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A society promoting scientific study of Australian Coral Reefs
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Ms Sally Barnes
Director of National Parks
Marine Reserves Management Planning Comments
Department of the Environment and Energy
Reply Paid 787
Canberra ACT 2601
managementplanning.marine@environment.gov.au

Dear Ms Barnes,

On behalf of the Australian Coral Reef Society (ACRS) I thank you for the opportunity to contribute to the Commonwealth Marine Reserve Management Planning (CMRMP) process.

The ACRS is the worlds' oldest coral reef society (established 1922) and is the professional organisation for Australia's coral reef scientists and managers. We are concerned with the study and protection of coral reefs, and have played a prominent role in bringing major conservation issues to the attention of governments and the general public. The society regularly draws on the expertise of its members to provide advice to governments and agencies on a range of marine issues (see http://www.australiancoralreefsociety.org/).

The expansion of the CMR network to the current level in 2012 represented progress towards establishing a scientifically-defensible network of marine reserves and re-affirmed Australia as a world leader in marine conservation. While this expansion was a definitely a step in the right direction, the proportion of the highly productive continental shelf protected in MNPZs (ca 3%; Barr and Possingham, 2013) is an order of magnitude lower than the globally recommended minimum of 30% (https://portals.iucn.org/congress/motion/053), and the 33% of the Great Barrier Reef Marine Park that was zoned MNPZ in 2002. The current Federal Government Review of CMR's offers the ideal opportunity to redress these deficiencies in the management plans and thus improve the protection of Australia's marine environment and standing as a world leader in marine conservation. It is heartening to see the proposed addition of three new MNPZ adjacent to the GBRMP, however the proposed reduction and fragmentation of the existing MNPZ's in the Coral Sea and the opening of Rowley Shoals to commercial fishing is disappointing, represents a major backward step, and has no scientific grounding. The Review's terms of reference require it to make recommendations to the Minister that are based on sound scientific evidence, yet there is little or no scientific evidence presented to support many of the recommendations within the Review.

The Review recommends that the Rowley Shoals, one of the world's most pristine coral reef ecosystems (Bellwood et al. 2003), be opened to commercial fishing. Similarly, the Review recommends that the area covered by MNPZ within the unique Coral Sea be reduced by 26%. This large MNPZ was to be Australia's major contribution to the large-scale protection of intact tropical pelagic marine life, and was consistent with science-based initiatives in many other nations including the UK, USA, France, Palau, Chile and New Zealand. Rather than maintain or expand the coverage of highly protected MNPZ's , the Review appears to have largely focused reducing the level of protection within existing CMR's without any scientific basis. If implemented such recommendations will severely undermine the benefits of marine reserves. A wealth of sound scientific evidence shows MNPZs generally increase the number of species, abundance of fish, and the size of fish, and create spill-over of larval and adult fish into adjacent areas (e.g., Lester et al. 2009; Harrison et al. 2012). Indeed, the Great Barrier Reef Marine Park is an exemplar of the benefits with respect to enhanced biodiversity following protection of 33% of the region in no-take MNPZs (McCook et al. 2010).

The benefits of MNPZ's extend beyond the protection fish stocks, and have been shown to enhance the resilience of reef systems. In a rapidly changing climate, highlighted by the devastating thermal bleaching event that has impacted much of Australia's coral reefs in 2016, there is a clear call for MNPZs to be expanded, not decreased. Research shows MNPZs generate resilience in the face of climate change and help areas bounce back quicker than areas outside MNPZs (Bates et al. 2014). Coral reefs, both nationally and globally, are facing an increasing frequency of severe disturbances (e.g., coral bleaching events, disease, cyclones, and outbreaks Crown-of-Thorns starfish). It is critically that reefs be able to both resist change and reassemble quickly following these disturbances so that the goods and services that reefs supply, and the industries that rely on them persist into the future. Research from the Great Barrier Reef shows that inside MNPZs, the impact of disturbances such as coral bleaching and storms, was reduced by 38% for fish and by 25% for corals compared with HPZ's (Mellin et al. 2016).

The recommendation that the Coral Sea large MNPZ be reduced by 26% has no scientific grounding, nor economic justification given the marginal benefits returned to industry (see ABARES assessment of the Review's recommendations). The substantial reduction in MNPZ coverage is a major step backwards from the 2013 CMR Management Plans, which were already criticised for their bias towards minimising impacts on extractive user groups. By reducing the spatial extent of the Coral Sea MNPZ, the Government will also fail to achieve the principles of Comprehensive, Adequate and Representative (CAR) protection which are the underlying foundations of the NRSMPA and the Goals and Principles which guide its implementation.

We approve the proposed addition of three new MNPZs recommended for Wreck, South Flinders and Eastern Holmes Reefs and the expansion of protection at Coringa Islets that will create greater connectivity with MNPZs on the outer edge of the GBRMP. Additionally, 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 Review's proposal to fragment and reduce the size of the large MNPZ by 26% represents a major strategic and scientific failure.

The BAP states that several of the Coral Sea reefs are very large and, thus, in their opinion, can be "zoned to achieve conservation (MNPZ) alongside low impact recreational and charter fishing (HPZ (Reefs))" (pg185), yet no evidence for this opinion is provided. This is in stark contrast with the scientific evidence that demonstrates both ecological and economic benefits to large and continuous marine protected

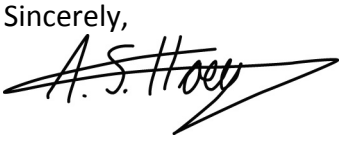
areas. Edgar et al (2014) assessed 87 MPA's across the world and found that the benefits increased exponentially with the inclusion of contiguous habitats and large reserve size. "Large intact MNPZs are also necessary to protect relatively mobile species such as tunas and oceanic sharks (Koldewey et al. 2010) and turtles (Scott et al. 2012), The BAP neither provides information on what constitutes "low-impact" recreational fishing nor allows for growth in the sector. This is concerning as partial protection (i.e. the exclusion of commercial fishing and retention of recreational fishing) does not generate conservation benefits comparable to those of fully protected marine reserves (Lester and Halpern 2008). The BAP's recommendation to fragment and reduce the Coral Sea MNPZ also fails to recognise that management and compliance costs are inversely correlated to reserve size, i.e. larger and more simple is cheaper, especially when a single reef has multiple zones .

The ACRS recommend the Government should retain the Coral Sea CMR's large MNPZ with no reduction in spatial coverage or location. It is one of the few locations within Australia's EEZ where a very large marine national park is currently possible with minimal impact to industry. The government should reject the recommendations to reduce reef protection at Osprey, Shark, Vema, Bougainville and Marion Reefs, and accept the additional protection recommended for key reefs such as Wreck, south Flinders and east Holmes and the additional MNPZs bordering the GBRMP as recommended by the Review.

It is disappointing that the BAP does not acknowledge the downgrade of many of the MNPZs to HPZs. Instead, this downgrading of protection is obscured when summarising the protection outcomes. For example, "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." (pg 14). HPZ's simply do not provide the benefits of MNPZ or SZ (Denny and Babcock 2004; Lester and Halpern 2008; de Franco et al. 2009; Sciberras et al. 2015), and therefore should not be considered as such when assessing the proportion of the reserves that are protected. The inclusion of HPZ's within estimates of 'high level of protection' is misleading

Sound policy based on scientific evidence is valued and respected by decision-makers and governments. Now, more than ever, there is a critical need for responsive management of Australia's natural environment underpinned by science. As recommended by the Review, there is no possibility that the CMRN can provide a meaningful benchmark for comparison with areas outside reserves to assess the impact of human activities and the effectiveness of management instruments outside reserves. To this end, the CMRMP will need to both embrace the need for representative and replicated MNPZs of adequate size, providing clear direction recommending scientific monitoring of zoning effectiveness, and allocation of essential resources for science and enforcement.

Sincerely,



Dr Andrew Hoey

President
Australian Coral Reef Society

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King Regards,

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