20 August 2017
Ms Sally Barnes
Director of National Parks
Canberra ACT 2601

Dear Ms Barnes

The Ocean Science Council of Australia (OSCA) would like to thank you for the opportunity to comment on the Australian Marine Parks Network Draft Management Plans released on 21 July 2017. OSCA is an internationally recognised group of university-based and independent marine researchers with direct expertise in relation to the development of the Australian Marine Parks Network (AMPN). A main purpose of OSCA is to encourage that public policy related to the national marine estate is based on evidence from sound science.

Summary

The 2012 AMPN expansion represented progress towards a scientifically defensible network of marine parks and reaffirmed Australia as a leader in marine conservation. In its 2016 submissions[1,2], OSCA expressed its support for the July 2012 expansion of the AMPN into four marine regions and the Coral Sea following decades of research and extensive community consultation. However, in consideration of the reports from the Bioregional Advisory Panel (Buxton and Cochrane 2015) and the Expert Scientific Panel (Beeton *et al*. 2015) hereafter referred to collectively as the 'Review', we found that the Review's recommendations were a significant step backwards relative to the 2012 management plans that were suspended in 2013. Moreover, OSCA found the Review inconsistent with the Australian Government's commitment to evidence-based marine management.

[1] http://oceanssciencecouncil.org/wp-content/uploads/2015/02/OSCA-CMR-Review-2016_02_04-FINAL-1.pdf
[2] ; http://oceanssciencecouncil.org/wp-content/uploads/2016/10/OSCA-Submission-CMRMP_2016_10_31.pdf

It is thus of significant concern that the draft management plans released on 21 July 2017 reflect an even further and greater step backwards, entirely inconsistent with available scientific evidence. Here we (1) summarise the key reductions in ocean protection proposed in the draft plans, (2) recap the key principles that underpin scientifically defensible marine protection and provide recommendations relevant at a systemic level, and (3) identify changes that are both systemic and park-specific that are needed if the Government wishes to achieve conservation outcomes cost-effectively and that are evidence based.

While recognising these weaknesses, there exists a significant opportunity for the Turnbull government to complete the network in a manner that meets conservation goals while supporting Australia's Blue Economy. OSCA had hoped that the 2017 draft management plans would address these concern by expanding the levels of IUCN II+ zoning in the plans referred to as Marine National Park Zoning (MNPZ protection), thereby upholding the goals and principles of the NRSMPA. Our submission provides key recommendations for consideration by Government.

1. Proposed undermining of protection

Despite the many proven environmental, social and economic benefits of IUCN II+ zoning and its critical role in buffering the impacts of climate change, implementation of the draft management plans would remove 400,000 km^2 of IUCN II+ protection across the AMPN, or 46% of the network. This means that in:

- 2007, 10% of Australia's EEZ was in marine parks, with 4% of the EEZ protected in IUCN II or higher.
- 2012, 36% of Australia's EEZ was in marine parks, with 14% of the EEZ in IUCN II or higher.
- 2017, 36% of Australia's EEZ remains as "protected" but **only 9%** of the EEZ in IUCN II or higher. This is below the most minimum of benchmarks (O'Leary et al. 2016).

Lack of representation in high level (IUCN II+) zoning: Further, the draft management plans mean that: 259 primary conservation features remain unrepresented; 16 of the marine parks have no IUCN II or greater protection; 20 biological regions have no IUCN or greater protection; and IUCN II protection targets are now met for only 8 of 53 of Australia's bioregions, halving the number of bioregions that previously attained the target of 10%.

On a regional basis, the draft management plans mean that:

- The North region draft plan protects ~1% of the region in IUCN II or greater, a 57% reduction;
- The Temperate East draft plan protects ~ 4% of the region in IUCN II or greater, a 2% reduction;
- The North-west draft plan protects ~5% of the region in IUCN II or greater, a 49% reduction;
- The South-west draft plan protects ~7% of the region in IUCN II or greater, a 40% reduction; and
- The Coral Sea draft management plan protects ~24% of the region in IUCN II or greater, a 53% reduction and loss of some 264,000 km^2.

Six marine parks would have their IUCN II+ zoning reduced by between 42 and 73%, and two marine parks would have their IUCN II+ zoning removed completely. If implemented, the draft management plans would leave 16 of the 44 marine parks established in 2012 without any IUCN II+ zoning. Added to

the nine without IUCN II+ zoning in the existing South-east network of 14 marine parks established in 2007 that would make 25 of the 60 Australian marine parks in Commonwealth waters without IUCN III+ protection.

Out of sight - out of mind: Where the draft plans increase protection in spatial coverage (e.g. Bremer Canyon and Perth Canyon), these marginal expansions have been at the cost of protection on the shelf and largely moved protection away from areas of known significant conservation value.

Ignoring risk: The Australian Government undertook a number of fishing gear risk assessments (FGRA) in 2010 and the Beeton *et al*. (2016) review re-assessed them. This review found that the original risk assessments were largely appropriate and that significant uncertainty remained as to the compatibility of a range of fishing gears with conservation outcomes. Nevertheless, the draft management plans now allow destructive fishing practices assessed by its own review as incompatible with conservation in 38 of the 44 marine parks under consideration.

Down-grading of existing high level (IUCN Ia and II to II and IV) protection: The draft plans also down-grade existing protection which compromises long term science time-series and undermines our ability to further our understanding of the impact of human activities on the ocean:

- Coringa Herald – was IUCN Ia, now integrated into the Coral Sea Marine Park as IUCN II; note – it operated as IUCN II but the opportunity to meet that standard was lost in 2012 declaration but could be addressed in new management plans;
- Lihou Reef – was IUCN Ia, now integrated into the Coral Sea Marine Park as IUCN II; note – it operated as IUCN II but was recommended for IUCN Ia in Review but was then again demoted;
- Middleton Reef – was IUCN Ia, now integrated into Lord Howe Marine Park; draft management plan both zones it as IUCN II and reduces the size of the zone;
- Mermaid Reef – was IUCN Ia, now integrated into the Argo Rowley Terrace Marine Park; draft management plan zones it IUCN II; and
- Ningaloo Mark Park – was IUCN II but operating as IUCN IV; draft plan confirms it as IUCN IV.

2. The principles

Protection works: There is broad consensus across the international marine research community (see submitted Science Statement signed by more than 1300 researchers) on the importance of IUCN II+ zoning in delivering conservation and economic outcomes. Research shows that the number of fish species and the size of fish increase inside IUCN II+ zoning, and larvae and adult spill across their boundaries. IUCN II+ zones also increase the resilience of marine life to climate change, and their protected marine life recovers more quickly than fished areas after damage from floods, storms and coral bleaching and resist climate “invaders”. IUCN II+ zones also accelerate the recovery of adjacent fisheries after natural or human-induced declines in fish populations, an important economic benefit that has been shown to fully compensate for the loss of fishing access in protected zones in the long run. Of note are the clear benefits generated for the Great Barrier Reef Marine Park following its expanded IUCN II+ protection by the Howard Government to 33% under the 2004 Representative Areas Program.

Political processes have suggested a near-term target of 10% of marine bioregions to be protected. For instance, the Aichi near-term target is for 10% of the global oceans to be in "effective and equitably managed, ecologically representative and well connected systems of protected areas" by 2020. Significant international caucuses have suggested that minimum areas for protection exceed 30%. The World Parks Congress (Sydney, 2015) declared a target of 'protection of both biodiversity and ecosystem services [that includes] at least 30% of each marine habitat … [with] no extractive industries'. This target was later adopted by the IUCN Members Assembly at the World Conservation Congress (Hawaii, 2016), which passed the motion that 'State and Government Agency Members designate and implement at least 30% of each marine habitat in a network of highly protected MPAs' with the 'ultimate aim of creating a fully sustainable ocean at least 30% of which has no extractive industries'. Such targets are also in line with the Howard Government's declaration of 33% no-take in the Great Barrier Reef Marine Park and the WA Government's declaration of 34% no-take in Ningaloo Marine Park in 2004. And indeed, targets of this order to achieve conservation goals are supported by empirical data (Edgar et al. 2014, O'Leary et al. 2016).

The other challenge in the draft plans is the highly residual nature of Australia's AMPN. IUCN II+ zones have in large part been relegated to areas that minimise interference with extractive activities (Barr and Possingham 2013; Devillers et al. 2015). Indeed, across the AMPN, the 2017 draft plans fail to accept CSIRO and Expert Science Panel advice that all marine parks should contain at least one IUCN II+ zone.

The continental shelf constitutes about 22% of Australian waters (Geoscience Australia 2005) but continues to have the least amount of IUCN II+ coverage. This is despite its marine life being the most diverse and human impacts the most intense in Australia's oceans. Under the 2012 management plans, only 3% of the continental shelf was protected within IUCN II+ zoning (Barr and Possingham 2013) and the 2017 draft management plans fail to address this notable deficiency. Each region continues to have only small amounts of its continental shelf within IUCN II+ zoning, e.g. the shelf and slope of the Temperate East remain virtually unprotected with only 0.01% (shelf) and 0% (slope) protected within MNPZs. The trend to locate IUCN II+ zoning in residual areas means that important conservation outcomes are missed and that it is difficult or impossible to quantify human impacts in the major habitat areas in which they occur.

Larger proportional protection is required in bioregions or ecosystems with more heterogeneous physical and biological characteristics and more exposure to threats (Pressey et al 2003; Desmet and Cowling 2004). This approach should therefore increase the extent of IUCN II+ zoning toward the continental shelf, which is the most heterogeneous and heavily used region of Australian waters (Williams et al. 2009).

Recommendation 1: Expand the 9% IUCN II+ protection within the existing boundaries to +30% across the network in a representative matter that reduces the residual nature, comparable to iconic protected areas such as the Great Barrier Reef and Ningaloo Marine Park, with a particular focus on the continental shelf.

Recommendation 2: Ensure that all bioregions incorporated within the boundaries of the marine parks

established in 2012 have comprehensive, adequate and representative (CAR) protection at IUCN II or greater level (see Recommendation 1). The Government should meet the CSIRO recommendations (as stated in their submissions to the development of the AMPN) for each marine park to include at least one MNPZ, with a particular focus on ensuring that the shelf, continental slope and seamounts are better represented within MNPZs.

Partial protection (IUCN IV Habitat Protection Zones) does not deliver comparable biodiversity benefits to IUCN II+

The draft management plans propose large increases in the area of IUCN IV Habitat Protection Zones (HPZs) to the AMPN. OSCA only supports such proposals where this protection represents an increase in the level of protection, e.g. IUCN VI to IUCN IV and protecting important conservation areas from extractive uses such as mining.

Minister Frydenberg's media statement of 21 July 2017, when announcing the release of the draft management plans, fails to acknowledge the downgrade of many of IUCN II+ zones to IUCN IV zones. Instead it obfuscates this downgrading when summarising the protection outcomes by emphasising that the draft plans: "Increase from 60 per cent to 63 per cent the area under high-level green [sic IUCN II] and yellow zone [sic IUCN IV] protection covering sites of ecological significance".

This implies that conservation outcomes from IUCN IV (HPZs) are comparable to those from IUCN II+ zones. This is not the case as attested to by a wealth of scientific literature and as confirmed by the Government's own Expert Science Panel. By allowing extractions, IUCN IV zones do not afford the same level of protection as IUCN II+ zones, and their reduced levels of protection result in reduced conservation outcomes (Ban et al 2014; Denny and Babcock 2004; Shears et al. 2006; Lester and Halpern 2008; Di Franco et al. 2009; Sciberras et al. 2015). In particular, Sciberras et al. (2015) concluded that "while PPAs [partially protected areas] significantly enhance density and biomass of fish relative to open areas, NTRs [no-take reserves] yielded significantly higher biomass of fish within their boundaries relative to PPAs." Edgar et al. (2014), in their seminal paper in *Nature*, concluded that "no-take" is a critical feature of successful marine parks in generating biodiversity outcomes. Australia's peak marine science body, the Australian Marine Sciences Association (AMSA), also made clear in its submission to the CMR Review that "Any rezoning to include more habitat protection, even if 'better' than general use, is still not no-take and therefore cannot be considered to satisfy CAR principles". Finally, it should be emphasised that IUCN IV zones open to fishing within marine parks are of little use to assess the effects of fishing and efficacy of fishery management outside the protected areas.

The suggestion that IUCN IV is equivalent to IUCN II+ zoning also ignores fundamental ecological evidence on the importance of intact ecosystems. Research from Atwood et al (2015), Burkholder et al (2013), Heithaus et al (2012), Barley et al. (2017a, 2017b) all document the importance of top down control on marine ecosystems. In short, the suggestion that habitat protection is sufficient to generate ecosystem services at a level commensurate with IUCN II+ is unsupported (Ban et al. 2014).

Finally, there is a considerable and growing body of scientific evidence that suggests that partial protection, as would occur if IUCN II+ zoning was replaced with IUCN IV in the AMPN, would accrue

increased management costs while adding much less in the way of meaningful, measurable conservation outcomes than MNPZ (Ban et al. 2011, Sciberras et al. 2015).

Recommendation 3: The Government should retain all previously identified IUCN II+ zoning and not downgrade them to partial protection such as HPZs. New HPZs in the 2017 draft management plans should only be retained where they increase the level of protection prosed in the 2013 plans, unless the area should be zoned as an MNPZ to meet CAR principles. For example, a HPZ has been recommended for Adele Island in the North- west Region, which is one of the most important seabird nesting sites in the Kimberley and home to globally unique coral reefs. This area requires protection from all extractive activities, including fishing, and hence an MNPZ is required.

Reference areas: The ability of the science community to demonstrate the effect of marine protection and assess impacts outside protected areas relies on the establishment of IUCN II+ zones as reference areas, noting the substantial review by McCook *et al*. (2010) of the zoning benefits on the Great Barrier Reef Marine Park as a highly relevant example of demonstrating management effectiveness. In the absence of high level protection, scientists are unable to provide this advice. The draft management plans jeopardise the opportunity to compare areas inside and outside MNPZs to assess the impact of human activity and the efficacy of management arrangements and indeed our ability to build ocean resilience.

Australia has very few IUCN Ia zones that provide researchers with a critical opportunity to test the impact of even non-extractive human activities. These zones, known as the “pink” zones in the Great Barrier Reef Marine Park have provided important information on human activity (i.e. pink zones have higher densities of sharks than even green zones; McCook et al. 2010). As such, downgrading IUCN Ia parks like Mermaid Reef to IUCN II eliminates a rare long-term log of response to the highest level of protection. Similarly, to downgrade the existing Ningaloo Marine Park which is zoned IUCN II to IUCN IV also means that rather than enforcing effective protection identified for this area, as per its original designation, it would be officially open for exploitation.

Recommendation 4: In the final AMPN management plans, the Government should increase representation of major habitats in IUCN II+ zones in a fully replicated design i.e. multiple examples of each habitat with full protection.

Ignoring risk: The draft management plans allow for trawling, gillnetting and longlining to occur in 38 of the 44 new marine parks, mining in 33 and the construction and operation of oil and gas pipelines in 42. By allowing extractive activities to continue throughout most of the AMPN, Australia is overlooking the primary roles of marine parks: biodiversity conservation and all this entails in terms of resilience and knowledge building, and as scientific reference areas. Of concern is that the Government’s own risk assessments have concluded that a number of these activities are incompatible with conservation outcomes, an outcome largely supported by the Review in its assessment of a subset of these activities. As such, their presence in “habitat protection zones” is not consistent with the goals of these zones.

Recommendation 5: Destructive fishing gears, as identified in the 2010 suite of Fishery Gear Risk Assessment Reports (http://conservationgeography.org/content/fishing-gear-risk-assessments) should be excluded from marine parks, regardless of zoning.

Economics: The Government's justification for its significant reductions in IUCN II+ protection is to reduce its impact on commercial fishers, but the impact of the IUCN II+ zones as proclaimed in 2012 would have been very small. In the case of Middleton Reef Seamount, a part of which would have its protection removed, ABARES estimates such a change would annually return $335 to each of the 92 holders of statutory fishing rights in the area's main fishery, the Eastern Tuna and Billfish Fishery (Larcombe & Marton 2016). A similar outcome would occur where protection of the high continental shelf and upper slope habitats in Peaceful Bay off Walpole in the South-West Corner Marine Park would be reduced. The economic return from the reduced protection for all fisheries would be $68,000 per year, and for the main fishery, the West Coast Demersal Fishery, it would amount to $600 per year or $86 for each licence holder (Larcombe & Marton 2016; Fletcher & Santoro 2014).

Australia's marine tourism industry is worth $28b per annum (*AIMS Index of Marine Industry 2016*) whereas the value of the returned catch from cuts to IUCN II+ protection across the AMPN is only $4m per annum (*ABARES Potential displacement of commercial fisheries by a Commonwealth marine reserve zoning scheme*. Revision 1 July 2017), representing just 0.3% of the total revenue from Australia's wild catch fisheries. Thus, the tiny economic benefits to fishers generated by the proposed reductions in protection would be greatly outweighed by economic costs to the tourism industry.

Recommendation 6: Move to a Blue Economy that values alternative options for our ocean economy and stops prioritising extractive activities at the expense of other industries.

3. Some specifics (but these should not be seen as the easy fixes – the above recommendations apply generally)

In addition to addressing the recommendations identified above, there are some egregious examples of failed proposals. These are not a full list but are representative of the challenges faced by the daft draft management plans. They include:

The Coral Sea: This example indicates the Government's lack of willingness to appropriately protect large iconic areas that are amongst the world's last remaining intact systems. The Department has received significant input on why high protection of this area – "the jewel-in-the-crown" - matters as a link between the Great Barrier Reef Marine Park and France's Coral Sea territory and as a rare tropical refuge for ocean wildlife. The reduction of protection by 53% is unsupported by science and is incumbent on the Government to justify. This is particularly important given the allowance of high-risk fishing activities in this region.

OSCA regards the proposed 53% reduction in IUCN II+ coverage within the Coral Sea as a significant retrograde step. The Government's Expert Science Panel noted the uniqueness of the region's coral reefs and emphasised the importance of increasing their protection. Recent research in the Coral Sea

shows that reefs not in IUCN II+ protection see their shark populations depleted by 90% of their original biomass, with populations of large predators halved and fish populations depleted by 70%. The importance of protecting the Coral Sea's reef sharks was highlighted by the Expert Science Panel which identified that: "Coral Sea reefs comprise a globally significant hotspot for reef sharks".

The draft management plan for the Coral Sea Marine Park would decimate the large IUCN II+ zone covering the eastern side of the marine park, cut by half the IUCN II+ zones at Osprey and Marion reefs, and convert Vema Reef's IUCN II zone to IUCN IV. These draft changes would only leave IUCN II zones at Coringa-Herald Islets and Bougainville, Lihou, Mellish and Kenn reefs, while Shark, Flinders, Holmes, Moore and Suamarez reefs, and Diane Bank and Willis Islets, would be zone IUCN IV – allowing ongoing exploitation.

These significant losses and the fragmentation of the IUCN II zoning in the 2012 management plans have no scientific basis. The intact IUCN II zone covering the Coral Sea was to be Australia's major contribution to the global protection of intact pelagic marine life at a large scale, consistent with the scale of newly established highly protected marine parks being established globally, for example in Chile, New Zealand, Palau, the UK and the USA. Moreover, France is in the process of creating a large marine reserve over its Coral Sea Territory, adjacent to Australia's Exclusive Economic Zone, and the combined protection would be globally significant. The 53% reduction in the IUCN II zoning would represent a major strategic failure with no basis in science.

The protection of the Coral Sea reefs is also critical to the dive tourism industry, which has direct sales of $6M each year that could expand to $15M if the reefs are highly protected (KPMG 2010). These figures contrast significantly with the $4.1M the Government claims will be gained by the commercial fishing industry across the entire AMPN should the 2017 draft management plans be implemented. As we have already said, the economic returns to commercial fishing from reduced MNPZ protection are at best marginal and to only a small number of licence holders.

Recommendation 7: Expand 2012 protection to include previously excluded high conservation value reefs.

Mermaid Reef: This example indicates the Government's lack of willingness to maintain long-standing protection. The draft management plan downgrades IUCN Ia protection to IUCN II.

Recommendation 8: Reinstate IUCN Ia protection to allow continuation of this important and rare log of human impacts on our oceans.

Perth Canyon: This example exemplifies the Government's rejection of the science indicating the need to protect hotspots of biodiversity and instead yet again push protection further offshore.

Recommendation 9: Re-establish and expand the IUCN II zoning within the Perth Canyon Marine Park.

Geographe Bay: This example indicates the Government's rejection of the science regarding the need for representative protection and importantly a lack of understanding that you can't protect the seabed without protecting the fish.

Recommendation 10: Re-establish and expand the IUCN II zoning within the Geographe Marine Park. Exclude destructive fishing activities.

Bremer: This example indicates the Government's rejection of the science regarding destructive fishing. Pushing protection offshore to accommodate inshore scallop trawling is not defensible within a marine park.

Recommendation 11: Re-establish and expand the IUCN II zoning within the Geographe Marine Park. Exclude destructive fishing activities.

4. Conclusions

The draft management plans represent a retrograde step by Australia's Government and is a matter of both national and international significance. Australia has been a world leader in marine conservation for decades, beginning with the establishment of the Great Barrier Reef Marine Park in 1975 and its expanded protection in 2004. At a time when oceans are under increasing pressure from overexploitation, climate change, industrialisation, and plastics and other forms of pollution, building resilience through a strong backbone of IUCN II zoning is well supported by decades of science.

The establishment of a strong backbone of IUCN II zoning is consistent with the move by many countries, including Chile, France, Kiribati, New Zealand, Palau, Russia, the UK and US that are establishing very large no-take marine reserves. In stark contrast, the implementation of the Government's draft management plans would see Australia become the first nation to retreat on oceans protection. Edgar et al. (2014) found that the effectiveness of marine protected areas in achieving meaningful conservation outcomes required five key features, including that they should be continuous, isolated and large. Large intact IUCN II zones are also necessary to protect relatively mobile species such as tunas and oceanic sharks (Koldewey et al. 2010; Wilhelm et al. 2014) and turtles (Scott et al. 2012).

The establishment of large IUCN II zones is increasing occurring as more nations acknowledge their significance and importance as a conservation measure. Their establishment is supported by the recognised failure of regional fisheries arrangements to stem the decline of oceanic species (Juan Jorda et al 2011; Stevens et al. 2000), and the recognised value of retaining examples of relatively intact marine ecosystems in which pelagic species are maintained or supported in recovery.

International policy momentum, including among several of our key regional and trading partners, is progressing the establishment of large IUCN II zones, not eroding them. Australia has held a role as a global leader in management of its oceans, and the fragmentation of this significant network will tarnish Australia's reputation and our ability to influence regional efforts towards sustainable marine resource management, as well as reducing conservation outcomes for minimal economic benefit.

OSCA recognises that stakeholders have concerns when management arrangements and existing access change. However, the history of marine park planning and establishment is one in which initial resistance from some extractive users is generally followed by a demonstration that IUCN II zones did not have significant negative outcomes for these stakeholders, particularly compared to the scale of impacts predicted by these sectors before establishment. Moreover, stakeholders often go on to embrace IUCN II zoning as they observe their benefits, both in terms of commercial fisheries (Goñi et al. 2010), recreational fisheries (Pascoe et al. 2014, Arias and Sutton 2013), tourism (Vianna et al. 2012) and education (Angulo- Valdes et al. 2010).

Stakeholders and taxpayers more generally want to know that changes to oceans management will generate benefits and be cost-effective. Changes to the AMPN that reduce protection levels, reduce coverage of key ecological features, or increase the residual nature of IUCN zones may also mean that much of the extractive uses that would have occurred in the absence of an AMPN continue effectively as if no AMPN was established at all. This "business as usual" approach is damaging to meaningful marine conservation as it creates an AMPN that is unlikely to provide the desired conservation outcomes; it represents the deliberate design of a system for poor conservation performance. It may also hinder the need for more protection in the future, since an area may be deemed to have sufficient protection, even if it is not representative of the biodiversity or reflective of the threats facing a region. This would leave the AMPN open to the charge that it is comprised of "paper parks" with associated costs but few conservation outcomes. Such an outcome will ultimately undermine public support for oceans management and protection.

Decision-makers and the community value evidence-based policy. At a time of rapid environmental change, there is a great need for responsive management underpinned by strong science. In addition to the recommendations above, in order to be fit for purpose, the AMPN should embrace the need for representative and replicated IUCN II zones of adequate size, provide clear direction recommending scientific monitoring of zoning effectiveness, and allocate essential resources for science and enforcement. An appropriately designed and scientifically based AMPN can co-exist alongside important marine industries and other human activity for mutual benefit.

The finalisation of the AMPN remains a remarkable opportunity for the Australian Government to strengthen the levels of IUCN II protection and to do so on the back of strong evidence. In contrast, implementation of the Government's retrograde draft management plans undermines oceans resilience and would allow damaging activities to proceed in the absence of proof of impact, ignoring the fact that a lack of evidence does not mean a lack of impact. The 2017 draft plans deny the science-based evidence.

We encourage the Australian government to respond to our recommendations, increasing the number and area of IUCN II zones and reflecting the science. This means achieving a target of at least 30% of each marine habitat in IUCN II zones, supported by Australian and international marine scientists and affirmed by the World Parks Congress in Sydney in 2015 and the IUCN Members Assembly at the World Conservation Congress in Hawaii in 2016.

Yours sincerely,

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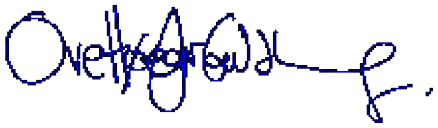

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The Ocean Science Council of Australia (OSCA): *OSCA is an independent group of internationally recognised researchers with specialist knowledge about the oceans. We are based around Australia with expertise in a variety of disciplines - marine ecology, environmental law, economics, and sociology. Our mission is to ensure that policy is knowledge based – informed by the latest science – and to provide independent advice on the major opportunities and challenges for Australia's oceans.*

A selection of relevant papers

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