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## **Submission to: Inquiry into Australia's faunal extinction crisis 10 September 2018**

### **SUMMARY**

Australia is home to a wealth of unique biodiversity that is a cornerstone of our national character, and vital to the ongoing wellbeing and prosperity of our country [1]. All Australians should be alarmed by the threats facing our biodiversity, and the severity of this situation is highlighted by the state of our threatened species – a situation quite rightly described by this Inquiry as a crisis.

The ESA welcomes this Inquiry and sincerely hopes it is the beginning of meaningful national action to reverse the trajectory of biodiversity decline in Australia. We believe this is a surmountable challenge – as a politically stable, affluent, and skilled nation, **Australia is equipped to respond to this crisis.**

Australia has a bi-partisan history of national and international engagement in the drive to conserve biodiversity and to stop and reverse declines of species and ecosystems. Our indigenous peoples hold deep knowledge and experience in conserving and managing our biodiversity. To complement this, our world-leading ecological and environmental researchers have a strong track record in building the knowledge base required to address this crisis. Both public and private institutions, and the wider community, support protection of our biodiversity and saving our threatened species.

These factors provide Australia with a solid foundation to effectively address the faunal extinction crisis. To take advantage of this potential and based on our expertise and experience, we make the following key recommendations to address this crisis:

- (1) **Increase national public investment in biodiversity conservation.** At least 2% GDP should be devoted to nature conservation. Investment should go to research, monitoring, on-ground action, and adequate resourcing of the Department of Environment and other federal bodies to effectively do their jobs in assessing threatened species nominations, developing Recovery and Threat Abatement Plans, implementing management actions, and monitoring effectiveness of management actions.
- (2) **Improve monitoring of threatened species and management actions** – both to detect changes in population abundance, evaluate key threats and causes of decline, and to undertake effective adaptive management to reverse species decline.
- (3) **Manage key threatening processes** – we know that a small number of widespread threats impact many threatened species, such as invasive species, habitat loss, and climate change. National action is needed to address these threats comprehensively, and effective action against these widespread threatening processes can be an efficient use of our investment in biodiversity conservation.
- (4) **Revise the EPBC Act** so that:
  - a. Recovery Plans are required to be developed and implemented for all threatened species,

- b. Threat Abatement Plans are required for all threatening processes, and
  - c. Accountability for endangerment and extinction is established, with a requirement for a formal public inquiry when species are listed as critically endangered and for all extinction events.
- (5) **Deliver strong national coordination:** Addressing the faunal extinction crisis requires implementation of a suite of policies and actions in collaboration with many stakeholders across jurisdictions in both the public and private realms. Strong national leadership and coordination must be implemented to achieve this.

We discuss our recommendations in more detail relative to each of the Inquiry's Terms of Reference below.

***Terms of Reference a) the ongoing decline in the population and conservation status of Australia's nearly 500 threatened fauna species;***

Australia is a world-leader in faunal extinction (July 2018 IUCN Red List) [2]. Australia's level of mammal extinction is the highest in the world, with >10% of 273 endemic land mammal species having gone extinct since European arrival, and a further 21% of Australian land mammals now classified as threatened [3].

**These statistics reflect the fact that Australia's current approach to the protection of its biodiversity is inadequate, and requires immediate and substantial attention.** We welcome this Inquiry as a first step in this process, and discuss specific recommendations and actions to address the faunal extinction crisis below.

***Terms of Reference b) the wider ecological impact of faunal extinction;***

At this time, Australia has not conducted an appropriate risk evaluation to fully estimate the consequences of current or possible future faunal loss, as would be done in other portfolios e.g. Defence infrastructure. The **wider ecological impact of faunal extinction is likely to be profound** and, as more species go extinct, this will have cumulative environmental impacts. Species extinction may:

- alter ecosystem functions so that ecosystems no longer provide important goods and services such as pollination, nutrient movement, food and water provisioning [4,5];
- have cascading effects on other species such as co-extinctions or the increase or release of other species (including invasive pests and weeds) [5]; and
- benefit some parasites with potential negative consequences for remaining species and/or human health [5].

For example, many species of fungi consumed by Australian marsupials such as bettongs and potoroos form beneficial mycorrhizae with numerous *Eucalyptus* spp., that enhance nutrient uptake and health of these trees. The fungi are dependent upon these native animals to disperse their spores, and so the loss of these species has cascading effects on the health of the entire ecosystem. Current work to reintroduce bettongs and other small mammals at Mulligans Flat Nature Reserve is demonstrating that these negative cascading ecosystem effects can be reversed when a species is reintroduced to an area where it had become locally extinct [6]. This shows the potential for well-designed management interventions to lead to recovery and restoration of ecosystems [7, 8].

**Terms of Reference** *c) the international and domestic obligations of the Commonwealth Government in conserving threatened fauna;*

**Conserving threatened fauna is a matter of national significance that warrants the leadership and intervention of the Commonwealth Government.** Accordingly, Australia is a signatory to the World Conservation Strategy (WCS) [9], the Convention on Biological Diversity (CBD) [10] and the related Sustainable Development Goals (SDGs) [11] to name a few. These commitments resulted in the first National Strategy for the Conservation of Australia's Biodiversity in 1996 [12], and the first federal act to protect biodiversity, the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) [13]. These commitments have been reinforced by successive governments from all sides of politics.

In addition, the EPBC Act binds Australia to not make declarations that are inconsistent with the CBD, the Apia Convention [14] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) [15].

The CBD's Aichi target 12 and the United Nation's SDG 15 set targets to prevent extinction of known threatened species. Unfortunately, Australia has not committed explicitly to the Aichi targets. In addition, there is currently no provision in Australian legislation that makes it an offense to cause, contribute significantly to, or fail to take reasonable actions to prevent an extinction. Thus, any agencies or individuals who contribute to species endangerment or extinctions or fail to take reasonable steps to prevent them, operate with impunity [16]. We recommend the Commonwealth Government address these serious deficiencies and commit Australia to avoiding preventable extinctions of known threatened species, and discuss this further in responses to ToR d).

**Terms of Reference** *d) 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;*

**Stronger environmental laws and resources for their enforcement are needed to address the faunal extinction crisis.** To ensure we achieve the primary objective of Australia's environment laws - to protect the environment and conserve biodiversity - relevant Departments and agencies must be adequately resourced and staffed to ensure effective implementation, monitoring, and compliance with environmental legislation.

We recommend that the Commonwealth Government commit to reviewing and revising the environmental legislation pertaining to the conservation of biodiversity, in accordance with the recommendations for a comprehensive review made by the Australian Panel of Experts in Environmental Law [17]. We note the impending statutory review of the EPBC Act in 2019 and encourage the Commonwealth Government to use this opportunity to implement the suggested reforms.

In particular, to address the faunal extinction crisis, we recommend changes to the EPBC Act ('the Act') as follows:

**a. Requiring development and implementation of Recovery Plans for all threatened species**

Recovery Plans for all threatened species were mandated under the Act prior to changes passed in 2006 (*Environment and Heritage Legislation Amendment Act (No. 1) 2006*). The Act requires that the Minister not make declarations that are inconsistent with any recovery plan. However, after the 2006

amendments, Recovery Plans were no longer required for threatened species but rather became a discretionary matter for the Minister. Instead, Conservation Advices became mandatory for all listed threatened species. A key difference between a Conservation Advice and a Recovery Plan is that the Minister is able to make decisions that are inconsistent with a Conservation Advice.

Recent studies have shown conclusively that Recovery Plans help drive efforts and investment for threatened species [18], and lack of Recovery Plans can contribute to extinction of threatened species [16]. Recovery Plans are also long-term in nature, providing an evidence-based strategy to work towards species protection regardless of changes in Government that may occur. Thus, **in order to address the faunal extinction crisis, the Act should be amended to restore the requirement for Recovery Plans for all listed threatened species. Alternatively, Conservation Advices could be given the same level of protection as Recovery Plans so that the Minister may not make decisions that are inconsistent with Conservation Advices.**

**b. Requiring Threat Abatement Plans for all threatening processes and drivers of biodiversity loss**

The Act also allows the Minister to make Threat Abatement Plans after listing key threatening processes. It is our view that **this provision is a cost-effective mechanism to efficiently address threats to Australia's biodiversity, and so the Act should be amended to require Threat Abatement Plans for all Key Threatening Processes and for additional processes identified as drivers of biodiversity loss.**

Addressing widespread threatening processes such as invasive species, habitat loss, overharvesting of species, and climate change and extreme weather events through the established but underutilised Threat Abatement Plans may enable more efficient use of conservation resources [19]. In these cases, Threat Abatement Plans would be advantageous in contributing to the protection of a suite of species and ecosystems, according to best available evidence. Such a proactive approach could also help to prevent threats and thus prevent species from becoming threatened in the first place.

**c. Establishing accountability for endangerment and extinction events.**

There is currently no provision in Australian legislation that makes it an offense to cause, contribute significantly to, or fail to take reasonable actions to prevent an extinction. Thus, any agencies or individuals who contribute to extinctions or fail to take reasonable steps to prevent them, operate with impunity.

There is also no formal public inquiry process into endangerment or extinction events, meaning we lose the opportunity to learn from past attempts at threatened species protection and may repeat errors that lead to species extinction.

To address these shortcomings, **we recommend that the EPBC Act is amended so that:**

- **it is an offence to cause or contribute to an extinction, to contribute to threatening processes that cause extinction**, or to fail to take reasonable actions to prevent an extinction;
- **it is possible to assign responsibility for extinctions** e.g. minister, government, department, landholder or public official; and

- **formal public inquiries are required into each listing of species as critically endangered and all extinctions events**, to enable us to identify the causes of critical endangerment and extinctions to improve future policy and management decisions.

**One of the greatest threats to the implementation of the EPBC Act are the prolonged and continuing cuts to the Federal Environment Department, which undermine its capacity to effectively support implementation of the legislation.** Analysis of budget data shows that the Federal Environment Budget has experienced a substantial cut in recent years - from \$1.4 billion in 2013/14 to \$945 million in 2017/18 - with further cuts projected to 2020/21 in the forward estimates. These estimates could translate to a reduction of up to 65% in federal spending on environment and biodiversity [20]. Such severe cuts make it difficult for Australia to provide any meaningful leadership on the positive actions needed to conserve threatened species. They also contribute to delays in the threatened species listing process, and the provision of useful advice to proponents and land managers.

***Terms of Reference e) the adequacy and effectiveness of protections for critical habitat for threatened fauna under the Environment Protection and Biodiversity Conservation Act 1999;***

The EPBC Act does not currently include adequate mechanisms to enable protection of critical habitat for threatened fauna. Currently, the identification of critical habitat is only applied to Commonwealth-managed land, and only a handful of sites are registered. **Identification of critical habitat should trigger mechanisms designed to protect these areas on all land tenures, ensuring that habitat loss does not worsen threats to already threatened species.** One possible mechanism would be through the identification of key critical habitats in Recovery Plans and Conservation Advices. Such a change will assist in protecting those habitat areas required for threatened species conservation [21].

***Terms of Reference f) the adequacy of the management and extent of the National Reserve System, stewardship arrangements, covenants and connectivity through wildlife corridors in conserving threatened fauna;***

Protected areas play an important role in threatened species conservation, and Australia's National Reserve System (NRS) is no exception. However, protected areas must be actively managed to achieve the best outcomes for biodiversity [22]. The 'passive' setting aside of land in itself can address some threatening processes occurring in that land area, such as habitat loss. In itself, it does not address other threatening processes in that land area such as invasive species. Addressing these kinds of threats – and achieving the greatest positive impact from protected areas – requires investment in active management of threats within protected areas. Recent analysis suggests that active management of Australia's NRS could address all threats within that land tenure having flow on positive impacts on approximately 48% of Australia's threatened species [22]. This is compared with impact for only 3% of threatened species if no active management is undertaken [22].

Despite this, it must also be recognised that protected areas, no matter how well-managed, cannot address all threats facing threatened species. For example, climate change, invasive species, diseases, and pollution are threats that operate regardless of land tenure. Addressing these threats requires landscape management approaches. The current National Reserve System also cannot be used to exclusively address decline in all threatened species, because not all of Australia's threatened species occur in the footprint of our NRS.

It is also worth recognising the importance of private lands set aside for conservation purposes, some of which already form part of the NRS. A landscape management approach incorporating these lands alongside public tenure conservation land, and in conjunction with wildlife corridors, has potential to achieve substantial positive outcomes for threatened fauna species.

To make better use of protected areas in addressing the faunal extinction crisis, we recommend:

- **Expansion of the NRS**, informed by a scientific analysis of critical habitats under-represented in the system so far;
- **Enhanced investment in NRS to implement effective threat management** within the NRS; and
- **Investment in a nationally coordinated approach to landscape scale management** of threats that is collaborative across jurisdictions and private land tenures, enabling Australia to leverage the maximum positive impact from all protected areas for threatened species conservation.

**Terms of Reference** *g) the use of traditional knowledge and management for threatened species recovery and other outcomes as well as opportunities to expand the use of traditional knowledge and management for conservation;*

Traditional knowledge and management have an important role to play in threatened species recovery and management. There is potential for greater use of traditional knowledge and management to address the faunal extinction crisis, particularly because traditional knowledge systems offer unique aspects including:

- **Filling knowledge gaps:** Especially in remote and regional parts of Australia, traditional knowledge has been shown to fill significant gaps in knowledge about species distribution, habitat preference, diet and reproduction [23,24,25]. This is particularly true of species that are culturally significant such as the Bilby, Sea Turtles or large Goannas.
- **Potential to support onground management actions:**
  - About a third of Australia is currently regarded as Indigenous lands and a third of Australia's National Reserve System is managed by Indigenous land managers through the Indigenous Protected Area system. Therefore, Indigenous lands plays an important role in Australia's national conservation agenda.
  - Recent research found that three-quarters of Australia's terrestrial or freshwater vertebrate species cited as threatened have ranges that overlap with Indigenous lands [26]. They also found that this overlap represents 45% of the range of each threatened species on average.

Indigenous people should therefore be included in initial discussions about species and ecosystems management through to decisions about management. They should be provided with opportunities to apply their unique knowledge, to have access to formal training and to collaborate with ecologists.

**Terms of Reference** *h) the adequacy of existing funding streams for implementing threatened species recovery plans and preventing threatened fauna loss in general;*

Existing funding streams for implementing threatened species recovery plans and preventing threatened fauna loss are completely inadequate. Australia has been ranked one of the worst in the world for underfunding biodiversity conservation, grouped among many developing countries [27], and funding has decreased substantially since that study. Declines in the Australian Government's

investment in the environment have been associated with widespread losses and declines of species and ecosystems [18].

Australia should be aiming for investment in environment and biodiversity conservation to be at the upper end of the OECD and G20 proportions of Gross Domestic Product (GDP). At present we are allocating less than 1%, whereas the budget should be 2% to enable recovery of threatened species and ecosystems and to address other environmental failures [28].

**Australia should commit to investing a minimum 2% of GDP in the environment and biodiversity conservation**, and allow for greater investment if it is required to reverse the observed declines in Australia's fauna species.

***Terms of Reference i) the adequacy of existing monitoring practices in relation to the threatened fauna assessment and adaptive management responses;***

Effective monitoring is a critical part of threatened species management and conservation. Monitoring is required to detect changes in population abundance and their causes, and to determine effectiveness of management actions when they are implemented. This latter component should ideally be embedded as part of an adaptive management framework.

The current record on monitoring of threatened species in Australia is very poor. Approximately 30% of Australia's threatened species are not monitored at all and many are monitored inadequately [18,19]. Funds to support ongoing monitoring of threatened species' populations are insufficient to identify population trends over time and causative factors, as well as the change in the trajectory after management actions are implemented. The State of Environment Report (2016) [29] identified how a lack of long-term monitoring interferes with the ability to apply effective policy and management and establish early warning of threats.

Monitoring frameworks must also identify triggers for action, otherwise we are simply observers to decline and extinction as was the case for the Christmas Island pipistrelle [30].

While Australia's implementation of threatened species monitoring has been inadequate to date, this is not due to a lack of knowledge or understanding of *how* to undertake monitoring. Our ecological science and management community is experienced in undertaking well-structured and cost-effective monitoring, where data can be used to inform adaptive management. With greater investment in this area, Australia is equipped to implement effective monitoring for threatened species assessment and adaptive management responses.

**Specifically, in relation to monitoring we recommend:**

- **Application of the precautionary principle** in cases where there is insufficient current knowledge to adequately assess status, threats, or required recovery actions for a species;
- Where critical knowledge gaps for threatened species are identified, **targeted research and monitoring activities should be initiated to address these gaps**. This could be facilitated by a dedicated fund administered by the Department of the Environment or other suitable body; and
- The **EPBC Act should specify a requirement for monitoring and evaluation** – of listed threatened species, and of recovery plans – with a requirement to include triggers for management intervention.

The ESA's members hold significant experience and expertise in monitoring species and ecosystems, and welcome an opportunity to work with government and other stakeholders in designing and implementing robust monitoring activities for Australia's threatened species.

***Terms of Reference j) the adequacy of existing assessment processes for identifying threatened fauna conservation status;***

The current EPBC listing and delisting processes are established on rigorous and transparent scientific processes, with criteria based on those developed internationally by the International Union for the Conservation of Nature (IUCN). Processes prescribed by the EPBC Act are overseen by an independent scientific advisory council who review documents and advise the Department and the Minister for the Environment. This council has a range of expertise in marine and terrestrial disciplines.

Recent years have seen the development of new processes to ensure more efficient listing and delisting processes, reducing duplication of State and Commonwealth processes – including the development of a Common Assessment Method (CAM) - and strategically streamlining assessment processes (i.e. the Species Expert Assessment Plan (SEAP)). There is also increased collaboration among expert groups to undertake status review assessments of multiple species at a time and submit a status report to the Committee for consideration that may result in recommendations to amend the EPBC list of threatened species.

**The process of referral, assessment and listing under the EPBC Act must remain focused on rigorous scientific assessment, solely on the basis of threat to the species or community.** Decisions about action, economic impact and resourcing need to be transparently segregated from the listing process.

As well as the scientific rigour of the assessment process, consideration must be given to timely processing of listings. We are aware of substantial delays that often arise between the threatened species nomination being received by the Department, and this nomination being assessed and a decision made. To achieve effective administrative process of these requests, **the federal Environment Department needs to be adequately resourced**, as noted elsewhere in this submission.

***Terms of Reference k) the adequacy of existing compliance mechanisms for enforcing Commonwealth environment law; and***

As noted under Terms of Reference d), we recommend the EPBC Act is revised to ensure clear lines of accountability for conserving threatened species, and identifying the causative factors and responsible parties when critical endangerment and extinction events occur.

We also recommend that **the delivery of EPBC Act compliance functions is urgently improved to address key concerns identified by the Australian National Audit Office through recent reviews [31,32]**. These concerns include a lack of timely and targeted information regarding compliance functions, IT system limitations that undermine compliance monitoring, and an inability to demonstrate that compliance monitoring activities have been effective in protecting the environment. Adequate investment in biodiversity conservation as noted above can contribute to these improvements. In addition, we recommend that staff who are responsible for reviewing EPBC referrals and managing compliance functions are **suitably qualified and knowledgeable in ecological science** so they can critically assess the information before them.

Design of EPBC Act **conditions of approval must also be improved to ensure they deliver environmental outcomes**. Currently, most conditions specified as part of EPBC Act approval decisions are input-based conditions that are not linked to environmental outcomes. For example, a proponent may be required to install a certain number of nest boxes as part of their approval conditions. However, there is no requirement that these nest boxes be effective in providing alternative habitat for displaced fauna. Thus, the proponent may be compliant with their approval conditions while achieving no environmental outcome. The Department of the Environment released an Outcomes-based conditions policy in 2016 [33] that seeks to address this deficiency. Outcomes-based conditions define an environmental outcome that must be achieved, without prescribing how to do it. This approach allows the approval-holder to focus on achieving environmental outcomes at the lowest cost, encourages innovation, and increases transparency around the achievement of environmental outcomes. To improve compliance mechanisms under the Act, **we recommend that this outcomes-based approach to approval conditions be mainstreamed** by the Department of the Environment.

In addition, there is a need **to improve the monitoring of implementation of EPBC approval conditions** for major developments. Currently this monitoring is largely reliant on reports from environmental consultants who are contracted directly by development proponents. This arrangement clearly establishes a high risk of conflict of interest. To ameliorate this risk, proponents could instead contribute a designated amount to the Department who can then directly undertake this monitoring or contract suitably qualified professionals to undertake it and report back to the Department.

#### ***Terms of Reference I) any related matters.***

The scope of this Inquiry is limited to Australia's threatened fauna, however we recommend that due consideration be given to enhancing the protection of Australia's threatened flora as well.

#### For further information

The ESA welcomes the opportunity to provide further information to this Inquiry or to discuss our submission in more detail. We may be contacted using the details below:

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*Submission prepared on behalf of the ESA by its Policy Working Group and approved by the Vice-President (Public Policy and Outreach) and President, 10 September 2018.*

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