



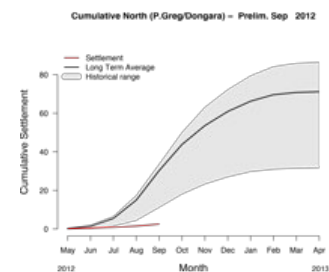
26th October 2012

Dear Mr. Borthwick,

I write in regards to the review of the Commonwealth fisheries legislation. I make a number of points with respect to fisheries management in Australia generally before responding to the specific components of the review. My perspective on this is underpinned by nearly 20 years as a professional scientist conducting research at the interface of fisheries and marine conservation, with extensive experience globally and in Australia.

On a global level, Australia looks not too bad on fisheries management, recognizing that the bar is pretty low given the overall depleted state of the world's oceans (see for instance the recent article by Pikitch in *Science* in relation to fisheries uncertainty¹). There have been innovative advancements such as Australia's harvest rules that seek to establish independent triggers for management. However, the "world's best" label has also sheltered a relatively complacent and potentially conflicted view on our fisheries management that is not productive, and in some cases has led to significant declines in fisheries resources. I provide two examples of how I believe the emperor has no clothes.

First example: The Western rock lobster was certified under the Marine Stewardship Council as an example of a world's best practice, sustainable fishery. This assessment was in part based on its strong management and indeed, the WA Department of Fisheries has historically received significant funding to manage the fishery. The fishery however subsequently experienced recruitment failure, as indicated by the collapse of the puerulus count (see right), the young lobster that are largely predictive of how many can be fished in future years. Of concern, the number of puerulus (red line) continue to remain well below historical averages.



Potential drivers of this collapse included overfishing of breeding stock and climate change². But what is clear is that this was not expected and recovery has not been quick despite significant changes to management (i.e reduction of fishing effort). Concerning also is that the root cause of this collapse, after 4 years, remains unclear although the original risk assessment suggested that overfishing of breeding stock would be to blame if the recovery was not relatively quick³. What concerns me deeply is that the management of this fishery is still held up as an example of good management, despite the collapse. When I queried this with the fisheries department, I was told "the sign of good management is that we know there is a problem". My professional view is that the sign of good management is that you avoid such problems. **In relation to the review of the Commonwealth Fisheries Act, the lesson is that even fisheries with significant levels of funding and attention can go wrong thus a more conservative approach in terms of the scale of**

¹ <http://www.sciencemag.org/content/338/6106/474.short>

² http://www.fish.wa.gov.au/Documents/occasional_publications/fop071.pdf

³ "If the environmental conditions this year, 2009, are average or favourable for puerulus settlement and it still remains very low, the likelihood that it was caused by breeding stock depletion (i.e. a stock and recruitment failure) would increase significantly" http://www.fish.wa.gov.au/Documents/occasional_publications/fop071.pdf

exploitation is required nationally (and at the State level). Oversight under the EPBC Act is a welcome addition to ensure that fishing, like mining, occurs sustainably.

Second example: The small pelagic fishery at heart of the Margiris debate would see an increase in effective fisheries landings from 1800 tonnes per year to 18000 tonnes per year, a ten fold increase in fishing mortality without due diligence in terms of potential impacts. Indeed, the uncertainty around this fishery is huge. Importantly, Wadsley challenged the estimates of biomass provided by AFMA. Subsequently, scientists involved in that assessment have acknowledged that their estimates of biomass were at best, uncertain⁴, despite having initially attacked Wadsley.⁵ This acknowledgment (and previous attack) seriously undermines the confidence that we can have in setting quotas as a percentage of estimated biomass, when the biomass estimates are clearly so imprecise. I also raised the points that our understanding of the target species was poor at best with a fundamental lack of knowledge about their biology, ecology, population structure etc,⁶ none of which points have been addressed. What concerns me is that basic questions about the quality of our information, what we need to know, etc. appears to have been jettisoned out the door for a suite of species that may be vulnerable to exploitation. Decisions to dramatically expand fisheries need to be relatively risk adverse given our general (poor) track record in fisheries management. **Thus, in relation to the review of the Commonwealth Fisheries Act, the lesson is that we need better oversight on fisheries and that an environmental oversight, driven by implementation of the EPBC Act should be welcome.**

The money nexus: There remains in Australia an uncomfortable linkage between fisheries research and fisheries exploitation. I believe that scientists working for government in cost-recovered fisheries are under some pressure to deliver industry outcomes. Scientists ex-government also come under some pressure: for instance, I have personally been told that my support of marine reserves is “career limiting” in terms of funding. **Thus, in relation to the review of the Commonwealth Fisheries Act, the lesson is that we need to ensure a mechanism for independent research in relation to our fisheries and their potential environmental impacts.**

With respect to the specific review questions:

- Recommend changes to the Acts that clearly establish the Fisheries Management Act 1991 as the lead document in fisheries management, and that all aspects of environmental, economic, and social consideration, and the relevant planning processes required be incorporated into the Acts, in a co-ordinated way. **Fisheries activities need to be declarable activities subject to oversight by the Minister for Environment similar to mining and petroleum activities.**
- Recommend any necessary changes to the Acts that affirm the powers of a Minister to take advice, and make decisions, with the full scope of the precautionary principle available within the Fisheries Management Act 1991, and that same definition of the precautionary principle apply in both the Fisheries Management Act 1991 and the Environment Protection and Biodiversity Conservation Amendment 1999. **Fisheries activities need to be declarable activities subject to oversight by the Minister for Environment similar to mining and petroleum activities.**
- Consider the need for modernising Commonwealth fisheries resource management legislation and approaches including penalty provisions, licence cancellations, the use of modern technology and co-management. Consideration of cost recovery arrangements will include consideration of the degree to which cost recovery might impact on the management of fisheries including investment in research and stock assessment. **Cost-recovery funding for fisheries science should be abolished and replaced by core government funding to ensure independence of involved scientists.**

This is a brief response. My concern remains that we are not doing a particularly good job around fisheries and that a more open process around management of our marine biodiversity is required.

⁴ http://www.afma.gov.au/wp-content/uploads/2012/08/IMAS_reanalysis-of-Neira2011.pdf

⁵ <http://www.afma.gov.au/2012/09/report-by-the-institute-of-marine-and-antarctic-studies-reproducing-the-mortality-model-in-neira-2011/>

⁶ <http://theconversation.edu.au/one-fish-two-fish-red-fish-blue-fish-science-doesnt-support-the-super-trawler-9143>

Sincerely,

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Cc Joe Ludwig, Tony Burke