The Senate

Environment and Communications References Committee

Australia's faunal extinction crisis

Interim report

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Chapter 1

Introduction

1.1 On 27 June 2018, the Senate referred the following matter to the Environment and Communications References Committee (the committee) for inquiry and report by 4 December 2018:

> Australia's faunal extinction crisis, including:
>
> a) the ongoing decline in the population and conservation status of Australia's nearly 500 threatened fauna species;
>
> b) the wider ecological impact of faunal extinction;
>
> c) the international and domestic obligations of the Commonwealth Government in conserving threatened fauna;
>
> 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;
>
> e) the adequacy and effectiveness of protections for critical habitat for threatened fauna under the *Environment Protection and Biodiversity Conservation Act 1999*;
>
> 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;
>
> 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;
>
> h) the adequacy of existing funding streams for implementing threatened species recovery plans and preventing threatened fauna loss in general;
>
> i) the adequacy of existing monitoring practices in relation to the threatened fauna assessment and adaptive management responses;
>
> j) the adequacy of existing assessment processes for identifying threatened fauna conservation status;
>
> k) the adequacy of existing compliance mechanisms for enforcing Commonwealth environment law; and
>
> l) any related matters.[1]

1 *Journals of the Senate*, No. 104, 27 June 2018, p. 3338.

1.2 On 26 November 2018, the Senate granted an extension of time to report until 29 May 2019.[2] On 2 April 2019, the Senate granted an extension of time to report until 13 November 2019.[3]

Conduct of the inquiry

1.3 The committee advertised the inquiry in the usual manner on its website, and wrote to a number of organisations and individuals, inviting them to make submissions by 13 August 2018. On 8 August 2018, the Committee agreed to extend the date for the receipt of submissions to 10 September 2018.

1.4 The committee has received 420 submissions, which are listed at Appendix 1 of this report, and available in full on the committee's website.

1.5 The committee held a number of public hearings to take evidence. A list of all witnesses that appeared at these hearings can be found at Appendix 2 of this report, and full Hansard transcripts of proceedings can be found on the committee's website. These hearings were held in:

- Canberra on 8 October 2018;
- Melbourne on 22 November 2018;
- Brisbane on 1 February 2019;
- Tasmania on 4 and 5 February 2019; and
- Canberra on 14 February 2019.

1.6 The committee also undertook site visits in:

- Victoria on 21 November 2018, to visit the Toolangi State Forest and the Healesville Sanctuary; and
- Queensland on 31 January 2019, to visit the site of proposed developments at Toondah Harbour, Cleveland.[4]

Structure of this report

1.7 This report is an interim report that draws on the committee's work to date. It concentrates on evidence received by the committee on whether the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is currently fulfilling its objectives in protecting threatened species.

1.8 It should be noted that this interim report is focussed on the effectiveness of the EPBC Act as a legislative framework for managing the Australian environment,

2 *Journals of the Senate*, No. 130, 26 November 2018, p. 4230.

3 *Journals of the Senate*, No. 141, 2 April 2019, p. 4793.

4 An account of both these site visits can be found in Appendix 3.

rather than its implementation. The committee recognises that evidence canvassed serious shortcomings with the implementation of the Act and other related areas, such as its interaction with state and territory frameworks. However, the committee does not seek to address these issues in this report.

1.9 The interim report consists of four chapters:

- Chapter 1 provides a background to the inquiry and its administration, a summary of the EPBC Act, and an overview of relevant reviews of and inquiries into the Act;
- Chapter 2 provides an overview of the faunal extinction crisis in Australia and the key threats to the survival of Australia's unique fauna;
- Chapter 3 considers the evidence received by the committee on the effectiveness of the EPBC Act, and potential reforms that should be considered by the Commonwealth; and
- Chapter 4 sets out the committee's views and recommendations.

Background

1.10 The EPBC Act is the Commonwealth's key environmental legislation relating to the protection of threatened species of flora and fauna, as well as ecological communities and heritage sites. The Act came into force on 16 July 2000, and is administered by the Department of the Environment and Energy (the department).[5]

1.11 The EPBC Act contains provisions for the Commonwealth to assess actions that are likely to have a significant impact on a matter of national environmental significance (MNES) in Australia. It also contains provisions to list and manage threatened species, ecological communities, and protected areas, and also regulates wildlife trade.

1.12 The department noted that 'Australia's international obligations provide the overarching framework and constitutional basis by which the Australian Government and the Department seek to deliver national policies and programs that provide for the conservation and protection of biodiversity, including threatened fauna'.[6] International agreements to which Australia is a signatory include the United Nations Sustainable Development Goals, Convention on Biological Diversity, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Convention on the Conservation of Migratory Species, the Ramsar Convention on Wetlands of International Importance and the World Heritage Convention. The department added that 'as a signatory to these conventions and agreements Australia

5 Department of the Environment and Energy, 'About the EPBC Act', www.environment.gov.au/epbc/about (accessed 20 February 2019).

6 Department of the Environment and Energy, *Submission 57*, p. 11.

has committed to care for, and report on progress towards, global biodiversity goals and targets'.[7]

1.13 The department also stated that it:

> …leads Australia's engagement in the United Nations Convention on Biological Diversity, and represents national interests at intersessional meetings and biannual Conferences of the Parties. The Convention on Biological Diversity is dedicated to promoting sustainable development. As a Party to the Convention, Australia's obligations include having a national biodiversity strategy and action plan that demonstrates how Australia will contribute to global targets and reporting internationally every four years on how we have contributed to the Aichi Biodiversity Targets.[8]

1.14 Apart from the EPBC Act, the Commonwealth also protects the environment through a number of other non-statutory measures, including 'programs that invest in recovery and restoration, national policies and strategies that guide national action, and funding activities that support science and monitoring for the conservation and protection of threatened fauna'.[9]

1.15 *Australia's Biodiversity Conservation Strategy 2010–2030* provides the 'guiding national framework to conserve national biodiversity to 2030' for Australian governments. According to the department:

> It provides an overview of the state of Australia's biodiversity and outlines collective priorities for conservation. The strategy also provides relevant guidance to non-government organisations and individuals on how and where they should be focussing their conservation efforts.[10]

Other stakeholders in environmental conservation and protection

1.16 The states and territories also have a major role in environmental matters being 'the primary regulators for Australia's native plants and animals'. All jurisdictions 'have legislation to conserve biodiversity and to retain and manage habitats, including through a conservation reserve system involving national parks, nature reserves, conservation parks and marine parks'. In addition, the state and territory governments operate native vegetation conservation programs, while also providing for sustainable development of lands and waters within their jurisdictions.[11]

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7 Department of the Environment and Energy, *Submission 57*, p. 11.

8 Department of the Environment and Energy, *Submission 57*, p. 11.

9 Department of the Environment and Energy, *Submission 57*, p. 5.

10 Department of the Environment and Energy, *Submission 57*, p. 17.

11 Department of the Environment and Energy, *Submission 57*, p. 5.

1.17 Non-governmental stakeholders including landholders, communities, traditional owners, and private sector and non-government organisations also play a key role. For example:

> All responsible landholders, managers and lessees contribute to biodiversity conservation through their management of lands and waters across Australia. This contribution ranges from retaining the productive potential of the lands and waters, to conserving particular species or habitats and even providing habitats for native species such as frogs, birds, reptiles and small mammals in towns and city areas.
>
> Other groups and sectors that invest considerable time and effort to protect biodiversity include Indigenous and community groups, environmental non-government organisations, businesses, and the research and education sector. These groups have considerable Indigenous ecological or local knowledge, technical expertise and play a critical role in onground implementation and raising community awareness. Many biodiversity conservation successes are the product of effective partnerships between governments and nongovernment groups.[12]

Objectives of the EPBC Act

1.18 The broad objectives of the EPBC Act are to:

- provide for the protection of the environment, especially matters of national environmental significance;
- conserve Australian biodiversity;
- provide a streamlined national environmental assessment and approvals process;
- enhance the protection and management of important natural and cultural places;
- control the international movement of plants and animals (wildlife), wildlife specimens and products made or derived from wildlife;
- promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;
- recognise the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; [and]
- promote the use of Indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.[13]

12 Department of the Environment and Energy, *Submission 57*, pp. 5–6.

13 Department of the Environment and Energy, 'About the EPBC Act', www.environment.gov.au/epbc/about (accessed 20 February 2019).

Actions requiring assessment

1.19 The Commonwealth Minister for the Environment must consider and approve all 'actions' that are likely to impact on NMES.[14] Actions are defined in section 523 of the Act as including:

(a) a project; and

(b) a development; and

(c) an undertaking; and

(d) an activity or series of activities; and

(e) an alteration of any of the things mentioned in paragraph (a), (b), (c) or (d).[15]

1.20 Currently, there are nine NMES that require ministerial consideration under the EPBC Act, which are also referred to as 'triggers'. These MNES relate to actions potentially affecting:

- world heritage properties;
- national heritage places;
- wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed);
- nationally threatened species and ecological communities;
- migratory species;
- Commonwealth marine areas;
- the Great Barrier Reef Marine Park;
- nuclear actions (including uranium mining);
- a water resource, in relation to coal seam gas development and large coal mining development.[16]

1.21 A number of other activities must also be assessed by the Minister, including actions that may affect the environment being undertaken by Commonwealth agencies, as well as any actions affecting the environment on Commonwealth-owned land. There is also some scope for the Minister to add other triggers to the list by

14 Department of the Environment and Energy, 'About the EPBC Act', www.environment.gov.au/epbc/about (accessed 20 February 2019).

15 *Environment Protection and Biodiversity Conservation Act 1999*, section 523.

16 Department of the Environment and Energy, 'About the EPBC Act', www.environment.gov.au/epbc/about (accessed 20 February 2019).

regulations, although this must be done in consultation with the jurisdictions, even if their agreement is not required.[17]

1.22 Additionally, threatened species and ecological communities can also receive protection through other relevant triggers in the EPBC Act. This means, for instance, that threatened species occurring in world heritage sites, Ramsar-protected wetlands, Commonwealth marine parks or the Great Barrier Reef Marine Park would also have some protections under the relevant MNES. In addition, some threatened species and ecological communities receive protection through other 'landscape-level' mechanisms, such as Commonwealth marine areas, and the National Reserve System.[18]

Biodiversity conservation and the listing of threatened species

1.23 As noted above, threatened species and ecological communities are a MNES under the EPBC Act. Chapter 3 of the Act sets out a regime for biodiversity conservation in Australia. This includes provisions for the 'listing' of nationally threatened native species and ecological communities, which involves the:

- identification and listing of species and ecological communities as threatened;
- development of conservation advice and recovery plans for listed species and ecological communities;
- development of a register of critical habitat;
- recognition of key threatening processes; [and]
- where appropriate, reducing the impacts of these processes through threat abatement plans.[19]

Conservation advices and recovery plans

1.24 The EPBC Act requires the preparation of conservation advices when a species is listed as threatened, to assist in its recovery. According to the department, a conservation advice 'provides guidance on immediate recovery and threat abatement activities that can be undertaken to ensure the conservation of a newly listed species'.[20]

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17 Department of the Environment and Energy, 'EPBC Act—Environment Assessment Process', *Fact sheet*, p. 2. See www.environment.gov.au/system/files/resources/d60cdd6a-8122-473a-bbd0-d483662cef3e/files/assessment-process_1.pdf (accessed 22 February 2019).

18 Department of the Environment and Energy, *Submission 57*, pp. 8–9.

19 Department of the Environment and Energy, 'Listed threatened species and ecological communities', www.environment.gov.au/epbc/about (accessed 20 February 2019).

20 Department of the Environment and Energy, *Submission 57*, pp. 12–13.

1.25 The department indicated that 99.7 per cent of all nationally listed species and communities have a recovery plan or conservation advice. The department added that, of the 449 listed fauna species:

- 337 have a conservation advice
- 206 have a recovery plan in place, noting some species have both
- Plans are being finalised as a priority for three listed species currently not covered by either.[21]

Key threatening processes and threat abatement plans

1.26 The EPBC Act also provides for the identification and listing of 'key threatening processes' (KTPs) and the development of 'threat abatement plans' (TAPs).

1.27 A KTP is defined as a process that 'threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community'.[22] Listing of a KTP provides official recognition that a process is a key threat to biodiversity at the national level. Currently there are 21 listed KTPs.[23]

Commonwealth environmental assessment processes

1.28 Assessment of actions that may have a significant impact on a MNES must be referred to the Minister for assessment. A flow chart of the assessment process regarding referrals is at Appendix 4.

1.29 In making a decision on projects, the Minister can decide that proposed actions are 'clearly unacceptable'. Where this finding is made, proponents are able to re-submit an amended proposal as a new referral, or request that the Minister reconsider the decision. The Minister can also decide whether approval of proposals is required under the EPBC Act, as well as the process of assessment. Alternative paths of assessment can include referrals being considered as:

- a controlled action, where approval is subject to conditions under the EPBC Act;
- not as a controlled action in a 'particular manner', which means that approval is subject to specified conditions; or

21 Department of the Environment and Energy, *Submission 57*, p. 13.

22 Department of the Environment and Energy, 'Key threatening processes under the EPBC Act', www.environment.gov.au/biodiversity/threatened/key-threatening-processes (accessed 6 March 2019).

23 These are listed at: Department of the Environment and Energy, 'Listed Key Threatening Processes', www.environment.gov.au/cgi-bin/sprat/public/publicgetkeythreats.pl (accessed 18 March 2019).

- not a controlled action, if the action is taken in accordance with the referral.[24]

1.30 The Minister can also decide to carry out a 'strategic assessment' under which can allow consideration of 'cumulative impacts' on MNES, with an eye to achieving 'conservation and planning outcomes on a much larger scale than can be achieved through project-by-project assessments'. For example, a large urban growth area that will be developed over many years. This means that individual approval for relevant projects may not need to be undertaken through the EPBC Act.[25]

The approvals process

1.31 In deciding to approve a project that has been assessed, the Minister must consider a number of matters, which are set out in section 136 of the EPBC Act. These include consideration of:

- the principles of ecologically sustainable development [outlined in section 3A of the Act]
- the results of the assessment of the impacts of the proposed action, including the relevant recommendation report from the secretary of the federal environment department
- referral documentation
- community and stakeholder comments
- any other relevant information available on the impacts of the proposed action, and
- relevant comments from other Australian Government and state and territory government ministers (such as information on social and economic factors).

The minister may also take into account the environmental history of the individual or company proposing to take the action, including the environmental history of the executive officers of companies, and parent companies and their executive officers.[26]

1.32 In approving a project, the Minister can determine that certain conditions must be met such as undertaking repair or mitigation of any damage caused by an action on an environmental matter protected by the EPBC Act. The Minister has a range of mechanisms, including requiring bonds or other securities, independent environmental auditing and compliance monitoring. Additionally, Commonwealth approval of a proposed action under the EPBC Act does not remove the requirement for proponents

24 Department of the Environment and Energy, 'EPBC Act—Environment Assessment Process', *Fact sheet*, p. 3.

25 Department of the Environment and Energy, 'Strategic Assessments', *Fact sheet*, p. 3. See www.environment.gov.au/protection/assessments/strategic (accessed 6 March 2019).

26 Department of the Environment and Energy, 'EPBC Act–Environment Assessment Process', *Fact sheet*, p. 6.

to seek any other relevant state and territory approvals.[27] A flow chart of the assessment process regarding the assessment/ decision to approve is at Appendix 4.

Bilateral agreements

1.33 The Commonwealth currently has bilateral agreements in place with all states and territories, which devolve certain powers to the jurisdictions. Bilateral agreements give state and territory governments the responsibility for undertaking environmental assessments and/or approvals for certain issues. Bilateral agreements exist between the Commonwealth and all other Australian jurisdictions.[28]

1.34 Chapter 3 of the EPBC Act sets out the objects and provisions for bilateral agreements. It states that bilateral agreements are made to:

> (a) protect the environment; and
>
> (b) promote the conservation and ecologically sustainable use of natural resources; and
>
> (c) ensure an efficient, timely and effective process for environmental assessment and approval of actions; and
>
> (d) minimise duplication in the environmental assessment and approval process through Commonwealth accreditation of the processes of the State or Territory (and vice versa).[29]

1.35 Assessment bilateral agreements are developed provide for:

> …a single environmental assessment process conducted by the state. At the completion of the assessment the state provides a report to the Australian Government assessing the likely impacts of the project on matters of national environmental significance.
>
> Following the assessment stage, the state and the Australian Government each make a decision on project approval and conditions to meet differing requirements. This may result in two approval decisions and two sets of conditions.[30]

1.36 The department submitted that the Commonwealth currently has assessment bilateral agreements in place with all states and territories.[31]

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27 Department of the Environment and Energy, 'EPBC Act–Environment Assessment Process', *Fact sheet*, pp. 6–7.

28 Department of the Environment and Energy, 'Environment assessments' www.environment.gov.au/protection/environment-assessments (accessed 18 March 2019).

29 EPBC Act, section 44.

30 Department of the Environment and Energy, 'One-Stop Shop for environmental approvals', www.environment.gov.au/epbc/one-stop-shop (accessed 18 March 2019).

31 Department of the Environment and Energy, *Submission 57*, p. 6. See also Department of the Environment and Energy, 'One-Stop Shop for environmental approvals', www.environment.gov.au/epbc/one-stop-shop (accessed 18 March 2019).

1.37 Under approval bilateral agreements:

> …the state assesses the likely impacts of a project on the environment and makes a decision on approval, accounting for both state matters and matters of national environmental significance. Only one decision is made and includes conditions (if appropriate).[32]

Exemptions

1.38 The EPBC Act contains exemptions for the assessment and approvals process for certain types of activities. This includes:

- forestry activities conducted under Regional Forestry Agreements (RFAs), which are exempted from assessment from EPBC Act assessment by section 38 of the Act;
- offshore oil and petroleum activities, which from 2014 are assessed under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act), regulated by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA);
- actions that the Minister considers are 'in the national interest' to approve without following the usual assessment process, under section 158 of the EPBC Act;
- actions that are necessary to address matters of national security or 'in relation to preventing, mitigating or dealing with a national emergency', which is provided for under section 28(3) of the EPBC Act; and
- any activities undertaken by a Commonwealth agency granted an exemption by the Minister for the usual approvals process, subject to the Minister being satisfied that the agency 'will comply with state/territory environment protection laws when undertaking the action or class of actions to which the declaration applies'.[33]

1.39 A list of exemptions for particular actions is published on the department's website, alongside reasons for exemptions being granted by the Minister, as required by sections 158 and 303A of the EPBC Act.[34]

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32 Department of the Environment and Energy, 'One-Stop Shop for environmental approvals', www.environment.gov.au/epbc/one-stop-shop (accessed 18 March 2019).

33 Department of the Environment and Energy, 'Exemptions', www.environment.gov.au/epbc/exemptions (26 February 2019).

34 'Exemption notices', http://epbcnotices.environment.gov.au/exemptionnotices/. For assessments subject to the OPGGS Act, see NOPSEMA, 'Legislation and regulations', www.nopsema.gov.au/about/legislation-and-regulations/ (both accessed 26 February 2019).

Review mechanisms and access to courts

1.40 The EPBC Act provides three means of seeking review or reconsideration of administrative decisions, namely: request for consideration; merits review; and judicial review.[35]

1.41 Reconsideration and merits review of administrative decisions enable all aspects of a decision to be reconsidered on their merits. If successful, a new decision can be substituted in place of the original decision.

1.42 In contrast, merits review is a form of external review conducted at the federal level by the Administrative Appeals Tribunal (AAT). Merits review is available for a wide range of decisions relating to permits (sections 206A, 221A and 243A), except those decisions made personally by the Minister.[36]

1.43 Judicial review is not concerned with the merits of an administrative decision, rather with whether the decision-maker acted lawfully when making the decision (for example, all relevant considerations were taken into account).

Reviews of and inquiries into the EPBC Act

1.44 There have been a number of inquiries and reviews which have commented on aspects of the EPBC Act which are relevant to the committee's current inquiry.

The 2009 Hawke Review

1.45 The EPBC Act stipulates that a statutory review must be undertaken every 10 years.[37] The first of these reviews was undertaken by Dr Allan Hawke in 2009. The department confirmed to the committee that the next statutory review must commence by October 2019, and that this would involve extensive consultation.[38]

1.46 In considering the first 10 years of the EPBC Act's operation, the Hawke Review made 71 recommendations to Government.[39] Most notably, Recommendation 1 of the Hawke Review was that the EPBC Act should be repealed and replaced with a new Act, 'The Australian Environment Act', which would:

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35 *Independent review of the Environment Protection and Biodiversity Conservation Act 1999* (2009) (Hawke Review), p. 252.

36 Originally, the EPBC Act allowed for merits reviews of a small range of decisions only: Hawke Review, p. 255.

37 EPBC Act, section 522A.

38 Department of the Environment and Energy, *Submission 57*, p. 16.

39 The recommendations can be found at: Hawke Review, pp. 27–44. The Government's response to the recommendations was: Australian Government, *Australian Government Response to the Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999* (August 2011), www.environment.gov.au/resource/australian-government-response-report-independent-review-environment-protection-and (accessed 8 March 2019).

(1) be restructured and drafted to modernise, clarify, simplify and streamline both language and process;

(2) reduce duplication of processes; and

(3) increase the focus on strategic approaches to environmental management.[40]

1.47 The Hawke Review set out the rationale for this recommendation:

> It is clear from comments that many people, including professionals, find the Act hard to understand and navigate. The Act is currently repetitive, lengthy, unnecessarily complex, often unclear and, in some areas, overly prescriptive. As a consequence many provisions need to be re-drafted.
>
> The simplest way to achieve the necessary reordering and redrafting would be to repeal the Act and replace it with a new *Australian Environment Act*. A complete redraft will enable legislators to use modern drafting techniques which will also aid simplification and clarity of the Act in general, although the effect of many of the provisions that exist currently in the Act will not change.[41]

1.48 The Government Response to the Hawke Review stated that, although it agreed with the 'intent' of this recommendation, the Government intended to achieve this 'through amendment of the EPBC Act rather than by drafting an entirely new Act'. The Government supported this position as follows:

> The drafting of a new Act would require substantial legislative drafting, stakeholder education and revision of administrative documents. The government will focus on progressing amendments that achieve the greatest outcomes for the environment and for proponents. This approach is consistent with the Review's general acknowledgement that the EPBC Act is still effective in achieving its aims. In a number of cases the amendments will include clarification, simplification and streamlining [as recommended].[42]

1.49 The Hawke Review made 70 other recommendations for reform of the EPBC Act. These are discussed in the following chapters of this report, where relevant to the evidence received by the committee.

Senate committee inquiries

1.50 The predecessor to this committee has produced a range of reports into issues relating to the EPBC Act.

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40 Hawke Review, p. 27.

41 Hawke Review, p. 27

42 Australian Government, *Australian Government Response to the Report of the Independent Review of the Environment Protection and Biodiversity Conservation Act 1999* (August 2011), p. 7.

1.51 In 2009, the committee tabled two reports for the inquiry into *The Operation of the Environment Protection and Biodiversity Conservation Act 1999*.[43] The final report of the committee made a number of recommendations, including:

- the potential inclusion of greenhouse gas emission and land clearing triggers in the Act;
- greater resources for the department for assessment, monitoring, complaint investigation, compliance, auditing projects approved under Part 3, and enforcement;
- regular evaluation and adequate resourcing of long-term environmental decisions made under the Act;
- a review of the effects of bilateral agreements with jurisdictions 'on the quality of environmental assessments of matters of national environmental significance', which was to be undertaken either as part of the independent statutory review of the Act, or by the Australian National Audit Office (ANAO);
- review of the interaction of the EPBC Act with the *Fisheries Management Act 1991* in the assessment and conservation of fish species;
- amending the timeline for nomination and listing of threatened species or ecological communities, to improve 'transparency, rigour and timeliness';
- the use of 'offsets' for habitat conservation only as 'a last resort' that 'must deliver a net environmental gain', and not be 'accepted as a mitigating mechanism where other policies or legislation (such as state vegetation protection laws) are already protecting the habitat proposed for use as an offset'; and
- consideration of expanding the scope for merits review 'in relation to ministerial decisions under the Act', particularly relating to 'whether an action is a controlled action; assessment decisions; and decisions on whether a species or ecological community is to be listed under the Act'.[44]

1.52 Following the tabling of the committee's reports for this inquiry, the then-Environment Minister, the Hon Peter Garrett AM MP, wrote to Dr Hawke, asking him to 'consider the findings and recommendations of the Senate Inquiry in his Independent Review of the EPBC Act'. The 2011 Government Response to the inquiry

43 The Senate Standing Committee on Environment, Communication and the Arts, *The operation of the Environment Protection and Biodiversity Conservation Act 1999: First Report* (2009), p. ix–x.

44 The Senate Standing Committee on Environment, Communication and the Arts, *The operation of the Environment Protection and Biodiversity Conservation Act 1999: Final Report* (2009), pp. ix–x.

report acknowledged that the committee's findings and recommendations had been considered as part of the Hawke Review in 2009.[45]

1.53 This committee also undertook an inquiry in 2013 into the *Effectiveness of threatened species and ecological communities' protection in Australia*. The committee made 44 recommendations to improve the Act's protection of threatened species. This included recommendations aimed at:

- reducing duplication between Commonwealth and jurisdictions, including in environmental law and in the administration of the listings process;
- reforming of the listing process for threatened species and ecological communities;
- improving recovery planning, and Action and Threat Abatement Plans;
- bolstering funding for implementation;
- working to address threats from invasive species and feral animals;
- more stringent monitoring and review processes, including preparation of national accounts provided to Parliament;
- reviewing the effectiveness of RFAs with state governments, particularly regarding threatened species protection;
- the undertaking of an audit of offsets granted under the Act;
- consultation with affected stakeholders prior 'to the introduction of amendments…to establish cost recovery mechanisms for environmental assessment processes';
- ensuring that 'conditions on approvals' made under the Act are 'kept as straightforward as possible and worded clearly to ensure that conditions are enforceable';
- developing better compliance strategies in consultation with jurisdictions for monitoring and compliance activities relating to the Act, as well as an audit of compliance with approval conditions to be undertaken by the ANAO; and
- more streamlined fisheries management provisions, to provide a 'single strategic assessment framework for Commonwealth and state-managed fisheries to deliver a single assessment and approval framework'.[46]

1.54 The Government Response to this report was tabled in August 2014. It noted that the recent appointment of Australia's first Threatened Species Commissioner was an indication of the importance the Government placed on threatened species

45 Australian Government, *Australian Government Response to the Senate Inquiry into the Operation of the Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (2011), p. 2.

46 Environment and Communications References Committee, *Effectiveness of threatened species and ecological communities' protection in Australia* (2013), pp. vii–xiii.

management, and a 'new national focus' for conservation efforts for endangered flora and fauna.[47]

1.55 The Government Response also agreed with a number of committee recommendations. This included recommendations for the: harmonising of lists of threatened species between the Commonwealth and jurisdictions (Recommendation 1); improved coordination of action plans (Recommendation 11); a review of all TAPs more than five years old, to be undertaken and released publicly within five years (Recommendation 21); and more stringent identification and mapping of critical habitats for threatened species and ecological communities in recovery plans and conservation advices (Recommendation 23).[48]

1.56 In 2011, this committee undertook an inquiry into the status, health and sustainability of Australia's koala population, which touched on the operation of the EPBC Act's protection of threatened species. The committee concluded that:

> The EPBC threatened species listing process is reactive and not well suited to the conservation needs of the koala. In the committee's view, there ought to be processes available to enable proactive protection for the koala as well as other significant Australian species. In this regard the committee notes the possible mechanisms announced as part of the government's response to the review of the EPBC Act which could enable a more proactive approach to koala conservation. Perhaps, building on the [Threatened Species Scientific Committee's (TSSC)] proposal to monitor species of cultural, evolutionary and/or economic significance, there ought to be a category of nationally significant species.[49]

1.57 In relation to threatened species more generally, the committee recommended:

> Recommendation 3:
>
> …the Australian Government establish a nationally coordinated and integrated program for population monitoring of threatened species and other culturally, evolutionary and/or economically significant species.
>
> [and]…
>
> Recommendation 5:
>
> …the Threatened Species Scientific Committee provide clearer information to the Environment Minister in all future threatened species listing advices, including species population information, and that the Threatened Species

47 Australian Government, *Australian Government response to the Senate Environment and Communications References Committee report: Effectiveness of threatened species and ecological communities' protection in Australia* (2014), p. 2.

48 Australian Government, *Australian Government response to the Senate Environment and Communications References Committee report: Effectiveness of threatened species and ecological communities' protection in Australia* (2014), pp. 3, 11, 17 and 19 respectively.

49 Environment and Communications References Committee, *The koala—saving our national icon* (2011), p. xix.

> Scientific Committee review its advice to the Minister on the listing of the koala in light of the findings of this inquiry.[50]

1.58 The Government Response agreed in part with Recommendation 3, noting a number of measures being taking to establish 'a national coordinated system' for monitoring the environment, including biodiversity. This included the development of 'environmental indicators' by the department to improve monitoring, the appointment of a Threatened Species Commissioner in mid-2014, and other programs to improve the information base for threatened species.[51]

1.59 The Government Response agreed with Recommendation 5. It noted that the TSSC takes account of available information relevant to the criteria for listing. It also stated that the Minister had decided to list koala populations in New South Wales, Queensland and the ACT as vulnerable under the EPBC Act.[52]

Australian National Audit Office (ANAO) audits

1.60 In 2014, the ANAO conducted an audit of the department's monitoring of compliance with the EPBC Act. The final report found that there were significant shortcomings with the department's management of EPBC Act compliance and risk management frameworks, stating:

> …nearly 14 years after the enactment of the EPBC Act, [the department] is yet to establish mature administrative arrangements to effectively discharge its regulatory responsibilities in relation to approved controlled actions. As a consequence, the assurance that the department has regarding proponents' compliance with action approval conditions, which are designed to address the risks posed to MNES, is limited.[53]

1.61 The ANAO also found that 'the increasing workload on compliance monitoring staff over time' had led to a 'generally passive approach' to monitoring compliance with approval conditions. As a consequence, the department only had a limited visibility of the progress of many controlled actions, and any subsequent risks to MNES. Additionally, the ANAO found that this passive approach was noticeable in its management of non-compliance.[54] In many cases, it stated:

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50 Australian Government, *Australian Government response to the Senate Environment and References Committee report: The koala—saving our national icon* (2014), pp. 6–7.

51 Australian Government, *Australian Government response to the Senate Environment and References Committee report: The koala—saving our national icon* (2014), pp. 5–6.

52 Australian Government, *Australian Government response to the Senate Environment and References Committee report: The koala—saving our national icon* (2014), p. 8.

53 Australian National Audit Office, *Managing Compliance with Environment Protection and Biodiversity Conservation Act 1999 Conditions of Approval* (2014).

54 Australian National Audit Office, *Managing Compliance with Environment Protection and Biodiversity Conservation Act 1999 Conditions of Approval* (2014), p. 16.

> …instances of proponent non-compliance (mostly of a technical nature—such as, a missed deadline to submit a management plan) were either not identified by staff, or were identified but not referred for assessment and possible enforcement action. The failure to appropriately respond to identified non-compliance can: impact on the effectiveness of environmental safeguards; risk environmental damage; jeopardise the department's ability to take future enforcement action; and harm the public's confidence in the regulator. Also, in the absence of appropriate procedures, the department's investigations into reported non-compliance with approval conditions were conducted inconsistently.[55]

1.62 In 2017, the ANAO undertook a follow-up audit, which found some of the department's performance had improved, but concluded that only limited progress had been made to strengthen the department's regulatory performance more generally:

> Environment has made progress in addressing the five recommendations made in [the 2014 ANAO report]…To date, limited progress has been made in relation to the implementation of broader initiatives to strengthen the department's regulatory performance.[56]

Recent reforms to Commonwealth environment law and policy

1.63 There have been a number of recent amendments to the EPBC Act and other Australian laws and policies for the protection and management of the environment.

1.64 In 2013, a water trigger was added to the EPBC as a new MNES, particularly relating to coal seam gas projects and large coal mining developments.[57]

1.65 In 2014, the Commonwealth appointed a Threatened Species Commissioner to 'bring national focus to threatened species'. The Commissioner also leads the implementation of the Government's Threatened Species Strategy and its five-year Action Plan.

1.66 In 2015, the Commonwealth worked with jurisdictions to implement a 'Common Assessment Method', which is designed to:

> …align the assessment and listing of nationally threatened species across Australian jurisdictions. The Common Assessment Method provides a consistent approach to assessments, reducing duplication of effort and improving clarity for stakeholders.[58]

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55 Australian National Audit Office, *Managing Compliance with Environment Protection and Biodiversity Conservation Act 1999 Conditions of Approval* (2014), pp. 16–17.

56 Australian National Audit Office, *Monitoring compliance with Environment Protection and Biodiversity Conservation Act 1999 Conditions of Approval: Follow-on audit* (2014), p. 7.

57 Department of the Environment and Energy, 'Fact Sheet 4: EPBC Water Act Amendments–Water Trigger', www.environment.gov.au/epbc/publications/factsheet4-oss-epbc-act-amendments-water-trigger (accessed 1 March 2019).

58 Department of the Environment and Energy, *Submission 57*, p. 7.

Chapter 2

Faunal extinction in Australia

2.1 This chapter provides an overview of the faunal extinction crisis in Australia and outlines the key threats to the survival of Australia's unique fauna.

The status of Australia's biodiversity

2.2 Many submitters noted that Australia has a large, diverse range of unique wildlife. The Wilderness Society commented:

> 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.[1]

2.3 However, extensive evidence was received about Australia's very poor record of protecting its unique wildlife, which set out the ongoing decline in biodiversity since white settlement. An article by Professor John Woinarski et al commented:

> Australia's isolation has resulted in its remarkable biodiversity distinctiveness but also the extraordinary vulnerability of its biota to novel threats. With the dwindling abundance, range, and diversity of so many species, we see now only a faint shadow of the richness and abundance of the Australian mammal fauna that existed at the time of European settlement.[2]

2.4 The extent of the decline means that Australia has one of the world's worst records for the extinction and lack of protection for threatened fauna and is ranked second (after Indonesia) in the world for ongoing biodiversity loss.[3] Submitters cited reports indicating that more than 10 per cent of endemic terrestrial land mammal species have become extinct over the last 200 years, which represents 50 per cent of the global mammal extinctions during that period.[4] In comparison, only one native

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1 The Wilderness Society, *Submission 133*, p. 4.

2 J Woinarski, A Burbidge and P Harrison, 'Ongoing unravelling of a continental fauna: Decline and extinction of Australian mammals since European settlement', *Proceedings of the National Academy of Sciences of the United States of America* (April 2015). This is available at: www.pnas.org/content/112/15/4531 (accessed 19 March 2019).

3 See for example: Wide Bay Burnett Environment Council, *Submission 30*, p. 1; The Wilderness Society, *Submission 133*, p. 5; Save the Bilby Fund, *Submission 175*, p. 6.

4 See for example: Centre for Ecosystem Science, UNSW, *Submission 56*, p. 5.

land mammal from continental North America has become extinct since European settlement.[5]

2.5 Mr Paul Sullivan, the Chief Executive of BirdLife Australia, commented on Australia's birds and stated that at least four bird taxa have recently become extinct, and the national threatened bird index shows that relative abundance of threatened birds has decreased by 52 per cent between 1985 and 2015. This includes birds such as the rainbow bee-eater, kookaburra and magpie. This compares very unfavourably with the 624 per cent increase in the population of threatened birds in the United States.[6]

2.6 Dr Graham Edgar, who appeared in a private capacity, provided evidence about the significant loss of biodiversity in the marine environment. Commenting on research on sediment cores from around south-eastern Tasmania, Dr Edgar stated:

> Every single core that we took showed that over the last 100 years there had been a catastrophic decline in the marine community in the system. So from an average of 23 species per slice of the core around 1900, we were down to around seven species today, of which four were introduced species. So basically the whole system has collapsed but with no recognition and nothing other than this study to show for it. This study has not been extended anywhere else but it is clearly important to understand what the scale of these losses are and to try and categorise them properly.[7]

2.7 BirdLife Australia also commented that, while biodiversity is declining globally, in many respects, Australia is a global anomaly. BirdLife Australia went on to explain:

> Australia is renowned worldwide for its unique and diverse flora and fauna. We are a wealthy nation with comparatively good governance and a high degree of political stability. Yet Australia is one of the worst performers for preventing extinction…Most of the continent is remote from urban communities and intensive areas of human development, yet we have high rates of extinction, with many of these having occurred in remote areas.[8]

Overview of the decline in biodiversity

2.8 The ongoing decline in biodiversity has been identified in a range of reports on Australia's environment. Australia's Fifth National Report to the Convention on Biological Diversity (CBD) stated that:

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5 J Woinarski, A Burbidge and P Harrison, 'Ongoing unravelling of a continental fauna: Decline and extinction of Australian mammals since European settlement'.

6 Mr Paul Sullivan, Chief Executive, BirdLife Australia, *Proof Committee Hansard*, 5 February 2019, p. 2.

7 Dr Graham Edgar, Private capacity, *Proof Committee Hansard*, 5 February 2019, p. 2.

8 BirdLife Australia, *Submission 118*, p. 8.

> In general, declines in population size, geographic range and genetic diversity are being seen among a wide range of species across all groups of plants, animals and other forms of life in Australia.[9]

2.9 The CBD report also noted a major decline in mammals in northern Australia, changes in species composition and loss of ecological integrity across a range of threatened ecological communities, and degradation in native vegetation.[10]

2.10 The latest State of the Environment (SoE) Report 2016 commented that 'the status of biodiversity in Australia is generally considered to be poor and deteriorating'. It was noted that mammal declines in northern Australia have continued; and there has been a significant decline in some bird species. The SoE report commented that 'very limited information is available to assess the state and trends of reptiles, amphibians and invertebrates, except for a few high-profile species'.[11] In relation to mammal extinctions, the SoE report commented that the number of mammal extinctions 'is vastly greater than that recorded for any other country'.[12]

2.11 In January 2019, the Organisation for Economic Co-operation and Development (OECD) released its report on Australia's environmental performance. The OECD report commented that 'Australia is one of 17 megadiverse countries. Although gaps in knowledge hamper proper assessment, the overall status of biodiversity is poor and worsening'.[13] The OECD report went on to acknowledge that steps had been taken to improve conservation outcomes, however, it found that:

> …the pace and scale of progress have not been enough to improve the status and trends of ecosystems and species…Small initiatives and limited investment are insufficient to fully address a legacy of land clearing combined with growing pressure from population growth, expanding development, invasive species and climate change.[14]

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9 Department of the Environment and Energy, *Fifth National Report to the Convention on Biological Diversity* (May 2014), p. 10. This report is available at: www.environment.gov.au/system/files/resources/fd293bd1-c8b8-4ef3-9178-315d06a1663d/files/5th-national-report-final_0.pdf (accessed 28 February 2019)

10 Department of the Environment, *Fifth National Report to the Convention on Biological Diversity*, May 2014, p. 2.

11 Department of the Environment and Energy, *Australia State of the Environment 2016, Overview*, p. 27, https://soe.environment.gov.au/theme/overview (accessed 28 February 2019).

12 Department of the Environment and Energy, *Australia State of the Environment 2016, Terrestrial plan and animal species* (2016), https://soe.environment.gov.au/theme/biodiversity/topic/2016/terrestrial-plant-and-animal-species-mammals#biodiversity-figure-BIO19 (accessed 28 February 2019).

13 Organisation for Economic Co-operation and Development, *OECD Environmental Performance Reviews: Australia 2019* (2019), p. 3. This report is available at: https://doi.org/10.1787/9789264310452-en (accessed 28 February 2019)

14 Organisation for Economic Co-operation and Development, *OECD Environmental Performance Reviews: Australia 2019* (2019), p. 170.

2.12 When considered together, these reports provide clear evidence of the deterioration of Australia's biodiversity. Significantly, it was suggested to the committee that the rate of decline in biodiversity is expected to continue.[15] BirdLife Australia, for example, commented that 'we anticipate the rate of EPBC [Environment Protection and Biodiversity Conservation] listings (new listings and uplistings) will only increase (in volume and pace) over the next 10–50 years'.[16] The Threatened Species Recovery Hub stated:

> Where recent population trajectory information is available, the overwhelming trend for EPBC Act-listed animal species is for ongoing population decline (174 species); in contrast, only three listed species are considered to be increasing. Extinction is a likely end result of ongoing population decline for threatened species.[17]

2.13 WWF-Australia also saw a poor outlook for Australia's fauna and suggested that, given increases from 2011 to 2015 in the number of listed critically endangered animals and plants, 'a further wave of extinctions is imminent'.[18] Mr James Trezise, a Policy Analyst for the Australian Conservation Foundation (ACF), commented:

> This is a crisis that is clearly unfolding in front of our eyes, and it's not like the pressures that are driving these events are abating or diminishing—in fact, they are ramping up. Australia is now a global deforestation hotspot. Let that sink in: we stand next to places like the Amazon and Indonesia for deforestation.[19]

2.14 The reasons for this outcome were clearly articulated by the Centre of Ecosystem Research, which stated:

> Extinction rates are accelerating because the underlying causes are not being addressed effectively by Australian governments, communities and industries, and laws and policies meant to protect against loss of species are not adequately implemented (regulation and compliance) or often subsidiary in decision-making to development legislation (e.g. mining, water resource management).[20]

2.15 The following discussion provides a more detailed analysis of the increase in the number of fauna listed as threatened and the trend rate of extinction in Australia.

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15 See, for example: Environmental Farmers Network, *Submission 27*, p. 2.

16 BirdLife Australia, *Submission 118*, p. 6. See also Centre for Ecosystem Science, *Submission 56*, p. 6.

17 Threatened Species Recovery Hub, *Submission 159*, Attachment 1 (*The ongoing decline in the population and conservation status of threatened fauna*), p. 2.

18 WWF-Australia, *Submission 131*, p. 1.

19 Mr James Trezise, Policy Analyst, Australian Conservation Foundation, *Committee Hansard*, 8 October 2018, p. 1.

20 Centre of Ecosystem Research, *Submission 56*, p. 7.

Rate of faunal extinction in Australia

2.16 At the time of European settlement, much of the fauna now regarded as threatened flourished across the continent. The Northern Territory Government noted extinctions had occurred even in the arid lands of central Australia and stated that this area experienced the worst mammal loss since European settlement.[21] Woinarski et al provided evidence of the rate of mammal extinction in Australia from settlement and stated:

> Although the detail of the patterning is imprecise, the available evidence indicates a broad sequential wave of mammal losses, beginning from the first settled areas in southeastern Australia (coincident with the first arrivals of some associated threats) from the 1840s, reaching central Australia in the 1890s with rapid declines there particularly over the period of 1930–1960 and marked losses continuing from about the 1960s to the present day in much of northern Australia.[22]

2.17 Woinarski et al also pointed to records of the collection of skins of now extinct and threatened species as evidence of this earlier abundance. For example, in one year (1908), a single company marketed 100 000 brush-tailed rock-wallaby skins; and in about 1900, dealers in Adelaide sold a now-extinct subspecies of brush-tailed bettong by the dozen at about ninepence a head for coursing on Sunday afternoons.[23]

2.18 One significant example of the decline of a previously abundant species is the koala. The number of koalas at the time of European settlement has been estimated as being up to 10 million.[24] Following settlement, koala populations came under pressure from clearing of habitat, fire and hunting. Woinarski et al, in their study of mammal extinctions, commented that in the 31 days of the last open season in Queensland in 1927, 500 000 koala skins were collected.[25]

2.19 While hunting of koalas ceased by 1930, continuing pressure from clearing of habitat, disease, fire and drought, saw numbers decline significantly. Koala populations in Queensland, New South Wales and the Australian Capital Territory were listed as vulnerable under the EPBC Act in May 2012. The Species Profile and Threats Database utilised in the listing process assessed koala populations in the

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21 Northern Territory Government, *Submission 2*, p. 2.

22 J Woinarski, A Burbidge and P Harrison, 'Ongoing unravelling of a continental fauna: Decline and extinction of Australian mammals since European settlement'.

23 J Woinarski, A Burbidge and P Harrison, 'Ongoing unravelling of a continental fauna: Decline and extinction of Australian mammals since European settlement'.

24 Bill Phillips, *Koalas: The little Australians we'd all hate to lose*, Australian Government Publishing Service, Canberra, 1990, pp. 20–26.

25 J Woinarski, A Burbidge and P Harrison, 'Ongoing unravelling of a continental fauna: Decline and extinction of Australian mammals since European settlement'.

period 1990 to 2010 as having declined by 43 per cent in Queensland and 33 per cent in New South Wales.[26]

2.20 Despite being listed as vulnerable, submitters argued that koala numbers are still declining, with the Australian Koala Foundation estimating that there are fewer than 100 000 koalas left in the wild, possibly as few as 47 860.[27] Localised extinction is now predicted—Koala Action submitted that the koala is now 'on the brink of extinction in many regions of Queensland'. Koala Action noted that between 1996 and 2014 the estimated mean decline in koala density in the Koala Coast (Redlands) was 80.25 per cent and in the Pine Rivers 54.28 per cent.[28]

2.21 While environmental awareness has grown from the 1960s, with both the Commonwealth and state governments enacting legislation to protect biodiversity, declines in abundance and extinctions have continued to occur. For example, the Commonwealth *Endangered Species Protection Act 1992* responded to 'the widespread view expressed by the Australian public that endangered species are a national problem that requires Commonwealth Government involvement'. The Act established national lists of endangered and vulnerable species and endangered ecological communities. At that time there were 226 species and sub-species of plants and 73 species of animals regarded as endangered, with a further 661 species and sub-species of plants and 66 of animals regarded as vulnerable.[29]

Since the introduction of the EPBC Act

2.22 The EPBC Act replaced the previous ad hoc approach to environmental legislation. In relation to biodiversity, it was the first time that the Commonwealth Government had 'legislated for the holistic concept of biodiversity conservation'.[30] One of the objects of the EPBC Act is to conserve Australian biodiversity.[31] In order to achieve its objects, the EPBC Act enhances Australia's capacity to ensure the conservation of its biodiversity by including provisions to protect native species,

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26 Department of the Environment and Energy, *Species Profile and Threats Database: Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)–Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)* www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=85104 (accessed 28 February 2019).

27 Australian Koala Foundation, *Submission 169*, p. 2.

28 Koala Action, *Submission 92*, p. 3.

29 Senator the Hon Nick Bolkus, Minister for Administrative Services, Second Reading Speech, *Senate Hansard*, 26 November 1992, p. 3587.

30 Senate Environment, Recreation, Communications and the Arts Committee, *Environment Protection and Biodiversity Conservation Bill 1998 and Environmental Reform (Consequential Provisions) Bill 1998*, April 1999, chapter 9.

31 EPBC Act, paragraph 3(1)(c).

including the prevention of extinction and the promotion of the recovery of threatened species, and protection of ecosystems.[32]

2.23 The EPBC Act provides for species identification and listing of species and ecological communities as threatened. Since the commencement of the EPBC Act, new categories have been added for listed threatened species and ecological communities. Critically endangered, conservation dependant and extinct in the wild have been added to the previous categories of endangered, vulnerable and extinct for threatened species and critically endangered and vulnerable have been added to the previous category of endangered for ecological communities.[33]

Trends in listings

2.24 Many submitters noted that since the introduction of the EPBC Act in 1999, the list of nationally threatened species and ecological communities has increased by more than 30 per cent.[34] The Threatened Species Recovery Hub added that, since the EPBC Act's inception, only 13 animal species have been delisted, five animals species have been down-listed (mostly due to review or new information) and 46 species have had their conservation status up-listed, mostly because of ongoing and severe deterioration in their conservation outlook.[35]

2.25 The SoE Report 2016 provides information on the threatened species list as at December 2015:

- 74 ecological communities, of which 31 were listed as critically endangered, 41 as endangered and 2 as vulnerable.
- 480 animal species, including 55 listed as extinct or extinct in the wild, an increase of 44 species since 2011. The number of nationally listed threatened animal species has increased for all taxa except amphibians. This included seven new mammal species listed as endangered and four new species listed as vulnerable. Two species of marsupial mole were delisted. The number of threatened bird species increased by 15 species; the number of critically endangered bird species increased by seven. Four species were uplisted to critically endangered since 2011.[36]

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32 EPBC Act, sub paragraphs 3(2)(e)(i), 3(2)(e)(iii).

33 As set out in chapter 1 of this report.

34 The Wilderness Society, *Submission 133*, p. 5.

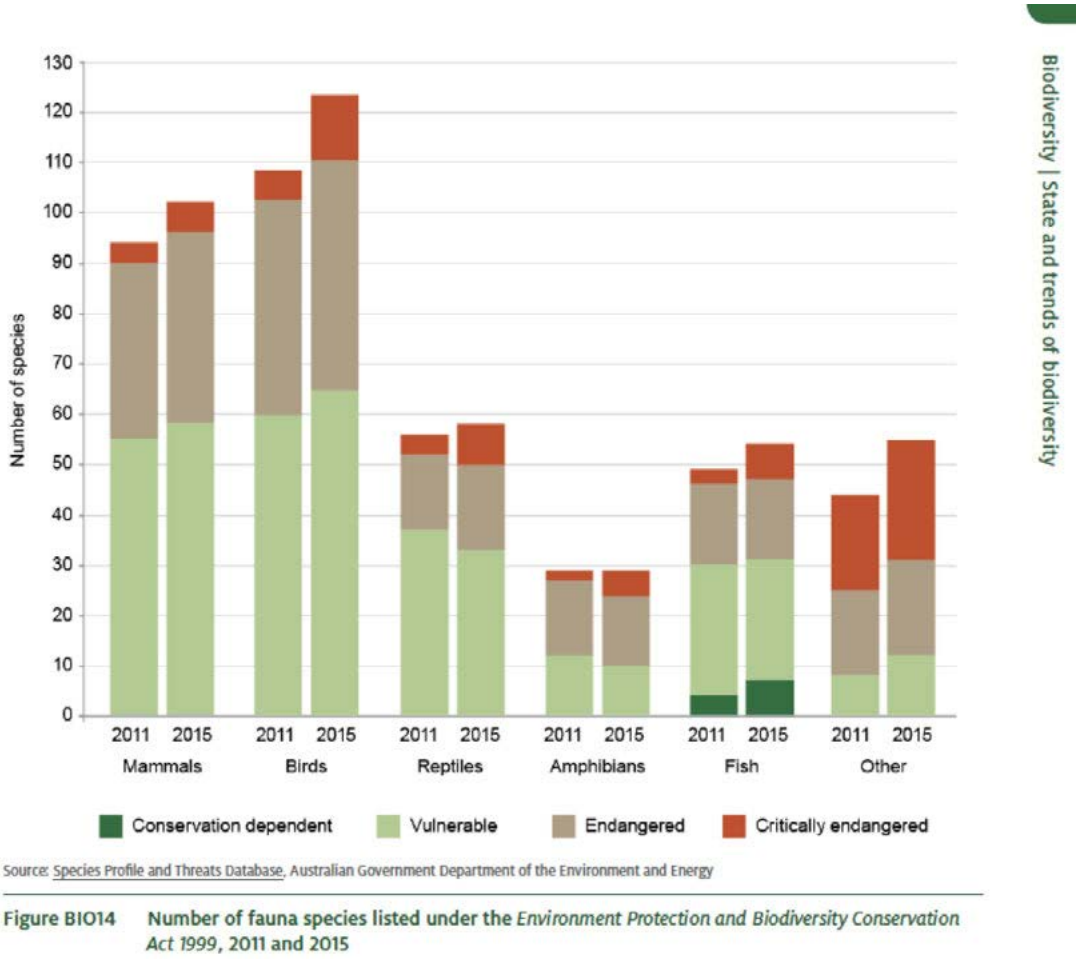
35 Threatened Species Recovery Hub, *Submission 159*, Attachment 1 (*The ongoing decline in the population and conservation status of threatened fauna*), p. 1.

36 Department of the Environment and Energy, *Australia State of the Environment 2016, Terrestrial plan and animal species: Threatened Species Lists* (2016), https://soe.environment.gov.au/theme/biodiversity/topic/2016/terrestrial-plant-and-animal-species-threatened-species-lists#figure-bio14number-of-fauna-species-listed-under-the-environment-protection-and-biodiversity-conservation-act-1999-2011-and-2015--119471 (accessed 28 February 2019).

- 1294 plant species, including 37 species listed as extinct.[37]

2.26 The SoE Report 2016 also provides the change in listings between 2011 and 2015 and noted that in that period, the list of nationally threatened species and ecological communities increased, with the addition of 30 new ecological communities, and 44 animal and 5 plant species.[38] Figure 2.1 provides EPBC Act fauna listings for 2011 and 2015.

Figure 2.1: Number of fauna listings under the EPBC Act, 2011 to 2015



Source: Department of the Environment and Energy, *SoE Report 2016.*

2.27 In July 2018, there were a total of 511 faunal species listed under all threatened species categories, an increase in total listings of 31 since 2015.[39] On

37 Department of the Environment and Energy, *Australia State of the Environment 2016, Overview*, p. 27.

38 Department of the Environment and Energy, *Australia State of the Environment 2016, Overview*, p.27.

39 Humane Society International, *Submission 98*, p. 2.

18 February 2019, the reclassification of listed species reduced the total number of threatened species to 506.[40]

2.28 Table 2.1 provides the EPBC Act list of threatened fauna in 2018 and 2015.

Table 2.1: EPBC Act list of threatened fauna

Listing	Species number 2018	Species number 2015
Extinct	Frogs (4) Mammals (27) Birds (22) Other animals (1)	Fauna species extinct or extinct in wild (55)
Extinct in the wild	Fishes (1)	
Critically endangered	Fishes (8) Birds (17) Frogs (5) Mammals (9) Reptiles (10) Other animals (29)	Fishes (7) Birds (13) Frogs (5) Mammals (6) Reptiles (8) Other animals (24)
Endangered	Fishes (17) Birds (54) Frogs (14) Mammals (37) Reptiles (20) Other animals (21)	Fishes (16) Birds (46) Frogs (14) Mammals (38) Reptiles (17) Other animals (19)
Vulnerable	Fishes (24) Birds (62) Frogs (10) Mammals (60) Reptiles (33) Other animals (13)	Fishes (24) Birds (65) Frogs (10) Mammals (58) Reptiles (33) Other animals (12)
Conservation dependent	Fishes (8)	Fishes (7)
TOTAL	Fauna 506	Fauna 480

Sources: Department of the Environment and Energy, *Species Profile and Threats Database*, www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl; and *State of the Environment Report, Terrestrial plant and animal species: Threatened species lists*, https://soe.environment.gov.au/theme/biodiversity/topic/2016/terrestrial-plant-and-animal-species-threatened-species-lists#figure-bio14number-of-fauna-species-listed-under-the-environment-protection-and-biodiversity-conservation-act-1999-2011-and-2015--119471 (both accessed 28 February 2019).

40 The Hon Melissa Price MP, Minister for the Environment, 'Stronger Protections for threatened species', *Media Release*, 18 February 2019.

2.29 The Threatened Species Recovery Hub provided an analysis of population trajectory of EPBC Act listed threatened animal species, based mainly on recent International Union for Conservation of Nature (IUCN) assessments. The trajectory is provided in Table 2.2.

Table 2.2: Population trajectory of EPBC Act listed threatened animal species

Years on EPBC Act list	Current population trajectory				
	Decreasing	Stable	Unknown	Increasing	Not given
18	116	47	21	3	9
15-17	10	1	0	0	2
12-14	10	2	1	0	1
9-11	5	1	0	0	0
6-8	9	1	1	0	0
3-5	16	6	2	0	3
0-2	8	2	2	0	1
Total	174	60	27	3	16

Source: Threatened Species Recovery Hub, *Submission 159*, Attachment 1 (*The ongoing decline in the population and conservation status of threatened fauna*), p. 7. See submission for notes accompanying table.

Faunal species extinctions

2.30 The EPBC Act list includes 55 fauna species either extinct or extinct in the wild. However, evidence suggests that the number of extinctions is much higher.

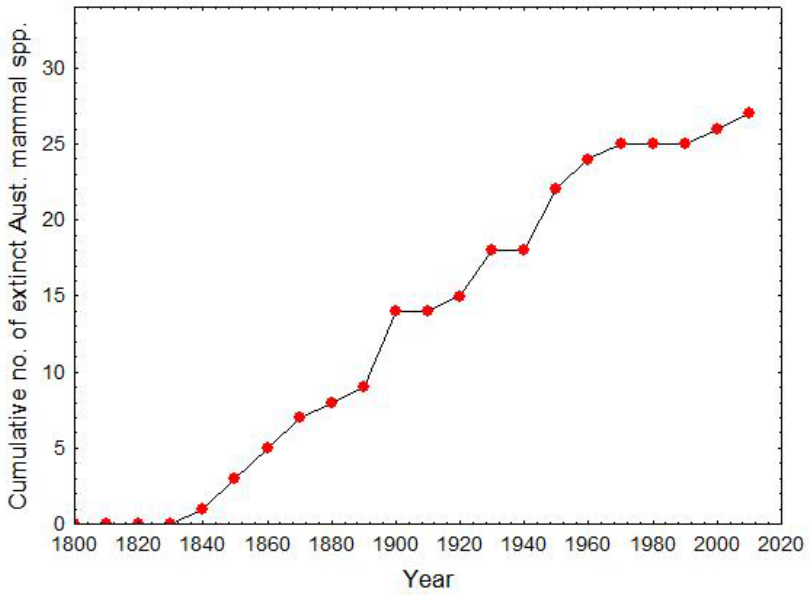
2.31 For example, while the EPBC Act lists 27 extinct mammal species, the Threatened Species Recovery Hub have identified 34 mammal extinctions in Australia since European settlement. It was added that of the 27 listed mammal extinctions include seven subspecies. As a consequence, 'only 59% of the extinctions of Australian mammal species are formally acknowledged under the Act, severely under-playing the extent of loss'.[41]

2.32 The Threatened Species Recovery Hub added that 'the rate of Australian mammal extinctions has continued largely unabated, with an average of 1–2 Australian endemic mammal species being made extinct per decade since about the 1850s'. The Hub also noted that many of the now extinct mammal species had vast ranges and large population sizes.[42] The cumulative number of extinct mammal since 1800 is provided in figure 2.2.

41 Threatened Species Recovery Hub, *Submission 159*, Attachment 1 (*The ongoing decline in the population and conservation status of threatened fauna*), p. 3.

42 Threatened Species Recovery Hub, *Submission 159*, Attachment 1 (*The ongoing decline in the population and conservation status of threatened fauna*), pp. 3–7.

Figure 2.2: Cumulative number of extinctions of Australian endemic mammal species since 1800



Note that, for some species, the dating of extinction is too difficult to assess, so the graph does not include all extinct species

Source: Threated Species Recovery Hub, *Submission 159*, Attachment 1 (*The ongoing decline in the population and conservation status of threatened fauna*), p. 3.

2.33 The Threatened Species Recovery Hub also provided information on the rate of extinction of reptiles and noted that the first known extinction of an Australian endemic reptile species since 1788 occurred in 2014, with the death in captivity of the last known Christmas Island forest skink (*Emoia nativitatis*).[43] It also noted that two other Australian endemic lizards, the blue-tailed skink (*Cryptoblepharus egeriae*) and Lister's gecko (*Lepidodactylus listeria*), became extinct in the wild in 2010 and 2012. The Threatened Species Recovery Hub commented that extinction, or extinction in the wild, of these three Australian endemic lizards represents about 10 per cent of the 31 global reported reptile extinctions since 1500. The Hub stated that, other than the extinction of one tortoise species, these three reptiles are the only known reptile extinctions in the world since the 1970s.[44]

2.34 Submitters also commented that two other species–Bramble Cay melomys (*Melomys rubicola*), the and Christmas Island Pipistrelle (*Pipistrellus murrayi*)—have gone extinct in the last decade.[45] In February 2019, the Minister, based on advice from

43 Threatened Species Recovery Hub, *Submission 159*, Attachment 1 (*The ongoing decline in the population and conservation status of threatened fauna*), p. 3.

44 Threatened Species Recovery Hub, *Submission 159*, Attachment 1 (*The ongoing decline in the population and conservation status of threatened fauna*), p. 4.

45 Green Fire Science, University of Queensland, *Submission 88*, p. 5; Victorian National Parks Association, *Submission 110*, p. 2.

the Threatened Species Scientific Committee (TSSC), determined to move the Bramble Cay melomys to the extinct category. At that time, the Tammar wallaby was removed from the extinct list to not listed.[46]

2.35 The committee also received evidence that 'many more Australian animal and plant species have not been sighted for decades, which warrants full scientific assessment for extinct listing'.[47]. For example, 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 sighted since.[48]

2.36 Given the concern that the EPBC Act listings do not accurately reflect the current outlook for many species, the Centre for Ecosystem Science, UNSW, concluded:

> Many more Australian animal and plant species have not been sighted for decades, warranting full scientific assessment for extinct listing.[49]

Species that are threatened with extinction

2.37 The committee also received evidence that pointed to a range of species which are threatened with extinction in the coming decades.[50] For example, Green Fire Science highlighted that, according to the *Action Plan for Australian Mammals*, 56 mammal species and 33 mammal subspecies are threatened with extinction.[51]

2.38 BirdLife Australia noted recent research which has identified a group of threatened birds at high risk of extinction in the next 20 years. It stated that 'these are taxa that have not attracted significant recovery effort, funding and/or lack recovery plans, representing the failure of successive Australian Governments to meet our international obligation to protect and conserve biodiversity'.[52]

2.39 In addition, submitters stated that, for many species, there is too little information about them to have them listed. The TSSC stated that:

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46 Minister for the Environment, the Hon Melissa Price MP, 'Stronger protection for threatened species', *Media release*, 18 February 2019.

47 Centre for Ecosystem Science, *Submission 56*, p. 7.

48 Green Fire Science, University of Queensland, *Submission 88*, p. 9; BirdLife Australia, *Submission 118*, p. 4.

49 Centre for Ecosystem Science, UNSW, *Submission 56*, p. 7.

50 Nature Conservation Society of South Australia, *Submission 104*, p. 3.

51 Green Fire Science, University of Queensland, *Submission 88*, p. 9, citing Woinarski JCZ, Burbidge AA, Harrison PL 'The Action Plan for Australian Mammals 2012', CSIRO Publishing (2014).

52 BirdLife Australia, *Submission 118*, p. 6.

> There are large numbers of other poorly known but imperilled species at risk from extinction but they are not protected because we know so little about them. Sufficient data are available for other species that have not been assessed. Scientists suspect that many hundreds of thousands of Australian species remain undiscovered or poorly known, and that many of these species are at as great a risk of extinction as those formally listed as threatened.[53]

2.40 Green Fire Science commented that research suggested that 'the number of EPBC Act listed threatened fauna species in Australia is possibly just 1/20th of the number that may actually be threatened'. Further, numerous species may have been lost before they were known to science. Green Fire Science concluded that 'we are constantly under-stating the severity of the crisis facing us'.[54]

Issues raised in relation to the threatened species list

2.41 As the EPBC Act list is at the heart of the legislative framework for threatened species recovery and protection, it was argued that the list must be rigorous and reflect the current situation of listed species. The Threatened Species Recovery Hub stated:

> The list of Australia's threatened species provides a robust foundation for recovery efforts and the application of regulatory protections. The list should therefore be justified, up-to-date and appropriately include all Australian species that are threatened with extinction. If the list is not comprehensive, so must our approach to conserving species be inadequate. An accurate, scientifically robust list thus provides a strong foundation for the prevention of extinction, and the recovery, of Australia's threatened species.[55]

2.42 However, the committee received a range of evidence commenting on aspects on the process for listing threatened species and ecological communities including:

- lengthy delays between nomination and listing of species and communities;
- the lists are incomplete, inaccurate and are not reviewed;
- heavy reliance on public nominations;
- problems with listing where there is insufficient data;
- taxonomic bias in the lists; and
- lack of emergency listing provisions.

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53 Threatened Species Scientific Committee, *Submission 151*, p. 4.

54 Green Fire Science, University of Queensland, *Submission 88*, p. 9.

55 Threatened Species Recovery Hub, *Submission 159*, Attachment 10 (*The adequacy of existing assessment procedures for identifying the conservation status of threatened fauna*), p. 3.

2.43 The following discussion provides an overview of the evidence received in relation to these issues. The committee's final report will consider these issues in greater detail.

Delays in nomination

2.44 Submitters stated that the process for listing is slow—at best taking up to a year, but generally taking two years.[56] While the EPBC Act includes timeframes for the TSSC to complete its assessment of nominations, the Act allows the TSSC to seek an extension of time to do so. The Department of the Environment and Energy (the department) has informed the committee that, at the time of writing, there are currently 13 species for which the assessment completion time has been extended by the Minister, at the TSSC's request. The department also commented that the requests and justification for extensions are available on the departmental website.[57]

2.45 One example of a delay in the assessment of a change in listing is the Australian sea lion. In 2005, the sea lion was EPBC Act listed as vulnerable. However, in 2008, the IUCN listed it as endangered. The TCCS is currently assessing the listing of the Australian sea lion and has been doing so for a number of years.[58]

2.46 As a consequence of the time taken to complete a nomination, a species may continue to decline and their conservation status can become more threatened. In addition, the failure to list a species may result in a lack of adequate consideration being given when a development proposal is being assessed. To address these concerns, submitters called for a simpler and faster nomination and listing process with statutory timeframes for the assessment of nominations.[59]

Lack of accuracy

2.47 In addition to concerns about the accuracy of listed species that have gone extinct, submitters also questioned the accuracy of the threatened species list for other classifications. For example, Associate Professor Mark Lintermans stated that the listings of freshwater fish grossly underestimate the actual number of threatened taxa. Professor Lintermans added:

> It is estimated that approximately 1/3rd of Australia's freshwater fish are yet to be formally described, and it is this cryptic freshwater fish biodiversity

56 Green Fire Science, University of Queensland, *Submission 88*, p. 19; Australian Institute for Marine Science, *Submission 158*, p. 4.

57 Department of the Environment and Energy, Answer to questions on notice from Additional Estimates 2018-19, 18 February 2019, Question no. 37 (received 20 March 2019). The list of extensions for assessment and decision can be found at www.environment.gov.au/biodiversity/threatened/nominations/extensions (accessed 20 March 2019).

58 Environment and Communications Legislation Committee, Mr G. Richardson, Department of the Environment and Energy, *Proof Estimates Hansard*, 18 February 2019, p. 114.

59 EDOs of Australia, *Submission 52*, p. 7.

> that is providing the bulk of recently identified taxa that urgently needs conservation action.[60]

2.48 The department commented that 'many of the species listed under the EPBC Act do not regularly have their status reviewed'. The department added that 'comprehensive reviews of all listed species is challenging due to the large number that are threatened'.[61]

Reliance on public nominations

2.49 Submitters argued that the threatened species list relies heavily on ad hoc nominations from 'under-resourced community groups rather than any program of systematic review'.[62]

Impact of insufficient data

2.50 Many species are either unassessed or classified as data deficient, meaning they do not receive environmental protection or management even if they are at threat and declining.[63]

Lack of emergency listing

2.51 As listing of a threatened species can take up to two years, submitters supported the inclusion of an emergency listing mechanism. For example, the Humane Society International stated that there should be a means by which 'more urgent nominations can be prioritised and emergency listings made where there are demonstrated immediate or significant threats'.[64] The Threatened Species Recovery Hub commented that:

> [Emergency listing] may be particularly critical where species experience sudden, catastrophic declines, or where a new species discovered during an environmental impact assessment could be at risk from the proposed development.[65]

2.52 The Threatened Species Recovery Hub provided the case of the Bellinger River Snapping Turtle, *Myuchelys georgesi*, to illustrate the need for emergency listing. In 2015, the turtle experienced an up to 90 per cent loss of population in under

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60 Associate Professor Mark Lintermans, *Submission 228*, p. 1.

61 Department of the Environment and Energy, *Submission 57*, p.12.

62 Nature Conservation Society of South Australia, *Submission 104*, p. 8.

63 EDOs of Australia, *Submission 52*, p. 8; Green Fire Science, University of Queensland, *Submission 88*, p. 19.

64 Humane Society International, *Submission 98*, p. 18. See also, Tasmanian Land Conservancy, *Submission 44*, p. 4; Green Fire Science, University of Queensland, *Submission 88*, p. 19; Australian Conservation Foundation, *Submission 137*, p. 9.

65 Threatened Species Recovery Hub, *Submission 159*, p. 18.

one year due to disease. While a recovery program has been established, the change in the formal conservation status under the EPBC Act took from February 2015 to December 2016 to be completed. The Hub noted that 'during which time the Commonwealth would have been unable to legally use the turtle's proposed Critically Endangered status in considering applications for developments that would impact them'.[66]

Key drivers of faunal extinction

2.53 According to the state of the environment report, the key pressures of habitat clearing and fragmentation, invasive species and climate change remain high on the list of pressures that threaten listed species and ecological communities, and biodiversity in general.[67] Evidence received by the committee also pointed to a range of threatening processes, both singly and in combination, driving biodiversity loss in Australian including:

- habitat loss, degradation and fragmentation;
- invasive species including cats and foxes;
- changes to fire management;
- climate change; and
- disease.

Habitat loss, degradation and fragmentation

2.54 The Commonwealth Endangered Species Scientific Sub-committee (the predecessor to the TSSC) commented that it was 'strongly of view that land clearance has been the most significant threatening process in Australia since European settlement' and should land clearing continue, additional species will become endangered.[68] Many submitters supported this view.[69] Dr Prowse for example, commented:

> The extinction of species and the loss of biodiversity is clearly a crisis of our own making. The reasons for this crisis are really quite clear: the loss of habitat is driving a loss of biodiversity and leading to extinction of species.[70]

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66 Threatened Species Recovery Hub, *Submission 159*, p. 18; Attachment 10 (*The adequacy of existing assessment procedures for identifying the conservation status of threatened fauna*), p. 4.

67 Department of the Environment and Energy, *Australia State of the Environment 2016, Overview*, p. vii.

68 Department of the Environment and Energy, 'Land Clearance', www.environment.gov.au/biodiversity/threatened/key-threatening-processes/land-clearance (accessed 19 March 2019).

69 Australian Veterinary Association, *Submission 54*, p. 3.

70 Dr Stephen Prowse, Chair, Protect the Bush Alliance, *Proof Committee Hansard*, 1 February 2019, p. 28.

2.55 The Centre for Ecosystem Science, UNSW, provided the following overview of deforestation:

- between 1972 and 2014, more than 7.2 million ha of primary forest was cleared across Australia, about 7 per cent of the available forest;
- in 2015, Eastern Australia, including NSW, was identified as one of only 11 regions of the world undergoing high deforestation and the only one in a developed country;
- deforestation has contributed to serious declines in woodland birds and reptiles. For example, it was estimated that about 100 million native birds, reptiles and mammals were killed because of destruction of their habitat in NSW between 1998 and 2005; and
- the loss of such habitat threatens the continent's biodiversity, affecting 60 per cent of Australia's nearly 1700 threatened species.[71]

2.56 Professor David Lindenmayer, appearing in a private capacity, provided evidence on the impact of logging on forest biodiversity. He stated:

> What we have seen, particularly in the last 20 years, is a significant decline in what we call site occupancy—that's the occupancy of these long-term sites by various elements of biodiversity. We have seen site occupancy for Leadbeater's possum decline by half, 50 per cent, in the last 20 years. Greater gliders have declined by 64 per cent. We've seen significant declines in virtually all of the species of possums and greater gliders on which we have worked. We have seen declines in 24 of the 49 species of birds on which we work.[72]

2.57 The rate of land clearing is contentious. The Australian Veterinary Association pointed to work by Evans which indicated that a lack of consistency between Queensland's SLATS (Statewide Landcover and Tree Study) and the Australian Government's NCAS (National Carbon Accounting System). The study concluded that 'in the absence of a robust quantitative evaluation, it is not yet clear whether deforestation rates have significantly changed following other recent policy changes in New South Wales, Victoria and Western Australia'.[73] This issue will be explored further in the committee's final report.

2.58 Dr Reside provided evidence on the threat of extinction facing the black-throated finch from habitat loss. The black-throated finch has been EPBC Act listed as endangered for nearly 14 years. As a result of habitat loss it has now disappeared from

71 Centre for Ecosystem Science, UNSW, *Submission 56*, p. 6 (citations not included).

72 Professor David Lindenmayer, Private capacity, *Committee Hansard*, 22 November 2018, p. 2.

73 Australian Veterinary Association, *Submission 54*, p. 5.

over 80 per cent of its original range and is now confined to two major areas around Townsville and the Galilee Basin in Central Queensland.[74]

Invasive species including cats, foxes and cane toads

2.59 Invasive species have contributed significantly to species extinctions in Australia. The Invasive Species Council stated that 'invasive species have been overwhelmingly the main cause of animal extinctions in Australia, primarily responsible for at least three-quarters of the mammal losses, about half the bird losses and all frog and lizard losses'. The Council went on to note that the recent extinctions and extinctions on Christmas Island (of the Christmas Island pipistrelle, Christmas Island forest skink, Blue-tailed skink and the Lister's gecko), were all due to invasive species such as the Asian wolf snake, cats, black rates and Asian giant centipedes. The Council concluded that 'Christmas Island offers a sobering case study of the destruction that can be wrought by invasive species'.[75]

2.60 Submitters commented on the benefits of eradicating invasive species for faunal populations. Many pointed to the example of Macquarie Island where feral cats, rabbits, ship rates and house mice had destroyed important seabird populations and sub-Antarctic ecosystems. An eradication program was completed in 2014 and since that time, populations of eight threatened bird species had either stabilised or recovered.[76] A further example was provided by Professor Moritz who noted that the baiting of foxes in Western Australia 'was demonstratively effecting in recovering threatened species there'.[77]

2.61 Some evidence pointed to the need for a more stringent environmental biosecurity regime, which would prevent the arrival into Australia of potentially harmful new invasive species. For example, the Invasive Species Council supported a stronger regime, particularly for islands, where native animal populations were more vulnerable to the effects of invasive species. The Invasive Species Council also noted that island habitats also offered substantial opportunities for the recovery of threatened fauna, as feral animals could be eradicated to protect endemic species.[78]

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74 Dr April Reside, Research fellow, Green Fire Science Lab, University of Queensland, *Proof Committee Hansard*, 1 February 2019, p. 40.

75 Invasive Species Council, *Submission 27*, p. 2. See also, Ms Rachel Lowry, Director of Wildlife Conservation and Science, Zoos Victoria., *Committee Hansard*, 22 November 2018, p. 51.

76 Invasive Species Council, *Submission 27*, p. 9; Australian Veterinary Association, Queensland Branch, *Submission 54*, p. 2.

77 Professor Craig Moritz, Chair, National Committee for Ecology, Evolution and Conservation, Australian Academy of Science, *Committee Hansard*, 8 October 2018, p. 25.

78 Invasive Species Council, *Submission 27*, p. 9.

Changed fire management

2.62 Changed fire regimes is considered a major threat that has contributed to the extinction of six mammal species, and is a significant pressure on 35 threatened mammal species.[79]

2.63 Professor Bowman provided evidence on the impact of the change from Aboriginal fire management:

> …the fire regimes that were applied to that national park were completely at odds with the fire regimes under Aboriginal practice. I wanted to know about Aboriginal practice. I've worked in central Arnhem Land for 20 years. I've seen traditional Aboriginal fire management. I've worked on an estate that was very rich in biodiversity. Again, that system where we worked has now also deteriorated.[80]

Disease

2.64 Disease is now affecting a number of Australia's native animals, including: Tasmanian devils and facial tumour disease; *chytrid* fungus with global impacts on wild frog populations; Bellingen River turtle virus; Koala chlamydia; and sarcoptic mange in wombats.[81]

2.65 The department noted that in 2014, seven frog species were identified as being at high risk of extinction from the disease *chytridiomycosis*, resulting from infection by the *chytrid* fungus, with a further 22 species assessed as being at moderate to lower risk of extinction.[82]

Climate change

2.66 Climate change is recognised as having a severe impact on the survival of species across the globe and in Australia it is seen as one of the major factors in biodiversity decline and species loss in both the terrestrial and marine environments. Professor Brendan Wintle, a Director of the Threatened Species Recovery Hub, commented that 'of the 450 listed animals in the EPBC Act, almost all of them are actually still declining, so there is a real risk also that these declines will be accelerated and exacerbated by climate change'.[83]

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79 Department of the Environment and Energy, *Submission 57*, p. 4.

80 Professor David Bowman, Private capacity, *Proof Committee Hansard*, 14 February 2019, p. 9

81 Zoo and Aquarium Association of Australia, *Submission 51*, p. 2.

82 Department of the Environment and Energy, *Submission 57*, p. 4.

83 Professor Brendan Wintle, Director, Threatened Species Recovery Hub, *Proof Committee Hansard*, 4 February 2019, p. 61.

2.67 Australia has already lost one known species due to the effects of climate change. In 2016 a report found that the Bramble Cay melomys was found to have become extinct due to sea level rise, which was attributed to climate change.[84]

2.68 The committee was also provided with evidence of the impact of extreme weather arising from climate change. In the case of the white lemuroid ringtail possum which lives on Mount Lewis in Far North Queensland, a severe heatwave in 2005 had a catastrophic impact on population numbers.[85]

Impacts of faunal extinction and decline

2.69 The impacts of faunal extinction and decline are multifaceted and pervasive; it is not only the environment that suffers but also Australian society and our economic wellbeing.

2.70 The committee received extensive evidence on the ecological impact of faunal loss and decline and the need to maintain health and diverse ecosystems. For example, the Tasmanian Land Conservancy, citing a study by Fonesca, stated:

> …the stability in natural ecosystems modulates depending on their richness and the functional role played by its composite species. In some cases extinction will have no effect at all if the role of the species lost is assumed by others, but extinction can have devastating ecosystem effects if the species lost performs a unique function or if services are compromised.[86]

2.71 The Wilderness Society submitted that emerging research shows 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.[87] The Threated Species Recovery Hub added:

> Ecological research worldwide has documented the beneficial interactions of species in food webs and has shown that simplification of food webs due to the extinction (or functional disappearance) of some species can have cascading and complex effects on biodiversity, ecosystem processes and ecosystem services…[88]

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84 Gynther, I., Waller, N. & Leung, L.K.-P, *Confirmation of the extinction of the Bramble Cay melomys Melomys rubicola on Bramble Cay, Torres Strait: results and conclusions from a comprehensive survey in August–September 2014* (2016), Unpublished report to the Department of Environment and Heritage Protection, Queensland Government, p. i.

85 Mr Lyndon Schneiders, National Director, The Wilderness Society Ltd, *Proof Committee Hansard*, 1 February 2019, p. 9.

86 Tasmanian Land Conservancy, *Submission 44*, p. 3.

87 The Wilderness Society, *Submission 133*, p. 4.

88 Threatened Species Recovery Hub, *Submission 159*, Attachment 2 (*Ecological impacts of faunal extinction and decline*), p. 3.

2.72 Disturbance of ecosystems through loss and decline can cause substantial change and the recovery of threatened species will have environmental benefits. Many threatened species have roles in the dispersal of seeds of native plants and spores of beneficial fungi. They play a role as ecosystem engineers and in balancing populations through predation as well as moderation of fire regimes, control of vegetation composition, and prevention of erosion.[89]

2.73 In this regard, the Tasmanian Land Conservancy pointed to ecosystem de-stabilisation in Tasmania due to the functional loss of two apex predators, the extinct Thylacine and now reduced Tasmanian devil populations due to Devil Facial Tumour Disease. As a consequence, 'over the past two decades significant shifts in predatory species especially feral cats now impacting critical weight range species such as bandicoot and bettong mean that Tasmania's status as a safe haven is perilously at risk'.[90] Bush Heritage Australia also added that quoll populations are at risk in Tasmania from increased numbers of feral cats.[91]

2.74 The Northern Territory Government noted declining biodiversity of complex ecosystems and stated that the 'loss and decline of threatened species, along with the wider declines of species that they are indicative of, have potential ecological domino effects on other species and communities'. These effects include: reduced prey availability for native predators, changes in community composition and competition, reduction in species for pollination and seed/fruit dispersal, and loss of environmental engineers, for example mammals that burrow and dig.[92]

2.75 Further evidence of the ecological contribution of threatened species was provided by the Western Australian Government, which provided the following examples:

- the endangered Carnaby's Cockatoo contributes to the health of the Endangered Banksia woodlands of the Swan Coastal Plain ecological community through its role in removing wood boring grubs and pruning trees and shrubs to increase flowering and fruiting;
- the burrows of the vulnerable bilby provide shelter and refuge for at least 20 species of arid zone mammals, reptiles and birds. Bilby burrows also accumulate nitrogen and other nutrients and hold moisture for longer periods in arid environments, which support improved plant regeneration; and

89 Threatened Species Recovery Hub, *Submission 159*, Attachment 2(*Ecological impacts of faunal extinction and decline*), p. 6.

90 Tasmanian Land Conservancy, *Submission 44*, p. 3. See also, Threatened Species Recovery Hub, *Submission 159*, Attachment 2 (*Ecological impacts of faunal extinction and decline*), pp. 5–6.

91 Bush Heritage Australia, *Submission 37*, p. 3.

92 Northern Territory Government, *Submission 2*, p. 4. See also, Australian Wildlife Conservancy, *Submission 55*, p. 2.

- the Critically Endangered woylie turns over large volumes of soil, dispersing seeds and fungi, improving water infiltration, nutrient cycling, plant regeneration and reducing fire risk by lowering leaf litter fuel loads.[93]

2.76 The Ecological Society of Australia pointed to the part played by Australian marsupials such as bettongs and potoroos in dispersing spores of fungi which are of benefit to trees. The loss of these marsupials has a cascading effect on the health of the entire ecosystem.[94] Many mammals such as bandicoots and rat-kangaroos dig for food and in the process turn over large volumes of soil, keeping soil in a loose and friable state, accelerating recycling of nutrients, and enhancing penetration of moisture.[95]

2.77 Other submitters cited the loss of dingoes from the environment in order to protect livestock as contributing to the rise in numbers of kangaroo and feral pigs.[96]

2.78 In further evidence to the committee, submitters commented on the importance Australia's unique biodiversity on our character, our economic wellbeing and for Indigenous Australians.

2.79 Mr Trezise of the ACF drew to the committee's attention the place of Australia's biodiversity at the core of our national identity; that we are taught from a young age the wonders of our native fauna.[97] Professor Wintle, Threatened Species Recovery Hub, added that the loss of species degrades our society and that:

> Species have a right to exist, and the loss of species degrades our society. We have a responsibility to pass on to future generations the wondrous natural heritage that we've been so fortunate to inherit, and we need to pass it on in a state that's equal to or better than when we inherited it. The current faunal extinction crisis represents a major threat to the legacy of our generation.[98]

2.80 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 affecting the efficiency of ecosystem function. The Australian Veterinary Association, Queensland Branch submitted:

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93 Western Australian Government, *Submission 9*, p. 2.

94 Ecological Society of Australia, *Submission 86*, p. 2.

95 Threatened Species Recovery Hub, *Submission 159*, Attachment 2 (*Ecological impacts of faunal extinction and decline*), p. 5.

96 Bush Heritage Australia, *Submission 37*, p. 3; Wildlife Preservation Society of Queensland Fraser Coast, *Submission 41*, p. 6

97 Mr James Trezise, Policy Analyst, Australian Conservation Foundation, *Committee Hansard*, 8 October 2018, p. 1.

98 Professor Brendan Wintle, Threatened Species Recovery Hub, 14 February 2019, p. 8.

> Biodiversity in all its complexity is essential for the maintenance of ecosystem services, clean and adequate water supplies, clean air, soil fertility and stability, carbon sequestration and to address climate change. Human health and prosperity as well as that of the natural world is ultimately dependent upon addressing faunal extinctions. A healthy fauna can only exist in conjunction with a healthy flora and microbiota.[99]

2.81 The Centre for Ecosystem Science similarly emphasised the importance of maintaining healthy ecosystems and argued that 'prolonged over-exploitation of [Australia's] landscapes has eroded their capacity to deliver economic prosperity and security'. The Centre added:

> Ecosystems deliver services such as clean water and air, soil stability and fertility, climate regulation, carbon storage, recreational and tourism opportunities, as well as production goods such as food, fibre and timber. Although many of these services are often regarded as economic externalities, they cannot be taken for granted and their maintenance costs cannot be ignored without eroding Australian incomes and business profitability.[100]

2.82 Other submitters pointed to impacts on particular industries, should the extinction crisis not be addressed. This included losses to the tourist industry when iconic wildlife such as the koala no longer exist or when ecological systems such as the Great Barrier Reef are so degraded that their appeal to tourists diminishes. The continued loss of fauna risks crop and stock production and therefore loss of food supplies.[101] The Environmental Farmers Network commented that

> Ecological networks, like all complex systems, behave in unpredictable ways when components are removed (become extinct). Ecological processes are critical to sustainable farming, eg pollination, water filtration, breakdown of crop residues and the recycling of nutrients. Fauna play roles in these things.[102]

2.83 A further matter raised in evidence was the fundamental importance of Australia's unique flora and fauna to Aboriginal and Torres Strait Islander people who have strong connections and obligations to country. The Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) submitted that:

> Retaining connection to country is critical to the identity and cultural continuity of Aboriginal and Torres Strait Islander societies and as a consequence, for the wellbeing and freedom of individual Aboriginal and Torres Strait Islander people. Indigenous peoples' laws and philosophical

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99 Australian Veterinary Association, Queensland Branch, *Submission 54*, p. 2.

100 Centre for Ecosystem Science, *Submission 56*, p. 10.

101 Name withheld, *Submission 391*, p. 8.

102 Environmental Farmers Network, *Submission 29*, p. 2.

> traditions, kinship, language and art are all connected through their relationship with lands and waters.[103]

2.84 AIATSIS went on to state that 'Indigenous owners prioritise caring for country as part of their overarching obligations and spiritual relationships with their lands and waters because of their interconnectedness with all aspects of the natural environment'.[104] Any extinction affects that interconnectedness. The ACF commented:

> Extinction events can have profound cultural implications. There are deep connections between Indigenous culture and custom and Australia's wildlife. Extinction events break these connections. They can and have significant impacts on communities and can further perpetuate social inequality.[105]

103 Australian Institute of Aboriginal and Torres Strait Islander Studies, *Submission 168*, p. 2.

104 Australian Institute of Aboriginal and Torres Strait Islander Studies, *Submission 168*, p. 3.

105 Australian Conservation Foundation, *Submission 137*, p. 2.

Chapter 3

The adequacy of the EPBC Act

3.1 This interim report provides an outline of the committee's preliminary deliberations to date concerning the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in relation to halting Australia's faunal extinction crisis. The following chapter canvasses evidence which commented broadly on the adequacy of the EPBC Act and whether it should be repealed and replaced with a new Act.

3.2 This chapter also looks at particular provisions of the EPBC Act that were highlighted in evidence as in need of reform.

3.3 Lastly, the evidence received regarding the need for an independent Environmental Protection Agency (EPA) to administer and oversee the management and protection of the environment in Australia is considered.

3.4 The committee reiterates that this is an interim report on the committee's work so far. It does not seek to be a comprehensive report outlining the entirety of the challenge faced by our threatened species, or to set out all possible reforms that the Commonwealth could undertake to amend the EPBC Act's legislative provisions and its implementation. Rather, it is intended that these matters should be taken up in the future work of the committee, should the Senate and the future committee be willing to do so in the next Parliament.

Views on the EPBC Act

3.5 Some evidence received by the committee suggested that the Commonwealth should develop a new Environment Act to replace the EPBC Act, arguing that its flaws would be too significant to address through amendments alone. Others told the committee that the current Act provides a solid foundation for the protection and management of the environment, even if it was acknowledged that there is significant need for reform of its provisions and implementation.

Support for a new Environment Act

3.6 Some stakeholders argued that the Commonwealth should consider replacing the EPBC Act with new environmental legislation.[1] It was argued that the current

1 For example, see: Doctors for the Environment, *Submission 3*, p. 2; Northern Plains Conservation Management Network, *Submission 39*, p. 2; EDOs of Australia, *Submission 52*, p. 3; Humane Society International, *Submission 98*, p. 7; International Fund for Animal Welfare, Oceania Region, *Submission 115*, p. 9; BirdLife Australia, *Submission 118*, p. 1 and Attachment 1 (BirdLife Australia, *Restoring the Balance: The Case for a New Generation of Australian Environmental Laws*), p. 5; Australian Conservation Foundation, *Submission 137*, p. 4. See also Professor Frank Carrick, *Proof Committee Hansard*, 1 February 2019, p. 20.

approach had failed to meet its objectives, particularly for the protection of threatened species. In considering this, it was suggested that developing a new Act would be more effective than amending the existing flawed EPBC framework.

3.7 For example, BirdLife Australia argued the repeated failures of the EPBC Act in protecting threatened species demonstrates that:

> Australia requires a new generation of environment laws that genuinely protect nature and restore our threatened species. It will require the establishment of independent institutions free from political interference, and improved accountability towards meeting our international commitments to biodivFersity conservation.[2]

3.8 The Australian Conservation Foundation (ACF) stated that the EPBC Act has mostly failed to protect threatened species and pointed to a range of issues, including: the extent of ministerial discretion; the focus on a narrow set of environment issues; the lack of third party enforcement; the lack of provisions for emergency listing of threatened species; and insufficient monitoring requirements.[3] Mr James Trezise, a Policy Analyst for the ACF, argued that the EPBC Act was so flawed that a new approach to environmental management and protection was needed. Mr Trezise stated:

> If you were to look at the EPBC Act, when it was drafted—it's what we call an omnibus bit of legislation—it is a very difficult bill to navigate. It's probably one of the most poorly drafted bills that is still in operation. If you were to talk about the kinds of changes—trying to put in a new institution, trying to make binding national standards and trying to insert community rights or citizen rights into the existing legislation—you're kind of creating Frankenstein's monster to a degree. It's a very difficult to bill and navigate as it is. It could be done, but you'd be basically rewriting that legislation and just keeping the name.[4]

3.9 Dr Nicole Rogers, who appeared in a private capacity, also endorsed a complete overhaul of Australia's current legislation, so that it reflected current knowledge about threatened species and their vulnerability:

> I think we should start again. I think we need to start again with the premise that having a permissive regime, a regime which relies upon ministerial permission to carry out activities, is not working. We need to have a regime which has much stronger prohibitions set in place and isn't so dependent upon discretion and upon one individual…My view would be, yes, we do need a new piece of legislation that reflects where we are at this point in time, what we have come to realise about the vulnerability of our environment and fellow species, and the interactive systems that are

2 BirdLife Australia, *Submission 118*, p. 2.

3 Australian Conservation Foundation, *Submission 137*, pp. 8–9.

4 Mr James Trezise, Policy Analyst, Australian Conservation Foundation, *Committee Hansard*, 8 October 2018, p. 7.

> currently in operation on the planet…I would go with the 'tear it up and start again' approach.[5]

3.10 The submission from the Australian Network of Environmental Defenders' Offices (EDOs of Australia) also set out the case for the development of a new legislative framework, concluding:

> We recommend a new Environment Act for Australia is needed to address the contemporary, interlinked challenges of extinction and biodiversity protection, natural resource management, land use, human settlements, production and consumption systems and climate change. The Environment Act must be underpinned by renewed national leadership, independent and trusted institutions, high levels of environmental protection, with strong community engagement and access to justice.[6]

3.11 Support for a new Act was provided by the Humane Society International which stated that it:

> …considers that in light on the multiple and complex factors facing threatened fauna, a new Environment Act is required to ensure sufficient protection can be provided to fauna and their critical habitats. Whilst the EPBC Act has made some improvements, the challenges facing our biodiversity, including Australia's fauna, are many and increasing. Only a new Environment Act will help ensure our fauna can deal with the cumulative impacts facing them.[7]

3.12 The committee notes that the 2009 Hawke Review recommended that the EPBC Act be repealed and replaced by a new Environment Act. In making this recommendation, the Hawke Review stated:

> The Act is currently too repetitive, unnecessarily complex and, in some areas, overly prescriptive. It needs restructuring to make it more accessible, easier to navigate and reduce the regulatory and resource burden on those impacted by the Act, requiring the recasting of many of its provisions.[8]

Areas of the EPBC Act in need of reform

3.13 This section considers the evidence received in relation to reform of the EPBC Act to improve the protection of threatened species. Areas considered in evidence include:

- the discretionary power of the Minister to make decisions under the Act;
- the lack of mandatory timeframes and implementation for certain decisions;

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5 Dr Nicole Rogers, Private capacity, *Proof Committee Hansard*, 4 February 2019, p. 70.

6 EDOs of Australia, *Submission 52*, p. 3.

7 Humane Society International, *Submission 98*, p. 5.

8 Hawke Review, p. 27.

- the scope of the current Act, including potential new triggers for 'matters of national environmental significance (MNES) and the exemptions made for some industries;
- the adequacy of key threatening processes and threat abatement plans made for threatened species, including the difficulties of addressing cumulative impacts; and
- a lack of mandatory monitoring of and compliance with conditions of approval of EPBC Act decisions; and
- the available mechanisms for appeal and review of decisions made under the Act.

Ministerial discretion

3.14 The EPBC Act allows for ministerial discretion in decision-making for a large number of matters.

3.15 The committee received evidence that expressed concern that the level of ministerial discretion for EPBC Act decisions was too great, whereas the guidance for the use of this discretion is insufficient. For example, Ms Jess Feehely, Law Council of Australia (Law Council), expressed concern that there is too much discretionary power vested in the Minister particularly as the EPBC Act lacks stringent requirements to ensure ministerial decisions are implemented. Ms Feehely said:

> There is a lot of discretion that is provided [in the EPBC Act]. I think one of the criticisms of the EPBC Act…is that it is a process based system as opposed to an outcome based system, so the discretion would be reduced if the legislation demanded particular outcomes rather than just requiring an assessment process to be undertaken and then leaving the decision at the discretion of the decision-maker.[9]

3.16 Dr Rogers also commented on the discretionary powers of the Minister and stated 'this enormous amount of discretionary power that's vested in one individual is, to my mind, not an appropriate way in which we can manage environment and manage what, as I said, has been conceded is a crisis'.[10]

3.17 The committee received a range of evidence outlining the areas where stakeholders considered that the ministerial discretion was too broad and could lead to adverse outcomes for Australia's biodiversity. Dr Philippa McCormack and Professor Jan McDonald pointed to the following:

> The EPBC Act gives the Environment Minister too much discretion in making key decisions affecting species. These include:

9 Ms Jess Feehely, Committee Member, Environment and Planning Law Committee, Legal Practice Section, Law Council of Australia, *Committee Hansard*, 5 February 2019, p. 18.

10 Dr Nicole Rogers, Private capacity, *Proof Committee Hansard*, 4 February 2019, p. 70.

- deciding whether to take protective actions, such as eg listing a species that is threatened with extinction;
- determining whether an activity will have a 'significant' impact on a species; and
- 'taking into account' the presence of a listed species when deciding to approve an action that may have a significant impact on the species)…[11]

3.18 Dr Bruce Lindsay, Environmental Justice Australia (EJA), set out the consequences of having decision-making power concentrated in the Minister's discretionary powers, including in relation to controlled actions:

> …environmental governance under the EPBC Act in particular excessively focuses on ministerial discretion. This is particularly the case with assessment and approval decisions, bioregional planning and the making of conservation instruments such as recovery plans. The consequence[s] of this approach have really been an absence of strong, binding legislative standards for environmental management and a propensity to approve environmental damage, usually with conditions and largely for reasons of expediency. Very few controlled action decisions under the EPBC Act are actually refused approval…An example of that is the fate of red-tailed black cockatoos in Victoria and South Australia.[12]

3.19 Many submitters pointed to the assessment of the Toondah Harbour development as a significant example of the use of ministerial discretion resulting in detrimental outcomes for the environment. In the case of Toondah Harbour, the proponent sought approval for the development of 3600 apartments on a wetlands site protected by the Ramsar Convention, which includes critical habitat for the threatened migratory bird, the Eastern Curlew.[13]

3.20 In its assessment of the proposal, the Department of the Environment and Energy (the department) advised the Minister that the proposal EPBC referral number 2017/7939 was 'clearly unacceptable', including because it would certainly impact on Ramsar-protected areas. According to evidence received by the committee, the Toondah Harbour project was then referred a third time as EPBC referral number 2018/8225, and determined to be a 'controlled action' to be assessed under an

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11 Research Centre for Future Landscapes, *Submission 162*, p. 4.

12 Dr Bruce Lindsay, Lawyer, Environmental Justice Australia, *Committee Hansard*, 22 November 2018, p. 22.

13 Please note, given the focus of this interim report on the EPBC Act's provisions, the committee is not able to fully to consider the issues raised by Toondah Harbour at this time. However, the committee does intend to maintain an ongoing interest in this issue in its future work.
Mr Chris Walker, Secretary, Redlands2030 Inc, *Proof Committee Hansard*, 1 February 2019, p. 27.

Environmental Impact Statement (EIS).[14] Evidence provided by Mr Chris Walker, Secretary of Redlands2030 Inc, noted that substantial impacts of the proposal on MNES remain. He told the committee:

> Despite significant community opposition and advice from within the department of the environment, this project was eventually declared a controlled action by the federal minister for the environment, who also approved assessment by the proponent under an environmental impact statement….
>
> It's difficult to believe the construction of 3,600 apartments could ever be considered wise use of Ramsar wetlands, so the developer is at risk of doing an EIS that should never be approved by the minister for the environment acting properly. The notion that this inconvenient constraint can be overcome by jiggling the Ramsar site boundaries has been mooted, but any such action would be in conflict with Australia's international obligations under the Ramsar convention. The threat of destruction to this Ramsar habitat and its endangered species should never have got to this stage.[15]

Ministerial discretion and recovery plans

3.21 The committee also received much evidence regarding the ministerial discretion in relation to Recovery Plans. It was noted that the original requirement for threatened species to have Recovery Plans was removed in 2007. As a consequence of the amendment of the EPBC Act, the Minister may opt to develop non-binding Conservation Advices.

3.22 The Western Australian Government submitted that the move away from recovery plans for most species is 'due to the onerous requirement for review and replacement of recovery plans under the EPBC Act'.[16]

3.23 Submitters argued that Conservation Advices did not provide the same level of protection as Recovery Plans. For example, the Ecological Society of Australia (Ecological Society) was highly critical of the use of Conservation Advices in place of Recovery Plans and stated that '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'.[17] The Ecological Society added that there were benefits in the use of Recovery Plans as:

> Recent studies have shown conclusively that Recovery Plans help drive efforts and investment for threatened species, and lack of Recovery Plans

14 See, for example, evidence given by Mr Chris Walker, Secretary, Redlands2030 Inc, and Dr Stephen Prowse and Ms Sheena Gillman, respectively Chair, and Secretary and Project Coordinator, Protect the Bush Alliance, *Proof Committee Hansard*, 1 February 2019.

15 Mr Chris Walker, Secretary, Redlands2030 Inc, *Proof Committee Hansard*, 1 February 2019, p. 27.

16 Western Australian Government, *Submission 9*, p. 3.

17 Ecological Society of Australia, *Submission 86*, p. 4.

> can contribute to extinction of threatened species. 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.[18]

3.24 Both the Ecological Society and the Research Centre for Future Landscapes noted that unlike a Recovery Advice, the Minister is prohibited from approving actions or making decisions that are counter to the provisions in a Recovery Plan.[19] the Ecological Society submitted that should Recovery Plans not be developed for all listed threatened species, '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'.[20]

3.25 Another area of concern was raised by Dr McCormack and Professor McDonald, who commented that 'the wide discretion afforded to the Minister is especially problematic in light of the increasing use of biodiversity offsets as conditions on the approval of activities with significant adverse impacts'.[21]

3.26 Evidence received by the committee noted some other discretionary mechanisms contained in the EPBC Act that were not being used by Ministers. For example, Dr Lindsay of the EJA noted that bioregional plans were 'quite a useful mechanism', however they are not often developed. He also noted that decisions to list threatened habitat on the Act's Critical Habitat Register was discretionary, and that the protection process even for listed critical habitat was 'complicated'.[22]

Scope of the EPBC Act

3.27 The committee received evidence in relation to the adequacy of the triggers in the EPBC Act and the inclusion of exemptions.

Potential new triggers or matters of national significance

3.28 As noted in chapter 1, there are currently nine matters of national environmental significance under the EPBC Act. A number of submitters and witnesses advocated for new triggers to be added to these existing matters of national significance (MNES).

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18 Ecological Society of Australia, *Submission 86*, p. 4.

19 Ecological Society of Australia, *Submission 86*, p. 4; Research Centre for Future Landscapes, La Trobe University, *Submission 123*, p. 5.

20 Ecological Society of Australia, *Submission 86*, p. 4.

21 Dr Philippa McCormack and Professor Jan McDonald, *Submission 162*, p. 4.

22 Dr Bruce Lindsay, Lawyer, Environmental Justice Australia, *Committee Hansard*, 22 November 2018, p. 27.

3.29 For example, Dr Lindsay of EJA highlighted that land clearing and climate change are not sufficiently addressed by the EPBC Act:

> Key gaps…in the Commonwealth's direct role in preventing or responding to harms or threats are those such as posed by land clearing or by climate change.[23]

3.30 Ms Feehely of the Law Council also put the case for broadening the existing triggers contained in the Act:

> For many years, there have been calls to broaden [existing MNES] out to include, for example, large scale land clearing or developments which have emissions above a certain threshold. So those are two very clear examples where they have been discussed at length and they have been recommended by the government's own agencies for consideration—and I think both of those would significantly broaden out the Commonwealth's involvement in managing biodiversity loss rather than having that ad hoc state based assessment of land clearing, for example.[24]

3.31 The Hawke Review noted the difficulties of introducing a climate change trigger, especially given its intersection with the then-policy of the Commonwealth Government for a market-based emissions abatement scheme, the Carbon Pollution Reduction Scheme (CPRS).[25] It recommended an interim 'greenhouse trigger' with a threshold of '500,000 tonnes of carbon dioxide equivalent emissions' at most, which would sunset at the commencement of the CPRS'.[26]

Exemptions

3.32 The EPBC Act contains exemptions for certain industry activities (also referred to as 'carve-outs'). Under section 38, forestry activities conducted under the Regional Forest Agreements (RFAs) are not subject to the environmental assessment and approval provisions in Part 3 of the EPBC Act. Offshore oil and gas projects are exempt from assessment under the EPBC Act, instead being assessed under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.[27]

3.33 A number of submissions commented that the Commonwealth should consider reforms to these current exemptions. For example, the Law Council of Australia submitted that an area for potential EPBC Act reform would be:

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23 Dr Bruce Lindsay, Lawyer, Environmental Justice Australia, *Committee Hansard*, 22 November 2018, p. 22.

24 Ms Jess Feehely, Committee Member, Environment and Planning Law Committee, Legal Practice Section, Law Council of Australia, *Proof Committee Hansard*, 5 February 2019, p. 21.

25 Hawke Review, pp. 113–116.

26 Hawke Review, p. 116.

27 As noted earlier in this report.

> Ensuring industries currently regulated outside the EPBC Act, such as offshore petroleum activities and forestry operations, are subject to equivalent assessment of impacts on threatened species.[28]

Key threatening processes and threat abatement plans

3.34 As outlined in chapter 1, the EPBC Act provides for the identification and listing of 'key threatening processes'. Once a threatening process is listed, a threat abatement plan (TAP) may be put into place if it is shown to be a 'feasible, effective and efficient way' to abate the threatening process.

3.35 As at February 2019, at the Commonwealth level, there were 21 listed key threatening processes (KTPs). The last threating process–aggressive exclusion of birds from potential woodland and forest habitat by over abundant noisy miners (*Manorina melnocephela*)–was listed in May 2014.[29] There are 14 listed approved TAPs with one—TAP for beak and feather disease—having been replaced by a non-statutory threat abatement advice and another— the TAP to reduce the impacts of tramp ants on biodiversity in Australia and its territories–having ceased in October 2016, which 'may soon be replaced by a new plan'.[30]

3.36 Concerns with the EPBC Act's provisions for listing KTPs were raised in evidence. Some of this evidence pointed out that the KTP listings process has not kept up with developing threats. Others noted the lack of requirement for developing TAPs for all KTPs, as well as insufficient resourcing for their implementation.

Key threatening processes

3.37 A number of areas were highlighted in evidence as requiring consideration for listing as KTPs under the EPBC Act. Some of the issues canvassed included the challenges posed by: population growth; alteration to natural water flow of rivers, streams, floodplains and wetlands; logging of native forests; ocean acidification; dieback and inappropriate fire regimes; and the loss of hollow bearing trees that support some threatened species.[31]

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28 Law Council of Australia, *Submission 121*, p. 7.

29 Department of the Environment and Energy, 'Listed Key Threatening Processes', www.environment.gov.au/cgi-bin/sprat/public/publicgetkeythreats.pl (accessed 18 March 2019).

30 Department of the Environment and Energy, 'Approved threat abatement plans', www.environment.gov.au/biodiversity/threatened/threat-abatement-plans/approved (accessed 18 March 2019).

31 Sustainable Population Australia, *Submission 87*, p. 9; National Parks Association of NSW, *Submission 91*, p. 7; Professor Tim Stephens, *Submission 93*, p. 5; City of Mandurah, *Submission 100*, p. 1; and the Nature Conservation Society of South Australia, *Submission 105*, p. 4.

3.38 The Centre for Ecosystem Science, UNSW, submitted that there had been a noticeable decline in the use of a number of EPBC framework assessment tools, particularly the KTP listing process:

> Resourcing of extinction risk assessment for species of fauna and other biodiversity, key threatening process listing, recovery planning and threat abatement planning has languished. This is particularly true for key threatening processes, with no listing since 2011, despite good knowledge of the effects of threats on biodiversity…[32]

3.39 In 2001, the EPBC Act was amended to incorporate the 'Loss of climatic habitat caused by anthropogenic emissions of greenhouse gases' as a KTP. This included consideration of 'reductions in the bioclimatic range' of critical habitat, and noted that: 'Non-biological components of the process include: temperature rise; changes in rainfall patterns; changes to the El Nino Southern Oscillation; and sea level rise'.[33] However, the KTP advice offered to the Minister advised against the development of a TAP for climate change in this case, stating:

> In their original assessment of the nomination ESSS provided advice that 'a reduction in the emission of greenhouse gases requires an internationally-coordinated effort and that international efforts have been and will continue to be made in this area'. ESSS concluded that a nationally coordinated threat abatement plan was not considered a feasible, effective and efficient way to abate the process, 'as most emissions of greenhouse gases are produced outside Australia and a reduction in emissions will require complex national and international negotiations'. ESSS also added 'As part of this process Australia should be making every effort to significantly reduce its contribution of greenhouse gases to the atmosphere'.[34]

3.40 It was noted that the specified timeframes in the EPBC Act for the consideration of new KTPs is rarely met. For example, the Humane Society International submitted that there was a need for a new mechanism to prioritise urgent listings where immediate or significant threats are faced by a species.[35]

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32 Centre for Ecosystem Science, UNSW, *Submission 56*, p. 13.

33 Department of the Environment and Energy, 'Loss of terrestrial climatic habitat caused by anthropogenic emissions of greenhouse gases', www.environment.gov.au/biodiversity/threatened/key-threatening-processes/loss-of-habitat-caused-by-greenhouse-gases (accessed 12 March 2019).

34 Department of the Environment and Energy, 'Loss of terrestrial climatic habitat caused by anthropogenic emissions of greenhouse gases', www.environment.gov.au/biodiversity/threatened/key-threatening-processes/loss-of-habitat-caused-by-greenhouse-gases (accessed 12 March 2019).

35 See Humane Society International, *Submission 98*, pp. 17–18.

Threat abatement plans

3.41 Ms Veronica Blazely, Acting Assistant Secretary of the Wildlife Trade and Biosecurity Branch of the department, told the committee that the Threatened Species Scientific Committee (TSSC) had not recommended the development of TAPs for the threats posed by land clearing, fire regimes that were not effective, and climate change.[36] Mr Murphy of the department, explained why TAPs are not in place for all KTPs:

> …there are key threatening processes that don't have threat abatement plans, because they don't necessarily fit the criteria in the legislation for the making of a plan… The criteria are in the act…The making of the plan has to be sort of feasible and effective to abate the threat.[37]

3.42 The Ecological Society argued that the provision to make TAPs under the EPBC Act should be used more often, as it represents:

> …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.[38]

3.43 A number of recommendations made by the Hawke Review went to the effectiveness of KTPs and TAPs, including that the Act be amended to:

- allow greater flexibility in developing recovery plans and TAPs, especially their development at a regional scale, as well as creating better opportunities and links to funding initiatives;
- better define KTPs, allow more flexibility in the criteria used to evaluate potential KTPs, and allowing the strategic identification of KTPs at a range of scales;
- provide more flexibility in developing and implementing TAPs, and allow transition to regional planning approaches and strategic threat management; and

36 Ms Veronica Blazeley, Acting Assistant Secretary, Wildlife Trade and Biosecurity Branch, Department of the Environment and Energy, *Committee Hansard*, 8 October 2018, p. 29.

37 Mr Paul Murphy, Assistant Secretary, Wildlife Trade and Biosecurity Branch, Department of the Environment and Energy, *Proof Committee Hansard*, 14 February 2019, pp. 29–30.

38 Ecological Society of Australia, *Submission 86*, p. 4.

- require the development of a 'threat abatement advice' when a new KTP is listed.[39]

Assessment of cumulative impacts

3.44 Concerns regarding the assessment of cumulative impacts have been raised in a number of the committee's previous inquiries including the inquiry into the protection of Aboriginal rock art of the Burrup Peninsula.[40]

3.45 While there is scope in the approval process for the decision-maker to have regard for any matters that are occurring at that time, the legal requirement for consideration of cumulative impacts is limited. Professor Bax, CSIRO, noted that:

> …unless you go to the stage of an integrated assessment the act does not easily allow for cumulative impacts. So, while it would look at one application at a time, it doesn't take into account that each action, each development, might have an impact on this species habitat such that overall it becomes an unsustainable situation, even though each individual agreement may be appropriate.[41]

3.46 Dr McCormack and Professor McDonald similarly commented on the lack of adequate recognition of cumulative impacts in the EPBC Act:

> The State of the Environment Report 2016 confirms Australia's biodiversity decline is largely due to the cumulative impacts of multiple pressures. The Federal Court's narrow interpretation of the Minister's obligation to consider the cumulative impacts of proposed activities highlights the inadequacy of the EPBCA's position on cumulative impacts. The [EPBC Act] should oblige the Minister to consider both the combined impact of past and likely future activities, the interaction of impacts from proposed activities and other stressors, and the prospect of approval setting a precedent for further development in the same location or of a similar type.[42]

3.47 Professor Brendan Wintle, Director of the Threatened Species Recovery Hub, noted that the Hawke Review had advocated for more strategic planning 'as a way of trying to avoid death by a thousand cuts'. In this regard, he noted potential dangers of strategic assessment approach, particularly if it was not backed up by appropriate funding:

> …we do need to go back and try to revisit the role of strategic assessment in protecting habitat for threatened species or protecting MNES in this

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39 Hawke Review, Recommendations 18–21 respectively, pp. 3–4.

40 See, for example, the report of the Environment and Communications References Committee, *Protection of Aboriginal rock art of the Burrup Peninsula* (2018).

41 Professor Nic Bax, Senior Principal Research Scientist, Oceans and Atmosphere, CSIRO, *Proof Committee Hansard*, 4 February 2019, p. 3.

42 Dr Philippa McCormack and Professor Jan McDonald, *Submission 162*, p. 6.

> country. But strategic assessments and strategic approvals can be quite dangerous, on one hand, because at any one time you can be signing off on the loss of a whole lot of habitat in a region. You've really got to get them right, and they really have to be very carefully supported by scientific analysis of what's in the region that you're doing your assessment of. If you sign off on the loss of these areas, are we really going to be able to compensate through the protection and conservation management of other areas? If we're going to do strategic assessment, which I think is definitely still a very good idea, we have to make sure we resource it properly.[43]

Monitoring and compliance

3.48 Some evidence noted that the EPBC Act does not have adequate requirements for the monitoring of and compliance with the approval conditions for projects. It was noted that this made Commonwealth enforcement of the Act very difficult, which was compounded by the under-resourcing of the department for oversight of approvals.

3.49 Professor McDonald, appearing in a private capacity, stated that:

> There's virtually no independent monitoring of compliance by the agency. Compliance is almost entirely driven by either self-reporting as part of an approval condition by proponents or developers of activities, or by reports from third parties...
>
> There is very little active monitoring, and that's a resourcing question. The department has been stripped, so there's not the personnel to undertake that kind of monitoring. From a compliance perspective, what we also see, and I think it's more worrying, is this pattern where an in-principle approval is given subject to the completion of plans of management, whether it's to do with biodiversity offsetting or water management. We saw that with Adani—plans of management that meet certain environmental criteria and they get developed later. The approval gets given and then, down the track, it turns out, 'It's not possible for us to meet these environmental criteria.' And rather than saying, 'That was the condition on which we gave you the approval; we won't allow you to proceed,' what ends up happening is that conditions get modified.[44]

3.50 Indeed some evidence presented to the committee pointed to the problem that many actions that should be referred under the EPBC Act are never referred in the first place. For example, Dr Martin Taylor, Protected Areas and Conservation Science Manager of WWF Australia, commented that:

> It's hard for us to say what enforcement action, if any, has been taken, because there is zero transparency under the current laws around what happens when a proponent fails to refer an action that significantly impacts on threatened species. How much is the department, in essence, approving

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43 Professor Brendan Wintle, Director, Threatened Species Recovery Hub, *Proof Committee Hansard,* 14 February 2019, p. 17.

44 Professor Jan McDonald, Private capacity, *Proof Committee Hansard*, 4 February 2019, p. 59.

> by failing even to discover what's happening, or by investigating it and then deciding not even to prosecute—which has happened in case after case that we've looked at?[45]

Mechanisms for appeal of EPBC Act decisions

3.51 A number of stakeholders observed that there were limited avenues for appealing or reviewing decisions made under the EPBC Act. In this regard, the limitations of judicial review were broadly noted by evidence, as were the barriers to individuals and organisations seeking to challenge decisions. Moreover, some evidence advocated for the Commonwealth to expand the scope for merits review for decisions under the Act. For example, a number submitters advocated for the reforms to guarantee community rights and participation in environmental decision-making, including through open standing provisions; review of decisions based on their merits; third-party enforcement provisions; and protections from cost orders in public interest proceedings.[46]

Judicial review

3.52 In relation to judicial review, Ms Feehely, Law Council, outlined general concerns with the existing provisions of EPBC decisions:

> So where there is a broad discretion given to decision-makers and the only opportunity to challenge is through a judicial review, there is a very limited opportunity for people who are concerned by the outcomes to actually challenge the decision that has been made and to ensure that the decisions are made on the basis of science.[47]

3.53 The committee notes that the Hawke Review concluded that the existing regime for judicial review of decisions made under the EPBC Act was 'adequate in ensuring procedural fairness', particularly given that applications for judicial review

45 Dr Martin Taylor, Protected Areas and Conservation Science Manager, WWF Australia, *Committee Hansard*, 8 October 2019, p. 4.

46 See, for example: Jane Goodall Institute, *Submission 15*, p. 5; Hamilton Field Naturalists Club, *Submission 38*, pp. 2–3; Cumberland Bird Observers Club Inc., *Submission 78*, p. 3; Portland Field Naturalists' Club Inc., *Submission 83*, p. 3; Koala Action Inc., *Submission 92*, p. 6; Humane Society International, *Submission 98*, p. 23; Nature Conservation Society of South Australia, *Submission 104*, p. 3; Centre for Environmental Law, *Submission 108*, p. 6; Victorian National Parks Association, *Submission 110*, p. 9; Conservation Council of South Australia, *Submission 117*, p. 2; Australian Conservation Foundation, *Submission 137*, pp. 4 and 16; Greenpeace Australia Pacific, *Submission 164*, p. 5; Ms Zoe Reynolds, Australian Labor Party Clovelly Branch, *Submission 229*, p. 4; Name Withheld, *Submission 248*, p. 3; Dr Colin Hocking, *Submission 289*, p. 3; and Name Withheld, *Submission 381*, p. 6.

47 Ms Jess Feehely, Committee Member, Environment and Planning Law Committee, Legal Practice Section, Law Council of Australia, *Committee Hansard*, 5 February 2019, p. 18.

could be made under the *Administrative Decisions (Judicial Review) Act 1977* and the *Judiciary Act 1903*.[48]

Merits review

3.54 Unlike judicial review, merits review must be specifically assigned by legislation. The EPBC Act allows for merits review by the Administrative Appeals Tribunal (AAT) in certain specific instances including for:

- permits for activities affecting protected species;
- permits for the international movement of wildlife; and
- advice about whether an action would contravene a conservation order.[49]

3.55 The committee notes that amendments to the EPBC Act in 2006 removed decisions made by the Minister personally from review by the AAT. The power is now confined to review of decisions made by a delegate of the minister.[50]

3.56 EDOs of Australia submitted that the lack of an independent review process undermines compliance and enforcement of the EPBC Act. EDOs of Australia recommended that any new legislation:

> …must build-in mechanisms for the community to seek arms-length review of decisions, administrative processes and potential breaches of the Environment Act and regulations.[51]

3.57 EDOs of Australia went on to comment that one of these mechanisms would be allowing 'standing for interested parties to seek merits review of a limited set of key decisions that impact biodiversity in an arms-length court or tribunal'.[52]

3.58 The committee notes that the Hawke Review made four recommendations about broadening the scope for merits review of EPBC Act decisions, as well as allowing for more open access to review processes.[53]

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48 Hawke Review, p. 261 and Hawke Review, Interim report, p. 314.

49 Hawke Review, p. 255.

50 As noted by the Hawke Review, p. 255.

51 EDOs of Australia, *Submission 52*, Attachment 1 (NSW EDO and Humane Society International, *Next generation biodiversity laws–Best practice elements for a new Commonwealth Environment Act*), p. 74.

52 EDOs of Australia, *Submission 52*, Attachment 1 (NSW EDO and Humane Society International, *Next generation biodiversity laws–Best practice elements for a new Commonwealth Environment Act*), p. 73. Note that the Senate Environment and Communications Legislation Committee considered the issue of 'standing' in its report into the inquiry into the *Environment Protection and Biodiversity Conservation Amendment (Standing) Bill 2015* (2015).

53 Hawke Review, p. 40.

Lack of independent oversight

3.59 A number of stakeholders pointed to the need for an independent institution to administer and oversee Australia's environmental protection framework, as well as to provide advice to the Minister. It was argued that a federal Environment Protection Agency (EPA) would ensure that decisions affecting the environment were made in a more informed and transparent manner, and allow a shift towards a more bipartisan approach to Australia's environmental management and conservation framework.

3.60 For example, Mr Eric Woehler, Convenor of BirdLife Tasmania, spoke positively about an independent EPA, outlined what activities it would undertake, and the problems with the current approach that it would address:

> We need an independent EPA to ensure that any management efforts, any conservation efforts—anything that is done is actually efficient and is working to minimise the risk of extinction of a species, not, as we're seeing, an increasing spectrum of species sliding towards extinction…
>
> We've seen too much—and we've heard examples this morning—of political interference. We've seen advice from the scientific community provided to ministers, and then ministers will sit on those decisions. They'll avoid making the decision, or there'll be some form of political interference to a process that should be science driven and evidence based. So, by taking that role away and having an independent EPA, you minimise the potential for political interference in a science based, evidence based approach.[54]

3.61 Mr Vica Bayley, the Tasmanian Campaign Manager for The Wilderness Society, suggested that a federal EPA could lift environmental outcomes across all Australian jurisdictions:

> …while the federal government may have responsibility for federally-listed threatened species, it's ultimately the states and state agencies that are managing the land and many of the programs, so we have a dislocation when it comes to the responsibility for actually taking steps required to protect these species. That's where we critically need an agency at the federal level, which is independent of government, resourced adequately and able to make the decisions required to properly protect these species. We need a national environmental agency or similar that can actually do the assessments of projects that are going to threaten matters of national environmental significance—that is able to enforce and regulate what assessments are approved and so forth—and take that forward. We have this absolute dislocation whereby intent at the federal level, even if we do have it, quite often doesn't necessarily translate to action at the local and state levels.[55]

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54 Mr Eric Woehler, Convenor, BirdLife Tasmania, *Proof Committee Hansard*, 4 February 2019, p. 35.

55 Mr Vica Bayley, Tasmanian Campaign Manager, The Wilderness Society, *Proof Committee Hansard*, 4 February 2019, p. 25.

3.62 Mr Trezise of the ACF stressed that a federal EPA would not take away powers from the states and territories. Instead, he suggested, it would look to improve performance of local regimes by enforcing national standards:

> One of the key things that we are pushing for is an environmental protection authority that operates at the federal level, brings up the standards of the states where they are below a certain standard and operates as a check and balance against environmental laws that may not be up to scratch in states and territories. It's not to assert a takeover of those functions; it's to set a baseline, a minimal federal environmental standard that we can't go below, because, as this committee has surely heard, we are in the grip of the sixth extinction crisis, and we have to do something about it.[56]

3.63 Dr McCormack stressed that the existing EPBC Act could be more effectively administered by an independent agency, even if a new Act were not developed:

> …existing laws could provide a key role in reversing historical trends, if they were fully implemented, appropriately funded and overseen by an independent agency, and that includes addressing ongoing habitat loss and actively tackling the threat of invasive species. These two examples are particular examples of non-climate stressors that are widely recognised in the scientific literature as essential to be addressed to help plants and animals adapt as the climate changes. If we can take some of those stressors off our biodiversity, they will be better equipped to adapt and cope with the threat that climate change poses.[57]

56 Mr James Trezise, Policy Analyst, Australian Conservation Foundation, *Proof Committee Hansard*, 14 February 2019, p. 6.

57 Dr Phillipa McCormack, Private capacity, *Proof Committee Hansard*, 4 February 2019, p. 54. See also Dr Philippa McCormack and Professor Jan McDonald, *Submission 162*, p. 11.

Chapter 4

Conclusions and recommendations

4.1 Australia is one of the most biodiverse countries in the world, with a rich variety of fauna. Our biodiverse environment is central to our wellbeing, the health of our economy, and our national identity. While Australia is home to several iconic species known around the globe, we also have many species we are yet to fully understand. Estimates suggest that, at present, there are 250 000 faunal species in Australia, with around 120 000 of these yet to be scientifically documented and described.[1]

4.2 However, against the richness of Australia's natural environment, our damning track record of faunal extinction and decreasing biodiversity is stark. The most recent State of the Environment Report observes a continuing trajectory of decline in mammal species, and a very significant slump in populations of birds, concluding that:

> Based on the information available about vegetation extent and condition, and the small number of species for which there is some understanding of trends in distribution and abundance, the status of biodiversity in Australia is generally considered poor and deteriorating.[2]

The adequacy of the EPBC Act

4.3 This interim report has focussed on the legislative foundation of Australia's management and protection of the environment over the last two decades, the *Environment Protection and Biodiversity Act 1999* (EPBC Act).

4.4 Evidence received by the committee has raised serious questions about whether the EPBC Act is still fit for purpose and is in fact achieving the objectives set out in the Act. It is also clear that the EPBC Act is struggling to meet the scale of the challenge our environment faces, including the threats to our faunal species.

4.5 Evidence considered in chapter 2 of this report overwhelmingly showed that Australia's rate of faunal extinction has continued to increase since the introduction of the EPBC Act.

4.6 This evidence indicated that the EPBC Act is incapable of addressing many of the principal drivers of faunal population decline, even if there have been positive

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1 Department of the Environment and Energy, 'Fauna Project Area', www.environment.gov.au/science/abrs/publications/fauna (accessed 15 March 2019).

2 Australian Government, *State of the Environment 2016*, 'Overview of state and trends of biodiversity', https://soe.environment.gov.au/theme/overview/biodiversity/topic/overview-state-and-trends-biodiversity (accessed 15 March 2019).

steps in a number of areas, including managing feral populations. These drivers are complex and include the loss, degradation and fragmentation of habitat, the threats posed by invasive species, and the effects of climate change. It is also clear that the cumulative impacts of these drivers are a major contributor to species decline, even if these cumulative impacts are notoriously hard to quantify and address, and that in its current form, the EPBC Act has no compulsory mechanism to address cumulative impacts.

4.7 The committee understands these are complex and inter-linked factors in species decline, and that the framework of the EPBC Act would need a complete overhaul to be adequate for the current challenge. The committee also notes that there have been significant failures in its implementation, including use and resourcing of compliance and protection mechanisms, and that these would need to be addressed in a new or revised Act.

4.8 The committee heard compelling arguments for the development of a new Environment Act, as this report discussed in chapter 3. Critics of the EPBC Act highlighted its complexity, noting that even professionals in the sector found its provisions difficult. The committee also received evidence on the gradual dilution of the Act's initial strengths.

The need for new environmental laws and a federal environmental protection agency (EPA)

4.9 The committee notes that the EPBC Act is 20 years old and has not been significantly reformed. There is also no independent institution to administer and oversee Australia's framework for environmental approvals and compliance.

4.10 Without new environmental legislation, Australia will continue to struggle to address the current rates of faunal extinction in the future. Moreover, it was also evident that the current approach will not be able to address the ongoing broader challenges to the environment that Australia faces, including the profound, deepening effects of climate change.

4.11 Any new legislation should also seek to incorporate international best practice, while adapting this to our local needs. New environmental laws should be developed with a mind to the large volume of work already undertaken on what changes would be required to effectively address the threats to Australian fauna.

4.12 New environment laws should be developed with broad consultation, not only with stakeholders in the environmental sector, but also scientific and legal experts, industry and employer groups, unions, and the broader Australian public. As jurisdictions will continue to administer large parts of Australian environmental law, the states and territories are integral to the development of any new legal frameworks. The Commonwealth must also recognise the fundamental role that Indigenous Australians play in environmental management, and thus in the development of any new environmental legislation.

Recommendation 1

4.13 The committee recommends that to limit the drivers of faunal extinction, the Commonwealth develop new environmental legislation to replace the *Environment Protection and Biodiversity Conservation Act 1999*.

4.14 The committee considers that a new legislative approach to managing and protecting Australia's environment should contain provision for an independent EPA. This should be given sufficient powers, resourcing and funding to assess activities, and ensure compliance and enforcement.

Recommendation 2

4.15 The committee recommends that the Commonwealth establish an independent Environment Protection Agency (EPA), with sufficient powers and funding to oversee compliance with Australia's environmental laws.

Future work of the committee

4.16 This interim report is focussed on setting out some aspects of the broad challenge faced by Australia's threatened faunal species, as well as considering the adequacy of the EPBC Act's current provisions for managing the environment.

4.17 The committee has received a large amount of evidence that it has not fully considered in this interim report. This includes many instances where the provisions of the EPBC Act are not being implemented effectively. It also includes information about many instances where existing laws are failing to protect threatened species that are at risk of extinction.

4.18 Although this report has recommended the Commonwealth develop a new legislative framework for Australia's environment, the committee notes that the second statutory review of the EPBC Act is due to commence no later than October 2019. As developing a new Act will take time, this review will provide an ideal opportunity to reconsider in depth the adequacy of the EPBC Act, and where its implementation can improve, including regarding threatened faunal species, as an interim measure.

4.19 The committee will maintain an ongoing interest in this review of the EPBC Act and its implementation, as well as the development of any new legislative approach by the Commonwealth.

4.20 The committee also notes its hopes that the work undertaken in this inquiry will be continued in the next Parliament, should the future committee and Senate agree to do so.

Senator Janet Rice
Chair

Australian Greens' additional comments

1.1 The Australian Greens believe the evidence and findings contained in this interim report are highly significant. We would like to thank the hundreds of organisation and individuals who made submissions and attended hearings across the country.

1.2 The inquiry has heard evidence that the scale and speed of decline for Australian threatened fauna is nothing short of scandalous. We are in the midst of the sixth great mass extinction event.

1.3 What is clear from the evidence so far is that there is nothing inevitable about species extinction, it is a choice. With adequate laws and funding, we can ensure that not one more Australian species goes extinct.

1.4 But our existing laws and compliance mechanisms are little more than processes to be stepped through by project proponents. They have failed to prevent faunal extinction and species decline.

1.5 The scope for ministerial discretion and overturning of expert advice, the ad-hoc nature of species protection and funding, the lack of mandatory action to limit key threatening process and protect critical habitat; all point to a framework that is facilitating rather than reversing faunal extinction.

1.6 The committee recommendations contained in this report are an important step forward on the path to reform. The Australian Greens welcome the findings of the committee that we need new environmental legislation that will actually limit the drivers of faunal extinction and the creation of an independent environmental protection authority (EPA) to ensure compliance with environmental laws.

An independent environment commission

1.7 While the committee has agreed upon the need for an arms length EPA to ensure compliance with and enforcement of the law, multiple witnesses and submitters have also identified the need for a separate independent body, a national environment commission.

1.8 Such a body would sit independent of government and set national standards, conduct strategic planning, and provide long term evaluation and monitoring of the state of our environment and the efficacy of our laws and programs. This role is distinct from the regulatory and compliance function identified in the committee's report for the EPA.

1.9 Some have argued that these strategic functions are already provided by the Department of the Environment and Energy, however the Greens believe that structural separation from the Minister for the Environment and government of the day is needed to provide frank and independent advice, standards and review.

1.10 The paper on Environmental Governance by the Australian Panel of Experts on Environmental Law came to a similar conclusion:

> It can be argued that the most effective implementation of the scheme would be likely to be achieved through having it administered by an independent, expert institution that is, and is perceived to be, free of political or other influence.[1]

1.11 The determination of the specific roles and responsibilities of a national environment commission is a significant task, and the Australian Greens look forward to exploring this issue further both within this inquiry and with broader stakeholder consultation throughout the development of new environmental legislation.

Recommendation 1

1.12 The Australian Greens recommend that the Australian Government create an independent national environment commission alongside new environmental legislation.

Senator Janet Rice
Chair
Senator for Victoria

1 The Australian Panel of Experts on Environmental Law, *Environmental Governance*, Technical Paper 2 (2017), p. 65.

Labor Senators' additional comments

1.1 Labor Senators welcome the Committee decision to focus this interim report on the effectiveness of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as a legislative framework for managing Australia's environment and protecting threatened species.

1.2 Labor Senators thank all organisations and individuals that made submissions to this inquiry, gave evidence at hearings and facilitated site visits, as well as the Secretariat for their ongoing research and administrative support.

1.3 Labor believes the Australian Government has an enduring responsibility to protect Australia's environment and natural resources. Australia needs new frameworks for truly national protection and management of Australia's natural resources to enshrine federal leadership in proactive and systemic protection of our environment. We must confront threats such as climate change and deliver on our international obligations including Sustainable Development, to protect biodiversity, to protect heritage, restore landscapes, control plastic pollution and improve air quality and water quality to protect human health and productivity.

1.4 Labor Senators acknowledge the current EPBC Act is now 20 years old and has never been significantly reformed. It is time to bring it into the 21st century.

1.5 Labor Senators note that the Leader of the Opposition and the Shadow Minister for the Environment announced on 16 December 2018 that, if elected, Labor will establish an Australian Environment Act in our first term. It will be an Act which protects our environment but also supports job-creating development by streamlining and harmonising processes. The new legal framework will compel the Australian government to actively protect our unique natural environment and demonstrate national leadership.

1.6 Labor will establish a high powered working group of experts including scientists, environmental lawyers and public policy thinkers to refine the clear concepts that underpin this reform. We will also ensure all stakeholders including states and territories, Aboriginal and Torres Strait Islander representatives, impacted industries and business groups, trade unions and civil society have a seat at the table.

1.7 Labor considers the new Environment Act should include a land clearing trigger, and the water trigger should be expanded to cover shale or tight formation gas developments. Consultation on the new legislation should also consider a National Parks trigger to protect our system of National Parks.

1.8 Labor Senators note the Leader and Shadow Minister also announced that, if elected, Labor will establish a new agency, a Federal Environment Protection Agency (EPA) to manage matters of national environmental significance. Labor's plan is for a strong, well resourced, science-based EPA that ensures compliance with environmental law, conducts public inquiries on important environmental matters, and

provides transparent and timely advice to the Minister within a clear decision-making framework.

1.9 Labor Senators support the Committee's recommendations for the Commonwealth to develop new environmental legislation and establish an independent EPA.

Senator Anne Urquhart
Senator for Tasmania

Senator Anthony Chisholm
Senator for Queensland

Appendix 1

Submissions, form letters, tabled documents, additional information and answers to questions on notice

Submissions

1	Australian National Audit Office
2	Department of Environment and Natural Resources, Northern Territory
2.1	Supplementary to Submission 2
3	Doctors for the Environment Australia
4	School of Veterinary and Life Sciences, Murdoch University
5	Department of Defence
6	Fauna Research Alliance
7	Capricorn Conservation Council Inc.
8	Lawyers For Forests
9	Western Australian Government
10	Greening Australia
11	Zoos Victoria
12	National Parks Association of the ACT
13	Blue Mountains Conservation Society Inc.
14	Tiaro and District Landcare Group
15	Jane Goodall Institute Australia
16	Centre for the Advancement of a Steady State Economy (CASSE) NSW
17	Bribie Island Environmental Protection Association Inc.
18	Animal Justice Party
19	Wairambar Rainforest
20	Australian Seabird Rescue Inc
21	BirdLife Capricornia
22	Friends of Grasslands
23	Kuranda Conservation Community Nursery Inc.
24	Research Centre for Applied Alpine Ecology
25	Wildlife Health Victoria: Surveillance
26	Alliance to Save Hinchinbrook Inc.
27	Invasive Species Council
28	Fenner School of Environment and Society, Australian National University
29	Environmental Farmers Network
30	Wide Bay Burnett Environment Council
31	Island Care Christmas Island

32	Natural Resource Management Regions Australia
33	Friends of the Koalas Inc. (Phillip Island)
34	Black-throated Finch Recovery Team
35	Community and Public Sector Union
36	Museums Victoria
37	Bush Heritage Australia
38	Hamilton Field Naturalists Club
39	Northern Plains Conservation Management Network
40	Steady State ACT
41	Wildlife Preservation Society of Queensland – Fraser Coast
42	Foundation for Australia's Most Endangered Species Ltd.
43	Queensland Conservation Council
44	Tasmanian Land Conservancy
45	Mr Graham Davies, Resonant Solutions Pty Ltd
46	Mr Alexander Dudley, Faunaverse – Australian Wildlife in Poetry
47	Mr Andrew Wilkie MP
48	Lake Macquarie City Council
49	North East Bioregional Network Inc.
50	Rainforest Reserves Australia
51	Zoo and Aquarium Association Australasia
52	EDOs of Australia
53	Rewilding Australia
54	Australian Veterinary Association, Queensland Division
55	Australian Wildlife Conservancy
56	Centre for Ecosystem Science, UNSW
57	Department of the Environment and Energy
58	Coolum and North Shore Coast Care
59	Friends of Errinundra
60	Urban Bushland Council WA Inc.
61	Wombat Forestcare Inc.
62	Redlands2030 Inc.
63	Hunter Bird Observers Club Inc
64	STEP Inc
65	Australian Speleological Federation Inc.
66	Belfast Coastal Reserve Action Group
67	Kara Kara Conservation Management Network Inc
68	Healesville Environment Watch Inc.
69	Friends of Leadbeater's Possum
70	Tree Kangaroo and Mammal Group
71	BirdLife Australia Northern Queensland Branch
72	Wildlife Queensland – Townsville Branch Inc.

73	Friends of Craigie Bush
74	Friends of the Koala Inc.
75	Australian Greens Victoria – Mornington Peninsula Branch
76	Friends of the Brush-tailed Rock-wallaby Inc.
77	Friends of the Western Ground Parrot Inc.
78	Cumberland Bird Observers Club Inc.
79	Canary and Cage Bird Federation of Australia Inc.
80	Wildlife of the Central Highlands (WOTCH)
81	Ryde Hunters Hill Flora and Fauna Preservation Society
82	Labor Environment Action Network (LEAN)
83	Portland Field Naturalists' Club
84	Conondale Range Conservation Association Inc.
85	Wildlife Preservation Society of Queensland – Sunshine Coast and Hinterland
86	Ecological Society of Australia
87	Sustainable Population Australia Inc.
88	Green Fire Science, University of Queensland
89	Zoos South Australia
90	Australians for Animals Inc.
91	National Parks Association of NSW
92	Queensland Koala Crusaders Inc, Koala Action Inc, and Moreton Bay Koala Rescue Inc
93	Professor Tim Stephens
94	Nature Conservation Council of NSW
95	Gecko Environment Council
96	Wildlife Health Australia
97	Melbourne Veterinary School, The University of Melbourne
98	Humane Society International
99	Ecosystem Science Council
100	City of Mandurah
101	Koala Action Group Qld Inc.
102	Friends of Underwood Avenue Bushland
103	Farmers Network Australia
104	Nature Conservation Society of South Australia
105	Royal Zoological Society of NSW
106	Student Environmental Law Society
107	Wollondilly Council
108	Centre for Environmental Law
109	Terrain Natural Resource Management
110	Victorian National Parks Association
111	North Queensland Conservation Council
112	Yarra Ranges Landcare Network

113 Protect the Bush Alliance
114 Society for Conservation Biology Oceania Section
115 International Fund for Animal Welfare, Oceania Region
116 SEA LIFE Australia
117 Conservation Council SA
118 BirdLife Australia
119 Mary River Catchment Coordinating Committee
120 Batwatch Australia
121 Law Council of Australia
122 Trust for Nature
123 Research Centre for Future Landscapes, La Trobe University
124 Warringal Conservation Society
125 Jervis Bay Regional Alliance
126 Koala Action Gympie Region
127 Wildlife Preservation Society of Queensland
128 Interdisciplinary Conservation Science Research Group, RMIT University
129 Nillumbik Environment Action Group
130 Fisheries Scientific Committee
131 WWF–Australia
132 Wildlife Preservation Society of Queensland, Logan Branch
133 The Wilderness Society Australia
134 Australian Land Conservation Alliance
135 Local Government Association of Queensland
136 Australia Zoo
137 Australian Conservation Foundation
138 Wet Tropics Management Authority
139 Garigal Landcare
140 Trees For Life Inc.
141 Moonlit Sanctuary Wildlife Conservation Park
142 Townsville and Region Environment Foundation
143 Wildlife Disease Association Australasia
144 C4 (Community for Coastal and Cassowary Conservation)
145 Cairns and Far North Environment Centre (CAFNEC)
146 Kuranda Envirocare
147 Environmental Defenders Office of Northern Queensland
148 Bats and Trees Society of Cairns Inc.
149 Friends of Eastern Otways (Great Otway National Park)
150 Gippsland Community Fire Watch
151 Threatened Species Scientific Committee (TSSC)
152 Parks Australia

153	National Environmental Law Association
154	Arid Lands Environment Centre
155	Environmental Justice Australia
156	Australian Academy of Science
157	Sentient
158	Australian Institute of Marine Science (AIMS)
159	Threatened Species Recovery Hub, National Environmental Science Programme
160	Gilbert's Potoroo Action Group Inc.
161	Environment East Gippsland Inc.
162	Dr Philippa McDormack and Professor Jan McDonald
163	Australian Environment Foundation
164	Greenpeace Australia Pacific
165	Johns Hill Landcare Group Inc.
165.1	Supplementary to Submission 165
166	Central Victorian Biolinks Alliance Inc.
167	Gippsland Environment Group Inc.
168	Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS)
169	Australian Koala Foundation
170	Frog Safe, Inc.
170.1	Supplementary to Submission 170
171	Wildlife Queensland Gold Coast & Hinterland Branch
172	Australasian Bat Society, Inc.
173	NSW Government
174	Tasmanian Department of Primary Industries, Parks, Water and Environment
175	Save the Bilby Fund
176	Warddeken Land Management Ltd
177	Minerals Council of Australia
178	Ms Edwina Barton
179	Mrs Barbara Thompson
180	Mr Kevin Eastment
181	Dr Ross Jeffree
182	Name Withheld
183	Name Withheld
183.1	Supplementary to Submission 183
184	Name Withheld
184.1	Supplementary to Submission 184
185	School of Molecular and Life Sciences, Curtin University
186	Professor George Wilson
187	Ms Claire deLacey

188	Mr Jim Morris
189	Mr Graeme Jack Wheeler
190	Mr David Gallan
191	Mrs Maureen Webb
192	Ms Mariea Pacheco
193	Ms Sylvia Hurse
194	Mr David Holland
195	Name Withheld
196	Mr Mark Smith
197	Mr Ashley Dayman
198	Mr Nathan Sidney
199	Mr Daryl Dickson
200	Ms Juliet Dingle
201	Name Withheld
202	Ms Karen Vegar
203	Dr Terrence Mulhern
204	Dr Mike Clear
205	Dr Shannon Currie
206	Mx Kit Darko
207	Ms Inala Swart
208	Ms Gilian Pixley
209	Name Withheld
210	Mr Malcolm Fisher
211	Dr Laura Ruykys
212	Mr Alan Thompson
213	Ms Tamara Murphy
214	Mr Robert Hanbury
215	Mr Brian Waldron
216	Name Withheld
217	Name Withheld
218	Mr Lindsay Hackett
219	Ms Leonie Stubbs
220	Mr Russell Jones
221	Ms Kathleen Shurcliff
222	Mr John Arndt
223	Ms Genevieve Jones
224	Mr Richard Cassels
225	Dr Jeffrey Carlyle
226	Mr Tim Burnard
227	Mr Michael Johnston
228	Associate Professor Mark Lintermans

229	Ms Zoe Reynolds, Australian Labor Party (Clovelly Branch)
230	Friends of the Earth Australia and Ban Uranium Mining Pernanently (BUMP)
231	Name Withheld
232	Mrs Pamela Reeves
233	Ryde Gladesville Climate Change Action Group
234	Name Withheld
235	Ms Kathryn Kelly
236	Dr Barbara Wilson
237	Mr Philip Spark
238	Mr William Kinsey
239	Dr Graham Zemunik
240	Ms Brianna Coulter
241	Ms Janine McGinness-Whyte
242	Mr Callan Harker
243	Mr John Gain
244	Ms Lee-Anne Veage
245	Mrs Juliette Norwood
246	Professor Don Driscoll
247	Dr Myfanwy Webb
248	Name Withheld
249	Name Withheld
250	Name Withheld
251	Name Withheld
252	Name Withheld
253	Name Withheld
254	Name Withheld
255	Mr Brian Summers
256	Ms Susan Reid
257	Mr Derek Williams
258	Name Withheld
259	Name Withheld
260	Name Withheld
261	Name Withheld
262	Mr Francis Breen
263	Cassowary Keystone Conservation Inc.
264	Miss Linda Bradburn
265	Name Withheld
266	Name Withheld
267	Mr James Dorey
268	Dr Peter Coyne

269	Mr Charlie Schroeder
270	Mr Colin Verrall
271	Mr David Paull
272	Mr Nick Hopkins
273	Mr James Fitzgerald
274	Ms Kathleen Patitsas
275	Mrs Pamela Gillot
276	Dr Sue Lewis
277	Dr Chris Nadolny
278	Dr Peggy James
279	Name Withheld
280	Mrs Kim Stephan
281	Mrs Diane Salter
282	Mr Jonathon Lough
283	Ms Vicky Shukuroglou
284	Dr Helen Hutchinson
285	Confidential
286	Confidential
287	Dr Kevin Bonham
288	Mrs Vivienne Dayman
289	Dr Colin Hocking
290	Dr Glenn Pure
291	Ms Lorraine Vass
292	Ms Joelle Penning
293	Ms Karin von Strokirch
294	Ms Vanessa Neale
295	Ms Carol Warren
296	Mr Andrew Douglas
297	Ms Lou Baxter
298	Mr Richard Ruff
299	Ms Heather King
300	Chris Bell
301	Mr Steve Meacher
302	Mrs Leonie Gale
303	Mr Greg Miles
304	Ms Sarah Gunn
305	Ms Kerry Hewson
306	Ms Aurelia Smeraldo
307	Mr Graham Harrington
308	Ms Ann Jelinek
309	Mr Roger Martin

310 Mr Ian Samson
311 Ms Eleanor Hanger
312 Mr Peter Flanagan
313 Morika Elek
314 Mr John Long
315 National Wild Dog Action Plan
316 Ms Gina Silis
317 Mr Peter Gibbs
318 Ms Elizabeth Livanos
319 Ms Sylvia Cooper
320 Mrs Carolyn Bussey
321 Mr Ged Lagerewskij
322 Mr Harry Johnson
323 Ms Nola Firth
324 Mr Sime Validzic
325 Ms Patricia Wilkinson
326 Ms Anne Layton-Bennett
327 Ms Jennifer Edwards
328 Ms Rachael Hollander
329 Mr Richard Weatherley
330 Mr Kel and Ms Lyn Eggins
331 Dr Bob Rich
332 Mr Peter Yates
333 Mr Jim Walker
334 Mr Steve Burgess
335 Mr Patrick Johnson
336 Ms Maxine Hare and Ms Carolyn Emms
337 Ms Jo Vandermark
338 Mr Guy Dutson
339 Ms Wendy Radford and Dr John Bardsley
340 Ms Catharine Errey
341 Ms Margaret Taylor
342 Ms Rose Dow
343 Ms Fiona Bullivant
344 Mr Nick Mooney
345 Ms Anne Reeves OAM
346 Mr Graeme Beech
347 Ms Edwina Mulholland
348 Ms Lois Levy
349 Mr Rainer Mathews
350 Mr Glenn Morris

351	Ms Viola Temple-Watts
352	Mr J Bridle
353	Ms Jan Ardill
354	Mr Bert Lawatsch
355	Ms Heidi Hardisty
356	Ms Denise Seabright
357	Mr Nelson Quinn
358	Mr Peter Pemberton
359	Ms Gail Podberscek
360	Ms Gabrielle Barto
361	Ms Maureen Grant
362	Ms Margaret Blakers
363	Ms Geraldine Ryan
364	Mr Atticus Fleming
365	Queensland Government
366	Name Withheld
367	Ms Andrea and Mr Peter Hylands
368	Dr Rosalie Schultz
369	Mr Steven Nowakowski
370	Ms Wendy Gleen
371	Ms Karen Siegel
372	Name Withheld
373	Associate Professor Michael Braby
374	Mr Gerry Gillespie
375	Ms Dereka Ogden
376	Ms Elaine Attwood AM
377	Ms Harriett Swift
378	Mr Rupert Macgregor
379	Dr Eddy Wajon
380	Professor Esther Gallant
381	Name Withheld
382	Name Withheld
383	Sutton Solar Action Group
384	Ms Beatrice Ludwig
385	Professor Tor Hundloe
386	Mr Norm Stimson
387	Ms Maria Matthes
388	Ms Patricia and Mr Barry Durman
389	Ms Austra Maddox
390	Confidential
391	Name Withheld

392	Confidential
393	Confidential
394	Name Withheld
395	Name Withheld
396	Mr Stephen Koci
397	Mr Robert Bertram
398	Mr Sean Burke
399	Law Institute of Victoria
400	Mr Mark Merritt
401	Mr Lloyd Gamble
402	Mr Ian Penna
402.1	Supplementary to Submission 402
402.2	Correction to Submission 402
403	Mr Peter Dykes
404	Mr Brynn Mathews
404.1	Response to Submission 404 from the Cairns Regional Council
405	North East Forest Alliance
405.1	Response to Submission 405 from the NSW Environmental Protection Authority
405.2	Response to Submission 405 from the Forestry Corporation of NSW
406	South East Forest Rescue
406.1	Response to Submission 406 from the Forestry Corporation of NSW
407	Mount Gravatt East Townhouse Development Action Group
407.1	Response to Submission 407 from the Lord Mayor of Brisbane
408	Friends of Bats and Habitat Gippsland
408.1	Response to Submission 408 from the East Gippsland Shire Council
408.2	Response to Submission 408 from the Department of the Environment and Energy
409	Mission Beach Cassowaries
409.1	Response to Submission 409 from the Cassowary Coast Regional Council
409.2	Response to Submission 409 from the Great Barrier Reef Marine Park Authority
409.3	Response to Submission 409 from the Queensland Department of Transport and Main Roads
409.4	Response to Submission 409 from the Department of the Environment and Energy
410	National Farmers' Federation
411	Queensland Wader Study Group
412	Mr Daniel Williams
413	Wombat Rescue Tasmania
414	Ms Jeanette Douglass

415	Mr Brian Douglass
416	Professor Frank Carrick, University of Queensland
417	Tasmanian Conservation Trust
418	Birdlife Tasmania
419	Birds of King Island
420	Dr Megan O'Shea

Form letters

- Form letter 1 – received 294 copies
- Form letter 2 – received 10,948 copies
- Form letter 3 – received 1,286 copies
- Form letter 4 – received 4 copies

Tabled documents

- Professor David Lindenmayer – C Todd et al, 'Assessing reserve effectiveness: Application to a threatened species in a dynamic fire prone forest landscape', *Ecological Modelling,* 338 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – C Taylor et al, 'Improving the Design of a Conservation Reserve for a Critically Endangered Species', PLoS ONE 12 (1) January 2017 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – D Lindenmayer 'Regional Forest Agreements fail to meet their aims', Ecological Society of Australia, 2018 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – H Keith et al, 'The value in Victoria's Central Highlands', Threatened Species Recovery Hub, August 2017 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – D Blair et al, 'Failing to conserve the Leadbeater's Possum and its Mountain Ash forest habitat', *Australian Zoologist,* 2018, vol. 39 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – H Keith et al, 'Ecosystems accounts define explicit and spatial trade-offs for managing natural resources', *Nature Ecology and Evolution*, November 2017, Vol 1 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – D Lindenmayer and C Sato, 'Hidden collapse is driven by fire and logging in a socioecological forest system', *PNAS*, May 2018, Vol. 115, No. 20 (public hearing, Melbourne, 22 November 2018)

- Professor David Lindenmayer – C Taylor et al, 'Resource Conflict Across Melbourne's Largest Domestic Water Supply Catchment', November 2018 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – E Burns et al, 'Ecosystem assessment of mountain ash forest in the Central Highlands of Victoria, south-eastern Australia', *Austral Ecology*, 2015, 40 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – D Lindenmayer et al, 'The need for a comprehensive reassessment of the Regional Forest Agreements in Australia', *Pacific Conservation Biology*, 2015, 21 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – C Taylor et al, 'Nonlinear Effects of Stand Age on Fire Severity', *Conservation Letters*, July/August 2014, 7(4) (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – D Lindenmayer, 'Flawed forest policy: flawed Regional Forest Agreements', *Australasian Journal of Environmental Management*, 2018, Vol. 25, No. 3 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – D Lindenmayer, 'Halting natural resource depletion: engaging with economic and political power', *The Economic and Labour Relations Review*, 2017, Vol. 28(1) (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – D Lindenmayer and C Taylor, 'Where there is fire, there is smoke', *Science*, 27 July 2018, Vol. 361 (public hearing, Melbourne, 22 November 2018)
- Professor David Lindenmayer – Summary notes (public hearing, Melbourne, 22 November 2018)
- The Wilderness Society – 'Victorian Forest Industry Taskforce - Statement of Intent' (public hearing, Melbourne, 22 November 2018)
- Goongerah Environment Centre – E Hill, 'VicForests logging threatening High Conservation Value forests of East Gippsland', 4 December 2017 (public hearing, Melbourne, 22 November 2018)
- Goongerah Environment Centre – Goongerah Environment Centre, Friends of the Earth and Fauna and Flora Research Collective, 'Lawless logging: An investigation into the breaches of the regulatory framework governing logging operations in Victoria' (public hearing, Melbourne, 22 November 2018)
- BirdLife Australia – BirdLife Australia, Australia's Faunal Extinction Crisis (public hearing, Brisbane, 1 February 2019)
- BirdLife Australia – Birdlife Australia, 'Restoring the Balance: The case for a new generation of Australian Environmental Bird Laws' (public hearing, Brisbane, 1 February 2019)

- The Wilderness Society – Photo of a white lemuroid ringtail possum (public hearing, Brisbane, 1 February 2019)
- Australians for Animals Inc. – List of NSW, Queensland Federal responses – Koalas – Federal actions (public hearing, Brisbane, 1 February 2019)
- Australians for Animals Inc. – April E Reside, 'How to send a finch extinct', *Environmental Science and Policy*, 2019 (public hearing, Brisbane, 1 February 2019)
- North East Bioregional Network Inc. – SD Bradshaw et al, 'Understanding the long-term impact of prescribed burning in Mediterranean-climate biodiversity hotspots, with a focus on south-western Australia' (public hearing, Hobart, 4 February 2019)
- North East Bioregional Network Inc. – CSIRO, 'Unlocking the potential of northern Australia' (public hearing, Hobart, 4 February 2019)
- North East Bioregional Network Inc. – Society for Ecological Restoration, 'National standards for the practice of ecological restoration in Australia' (public hearing, Hobart, 4 February 2019)
- North East Bioregional Network Inc. – BT Lazenby et al, 'Evidence for a recent decline in the distribution and abundance of the New Holland mouse (*Pseudomys novaehollandiae)* in Tasmania, Australia' (public hearing, Hobart, 4 February 2019)
- The Wilderness Society – Regarding Tasmanian Government submission, January 2019 (public hearing, 4 February 2019)
- The Wilderness Society – Prosser Plains Raw Water Scheme, maps (public hearing, Hobart, 4 February 2019)
- Wombat Rescue Tasmania – List of kits supplied by Wombat Rescue Tasmania (North) (public hearing, Hobart, 4 February 2019)
- Australian Conservation Foundation – Documents from the Department of the Environment and Energy relating to Toondah Harbour released under Freedom of Information request (public hearing, Canberra, 14 February 2019)

Additional information

- Department of the Environment and Energy, 'Referral Decision Brief – Toondah Harbour Development, Queensland (EPBC 2018/8225)' from Birdlife Southern Queensland (site visit, 31 January 2019)

Responses to evidence given at public hearings

- WWF–Australia and the Australian Conservation Foundation – relating to evidence provided by the Department of Environment and Energy at the public hearing on 8 October 2018, dated 19 October 2018

- Department of Environment and Energy – response to comments made by WWF–Australia and the Australian Conservation Foundation, dated 29 November 2018

Answers to questions on notice

- Australian Academy of Science – Answer to question taken on notice, public hearing, Canberra, 8 October 2018 (received 2 November 2018)
- Australian Academy of Science – Answer to question taken on notice, public hearing, Canberra, 8 October 2018 (received 2 November 2018)
- Parks Australia – Answers to questions taken on notice, public hearing, Canberra, 8 October 2018 (received 7 November 2018)
- Victorian Forestry Corporation (VicForests) – Answers to questions taken on notice, public hearing, Melbourne, 22 November 2018 (received 17 December 2018)
- Victorian Forestry Corporation (VicForests) – Answer to question taken on notice, public hearing, Melbourne, 22 November 2018 (received 18 January 2019)
- Threatened Species Recovery Hub, National Environmental Science Programme – Answer to question taken on notice, public hearing, Brisbane, 1 February 2019 (received 5 February 2019)
- Ecological Society of Australia – Answers to questions taken on notice, public hearing, Brisbane, 1 February 2019 (received 4 March 2019)

Appendix 2

Public hearings

Monday, 8 October 2018 – Canberra

Australian Conservation Foundation

Mr James Trezise, Policy Analyst
Mr Andrew Picone, Nature Campaigner

WWF–Australia – via videoconference

Dr Martin Taylor, Protected Areas and Conservation Science Manager

Parks Australia

Dr Judy West, Director of National Parks
Ms Tiffeny Horwood, Acting Assistant Secretary, Parks, Island and Biodiversity Science

Australian Academy of Science

Professor Craig Moritz, Chair, National Committee for Ecology, Evolution and Conservation
Dr Stuart Barrow, Senior Policy Analyst

Department of the Environment and Energy

Mr Dean Knudson, Deputy Secretary
Ms Monica Collins, Chief Compliance Officer
Dr Sally Box, Threatened Species Commissioner
Ms Kylie Jonasson, First Assistant Secretary
Mr Matthew Whitfort, Acting First Assistant Secretary, Knowledge and Technology Division
Mr Steve Costello, Assistant Secretary, Program Delivery Branch, Biodiversity Conservation Division
Mr Geoff Richardson, Assistant Secretary, Protected Species and Communities Branch
Ms Veronica Blazely, Acting Assistant Secretary, Wildlife Trade and Biosecurity Branch

Thursday, 22 November 2018 – Melbourne

Professor David Lindenmayer AO – private capacity

The Wilderness Society Ltd

Mr Lyndon Schneiders, National Director
Ms Amelia Young, Victorian Campaigns Manager

Victorian National Parks Association Inc.

Mr Matt Ruchel, Executive Director

MyEnvironment Inc.

Ms Sarah Rees, President

Environmental Justice Australia

Mr Brendan Sydes, Chief Executive Officer and Principal Lawyer
Dr Bruce Lindsay, Lawyer

Wildlife of the Central Highlands

Ms Maggie Riddington, President
Mr Jake Mckenzie, Executive Member

Environment East Gippsland – via teleconference

Ms Jill Redwood, Coordinator

Goongerah Environment Centre

Mr Ed Hill

Victorian Forestry Corporation (VicForests)

Mr Alex Messina, General Manager, Corporate Affairs
Mr Tim McBride, Manager, Biodiversity, Conservation and Reach
Mr Bill Paul, Manager, Environmental Performance

Australian Forests Products Association – via teleconference

Mr Ross Hampton, Chief Executive Officer
Mr Victor Violante, Senior Policy Manager

Healesville Sanctuary/Zoos Victoria

Ms Rachel Lowry, Director, Wildlife Conservation and Science, Zoos Victoria

Friday, 1 February 2019 – Brisbane

BirdLife Australia

Mr Paul Sullivan, Chief Executive
Dr James Radford, Chair, Research and Conservation Committee
Ms Judith Hoyle, Convenor, BirdLife Southern Queensland

The Wilderness Society

Mr Lyndon Schneiders, National Director
Ms Jessica Panegyres, National Nature Campaigner

Professor Frank Carrick AM – Private capacity

Australians for Animals Inc

Ms Sue Arnold, Coordinator

Redlands2030 Inc

Mr Chris Walker, Secretary

Protect the Bush Alliance

Dr Stephen Prowse, Chair
Ms Sheena Gillman, Secretary and Project Coordinator

Ecological Society of Australia

Dr Rebekah Christensen, Vice-President (Public Policy and Outreach)

Dr James Watson – Private capacity

Green Fire Science Hub, University of Queensland

Dr April Reside, Research Fellow

Queensland Conservation Council

Ms Louise Matthiesson, Director

Wildlife Preservation Society of Queensland

Mr Peter Ogilvie, President
Mr Des Boyland, Policies and Campaigns Manager

Threatened Species Recovery Hub, National Environmental Science Program

Professor Martine Maron, Deputy Director

Quandamooka Yoolooburrabee Aboriginal Corporation

Mr Cameron Costello, Chief Executive Officer
Ms Kathryn Crouch, Joint Management Ranger
Professor Darryl Low Choy, Chair, Quandamooka Land and Sea Committee
Mr Joel Bolzenius, Projects and Policy Coordinator
Dr Jan Aldenhoven, Adviser

Monday, 4 February 2019 – Hobart

CSIRO

Professor Paulo de Souza Jr, Group Leader, Data61
Professor Nic Bax, Senior Principal Research Scientist, Oceans and Atmosphere
Dr David Westcott, Senior Principal Research Scientist, Land and Water
Dr Tim Lynch, Senior Research Scientist, Oceans and Atmosphere

North East Bioregional Network Inc.

Mr Todd Dudley, President

Tasmanian Conservation Trust

Mr Peter McGlone, Director

The Wilderness Society

Mr Vica Bayley, Tasmanian Campaign Manager

Wombat Rescue Tasmanis

Ms Bea Mayne, President and Northern Coordinator
Ms Lauren Faulkner, Secretary
Ms Kim Rettig, Southern Coordinator

BirdLife Tasmania

Dr Eric Woehler, Convenor

Dr Dejan Stojanovic – Private capacity

Dr Matthew Webb – Private capacity

Birds of King Island – via teleconference

Ms Kathrine Ravich, Facilitator

Dr Phillipa McCormack – Private capacity

Professor Jan McDonald – Private capacity

Professor James Kirkpatrick – Private capacity

Professor David Bowman – Private capacity – via teleconference

Professor Brendan Mackey – Private capacity

Dr Nicole Rogers – Private capacity – via teleconference

Bonorong Wildlife Sanctuary

Mr Greg Irons, Director

Tuesday, 5 February 2019 – Hobart

Dr Neville Barrett – Private capacity

Dr Graham Edgar – Private capacity

Mr Todd Walsh – Private capacity – via teleconference

Law Council of Australia

Ms Jessica Feehely, Committee Member, Environment and Planning Law Committee, Legal Practice Section

Tasmanian Land Conservancy

Mr James Hattam, Chief Executive Officer
Dr Sally Bryant, Head of Science

Department of the Environment and Energy

Dr Nick Gales, Australian Commissioner to the International Whaling Commission

Thursday, 14 February 2019 – Canberra

Australian Conservation Foundation

Mr James Trezise, Policy Analyst
Ms Annica Schoo, Environmental Investigator

Threatened Species Recovery Hub, National Environmental Science Programme

Professor Brendan Wintle, Director
Professor John Woinarski, Deputy Director
Professor Sarah Legge, Deputy Director
Mr Bradley Moggridge, Indigenous Liaison Officer

Department of the Environment and Energy

Ms Kylie Jonasson, First Assistant Secretary
Mr James Tregurtha, First Assistant Secretary
Dr Sally Box, Threatened Species Commissioner
Mr Geoff Richardson, Assistant Secretary, Protected Species and Communities Branch
Mr Paul Murphy, Assistant Secretary, Wildlife Trade and Biosecurity Branch
Mrs Monica Collins, Chief Compliance Officer, Office of Compliance
Ms Tia Stevens, A/g Assistant Secretary, Biodiversity Policy and Water Science Branch

Appendix 3

Summary of committee site visits

This appendix contains summaries of the committee's site visits undertaken during the inquiry. These visits were to:

- the Toolangi State Forest and the Healesville Sanctuary, in the Yarra Valley, Victoria; and
- the site of proposed developments by Walker Group Holdings (Walker) at Toondah Harbour in Cleveland, Queensland.

Site visit: Toolangi State Forest and Healesville Sanctuary

On 21 November 2018, Senators Rice, Duniam and Urquhart visited sites in the Yarra Valley in Victoria: the Toolangi State Forest; and the Healesville Sanctuary.

Toolangi State Forest

The visit to Toolangi State Forest was hosted by Professor David Lindenmayer, Professor of Ecology and Conservation Science at the Fenner School of Environment and Society, at the Australian National University (ANU), and two ANU research officers based in the Victorian central highlands, Mr Lachlan McBurney and Mr David Blair.

The committee visited a number of sites in Toolangi State Forest, and received in situ briefings, as follows:

- coupes where logging has recently been undertaken, which have not yet been re-planted. This included sites where forestry activities have left buffer zones around areas where threatened species have been located prior to logging;
- sites showing the effects of bushfires. This included the recovery of areas damaged in the 'Black Saturday' bushfires of 13 April 2009, as well as the long-term and lasting effects of the 'Black Friday' bushfires of 1939;
- areas of old growth forest and forest areas that include individual old trees that provide habitat to threatened species, including the critically endangered Leadbeater's Possum, the vulnerable Greater Glider, and many species of birds whose populations have been declining;
- newer areas of regrowth forests, including areas representing up to two decades of regrowth;
- water catchment areas in the Toolangi State Forest that feed the water reservoirs supplying Melbourne and other parts of southern Victoria; and
- sites where long-term monitoring of animals occurs, including possums, gliders and birds, undertaken by the ANU research team directly, as well as

through programs they run for members of the public to participate in monitoring species population.

The committee looked at sites of old growth mountain ash, which provide critical habitat for populations of animal species, including the critically endangered Leadbeater's Possum. These possums nest in hollows of mountain ash, which almost always require trees to be around 150–years old before they develop. The committee looked at conservation strategies that have been explored with limited success, including artificial hollows and nesting boxes. Professor Lindenmayer noted that populations had declined, with site occupancy for Leadbeater's Possum around half of rates two decades ago.

Professor Lindenmayer gives an in situ briefing at a coupe in Toolangi State Forest to Senators Rice, Urquhart and Duniam

The committee considered the different burning patterns of old growth and younger regrowth forests. Professor Lindenmayer explained that younger forests burned with greater severity, as they are more prone to crown-scorching fire patterns. This has effects not only on the amount of forest destroyed, but also more devastating effects on animal populations due to the speed and heat of burning in younger forest areas.

As well as noting the effects of regrowth forest on the severity of fires, Professor Lindenmayer commented that research pointed to more frequent occurrence of re-burning bushfires in these areas, due to the younger tree populations.

The committee was advised of the importance of old growth forest to the health of water catchments. Professor Lindenmayer stated that some old growth Victorian water catchments are 'closed' for logging, whereas others are 'open'. He commented that,

whereas younger forests draw on water and take it out of the catchment system, older forests increase the intake of water into catchments.

Mr Blair and Mr McBurney give an in situ briefing at a bird monitoring site in Toolangi to Senators Urquhart, Rice and Duniam

Healesville Sanctuary

Following the visit to Toolangi, the committee visited the Healesville Sanctuary. The committee was given a briefing and tour of the Sanctuary by its General Manager of Life Sciences, Dr Rupert Baker.

Healesville Sanctuary is a zoo-based conservation organisation, which is one of three zoos that operate under Zoos Victoria (along with Melbourne Zoo and Werribee Open Range Zoo).

The Healesville Sanctuary states that its mission is to 'fight wildlife extinction' through:

> 1. Innovative, scientifically sound breeding and recovery programs to support critically endangered Victorian, terrestrial, vertebrate species;
>
> 2. Partnering with the Victorian community to create the world's most wildlife friendly society;
>
> 3. Providing profound zoo-based animal encounters to connect people with wildlife; and

4. Strong commercial approaches to secure financial sustainability.[1]

The Healesville Sanctuary supports the recovery programs for 21 species that are at risk of extinction. It does this through a range of activities, including captive breeding and reintroduction programs, research, and raising community awareness. The Sanctuary also assists species recovery in other ways, including raising money for recovery programs, and through its collaborations with recovery teams and experts around Australia.

The committee had the opportunity to view the Sanctuary's programs for some of these threatened animals, including species of:

- birds (including the Helmeted Honeyeater and Orange-bellied Parrot);
- frogs (Corroboree Frog, Baw Baw Frog) and lizards (including the Guthega Skink, Grassland Earless Dragon); and
- the Leadbeater's Possum.

Evidence taken at the committee hearing on 22 November 2018

The day after the site visit, the committee held a public hearing in Melbourne to take evidence. Professor Lindenmayer appeared at this hearing in a private capacity. At this hearing, the committee also took evidence from Ms Rachel Lowry, the Director of Wildlife Conservation and Science for Zoos Victoria.

1 Healesville Sanctuary, 'Vision and mission', www.zoo.org.au/about-us/vision-and-mission (accessed 14 February 2019).

Site visit: Toondah Harbour

On 31 January 2019, a subcommittee consisting of Senators Rice, Watt and Waters visited the site of proposed developments at Toondah Harbour, in Redland City, about 25 km south-east of Brisbane.

The committee received a briefing and a guided tour of the site from representatives of several organisations at Toondah Harbour, namely:

- Mr Steve MacDonald and Mr Tom Taranto from Redlands2030;
- Ms Judith Hoyle from Birdlife Southern Queensland; and
- Dr Peter Rothlisberg and Mr Robert Bush from the Queensland Wader Study Group.

Background

Toondah Harbour is the location of the Stradbroke Island Ferry Terminal, which is used by ferries and water taxis servicing North Stradbroke Island. It sits on the western shore of Moreton Bay, in the suburb of Cleveland, which has a population of around 15 000 people.[2]

The Queensland Government declared Toondah Harbour to be a Priority Development Area (PDA) on 21 June 2013. The Queensland Government and Redlands City Council chose Walker Group Holdings (Walker) as the preferred development partner.[3] Walker is proposing the redevelopment of the existing marine facility at Cleveland and a new residential development of 3600 units.

Toondah Harbour is in the Moreton Bay wetlands, one of five areas in Queensland that are protected under the Ramsar Convention, an international agreement that protects representative, rare or unique wetlands that are important for preserving biodiversity. The site was first protected under the Ramsar Convention in 1993.

The committee briefly discusses the proposed development at Toondah Harbour in the main body of this report. The committee notes that future reports for this inquiry may discuss the matter further.

Site visit

The committee received a briefing on the proposed development and related issues from representatives of Redlands 2030, BirdLife Southern Queensland, and the

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2 Redland City Council, 'Cleveland', www.redland.qld.gov.au/info/20125/our_suburbs_and_islands/164/cleveland and 2016 Census QuickStats, http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/SSC30627 (both accessed 25 January 2018).

3 Walker Group Holdings, 'Project Details', www.toondah-harbour.com.au/#projectdetails (accessed 24 January 2019).

Queensland Wader Study Group. This was held at the Grand View Hotel overlooking Toondah Harbour, following which Senators had the opportunity to ask questions.

Senators Watt, Rice and Waters with representatives of Redlands 2030, BirdLife Southern Queensland and the Queensland Waders Study Group

The committee then walked to several sites with the hosts, including:

- viewing the proposed development from the back of the Grand View Hotel. The hosts had marked out the proposed development area with buoys in Moreton Bay. From this elevated location, the committee could view a panorama of the proposed development of 3600 units, to be built on the mudflats;
- observing several critically endangered Eastern Curlew from locations along the shoreline of GJ Walter Park, as well as some Bar-tailed Godwit (listed as vulnerable) and Whimbrel. The committee saw some Eastern Curlews feeding on the mudflats at low tide. The mudflats are critical habitat for the Eastern Curlew, and would be completely destroyed by the proposed development;
- inspecting the Stradbroke Island Ferry Terminal, which sits at the southernmost point of the proposed development, and is proposed to be redeveloped;
- seeing other development sites currently being undertaken in Toondah's residential areas;
- viewing koala habitat in GJ Walter Park, as well as in in adjacent residential streets. This included one koala in a large gum tree on Shore Street East. The

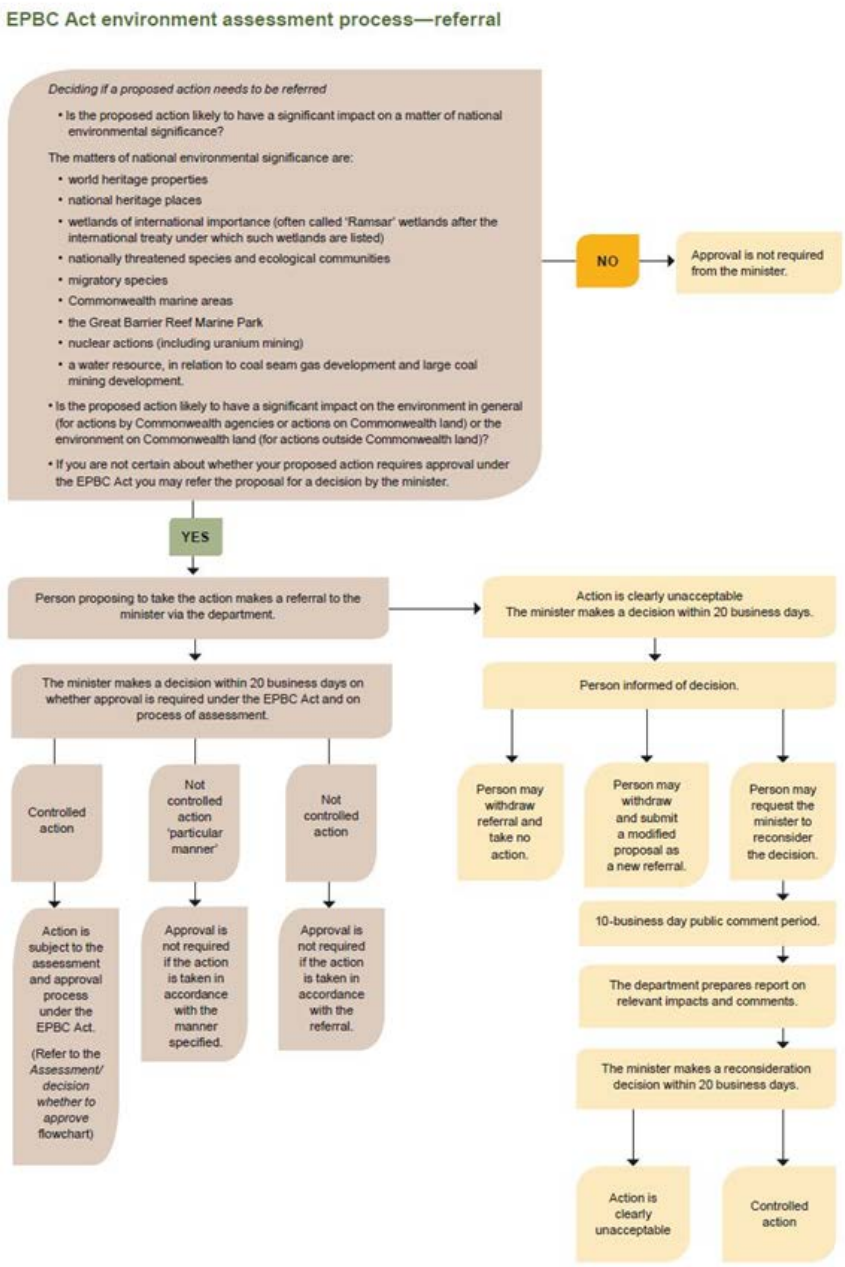
committee heard that this population of urban koalas would almost certainly be threatened by the Walker proposal, including through the risks of increased traffic flows.

Evidence taken at the committee hearing on 22 November 2018

Representatives of Redlands 2030 and BirdLife Southern Queensland appeared at the committee's hearing the following day to give evidence.

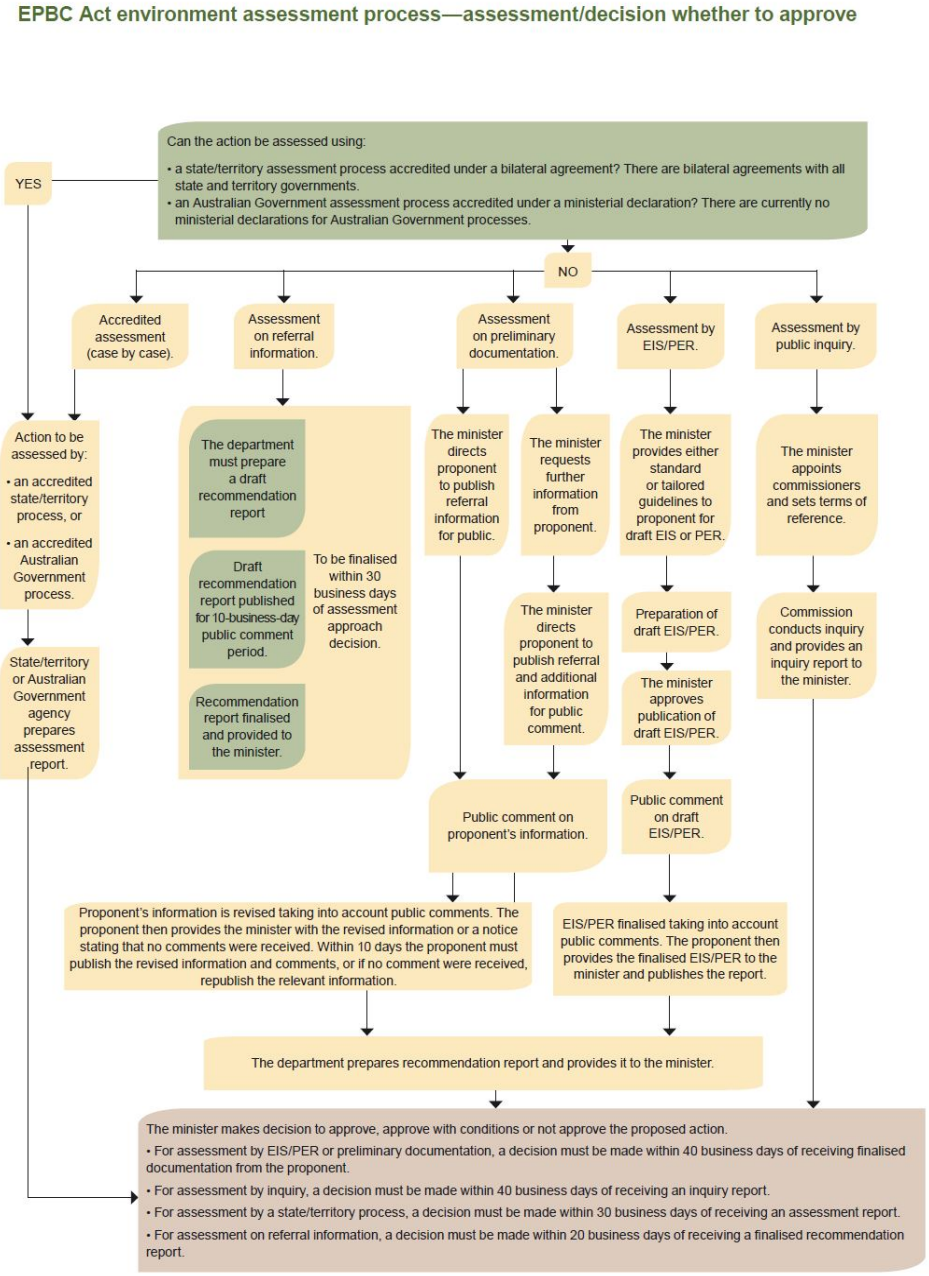
Appendix 4
Flowcharts of EPBC Act environment assessment processes

Figure 1: EPBC Act environment assessment process–referral



Source: Department of the Environment and Energy, 'EPBC Act–Environment Assessment Process', *Fact sheet*, p. 3.

Figure 2: EPBC Act environment assessment process–assessment/decision whether to approve



Source: Department of the Environment and Energy, 'EPBC Act–Environment Assessment Process', *Fact sheet*, p. 3