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Batemans Marine Park  
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I refer to the brochure on the proposed Batemans Marine Park, the covering statements by the Marine Park Authority on the benefits of marine parks in general, and several of the relevant documents from the Marine Parks Authority website. These documents, in combination, represent a marketing campaign for more MPAs, being put to the public under the pretence of being the scientifically assessed best way to protect marine biodiversity while also improving fish stocks.

The opening text of the Draft Zoning Plan of the Batemans Marine Park, which is the document most of the public will assume is the definitive one relevant to this park, quotes the laudable goal of marine parks in NSW as to conserve marine biological diversity, marine habitats and ecological processes. Few could find exception. Biodiversity has great value, in many forms. But its protection in combination with Australia's legislated principle for natural resource management, Ecologically Sustainable Development, is not simple.

The anticipated specific benefits of the Batemans Marine Park are not given in the Zoning Plan, which is most unfortunate as their absence actually makes it extremely difficult for the reader to assess the cost-benefit of implementing the Plan. However, for those who are in a position to carry out additional research, 'The benefits of marine protected areas' (but notably not the problems and costs) as they relate to the NSW Representative System of Marine Protected Areas, of which the Batemans park is one, are defined on the Marine Park Authority website, and are discussed below:

The listing of benefits begins with the categorical statement that the NSW system of MPAs 'will have many benefits'. It then is less definitive by stating that MPAs 'can have positive effects on ecosystems, habitats and species under protection and may also have other benefits including:'

- *"improved fish stocks as a result of the protection of habitats critical for commercially and recreationally important species"*.  
As this is the first benefit specifically listed it is reasonable to assume it is a primary reason for the system of MPAs, and yet in the Batemans Zoning Plan the specific commercially or recreationally important species that might benefit are not identified, let alone 'habitats critical' for them.

The great majority of the commercially and recreationally important species in the Batemans Park area are highly mobile, and many are migratory, and specific spawning or nursery areas are not identified in the areas proposed for closure to commercial or recreational fishing. Furthermore, for this park, no species, other than the grey nurse shark, which has independent protection measures and which is no longer targeted by either commercial or recreational fishers, is mentioned as being in need of conservation or even stock management. Therefore it is extremely unlikely there will be any demonstrable improvement in fish stocks beyond the localized increases within the areas that are closed. Increases in localised abundance usually do occur for any renewable natural resource when harvests are curtailed and they should not be assumed to be consistent with optimum ecologically sustainable use of the total resource (the goal of wise fisheries management). It is noteworthy that the Marine Park Authority website contains a document under the heading “MPA Science Paper” which is actually titled “A review of the benefits of Marine Protected Areas and related zoning considerations”. It is a great pity that a document put to the public as the science paper on the subject of MPAs considers only the benefits, and ignores the problems and costs, of MPAs. Furthermore the cited review lists many cases of increased stocks of species within closed areas, and even immediately adjacent to such areas, but includes no analyses of whether any of these localised increases represent efficient management of the species as a whole.

What the closures proposed in the Batemans Marine Park will do is allocate fish stocks away from those individuals who currently fish in the areas proposed for closure in favour of those who fish in adjacent areas. Of course it is possible individuals who fish in adjacent areas will not receive any advantage from the proposed re-allocation if the displaced individual fishers pay the cost (substantial in many cases) and relocate their fishing effort to the adjacent areas. The likely outcome is that one group of fishers will be seriously disadvantaged by having to move, with grave effects on lifestyle if their current place of domicile is related to access to fish resources, and the remaining group will have to accommodate increased fishing effort at their current sites. These problems will be particularly acute for individuals who go on foot to their preferred fishing sites. Children and the elderly are prominent in this category.

In the absence of specific stock management benefits for individual species the proposed closures are a resource allocation measure for no assessed conservation outcome. The world has many examples of disastrous fisheries management from resource allocation being packaged and marketed, incorrectly, as resource conservation. Other forms of natural resource management in Australia, for example water management, are now suffering from the same mistake of allocation being assumed to solve conservation problems on its own. If there are specific fish stock conservation measures that need addressing, and for which area closures are the appropriate management tool, then have them identified. Only then can we assess the realistic benefits of the proposals, design the measures necessary to test their effectiveness and begin appropriate adaptive management.

- *“dispersal of larval recruits and genetic diversity to surrounding areas”*.  
The reader is left to assume that this will somehow increase under the proposed closures. Such an outcome is frequently predicted by the proponents of MPAs, as it is in the Marine Park Authority’s “Science paper”, but seldom demonstrated as a cost-effective outcome, unless critical spawning or nursery habitat, such as river gravel beds for spawning salmon and trout, is present in the protected area. As no such areas have been identified in the Batemans Plan no significant recruitment benefits should be assumed.
- *“sites for education”*  
These are everywhere. Unless there is clear understanding of why these sites are different to others and why they are important their value for education is limited.
- *“increasing community awareness and understanding of marine conservation issues”*  
This is definitely required. It is normally best served by full and honest disclosure of the real conservation issues backed up by specific examples of the benefits and costs of conservation. It is not served by marketing imprecise and unsubstantiated claims of benefits without open consideration of alternative management solutions and the problems and costs associated with each.
- *“provision of scientific reference sites for research and long-term monitoring”*  
All reference sites can be of value, even if only to document change and to help identify causes. Exclusion zones can be of particular value if they are truly protected from external influence. This is often beyond the scope of merely excluding one or more groups of users. For example, exposed ocean beaches will not be protected from change by prohibiting recreational and commercial fishing. Wave, current, tide and wind action will have infinitely more impact. As, of course, may alterations to these factors from global climate variability. It is difficult to imagine a cost-effective biodiversity benefit from closing such areas to fishing. Yet the social and financial costs to fishers, and the management costs to taxpayers, of doing so are certain to be considerable.

It is also noteworthy that the most valuable scientific reference sites for biodiversity and fish stock evaluation purposes are those that are included in an experimental design that takes into account the most likely threats to the biodiversity and stocks in question. The Marine Park Authority’s “Science paper” states (page 2) that approximately 60% of coastal wetlands within estuaries in NSW were lost or degraded over the past 200 years. The causes are then listed as, “increased nutrient levels and turbidity from urban and industrial discharges and catchment usage are the key causes of increased turbidity and nutrient levels that often result in a decline of seagrass habitats and diversity of species in soft-sediment areas. Direct damage can also occur through increased numbers of introduced marine pests, swing-mooring chains, propellers, retrieval of anchors and indirectly through shading from jetty and pontoon construction”. A

subsequent paragraph then states, “The overall pressures include some fishing activities that can impact, to varying extents, on the structure of estuarine communities and extent of estuarine habitats.” The Batemans Marine Park proposal describes “protection” of estuarine areas from fishing, some forms of which can have an impact, but does not address what the Marine Park Authority considers the real threats to biodiversity and fish stocks. By their own admission, exclusion of fishing is most unlikely to conserve either biodiversity or fish stocks in these areas.

It is unfortunate the problems and costs of implementing the proposed MPAs are not outlined in the same way as the benefits. Full and open consultation should be based on unbiased presentation of the issues. Obvious problems include:

- **Cost.** Issues related with problems such as cost are not openly discussed in the Batemans Marine Park pamphlet. However two documents which consider economic issues, a “Socio-Economic Report” and an “Economic Report”, are available on the Marine Park Authority website. The major cost listed in these studies is the buyout of commercial fishers, but no mention is made of compensation for recreational fishers, even though the socio-economic impact on at least some of them could be greater than the impact on some commercial fishers. Presumably they are left to fund their own dislocation? Significantly, the Socio-Economic study lists the positive economic and social impacts from the marine park establishment to include “enhanced recruitment of fish for recreational fishing and growth in tourism through marine park management and promotion”. Enhanced recruitment of fish is, as discussed above, extremely questionable and should not be assumed in the absence of effective protection of specific spawning and nursery areas, and if the major growth in tourism is to be through marine park management and promotion then the primary beneficiaries of establishing the park are acknowledged to be those who manage and promote the park!
- **Diminished economic efficiency.** As it is impossible the parks will solve all of NSW’s fisheries management problems other, more specific management measures will remain necessary (this is acknowledged in the supporting documents). Such measures will overlap, to at least some degree, with the proposed closures. When there is overlap in management regimes each additional measure represents a level of inefficiency, with associated costs. The Batemans Marine Park, if implemented as proposed, would represent more layers of Government for implied and imprecise benefits that are not openly identified.
- **Decreased management efficiency.** In the absence of precise fish stock issues, and to a lesser degree biodiversity issues, the Batemans Park proposal represents an extremely blunt instrument for management. Only by serendipity would it represent the most efficient solution to specific problems, which have not even been identified in the proposal.
- **Potential community disenchantment** with area closures as a management tool is likely if outcomes are not as predicted by the proponents.

In summary, I remain committed to the merits of area closures as a biodiversity and stock management tool, but the current proposals do not represent a meritorious example of their use for these purposes, or for the facilitation of full and productive public consultation. The suite of documents put forward on these multiple use MPAs are consistent only in their bias. The documents appear to be part of a marketing campaign to support the declaration of MPAs, rather than a full and honest presentation of the science and management relevant to the issues.

It is a great pity that the benefits that can be achieved by well designed and administered MPAs are concealed by imprecise and exaggerated projection of a supposed panacea that has no acknowledged adverse effects. The failure to acknowledge, let alone address, the problems, including social dislocation and the difficulties of protecting biodiversity from external influence, is most disappointing. The nomination of Sanctuary Zones, in totally inappropriate areas, such as exposed ocean beaches, depicts the proposals as little more than a 'grab-bag' of areas rather than the balanced scientific assessment claimed. It should not go ahead without full re-evaluation of, at least, the impacts of sanctuary zones on recreational fishers and identification of the measures appropriate for the effective protection of biodiversity in estuarine areas.

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