

Submission
No 784

INQUIRY INTO RECREATIONAL FISHING

Organisation: Nature Conservation Council of NSW
Name: Ms Cate Faehrmann
Position: Director
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Level 2, 301 Kent Street, Sydney NSW 2000

Ph: 02 9279 2466 Fax: 02 8026 8301

Email: ncc@nccnsw.org.au

Web: www.nccnsw.org.au

ABN: 96 716 360 601

The Director
Select Committee on Recreational Fishing
Legislative Council
Parliament House
Macquarie Street
Sydney NSW 2000

11 March 2010

Dear Director,

Re: Inquiry into recreational fishing

The Nature Conservation Council of NSW (Nature Conservation Council) welcomes the opportunity to comment on the State's recreational fishery as part of the inquiry into recreational fishing.

The Nature Conservation Council works to ensure a positive and sustainable future for our natural environment and believes that recreational fishing, if effectively managed, can be a part of that sustainable future. Indeed, recreational fishing is built upon the platform of a healthy marine environment and, like any activity that exploits that environment, there is an inevitable, though manageable footprint. The challenge for recreational fisheries is to minimise that footprint and make a positive contribution towards the sustainability of the marine environment.

Below, we address the terms of reference of the inquiry. Our comments are intended to highlight ways in which the management of recreational fishing in NSW, and its practice, could be improved in an effort to move towards sustainability.

(a) Existing regulatory, policy and decision-making processes, including the creation and efficacy of Marine Protected Areas and Marine Parks.

Marine Parks – science and the role of recreational fishers

The State's six existing marine parks are all multi-use, with sanctuary or no-take protection covering only 6.7% of NSW waters. Of that 6.7%, less than 4% of the coastline is set aside in no-take zones. This percentage falls far short of that proposed by

marine scientists, who have called for at least 30% of each marine habitat type to be zoned as no-take.^{1 2 3 4}

The scientific case for marine parks, particularly no-take areas,⁵ is overwhelmingly strong and well evidenced in a huge range of scientific journals and consensus statements (see footnotes 1-4).

By contrast, attacks on marine parks are rarely based on science and are all but absent in the scientific literature. The regularly cited 'papers' attacking the science behind marine parks^{6 7} have not appeared in any academic journals and are opinion pieces in which the author fails to back up the majority of the claims made with either original research and data or references to published literature.

The role of marine parks as builders of resilience in the marine environment has also received significant attention in recent years, with IUCN's Dr Dan Laffoley recently stating, "The role of MPAs in reducing the impact of overfishing and other stress factors on the marine environment cannot be overstated...A stronger network of MPAs would mean that oceans are in a better position to survive and thrive despite the impacts of global warming...IUCN has been urging governments to massively scale up actions now to put MPAs in place throughout the oceans as part of the solution to the impacts of climate change."⁸

The recent independent *Review of Research and Monitoring Programs* of NSW marine parks is not yet publicly available and is being reviewed by the Marine Parks Advisory Council (MPAC), to which the Nature Conservation Council nominates a representative. However, we suggest that the inquiry committee seeks a copy of the review in order to better understand the application of science in NSW marine parks.

In 2008, a global 'Code of Practice for Recreational Fisheries' (CoP) was published.⁹ The CoP was intended to promote best practice and sustainability in recreational fisheries and

¹ Ballantine, W.J. & Langlois, T.J., 2008. Marine reserves: the need for systems. *Hydrobiologia*, 606: 35-44.

² AMSA 2008. Position paper on marine protected areas. Australian Marine Sciences Association. December 2008.

³ The Ecology Centre, The University of Queensland (2009) Scientific Principles for Design of Marine Protected Areas in Australia: A Guidance Statement. 29pp.

⁴ European Scientists' Consensus Statement on Marine Reserves, 2007.
http://www.york.ac.uk/depts/eeem/gsp/mem/marine_reserves_consensus.pdf

⁵ Denny, C.M. & Babcock, R.C., 2004. Do partial marine reserves protect reef fish assemblages? *Biological Conservation*, 116(1): 119-129.

⁶ Kearney, R., 2007. The Pros and Cons of Marine Protected Areas in New South Wales: Who's been Hoodwinked? ASFB Canberra, 12/9/2007.

⁷ Kearney, R. E., 2008. The hoodwinking continues. Seminar presented to the Fisheries Centre, NSW Department of Primary Industries, Sydney, October 30, 2008.

⁸ IUCN, 2009. *World Conservation*, 39(2), October 2009.

⁹ European Inland Fisheries Advisory Commission, 2008. *EIFAC Code of Practice for Recreational Fisheries*. Rome: EIFAC. Occasional Paper No. 42, 45 pp.

complement the FAO Code of Conduct for Responsible Fisheries.^{10 11} Several of the CoP's articles are of interest in how recreational fishers should approach the issue of marine protected areas if they are to demonstrate best practice.

Article 11.2 states, "Sustainable recreational fisheries management is based on an ecosystem approach to fisheries and a precautionary approach." Marine protected areas are fundamental components of an ecosystem-based approach to fisheries management.¹²

Article 13.7 states, "objectively and routinely communicate recent advances in recreational fisheries science, management and conservation." In NSW in recent years, it cannot be said that the hierarchy of recreational fishing has objectively communicated science. In fact, the opposite has largely been true, with peak bodies such as the Advisory Council on Recreational Fishing (ACoRF), Recfish Australia and the Recreational Fishing Alliance, actively misrepresenting marine parks and the science surrounding them while promoting a message that marine parks somehow "threaten average Australians". The apparent philosophical opposition and unscientific approach to marine parks goes directly against article 5.6 of the CoP, which calls on fishers to "accept that environmental stewardship is the overriding ethical principle to which recreational fishing practice and its management will be judged by others." The marine park "lockout" message is not only misleading and dishonest, but it is ultimately damaging to the conservation credentials of recreational fishing bodies as it implies a short-term self interest over a long-term approach of promoting a sustainable marine environment.

The recent publication by the NSW Marine Parks Authority shows how recreational fishing can coexist very positively with marine parks and presents examples of prominent recreational fishers who are supportive of the current parks.¹³ Further support for marine parks, particularly among local residents and users, has been well documented in both Jervis Bay and the Solitary Islands.¹⁴

Given that marine parks and their no-take areas are now understood to be an essential tool for conserving marine biodiversity,¹⁵ the Nature Conservation Council feels it is time for the recreational fishing community to put its weight, both politically and in terms of educating its members, behind existing marine parks in NSW and encourage the government to create a Comprehensive, Adequate and Representative (CAR) system of

¹⁰ FAO, 1995. *FAO Code of Conduct for Responsible Fisheries*. Rome: FAO, 41 pp.

¹¹ For a discussion of the CoP, see Arlinghaus et al., 2010. Providing context to the global code of practice for recreational fisheries. *Fisheries Management and Ecology*, In Press.

¹² Garcia, S.M.; Zerbi, A.; Aliaume, C.; Do Chi, T.; Lasserre, G., 2003. The ecosystem approach to fisheries. Issues, terminology, principles, institutional foundations, implementation and outlook. *FAO Fisheries Technical Paper*. No. 443. Rome, FAO, 71 pp.

¹³ Marine Parks Authority NSW, 2009. *Recreational Fishing in NSW Marine Parks*. December 2009.

¹⁴ Anonymous, 2008. Jervis Bay Marine Park community Survey – final report. McGregor Tan Research. Report prepared for New South Wales Marine Parks Authority, Sydney, Australia. 119 pp. AND Anonymous, 2008. Solitary Islands Marine Park community Survey – final report. McGregor Tan Research. Report prepared for New South Wales Marine Parks Authority, Sydney, Australia. 122 pp.

¹⁵ Banks, S.A. & Skilleter, G.A., 2010. Implementing marine reserve networks: A comparison of approaches in New South Wales (Australia) and New Zealand. *Marine Policy*, 34: 197-207.

marine parks in this state. The logical next step in a CAR network is the Hawkesbury Shelf bioregion, with a park centred around the Sydney area.

The government should also, as a matter of urgency, act on the advice of its own¹⁶ and independent scientists¹⁷ to provide proper protection for the remaining grey nurse sharks inhabiting state waters. Fish Rock/Green Island and the other key aggregation areas should be fully protected by 1500 metre radius no-take zones. Current critical habitat zoning is not working and recent research has identified that at Fish Rock, in particular, continued fishing interactions with grey nurse sharks are likely to reduce the shark population's ability to recover.¹⁸

Marine Protected Areas – improving the processes

The various forms of marine protected area (MPA) can be confusing for the community. As a result of ill-informed and misleading claims,¹⁹ there is a perception among some that marine parks are not multiple use. There is also scope for confusion over what activities are permitted in other forms of MPA, such as aquatic reserves. Better communication from government agencies is needed about what MPAs are, the science that supports them, and the benefits they can provide for the environment, fishers and other community members.

The process of creating and managing MPAs (including recreational fishing havens (RFH) and critical habitat sites) could be simplified by bringing all forms of MPA under the Marine Parks Act (1997) and Fisheries Management Act (1994), with a view to managing all MPAs as marine parks or aquatic reserves. This would, for example, enable RFHs to continue to be used as intended by recreational fishers but would also provide adequate protection against development. It would also enable RFHs and critical habitats to contribute to Australia's National Representative System of Marine Protected Areas (NRSMPA).

The overall process used to create marine parks works relatively well, with the external boundaries announced first, followed by public consultation on zoning options. Public consultation on zoning by all stakeholder groups provides the best chance of designing parks that fulfill their environmental objectives while accommodating the needs of all user groups as far as possible.

Finally, we suggest that the objects for zones currently in the Marine Parks Regulation should be transferred to the Marine Parks Act, with all zoning types standardised. The

¹⁶ Administrative Appeals Tribunal, 2007. *Nature Conservation Council of NSW Inc and Minister for Environment and Water Resources and Ors*. AATA 1876; (2007) 98 ALD 334 (18 October 2007).

¹⁷ Stevens, J., 2003. Review of grey nurse shark protection. CSIRO Marine Research, Hobart, November 2003.

¹⁸ Bansemmer, C.S. & Bennett, M.B., 2010. Retained fishing gear and associated injuries in the east Australian grey nurse sharks (*Carcharias taurus*): implications for population recovery. *Marine and Freshwater Research*, 61: 97-103.

¹⁹ <http://www.stopmarinelockout.com.au/>

result would be zoning plans that would be less easy to dismantle and improved scope for effectively communicating zoning types with the NSW community.

(b) The representational system of trusts and advisory committees.

The Nature Conservation Council provides a representative for the conservation sector on both the Advisory Committee on Recreational Fishing (ACoRF) and the Recreational Fishing Saltwater Trust Expenditure Committee (RFSTEC). Our experience on these committees leads us to make the following observations.

The ratio of conservation representation to recreational fishing industry representation makes it a complex and difficult task to achieve balanced discussions between marine conservation and fisheries management strategies. The unbalanced nature of many discussions results in an outnumbered voting process irrespective of available science or facts.

An example of available science being ignored, or even dismissed as propaganda, is in discussions involving marine parks. The decision to spend \$30,000 of trust funds to engage a consultant (a fisheries scientist rather than an ecologist or conservation biologist) to criticise the National Parks Association's Torn Blue Fringe report²⁰, when the government was preparing its own review, is an example of a clear anti-marine park bias and of questionable use of funds, particularly given the lack of academic or scientific rigour in the resulting report.²¹

Given ACoRF and RFSTEC's tendency to ignore science in instances when it conflicts with the committees' position, it is important that an appropriately qualified and independent marine scientist be included as a voting member on both committees (as well as on the Recreational Fishing Freshwater Trust Expenditure Committee (RFFTEC)). This would help improve the decision making process and provide the committees with independent, non-partisan scientific advice on a range of issues.

Following a suggestion from the conservation representative, ACoRF recently voted in favour of inviting a Marine Parks Authority representative to join the committees in order to provide credible information and a solid basis for marine parks discussions. However, further evidence of the concern over marine parks is made apparent by the decision to only give observational status to the new member, without any voting power.

The committees are a valuable forum in which to discuss the many and varied issues, projects and funding opportunities affecting the recreational fishing sector. However, in their current form, the committees are, in part, responsible for misinformation that is disseminated around the fishing community, particularly with respect to marine parks and the myth of the 'lock out', despite the availability of correct scientific information.

²⁰ Winn, P. 2008. *The Torn Blue Fringe: Marine Conservation in NSW*. National Parks Association of New South Wales, Sydney.

²¹ Kearney, B., 2009. *Response to ACoRF on the Torn Blue Fringe: Marine Conservation in NSW* (Winn 2008), March 2009.

The Nature Conservation Council would like to see more balanced committees (including scientific representatives) with greater objectivity and willingness to refer to available science in order to move forward in managing our coastal environments sustainably in the future.

In assessing the functioning of the advisory committees, we suggest the inquiry committee refers to the January 2006 NSW DPI *Review of Recreational Fishing (Saltwater) Trust*, in which a number of issues were raised about RFSTEC's procedures. A similar report is available for the RFFTEC from May 2006.

In addition to the committees already discussed, it is appropriate here to discuss the Marine and Estuarine Recreational Charter Management Advisory Committee (MERCMAC) and the charter industry's place in recreational fishing in NSW. While often considered as part of the state's recreational fishery, the charter industry is, in fact, commercial in nature and should undergo a separate Environmental Impact Statement (EIS) to the recreational sector. Other issues that the charter sector needs to improve upon are the continued poor reporting on catch and effort and the use of automated retrieval systems, particularly when fishing deepwater species.

This inquiry allows for a fundamental rethink on how to develop a reporting system in the charter sector that complements commercial catch and effort data and any future catch and effort data for the recreational sector.

(c) Value of recreational fisheries to the economy in New South Wales.

Recreational fisheries benefit the economy and continue to thrive alongside marine parks.²² However other recreational marine based activities are also very valuable to coastal communities, for example boating, swimming, diving and kayaking.

The major challenge, and responsibility, for any users of the marine environment is to minimise any negative impacts associated with that use.

(d) Gaps in recreational fishery programs.

Recreational fishing programs ought to include MPA educational information with a view to helping to foster widespread understanding of the need for and potential benefits of MPAs. Such programs would generate better informed debate and help move the MPA process in NSW towards a CAR network that took into account all user groups.

There is also a clear need to improve understanding of the impacts of catch and release fishing and minimise post release mortality and other negative impacts associated with capture. While there has been significant research on this issue both in NSW and beyond,

²² <http://www.batemansbaypost.com.au/news/local/news/general/fishing-for-park-compliments/1748754.aspx>

further work is warranted which should lead to an improved educational program on how to maximise survival rates of released fish.

(e) Ecologically sustainable development issues related to improving recreational fisheries.

The environmental impacts of recreational fishing are not insignificant²³ and there is increasing evidence that recreational fishing, including spearfishing, can have considerable impacts on aquatic ecosystems.^{24 25 26} Therefore, it is important that recreational fisheries be considered in any fisheries management strategy.

One of the key challenges facing recreational fisheries managers in NSW is that of quantifying total catch and effort and catch and effort for each species. Without this information, it is not possible to show recreational fishing as a whole is sustainable, and it complicates the already challenging task facing managers of commercial fisheries, who need to factor recreational take into any stock assessments if sustainability is to be achieved.

With this in mind, it is fundamental that the NSW recreational fishery undergoes an Environmental Impact Statement (EIS), as the commercial fisheries have been obliged to. While this in itself would not ensure sustainability, it is a necessary first step. Much of the preliminary work to prepare an EIS has already been done by I&I and proceeding with the EIS as was originally planned would add to the credibility of the recreational fishery as a sector that is concerned about its impact on the environment.

While there is a general perception that commercial fisheries have a larger footprint on the environment due to the fishing methods used and overall catch levels, in some cases the total recreational catch is equal to or sometimes significantly greater than the total commercial catch, as illustrated below (Table 1), and can be the dominant factor in causing overfishing.²⁷

The higher catch rates and, importantly, the uncertainty in the total recreational catch for many species,²⁸ demonstrate the need for significant improvements in research if ecologically sustainable development (ESD) principles are to be met. In addition to the

²³ McPhee, D.P., Leadbitter, D. & Skilleter G.A., 2002. Swallowing the bait: is recreational fishing in Australia ecologically sustainable? *Pacific Conservation Biology*, 8: 40-51.

²⁴ Cooke, S.J. & Cowx, I.G., 2006. Contrasting recreational and commercial fishing: searching for common issues to promote unified conservation of fisheries resources and aquatic environments. *Biological Conservation*, 128: 93-108.

²⁵ Lewin, W.-C., Arlinghaus, R. & Mehner, T., 2006. Documented and potential biological impacts of recreational angling: insights for conservation and management. *Reviews in Fisheries Science*, 14: 305-367.

²⁶ Nevill, J., 2004. Impacts of spearfishing. Published at <http://www.ids.org.au/~cnevill/marineSpearfishing.doc>

²⁷ Queensland Government, 2009. Annual status report 2009. Rocky reef fin fish fishery. Department of Employment, Economic Development and Innovation, Brisbane.

²⁸ For example, the estimated recreational catch of mulloway ranges from 100-500 tonnes (Table 1). This highlights a huge level of uncertainty in catch levels for a species that is classified as overfished.

sometimes high catch levels and the uncertainty, the estimates are based on research undertaken in 2003 and are in urgent need of updating.

Table 1. Comparison of total annual catch by NSW commercial and recreational fisheries. Source: Status of Fisheries Resources in NSW 2006/07.

Species	Exploitation status	Commercial catch (tonnes)	Recreational catch (tonnes)
Bluespotted Flathead	Fully Fished	125	320-450
Dart	Undefined	<5	15-50
Dusky Flathead	Fully Fished	120	570-830
Flounders	Undefined	<20	10-20
Grey Morwong	Overfished	40	130-210
Hammerhead Shark	Undefined (IUCN Vulnerable/Endangered)	<5	10-50
Luderick	Fully Fished	350	270-550
Mackerel Tuna	Undefined	15	<50
Mahi Mahi	Undefined	<5	100
Mako Shark	Undefined (IUCN Vulnerable)	6	30-140
Mulloway	Overfished	40	100-500
Pearl Perch	Uncertain	13	<30
Sand Whiting	Fully Fished	14	230-460
Snapper	Growth Overfished	200	180-250
Spanish Mackerel	Fully Fished	5	10-100
Spotted Mackerel	Fully Fished	25	10-100
Sweep	Fully Fished	40	30-60
Tarwhine	Fully Fished	75	130-210
Teraglin	Fully Fished	10	70-110
Tiger Shark	Undefined (IUCN Near Threatened)	5	10
Yellowfin Bream	Fully Fished	360	820-1070
Yellowtail Kingfish	Growth Overfished	125	120-340

An EIS would help with current management but would also help determine at what level recreational fishing effort can be sustainable and where the current effort sits on that scale.

We suggest an EIS should also address, or suggest research projects that address, the following issues:

- Assess the scientific basis for setting size and bag limits. The minimum size limit for mulloway, for example, stands out as being inappropriate as it is well below the size at maturity.²⁹ The precarious state of mulloway stocks indicates a need for a radical reassessment of this minimum size limit.

²⁹ The minimum legal length (45 cm TL) is much smaller than the size at sexual maturity (~70 cm TL) for females. In: Status of Fisheries Resources in NSW 2006/07.

- Assess any negative effects of selectively removing larger fish and highlight instances where maximum, as well as minimum, size limits might be appropriate.
- Measure cryptic mortality of fish that have either escaped before capture or have been released post capture.
- Waste, in the form of lost gear, bait bags and other litter, either lost accidentally or left behind through carelessness, has an impact on the environment but that impact needs to be quantified and efforts made to reduce it. There have clearly been positive steps taken to reduce damage in this area with the invention of biodegradable line and the use of non stainless steel hooks and circle hooks. We look forward to continued improvements in this area.
- Given that recreational fisheries cannot be viewed or managed in isolation and must be considered alongside commercial fisheries and other uses of the marine environment, it is desirable to move towards an ecosystem-based approach to managing recreational fisheries and the application of risk-based methods, something lacking in NSW at present.³⁰
- The issue of Fish Aggregating Devices (FADs) should also be considered as they are incompatible with ESD principles. FADs artificially draw fish in from surrounding waters, concentrating their numbers in a small area, reducing the skill levels required by fishers, and ultimately increasing the overall depletion rates for the species concerned.

It is hard to reconcile the policy of fish stocking with ESD principles. Fish stocking should only be used as a last resort as it merely serves to temporarily mask the real causes of fish decline and can hamper stock and ecosystem recovery efforts. Stocking of non-native fish, such as trout, in freshwater systems, damages the natural environment and is harmful to native species and should be phased out.^{31 32} In addition, the CoP states, "stocking should be the last option" (Article 11.26) and "Introduction of non-native species to create fisheries should be avoided" (Article 11.27). (See footnote 9).

Another key issue that the inquiry should investigate and make recommendations on is the practice of targeting sharks. There is a growing realization that sharks are inherently vulnerable to fishing pressure and at high risk of extinction compared to other fish species.³³ At present, the recreational take of sharks in NSW is largely guesswork, with

http://www.dpi.nsw.gov.au/research/areas/systems-research/wild-fisheries/outputs/2008/972/status_short/Mulloway.pdf

³⁰ Scandol, J.P., Ives, M.C. & Lockett, M.M., 2009. Development of national guidelines to improve the application of risk-based methods in the scope, implementation and interpretation of stock assessments for data-poor species. Fisheries Final Report Series No. 115. FRDC Project No. 2007/016. Industry & Investment NSW, Cronulla Fisheries Research Centre of Excellence.

³¹ Gillespie, G.R., 2001. The role of introduced trout in the decline of the spotted tree frog (*Litoria spenceri*) in south-eastern Australia. *Biological Conservation*, 100(2): 187-198.

³² Crowl, T.A., Townsend C.R. & McIntosh, A.R., 1992. The impact of introduced brown and rainbow trout on native fish: the case of Australasia. *Reviews in Fish Biology and Fisheries*, 2(3): 217-241.

³³ Field, I.C., Meekan, M.G., Buckworth, R.C. & Bradshaw, C.J.A., 2009. Susceptibility of sharks, rays and chimaeras to global extinction. *Advances in Marine Biology*, 56: 275-363.

huge ranges of uncertainty, and based on data from 2003.³⁴ However, it is estimated that 1.2 million sharks are caught annually by recreational fishers across Australia, with around 200,000 of those retained.³⁵ In addition, the majority of shark species targeted by recreational fishers in NSW are listed as 'threatened' or 'near threatened' globally and in the Australian region on the IUCN Red List of threatened species.³⁶ Ultimately, efforts must be made to educate recreational fishers not to target sharks and other internationally threatened species and to release alive any sharks that are accidentally captured. In the short term, mandatory reporting of recreational shark catches should be introduced as a matter of urgency.

Conclusions

While the Nature Conservation Council appreciates that the terms of reference necessarily limit the scope of the inquiry and the submissions, it is fundamental that any investigation into the benefits and opportunities for recreational fishing be based on a realisation that recreational fishing is built on a healthy environment. Future recreational fisheries will rely upon successfully recovering and maintaining marine ecosystem health.

Recreational fisheries management, and the policies of peak bodies and industry leaders, should be based on science and where that science is lacking, a precautionary approach to environmental exploitation. At present, this is not always the case, particularly with regards to marine parks.

Most activities have some impact on the natural environment. Recreational fishing, by its very nature, has a direct impact. That impact is manageable and need not conflict with ESD principles. Given the significant gaps in information on the catch, effort and effects of recreational fishing in NSW, we urge the committee to recommend an EIS for recreational fishing as a first step towards demonstrating sustainability.

If you have any questions about the points raised in this submission, please contact Ben Birt, Marine Conservation Officer, c

Yours sincerely,



Cate Faehrmann
Executive Director

³⁴ The estimated annual recreational whaler shark take is 40-160 tonnes. See Status of Fisheries resources 2006/07: <http://www.dpi.nsw.gov.au/research/areas/systems-research/wild-fisheries/outputs/2008/972>

³⁵ McLoughlin, K. & Eliason, G., 2008. Review of information on cryptic mortality and the survival of sharks and rays released by recreational fishers. Bureau of Rural Sciences, Canberra.

³⁶ <http://www.iucnredlist.org/>