A Statement of Concern to the Australian Government: Review of the Commonwealth Network of Marine Reserves

30 October 2016

The Hon. Josh Frydenberg MP
Minister for Environment and Energy
Parliament House Canberra

Dear Minister Frydenberg,

The expansion of Australia's Commonwealth Marine Reserve Network in 2012, with the declaration of 44 new and revised parks, was a major step forward in the protection and management of our oceans. It constituted significant progress towards establishing a scientifically-defensible network of marine reserves for conservation of marine biodiversity and to act as reference areas, and it re-affirmed Australia as a world leader in marine conservation. However, the network was not perfect. The distribution of highly protected (no-take) Marine National Park Zones (MNPZs) was biased to deep waters and only 3% of the highly productive continental shelf was protected in MNPZs (Barr and Possingham 2013). This is well below the globally recommended minimum of 30% both identified by the international science and management communities[1] and supported by empirical evidence (O'Leary *et al.* 2016). It is worth noting that this is also the standard achieved by the Howard Government over ten years ago with the rezoning of the Great Barrier Reef Marine Park to 33% MNPZ.

The Review of the new reserves announced by the Abbott Government in 2013 provided an opportunity to use sound science to address the deficiencies in the previous management plans and thus improve the protection of Australia's oceans. However, while the Review has proposed some improvements in areas protected from the expansion of extractive industries such as mining, it has failed to address core gaps in representation of marine habitats in the network, and eroded the coverage of the MNPZs that were established in 2012.

The Review's terms of reference require it to make recommendations to the Government that are based on scientific evidence and the Review comprised two panels. The Expert Scientific Panel (ESP) was charged with evaluating the policy settings and science leading up to the creation of these parks in 2012 (Beeton *et al.* 2015). The Bioregional Advisory Panel (BAP) was charged with considering stakeholder concerns, the consultation processes and recommending changes to the zoning within the reserves (Buxton and Cochrane, 2015). Unfortunately the conclusions of the two panels within the Review are often contradictory, reducing the Review's impact and credibility. This has the potential to erode the network's ability to deliver its primary purpose – the conservation of biodiversity in Australia's oceans.

[1] World Conservation Congress (Hawaii 2016) Motion 53 https://portals.iucn.org/congress/motion/053; World Parks Congress (Sydney 2014) http://worldparkscongress.org/downloads/approaches/ThemeM.pdf;

The Australian Government can have confidence in the level of consensus that now exists within the international marine research community with respect to the importance of MNPZs in delivering important conservation and economic outcomes. The ESP recognises the scientifically proven benefits of MNPZs and reinforces their importance in its report (Beeton *et al.* 2015). However, despite the scientific evidence, the BAP recommends the removal of 127,000km^2 of MNPZ coverage from the reserve system, an area almost twice the size of Tasmania (Buxton and Cochrane 2015). No reasonable justification is given for the loss of such a large area of protection for marine life.

The distribution of MNPZs across the network was also considered by the ESP, who concluded that:

> "*…because MNPZs are important scientific reference sites for monitoring change within and outside reserves, each reserve should include at least one MNPZ and that a significant sample of each primary conservation feature and each provincial bioregion be included in at least one MNPZ of an appropriate configuration and size to meet conservation objectives." (Beeton* et al. *2015; p110)*

This finding also reflected the scientific advice from the CSIRO that all marine reserves should contain at least one MNPZ.[2] Despite these findings, the BAP recommends there be no MNPZs in five reserves in the North-west Region, three in the Temperate East Region, one in the South-west Region, and three in the North Region (Buxton and Cochrane, 2015).

The erosion of MNPZs comes with little economic justification. An examination of the ABARES assessment of commercial fishing displacement (Larcombe and Marton 2016) indicates that the recommended reductions in MNPZ generate only very minor economic benefits to commercial fishing. Moreover, research by Australian marine economists highlights the important economic role of highly protected marine reserves in accelerating the recovery of depleted fisheries due to either natural or human-induced causes, suggesting that the economic value of increased resilience derived from MNPZs is high enough that the long-term net effect on fisheries is positive (Grafton *et al*. 2006). This is likely even more true when economic benefits are at best marginal and at a time when climate change is driving significant uncertainty in ocean health.

Overall, it is estimated that the BAP's recommendations would reduce total displacement of existing commercial fishing by only 0.3% (Larcombe and Marton 2016; Beaver and Turner 2016). Considering that displacement of commercial fishing was already minimal in the original 2012 declaration of the 44 reserves (0.7%) there appears to be no logical rationale to the proposals for such large losses in protection. Specifically, based on the independent analysis by Beaver and Turner (2016):

- in the *Temperate East Region*, the BAP recommends removal of protection for a remote coral reef habitat Middleton Reef, Lord Howe which would return an estimated economic benefit of up to $31,000 per annum for the Commonwealth's Eastern Tuna and Billfish Fishery;
- in the *South-west Region*, the BAP recommends opening up the Bremer marine reserve for scallop trawling, which would return an estimated benefit of $4,700 per annum to the WA South Coast Trawl Fishery;
- in the *North-west Region*, the BAP recommends opening up the globally significant Rowley Shoals ecosystem for trawling, which would return an estimated economic benefit to fishers of $36,900 per annum in the North-west Slope Trawl Fishery; and
- in the *North Region*, the BAP recommends doubling the area opened up for gillnetting, which would return an estimated economic benefit to the NT gillnet fishery of $300 per annum.

[2] CSIRO submissions to the development of the Commonwealth Marine Reserve Network: see for instance: https://www.environment.gov.au/archive/coasts/mbp/north/consultation/submissions/pubs/0090csiro.doc; https://www.environment.gov.au/archive/coasts/mbp/north-west/consultation/submissions/pubs/0073csiro.doc; https://www.environment.gov.au/archive/coasts/mbp/south-west/consultation/submissions/pubs/0081csiro.doc

The ESP findings also placed significant focus on considering the impact of commercial fishing gears and thus their appropriateness for use within marine reserves. It is clear that downgrading of MNPZs and partially protected areas throughout the network to allow expansion of commercial fishing is not only financially unrewarding but at odds with the findings of the ESP. For instance:

- Pelagic longlining was found by the Federal Government's Fishing Gear Risk Assessment (FGRA) to be incompatible with the conservation values of marine reserves (Morison and McLoughlin 2010). The ESP upholds the findings of the FGRA. Despite this, the BAP recommends a near doubling of the area over which pelagic longlining can occur in the Coral Sea Marine Reserve including over the location of a globally significant black marlin spawning aggregation.
- Demersal longlining was found by the ESP to be incompatible with the conservation values of seamounts in the Coral Sea. However, the BAP recommends allowing demersal longlining to operate on a number of Coral Sea seamounts.
- Demersal set-lining was found by the FGRA, and upheld by the ESP, to pose an unacceptably high risk to the conservation values of the Temperate East marine reserves (Morison and McLoughlin 2010). Nevertheless, the BAP recommends this practice be allowed in the Solitary Islands Marine Reserve at Pimpernel Rock, an area known to be an aggregation area for critically endangered grey nurse sharks.
- Demersal trawling is recommended by the ESP to be disallowed in the Coral Sea Marine Reserve. However, the BAP recommended that demersal trawling be increased by 700% in this reserve.

The proposed loss and fragmentation of the large offshore MNPZ in the Coral Sea, as recommended by the BAP, is of particular concern. High level protection across this region represents Australia's major contribution to the protection of intact tropical pelagic marine ecosystems globally, and is consistent with the global move by many countries, including New Zealand, Chile, the UK, Palau and the US, to establish very large no-take marine reserves[3]. At over 115,000km^2, the area the BAP proposes to be excised would be equivalent to removing the entire network of MNPZs created by the Howard Government in the Great Barrier Reef Marine Park in 2004.

If the BAP's recommendation to reduce the MNPZ in the Coral Sea is adopted, the main beneficiary would be the Eastern Tuna and Billfish Fishery (ETBF), a fishery which mainly operates outside the Coral Sea Marine Reserve and whose operations are minimal within the large originally-envisioned MNPZ. According to the ABARES analysis, Beaver and Turner (2016) estimated that the 26% reduction in spatial coverage of the large MNPZ would lead to an increased catch and value across the fishery by about 8% and 10% respectively, which is less than the average year-to-year fluctuations in the current ETBF resulting from external, business-as-usual factors (Larcombe and Marton 2016). Fragmenting Australia's largest highly protected area to allow marginal commercial fishing, is clearly at odds with supporting conservation outcomes.

The ESP also recognises that partial protection does not deliver the biodiversity benefit of full protection:

"*While the strongest biodiversity and conservation benefits are delivered by excluding extractive activities from marine reserves, less restrictive management regimes can also deliver biodiversity benefits*"*(Beeton* et al. *2015; pg 115)*.

This is well established in the scientific literature; partial protection (e.g. zones that allow some forms of fishing) simply does not generate biodiversity benefits comparable to that of MNPZs (Denny and Babcock 2004; Shears *et al.* 2006; Lester and Halpern 2008; Di Franco et al. 2009; Sciberras et al. 2015). Nevertheless, much of the BAP's recommendations increase partial protection at the cost of MNPZs but then express this downgrade as an improved outcome:

"Together with Marine National Park (IUCN II) and Sanctuary (IUCN 1a) zones, the additional area zoned as ***Habitat Protection*** *increases the proportion of the reserve estate receiving a high level of protection from 60 % to 76%..." and in the Coral Sea "the combined area zoned for high level protection (IUCN Ia, II and IV) increases from 80 % to 97% of the reserve." (Buxton and Cochrane 2015; pg 14)*

[3] http://www.mpatlas.org/data/

Overall, the outcome of the Review is one in which the ESP acknowledge the importance of comprehensive, adequate, and representative (CAR) protection, and the unique value of MNPZs in conservation. The BAP has largely recommended outcomes that reduce protection and increase the proportion of MNPZs in residual areas or marginal conservation importance. The overall emphasis of the Review appears to have largely focused on modifying the zoning by eroding the critically important zones of high protection for zones of lesser protection, but without any scientific basis and, according to ABARES, minimal economic benefit (Larcombe and Marton 2016).

Stakeholders and tax payers more generally want to know that changes to ocean management will generate benefits and be cost-effective. Changes to the network that reduce protection, reduce coverage of key ecological features, or increasingly relegate MNPZs to residual areas may also mean that much of the extractive uses that would have occurred in the absence of a marine reserves network continue effectively as if no network were established at all. This kind of 'business as usual' scenario is damaging to efforts to improve biodiversity conservation as it creates a large reserve system unlikely to provide the desired conservation outcomes. Also, reserves in residual areas are in most cases unsuited for use as reference areas to assess the impact of human activity and management in areas outside reserves.

Minister, the development of new management plans is an opportunity to not only champion evidence-based benefits for people and the environment, but also to continue Australia's long history of leadership on conservation of Australia's marine estate. We seek your support for a scientifically-based marine reserves network that meets international standards for ocean protection. We urge you to act decisively to expand rather than erode the current levels of protection provided in the network to address current gaps in marine protection.

Yours sincerely

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[4] Note, these are but the most proximate references. The peer-reviewed literature supports the points made in this statement of concern and additional support can be provided if requested.