fauna

The Australian Government should overhaul Australia's environment laws to ensure permanent protection of faunal habitat by ending land clearing and logging of old growth and high conservation value native vegetation, including disallowing the burning of native forests as a form of renewable energy.

Effective new environment laws and regulations must define a set of National Environmental Matters (NEMs) for which the Federal Government is legally responsible for enhancing or maintaining, including (but not limited to):

- the National Reserve System, encompassing terrestrial and marine protected areas, National and World Heritage areas;
- High Conservation Value forests and bushland. This includes all primary, old growth and remnant vegetation, and regrowth vegetation where it meets one of the six criteria as defined by the High Conservation Value Network, including riparian areas and threatened species habitat.
- Critical habitat for critically endangered or endangered species and communities;
- Population numbers for endangered and critically endangered species; and
- Large, intact, functioning ecosystems (wilderness areas).

National Recovery Plans (NRPs)

We must have a legislated requirement to develop science-based recovery plans for all threatened species that are enforceable, binding, and require climate impact assessment for species and its critical habitat, and include emergency response plans and funding in the event of extreme events affecting habitat (such as fire).

These recovery plans must be resourced for recovery, not just population stabilisation, a for maintenance and eventual recovery of existing critical habitat. The Federal Government must significantly increase resources into recovery plan and threat abatement implementation, including establishing a Recovery Fund with an annual investment of $200m to implement recovery plans.

NRPS should be integrated with other legislation that may impact the efficacy of NRPs - including urban and regional planning and development legislation and codes - to proactively prevent conflict between the conservation of species and development plans.

National land and carbon fund to support landholders

Establish a dedicated fund that maximises the restoration of threatened species habitat, the provision of climate refugia and the long-term sequestration of carbon, while supporting communities and businesses to take advantage of this economic opportunity.

Expand and strengthen Australia's protected area estate

Fund the National Reserve System Program to at least $200 million a year to ensure protected area expansion and management, prioritising habitat for endangered and critically endangered animals. This should include long-term funding for effective management and conservation of Indigenous cultural values and support for and expansion of Indigenous Protected Areas and Traditional Ranger programs around the country.

Ensure a nationally consistent and coordinated system of protection tenures (public, Indigenous and private) that support the Federal Government to meet its obligation to enhance or maintain the National Environment Matters outlined above.

Joint and co-management in collaboration with Indigenous Australians should be encouraged and supported with funding, and establishment of protected and conservation areas should not compromise Traditional Owner rights and interests regardless of whether their native title rights have been recognised.

With the impacts of climate change already upon us it is critical that we prioritize the establishment of landscape scale corridors - reconnecting protected areas via major revegetation programs - allowing species to move and adapt. This will help reduce extinction rates. The Victorian Emerald Link proposal is an example of where protecting the remaining intact vegetation from alps to coast left anywhere on mainland Australia will support movement and adaptation of species in the face of climate change impacts[41].

Data and expertise

In the immediate term, Australia requires a major investment in monitoring and data collection on the state and trends of threatened species, as well as outcome-focussed monitoring of species conservation efforts and spending. We require a national commitment to an accounting system that tracks trends for threatened species, beginning with a priority focus on critically endangered and endangered species and their habitats.

It is clear at the moment that there is not consistent monitoring or mapping of key threatening processes such as land clearing across the country, which impedes the proper application of the EPBC. In the immediate term, the Wilderness Society recommends that the Federal Government implement a consistent national vegetation monitoring program, taking the best elements from the current national greenhouse gas inventory, Queensland's "SLATs" and the latest remote sensing research to monitor all woody vegetation change and their associated emissions.

All the above data should be readily available to the public as soon as the data is scientifically validated (as opposed to release of a Government report), including interactive maps, GIS data, and detailed breakdown of impacts on habitat by land use / sector.

In the medium term this monitoring system could be integrated with, or exist alongside, an interactive regulatory map showing developers, farmers and others where they need to seek EPBC approval and 'no-go' zones for development outlined in National Recovery Plans or the National Environment Plan.

[41] More information can be found here https://www.emeraldlink.com.au/

References

Australian Conservation Foundation (2018) *Australia's extinction crisis: Protecting critical habitat*. Available online at https://www.acf.org.au/reports

Australian Conservation Foundation, World Wide Fund for Nature and The Wilderness Society Australia (2018) *Fast-tracking Extinction: Australia's national environmental law* Available online at https://www.acf.org.au/reports

Australian Conservation Foundation (2018) *Budget Submission 2018-19*. Available online https://www.acf.org.au/budget_2018_19_investment_in_a_healthy_environment_cut_to_bare_bones_while_fossil_fuel_subsidies_continue

Argent R (2017) *Australia state of the environment 2016: inland water* Australian Government Department of the Environment and Energy, Canberra

Australian Network of Environmental Defenders Offices [ANEDO] (2014) *Assessment of the adequacy of threatened species and planning laws* Places You Love Alliance, Sydney

Australian Panel of Experts on Environmental Law (2017) *Environmental Governance* (Technical Paper 2), retrieved from http://apeel.org.au/papers/

Bottrill M et al 2011 "Does recovery planning improve the status of threatened species?' *Biological Conservation* 144(5): 1595–1601

Cardinale B, Duffy J, Gonzalez A, Hooper D, Perrings C, Venail P, Narwani A, Mace G, Tilman D, Wardle D, Kinzig A, Daily G, Loreau M, Grace J, Larigauderie D & Naeem S (2012) "Biodiversity loss and its impact on humanity" *Nature* 486: 59–67

Chapman, A. D. (2009) "Numbers of living species in Australia and the world" *Australian Biological Resources Study*, Canberra, Australia

Cresswell D & Murphy H (2017) *Australia state of the environment 2016: biodiversity* Australian Government Department of the Environment and Energy, Canberra

Department of Environment, Land, Water and Planning (2017) *A review of the effectiveness and impact of establishing timber harvesting exclusion zones around Leadbeater's Possum colonies*. Available online at https://www.wildlife.vic.gov.au/__data/assets/pdf_file/0033/73869/eadbeaters-Possum-Review-Report-July-2017.pdf

Garnett S, Szabo J, and Dutson G (2011) *The action plan for Australian birds 2010* CSIRO, Melbourne

Geyle H, Woinarski J, Baker B, Dickman C, Dutson G, Fisher D, Ford H, Holdsworth M, Jones M, Kutt A, Legge S, Leiper I, Loyn R, Murphy B, Menkhorst P, Reside A, Ritchie E, Roberts F, Tingley R and Garnett S (2018) "Quantifying extinction risk and forecasting the number of impending Australian bird and mammal extinctions" Pacific Conservation Biology 24:157–167

Jackson W, Argent R, Bax N, Clark G, Coleman S, Cresswell I, Emmerson K, Evans K, Hibberd M, Johnston E, Keywood M, Klekociuk A, Mackay R, Metcalfe D, Murphy H, Rankin A, Smith D & Wienecke B (2017) *Australia state of the environment 2016: overview* Australian Government Department of the Environment and Energy, Canberra

Legge S, Robinson N, Lindenmayer D, Scheele B, Southwell D, & Wintle B (Eds.) (2018) *Monitoring Threatened Species and Ecological Communities* CSIRO Publishing, Melbourne

Lindenmayer, D (1996) *Wildlife and Woodchips: Leadbeater's Possum, a Test Case of Sustainable Forestry* UNSW Press, Sydney

Lindenmayer D and Meggs R (1996) "Use of den trees by Leadbeater's Possum" *Australian Journal of Zoology* 44(6): 625 - 638

Lindenmayer D, Blair D, McBurney L and Banks S (2015) *Mountain Ash: Fire, Logging and the Future of Victoria's Giant Forests* CSIRO Publishing, Melbourne

Lindenmayer D, Blair D, McBurney L and Banks S (2015) "Ignoring the science in failing to conserve a faunal icon – major political, policy and management problems in preventing the extinction of Leadbeater's possum" *Pacific Conservation Biology* 21(4): 257-265

Pressey R, Humphries C, Margules C, Vane-Wright R & Williams P (1993) "Beyond opportunism: key principles for systematic reserve selection" *Trends in Ecology & Evolution* 8: 124-128

Senate Environment and Communications References Committee (2013) *Inquiry Report: Effectiveness of threatened species and ecological communities' protection in Australia*

Taylor M et al 2014 *Building Nature's Safety Net 2014: A decade of protected area achievements in Australia* WWF-Australia, Sydney www.wwf.org.au/buildingnaturesafetynet2014

Watson J et al 2010 "The capacity of Australia's Protected Area System to represent threatened species" Conservation Biology 25(2):324-332

Waldron A, Miller D, Redding D, Mooers A, Kuhn T, Nibblink N, Roberts j, Tobias J & Gittleman J (2017) "Reductions in global biodiversity loss predicted from conservation spending" *Nature* 551: 364–367

Webb M, Stojanovic D & Heinsohn R (2018) "Policy failure and conservation paralysis for the critically endangered swift parrot" *Pacific Conservation Biology*, In press. Available online at https://www.difficultbirds.com/research-output/

Woinarski J, Armstrong M, Brennan K, Fisher A, Griffiths A, Hill B, Milne D, Palmer C, Ward S, Watson M, Winderlich S and Young S (2010) "Monitoring indicates rapid and severe decline of native small mammals in Kakadu National Park, northern Australia" *Wildlife Research* 37: 116-126

Woinarski J, Burbidge A and Harrison P (2014) *The action plan for Australian mammals 2012* CSIRO Publishing, Melbourne

Woinarski J, Burbidge A & Harrison P (2015) "Ongoing unraveling of a continental fauna: decline and extinction of Australian mammals since European settlement" *Proceedings of the National Academy of Sciences* 112(5): 4531-4540

Woinarski J (2018) *A bat's end: the Christmas Island pipistrelle and extinction in Australia* CSIRO Publishing: Melbourne

WWF Australia (2017) *Pervasive inaction on national conservation law over tree-clearing law in Queensland 2013-16* Available online via http://www.wwf.org.au/knowledge-centre/resource-library#gs.qD39tiE

Appendix 1: Convention on Biological Diversity : Aichi Biodiversity Targets 2011-2020

More information on the Targets can be found at :
https://www.cbd.int/sp/targets/default.shtml

Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.

Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.