Australian Network for Plant Conservation comments on review of *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) -updated 20th April 2020

Conservation of biodiversity in Australia (including threatened species and ecosystems) in the long term requires the adoption of the following five key elements:

1. **Adoption of IUCN Red List criteria for both species and ecosystems as the criteria for listing of species and ecological communities in any revised EPBC Act legislation**

The Commonwealth has an intergovernmental Memorandum of Understanding signed with most states and territories (The Common Assessment Method, CAM, https://www.environment.gov.au/biodiversity/threatened/publications/mou-cam) that provides a pathway for the Commonwealth and all states and territories to adopt IUCN Red List criteria (IUCN 2019a, Bland et al. 2017) into their respective threatened species legislation. ANPC supports the ongoing role of the CAM process. However, to date, while the Commonwealth has supported the CAM process for species, two issues remain to be resolved.

Firstly, the EPBC Act criteria for listing of species does not match IUCN Red Listing criteria and some components of I the IUCN criteria are explicitly not included in the EPBC Act criteria (e.g. IUCN D2). This means that some species considered to be at risk globally using IUCN (world's best practice) criteria cannot be listed as threatened under the EPBC Act. That needs to be resolved by the complete adoption of IUCN Red list criteria for species into a revised EPBC Act.

Secondly, the Commonwealth has not signed the CAM MoU for ecological communities and the EPBC act criteria for ecological communities does not apply global best practice as it does not reflect the IUCN Red List criteria for ecosystems (Bland et al. 20176). This shortcoming has two consequences. As some states/territories have adopted the IUCN Red List criteria for ecosystems into their threatened species legislation, there is an increasing lack of alignment between state and territories and the Commonwealth threatened ecological community listings at a time when alignment is preferred. Secondly, the listing credibility of threatened ecological communities on the EPBC Act is somewhat undermined as it does not consider global best practice and may produce erroneous results, e.g. a failure to list a TEC as appropriate criteria or thresholds were not considered.

We argue that any revised Commonwealth threatened species legislation must adopt global best practice and incorporate IUCN Red List criteria for both species and ecosystems as the criteria for listing of species and ecological communities as has already been done in several states (NSW, WA) and territories (ACT).

2. **A comprehensive and up to date set of threatened species and ecological community listings**

The conservation of Australia's biodiversity, through legislation, should provide a comprehensive, up to date list identifying species and ecological communities most at risk of extinction (along with funding measures to help recover these species and ecological communities and mitigate the threats to them). To date, listings under the EPBC Act are only partially comprehensive and not all are up to date. Scientific data is available to assess the threat status for most vertebrates, vascular plants and ecological communities based on plant composition. Non-vascular plants (algae, mosses, etc), fungi and invertebrates are poorly represented on the threatened schedules of the EPBC Act as they are mostly data poor. For most vertebrate groups the threatened species lists are relatively comprehensive, e.g. based on Action plans for Birds and mammals, IUCN workshops for frogs, reptiles and fish). For vascular plants, the lists are probably at best 60-70% complete (i.e. there are still many more threatened plants that need to be listed once a more complete assessment has been made). Threatened Ecological Communities are also only partially comprehensive with many parts of the country are yet to be assessed.

The problem with a partially comprehensive and partially up to date approach is that decisions on both investment for recovery and mitigation in relation to development cannot take into account those species that are declining towards extinction but have not yet been listed as threatened. This increases the risk of unforeseen extinctions of species.

A productive way forward would be to increase the funding available to resource the development of a comprehensive and up to date set of threatened listings for vertebrates and vascular plants and plant based ecological communities. Sufficient scientific data is available to achieve this, and it will avoid extinctions of particularly plant species, where the threatened species lists are currently under-representative.

3. Consideration of IUCN Key Biodiversity Areas in Australia

IUCN Key Biodiversity Area (KBAs) are a global set of criteria which can be used to identify, highlight, protect and effectively manage sites that make a significant contribution to the persistence of biodiversity in Australia and globally. The KBA criteria, or variations thereof, have been used to identify priority conservation areas for countries (Madagascar, Eken et al. 2004), and taxonomic groups such as birds (Birdlife International 2014) and plants (Derbyshire et al. 2017). IUCN Key Biodiversity Areas criteria (IUCN 2016, 2019b) provide an explicit, objective and widely understood framework that represents international best practice for identifying areas of high biodiversity conservation values. The IUCN Key Biodiversity Areas (KBA) criteria are a product of extensive consultation with a large community of international scientists (Langhammer et al. 2007; IUCN 2016, 2019a; Derbyshire et al. 2017).

A revised EPBC Act should include the option to list Key Biodiversity areas in Australia based on the IUCN criteria (IUCN 2016). Such areas are critical for biodiversity conservation but are outside the scope of present listings for matters of national environmental significance. The NSW Biodiversity Conservation Act 2016 presents a model of how to incorporate this concept into state legislation.

4. Effective resourcing of threat mitigation to reduce the decline of biodiversity

The current EPBC Act has not prevented ongoing decline of biodiversity in Australia. There are two main reasons for this: a lack of sufficient resourcing and planning to mitigate threats to biodiversity; and ineffective protection of matters of national significance in regulations (see Point 5 below).

The major ongoing threats to biodiversity in terrestrial, marine and aquatic landscapes, continue to be clearing and fragmentation of habitat and native vegetation, climate change (warming and drying), changes to disturbance regimes (such as fire regimes, water regimes), introduced pests, weeds and pathogens (including impacts of domestic stock), pollution (including nutrient enrichment and salinisation), disturbance from humans (logging, tracks, roads, trampling, illegal collection etc) Keith and Auld (2017). Many (but not all) of these key threats have been identified under the EPBC Act as Key Threatening Processes (http://www.environment.gov.au/cgi-bin/sprat/public/publicgetkeythreats.pl). A subset have approved threat abatement plans (https://www.environment.gov.au/biodiversity/threatened/threat-abatement-plans/approved), but noticeably the major threats of clearing, changed fires regimes, changes water regimes, climate change and pollution have no plan for action.

A renewed focus on mitigating threats to biodiversity is urgently needed. Failure to address KTPS (which in some, but not all, cases will require international action) renders ineffective many of the actions implemented for individual species. Effective threat abatement will not only assist already listed species and ecological communities, but will also assist securing the future of all the currently unknown and unrecorded components of biodiversity.

Listed Key threatening processes also need to be considered in deliberations under matters of national environmental significance. The current Commonwealth focus on feral cats is a start, but most threatened biodiversity is not affected by feral cats, so it is of limited value as a lone measure of threat mitigation. Without considerable new investment in widespread threat mitigation in Australia, including significantly reducing ongoing land clearing and fragmentation of habitat, many more species and ecological communities will be in decline and be eligible for listings as threatened.

The need for an increased focus on threats is highlighted by the 2019/2020 bushfire season in southern Australia. Drought conditions led to extensive fires burning for prolonged periods and burning in highly sensitive areas such as rainforests. Post-fire recovery of plants and animals is hampered by feral predators, feral grazers and stock, weeds, pathogens, and the risk of additional fires in the near future under a warming

climate. Currently there is no national identification of changed fire regimes as a key threatening process (although it is under consideration), while some states (NSW, Vic) have clearly identified the risk to biodiversity posed by high fire frequency. Simplistic suggestions that more hazard reduction burning is the answer are not supported by science. Adverse impacts of altered fire regimes on native plants and animals in Australia will continue and a national strategy identifying those areas, species and ecosystems most at risk from different elements of the fire regime is needed, along with increased resourcing to implement protection measures that may be developed in that strategy.

In spite of recognising climate change and, separately, correlated factors as KTPs, there has been little coordinated action to address and minimise the impact of KTPs. Importantly there has been little consideration of the implications of climate change on species and communities. Importantly, at least for a of number of species, will be movements of species within Australia as a consequence of a changing climate. The EPBC Act does not provide for special recognition of species populations at the limits of range or populations that provide important genetic material that may help buffer the species as it migrates into new areas. A species for example moving into New South Wales from Queensland in response to warming will be present initially in NSW in small numbers and be vulnerable if not endangered at the state scale. It may also be seen as invasive. Unless states list such species under state legislation, the invading populations will not be given conservation protection, as the EPBC has a continent wide perspective. It is important to recognise that Australia is a continent, and that populations of widespread species may experience a range of environmental conditions and a variety of threats which vary geographically across a species' range. Conservation of variation within is species an essential part of biodiversity conservation.

In addition, in combination with an increased emphasis on threat mitigation, there is an important role for active restoration of degraded ecosystems. ANPC actively support this role through reviews and expert guidelines (for example, Hancock, N., Gibson-Roy, P., Driver, M. and Broadhurst, L. (2020). The Australian Native Seed Sector Survey Report. Australian Network for Plant Conservation, Canberra. and Commander, L.E., Coates, D., Broadhurst, L., Offord, C.A., Makinson, R.O. and Matthes, M. (2018) Guidelines for the translocation of threatened plants in Australia. Third Edition. Australian Network for Plant Conservation, Canberra.)

5. **Effective regulation of matters of national environmental significance based on scientific evidence and free of political oversight**

The current regulation of matters of national environmental significance needs to be more proactive with an emphasis on preventative measures such as acting earlier to prevent loss. Effectively vulnerable species are subject to ongoing loss while Vulnerable ecological communities are not even considered matters of national environmental significance (they should be). This needs to change or many more species and ecological communities will decline to endangered and critically endangered where the costs of recovery are likely to be much greater. At the same time, ministerial discretion in approval of major developments seems too great and appears to promote ongoing or accelerated biodiversity loss.

One of the drawbacks of the current EPBC Act is that ultimately it is the Minister who makes decisions about what is listed – he, or she, does not have to accept the advice of the Threatened Species Scientific Committee. It is true that in the vast majority of cases the TSSC's advice has been adopted, but there have been a few cases where the Minister has made a contrary decision. ANPC feels it is important that the decision on whether to list is made purely on scientific criteria, while decisions as to the consequences of listing will necessarily involve other considerations. Such a model of listing by an independent scientific committee has been operating successfully in NSW for 25 years.

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Questions from Review discussion paper

QUESTION 1: Some have argued that past changes to the EPBC Act to add new matters of national environmental significance did not go far enough. Others have argued it has extended the regulatory reach of the Commonwealth too far. What do you think?

As outlined above matter of national environmental significance need more protection not less, as biodiversity continues to decline.

QUESTION 2: How could the principle of ecologically sustainable development (ESD) be better reflected in the EPBC Act? For example, could the consideration of environmental, social and economic factors, which are core components of ESD, be achieved through greater inclusion of cost benefit analysis in decision making?

ESD is about allowing maintaining a sustainable ecology. Given ongoing biodiversity decline more attention need to be given to the precautionary principle), inter-generational equity and proper consideration of what is required for the conservation of biological diversity and ecological integrity. Consequently, ANPC does not support greater inclusion of cost benefit analysis being applied to listing processes, which must remain based on scientific evidence only. ESD should be given greater weight in regulatory decision. In order to halt decline it is not a matter of giving equal weight to all factors in any particular case, but in some cases giving greater weight now to environmental factors in the light of their previous neglect.

QUESTION 3: Should the objects of the EPBC Act be more specific?

ANPC supports the EPBC Act 1999 objectives. However, ongoing biodiversity decline indicates that several key objectives need stronger action to protect Australia's biodiversity, ie the objectives below are not being

effectively achieved: 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; and promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources.

QUESTION 4: Should the matters of national environmental significance within the EPBC Act be changed? How?

ANPC recommends the inclusion of Vulnerable TECs, and Key Threatening processes and Key Biodiversity Areas into matters of national environmental significance, along with issues where Australia is obliged to protect areas through international treaties.

QUESTION 5: Which elements of the EPBC Act should be priorities for reform? For example, should future reforms focus on assessment and approval processes or on biodiversity conservation? Should the Act have proactive mechanisms to enable landholders to protect matters of national environmental significance and biodiversity, removing the need for regulation in the right circumstances?

See major issues 1-5 above.

QUESTION 6: What high level concerns should the review focus on? For example, should there be greater focus on better guidance on the EPBC Act, including clear environmental standards? How effective has the EPBC Act been in achieving its statutory objectives to protect the environment and promote ecologically sustainable development and biodiversity conservation? What have been the economic costs associated with the operation and administration of the EPBC Act?

See major issues 1-5 above.

QUESTION 7: What additional future trends or supporting evidence should be drawn on to inform the review?

- A current lack of a comprehensive and up to dataset of Threatened species and ecological community listings.
- Ongoing lag effects for biodiversity decline.
- Novel emerging threats to biodiversity, for example new and emerging pathogens.

QUESTION 8: Should the EPBC Act regulate environmental and heritage outcomes instead of managing prescriptive processes?

Some enhanced or additional regulation is needed as past experience shows ongoing biodiversity decline.

QUESTION 9: Should the EPBC Act position the Commonwealth to take a stronger role in delivering environmental and heritage outcomes in our federated system? Who should articulate outcomes? Who should provide oversight of the outcomes? How do we know if outcomes are being achieved?

QUESTION 10: Should there be a greater role for national environmental standards in achieving the outcomes the EPBC Act seeks to achieve? In our federated system should they be prescribed through:
- Non-binding policy and strategies?
- Expansion of targeted standards, similar to the approach to site contamination under the National Environment Protection Council, or water quality in the Great Barrier Reef catchments?
- The development of broad environmental standards with the Commonwealth taking a monitoring and assurance role? Does the information exist to do this?

National standards are welcome. For example see ANPV translocation guidelines for plants at https://www.anpc.asn.au/product/guidelines-for-the-translocation-of-threatened-plants-in-australia/

However, there is little point if they are non binding.

QUESTION 11: How can environmental protection and environmental restoration be best achieved together?
- Should the EPBC Act have a greater focus on restoration?
- Should the Act include incentives for proactive environmental protection?
- How will we know if we're successful?
- How should Indigenous land management practices be incorporated?

ANPC has recently undertaken a review of Australian native seed supply (Hancock, N., Gibson-Roy, P., Driver, M. and Broadhurst, L. (2020). The Australian Native Seed Sector Survey Report. Australian Network for Plant Conservation, Canberra). This highlights a number of major issues for restoration of native ecosystems. There are issues with a lack of licencing, seed supply is not sufficient to match seed needs, wild seed sourcing cannot (and should not) sustain seed needs. ANPC recommends that the formation of a peak industry group to represent the native seed sector is highly desirable. ANPC make a number of important recommendations on this matter which can be found in the report at https://www.anpc.asn.au/wp-content/uploads/2020/03/ANPC_NativeSeedSurveyReport_WEB.pdf

Any revised legislation needs a strong, enhance biosecurity element, given the ongoing concerns are new exotic introductions to Australia. The recent example of myrtle rust (http://www.apbsf.org.au/wp-content/uploads/2018/11/Myrtle-Rust-reviewed-June-22-2018-web.pdf) highlights both the risk to native biodiversity and the lack of a co-ordinated approach to biosecurity that affects biodiversity as opposed to agriculture, in Australia.

QUESTION 12: Are heritage management plans and associated incentives sensible mechanisms to improve? How can the EPBC Act adequately represent Indigenous culturally important places? Should protection and management be place-based instead of values based?

QUESTION 13: Should the EPBC Act require the use of strategic assessments to replace case-by-case assessments? Who should lead or participate in strategic assessments?

ANPC recommends the need for case by case assessments as each species has a different life history, each ecosystem faces different threats, and novel threats appear, especially in relation to a changing climate. A supposedly 'strategic' approach does not clearly allow consideration of such important factors.

QUESTION 14: Should the matters of national significance be refined to remove duplication of responsibilities between different levels of government? Should states be delegated to deliver EPBC Act outcomes subject to national standards?

QUESTION 15: Should low-risk projects receive automatic approval or be exempt in some way?
- How could data help support this approach?
- Should a national environmental database be developed?
- Should all data from environmental impact assessments be made publically available?

ANPC strongly recommends against any automatic approvals. Plant species of conservation concern may occupy very small ranges and tiny habitat patches. Most 'automated approval' settings involve thresholds for habitat size that is totally inappropriate for plant species (i.e. the thresholds are way too high). Essentially an automated approvals process will likely result in more plant extinctions in Australia, which is clearly against the intent of the objectives of the EPBC Act.

ANPC support the concept that all EIS's be made publicly available for transparency of decision making.

QUESTION 16: Should the Commonwealth's regulatory role under the EPBC Act focus on habitat management at a landscape-scale rather than species-specific protections?

ANPC recommends that the Commonwealth needs to be involved in both species- specific protections and habitat management. One does not substitute for the other. Plant species have a vast array of variation in life history and responses to disturbances such as fire, flood etc and species specific protections are important for the conservation of these plant species.

QUESTION 17: Should the EPBC Act be amended to enable broader accreditation of state and territory, local and other processes?

QUESTION 18: Are there adequate incentives to give the community confidence in self-regulation?
See Q15 response. ANPC recommends that self regulation is not compatible with long term biodiversity conservation.

QUESTION 19: How should the EPBC Act support the engagement of Indigenous Australians in environment and heritage management?
- How can we best engage with Indigenous Australians to best understand their needs and potential contributions?
- What mechanisms should be added to the Act to support the role of Indigenous Australians?

QUESTION 20: How should community involvement in decision making under the EPBC Act be improved? For example, should community representation in environmental advisory and decision-making bodies be increased?

QUESTION 21: What is the priority for reform to governance arrangements? The decision-making structures or the transparency of decisions? Should the decision makers under the EPBC Act be supported by different governance arrangements?

QUESTION 22: What innovative approaches could the review consider that could efficiently and effectively deliver the intended outcomes of the EPBC Act? What safeguards would be needed?

See point 3 (Key Biodiversity Areas) above in main points

QUESTION 23: Should the Commonwealth establish new environmental markets? Should the Commonwealth implement a trust fund for environmental outcomes?
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QUESTION 24: What do you see are the key opportunities to improve the current system of environmental offsetting under the EPBC Act?

ANPC has serious concerns about the effectiveness of offsetting and its application. Current practice fails international standards (see Maron et al 2018 The many meanings of no net loss in environmental policy. Nature Sustainability 1, 19–27.; Maron et al 2016 Taming a Wicked Problem: Resolving Controversies in Biodiversity Offsetting. BioScience 66, 489–498.). Key problems are no like for like, allowing loss now for possible future gains (i.e. effectively increasing current extinction risk), loss calculators that have minimum habitat size thresholds that are way too large to be applied to many plant species that occupy small habitat fragments.

ANPC recommends that any offsetting framework be redesigned using best global scientific practice in collaboration with experts in offsetting and species or ecosystem management. ANPC also suggests that monitoring of offsets needs on-going resourcing, independent assessment of outcomes and transparent reporting.

QUESTION 25: How could private sector and philanthropic investment in the environment be best supported by the EPBC Act?
- Could public sector financing be used to increase these investments?
- What are the benefits, costs or risks with the Commonwealth developing a public investment vehicle to coordinate EPBC Act offset funds?

QUESTION 26: Do you have suggested improvements to the above principles? How should they be applied during the Review and in future reform?