

SUBMISSION TO THE EPBC ACT REVIEW

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Australian Institute of Marine Science

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PERTH

17 April 2020

Professor Graeme Samuel AC
Independent Reviewer - EPBC Act Review
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Dear Professor Samuel,

It was a pleasure to host you and members of the EPBC Act Review team at AIMS' Headquarters in Townsville on 12 December 2019, and to show you around our SeaSim research aquarium. I hope you found your visit interesting and the exchange of views with the AIMS team useful and informative.

As requested in your letter of 20 December 2019, AIMS is pleased to provide a formal submission in response to your Discussion Paper. There are two parts to our submission. We explain the nature of AIMS' direct interaction with the Act, including discussing areas where we feel the operation of the Act could be improved. We then focus – as requested – on the specific questions in your Discussion Paper, where AIMS has the scientific or technical expertise and/or direct practical experience from which to make recommendations.

I trust you find this submission useful. I wish you and your team every success in this worthy exercise.

Yours sincerely,

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AIMS' interactions with the EPBC Act

AIMS, as a scientific research agency working in the vast and complex environment of Australia's tropical marine estate, has a significant level of interest in the operation and effectiveness of the Australian Government's central piece of environmental legislation, the EPBC Act (the Act).

Our interactions with the operation and provisions of the Act tend to be specific or broad.

Specific interactions (some requiring permitting), include our research conducted on:

- benthic (seafloor communities) mapping and bio-discovery, at times involving key ecological features;
- toxicology, testing and model development (including the issue of using data relevant to tropical marine systems);
- tagging and studying of migratory species including species of conservation concern; and
- acoustic seismic impact research on marine species.

Broader interactions include our work that involves:

- engaging with Indigenous Australian's for on-country access and research collaboration.

In addition, through the course of our work, we have identified areas where we believe there is potential for strategic improvement in the objectives and operations of the Act. These include:

- acknowledging the benefits of integrating Indigenous knowledge (including Indigenous management of biodiversity) and 'Western' science, and facilitating the achievement of this;
- acknowledging and explaining the cumulative impacts of multiple stressors on ecosystems, and reflecting the consequences of these in environmental assessments;
- better explanation and incorporation of the concept of 'resilience', not just species abundance, richness or diversity, as a measure of species or ecosystem viability;
- improving understanding of the value of 'ecosystem services' and incorporating this into environmental assessments;
- acknowledging the value of baseline information (particularly for tropical marine habitats where there are significant gaps), and providing solutions where this is lacking – in the mechanisms provided by the Act for habitat protection, or species-specific protection, strategies;
- ensuring that all data and information collected during the course of an environmental assessment, or as part of post-hoc monitoring that is conducted as a condition of development approval or to assess whether decisions made under the Act achieve their intended protection/conservation purpose, are made freely and publicly available in a timely and accessible form; and
- creating an offsets mechanism that funds public good research that is focussed on establishing environmental baselines and inventories, and reducing the envelope of uncertainty surrounding the potential impacts of pressures on or threats to the environment in order to strengthen evidence for decision-making and reduce the need to apply the precautionary principle.

AIMS Comment on specific questions in the 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?

- AIMS welcomed the introduction of the Great Barrier Reef (GBR) (added 2009) and the Marine Environment (as per 'Protection of Commonwealth marine areas') into revisions of the Act.
- These inclusions provided additional emphasis to the importance of AIMS' mission to 'provide the research and knowledge on Australia's tropical marine estate required to support growth in its sustainable use, effective environmental management and protection of its unique ecosystems'.
- The importance of these earlier decisions to broaden the reach of the Act – particularly to include the GBR – have been justified in recent years as the GBR struggles under the increasing weight of cumulative impacts, including the many caused by climate change.

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?

- The greater inclusion of cost-benefit analysis (CBA) in decision making is a reasonable objective. However, it has limitations, particularly if there are insufficient data to accurately quantify the social and environmental benefit and cost streams. It can also lead to bias if overreliance is put on standardised discount factors, as these can be skewed towards financial discount rates (e.g. Treasury bond rates) rather than reflective of social valuations of future environmental loss. However, if CBA is conducted in a way that fully includes the real value of environmental and social considerations, then it can be a powerful tool in decision-making for ESD. The problem arises when CBA fully monetises the economic, but only *partially* monetises the wider environmental and social costs and benefits. Such analyses can skew decision-making towards projects which are strong economically but very damaging to the environment and society. There are ways of ensuring that such biases are eliminated – such methodologies allow rigorous quantitative identification of optimal triple bottom line outcomes (see Hardisty, 2009).
- An alternative to CBA is scenario analysis, which even if done within the simple framework of high/central/low cases, can provide decision-makers with a visible insight into future outcomes.
- Further, AIMS suggests that an evaluation of any impacts on the continued provision of 'ecosystem services' should be incorporated into environmental assessments, and that such an evaluation be conducted with an agreed standardised methodology that produces comparable results.

Question 3: Should the objects of the EPBC Act (as below) be more specific?

- *to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance; and*
- *to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources; and*
- *to promote the conservation of biodiversity; and*
- *to provide for the protection and conservation of heritage; and*
- *to promote a cooperative approach to the protection and management of the environment involving governments, the community, land-holders and Indigenous peoples; and*
- *to assist in the cooperative implementation of Australia's international environmental responsibilities; and*

- *to recognise the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and*
- *to promote the use of Indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.*

- AIMS considers the current list of objects to be quite comprehensive and targeted at an appropriate level.
- However, AIMS suggests introducing the concept of 'resilience' (i.e. the capacity of a system to resist and recover from disturbance and undergo change while still retaining essentially the same function, structure and integrity) into the Act to augment the existing focus on species abundance, richness or diversity, as measures of species or ecosystem viability.
- Understanding and maintaining the processes that are fundamental to ecosystem resilience, particularly in marine ecosystems, will become increasingly important as the cumulative impacts of pressures and threats, especially those associated with climate change, begin to overwhelm traditional biodiversity-focussed management regimes.
- The importance of maintaining ecosystem resilience and the processes that support it is increasingly becoming the focus of agencies charged with managing some of Australia's most iconic ecosystems (e.g. the Great Barrier Reef Marine Park Authority's *GBR Blueprint for Resilience*).

Question 4: *Should the matters of national environmental significance within the EPBC Act (as below) be changed? How?*

- *world heritage*
- *national heritage (added in 2003)*
- *wetlands of international importance (listed under the Ramsar Convention)*
- *listed threatened species and communities*
- *listed migratory species*
- *protection of the environment from nuclear actions (such as uranium mines, although nuclear power plants are prohibited),*
- *marine environment*
- *the Great Barrier Reef Marine Park (added in 2009), and*
- *protection of water resources from coal seam gas development and large coal mining development (added in 2013)*

- AIMS considers the current list of matters of national environmental significance within the Act to be appropriate at this time.

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?*

- In any reform to the Act, AIMS recommends the focus be keenly held on the main purpose of the Act – 'protection and conservation'. It may seem expedient to reform approval and assessment processes to speed up decision-making, however it is the outcome of these processes rather than the time they take that should be foremost in any redesign thinking.
- Having said that, AIMS would encourage removal of genuine duplication or otherwise unnecessary steps or impediments that do not improve the outcome of the assessment/decision process.
- Also, we would encourage holistic, rather than narrow, process redesign. For example, if it emerges that a major impediment to timely decision making arises from understaffing of the administrators of the Act, then increased staffing might be the optimal solution, rather than changing a process.

- Lastly, AIMS strongly recommends against removing regulations and putting decisions in the hands of individual landholders. To do so would increase the burden on the administrators to ensure that these powers were being used appropriately by the individuals in whom they had been vested.

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?

- A significant impediment to the most efficient use of the Act is often the absence of, or the limitations of inadequate data. Any effort to improve the availability of quality data to facilitate rigorous assessment of matters under consideration will assist in achieving the objectives of the Act.

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

- The Discussion Paper states (refer: ‘Pressure on the environment will increase’) “While some ecosystems — such as oceans — are considered to be in good condition, further declines in habitat and biodiversity are expected.”
- AIMS agrees that further declines are expected. However, the statement that oceans are in good condition is *incorrect*. The world’s oceans are in poor condition, with marine heat waves, increasing acidification, coral reef bleaching, overfishing and plastic pollution just some of the more obvious pressures. The GBRMPA for instance has just downgraded the outlook for the Great Barrier Reef to Very Poor for the first time. The threat of climate change to the nation’s marine biodiversity is real and present, and is already driving significant events such as the major coral bleaching events on the GBR in 2016, 2017, and again in 2020. Under current emission trends, the prospects for the GBR and other Australian coral reefs is bleak. The Act needs to fully take these realities into consideration, and should be a strong mechanism for protecting and building resilience in our ecosystems.
- Regarding future trends, AIMS is happy to provide a body of peer reviewed scientific literature that provides well-founded scenarios of reef ecosystem loss in coming decades should action to mitigate climate change be unsuccessful

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

- AIMS does not have a material comment on this question.

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?

- AIMS does not have a material comment on this question.

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:

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| <ul style="list-style-type: none"> ○ 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?*
- AIMS does not make a recommendation here, but can provide an observation with respect to the Queensland Government's GBR water quality regulations. The observation being:
 - that despite hundreds of millions of dollars spent on water quality improvement initiatives, it was still considered that the only genuinely effective way to enforce the necessary environmental performance standards on water quality polluters was through expanded regulation; and
 - that these regulations and the quantitative dimensions that underpin them were only possible through a concerted and extensive collection of baseline scientific data. We do not believe this is a unique example, either in terms of the need to regulate, nor the need to spend effort in acquiring the data necessary on which to base these regulations.

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?*
- AIMS notes that if environmental protection is done effectively, then the need for subsequent restoration is less necessary. However, recognising that Australia currently has many ecosystems under significant threat, or in a badly degraded condition, then it might be useful to explicitly address these separately within the Act. As such, we believe that a focus on restoration is now warranted.
- Thus, it might be useful to construct the Act as a continuum, commencing with environmental protection, moving on to environmental resilience, and then concluding with environmental restoration.
- A benefit from this continuum approach might be that objectives in the Act could be supported by a continuum of regulations, measures and procedures. One example being data – initially acquired to make protection decisions, and then supplemented to make resilience decisions (or to check the efficacy of environmental protections), and then should things go wrong, to be used as baselines for remediation or restoration.

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?

- AIMS does not have a material comment on this question.

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?

- AIMS does not have a material comment on this question.

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?

- AIMS does not have a material comment on this question.

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?*
- To ensure that such a simplified process still achieves the objectives of the Act, it would be essential to have clear unambiguous definitions of what constitutes a ‘low risk’ project. In addition, the process and justification for low risk should be published and supported by scientifically rigorous, and publicly accessible data to provide confidence in the low likelihood of environmental damage caused by the project.
 - AIMS promotes the application of the FAIR (Findable, Accessible, Interoperable, Re-usable) data principles to data collected either for the purposes of environmental impact assessment, or for post-approval compliance monitoring. This would make a significant contribution by filling knowledge gaps concerning Australia’s biodiversity, particularly within its marine estate, improve transparency, facilitate scientific scrutiny, and reduce unnecessary duplication and expense associated with data collection.

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?

- AIMS believes that the Commonwealth’s regulatory role under the Act should be applied at the appropriate scale for the specific matter under consideration. The Act is the Commonwealth’s primary piece of environmental legislation dealing with listed threatened species, listed migratory species and outstanding universal values within world heritage areas, some of which are individual species (e.g. dugongs in the GBR World Heritage Area). Therefore, in some circumstances, particularly those in which an individual species is the target of extractive activities (e.g. hunting of humpback whales), the Act must be applied at a species-specific scale in order to ensure adequate protection.
- However, in other circumstances, providing protection at a habitat or ecosystem scale can provide efficiencies and collateral protection to entire species assemblages. This is particularly appropriate when diverse assemblages are dependent on a specific habitat type (e.g. corals of the GBR and north-west shelf, seagrass meadows in Shark Bay, WA).

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

- AIMS does not have a material comment on this question.

Question 18: Are there adequate incentives to give the community confidence in self-regulation?

- AIMS does not have a material comment on this question.

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*
- Enhancing the ability of the EPBC Act to support the engagement of Indigenous Australians in environment and heritage management is consistent with one of AIMS’ strategic objectives: to improve the participation of Traditional Owners in the scientific research activities that AIMS undertakes on their sea country, and in doing so, create learnings that include both ‘Western’ science and traditional knowledge. AIMS would be pleased to provide further information to the Act review team on our Indigenous Partnerships Plan.

- AIMS also supports the recommendation in the Discussion paper to update the Objects of the Act to provide more emphasis and clarity on the involvement and interests of Indigenous Australians, by changing the wording in the objects from “to promote the use of Indigenous peoples' knowledge...” to “to provide for the use of Indigenous peoples' knowledge...”.

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?

- AIMS does not have a material comment on this question.

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?

- AIMS does not have a material comment on this question.

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?

- AIMS does not have a material comment on this question.

Question 23: Should the Commonwealth establish new environmental markets? Should the Commonwealth implement a trust fund for environmental outcomes?

- AIMS does not have a material comment on this question.

Question 24: What do you see are the key opportunities to improve the current system of environmental offsetting under the EPBC Act?

- The Act provides for the ability to offset any environmental impacts associated with a project by creating an equivalent environmental benefit elsewhere. In terrestrial habitats, this often takes the form of land purchases that confer protection to an equivalent area of similar habitat. Such offsets are more difficult to apply in the marine environment, which can be more transient in nature. It should also be noted, that protecting an *existing* area does not actually confer an environmental benefit, *unless* that area is improved, augmented, or restored in some way. And then only the marginal gains from those improvements can be considered as benefits.
- Considering the difficulty of establishing offsets in marine environments, and the lack of rigorous data and certainty regarding the potential impacts of pressures on or threats, particularly to the marine environment, this review of the Act provides an opportunity to create an offsets or investment mechanism that funds public good research that is focussed on reducing the envelope of uncertainty surrounding the potential impacts of pressures on, or threats to, the environment in order to confidently make evidence-based decisions, and research that develops rigorous methods for environmental restoration.

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?*

- Noting the common lack of rigorous data and certainty regarding the potential impacts of pressures on or threats to the environment, particularly the marine environment, and recognising that assessments under the Act are often initiated by applications from the private

sector, and that approval decisions should be founded on a robust data-driven evidence base with minimal uncertainty, the Act could provide a vehicle to facilitate private sector investment in public good environmental research.

- This research could be targeted at filling knowledge gaps that otherwise hinder robust decisions concerning the sustainable use and protection of the environment. Such investment could be directed at research aimed at reducing uncertainty regarding the singular and cumulative impacts of pressures on or threats to the environment, or establishing environmental baselines that enhance the rigour of environmental impact assessments and inform development decisions by the private sector.
- Such investment could be delivered through a general offsets scheme, or through issue-specific private/public partnerships.

Question 26: Do you have suggested improvements to the [below] principles? How should they be applied during the review and in future reform?

- *Effective protection of Australia's environment*
 - *Protecting Australia's unique environment and heritage through effective, clear and focussed protections for the benefit of current and future generations.*
- *Making decisions simpler*
 - *Achieving efficiency and certainty in decision making, including by reducing unnecessary regulatory burdens for Australians, businesses and governments.*
- *Indigenous knowledge and experience*
 - *Ensuring the role of Indigenous Australians' knowledge and experience in managing Australia's environment and heritage.*
- *Improving inclusion, trust and transparency*
 - *Improving inclusion, trust and transparency through better access to information and decision making, and improved governance and accountability arrangements.*
- *Supporting partnerships and economic opportunity*
 - *Support partnerships to deliver for the environment, supporting investment and creating new jobs.*
- *Integrating planning*
 - *Streamlining and integrating planning to support ecologically sustainable development.*

- AIMS supports these principles, suggesting a potential improvement to only the second of them:
- Making effective decisions more efficiently
 - Achieving efficiency and certainty in decision making, including by ensuring decisions are based on sound data, using transparent methodologies, and involve only regulations that are necessary to ensure outcomes consistent with the purpose of the Act.

Summary

AIMS would be pleased to engage further with the EPBC Act Review on any of the matters we have addressed above, and provide additional background material and references. If so, please contact [REDACTED] to arrange this.