

# Submission to Productivity Commission Report – Marine Fisheries and Aquaculture

## Executive Summary

There should be explicit recommendations relating to –

The development of methodologies to allow for more transparent comparisons of social and economic components of recreational fishing versus commercial fishing. This would also be useful for Indigenous fishing.

A requirement for funding the quantification of the social and wellness benefits of fishing. This should examine the social licence to operate of the various sectors. There should be a recommendation to examine cost effective data collection, with special emphasis on citizen science models.

An explicit recommendation that DAWR especially, and AFMA, resource facilitative recreational fisheries management and engagement processes. Both should obtain expertise in recreational fisheries management and ensure adequate resources for transparent and objective cooperative engagement with the sector, and the development of policies designed to optimise the community return from their catches and/or shares.

That the responsible agency be directed to allocate a fair and reasonable share of the SBT resource to the recreational sector; that this be done from existing allocations and agreement sought that consequently compensation for historical discrimination not be sought.

That the Coolangatta Communiqué be revisited and progress made on its recommendations where appropriate, or updated as required.

That public good funding by FRDC explicitly recognise and include the recreational fishing sector's economic benefits and any contributions made by the sector are able to be explicitly matched from core funding.

That funding models for non-consumptive users be examined in addition to recreational fishing funding models. That Treasury examine (objectively) the feasibility of a Wallop-Breaux funding model and that an independent panel, including recreational fishing interests, examine models for the allocation of benefits to participants and the wider community.

## Introduction

This Productivity Commission report follows a previous excursion into the area in 1992 with its report into cost recovery for managing fisheries. While this latest report is a great improvement on the previous attempt, there are still many fundamental issues which need further consideration or qualification.

The submission is prepared on the basis of 30 years of Australian fisheries management experience, in recreational fisheries, commercial fisheries and marine and terrestrial conservation management. The author has experience in government and with NGO's in the recreational fishing, sport and health industries.

While the bulk of this submission will discuss the rather cursory consideration of recreational fisheries benefits, there will be discussion about consistency, equity and assumptions.

## A fundamental error

There is a significant error in the report which must be addressed.

The report states: *“The cost of managing New Zealand’s wild catch fisheries and aquaculture production is 6–7 per cent of its gross value of production compared to 12 per cent in Australia (Commission estimates).2”*

In Chapter 10 – the report additionally states: *“The Commission estimates that the cost to Australia’s fisheries management agencies of managing Australia’s wild catch fisheries and aquaculture production is approaching \$290 million per annum (or 12 per cent of the annual value of all seafood production).51”*

This is the sort of figure which is quoted by Treasury departments and politicians to demonstrate that the (commercial) fisheries are overly subsidised in Australia.

The \$290 million dollar cost includes expenditure on recreational fishing activities, yet the value of production does not include any recreational benefits or quantify the contributions which the various industries make to offset this amount.

Indeed the report fails to identify (other than cursorily quoting economic processes without attempting to quantify) recreational benefit. New Zealand for example spends considerably less on recreational fisheries management.

Here are some figures from the Western Australian Department of Fisheries Annual Report for 2104-2015 that clearly illustrate this problem.

Benefits from commercial fishing and aquaculture \$490 million

Benefits from recreational fishing \$1010 million

Expenditure on commercial fisheries and aquaculture - \$80 million (12.5%)

Expenditure on recreational fisheries - \$19 million (1.9%)

Using total expenditure against ONLY commercial benefits – (20.2%)

Using total expenditure against total benefits – (6.6%).

Since the Commonwealth currently expends effectively nothing on recreational fisheries – the figure may be accurate in that and only that jurisdiction. However, in all other jurisdictions, the change from 20.2% to 6.6% is significant and extremely important.

Prokop 2013 stated - *“The Department of Agriculture Fisheries and Forests (DAFF) (Note – now DAWR) does not understand recreational fisheries, views it as resource intensive and counter to primary production, and applies approximately one position from a 2012/13 budget of \$1.2 billion. Recreational fishing has been valued at between \$1.85 and nearly \$10 billion.*

*The Australian Fisheries Management Authority (AFMA) uses a definition of economic efficiency that excludes recreational fishing.”*

**SUMMARY:** Economic comparisons of inputs versus outputs values needs to include all the outputs – ie it needs to include the total fishing value that is the sum of the economic value of each sector.

## Assessing the common property costs and benefits

Given that we are dealing with a renewable and common property natural resource, questions need to be asked about the transparency and equity of management, expenditure and utilisation of stocks between and across sectors.

The report states: *In the Tasmanian scalefish fishery, 70 per cent of commercial fishers had a below average gross catch value of \$22 000 or less in 2015.*

If the Western Australian figure translates at all across jurisdictions, the community is paying in management costs much more the gross value of the catch of some minor fisheries every year. Recfishwest has previously stated – ‘The government should not over value the lifestyle needs of a small number of commercial fishers over the overall benefit of the recreational fishing sector.’ At a minimum, it is imperative to try and better define the problem and a range of solutions.

There is a need for a more considered and cooperative approach. Not all fish resources, fisheries or community values are the same. There are high value commercial fisheries such as pearling and prawns that only indirectly impact on recreational fisheries. But there are fisheries such as gill netting for mullet in estuaries (or the now prohibited G-trap netting for Australian herring in WA), where very small commercial benefits are realised at a potential great loss to tourism, leisure and wellness benefits.

Prokop (2013) states - *“Even if socio-economic research does not become a focus, the overall benefit to the community of having inshore access to fish stocks for the recreational sector is widely recognised through political channels. A prominent WA politician recently said “I have 20,000 constituents who fish for fun and about 10 who do it commercially, you tell me how I’m going to vote on resource sharing issues.”*

*The persuasive question will be – Will the fish buying public notice or care if a certain species becomes unavailable?”*

*The community is capable of answering this question – likely ‘no’ for herring and bream; ‘yes’ for King George whiting and snapper. This will then focus the debate on how you can harvest King George whiting with minimal impact on bream stocks rather than an ‘all or nothing’ approach by both sectors.*

*The other important question to be addressed is; is any adjustment a restoration of an historical inequity, or a shift in catch share from the commercial sector. The answer to this question has fundamental funding consequences, especially for government.”*

The report appears to be making a judgement in stating:

### Box 4.1

#### *Significant recreational catch of key species*

*Many species are harvested by recreational and commercial fishers and in some instances recreational catch is estimated to exceed commercial catch.*

- *The 2013-14 New South Wales survey of recreational fishing estimated recreational harvest weights for 10 key species and compared these with commercial fisheries data. It found that recreational catch exceeded commercial landings for five of the 10 species - dusky flathead, sand flathead, mulloway, tailor and yellowtail kingfish (West et al. 2015).*

- *Queensland's 2013-14 recreational survey estimated that the recreational harvest of snapper and yellowfin bream are similar to the commercial harvest, whereas the recreational harvest of dusky flathead is more than twice the commercial harvest (DAF Qld 2015c).*
- *The 2013-14 South Australian Recreational Fishing Survey estimated that the recreational harvest exceeded commercial production for King George whiting (58 per cent of the total harvest) (Giri and Hall 2015).*
- *The 2012-13 survey of recreational fishing in Tasmania estimated the annual recreational harvest of flathead at 236 tonnes, almost six times the commercial take. The shares of key species taken by the recreational sector in the Tasmanian commercial scalefish fishery were similar to or larger than that taken by commercial fishers for blue warehou, flathead, flounder, mullet, cod, barracouta, jackass morwong, jack mackerel, striped trumpeter, and southern calamari (Lyle, Stark and Tracey 2014).*

Sadly, the productivity commission report does not consider charter fishing in any detail. It is an industry which 'straddles' commercial and recreational fishing (a paid activity which is considered recreational fishing), yet receives none of the benefits of commercial fishing such as primary producers rebates.

### **Optimum community return from the resource**

The question regarding relative recreational catches is, (and it is ONLY addressed by Western Australia in its pursuit of OPTIMUM rather than maximum sustainable or economic yield), 'so what'?

There is no public outcry over a 95% allocation of Western rock lobster to the commercial sector. The report touches on the basis for that allocation process and it has been accepted.

To then infer that because the recreational sector is catching more dusky flathead in NSW, it must therefore be controlled, is a rash generalisation. Determining the optimum community return from the resource and then setting in place management that delivers this IS an important consideration. However, to date the supposition that the recreational catch is uncontrolled and uncontrollable is not borne out by reality. The consequences of further explicit recreational controls which result in de facto re-allocations are a topic that could rightly have been considered in the productivity commission report.

Let us quickly examine the Western rock lobster question in some detail and ask why these secondary and important issues have been ignored by the report.

The WA Fisheries annual report provides some figures. The recreational nominal allocation was 388 tonnes. The mean assessed catch was 249 tonnes or 64% of the allocation. The commercial take was 101% of their allocation because the government, in their wisdom, chose to allocate an additional amount for drip loss to the commercial sector (and not applied to the recreational sector).

The ongoing concern is that the 36% (139 tonnes) underutilised by the recreational sector is being de facto – reallocated back to the commercial fishing sector at the ratio of 95/5 as per the agreement. There is no way for the recreational sector to 'bank' a biological or economic benefit from conservative management.

Prokop (2013) states – *"The critical issue which still remains unresolved, is addressing the equity issues associated with fin fish management between the commercial and recreational sector.*

*If there are not clear ways forward, then there will be significant overt lobbying for political decisions which address many of the historical inequities, especially relating to spatial management, size limits, and different approaches to incidental mortality by commercial and recreational fishers.”*

### **Recreational fishing participation versus efficiency – Perception or reality?**

The report uses populist arguments that recreational fishers must continue to grow in catch and effectiveness.

Prokop (2013) considered this topic in far greater detail – *“Fishing is popular. But in the past, it was even more popular. A 1978 study Fish and seafood consumption in Australia: a consumer survey 1976-77 - found that in Perth in 1976-1977, 45.6% of households had a member that goes fishing for recreation. This measure makes it more difficult to compare with participation rates where individual anglers were counted, but the figure is exceptionally large.*

*Participation among teenagers has dropped considerably (Henry and Lyle 2003), probably due to competition from other activities.*

*Sutton (2007), in a survey of Queensland recreational fishers between 1996 and 2004, found the recreational fishing participation rate ( i.e., Queensland population aged five or over that participates) declined from 28.1% to 20.6%.*

*Of the Queenslanders who fished, 70% reported the constraints to fishing were predominantly lack of time, crowding, unavailability of facilities and costs.*

*Fishers with higher incomes, fishers with higher dedication to a fishing lifestyle, fishers who placed higher importance on motivations related to catching fish and relaxation, and fishers who were male were more likely to experience constraint.*

*This is consistent with findings elsewhere. Floyd et al (2006) reported downward trends in recreational fishing in the USA. In 2001, 8% of females 16 years and older and 25% of males fished. Gender was found to be the most significant predictor of fishing participation.*

*Other research shows a high degree of turnover of recreational fishing participants. Fedler and Ditton (2001) found that nearly 25% of the anglers in a particular year will become inactive within 1 or 2 years.*

*Whereas anglers cited “a lack of time” as their most common constraint, it was also their most important reason for quitting fishing.*

*A number of authors comment that participation in active strenuous activities usually decreases with age. This runs counter to the widely held belief in Australia that retirees and grey nomads are fishing every day and catching all the fish.*

*Bissell et al (1998) identify a reduction of rurally raised males as a contributing factor in reduced fishing participation, but note that this is offset with increased population in coastal areas, a factor which is likely to occur if Perth continues its north-south coastal urban sprawl.*

*Arlighaus (2006) provides an excellent summation, "To conclude, major factors affecting recreational angling participation appear to include demographic and social changes such as urbanization, an aging population, changes in income and educational levels, and the changing role of women in society. Fisheries managers should recognize how demographic change can impact the angling population and the environment in which management occurs."*

With the possible exception of the Northern Territory and Western Australia, recreational fishing participation is dropping at a far greater rate than the population is increasing. One significant factor is increasing urbanisation, yet, with the exception of Victoria, governments are failing to develop explicit urban recreational (including fishing) opportunities.

Prokop (2013) provides a more in-depth assessment of technological improvements which are increasingly being accepted as an unmanaged impact (also as in Management Paper 252 described below).

*"The impact of technological improvements on the sustainability of fish is difficult to quantify. It is confounded by other factors such as increasing total participation and other factors.*

*Conversely, it can be argued that ALL improvements in fishing relate to technological improvements. Cars, aluminium boats, outboard motors and paved roads had a huge impact on fishing effectiveness. The extent to which these changes had a greater or lesser impact than GPS, electric motors, braid line and larger and more boats, has not been well studied.*

*The commentary in Western Australia has been speculative and alarmist, without identifying the qualitative nature of what is presented as 'fact'.*

*Fisheries Management Paper No. 252, A Resource-based Management Approach for Recreational Fishing in Western Australia 2012 – 2017 (2012), states "Over the past 15 years, dramatic improvements in fishing technology have had a significant impact on the way people fish - particularly from boats. The digital technology explosion has meant that small, inexpensive, high quality fish-finding and navigation equipment is now readily available and widely used."*

*"The availability of affordable Global Positioning Systems (GPS) and colour sounders is helping more recreational fishers to catch more fish, more often - even those that previously had a low level of success due to their inexperience. This technology is constantly advancing and becoming more affordable."*

*"The increased exploitation rate as a consequence of improved technology is a major factor contributing to sustainability issues with demersal scalefish in the West Coast Bioregion."*

*"Ongoing advancements in fishing technology are likely to further improve the accuracy with which anglers can target fish in the future. Fibre optics, better digital imaging equipment, and other advances will greatly increase the transparency of the ocean, and make the finding of fish increasingly a matter of science and applied technology rather than experience and skill."*

*The fact that improved technology can improve catches is no longer seriously debated, but to include unsubstantiated, emotive and alarmist language by the managers of the resource is not necessarily helpful.*

*What is not mentioned is that technology is a two way street. There have been tremendous advances in survival of released fish, using improved technology (Sawynok 2008) and this has been enhanced by increasing community stewardship of the resource which results from these community engagement processes.*

*The conflict and conundrum of using poor science and alarmist language is best contrasted with St John and Syers (2005) where the negative factors associated with releasing fish were emphasised. Data was later found to have been misrepresented in parts of this study.*

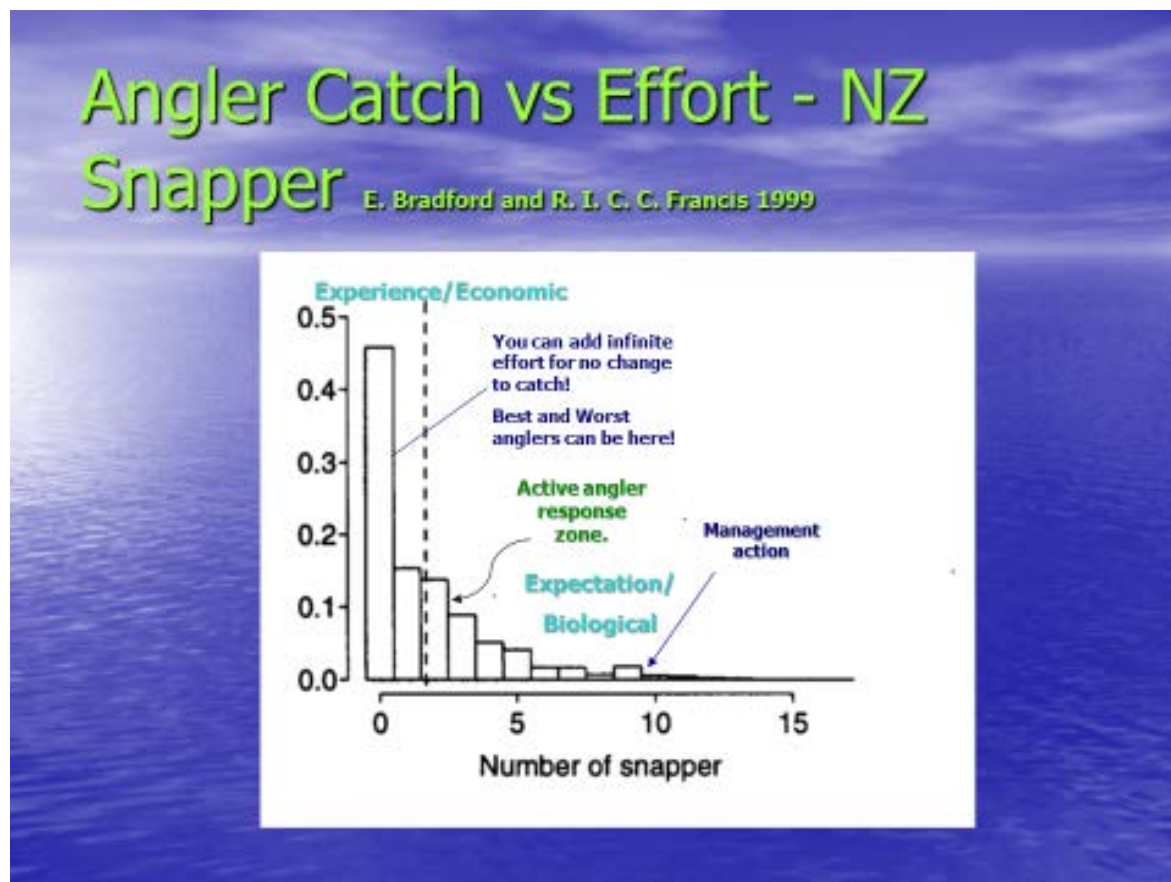
*Recfishwest found very different results with angler cooperative tagging programs, with one snapper being recaptured 6 times from the 'dead zone' apparent from St John and Syers' work. In addition, the use of anglers to assist research found spectacular movement and survival results with Samson fish tagging and an increase in the number of legal sized fish (including dhufish) being released by anglers assisting the program.*

*In a recent study, Samson fish were caught in depths ranging from 80 to 133 metres and then placed into an at-sea enclosure to monitor their survival. This study showed that the survival rate of the Samson fish that were released was 93 per cent. Handling, the time spent out of water and exhaustion was thought to have contributed to the mortality, or death, of the remaining seven per cent of fish (Rowland 2009).*

*There has been a reluctance to embrace new and emerging technology across government. Some of this is due to conservatism towards changes and some of it is due to the rapidly evolving nature of these technologies.*

*Technology should be viewed as an opportunity and not a threat. An investment in smart technology which enables a recreational or commercial fisher to photograph, measure and/or weigh individual fish as they are caught and have that information sent to a database to allow for real time monitoring of catches is inevitable and should be actively pursued."*

## Recreational effort as a proxy for catch – a real world example



The slide above clearly demonstrates some of the difficulties with sweeping assumptions about recreational fishers catches and the utility of effort as a proxy for catch. With nearly 50% of participants either catching or keeping nothing – the frequent application of parametric tests leads to faulty conclusions.

Interestingly, many of the resource allocation and management issues discussed in the report were clearly addressed in the Coolangatta Communiqué in 2002 which is not referenced by the Productivity Commission report.

(<http://www.ausfish.com.au/vforum/archive/index.php/t-117185.html>)

Given some of the above, the question which I asked the then Minister Ian Macdonald at Coolangatta in 2002 – and which has never been seriously addressed or answered is – “Do you know of ANY other industry, with so many participants and generating so much economic activity, that receives so little consideration from government, as recreational fishing?”

The report states - “While commercial catch is usually measured and controlled, recreational fishing catch is subject to much less scrutiny. Gaps or separations in responsibility between jurisdictions can exacerbate these problems. This is evident where AFMA (the Australian Fisheries Management Association) has devolved responsibility for recreational fishing to the states (despite AFMA having the legislative capacity to regulate recreational fishing). Disjointed management has the potential to impede effective management of a number of valuable species, such as southern bluefin tuna (chapter 6).”



Recreational fishing has been subject to more management reforms than commercial fisheries since 1990. This is partly due to there being little management before this time, but it is incorrect to state that recreational fishing has not been scrutinised.

(See for example Prokop, (1995), (1996))

AFMA and DAWR have little understanding of, or ability to manage the recreational sector. Any and all engagements have precipitated direct political intervention rather than negotiation or consultation.

The report states - *“The Commonwealth policy specifies that maximum economic yield (MEY) should be pursued.”*

Unfortunately, the recreational sector is not believed to provide any economic yield, as its benefits are wilfully ignored by both AFMA and DAWR.

### **Valuing the recreational catch – the need for new methodologies**

The report fails to address in even cursory terms why politicians are increasingly supporting recreational fisheries. Rather, the report gives a rehash of economic rhetoric to justify the Commonwealth’s position.

*Several studies (for example, Dominion Consulting (2005), EY (2015) have identified expenditure on recreational fishing, and these have been used by proponents to estimate the economic worth of recreational fishing (and, consequently, argue for a greater allocation of total catch). However, total expenditure figures are of limited use for reallocation decisions because they provide a measure of the total value recreational fishers place on access, rather than the marginal value they would place on more access. A more accurate method to estimate marginal value for recreational fishers is a valuation technique known as the travel cost methodology (Hundloe 2002; Mazur and Curtotti 2016). This methodology provides a way of estimating how much more recreational fishers would pay for an additional trip to a recreational fishing destination (box 2.5). This can then be compared with the value other groups obtain from changes in access to fishery resources. Another method of estimating the marginal value of recreational fishing is to survey how much recreational fishers would be willing to pay for more access to fishery sites (so-called contingent valuation methods).*

While total valuation does indeed overvalue recreational fishing, the philosophical arguments over absolute versus marginal values are used interchangeably and inevitably to the detriment of non-commercial uses. As per the criticism of the biased use of total expenditure on fisheries management against only economic benefit of commercial fisheries, the report glosses over these inconsistencies in an economic sense.

Contingent valuation methods are similarly grossly inaccurate at providing a measure of recreational fishing ‘value’. This is partly due to the fact that the driver for recreational fishing is experience rather than economic return. Secondly, many recreational fishers return most if not all of their fish already. To ask them to value a second fish when they are already releasing most of their catch voluntarily is illogical to the point of nonsense.

Here is some data from my own recreational fishing trips to New Zealand:

During the period 26 November 2010 to 16 March 2016, 1436 fish were caught: 1302 brown trout, 63 rainbow trout, 61 Chinook salmon, 1 Sockeye salmon, plus 9 redfin perch (redfin not included in other catch statistics).

Table 1.1: Summary statistics of fish caught, kept and time to catch or keep fish, for different fishers.

\*Several days had multiple guests.

Fisher	Fish caught	Physical days fished	Hours fished	Average time to catch one fish	Fish kept	Average time to keep one fish	Fish kept (%)
Primary Angler	1325	184	1065	48 minutes	71	15 hours	5.4%
Guests Overall	111	57	330*	2 hours 58 minutes	6	55 hours	5.4%
'Best' Guest	43	9	79.75	1 hour 27 minutes	1	79 hours 45 minutes	2.3%
<b>Total</b>	<b>1436</b>	<b>-</b>	<b>1395.00</b>	<b>58 minutes</b>	<b>77</b>	<b>18 hours 7 minutes</b>	<b>5.4%</b>

This Table clearly demonstrates the difficulties in assigning marginal values to recreationally caught fish. A catch rate of one fish (greater than 25 cms were included) every 48 minutes is exceptional. The more common measure used, where only retained fish are counted, gives one fish every 15 hours fished, which is extremely poor.

A total of 1046 fish (of the 1436) were captured over a five year period in a system that is only 8 kilometres in length – indicating the local importance of this water (to the anglers in the study) and the multiple use upon which the fishery is clearly based.

Additionally, the table demonstrates the huge differences in success rates of different anglers.

Dr Daryl McPhee, in a paper on citizen science that we are preparing, sums the difficulty of amalgamated data extremely well – *“Statewide or national fishing surveys are an excellent tool for providing broad-scale data on information such as overall participation rates and general demographic snapshots, but they provide limited information on the specific behaviours and motivations of recreational fishers, and satisfaction with the recreational fishing experience. They are also very expensive and as such are typically only undertaken infrequently. Given that recreational fishing is a leisure activity, an understanding and measure of satisfaction and the factors that influence it is central to managing the activity for optimal community benefit. The issue with broad-scale statewide or national surveys is that attributes of the more avid fishers get “swamped” by the numerically dominant fishers that fish infrequently. In effect, they homogenise the highly heterogeneous activity that is recreational fishing.”*(emphasis added).

### Marginal valuations of commercial fisheries

The paper correctly points to the marginal benefits of management and allocation changes for the commercial fishing sector.

*Changes to the allocation for commercial fishers can affect the quantity of catch commercial fishers can sell, and the costs they face in catching these fish. Large changes in allocation may also affect the prices at which fishers sell their produce. The interaction of these factors changes the value commercial fishers obtain from accessing the fishery. The difference between the value obtained under the new allocation and the previous allocation represents the marginal value arising from the change in allocation.*

Unfortunately, most comparisons between commercial and recreational economic benefit use widely varying and largely discriminatory comparisons. The recreational methodologies use infinite discount (or replaceability) methods yet compare commercial market returns. The methodology described above gives a more true marginal benefit of the commercial benefit, yet is rarely applied. In essence, recreational fishing seeks to value the experience, whereas traditional economic analyses deal with commodities. Most recreational fishing management strategies seek to either maximise the experience or maximise inefficiencies, without impacting unduly on the experiences.

Section 92 of the Australian Constitution allows for free trade between the states. The report discusses some of the difficulties of varying management strategies between state jurisdictions especially for straddling stocks. (see for example - Prokop, F. (1995), (1996)). Therefore, in an economic sense, the 'products' are, by the Constitution, equally replaceable.

Following from this, it could be reasonably argued that the true marginal value for a commercially caught NSW pink snapper is the premium, and only the premium, which a consumer would pay over what they would pay for an equally replaceable Shark Bay pink snapper. In instances where NIMBY applies and a consumer (or recreational fisher) would pay a premium for exploitation that does not directly affect them and their local area, then the result might well be a negative number.

An assessment and comparison of this type marginal value could give an objective assessment of the economic validity of the different management strategies employed for the same resource. If NSW (or other) consumers are willing to pay a higher premium for their smaller (so-called) plate sized snapper, then management that allows for this without over-exploiting the resource is possible. It would be nice to see economics and biology acting together rather than in constant opposition.

Indeed, many years ago, Dr Paul McLeod, when chairing the Australian salmon and herring resource allocation committee noted that the marginal value of a commercially caught Australian herring was about 3-4 cents. His view was that to justify a resource re-allocation, the marginal value of a recreationally caught herring only had to exceed 4 cents. The methodology became largely moot against that form of null hypothesis.

### **Who controls the allocation process and ongoing management?**

*An allocation policy will only work if regulators are willing and able to hold sectors to their allocated share or access rights.*

The paper correctly identifies this issue as an important one. As already discussed, the Western Australian government has chosen to give the commercial rock lobster industry more than 100% of their allocation, while failing to address the ongoing management implications of the recreational sector consistently under-exploiting their share. If the government is going to act as 'agent' for want of a better term, of the recreational sector's share, then allowing a de facto reallocation that potentially disadvantages that sector in the future requires careful consideration and a transparent process.

While the position put in the report is valid, who is going to ensure that the government is going to fairly uphold its stewardship responsibilities?

### **The Southern Bluefin tuna conundrum**

Given that it could be strongly argued that the government was negligent or irresponsible to allocate 100% of the Southern Bluefin tuna (SBT) catch to the commercial sector – why should the recreational sector be expected to enter a (narrow and likely highly skewed) market to buy back a share of the resource that was given away without their consideration? Interestingly, a similar debate is being held with respect to Indigenous rights which are increasingly being found against the government.

If this were to apply in the case of SBT, is the recreational sector then entitled to compensation for its foregone historical catches? Irrespective, the reluctance of AFMA in particular to acknowledge or recognise recreational catches appears to at least partly stem from a reluctance to admit that past management processes were flawed and prejudiced all but a small number of primary stakeholders.

These are fundamental questions if the recommendation is adopted – given the total lack of engagement with, and understanding of the recreational sector by the Commonwealth.

*DRAFT RECOMMENDATION 6.2 The Australian Government should set allowable catch limits of southern bluefin tuna for all fishing sectors (including the recreational sector). Sectoral allowances should be in place in advance of the southern bluefin tuna fishing season commencing on 1 December 2018.*

*In consultation with fishers, the Australian Government and state governments should negotiate the nature of, and responsibility for, the day-to-day management of recreational fishers targeting southern bluefin tuna.*

There appears to be an internal contradiction with the statement: *For practical reasons, the Commonwealth may continue to draw on the states' expertise and proximity to recreational fishers for the day-to-day management of the recreational effort applied to SBT. However, under such an arrangement the states would need to be accountable for compliance with the catch allocation assigned to their recreational fishers.*

This acknowledges the lack of understanding of recreational management, but presumes that a transparent and equitable allocation (a far more important consideration under a rights based framework) can be made. There would be little belief in the wider recreational fishing sector that anything other than a desire to institutionalise historical discriminations would be the driver by Commonwealth bureaucrats and would result in their overt political behaviour as the best (or only) way for procedural fairness in this decision. (See the failure to address the recommendations of the Coolangatta Communiqué).

This position is reinforced by the statement in the report that – *“the Australian Southern Bluefin Tuna Industry Association (2012) expressed concern over political involvement in a total allowable catch decision for a Commonwealth fishery.”* This appears to be a blatant attempt by industry to ensure that the people who have historically rewarded them are able to continue to do so without transparency or oversight by elected officials.

Notwithstanding these concerns, the ongoing management of the recreational take of SBT is complex and important. Australia gets insufficient recognition for the recovery of large SBT

(although there is little doubt that previous AFMA management policies contributed to overcapitalisation and a part of the stock decline).

This is one fishery where a recreational ‘tag’ system might well be justified. But it needs a clear investment in transparent discussions and well defined penalties and rewards.

An empowered and community driven management strategy will likely result in conservative management. As discussed for Western rock lobsters, the recreational sector is well under its nominal allocation. However it cannot, under existing arrangements, ever be rewarded for this conservative behaviour, yet will quickly be penalised if they exceed their allocation.

Indeed the recreational take in Western Australia for ALL fisheries for which there is a nominal or explicit allocation – is well under the target. These include – West coast demersal species – 61% of target. Roe’s abalone 50%. Marron – 61%.

### **Recovering costs**

Recovering costs is another challenging topic covered by the Productivity commission report.

While the principle of user pays should be used wherever possible, it is fair to say that the recreational sector pays for the services it currently receives from the Commonwealth. It pays nothing and receives no consideration or benefit from the Commonwealth. Any benefit it accrues comes through the Fisheries Research and Development Corporation (FRDC) against public good funding.

Whether recreational fishing licences are cost recovery or a resource rent should be subject to assessment by an independent and expert panel, which includes people with expertise in recreational markets. Licences certainly cannot be considered a return to the community as the productivity commission completely ignores any social or economic considerations against the sector, instead opting for a ‘they should pay because they can’ approach. The conservation or non-consumptive sector is not proposed to be cost recovered, even though they, in a conservation as well as a fisheries management sense, are highly subsidised and are beneficiaries of many management reforms.

*In sum, licensing provides a practical and proportional way of better incorporating recreational fishing into harvest and other management strategies. Taking this action will reduce the risk and likelihood of more draconian measures to manage and mitigate the impacts of the sector down the track. The Commission considers that all jurisdictions should require recreational fishers to obtain licences (or permits) to fish. The Australian Government should consider licensing if it takes on greater responsibility for the management of recreational catch (chapter 6).*

While the conclusion of wider adoption of user pays is defensible, the logic; especially since the Commonwealth has not earned respect or trust; is not.

It is also disappointing that the report gives credence to the flawed and basically incorrect statement: *Some stakeholders noted that the lack of licensing arrangements in some jurisdictions has compromised resourcing and effective fisheries management, and led to unjustified cross-subsidies from commercial fisheries. Wildcatch Fisheries SA commented: Where recreational fishers don’t pay licence fees, funds must be provided from general revenue to cover the budget for management, compliance and stock assessment. In South Australia, there is no transparency as to how much money is provided and without such it is alleged that considerable cross subsidisation takes place from the cost recovered fees paid by the commercial sector. The failure to have a robust funding base*

*to ensure that there is investment in research, management and compliance for and by recreational fishers has seen the ability to support effective fisheries management compromised for over a decade. (sub. 10, p. 5)*

The Western Australian examples provided clearly show that the community is much more highly subsidising commercial fisheries than recreational fisheries. Irrespective, both sectors have a reasonable expectation of some form of subsidy, given that there are intergenerational and environmental benefits from sound management, and non-consumers (irrespective of whether they are seafood consumers – domestic OR imported) have a strong, but unfunded, vested interest in sustainable and viable marine environments.

*Given this, the Commission does not consider that resource rent charges can be effectively applied in most fisheries at the present time. It is also worth noting that rent charges are not the only way to return the value of fishery use to the wider community — taxes on income and profit can do so as well.*

There are currently two fisheries that pay a resource rent – the Tasmanian commercial abalone fishery and the recreational Western rock lobster fishery. The principle behind the Western rock lobster fishery recreational licence was to extract some return from a high value fishery (what this means is completely open to debate as the report ignores how this might be defined in its entirety).

Prokop (2013) discusses the use of resource rents for the recreational sector versus cost recovery for the commercial sector - *“This lead to some quite astounding inequities. For rock lobster, the recreational sector was paying between 3-5 times per unit caught (the variation is due to vast differences in the estimates of recreational catches) compared to that which the commercial sector paid.”*

The Coolangatta Communiqué provides some sound logic behind this often emotional debate. Since that time, the fishing tackle trade alone has reached \$1 billion retail, and has become almost exclusively an import based industry. While Treasury have been often wilfully obstructionist when it has come to discussion of a Wallop-Breaux type of levy – fearing precedence rather than outcome, a small import based levy may provide a sound funding base for recreational fisheries management.

This is absolutely contingent upon some improvement in the philosophy and management of both DAWR and AFMA towards the sector, formal recognition of the industry by FRDC, and more formal involvement in a future rights based management framework. These are not unreasonable requests and ones that underpin sound commercial fisheries management principles.

### **Pros and Cons of quota management**

*The Commission considers that there is a case for moving to ITQs where cost-effective (and technically feasible). The hindrances to greater use of ITQs where this is likely seem 12 Sub. 16, Gardner and Ogier; sub. 17, The Fishermens Portal; sub. 44, Seafood Industry Victoria; sub. 60, Queensland Government. to be ones relating to implementation, rather than fundamental concerns about their suitability. A major impediment to take-up of ITQs is the cost of buying out existing entitlements to fish. The efficient and effective implementation of ITQs has also been hindered by the processes of allocating new rights.*

The report gives a sound economic rationalist’s perspective on quota based management. Once again, the conclusion is sound, even if elements of the rationale are much less so.

There is a strong need to balance anthropomorphic measures such as community return, socio-economic and efficiency measures into fisheries management against traditional biological drivers. This applies also to recreational fisheries and will become increasingly necessary due to the costs and difficulties in fishery independent stock assessments and the fact that MSY is a flawed two dimensional representation of a four dimensional (even with a single sector) problem.

However, while the report correctly points out some of the difficulties in output based management controls, it neglects to highlight some of the difficulties (especially in the absence of other complementary measures), of quota based systems.

One huge problem is with under-reporting of incidental mortalities or high grading. There is a need for all sectors to move towards management based upon total mortality estimates. If a trawler is dumping small fish because the beach price is lower and they are not debited to their allocation, the sustainability of the resource has to be at risk. New Zealand is grappling with the consequences of conveniently ignoring this situation for a long period.

Secondly, it is essential that any quota allocation is proportional, not absolute. This allows catches to be manipulated based upon stock and other factors more easily. It is also essential that the capacity to adjust these proportional allocations are subject to the same criteria if they are adjusted up or down. New Zealand implemented a system which allowed for easy adjustment of allocations upwards, but very difficult to adjust downwards. This lag while the stocks are potentially at greater risk is simply not acceptable.

Any quota system utilising common property resources must have trading rules clearly articulated. If ultimately, recreational fishing rights are to be tradeable, having clearly articulated processes and procedures to deal with likely significant market distortions in a thin and easily manipulated market need to be considered. In addition, the capacity for creative trade-offs need to be allowed for in any business or legislative framework. For example, the recreational sector may wish to trade catches for exclusive access to some waters.

This is simply not currently possible with the lack of understanding of these issues at the Commonwealth level. However, the report identifies a potential solution.

### **Consultation and the role of advisory bodies**

*The Western Australian Department of Fisheries has sought to resolve this issue by engaging the Western Australian Fishing Industry Council (WAFIC) to provide consultation services.<sup>54</sup> A service level agreement requires WAFIC to consult with the entire commercial sector (or a sub-segment of the sector if directed) and convey views to the Department of Fisheries. To reduce the perception of a conflict of interest on the part of WAFIC (as both a contractor to the government and a body that independently advocates in the interests of its members), WAFIC has created a separate body (the Industry Consultation Unit) to be responsible for the provision of consultation services (sub. 45). Feedback to this inquiry suggests that these arrangements (and similar arrangements for recreational fishers through Recfishwest) are working well.*

Further, the discussion surrounding responsible behaviour on committees is supported.

*In relation to appointments, members of any technical advisory group (such as a committee advising on the total allowable catch for a fishery) should be appointed based on their expertise. Where the advisory group is undertaking more of a representative function (such as providing advice on the interests of a fishing sector/group), the appointment of members could be made based on nominations from the relevant group. All members of an advisory committee, however, must be*

*guided by the committee's terms of reference and their role descriptions in the undertaking of their duties. To be effective, the governance arrangements need to be backed by a power for the Minister or department to dismiss advisory group members who breach the terms of their engagement.*

The challenge is sometimes greater when members of statutory bodies, Boards, or public servants behave irresponsibly and there is no recourse.

AFMA is particularly vulnerable to this criticism. Foster et al (n.d. c.2005) States with respect to resource sharing for the tuna and billfish fisheries – *“The fishery is being structurally adjusted as part of the Australian Government's \$220 million Sustainable Fisheries package. A major part of the package will be used to reduce the high level of fishing capacity in those fisheries that are subject to over-fishing, or at significant risk of over-fishing, such as the ETBF.”*

There was no attempt to address public concerns or resolve longstanding spatial resource sharing arrangements and there was significant privatisation of the public good investment. Not only are most state jurisdictions unable to access this sort of rescue, those who were responsible for the original failings continued to manage the fishery.

### **Process failures and the reliance on political solutions**

*The independent reviews of fisheries for New South Wales (Stevens, Cartwright and Neville 2012) and Queensland (MRAG Asia Pacific 2014) found there was a high level of political involvement in operational decision-making in those states. This led to adverse outcomes, including unduly long decision-making processes.*

The important but often ignored perspective remains: Are the processes for developing and managing aquatic resources sufficiently transparent, equitable and soundly based to reduce political interference? Or are they sufficiently biased and inequitable such that sectors feel that the only resolution is through higher risk, political channels. The recreational generally sector feels that the institutional biases, especially at the Commonwealth level are such that there is little or no chance of fair consideration except through political processes. This has resulted in the formation of explicit recreational fishing specialised political parties.

### **Compliance by recreational fishers**

Related to this issue is the report perpetuating the myth of non-compliance of recreational fishers.

*The scale and scope of non-compliance with recreational fishing laws is difficult to judge given the number, dispersion and diversity of participants and activity.*

The Western Australian annual report 2014-15, provides an insight into this unjustified statement. In the West Coast zone there were 1378 fisheries officer interactions with commercial fishers. This resulted in 403 'difficulties' which included warnings and 270 offenses. This is a 29.2% non-compliance rate and 19.6% offence rate.

During the same period there were 84,615 recreational interactions. There were 2845 'difficulties' including warnings and 1235 offenses. This is a 3.4% non-compliance rate and 1.5% offence rate.

There is clearly a need to improve compliance with both sectors, but to single out the recreational sector in the report is clearly unjustified by these figures.



## Consistency in total mortality

The report goes to great lengths to discuss the impact of released fish mortality by the recreational sector, but entirely ignores this as an issue for the commercial fishing industry. Apart from the high grading or quota busting associated with discards, many recreational and commercial fisheries fish similar areas for the same species. It is unacceptable and irresponsible not to identify that this is clearly a cross-sectoral issue and one that needs an objective and transparent management strategy to be developed.

Associated with this is the issue of multiple use of recreationally caught fish. As the New Zealand trout data provided demonstrates, many recreational fisheries are utilising the same fish multiple times; whereas commercial fisheries, while accessing a renewable resource, are not utilising the same fish more than once.

Prokop (2013) – *“There has been a significant and progressive movement of fish species from food fish to sports fish from the 1980’s across Australia. Species such as Australian bass, flathead, Murray cod, barramundi, snapper and bream have all gone through this transformation. This has resulted in much greater release rates, with the largest fish being viewed as the most important to release carefully.*

*Recreational fishers place a disproportionately large ‘value’ on catching a big or huge specimen. A 100 cm barramundi might be worth 100 times as much as a 55 cm barramundi, with similar values for large trout, Murray cod, mullocky or tailor.*

*Even fish that are primarily eating species such as dhufish have a similar aura attached to large specimens. This is enhanced as, unlike with some species, large dhufish remain excellent eating. It is important to recreational fishers for there to be some (and increasing over time) expectation that they will/could catch an 18 kilogram plus dhufish.*

*The irony is that to manage a dhufish fishery with a reasonable expectation of catching a really large fish requires an extremely conservative harvest strategy. Dhufish are slow growing, residential and vulnerable to barotrauma mortality. So it is essential to have a large standing stock to ensure that really large fish are available, and good recruitment needs to be carefully managed to ‘last’ as long as possible. This also means that egg production includes those fish with a predisposition for large size are included in the larger egg pool; providing an extra dividend under good recruitment conditions.*

*McManus et al (2011) describes this stewardship intent well – ‘Analysis of catch and release data provides insight into the importance recreational fishers place on managing the future of fishery resources.’”*

## Further recreational data collection

There is clearly a need for improved recreational data to inform management and the myriad of ongoing issues identified by the report and this submission. The report states - *To date, the states and the Northern Territory have been reluctant to commit to undertaking coordinated surveys, in part because of a lack of resources. Based on the estimated cost of a national survey, \$6.8 million in 2017-18 (Georgeson et al. 2015), this would entail just over \$2 per recreational fisher every five years (or about 40 cents annually).*<sup>23</sup>

Given the need for consistent methodology in data collection and the historical disregard by the Commonwealth of recreational fishing as the largest ‘invisible’ industry in Australia, 40 cents per

participant per year is an inconsequential contribution to the public good return from improved management outcomes. (Compared to a \$220 million bailout for AFMA management that should have been addressed through proper processes).

However, the process and utility of the management needs to be developed cooperatively, transparently and involving all stakeholders (including commercial fishing interests). The previous national recreational survey (Henry and Lyle 2003) survey provided significantly less valuable information because a number of the assumptions (such as effort is a proxy for catch), were never tested.

There is a need for more cost effective data collection for recreational fishers. Rowland (2009) provided a strong example of where a cooperative approach to citizen science can provide high quality and ground-breaking information. Even the very poorly managed St John and Syers (2005) project saw some significant behavioural changes as people participating in the study saw benefits from their participation. There should be a significant additional commitment to cooperative and outcome focussed citizen science projects in the future (Vann-Sander et al 2016). These should not just be limited to recreational fishers, but should include components or projects of particular relevance to Indigenous, commercial fishing and non-consumptive uses such as diving.

### **Contestable research**

The report is correct in this statement: *The benefits of in house expertise are not voided by making research contestable. Further, the use of in house expertise for projects would remain the preferred course where the expected gains from making that project contestable are not expected to exceed the additional administration costs.*

The belief in having research of this nature run (or controlled) by groups like CSIRO or internal fisheries research arms of government is strongly refuted. These bodies (especially CSIRO) have extraordinarily high on-costs, lack transparency and believe that they are not accountable to stakeholders, the community or politicians.

Numerous examples exist of where public good funding should be coordinated by groups who are truly independent (being commissioners of a commercial fisheries management agency is not independent). Extension strategies and outcome focus should be a major consideration, not incidental to enhancing the publication record of the principals.

There should be a clear human resource management component for the project. Universities are ideally positioned to provide opportunities for meaningful and often fresh insights into solutions to complex management and resource sharing projects.

### **Conclusion**

Overall the Productivity Commission report makes a number of sound recommendations.

However, the opportunity to address a number of compelling issues, and the chance to demonstrate that cost recovery for the recreational sector will result in increasing recognition of benefits from government, has not been taken.

There should be explicit recommendations relating to –

The development of methodologies to allow for more transparent comparisons of social and economic components of recreational fishing versus commercial fishing. This would also be useful

for Indigenous fishing.

A requirement for funding the quantification of the social and wellness benefits of fishing. This should examine the social licence to operate of the various sectors. There should be a recommendation to examine cost effective data collection, with special emphasis on citizen science models.

An explicit recommendation that DAWR especially, and AFMA, resource recreational fisheries management and consultation processes. Both should obtain expertise in recreational fisheries management and ensure adequate resources for transparent and objective engagement with the sector, and the development of policies designed to optimise the community return from their catches and/or shares.

That the responsible agency be directed to allocate a fair and reasonable share of the SBT resource to the recreational sector; that this be done from existing allocations and agreement sought that consequently compensation for historical discrimination not be sought.

That the Coolangatta Communiqué be revisited and progress made on its recommendations where appropriate, or updated as required.

That public good funding by FRDC explicitly recognise and include the recreational fishing sector's economic benefits and any contributions made by the sector are able to be explicitly matched from core funding.

That funding models for non-consumptive users be examined in addition to recreational fishing funding models. That Treasury examine (objectively) the feasibility of a Wallop-Breaux funding model and that an independent panel, including recreational fishing interests, examine models for the allocation of benefits to participants and the wider community.

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