

Submission  
No 978

## INQUIRY INTO RECREATIONAL FISHING

**Organisation:** Australian Marine Sciences Association - New South Wales  
Branch

**Name:** Dr Will Figueira

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Australian Marine Sciences Association  
New South Wales Branch

**The Hon Robert Brown MLC**  
Select Committee on Recreational Fishing  
Parliament House  
Macquarie Street  
Sydney NSW 2000

March 19, 2010

**Re: Parliamentary Enquiry into Recreational Fishing in NSW**

Dear Honourable Member Brown,

The NSW branch of the Australian Marine Sciences Association (AMSA) appreciates the opportunity to provide input into the Parliamentary Inquiry on Recreational Fishing in NSW.

***Introduction***

AMSA is a professional society of over 1000 members nationwide and over 200 in NSW, committed to understanding and protecting marine resources. Our members are from universities and government agencies and have expertise spanning all disciplines related to marine science.

With respect to the brief for this Inquiry, we have worked closely with commercial and recreational fisheries for a number of years. The focus of the research of our members is often at the interface between fisheries science and ecology and often includes the benefit of the fishing sector as a core interest.

AMSA-NSW takes no specific ethical position on recreational fishing *per se*, indeed many of our members are avid recreational fishers. Our goal is to provide a scientific consensus on the role of angling in the fisheries of NSW and its potential ecological impacts based on the available data. AMSA-NSW has therefore limited its submission to specific scientific aspects surrounding the management of recreational fishing in NSW

***Recreational fishing in NSW***

It has been estimated that roughly 20% of the population of NSW, about 1 million people, participated in recreational fishing in 2000, spending about \$500,000 per year at that time (Henry and Lyle 2003). While the average angler may only catch a few fish per

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day, in aggregate the harvest of recreational fishers is actually quite large, about 30% of commercial catches. Indeed recreational fishing accounts for the majority of catch (50% or greater) in nine of the top twenty (and four of the top ten) harvested species in NSW (NSW-Fisheries 2002). These are species such as flathead, bream, tailor, mulloway and kingfish.

These trends are not unique to Australia and it has been estimated that as much as 12% of worldwide landings may come from recreational fishing (Cooke and Cowx 2004). In other countries where recreational fisheries are regularly assessed, such as Canada and the United States, total landings of the most commonly harvested species (in any sector) by anglers are on par or even greater than those for commercial fisheries (Coleman et al. 2004).

In severe cases, recreational angling has caused the collapse of Canadian fisheries (Post et al. 2002). Smaller scale studies in Australia have also demonstrated increased impacts on fished species the closer one gets to areas of intense recreational fishing activity (Stuart-Smith et al. 2008).

We cite these data not to argue that recreational fishing is better or worse for stocks than commercial fishing, but to make the point that angling is responsible for a substantial portion of fishing related mortality in NSW (and indeed worldwide). When government agencies are faced with management decisions required to curb declines in a heavily fished stock, all sources of mortality for that stock should be evaluated and in most cases, this includes recreational fishing. Given the potentially significant impact of recreational fishing, it is surprising that the recreational fishery as an extractive activity is not required to conduct an Environmental Impact Statement (EIS) like other fisheries.

### *Assessing recreational fisheries*

One of the largest difficulties in assessing the need for management of recreational fisheries is the paucity of catch and effort data, especially over large areas. While many surveys of small areas have been completed, to date only one comprehensive statewide survey on recreational fishing has been conducted in NSW (Henry and Lyle 2003).

We fully appreciate the challenge of gathering data from recreational fisheries due to its diffuse nature in comparison with commercial fisheries which can be monitored from catch data. The data that does exist indicates that recreational catch is of a magnitude that fisheries cannot be adequately managed without a more comprehensive understanding of the recreational catch and effort. Thus it is incumbent upon the NSW government to collect the data required to properly manage its fish stocks. To do otherwise could lead to the loss of viable populations and concomitant collapse of fisheries, both recreational and commercial.

The most fundamental problem encountered in obtaining data on the recreational fisheries sector is the lack of a contact list on which to base the survey. The obvious choice in for such a list would be information gathered during the licensing process. However due to the numerous exemptions and lack of quality control at the point of sale, these data are incomplete. Thus researchers are forced to use standard phone directories which adds significantly (as much as 30%) to the budget of the project due to the large

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number of people called who are not actually fishers. And this problem continues to grow as the number of mobile and unlisted numbers increases.

### *Recreational fishing and marine reserves*

The AMSA position on marine reserves has been stated quite clearly and can be found at:

[http://www.amsa.asn.au/PDF-files/Submissions/AMSA\\_MPA\\_2008\\_Statement.pdf](http://www.amsa.asn.au/PDF-files/Submissions/AMSA_MPA_2008_Statement.pdf)

By way of summary, AMSA strongly supports the state and Commonwealth's marine reserve initiatives. Despite the claims by many critics of marine parks, there is at this point, overwhelming evidence that the establishment of marine reserves (especially no-take "Sanctuary" zones) will result in increases in the diversity and biomass of organisms within the reserve (Halpern 2003, Lester et al. 2009).

The recently completed report on the science behind marine parks in NSW has indicated studies conducted in Australia are consistent with these world-wide trends. These increases in biomass can translate into fisheries benefits as marine parks serve as refuges from fishing mortality and as areas where the risk of extinction is extremely low.

NSW has introduced a network of marine parks (six to date) in accordance with the state and Commonwealth action plan for the protection of marine biodiversity and habitat. Recreational fishing has been excluded in certain areas of these parks and hence the establishment of marine parks has come under rather intense criticism from certain segments of the recreational fishing community.

There is much misinformation circulating about marine parks but perhaps the most egregious is that fishing is excluded from all areas of marine parks. In fact, NSW Marine Parks are multi-use and recreational fishing is prohibited only in sanctuary zones which make up roughly 20% of the area of all of the NSW marine parks. Given that roughly 32% of the NSW coast is currently part of a marine park, this means that recreational fishing is actually only excluded from about 6.5% of coastal areas in NSW...hardly a lockout.

### *Marine reserves and recreational fishing havens*

We would also point out the contradictory stance that many recreational fishing groups have taken on the issue of spatial zoning to regulate fisheries. In concert with the establishment of the network of marine parks in NSW, over 30 "Recreational Fishing Havens" have been introduced at a cost of nearly \$20 million dollars. These are specific areas in which most forms of commercial fishing have been excluded under the assumption that this will protect marine fishes and enhance recreational catches.

These havens received strong support from the recreational fishing community despite there being practically no evidence of their effectiveness in achieving the stated goals. Yet, these same groups argue vociferously against the establishment of sanctuary zones in marine parks despite overwhelming scientific evidence (see below) that they do, in fact, achieve the stated aims of protecting biodiversity and habitat. This contradiction shows that the "No science in marine parks" campaign staged by some recreational fishing is fundamentally flawed and more importantly, is damaging to the long-term interest of all parties involved.

Perhaps the greatest oddity in the resistance by recreational fishing groups to the establishment of marine parks in NSW is the fact that while fishing of any kind is not allowed in marine park sanctuary zones (673km<sup>2</sup> or roughly 6.5% of the coast), nearly three times this area (~1,800km<sup>2</sup>) has been set aside in Habitat Protection Zones which are very similar to recreational fishing havens in that most forms of commercial fishing are not allowed however nearly all forms of recreational fishing are. By-outs of commercial fishers have ensured there will be limited effects due to the redistribution of commercial effort from these areas. Thus while marine parks have placed some limitations on recreational fishing, they have also massively increased the amount of habitat available solely to recreational fishing in the form of havens.

#### *Economic costs and benefits of marine reserves*

The costs of implementing marine reserves are often touted as a reason not to implement them. Certainly there are costs however the economic benefits as a result of increased tourism typically far outweigh these. For instance management costs for the Great Barrier Reef Marine Park are on the order of \$35 million per year while revenues resulting from the park are approximately \$5 billion per year (McCook et al. 2010).

A study on the economics of marine reserves in the South West Marine Region (WA) has indicated that revenues from marine parks will be an order of magnitude greater than the costs to implement and maintain them (hundreds versus tens of millions of dollars, Allen Consulting Group 2009). We suggest that NSW now has an unprecedented opportunity to similarly benefit from and capitalize from its Marine Park system.

#### *Management of recreational fisheries*

As indicated previously, the available data demonstrates that recreational fishery landings must be documented and incorporated into management strategies for specific fisheries or stocks. To categorically choose to ignore this important source of fishing mortality would make as much sense as ignoring that from commercial fisheries.

Unlike commercial fisheries, recreational fisheries cannot typically be managed based upon annual or seasonal quotas due to the lack of information on catch and the open access nature of the fishery. The only tools for effort control in recreational fisheries are closures (temporal or spatial) and size and bag limits. We have argued in the AMSA position statement on marine reserves that both techniques need to be available to managers to effectively limit fishing mortality and allow for recovery of certain stocks.

A key point here is that many of these management practices are used because we have so little data for recreational fisheries upon which to base them. In such situations managers have an imperative to be conservative as the consequences of doing otherwise could be disastrous. However improved data will allow for the exploration of different, more specific, and potentially less intrusive (to recreational fishing) management options.

Because we will never have perfect information, AMSA argues for the establishment of marine reserves as safeguards for the future. However, the establishment of survey programs to provide more precise and regularly updated data on recreational fishing will be key to enable managers to more fully explore all options.

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### *Recommendations*

Based on the points discussed above we would recommend the following:

1. It is imperative that the NSW Government acknowledges that recreational fishing accounts for a substantial portion of the mortality of fished stocks and that where management action is required to aid the long-term health of a stock, limitations on recreational fishing must be included in the options.
2. Given that current management of recreational fishing in NSW is operating in a very data-poor environment it is incumbent to adopt a conservative approach to management until such time as appropriate data can indicate otherwise.
3. Direct additional funding, especially that made available by the collection of license fees (as administered by the Recreational Fishing Trusts), towards programs designed to provide accurate, fishery independent estimates of recreational fishing effort and harvest at both small and large spatial scales. Furthermore, set up a dedicated, independent program to assimilate this data in an ongoing manner to inform regular assessment of the fishery.
4. Work toward the establishment of a complete recreational fishing license database which can serve as a basis for assessing the fishery. This means that all fishers must have a permit, even if no fee is charged. The benefits of this single action to the cost-effective assessment of recreational fisheries cannot be overstated.
5. Continue with the development of marine parks in NSW as per the recommendations outlined in the AMSA position statement on marine reserves.
6. We see no value in expanding the number of recreational fishing havens in NSW, either by area or number, and note that credible scientific evidence for achievement of their stated goals is lacking. In addition we point out that the amount of area devoted to solely to recreational fishing (as is the goal of havens) has been massively increased with the zoning of 1,800km<sup>2</sup> of habitat protection zones in NSW marine parks.
7. We must formally recognize the concept of trans-generational equity as it relates to fisheries. That is, we carry an obligation to ensure that the natural resources we enjoy today are also available to those that follow us. History has shown us only too clearly that the amount of fishing pressure a system can take is finite before failure occurs. Under the status quo, fishing pressure will only increase as the human population grows. It is therefore incumbent upon us to take action now to protect our marine resources by the cooperative development of sustainable fisheries. This is the only way to ensure participation and enjoyment in recreational fishing for future generations.

### *Conclusion*

AMSA-NSW sees this Inquiry as a chance to set the stage for ongoing partnerships between scientists, recreational fishers and managers. All have a vested interest in the long-term health of NSW living marine resources and recognize the need to establish a firm understanding of the extractive activities of the recreational fishery sector. The state collects around \$12 million per year in license fees providing a substantial opportunity to better understand these fisheries. Currently little of this funding is directed

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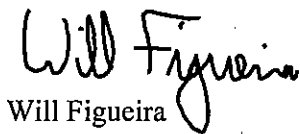
towards programs devoted to assessing recreational fisheries, especially over large areas and in a fishery independent manner, and this represents a missed opportunity.

Fishing pressure is ever increasing and thus we need to act now to engender a sense of responsibility for resources that the people of NSW so enjoy. The recreational fishers of NSW pay for their license in good faith with the understanding that these public funds, collected by the NSW Government, will be used to benefit the health and well-being of the resources that fishers and their families currently enjoy.

We encourage the Parliamentary Inquiry to consider how these funds might best be used to help ensure sustainable fishing for the future.

We hope you have found this submission useful to this important Inquiry. AMSA NSW would be pleased to meet with the Committee to clarify any points in this submission or provide further information.

Regards,



Will Figueira  
Secretary, NSW AMSA

Submitted on behalf of Melanie Bishop,  
President, NSW AMSA

*References*

- Allen Consulting Group. 2009. The economics of marine protected areas: Application of principles to Australia's South West Marine Region.52.
- Coleman, F. C., W. F. Figueira, J. S. Ueland, and L. B. Crowder. 2004. The impact of United States recreational fisheries on marine fish populations. *Science* 305:1958-1960.
- Cooke, S. J. and I. G. Cowx. 2004. The role of recreational fishing in global fish crises. *Biosci.* 54:857-859.
- Halpern, B. 2003. The impact of marine reserves: Do reserves work and does reserve size matter? *Ecol Appl* 13:S117-S137.
- Henry, G. W. and J. M. Lyle. 2003. The National Recreational and Indigenous Fishing Survey. Australian Government Department of Agriculture, Fisheries and Forestry, Canberra, ACT.
- Lester, S. E., B. S. Halpern, K. Grorud-Colvert, J. Lubchenco, B. I. Ruttenberg, S. D. Gaines, S. Airame, and R. R. Warner. 2009. Biological effects within no-take marine reserves: a global synthesis. *Mar Ecol Prog Ser* 384:33-46.
- McCook, L. J., T. Ayling, M. Cappel, J. H. Choat, R. D. Evans, D. M. De Freitas, M. Heupel, T. P. Hughes, G. P. Jones, B. Mapstone, H. Marsh, M. Mills, F. J. Molloy, C. R. Pitcher, R. L. Pressey, G. R. Russ, S. Sutton, H. Sweatman, R. Tobin, D. R. Wachenfeld, and D. H. Williamson. 2010. Adaptive management of

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- the Great Barrier Reef: A globally significant demonstration of the benefits of networks of marine reserves. Proceedings of the National Academy of Sciences:-. NSW-Fisheries. 2002. Survey of recreational fishing in New South Wales - Interim report by NSW Fisheries. NSW Fisheries.
- Post, J. R., M. Sullivan, S. Cox, N. P. Lester, C. J. Walters, E. A. Parkinson, A. J. Paul, L. Jackson, and B. J. Shuter. 2002. Canada's recreational fisheries: The invisible collapse? Fisheries 27:6-17.
- Stuart-Smith, R. D., N. S. Barrett, C. M. Crawford, S. D. Frusher, D. G. Stevenson, and G. J. Edgar. 2008. Spatial patterns in impacts of fishing on temperate rocky reefs: Are fish abundance and mean size related to proximity to fisher access points? J Exp Mar Biol Ecol 365:116-125.