

18 September 2017

Director of National Parks
Temperate East Marine Reserves Network Draft Management Plan
Department of Environment and Energy
Reply Paid 787
Canberra ACT 2601

Dear Ms Barnes

Re: Draft Coral Sea Commonwealth Marine Reserve Management Plan

Thank you for the opportunity to comment on the draft Coral Sea Commonwealth Marine Reserve Management Plan.

Given the environmental and economic significance of the Coral Sea as a major source of biodiversity, fishery resources and tourism, we strongly support the decision in the draft plan for full exclusion of mineral and petroleum extraction and exploration from the *2017 Draft Coral Sea Commonwealth Marine Reserve Management Plan* (hereafter the Draft Plan). We do, however, have major concerns about the substantially reduced high level protection (*Marine National Park Zone*, IUCN II) proposed within the Marine Park, and the substantial increase in the proportion of the park given low level protection, especially in the western portion. We make the following points:

1. Too little high-level protection

We are strongly concerned by the very low proportion of the Coral Sea Marine Park given the highest level of protection (approximately 24% compared to about 40% under the 2011 Coral Sea Marine Reserve Proposal) proposed under the draft plan. No reef within about 250 km of the current Great Barrier Reef Marine Park (GBRMP) eastern boundary that is not already a Commonwealth reserve has been declared a 'no-take' *Marine National Park Zone*. These few, isolated areas proposed under the draft will not maintain adequate genetic connectivity. The plan therefore risks not meeting a stated goal of the EPBC Act in maintaining biodiversity. The paucity of "no-take" areas proposed in the draft plan also makes replication near impossible and compromises effective monitoring. In a network, highly protected areas should be spaced about 20–80 km apart to ensure that connectivity facilitates replenishment (Shanks *et al.* 2003; Halpern *et al.* 2006; McCook *et al.* 2009, 2010). Holmes, Osprey (southern half), Cato, and Wreck Reefs remain open to some fisheries under the draft zoning. A more conservative approach to zoning is required and a much higher proportion of contiguous area should be zoned with the highest level of protection to best ensure genetic connectivity of stocks within and between the Coral Sea and Great Barrier Reef (GBR).

The majority of the proposed Coral Sea Marine Park is classed as a *Habitat Protection Zone*. We note, that the 2011 Plan referred to the *Habitat Protection Zone* as being the second highest level

of protection. We are seriously concerned that the range of permitted uses defined under the *Habitat Protection Zone* in the current draft has been greatly widened (apart from exclusions for crab potting). This effectively makes the *Habitat Protection Zones* in the current draft equivalent to the lowest level of protection from the 2011 draft. The net effect of the current draft is to extend minimum protection to about 76% of the park.

We strongly recommend that the range of allowable activities under the *Habitat Protection Zone* in the draft plan be reduced, consistent with the original proposal under the 2011 plan. Furthermore, the draft plan requires additional, more closely-spaced *Marine National Park* zones in order to adequately conserve the biodiversity of these regions. A Comprehensive, Adequate and Representative (CAR) network of IUCN level II reserves should be implemented. Such a CAR-based system with extensive Marine National Park zones will more effectively service fishery stocks and meet the challenges of damaged ecosystem recovery.

2. More protection required for the western Coral Sea

More protection in the western portion of the Coral Sea is required where proposed protection is weakest and where human impact is likely to be highest. The three narrow strips of *Marine National Park Zone* along the margins of the GBRMP are a good start, but need to be increased in size and made more continuous. Although the proposed zonation was in part guided by bioregionalization, that of the Coral Sea was based on IMCRA (Commonwealth of Australia 2006), which in turn was based primarily on demersal fish data. In the Coral Sea, however, the number of deepwater benthic data points for fishes is very low, and the reef-fish fauna is also poorly known compared to the GBR. This makes the IMCRA biozones preliminary. There is a strong likelihood of an east-west (on-offshore) gradient in species composition that is not evident in the biozone maps, and which would make the western part of the Coral Sea even more significant in terms of biological resources. Consistent with the EPBC Act under the precautionary principle, this likelihood should at very least justify increased protection for the reefs in the western Coral Sea until appropriate biodiversity research can be conducted. Australia has been remiss in researching the marine resources of its EEZ, particularly along the eastern seaboard in the Coral Sea and northern Tasman Sea. An important aim of the Australian Museum and other Australian natural history museums is to document biodiversity, but our knowledge of the Coral and Tasman Sea faunas, particularly invertebrates (Ponder *et al.* 2002), remains rudimentary. Australia's efforts to remedy this ignorance compare poorly with those of France and New Zealand, the two other developed nations with legal responsibilities in the region. Each of these countries has thriving research programs documenting the biota of the parts of the Coral and Tasman Seas for which they are, respectively, legally responsible. Australia must do better, and the zoning plan must not only allow, but it must promote such biodiversity research. Although the western portion of the Coral Sea highlights this issue, it is an endemic issue across all marine protected areas. We recommend that the draft plan have a clear focus on further research to improve data on the region and also include a feedback mechanism to enable this data to be included in future management, consistent with basic management planning principles.

3. GBR resilience undermined

With the GBR subject to significant stressors from increasing human activities and impacts of climate warming (Hutchings *et al.* 2007; Przeslawski *et al.* 2008), the western Coral Sea can serve as an important buffer zone for the GBR, and serve as a major source of genetic exchange with reefs further east. To be effective, however, a large proportion of the Coral Sea and its reefs must be given a significant level of protection, which makes an expansive *Marine National Park Zone* crucial. Maintaining high quality reefs provides the best known insurance against the impacts of climate change (Hughes *et al.* 2010, 2017) and is the strategy followed by GBRMPA (GBRMPA, 2009). Maximising the size of 'no-take' protection zones is the best means of conserving pelagic and reef-fish stocks in the Coral Sea, which, also contribute to fisheries stocks managed within the GBRMP. We therefore recommend that the draft plan needs to greatly increase the zoned area afforded the highest level of protection.

4. Management decision-making must be evidence-based and monitored regularly

We support the intention to implement programs to proactively minimise damage, promote rehabilitation and improve the resilience of the Marine Park (Draft Plan, Ch. 2.4). In order to determine if these goals are achieved, however, reserve layout and zoning must be designed to enable the effectiveness of the reserve to be monitored and assessed. This requires designating a larger number of "no-take" *Marine National Park Zones*, which act as important baseline reference sites to enable accurate measurement of the effectiveness of management strategies. Without the ability to make assessments based on good evidence, management decisions will be little more than reflexive.

Attending the draft plan's intention to pursue multiple lines of public engagement and park management activities, funding must be provided for regular policing and surveillance to ensure compliance; little evidence is supplied to indicate how this will be achieved.

I look forward to the opportunity to work with the Australian Government, the Director of National Parks, and the Department of Environment and Energy in further exploring and resolving these issues.

Yours faithfully

Dr Rebecca Johnson
Director
Australian Museum Research Institute

On behalf of:
Dr Shane T. Ahyong
Dr Donald J. Colgan
Dr Pat A. Hutchings

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