

ROYAL ZOOLOGICAL SOCIETY OF NSW SUBMISSION ON THE INDEPENDENT REVIEW OF THE EPBC ACT

PREAMBLE

The Royal Zoological Society of New South Wales (RZS NSW) is Australia's oldest and largest zoological society, including among its members professional zoologists and ecologists and people in the broader community who are passionate about the conservation of Australia's unique animals and their habitats. The Society welcomes the opportunity to make a submission to the Independent Review of the EPBC Act.

In our submission, we have been guided by the *Independent review of the EPBC Act-discussion paper* (2019). We note that the terms of reference are to examine:

- a) the operation of the Act, and
- b) the extent to which the objects of the Act have been achieved.

We note also that the broad questions that the review seeks to address are:

- Is the EPBC Act delivering what was intended in an efficient and effective manner?
- How well is the EPBC Act being administered?
- Is the EPBC Act sufficient to address future challenges? Why?
- What are the priority areas for reform?
- What changes are needed to the EPBC Act? Why?

and have sought to structure our submission accordingly. The first part of this submission thus addresses these broad questions, and the last part addresses the specific questions in areas where the RZS has most expertise.

The general view of the RZS NSW is that the EPBC Act has not been achieving its major aims with respect to biodiversity conservation. This is evidenced readily by the lists of threatened species, ecological communities and key threatening processes that have continued to expand over the last 20 years since the EPBC Act came into force; the manifest lack of compliance with the provisions of listing that have seen, for example, dramatic *increases* in the clearing of koala habitat in the wake of listing of the koala as a vulnerable species on the EPBC Act in 2012 (Taylor 2020); failure to list critical habitat; failure to require or provide resources for the recovery of threatened entities or abatement of threats; and failure to protect matters of national environmental significance such as the Great Barrier Reef. The RZS submits that environmental protection **must be strengthened in all these areas, and provisions for compliance also must be tightened so that breaches of the legislation are detected and dealt with appropriately**.

The RZS also notes, and applauds, amendments to the EPBC Act that have been made on previous occasions, such as the inclusion of wildlife trade in 2001 and several additional matters of national environmental significance from 2004. Despite such positive steps, and moves to incorporate ecologically sustainable development, there is no doubt that Australia's national environmental heritage continues to slide. The extent of loss of Australia's biodiversity has been extensively and exhaustively documented for a very wide range of taxa at local, regional and national levels (e.g. Woinarski *et al.* 2015, 2017; Cresswell & Murphy 2017; Dickman 2018; Kearney *et al.* 2018; Wintle *et al.* 2019; Van Dijk 2020). Australia's poor record of biodiversity loss—and concomitant reduction in resources to stem the loss—



fares very poorly in comparison with other advanced nations (OECD 2008, 2019; Waldron *et al.* 2017). We submit that this review of the EPBC Act provides an opportunity to reverse this situation.

SUBMISSION

We have confined the first part of this submission to two broad areas covered by the EPBC Act with which the RZS has most expertise: the nominations and listing process, and the importance of habitat and its conservation. The second and last part addresses some of the specific questions raised in the *Independent review of the EPBC Act - discussion paper* (2019).

1) Nominations, the listing process and its consequences

Is the EPBC Act delivering what was intended in an efficient and effective manner?

Among the objects of the EPBC Act are to (a) provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance; (b) promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources; and (c) promote the conservation of biodiversity. The RZS believes that these objects are not being delivered efficiently or effectively with respect to the nominations / listing process.

Key issues lie in the complex and lengthy process for listing items, ministerial discretion, and lack of follow-up once something is listed.

The listing process (s194) involves an optional step for the Minister to determine conservation themes and to invite people to make nominations for inclusion in the schedules of the Act. This may follow advice from the Threatened Species Scientific Committee (TSSC). The nominations go to the TSSC for review, and then back, after further review, to the Minister to finalise those items to go forward for further assessment. The TSSC then invites public comments about these items and then, after further assessment, these items go back to the Minister who makes a final decision about whether they should be included. Similar processes are followed for the listing of species, ecological communities and key threatening processes, and recent experience has shown that it can be 3-4 years before a final decision to list is actually made. Following a listing, Recovery Plans (for species or ecological communities) may or not be made, and a Threat Abatement Plan (TAP) for a Key Threatening Process (KTP) may or may not be made, depending on whether the Minister thinks that such a plan could facilitate effective and efficient abatement of the threat. Taking KTPs as an example, there are several problems with this approach:

• Listing of KTPs is incomplete and not systematic, as most have come about from public nominations. For example, inappropriate fire regimes, livestock overgrazing and changed hydrological regimes are all good KTP contenders, but are not listed.



- Processing is slow, complex and time-consuming, as noted (3-4 years).
- The Minister decides which KTPs to progress, so political interference is quite possible / likely, and also the Minister may or may not accept advice from the TSSC about whether to list a KTP.
- Emphasis is on current threats, and does not proactively allow listing of future / emerging threats such as reduced river flows and increased incidence of extreme weather events and associated disturbances such as megafires.
- Compounding the above, a TAP may be drafted, but only if the Minister thinks it might work. In general, 'big' KTPs such as Land clearing and Loss of climatic habitat caused by anthropogenic emissions of greenhouse gases do not have a TAP, but smaller or more localised KTPs usually do.
- Resourcing to either list KTPs and TAPs in the first place is limited, and resourcing to enable action on TAPs appears not to have any statutory backing; hence, many TAPs are approached in a discontinuous and piecemeal fashion, if at all.
- Monitoring of the effectiveness of TAP actions seldom occurs, so adaptive learning about how to improve abatement processes is quite limited.

How well is the EPBC Act being administered?

In the view of the RZS, in respect of the problems noted above, the EPBC Act could be administered more efficiently and effectively. In addition, we make the following points, again using KTPs and TAPs by way of illustration:

- Identifying KTPs and rapidly drafting associated abatement plans should assist in maximising our ability to efficiently conserve many species and ecological communities, rather than doing this one by one.
- The process for developing and implementing TAPs is too slow, often 4-5 years, sometimes much longer (e.g. Predation by the Feral Cat was listed a KTP in 2000, ant a TAP was not completed until 2008). When added to the time taken to list a new KTP, a threat could have become completely uncontained by the time a TAP was in place. Imagine a process whereby covid-19 was recognised as a threat in January 2020 and a TAP was in place for it nearly a decade later ... and only then if the relevant Minister had thought that was a good idea. There is a need to move with covid-19 like speed with some KTPs and TAPs, such as with invasive species that are known to be problematic elsewhere.
- Listings should recognise that many threats interact (e.g. fires kill many animals and open up the understory vegetation that then allows introduced predators to gain access). TAPs are stand alone documents, but would be most effective if threats were acknowledged to be often interactive and managed together.
- Threat abatement needs to be guided by science, but to be effective needs to have buy-in from other sectors, both at the political level and in the community.



- TAPs are established with the best knowledge at the time, but must be monitored for effectiveness and re-evaluated every 4-5 years to ensure either that the TAP is working or that modifications are needed. Such re-evaluations appear to occur haphazardly at present due to limited resources.
- The results of monitoring, and of assessments of TAPs, should be publicly available to ensure transparency and to maximise opportunities for public engagement.
- No TAP has yet fully abated or contained the threat it was designed to combat.

Is the EPBC Act sufficient to address future challenges? Why?

A big problem with the operation of the Act appears to be the speed with which any entities can be listed. In addition, listings of entities are reactive rather than proactive, with little recognition of emerging threats or of seemingly common species that are in decline and which could be conserved quickly and effectively if timely action were possible.

What are the priority areas for reform?

A clearer, quicker, more transparent system is needed to identify and list threatened species and communities in a systematic manner. A clear, quick response system is needed also to identify and rank KTPs so that TAPs can be developed and implemented in a timely manner. The outcomes of these processes need to be made available publicly to maintain transparency and improve engagement.

What changes are needed to the EPBC Act? Why?

- The first object of the Act, "to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance" is aspirational, but weak. The words 'provide for' should be replaced by something stronger, such as 'improve' or even removed altogether; i.e. the first object of the Act is "to protect the environment." The word 'especially' here allows all components of the environment that are not listed as matters of national environmental significance (MNES) (or those that are being considered under the very slow listing process) to be practically sidelined.
- The TSSC currently has a very large workload and still is able to respond largely just to *ad hoc* nominations from the public. Consideration should be given to expanding the TSSC or to establishing a further science panel that is charged with 'horizon scanning' for species, communities and KTPs that should be considered for proactive review for listing. This would necessitate increased resourcing.
- The process must be simplified and made quicker. Ideally ministerial discretion about proceeding with nominations and listings should be removed and left to the TSSC. Listings should be science-based only, and continue to follow clear and defensible decision rules about whether entities should be listed or not. Ministerial input would



be more appropriate at the next stages in deciding the form of recovery plans or TAPs as these involve provision of resources and other decisions.

- Consider an emergency listing procedure for rapidly declining species or rapid-onset threats that need quick action to be managed. The NSW Biodiversity Conservation Act makes such provisions and provides a useful precedent.
- Increase the resources needed to draft and implement Recovery Plans and TAPs, including having a prioritisation framework that focuses on maximising returns for investment and getting major TAPs working first.
- Ensure that there is consistency in definitions and terminology between different categories. For example, the current EPBC Act uses mostly IUCN terminology for threatened entities and categories of threat, but uses some terms, such as 'conservation dependent', that have been abandoned by the IUCN and ignores others, such as 'Data Deficient', that could be very useful. There are, in addition, internal inconsistences that need to be addressed. Thus, 'vulnerable' species are currently designated as matters of national environmental significance, whereas 'vulnerable ecological communities' are not. Although not necessarily part of the national review, consistency in definitions and terminology should be sought at state levels as well: listed fauna, flora, ecological communities and other MNES do not respect arbitrarily drawn state borders.
- Include provision for developing multi-threat TAPs, especially where the threats are known to interact.
- Ensure engagement of all stakeholders in the TAP, including members of any species-based recovery plans whose species are affected by the KTP and associated TAP.
- Ensure compliance with international agreements. For example, Aichi Biodiversity Target 12 of the Convention on Biological Diversity states that 'By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained' (CBD 2014). We submit that changes to the EPBC Act, including those suggested by the RZS, should assist in Australia meeting such international obligations.

2) Habitat and its conservation

Is the EPBC Act delivering what was intended in an efficient and effective manner?

The RZS believes there is confusion about the terminology surrounding the word 'habitat' and that provisions to protect the habitats of living MNES have been largely unsuccessful. Our submission here relates to the first three objects of the Act, as well as object (d) to promote a cooperative approach to the protection and management of the environment involving governments, the community, land-holders and Indigenous peoples. The RZS believes that these objects are not being delivered efficiently or effectively with respect to the protection of habitat.



Key issues lie in the definition of 'habitat', the problem with offsets and cumulative impact assessments, and the apparently broadscale lack of compliance with the provision in the Act that a person must not take an action likely to have a significant impact on matters of national environmental significance without approval.

Under section 207A(1), habitat critical to the survival of a listed threatened species or listed threatened ecological community can be added by the Minister to the Register of Critical Habitat provided that it occurs on Commonwealth land. However, habitat that is critical to the survival of a listed threatened species or ecological community can also be identified by the Minister in Recovery Plans and Wildlife Conservation Plans, but is not entered on the Register if the area is outside Commonwealth jurisdiction unless steps have been taken to consult with the owner of the property where the habitat is located. It is an offence to knowingly damage critical habitat, but only if it occurs on Commonwealth land. Only five areas have been listed on the Register of Critical Habitat, with none since 2005 (Fitzsimons 2020). In addition to confusion about what constitutes critical habitat, there seems to be little recognition that habitat itself can be both living (and potentially containing species that are themselves MNES) and non-living (e.g. rock outcrops).

Habitat offsets should go through an impact mitigation structure—avoid, mitigate, offset—before a development is approved, but appear to be used without consideration of the first two steps in the majority of cases (see: https://www.ecolsoc.org.au/publications/bulletin/esa-bulletin-june-2019/EPBC). Although offsets can be used to reconcile conservation and development goals, they can be used by governments and industry to renege on their commitments by stealth, with little accounting or monitoring of biodiversity in the offset sites (Maron *et al.* 2015). Offsets also do nothing to mitigate the problem of cumulative impacts, where loss of habitat in many small areas throughout the ranges of species or ecological communities accumulate over time to render these entities at risk of extinction. Habitat loss is not only cumulative in this situation, but also disruptive to the connectivity of habitat. When habitat is fragmented, many species become confined to the fragments and decline to local extinction by stochastic population processes and loss of genetic integrity.

Lack of compliance with the EPBC Act is perhaps the greatest problem with respect to habitat protection. We noted above the escalation in clearing of koala habitat in NSW and Queensland in the years after the koala was listed as vulnerable under the EPBC Act in 2012. Some 80% of the habitat destruction in Queensland was for livestock pasture, while 62% in NSW resulted from losses due to forestry operations (Taylor 2020). A recent review by Ward *et al.* (2019) concluded that, of all EPBC Act-listed threatened species habitats lost in Australia between 2000 and 2017, 93% by area were neither referred nor approved under the Act. Such losses represent serious and systemic problems with compliance.

How well is the EPBC Act being administered?

In view of the pervasive problems with the conservation of habitat noted above, especially the habitat of threatened species and ecological communities, the RZS has little confidence that the EPBC Act is, or has been, administered effectively. Indeed, the bulk of available evidence is that there is very little in the EPBC Act that works as it should with respect to habitat conservation. Consider the southern black-throated finch, listed as endangered on the EPBC Act and therefore a MNES, as an example. Since 2000, 775 development applications



have been made to clear habitat within the rapidly diminishing range of this species, yet only three applications were disallowed (Reside & Watson 2019). The species is now presumed extinct in NSW, and the continued practice of offsetting areas of habitat lost in Queensland by increasing nominal protection of habitat elsewhere means that this species (and many others) continues to lose habitat overall (Reside & Watson 2019). The magnitude of habitat loss, and of the extent of the inexorable decline in numbers of species and areas of ecological communities, is difficult to quantify owing to the lack of monitoring in either the areas that have been impacted or offset. In the case of the southern black-throated finch, poor administration of the Act has resulted in this endangered species now occupying just 12% of its former range, with habitat clearing still continuing to be approved (Reside & Watson 2019).

Is the EPBC Act sufficient to address future challenges? Why?

The provisions in the EPBC Act with respect to habitat appear, on paper, to be capable of meeting many future challenges. If we assume that there is a systematic and full listing of species and ecological communities and other MNES entities, the provision that a person must not take an action that has a significant impact on threatened species without first seeking and obtaining authorisation (EPBC Act s18) appears quite reasonable. However, the 'green light' that is given to almost every development proposal, the evident lack of will to ensure compliance with the provisions of the Act, and failure to follow up even the most flagrant breaches of the Act where no approval has been sought – as in the case of habitat clearing for the koala (Taylor 2019) – provide little confidence that the Act is sufficiently meeting current challenges, let alone future challenges.

What are the priority areas for reform?

As with the listing process for species, communities and key threatening processes, a clearer, quicker, and more transparent system is needed to identify and list critical habitat. Listing of such habitat is needed for all entities listed as MNES. Once identified, critical habitat needs to be given considerably higher levels of protection than are afforded under current arrangements, and the problematic issues of offsets and cumulative impacts also need to be given priority for reform. Monitoring is needed to ensure that habitat protection does its job – that is, that habitat continues to provide the shelter, food and other resources that are needed by the species and communities that occupy or comprise the habitat.

What changes are needed to the EPBC Act? Why?

- 'Habitat' needs to be more clearly and simply defined. Ecologically, habitat refers to the area (or volume) of the environment that contains the resources that are necessary for the persistence of an entity (population, species, ecological community). Critical habitat should be that habitat required for the persistence of entities listed as MNES.
- Many species and communities that are currently listed as threatened (and others that will be listed) can be expected to shift their distributions due to climate change and other disturbances in future. Thus, consideration should be given to ensuring that the



location and extent of critical habitat can shift concomitantly with the entities that it protects and contains.

- The Register of Critical Habitat should be extended to cover all jurisdictions.
- Given that only five areas of critical habitat have been listed since 2005, ministerial discretion about whether to list it should be removed. Critical habitat should identified for all listed entities and MNES using science-based criteria, with such identification being made ideally by the TSSC or other relevant scientific panel. This will also speed the identification process. As with the listing process, Ministerial input would be more appropriate after the identification of critical habitat when questions concerning provision of resources and other decisions need to be made.
- Increase the resources needed to ensure effective identification of critical habitat and the monitoring of the entities that it is intended to protect.
- A higher bar should be set before offsets are allowed to proceed. Proponents of a development or disturbance must be able to show, transparently, that they have considered all options to avoid, and to mitigate, the damage that will be caused by their proposal, with offsets used as a last resort.
- Offsets then should be allowed only if they lead to guaranteed protection in perpetuity of similar habitat and the MNES in question is known to occur there (i.e. 'like for like' in reality), if the areas to be disturbed are not key parts of the areas occupied by listed species or ecological communities, and if the areas to be disturbed do not provide critical habitat connectivity. This provision reduces the chances of extinctions occurring via 'death by a thousand cuts'.
- To ensure transparency and accountability in the granting and management of offsets, an independent assessment expert panel should be established. This should be ideally located outside of both government and the development industry; the Ecological Society of Australia is an example of a potential broker with the relevant expertise to help set up such an independent panel.
- Compliance with the provisions of the EPBC Act *must* be strengthened, with adequate resourcing provided to increase understanding of the consequences of breaches and to ensure compliance. The EPBC Act should be used to over-rule the kinds of state regulatory changes that have led to the escalation of clearing of koala habitat after this species was listed as nationally vulnerable on the EPBC Act.
- Potential exemptions to the Act, such as the NSW Regional Forest Agreement, should be reviewed and allowed – if at all – only under the most exceptional and compelling circumstances.

Responses to specific questions raised in the *Independent review of the EPBC Act-discussion paper* (2019)



Question 1.

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

While the EPBC Act has been a key instrument and with good elements in its endeavours to protect Australia's biodiversity, the Act and the MNES have not sufficiently delivered on their intended role of achieving biodiversity conservation. We know that we have lost some terrestrial vertebrate, invertebrate and plant species that occur only in Australia, in contravention of the main objects of the Act.

The challenge to conserve our marine biodiversity is also substantial, given that most of Australia's population lives within 50 km of the coast and all capital cities are based on the coast except for Canberra. We depend on a well functioning marine ecosystem, for fisheries, recreation and tourism. Australia has the third largest EEZ (Exclusive Economic Zone) in the world, and we have international and national obligations to manage and conserve the biodiversity of this Zone, from the coast to deep water habitats offshore. Much of the biodiversity here remains to be discovered and described.

The management of terrestrial habitats cannot be done in isolation as there is significant connectivity between terrestrial and marine habitats in terms of land run-off, water flowing down the rivers. So we need to have an expanded list of MNES covering broad spatial scales to address:

- Significant greenhouse gas emissions mitigation and adaptation to climate change for example to reduce the now-almost annual mass bleaching effects on the World Heritage Listed Great Barrier Reef.
- Significant land clearing activities mitigation of runoff to rivers and coasts
- Significant threatened habitats, ecological communities/ecosystems, including saltmarsh, major water rivers/water resources, mangroves, kelp forests, coral reefs and sea grass beds, for example.
- Significant threatened species and critical habitats for species of concern and associated biota and ecological processes.
- The need for species recovery and threat abatement plans with effective monitoring plans to ensure that management and abatement measures are effective.

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?

While we have recently experienced intense fires on land, we have also witnessed massive declines in the health of coral reefs, die back of extensive mangrove habitats in the Northern Territory, and loss of kelp beds along the east coast of Australia. Our estuaries along the coast have warmed and acidified, with severe ecological consequences for our oyster industry as well as changing the composition of fish communities and facilitating the spread of exotic marine organisms, some of which are pest species.

We need to revise the EPBC Act to help reduce the environmental impacts of climate change caused by increased emissions from our economic activities. In the marine environment these



impacts may not as easily visible as those on land, but that does not mean that they should not be acted upon.

Ouestion 3.

Should the objects of the EPBC Act be more specific?

The intended purpose of the Act has become more challenging to achieve since 1999 due to pressures from increasing population and climate change. The Act needs to be more specific and managed through a consistent Australia-wide legislative reach with objectives to:

- Achieve Ecologically Sustainable Development (ESD).
- Address negative trends to prevent further biodiversity loss and associated habitats.
- Remove threatening processes that are destroying habitats both in the terrestrial and marine environments.
- Appreciate the value of environmental conservation to the health and well-being of all Australians.
- Conserve and manage our unique biodiversity, which also has major economic benefits through fisheries, agriculture and tourism.
- Clearly state the need for ongoing monitoring to ensure that our management of biodiversity is effective, with the results being widely and publicly disseminated.

Ouestion 4.

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

We are living in the Anthropocene, and with it the large associated changes to our environment, like higher temperatures, changes in rainfall patterns and changes in ocean currents and frequency and intensity of cyclones. So the EPBC Act will need to be far more adaptable so that is can address these issues.

Ouestion 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?

The Act needs to be strengthened and ensure that the Commonwealth retains primary regulatory responsibility for what is now an expanding list of matters of national environmental significance. The Act needs to be underpinned by strong national leadership, robust science, independence, strong community engagement, including Indigenous representation, and in consideration of intergenerational justice with respect to the important services provided by our biodiversity and upon which Australia depends.

We have seen environmental impacts caused by local jurisdictions being influenced by vested interests, and lack of resourcing, and we stress that these negative outcomes often impact on areas way beyond those local jurisdictions. So we need a strengthening of the EPBC Act, not



a removal of regulations. But as shown in the recent rezoning of the GBR, community engagement and support is critical to ensure a sense of ownership of the resource. The community needs to see the successful outcomes of the EPBC Act by effective monitoring programs and adequate resources to ensure this occurs, and for this information to be widely disseminated.

Ouestion 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?

Yes, the Act needs to provide better guidance with clear environmental standards and clarification around terms such as a significant impact. The Act must mention climate change as the most significant threat. Guidance is needed in urgent situations.

We need to note that Extinction is irreversible and habitat destruction nearly impossible to reverse. We must not only concentrate on threatened species but threatened ecosystems. While we hear about bleaching and death of corals, it is not just the corals but all the animals associated with live coral; i.e. we are changing the entire coral reef ecosystem. The EPBC Act standards need to include proactive recovery and threat abatement plans. We strongly suggest that the EPBC has been ineffective in achieving its objectives of protecting the environment and conserving our unique biodiversity and promoting ecologically sustainable development.

Question 7.

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

We have listed below some references which support our comments in Question 6, re. the loss of 50% corals on the reef and associated organisms, and changes to inshore coral reef communities, loss of kelp along the east coast of Australia, massive die back of mangroves in Northern Territory, and mammals and birds.

- Babcock *et al.* 2019. Severe continental-scale impacts of climate change are happening now: Extreme climate events impact marine habitat forming communities along 45% of Australia's coast. *Front. Mar. Sci.* 6: 411.
- Hughes *et al.* 2017. Global warming and recurrent mass bleaching of corals. *Nature* 543: 373-377.
- Johnson *et al.* 2011. Climate change cascades: Shifts in oceanography, species' ranges and subtidal marine community dynamics in eastern Tasmania. *JEMBE* 400: 17-32.
- Scanes *et al.* 2020. Climate change rapidly warms and acidifies Australian estuaries. *Nature Communications* 11: 1803.



- Smith, J.N *et al.* 2020. Shifts in coralline algae, macroalgae and coral juveniles in the Great Barrier Reef associated with present-day ocean. *Global Change Biology* https://doi.org/10.1111/gcb.14985
- Wernberg *et al.* 2013. An extreme climatic event alters marine ecosystem structure in a global biodiversity hotspot. *Nature Climate Change*: 3,78.
- Woinarski, J. C. Z., Burbidge, A. A. & Harrison, P. L. 2015. Ongoing unraveling of a continental fauna: decline and extinction of Australian mammals since European settlement. *Proceedings of the National Academy USA* 112: 4531–4540.
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Question 8.

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

Both are needed for the Act to be effective. It is vital to have detailed monitoring programs so the outcomes can inform management decisions.

Ouestion 9 & 10 are linked

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?

Should there be a greater role for national environmental standards in achieving the outcomes the EPBC Act seeks to achieve?

It is vital that the Commonwealth retains the primary regulatory role. Biota do not recognise state or international boundaries.

The national EPA should have greater oversight and management. Also there is a need for an independent advisory board including scientists to assist with this to ensure that as new scientific evidence is obtained this is incorporated into management options.

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?

We need to stress that restoration is expensive, and it is much easier to rehabilitate; once species are lost this is all over. Restoration is not an insurance policy. We cannot reverse



biodiversity loss, and – as noted in detail above – we question the value of "environmental offsetting" as in most cases there is little or no follow up to assess if it has actually worked. By the time assessments are made, it is often too late.

We seriously doubt that seeding coral reefs with heat resistant corals will work, technological fixes are expensive and likely to be ineffective. We have the scientific evidence to show what is causing species loss, let use this evidence.

We are not commenting on the other points here.

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?

We need both, need to consider broad bioregions and nationally based procedures. The National EPA should lead strategic assessments with evidence provided by an independent scientific committee.

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?

The Commonwealth should retain primary regulatory responsibility and oversight for what is now an expanding list of matters of national environmental significance. This is needed for a more consist approach to biodiversity conservation in Australia and to have a Commonwealth-State involvement for this common goal. Delegation across authorities and states will reduce environmental outcomes.

We need to have a far more streamlined approach.

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?

Both are needed. Most importantly, in order to achieve conservation of our biodiversity, we need to have multiple species recovery plans and threat abatement plans.

Question 17.

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

No, the Commonwealth must be the prime regulatory agency. We need clear national guidelines to avoid the complexity of multiple layers that would occur with the inclusion of many layers from the Commonwealth to local. We also need to ensure that all levels of regulation are transparent, and critical to enhance environmental stewardship.

Question 18.



Are there adequate incentives to give the community confidence in self-regulation?

No - we need central oversight to ensure vested interests do not override best outcomes for biodiversity and its long term management.

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?

The community needs to be informed through all stages of the nominations, listing, management and regulatory processes. This will give them more confidence in the system and encourage them to be proactive in conserving and managing our biodiversity.

It is important that the Commonwealth retains primary regulatory responsibility for the Act and its implementation, and that the National EPA should have greater oversight. We need a national approach. There are no lines on water as is well demonstrated by the connectivity of the East Australia Current, the Murray Darling and other systems, and there are likewise no lines on the land that are recognised by terrestrial biota.

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