



Annika Reynolds, Lilly Deluca, Adam Gottschalk, Kelsey Gray, Stella Leonardi and Imogen Picker

SUBMISSION TO THE AUDIT OF THE
MANAGEMENT OF THREATENED
SPECIES AND ECOLOGICAL
COMMUNITIES UNDER THE EPBC
ACT

Acknowledgement of Country

We recognise our Aboriginal and Torres Strait Islander nations were the first sovereigns of our lands and waters. This sovereignty was never ceded and continues to this day, informing our connection to land, waters and community.

Indigenous respect and guardianship over the Australian land is an integral part of environmental justice and must be acknowledged and respected for the realisation of environmental justice in this country. Indigenous leadership, autonomy and justice are also critical to broader climate justice in Australia.

GreenLaw and its members acknowledge we meet on Indigenous land and, in working towards environmental justice, stand beside the traditional guardians of our lands. We recognise that during the writing of this submission we met on Ngunnawal and Ngambri Country, as well as the lands of the Awabakal and Kurna People. We pay our respects to Elders past and present.

GreenLaw

GreenLaw welcomes the opportunity to provide a submission in response to the ANAO's Performance Audit of the Management of Threatened Species and Ecological Communities under the *EPBC Act*.

GreenLaw is a young person-led law reform and legal research institute leveraging the expertise and imagination of the next generation of lawyers to tackle the climate crisis. GreenLaw works in partnership with Universities, NGOs and other industry partners to deliver policy development, legal research and law reform recommendations. GreenLaw conducts novel research in four core research areas: democracy and the environment, a just transition, thriving ecosystems, and future communities. GreenLaw was recognised as a key civil society group addressing the climate crisis by the Pro Bono Centre's 2020 Pro Bono Guide to the Climate Crisis.

This submission reflects the views of GreenLaw researchers and is not intended to be an institutional submission by the Australian National University nor is it intended to represent the views of our respective employers.

If it would be of assistance, we are happy to be contacted for further comments or to provide a full report on our research, please email: green_law@outlook.com.

Executive Summary

This submission is based on the results of a recent study undertaken by GreenLaw researchers, forthcoming publication. GreenLaw was commissioned by the Australian Conservation Foundation to undertake an assessment of threatened species management under the *EPBC Act*,¹ with a particular focus on climate change as a threatening process.

The scope of our study was limited to Australia's critically endangered species and ecological communities under the *EPBC Act*, which included 334 species and ecological communities as of July 2021. We assessed 290 Conservation Advices (87% of critically endangered species and communities) and 114 Recovery Plans (34% of the total number of species and communities), with some species being managed under both conservation documents.

Our research was guided by the following major questions:

- To what extent do Conservation Advices and Recovery Plans assess climate change impacts?
- To what extent do Conservation Advices and Recovery Plans recommend climate mitigation or adaptation measures?

Our methodology is provided at [Appendix A](#) in this submission.

Our results demonstrate there is a **climate change gap**, in both the threat assessment and recommended recovery actions under the *EPBC Act*, for Australia's critically endangered species. In total, climate change impacts are omitted in all conservation documents for 178 species and ecological communities (approximately 54% of the total number of critically endangered species). Furthermore, even in conservation documents that included climate change impacts, our results show that climate threat analysis tended to be brief and generalised, and that actions recommended to mitigate climate impacts were limited.

The results of our study have significant implications for threatened species management under the *EPBC Act*. The recovery of species threatened by climate change relies on the development and implementation of recovery actions aimed at addressing climate change impacts. Alarming, the proportion of Conservation Advices and Recovery Plans outlining mitigation actions was lower than the proportion of both documents which identify climate change as a threat. The disparity between threat and mitigation analyses in Conservation Advices and Recovery Plans contradicts the premise of both conservation documents, to guide the recovery of nationally listed species through management actions.² This strongly indicates that the development and implementation of both conservation documents is currently ineffective under the *EPBC Act*.

¹ *Environment Protection and Biodiversity Conservation Act 1999* (Cth) ('*EPBC Act*').

² Jane MacDonald et al, 'Improving policy efficiency and effectiveness to save more species: a case study of the megadiverse country Australia' (2015) 182 *Biological Conservation* 102; *EPBC Act* (n 1) s 270(1).

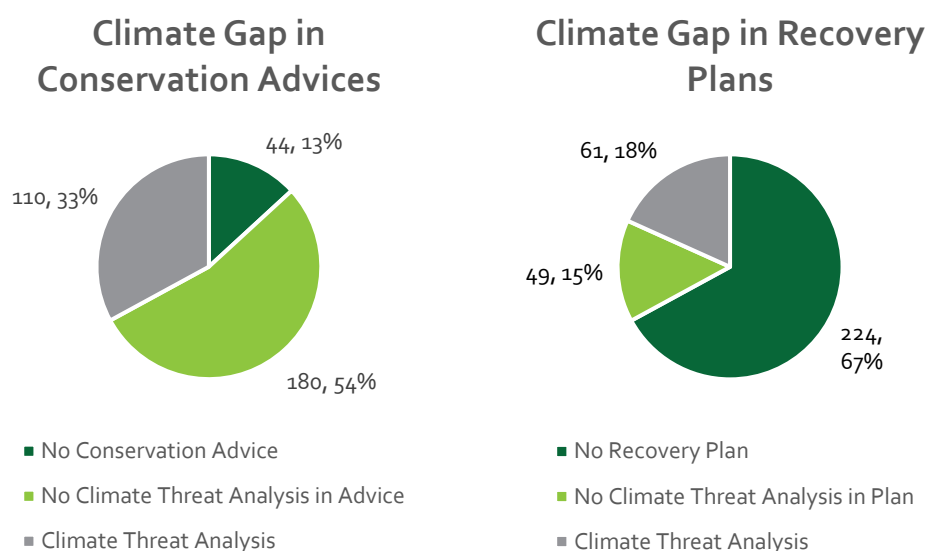
The Climate Gap

There is a broad scientific consensus that climate change is having a significant, and worsening, impact on Australia’s critically endangered species.³ However, our results demonstrate there is a **climate change gap**, in both the threat assessment and recommended recovery actions under the *EPBC Act*, for Australia’s critically endangered species. This gap has a direct impact on the level of climate mitigation and adaptation recommended for our critically endangered species, reducing the direct actions planned or being taken to address climate threats.

The Climate Change Gap

For the species and ecological communities that had a Conservation Advice, 54% of those Advices (180 Advices) did not discuss climate change at all, and 15% of Recovery Plans also do not mention climate change. *Figure 1* is a graphical representation of our findings:

Figure 1 The Climate Gap in Conservation Advices and Recovery Plans



However, in some areas the climate gap is large, with significant implications for the ongoing conservation management of certain categories of threatened species. In our data, climate change impacts are omitted in all conservation documents for 178 species and ecological communities (approximately 54% of the total number of critically endangered species). We found major gaps in the climate analysis for flora, insects and molluscs, and reptiles. The gaps included species where there is genuine scientific uncertainty about the impacts of climate change. But gaps also existed for species where there is evidence of climate change is a threat. For example, there is no mention of climate change in conservation documents for both the Short-nosed Sea Snake and the Leak-scaled Sea Snake despite scientific evidence indicating

³ Ramona Maggini et al, 'Protecting and restoring habitat to help Australia’s threatened species adapt to climate change' (2013) *National Climate Change Adaptation Research Facility* 58, 54.

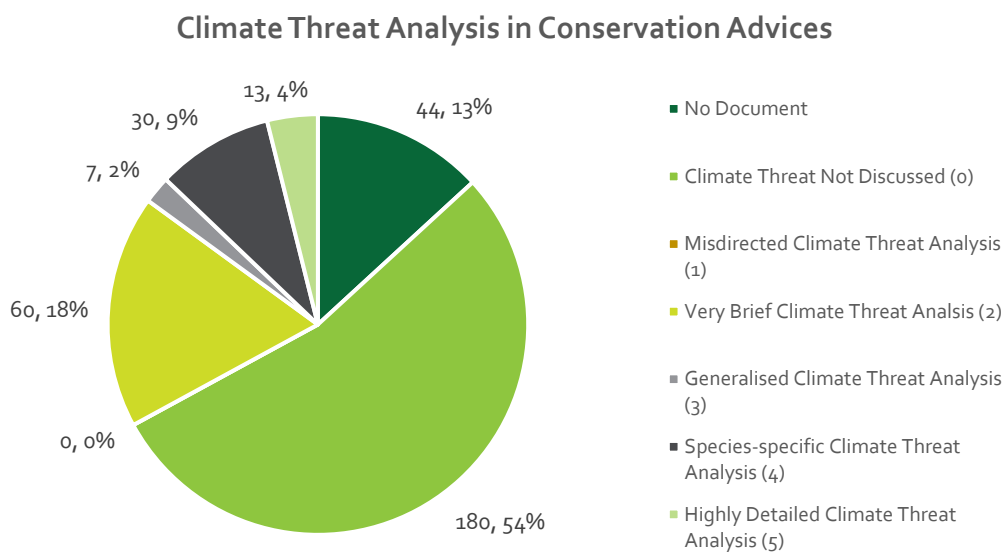
that climate impacts, including warming seas and coral bleaching events are major threats to the species.⁴

In 11 Recovery Plans (3% of all Recovery Plans) we found that climate threat analysis was misdirected, representing a further climate gap for critically endangered species. In the majority of Recovery Plans where climate threat analysis was misdirected (scoring a '1' for climate threat analysis), it was stated that climate threats are 'beyond the scope' of the Plan. Under the *EPBC Act*, Recovery Plans must 'identify threats to the species or community'.⁵ There is no limitation in the Act regarding what kinds of threats should be addressed in Plans, and no explicit exclusion of climate threats in either the legislation or public Department policy.⁶ Thus, there is no legal basis for carving out climate threats in this way.

Climate Threat and Mitigation Analysis

Of the conservation documents which did discuss climate change, we found that the analysis of its impacts tended to be brief and generalised. Furthermore, the majority of Conservation Advices that discuss climate change as a threat did not make recommendations about mitigating actions. Recovery Plans performed slightly better, though there is still a noticeable disconnect between the identification of climate change as a threat and recommending actions to mitigate the risk. *Figure 2* is a graphical representation of our findings:

Figure 2 The Climate Threat Analysis in Conservation Advices and Recovery Plans

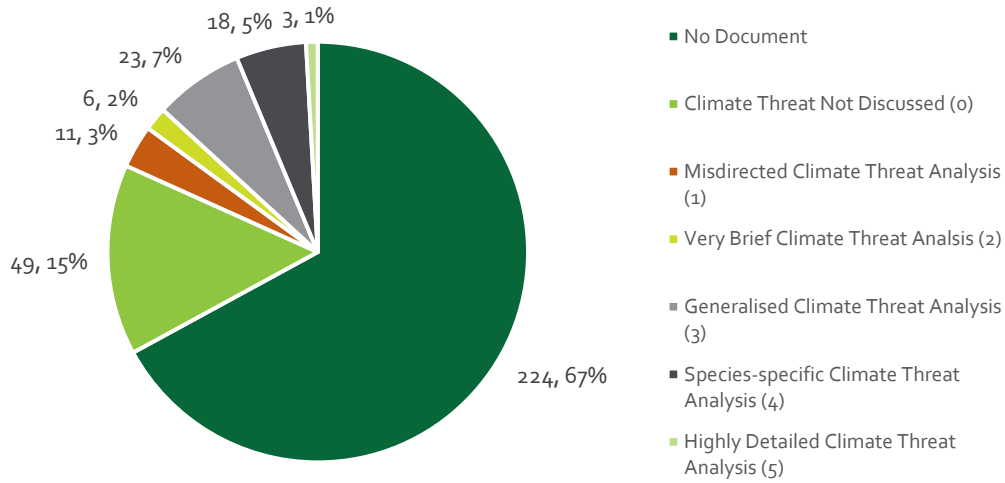


⁴ Ruchira Somaweera et al, 'Pinpointing Drivers of Extirpation in Sea Snakes: A synthesis of evidence from Ashmore Reef' (2021) 8 *Frontiers in Marine Science* 1, 13.

⁵ *EPBC Act* (n 1) s 270(2)(ca).

⁶ Indeed, anthropogenic climate change is a recognised threat with a specific threat abatement plan under the *EPBC Act*: See Threatened Species Scientific Committee, 'Loss of terrestrial climatic habitat caused by anthropogenic emissions of greenhouse gases' *Department of Agriculture, Water and the Environment* (Web Page, 4 April 2001) < <https://www.awe.gov.au/environment/biodiversity/threatened/key-threatening-processes/loss-of-habitat-caused-by-greenhouse-gases>>.

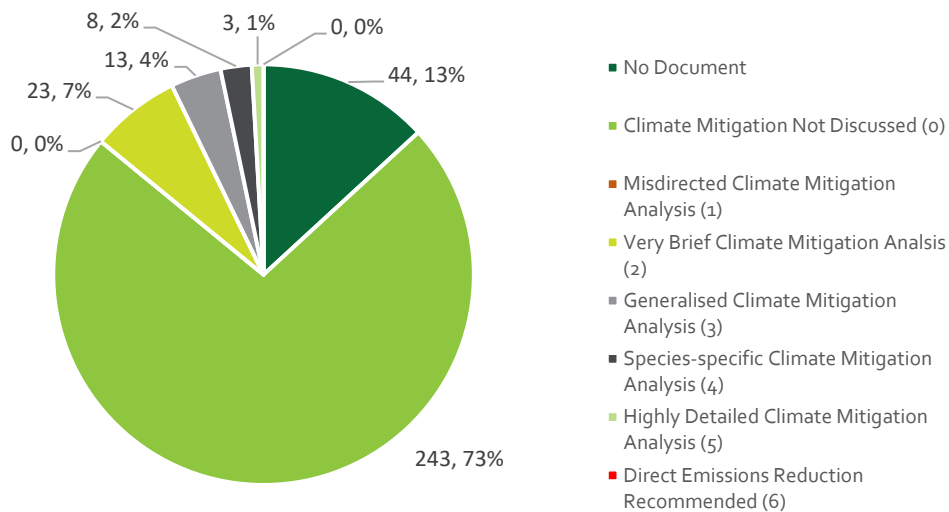
Climate Threat Analysis in Recovery Plans



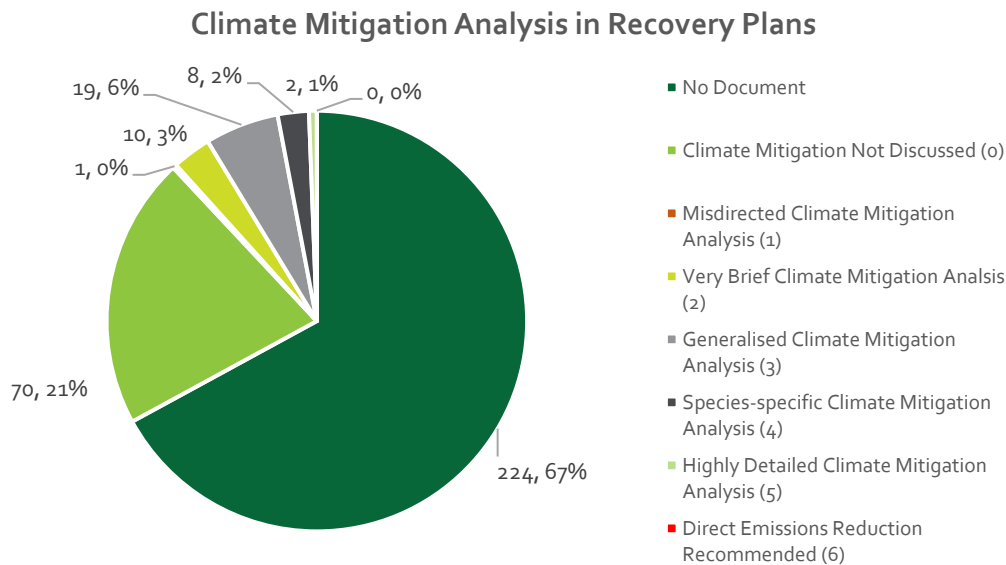
Our results demonstrate there is a major gap in climate mitigation analysis, even in Conservation Advices and Recovery Plans that do discuss climate threats for critically endangered species and ecological communities. In our report, climate mitigation refers to recovery actions that are intended to mitigate climate impacts on species or ecological communities.⁷ Figure 3 is a graphical representation of our findings:

Figure 3 The Climate Mitigation Analysis in Conservation Advices and Recovery Plans

Climate Mitigation Analysis in Conservation Advices



⁷ Barbara A. Cook et al, *Incorporating climate change into recovery planning for threatened vertebrate species in southwestern Australia* (Report No CENRM 142, 2016) 6.



The Implications of Our Results

Climate change will have a devastating impact on Australia’s threatened species. Climate models confirm that 16-61% of these species will lose the majority of their climatically suitable range by 2085. Climate change will have a dramatic effect on Australia’s environment,⁸ impacting the habitat and survival status of our threatened species.⁹ Studies have found that the climate will become ‘unsuitable’ for species¹⁰ and threaten many species with extinction.¹¹ It is therefore notable that climate threats are largely omitted in Conservation Advices and Recovery Plans for critically endangered species.

Our results demonstrate there is a climate change gap in both the threat assessment and recommended recovery actions under the EPBC Act. Our research was limited to critically endangered species and communities. However, given they are at greatest risk of extinction it is perhaps reasonable to infer the situation is unlikely to be “better” with respect to other categories of threatened species. The recovery of species threatened by climate change relies on the development and implementation of recovery actions aimed at addressing climate change impacts.

Generalised statements about climate change threats are overly represented in Conservation Advices. While Recovery Plans contain a higher proportion of species-specific analysis, the presence of generalised language is still concerning because it demonstrates a lack of depth in analysis. Descriptions of general threats, rather than an assessment that address climate impacts specifically for the species, undermines species recovery. In essence, such limited climate

⁸ Intergovernmental Panel on Climate Change, *Special Report: Global Warming of 1.5°C: Chapter 3 – Impacts of 1.5° global warming on natural and human systems* (2019).

⁹ Cook et al (n 7) 37; Don PA Sands, ‘Important issues facing insect conservation in Australia: now and into the future’ (2018) *Austral Entomology* 57(2) 150.

¹⁰ Ramona Maggini et al (n 3) 54.

¹¹ Cook et al (n 7) 37.

analysis restricts recovery actions to a shorter time frame and limits the Plan's effectiveness, particularly its ability to address the synergistic and additive impacts of rapid climate change.¹²

Impacts on the Efficacy of the EPBC Act Environmental Impact Assessment Process

The *EPBC Act* prohibits developments that would have a 'significant impact' on threatened species and ecological communities.¹³ The environmental impact assessment process under the *EPBC Act* empowers the Minister to approve developments that may have a significant environmental impact (termed controlled actions), by assessing the full impact of the development and imposing conditions to minimise impacts.¹⁴ In this assessment process, the Minister is required to **consider** relevant Conservation Advices,¹⁵ and must act **consistently** with relevant Recovery Plans.¹⁶

Therefore, the climate gap in Conservation Advices and Recovery Plans has the following impacts on the efficacy of the *EPBC Act's* environmental impact assessment process:

Information gaps in the environmental impact assessment process: a core theory justifying environmental impact assessments, is that decision-makers require comprehensive information to make decisions that will improve ecological and development outcomes.¹⁷ If Conservation Advices and Recovery Plans suffer from a climate gap, then the entire environmental impact assessment process will also suffer from this gap.¹⁸ In particular, decision-makers will be unable to take a fully informed 'risk-based approach' to environmental impact assessment, which is considered best practice for procedural and substantive environmental outcomes.¹⁹

Considering the overall impact of a development on climate change: there is no climate change trigger under the *EPBC Act*, despite climate change being a major threat to Australia's overall environment. In practice Conservation Advices and Recovery Plans are one of the only legislated mechanisms for climate impacts to be considered in controlled action approvals. Filling the climate gap in these documents would facilitate better environmental impact assessment decisions, that can consider the overall climate impact of a proposal. For example, the full ecological impacts of a heavy greenhouse gas emitting development would be considered, as well as the full ecological benefits of a renewable energy development.²⁰

Undermining the benefits of mitigation and offset packages in approval conditions: the climate gap means the Minister is not consistently assessing climate impacts, mitigation or adaptation

¹² MacDonald et al (n 2).

¹³ *EPBC Act* (n 1) s 18(1).

¹⁴ Andrew Macintosh, 'Best Practice Environmental Impact Assessment: A Model Framework for Australia' (2010) 69(4) *Australian Journal of Public Administration* 401, 406; Peta Norris, 'Seeking balance: The promise and reality of biodiversity offsetting' (2014) 31 *Environmental and Planning Law Journal* 137, 138.

¹⁵ *EPBC Act* (n 1) s 139(2).

¹⁶ *Ibid* s 139(1).

¹⁷ Macintosh (n 14) 403.

¹⁸ *Ibid*.

¹⁹ *Ibid* 407.

²⁰ Both of which may be assessed under the *EPBC Act* in a climate-blind manner, which undermines the integrated assessment principle of best practice Environmental Impact Assessment: See generally Macintosh (n 14); Robert V. Bartlett and Priya A. Kurian, 'The Theory of Environmental Impact Assessment: Implicit models of policy making' (1999) 27(4) *Policy & Politics* 415.

in controlled action approval conditions. In particular, this increases the risk that mitigation and offset conditions are not addressing the full impact on the species, and not achieving the key aim of 'no net biodiversity loss' to the species or ecological community.²¹ Best practice offsets, affirmed by the judiciary,²² require the decision-maker to be able to accurately assess whether: the loss of biodiversity values is irreparable, the impact constitutes an interim threat to the species before the offset benefits accrue and the offset will provide long-term value commensurate with impact of the development.²³ Climate change fundamentally influences each of these considerations,²⁴ and should be accounted for to ensure the true value of a mitigation and offset package is determined prior to the approval of a controlled action.

Impacts on the Efficacy of Threatened Species Management under the EPBC Act

At a federal level, threatened species and ecological community conservation extends beyond environmental impact assessment processes. This year, the federal government released the *Threatened Species Strategy 2021-2031*, which aims to 'improve the trajectories of priority threatened species by 2031' through 5-year action plans.²⁵ The first 5-year action plan is being finalised, although the list of 100 priority species has been released. It is anticipated the plan will engage in direct mitigation and conservation actions including 'climate change adaptation and resilience', as well as supporting actions for more effective planning and community engagement.²⁶

However, the climate gap in existing Conservation Advices and Recovery Plans is likely to have two significant impacts on the efficacy of the *Threatened Species Strategy* and broader conservation for all critically endangered species:

The Importance of Conservation Advices and Recovery Plans for the Strategy and Action Plans:

both the Strategy and Action Plans are high-level documents, which will rely on the threats mitigation actions identified in the Conservation Advice and Recovery Plan for prioritised species.²⁷ The existing climate gap means that the Strategy and Action Plans, despite identifying climate change as a broad threat, will be largely climate-blind in how on the ground actions are designed and implemented for species conservation.

Furthermore, the previous Strategy (2015-2020) for priority species recovery utilised three-year score cards to assess recovery efforts.²⁸ The three-year score card for each priority species were largely reliant on Conservation Advices and Recovery Plans, for example carrying across criteria for recovery from the species Plan. Thus, climate gaps in the Advice or Plan fundamentally

²¹ See generally Philip Gibbons et al, 'A Loss-Gain Calculator for Biodiversity Offsets and the Circumstances in Which No Net Loss is Feasible' (2016) 9(4) *Conservation Letters* 252.

²² See, eg, *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure* (2013) LGERA 347.

²³ Peta Norris, 'Seeking balance: The promise and reality of biodiversity offsetting' (2014) 31 *Environmental and Planning Law Journal* 137.

²⁴ Ibid.

²⁵ Australian Government, *Threatened Species Strategy 2021-2031* (Department of Agriculture, Water and the Environment, 2021) 5, 24.

²⁶ Ibid 28.

²⁷ Ibid 29.

²⁸ See, eg, H.M. Geyle et al, *Report to Office of the Threatened Species Commissioner: 3-year review of progress on priority bird and mammal species* (Threatened Species Recovery Hub, 27 November 2019).

influences how priority species recovery is assessed, potentially hiding significant risks to the long-term recovery of the species.

Compounding Gaps for Critically Endangered Species: the Strategy and Action Plans are confined to a mere 100 priority species.²⁹ Priority species have been selected on a range of metrics and not all species are critically endangered. Therefore, the majority of critically endangered species and ecological communities will not benefit from the additional conservation efforts imbedded in the Strategy and Action Plans. Instead, these species will rely solely on the threat identification and mitigation actions recommended in their specific Conservation Advice and Recovery Plan. This means that climate gaps in Conservation Advices and Recovery Plans will have significant flow-on effects for the on-the-ground conservation actions taken for these species and ecological communities.

²⁹ Australian Government, *100 Priority Species* (Threatened Species Strategy, October 2021).

Implications for the Development and Implementation of Plans and Advices

The ANAO's second audit criteria is: **Have effective and efficient arrangements been established to develop and implement plans and advices?** The following section outlines the implications our results have for the management of threatened species under the *EPBC Act*.

The Legislative Framework Compared to the Climate Gap

Since 2001, the loss of climatic habitat caused by anthropogenic emissions of greenhouse gases has been a recognised key threatening process under the *EPBC Act*.³⁰ However, the Threatened Species Scientific Committee concluded that a threat abatement plan for climate change 'could not effectively reduce losses of climatic habitat, since the internationally-distributed causal factors (climate change due to anthropogenic greenhouse gas emissions) would continue'.³¹ Whilst, the focus of this submission is not on the decisions of the Threatened Species Scientific Committee, we emphasise that climate mitigation and adaptation are viable, and necessary, components of future threatened species management to ensure species conservation is not climate impact blind.

However, these decisions by the Threatened Species Scientific Committee highlight that climate threats have been a recognised component of the management of threatened species under the *EPBC Act* for twenty years. Yet, our results highlight such recognition is not translating into species-specific threat analysis or mitigation, with over half of all conservation documents for critically endangered species not discussing climate impacts at all. This strongly indicates that the Department, either because of bureaucratic constraints or political intervention, is not effectively engaging with both the current science and the *EPBC Act* legislative framework for threatened species management in the design and implementation of Plans and Advices. This has significant implications for the likely efficacy of all threat management under the *EPBC Act*.

Furthermore, in our study we often found that Conservation Advices or Recovery Plans were nearing expiry or outdated under the legislation. These "older" conservation documents had a markedly higher climate gap than more recently developed documents. These findings correlate with other studies.³² Such trends highlight that the Department is not effectively updating conservation documents to reflect new scientific information or the increased threat of climate change, especially as major natural disaster events become more likely.

Overall, our findings indicate that even **if** Department policies exist that govern either the translation of key threatening processes into species-specific conservation or the updating of conservation documents, actual adherence to such policies is lacking.

³⁰ Threatened Species Scientific Committee (n 6).

³¹ Ibid.

³² Cook et al (n 7) 6.

Inadequate Climate Mitigation and Adaptation in Advices and Plans for Implementation

Furthermore, a concerning aspect of our results, pointing to the inefficacy of conservation documents, is that even where climate change threats have been identified, no effort has been made to suggest recovery actions to mitigate the impact of those threats. This suggests that the conservation documents are not future focused and do not effectively address the imminent threats facing our species. This increases the risk that ongoing climate impacts on critically endangered species are unaddressed, reducing suitable habitat and negatively affecting species' resilience to other threats.

The overwhelming majority of Recovery Plans which did discuss climate mitigation did not include active mitigation actions. While passive actions, such as monitoring and data collection, are important for developing strategic conservation management, in the absence of more active or interventionist actions, passive actions are insufficient to halt species extinction.³³ Hoepfner and Hughes liken this to 'counting the books while the library burns'.³⁴ The failure to recommend active actions, such as species translocation, in the vast majority of Conservation Advices and Recovery Plans is concerning, as protection from climate change impacts for those species cannot be accomplished without further recovery planning.

These findings indicate the Department has a tendency to focus on threat identification over the development of an appropriate threat mitigation and recovery strategy. This bias towards threat identification is less of a concern for Conservation Advices, but strongly suggests significant issues with the administration and development of Recovery Plans – which should be a lynchpin document for the recovery of a species, including under other plans like the *Threatened Species Strategy*.

Conclusion

GreenLaw's research demonstrates the shortcomings of the *EPBC Act* and its protection of threatened species. Our analysis of the conservation documents reveals a significant gap in climate threat and mitigation analysis, which is disconnected from scientific reality and what research shows will happen under current climate trajectories. Our results indicate that there is an urgent need to develop plans and advices which address key threatening processes such as climate change, if they are to be effective and efficient.

³³ Johanne Hoepfner and Lesley Hughes, 'Climate readiness of recovery plans for threatened Australian species' (2019) *Conservation Biology* 33(3) 534, 539.

³⁴ Ibid 539 citing David B Lindenmayer, Maxine P Piggott and Brendon A Wintle, 'Counting the books while the library burns: why conservation monitoring programs need a plan for action' (2013) *Frontiers in Ecology and the Environment* 11(10) 549.

Appendix A: Detailed Methodology

We assessed all Conservation Advices and Recovery Plans for all critically endangered species and communities listed under the *EPBC Act*, as of July 2021. In this paper we call these collectively “conservation documents”. These documents were accessed through the Species Profile and Threats (SPRAT) Database. Data collation occurred between July and September 2021. At this time, there were 334 Critically Endangered species and communities listed under the *EPBC Act*. Our sample included 290 Conservation Advices (87% of critically endangered species and communities) and 114 Recovery Plans (34% of the total number of species and communities), with some species being managed under both conservation documents. We collected the following types of data for each individual species and community, as well as for each Conservation Advice or Recovery Plan:³⁵

- Basic information, such as distribution;
- Whether any of the following climate terminology was used: climate, climate change, warming, global warming, sea level rise, greenhouse gas/es, emission/s; and
- Information on climate threat, mitigation and adaptation analysis.

We analysed the extent that a document assessed climate change impacts to a species using a standardised metric. We describe this as the “Climate Threat Analysis”. Table 1 provides the indicators for the ‘0’ to ‘5’ rating:

Table 1 Outline of Ratings for Climate Threat Analysis

Rating	Indicators
0	No discussion of climate change.
1	Misdirected assessment of climate threats.
2	Brief and generalised discussion of climate threats, typically in a sentence or less.
3	Climate threats are discussed in general terms, with some discussion of major climate threats such as altered fire regimes or increased temperatures.
4	Climate threats are assessed in a species-specific manner over one or more paragraphs, key climate threats to the species outlined. May use scientific literature or statistical analysis.

³⁵ Some Recovery Plans covered multiple species and communities. We used slightly modified criteria to assign ratings to these ‘Group Recovery Plans’. This allowed authors to identify whether the Recovery Plan discussed climate change in relation to specific species and communities or only in relation to the group. Group recovery plans are valid under the *EPBC Act*: (n 1) ss 269A, 283.

5	Detailed and species-specific climate threat analysis, utilising scientific literature and statistical analysis, the document may state climate change is a major threat.
---	---

We also determined whether the conservation document recommended passive, active or a combination of mitigation actions for a species. Passive versus active mitigation actions were assessed based on Hoppner and Hughes’ study on climate mitigation.³⁶ We assessed the extent that a document outlined climate mitigation actions for a species using a standardised metric, below Table 2 provides the indicators for the ‘0’ to ‘6’ rating:

Table 2 Outline of Ratings for Climate Mitigation Analysis

Rating	Indicators
0	No discussion of climate change.
1	Misdirected assessment of climate mitigation.
2	Brief and generalised discussion of climate mitigation, typically in a sentence or less.
3	Climate mitigation is generalised and recommends passive actions, such as data gathering.
4	Climate mitigation is generalised and recommends both passive actions, such as data gathering, and active actions, such as translocation programs.
5	Climate mitigation is highly detailed and species-specific with both passive and active mitigation actions recommended. Mitigation analysis may include accountability mechanisms, budgets or detailed timeframes to achieve outcomes.
6	Highly detailed climate mitigation analysis, with recommendations addressing the need for emissions reduction to reduce climate threats.

Finally, we collated whether specific climate adaptation actions were recommended, drawing on a list of climate adaptation tools from LeDee et al.³⁷

Our research also underwent a blind inter-coder reliability check, resulting in an acceptable error margin of 7.5%. No single author was an outlier, indicating consistency in our review.

³⁶ Hoepfner and Hughes (n 33).

³⁷ Olivia E. LeDee et al, 'Preparing Wildlife for Climate Change: How Far Have We Come?' (2021) 85(1) *The Journal of Wildlife Management* 7.