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Commissioner Melinda Cilento
Australian Marine Fisheries and Aquaculture
Productivity Commission
GPO Box 1428
CANBERRA CITY ACT 2601

06/04/2016

Dear Commissioner Cilento

Submission to the submission to the Marine Fisheries and Aquaculture public inquiry

The Australian Marine Conservation Society (AMCS) is a leading Australian NGO working towards the conservation of Australia's unique and diverse marine environment.

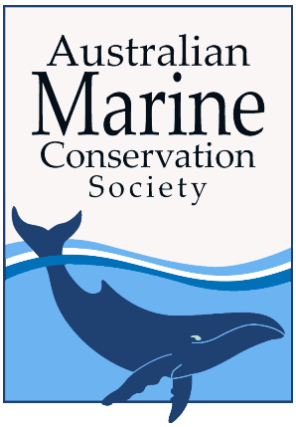
Thank you for the opportunity to make a submission to the Productivity Commission's public inquiry into marine fisheries and aquaculture

Our submission follows.

Please contact me if we can provide any further information in relation to this submission.

Yours sincerely

Josh Coates
Marine Campaigner, Australian Marine Conservation Society



Productivity Commission's public inquiry into marine fisheries and aquaculture

Submission by the Australian Marine Conservation Society

April 2016

Introduction/overview of AMCS

The Australian Marine Conservation Society (AMCS) is a national environmental organisation working towards the conservation of Australia's coastal and marine environment and the marine biodiversity they support. Our mission is to help protect Australia's oceans for the sake of current and future generations.

AMCS has over 100,000 members and supporters who support our work financially, undertaking voluntary activities and through social media.

Since forming in 1965, AMCS has had a long-standing involvement in improving the protection and management of Australia's marine environment.

Throughout our 50 year history we have worked through science based research, policy advocacy, on ground activity, community engagement and education to take effective action to protect Australian's marine and coastal environment. We work with and empower individuals, volunteers and communities to also be voices for marine conservation. We work with industry, stakeholder groups and indigenous organisations to identify solutions to unsustainable use of marine resources. We seek to work with and persuade government to make long term, precautionary and ecosystems-based decisions founded on the principles of ecologically sustainable development.

Submission Body:

Introduction

The Australian Marine Conservation Society welcomes the opportunity to input into this inquiry and the potential for the inquiry to contribute to much needed fisheries reform.

We note and commend the primary focus on improving fisheries regulation without compromising fisheries policy and environmental objectives.

To achieve this goal we encourage the commission and all stakeholders to acknowledge that without ecosystem integrity there will be a greatly reduced fisheries sector with limited economic output given that this sector itself is reliant on an ecologically sound and productive marine system.

Ecosystem Based Management (EBM) is an essential basic building block of any contemporary fisheries management policy or regime. It takes into account the impact of fishing on target, non-target, other dependent species and the ecosystems and habitats in which those species occur.

The oceans are the last great global common belonging to everyone but owned by no one. They provide a range of values, with fishing just one activity that must be balanced with a range of other multiple use activities to achieve maximum community benefit for current and future generations.

As naturally open-access renewable resources, fisheries pose significant economic and governance challenges for policy makers and governments. Worldwide experience and many studies have shown that poorly or unregulated fisheries suffer from overfishing, over-capitalization, falling or negative profitability, data-deficiency and falling productivity resulting in severe pressure on target

stocks, by-catch, protected species and the ecosystems that support them. This has been widely referred to as the 'tragedy of the commons'.

Addressing implied assumptions in the TOR/discussion paper

The Terms of Reference contain the general statement that "..... Australian fisheries are regarded as sustainable, reliable and safe ...". We would question the statement that all Australian fisheries can be characterised as sustainable regardless of the definition of sustainable use (see next section on defining sustainability). Even by the most conservative definition a number of Australian fisheries can be considered currently unsustainable as evidenced by Government assessments indicating current or historical overfishing and in the extreme cases fishery closures due to stock status concerns. We note very large differences in the management of target, non-target and protected species interactions, within and between jurisdictions.

We believe there are significant differences in management efficacy across and within jurisdictions and we do not understand against what measure(s) "reliable and safe" are being judged in the context of this inquiry. We recommend investigation and standardisation of these terms (see below).

There have been attempts by some sectors to refer to the strategic assessment process as a tick for sustainability, which we do not agree with. The spirit of the strategic assessment process was to move fisheries towards sustainability as opposed to a representation of fisheries management best practice. This is why approvals of strategic assessment usually have conditions or recommendations as a way of moving fisheries towards a more sustainable base. They cannot in isolation be used as, or considered, a sustainability approval.

What is sustainable?

When considering the sustainability of a fishery AMCS advocates a broader approach than simply considering the stock status of the target fish species, but instead assessment of the overall ecological sustainability of the fishery as well as the societal values associated with the fishing activity. Truly sustainable fisheries are ecologically sustainable when the stocks of target species, non-target species and their surrounding ecosystems are maintained over the long term. A truly sustainable fishery meets the long-term needs of fishermen, seafood consumers, other users and society as a whole, and the environment together.

Specifically we recommend a move away from the current and long standing MSY (Maximum Sustainable Yield) model, which typically allows for running a particular stock down to 20% to 40% of estimated unfished bio-mass.

Currently in more progressive fisheries the MSY model is being replaced with a MEY (Maximum Economic Yield) model (often calculated at 40% to 60% of unfished biomass). This approach has both environmental and economic merit and represents an improvement on the MEY model.

However, the MEY model does not properly take into account all social values (e.g. non-fishing recreation), community benefit / non-fishing economic interests (e.g. tourism sector), and environmental outcomes (e.g. ecological support for non-target species, climate change adaptation). **This should be considered a key goal of fisheries management in the short term.**

Moving to an OSY (Optimum Sustainable Yield) model which carries more emphasis on social values/community benefit/environmental outcomes, would deliver productivity, community and economic benefits beyond just (but including to) the fishing sector. This should become the long term goal for fisheries management in Australia. Retaining 60% of unfished biomass of target stocks is often considered as an approximate starting reference point for OSY. Such a reset of fisheries management policy would of course mean significant periods of reduced catches as stocks recover, but would deliver long term benefits to fishers, the community and the environment.

Such an approach would represent a key platform for genuine Ecosystem Based Management.

The importance of Ecosystem Based Management (EBM)

Ecological, economic and social impacts are all recognized components of EBM. However, the long-term capacity of an ecosystem to deliver positive ecological, economic and social outcomes will depend first and foremost on its ecological integrity. While, in the short term, it may be seen as politically or financially expedient to compromise ecological integrity for economic and social gain, such benefits will not be sustainable in the longer term.

Against this background it is essential that the Inquiry acknowledge that maintaining and improving ecological integrity must be the starting point of any process aimed at improving the ecological sustainable use and management of fisheries resources.

We highlight the significant gaps that exist in our knowledge of ecosystems and how the various elements within these systems interact. The information gaps are also not uniform, with some fisheries well studied and others not – this disparity should be recognised as part of the Review and needs to be addressed. Effective monitoring and data collection is essential if we are bridge this gap and ensure high quality data is available to inform management decisions. The proper application of the precautionary principle must be undertaken as these knowledge gaps are addressed (see section on precautionary principle below).

The need for regulation.

There is a clear and 'public good' need for fisheries regulation and while one aim of this inquiry is to identify opportunities to reduce the regulatory burden this goal must at all stages be balanced against the public good.

Governments become involved in fisheries management due to the nature of this market and the way fishers respond to it. The actions of fishers (while rational) impose costs on other fishers and the community generally. This results in a "market failure". That is, a situation where the allocation of goods and services by the free market is not efficient. Economic theory suggests that there exists another outcome where individuals and in this case the community also will be better off based on intervention in the market. In other words, over-capitalization and over-exploitation of fishery resources, poor profitability and degradation of the ecosystems that support them, result from the failure of the market to give the correct signals to investors. In these circumstances, self-management by participants is almost always not appropriate and governments must become directly involved. Hence regulation is the cornerstone of effective contemporary fisheries management.

A community owned resource

The fisheries sector is accessing a community owned resource that brings benefits for and value to other stakeholders including Traditional Owners, the tourism industry and recreational fishers. **It is crucial that the interests of non-extractive sectors of the community and economy such as tourism and non-fishing recreation are given proper consideration and weighting in so called 'resource allocation' processes.**

Consistency of import and export regulations regarding sustainability.

One area we strongly recommend be addressed by this Inquiry is the significant disadvantage faced by the commercial fishing sector in the catching and marketing of product due to the lack of any regulation relating to the sustainability and/or legality of imported product. This is clearly evident at the retail level when relative prices are compared. Unsustainable fisheries and fishing practices have significant environmental, food security, economic and social consequences, including the destruction of ecosystems, the loss of species, the development of trash fish fisheries and forced labour/poor working conditions. Imported seafood will always play an important role in Australian seafood consumption, but should not penalize the Australian fishing industry where it may secure market advantage through lower standards of sustainability. Neither can the sustainability or lack thereof in imported seafood be used as justification to drag the standard of Australian-caught seafood down. It is also important to note that not all imported product is of a lower sustainability standard that Australian caught products. This issue is closely linked to the issue of seafood labelling addressed in the next section.

Seafood Labelling

Labelling is an essential element in providing consumers with the information they need to make informed choices when purchasing seafood. While some progress has been made at the retail level, the arrangements generally provide only limited information (imported or local) and no information on the specific locality of catch, species, catching method, fisheries management arrangements and sustainability of the product. Often these existing arrangements are not well monitored or enforced.

Despite recent proposals, supported by both the commercial fishing and conservation sectors, to improve seafood labelling, the food service industry (restaurants, cafes and hotels, etc.) in most parts of Australia the industry is exempt from even country of origin labelling requirements. However in the Northern Territory all imported seafood prepared for immediate human consumption is required to be labelled as imported.

Approximately 70% of Australian seafood consumption comes from imported products. Yet according to industry surveys, most Australian consumers believe they are purchasing Australian seafood when in fact they may not be. The discrepancy between public perception and fact shows all too clearly that Australian consumers are not adequately or accurately informed.

We believe seafood labelling laws are lagging behind international standards in Australia to the detriment of both the consumer and the Australian fishing industry. Proper labelling laws would increase recognition and uptake of sustainable and in particular Australian sustainable seafood products. Australian fishers are currently at a disadvantage when their product is not readily

discernible to the consumer from similar looking imported product from regions/fisheries with poorer management practice.

We acknowledge that providing mandatory information by labelling on the sustainability of a product is challenging and we see an ongoing role for consumer guides to sustainability such as the Australian Sustainable Seafood Guide as well as independent accreditation schemes.

To allow informed purchasing decision making AMCS strongly recommends introduction of labelling laws including clear mandatory labelling of species, locality in which it was caught or farmed and the fishing or aquaculture method used. Such a system would remove the disadvantage Australian producers currently face. It would also allow more informed consumer choice leading to market based improvements in management for environmental performance/sustainability and product quality.

We recommend that nationally agreed and consistent mandatory seafood labelling laws be adopted specifying species, origin and fishing/farming method at point of sale and traceable through the supply chain that encompass both the food service industry and details available to consumers at the retail level.

Cross jurisdictional management of fisheries.

We agree that wherever possible single jurisdiction management of stocks is desirable both from an ecological perspective and in seeking to maximize efficiency and reduce unnecessary regulation. It is not something that we believe can be easily achieved without significant political will. There are a number of examples where this has not been forthcoming even in the face of overwhelming evidence of the potential benefits. The Bass Strait Scallop fishery is an excellent example. Despite numerous attempts to rationalise management in this fishery, three jurisdictions (Commonwealth, Victoria and Tasmania) manage this relatively small fishery.

However, the national Status of key Australian Fish Stocks (SAFS) reporting process does show Australian fisheries management agencies are maturing to a point where stocks are assessed in their entirety (albeit without any reference to the protected species that are also impacted by fishing activities), which helps promote the need for more timely management interventions when required.

Regionalisation of fisheries management

The management of fisheries at scales appropriate to both the stock, societal and environmental parameters can help address the tragedy of the commons, increase productivity and improve environmental outcomes. This is not about creating new jurisdictions but instead about managing fisheries in a way that recognises the biological characteristics of target and non-target species as well as the geography and demographics of those who fish for them.

For example for species like threadfin salmon or barramundi, stocks may be restricted to defined estuaries or areas and the impacts of localised overfishing will not be offset by recruitment from other areas. Similarly, arrangements that allow commercial fishers from distant areas to fish anywhere within a large (e.g. statewide) region can allow overfishing of certain areas at certain times and a disincentive for local stewardship of the resource. Fishers' local knowledge of an area

can facilitate better prevention of interactions with threatened species e.g. Dugong. Knowledge sharing and co-planning for fishery management improvements and efficiencies between fishery participants can also be enhanced by management on appropriate scales.

For example allocating Individual Transferable Quotas for take of commercial species to biologically and socially appropriate geographic scales can produce productivity benefits and should be considered where appropriate for EBM regardless of the geographic scale of the overlying jurisdiction.

There is also opportunity for regionalisation of recreational fisheries management to be further improved and implemented via proven methods such as variation of local bag or max/min size limits as is biologically appropriate in light of variable fishing pressure across regions. Any such action would need to be balanced with potential for confusion due to over-complexity causing compliance problems and poor 'ownership' of the rules, and applied for solid and well communicated biological reasons.

Streamlining Services.

We also believe that while rationalising cross jurisdictional management arrangements may present some challenges, there is significant immediate opportunities for efficiencies in further streamlining services across jurisdictions, particularly for the commercial fishing sector. There is scope for common platforms to provide monitoring (Vessel Monitoring Systems - VMS), licensing, electronic logbooks (e-logs); electronic monitoring (e-monitoring) and where they are in use electronic reporting by observers. Such streamlining should not only lead to cost efficiencies but should also reduce the burden of multiple arrangements where fishers operate in more than one jurisdiction. Ultimately also, consolidation of these services will provide an important foundation for more significant collaboration on management arrangements over time.

Single National Environmental Regulatory Arrangement.

In terms of developing uniform arrangements to provide sustainable outcomes, it is our view that ecological outcomes, which are critical to this sector, would be enhanced from a single national environment regulatory framework. **This would involve extending the current Wildlife Trade Operation assessment for State/NT fisheries that want to export their products to a full assessment of the ecological sustainability of all Australian fisheries.**

Consolidation to genuine best practice not lowest agreed level.

In the context of finding efficiencies, the risk is that consolidation leads to adoption of the lowest common denominator. In Australia, and globally, the jurisdictions which are the most advanced in terms of a high standard of management are also those which tend to be most profitable, e.g. Western Australia. Conversely, those that have failed to introduce effective regulation to protect marine resources and its use by fishers are performing the worst environmentally and economically e.g. Queensland. Clearly in order to maximize the return to the Australian community from the use of marine resources high environmental standards are paramount. We believe it is essential that any recommendations from this inquiry protect existing ecological sustainable outcomes and improve the ecological sustainability where such improvements are required. They should not

undermine ecosystem integrity while improving the economic efficiency and profitability of Australian fisheries.

Sectoral management.

As a general proposition we would like to see improvements and greater consistency in the management of each sector or stakeholder group accessing a fishery resource– commercial, recreational, indigenous and aquaculture. We believe the same policy goals and management principles in terms of environmental protection and sustainability (some of which are elaborated below) need to apply to each sector/stakeholder group. We do not feel this is the case at present.

In order to improve arrangements across the sectors/stakeholders more scientific assessment and monitoring of stocks and ecosystems is essential and where excess capacity and over-capitalisation exists, targeted structural adjustment schemes should be introduced. Wherever possible we support the use of market based management measures to ensure fishers receive appropriate economic signals and fishing effort and sustainability are kept in balance. Unfortunately we feel there has been a lack of political will (and resources) particularly in the States and NT to address these issues.

Harvest Strategies

The development and implementation of a Commonwealth Fisheries Harvest Strategy Policy and Guidelines (HSP) has clearly improved the management of Commonwealth fisheries. The first HSP was developed in 2007 and reviewed in 2013. The review concluded that generally the HSP was appropriate and working to provide best practice guidance to AFMA and fisheries managers. It did however identify areas that could be strengthened.

We support the use of harvest strategies noting that these must be kept up to date and used in conjunction with, and be informed by, other ecosystem policies. **We contend that harvest strategies should cover all target and retained species as well as provisions addressing discarded or otherwise impacted species.** This would require some broadening of current arrangements and the development of a policy specifically addressing discards. Ideally, harvest strategies would be developed and implemented in all jurisdictions and cover key fishing sectors. We note that accurate and reliable data on the biology of species, the nature and extent of the fishery and on economic aspects of the fishery is essential. Such information will involve potentially increased regulation and cost. To the extent that this data is unavailable or too costly to collect then increased precaution will need to be applied in management arrangements.

Bycatch

There is both a National Policy on Fisheries By-catch and a Commonwealth Policy on Fisheries By-catch that provide useful guidance on this matter. The National Policy was developed in cooperation with all Australian governments and provides a national framework for coordinating efforts to reduce bycatch. The policy provides options by which each state/territory jurisdiction can manage bycatch coherently and in a national context while still allowing for differences in state/territory fisheries.

The Commonwealth Policy seeks to ensure that the direct and indirect impacts of fishing on ecosystems are taken into account and managed accordingly. This is done through mechanisms that reduce bycatch, improve the protection for vulnerable species and arrive at decisions on the acceptable extent of ecological impacts.

The Commonwealth Policy was reviewed in 2012-13 and a report issued in May 2013. The review recommended a revised bycatch policy that adopts risk-based approaches to assess the level and likelihood of impacts on bycatch species. As part of the review we expressed the view that there needs to be greater coherence between the HSP and the By-catch policy and as mentioned above would like to see harvest strategies cover both target and retained species as well as provisions addressing discarded or otherwise impacted species.

Independent assessment, certification or accreditation

We strongly support the need for independent assessment of Australian fisheries. Currently, Commonwealth fisheries are subject to the strategic assessment provisions of Part 10 of the EPBC Act (against the Guidelines for the Ecologically Sustainable Management of Fisheries 2007), to assessments relating to their impacts on protected marine species and communities under Part 13 of the EPBC Act and to assessments for the purposes of export approval under Part 13A of the EPBC Act.

We believe that it is entirely appropriate that the Department of the Environment (DoE) is responsible, under the EPBC Act, for ensuring that any Australian fishery does not adversely affect the survival or recovery of protected species or the survival and recovery of listed threatened species, since the status of those species is determined under the EPBC Act. Similarly, we believe that it is appropriate that DoE assesses Australian export fisheries. We believe that, as well as providing confidence that the impacts of fisheries are acceptable, these assessments have been particularly valuable in driving change in both Commonwealth and State-managed fisheries.

Strategic assessments at the Commonwealth level and assessments of all export fisheries have been, and will continue to be, an important tool in further improving fisheries management in all jurisdictions. As a general comment we think that Strategic Assessments under Part 10 of the EPBC Act have greatly assisted the Australian Fisheries Management Authority (AFMA) in developing and continue to improve Commonwealth fisheries management. **We contend that extending Strategic Assessments (or an equivalent accreditation) to the States and the NT would help to improved management arrangements in those jurisdictions.** This requirement needs to be carefully considered for two reasons, firstly we believe it would over time greatly enhance the management arrangements in these jurisdictions and secondly, it would "level the playing field" and harmonize environmental requirements across jurisdictions.

A particular strength in these arrangements is the independent nature of the assessments and as such we believe that the **assessment processes must remain within DoE and not be devolved to fishery management agencies such as AFMA or the States/NT. DoE needs to be adequately resourced to undertake these assessments.**

Improving the process of application of science to fisheries management

It is important that the inquiry note the productivity benefits of good science. Good fisheries management processes rely on the best available science. To the extent this is not available management decisions suffer and greater precaution will be needed which may impose a higher regulatory burden on fishing sectors.

There is a high degree of uncertainty in our understanding of the marine environment and even in relation to individual target species. This lack of understanding covers a wide range of issues, from species biology (e.g. do we know enough about what age a particular species starts to reproduce in order to make sound management decisions), through to lack of data on fishing mortality (eg. do we really have sufficient information to manage risk of overfishing, if fishers are only reporting some species at genus or even family level). Managers must have access to sufficient biological information and reliable up to date data and assessments to develop appropriate harvest strategies, deal with risk and uncertainty and assess broader environmental impacts related to fishing activity.

Differing arrangements apply across the different jurisdictions for the provision of scientific information. There has been some duplication in effort, although there has also been significant collaboration, particularly on near shore species managed across State/NT boundaries. At the Commonwealth level, AFMA has relied on the CSIRO and the FRDC to provide scientific advice. CSIRO has played a critical role in not only providing fundamental stock assessments, but also in developing important new tools, including Management Strategy Evaluation, Management Procedures for specific fisheries and the methodology to conduct an ERA. However, funding for day to day fisheries work has been constrained in more recent years with the development of Flagship programs and less emphasis on day to day fisheries work.

We have serious concerns regarding the preferential and exclusive use of the FRDC for fisheries research with an industry component. Concerns include the perceived or actual industry influence including bias in release and reporting of findings that are not favourable to status quo industry practice. Scientists who for personal economic reasons do not feel that can speak out individually on this issue report problems with mandatory ceding of rights to their research and the release of findings to the FRDC. Reporting on research projects is subject to veto editing leading in some cases to the removal or 'watering down' of important findings and/or large delays in release of research outcomes. More transparency and diversity in how fishing industry related fisheries research is allocated and managed is required.

Fisheries management requires access to sound unbiased science for both stock assessments and broader ecological assessments/understanding. This must be adequately resourced if we want the best available management is to be implemented.

AMCS recommends increased funding to support the science needed for EBM based fisheries management including restoring the role/funding of CSIRO to deliver this research and increased transparency and diversity in allocation of funding to research institutions and reporting of findings.

<u>Using all regulatory tools available – one size does not fit all.</u>

The Issues Paper raises a series of questions that could potentially leave the reader thinking there is one management tool available to fisheries managers/agencies which is vastly superior to other

tools. This is not the case and experience over time has identified that there is no "one size fits all" when it comes to fisheries management. Different tools are needed to achieve different outcomes.

Contemporary thinking supports the use of ITQs where regulation is on the output – the catch, rather than some way of limiting catch via vessel or gear (input controls). Output controls have a range of economic and market benefits, which are not available when using input controls. However experience suggests that ITQs alone will not ensure that all the required and desirable management objectives are met.

As such, fisheries managers now rely on a suite of tools to meet the various objectives. Even where single species management is concerned, as is the case with the Southern Bluefin Tuna (SBT) fishery (a quota managed fishery), a range of other regulatory controls are required, including controls to mitigate interactions with protected species including seabirds, sharks, dolphins, seals and turtles; non-target species, limiting or banning the discharge of offal; the use of non approved gear and the protection of spawning grounds or nursery areas etc. Thus, it is a matter of choosing the right tool to achieve the desired outcome and combining it with the other tools necessary to meet, target, non-target and broader ecosystem objectives.

Input controls alone (with the exception of Individual Transferable Effort units - ITEs) provide often-perverse incentives, which cause rigidities and restrict rational economic decision-making. ITEs are a way of addressing this but must be adjusted annually to compensate for effort creep and ensure stock sustainability targets are met. They also require a range of additional input controls to ensure non-target and ecosystem objectives are met.

To determine the appropriate mix of controls an assessment of the risks associated with catching the target species, the impact of this catching on non-target species and the broader ecosystem will be needed. This is within dynamic ecosystems where the abundance of target and non-target species change and innovation by fishers mean that arrangements need to be continuously monitored and adjustments made in response to these changes.

It is also important to note the role of non-fisheries management tools in the management of fisheries. Marine Protected Areas are one such tool and are covered in the next section.

Marine Protected Areas

Marine Protected Areas (MPAs) provide a broad range of ecosystem and societal benefits that support Ecosystem Based Management of fisheries. In this submission we focus specifically on productivity benefits of MPAs and associated issues. Ecosystem-based Marine Protected Areas incorporating core no-take reserves may require new approaches to management of marine environments, but the benefits will be significant and enduring.

The use of scientific reference points provided by larger no-take marine protected areas can facilitate cost reductions in obtaining data to address ecosystem based management assessment requirements and third party (including government assessments/accreditation etc. For example in the Western Rock Lobster fishery, which is one of the most data rich fisheries in Australia, research has determined that the most feasible and cost-effective option for understanding the ecosystem effects of fishing in a comparison of management options is comparison with MPA area (e.g. Jurien and Rottnest).

As noted above MPAs are emerging as one of the most cost-effective and feasible management tools to separate and therefore better manage the effects of fishing and a changing climate.

MPAs can reduce ecological risk - and therefore compliance burden for fisheries, particularly in cases where management is forced by lack of research data to rely heavily on risk assessment based management. Additionally the cost in terms of reduced yield when fisheries management settings are ideal and environmental conditions are stable, is insignificant compared to the 'real-world' costs of recent Australian fisheries failures and during the data gathering stages of fisheries management . I.e. the 'insurance' benefits of MPAs are valuable for overall long term productivity.

A recent modelling study suggests that in generalised conditions MPAs can reduce the decline in yield when overfishing occurs, and speed stock recovery[1]. Similarly, the study suggests that reduction in yield can be significantly less than that predicted by reduction in fishable area caused by the presence of MPAs. For quota-managed fisheries, that portion of the broodstock within MPAs can be incorporated in management settings at the scale of the stock, so is not lost to the fishery.

MPAs can also provide profitability benefits increasing productivity for example in Australia some large scale, traditionally high impact commercial fisheries are promoting the presence of Commonwealth MPAs in their fishery area to their market as a means to improve market opportunities and social license[2].

It is also relevant to note that better technology is making compliance with MPAs simpler and cheaper than ever. This same technology provides a dual benefit for fisheries management of supporting management at finer, more economically and ecologically valuable, spatial resolutions.

AMCS contends that politicising of MPAs is more of an issue for fishing industry investment certainty, than if MPA networks were completed quickly and efficiently, allowing adaptive management to improve outcomes and reduce impacts. The post-hoc economic and regulatory impacts of MPA establishment have been consistently lower than those predicted by industry interest groups[3], based on the experience from the extensive existing MPA network established throughout Australian waters.

In summary perceived or actual costs to productivity of MPAs are significantly offset by economic benefits created by greater resilience when fisheries management fails or discrete environmental impacts occur, by marketing advantages and improved social license, and by the ability of reference areas to inform and improve harvest settings and overall EBM performance in a dynamic

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[1] Buxton CD, Hartmann K, Kearney R, Gardner C (2014) When Is Spillover from Marine Reserves Likely to Benefit Fisheries? PLoS ONE 9(9): e107032. doi:10.1371/journal.pone.0107032

[2] http://www.abc.net.au/pm/content/2015/s4284713.htm

[3] E.g. see: Pascoe S, Doshi A, Dell Q, Tonks M, Kenyon R (2014) Economic value of recreational fishing in Moreton Bay and the potential impact of the marine park rezoning Tourism Management 41, 53-63

Vs

McPhee DP, Buxton C, Knuckey I, Hundloe TJA, Stone S, Williams KA (2007) Part 2: Final Submission: A Participatory and Coordinated Fishing Industry Response to the Proposed Rezoning of the Moreton Bay Marine Park, FRDC Project No. 2007/053

environment. Allocation of fishery resources to the environment including via the use of MPAs provides productivity benefits as well as contributing to EBM.

Allocation of resources

At present there is no simple and effective way of managing or ensuring that the allocation of fisheries resources among extractive user groups maximises the value to Australians now and over time. There exist uses outside of the fisheries sector where resources may achieve a greater return e.g. tourism or ecosystem services.

In terms of commercial fishing, most allocations are based on historical access to the resource. In most jurisdictions there are however markets which exists both for fishing permit/licenses and quota. This enables new entrants to buy access to the fishery/resource and for those who wish to exit to leave with a financial return, albeit subject to an assessment of the value of the license or quota that invariably reflects to a large degree how well the fishery is being managed and its long term sustainability.

There has been extensive work in all jurisdictions to deal with initial allocations within the commercial fishing sector, however we are not aware of such work being done within other sectors. This is a complex and demanding area and one that has been the subject of extensive litigation. The Commission should not underestimate the complexity of dealing with allocation issues, not just in the commercial sector but also between sectors and to the environment.

It is crucial to the future of Australian fisheries and environmental management that we adopt real Ecosystem Based Management (EBM) including calculation of Optimum Sustainable Yield (OSY) resulting in proper allocation of resources to not only the commercial, recreational and Indigenous fishing sectors but also to the environment and other uses including tourism and societal priorities such as iconic or threatened species recovery and maintenance.

Recreational fishing

Recreational fishing can and will continue to impact on target and non-target species and the broader ecosystem and these impacts may not be being adequately recognised or managed. AMCS' view is that the same high standards we expect with respect to the commercial fishing sector's access to a community owned resource should be applied to the recreational fishing sector.

Explicit resource allocations to the recreational sector may hold benefits for resource management and resolving sectoral conflict in some instances, but there are clear obstacles in the feasibility of their application. Foremost among these is a clear need to accurately determine the level of recreational harvest across fisheries.

We see a need for more formal management arrangements, better data collection (to improve the understanding of the impact of recreational fishing), better monitoring and enforcement of management arrangements and that the costs associated with these improvements be in part cost recovered from participants through appropriate mechanisms. Importantly, there must be real transparency in ensuring that costs recovered from this sector are returned to recreational fishery management.

Illegal fishing

In this section we have assumed that the Commission wishes to consider not just illegal fishing, but illegal, unreported and unregulated (IUU) fishing.

IUU fishing is very much fisheries management jargon, although it is now widely used. IUU fishing is often referred to in the context of foreign vessels fishing illegally in waters under the jurisdiction of a state without appropriate authorisation. However IUU fishing is far more complex than this. Essentially, it seeks to describe in greater detail different types of fishing behaviour that take place outside or contravening agreed management arrangements and international norms.

Those arrangements and norms basically fall into two categories.

1. A state exercising its jurisdiction over fishing activities of all vessels, both national and foreign within its EEZ, that is, out to 200 nautical miles from its coast; and
2. Beyond the 200-mile EEZ, on the high seas, vessels are subject to the legislation and control of their flag State.

Some states apply management and conservation measures in full compliance with UN conventions, notably the United Nations Convention on the Law of the Sea (UNCLOS), the United Nations Fish Stocks Agreement[4] (UNFSA) and FAO agreements and voluntary codes. Other States have either not ratified or agreed to these international arrangements or choose not to implement them effectively. Member countries of Regional Fishery Management Organizations (RFMOs) are also required to fully apply the agreed RFMO conservation and management measures. RFMOs regulate fishing in certain areas of the high seas, sometimes focusing on particular species and or areas being fished. Some RFMO conventions also cover EEZs. Such international and regional legal regimes are however only binding for ratifying or member States.

The important thing to note is that IUU fishing can and does occur in all jurisdictions. Globally, IUU fishing is a significant problem. By its nature it is difficult to put an accurate figure on the level of IUU catches. The first detailed study (Agnew et al., 2009[5]) provided a global estimate of between 11 and 26 million tonnes, excluding discards and artisanal unregulated catches. This represents between one-sixth and one-third of reported global wild fisheries catches and a value of somewhere between US$10-23 billion.

Within the Australian EEZ foreign illegal fishing is still a problem but nowhere near the problem it has been in the past. However the Australian Government needs to remain vigilant as there are large fleets operating in the Indian and Pacific Oceans which have in the past fished both immediately adjacent to the EEZ and also within it. In this regard it is appropriate for Australia to continue its cooperation with and support to neighbouring developing states in their attempts to improve regional monitoring, control, surveillance and enforcement. Illegal fishing by Indonesian vessels in northern waters has in the past been a problem, but incursions are now much less

[4]The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

[5] Agnew, D.J., J. Pearce, G. Pramod, T. Peatman, R. Watson, J.R. Beddington and T.J. Pitcher (2009). "Estimating the Worldwide Extent of Illegal Fishing". PLOS ONE 4(2). doi:10.1371/journal.pone.0004570

frequent. Likewise illegal fishing around Australian Antarctic islands - Heard and McDonald Islands in the Southern Indian Ocean and Macquarie Island south west of New Zealand has not been a significant problem in recent years. This is not to say Australia can ignore these as significant risk areas for foreign illegal activity.

Internationally, Australia both in RFMOs and more generally has taken a high profile stance in the fight against IUU fishing. It has ratified or adopted all the key international instruments (most recently the FAO Port State Measures Agreement) and rigorously implements agreed catch documentation schemes (CDS). It is an active participant in six RFMOs and regularly pushes for improvements to conservation and management measures to improve the transparency and accountability of fishing by member states. This is not to say further improvements cannot be made particularly as mentioned previously, the need to link both IUU fishing and imported product from unsustainable fisheries.

Within domestic jurisdictions IUU fishing can and does occur. No doubt AFMA and State/Territory submissions will provide the Commission with estimates of the level and extent of this activity.

Addressing IUU fishing is important to good management and productivity and must remain a management priority.

Multi-jurisdictional governance

We are aware of a number of examples where further rationalization of jurisdiction would reduce the regulatory burden and hopefully improve productivity and ecological outcomes. Some of these include NSW/Commonwealth (trawl); Bass Strait Scallops (three jurisdictions involved); and State/State arrangements (e.g. Snapper in QLD and NSW).

There have been many attempts over the years to rationalise jurisdictional arrangements, but for a variety of reasons this has not been possible. We strongly support the need for further sensible rationalization of jurisdiction between the States/NT and the Commonwealth. Success in this area will no doubt improve fisheries management outcomes, reduce the regulatory burden on fishers and improve productivity.

Too many jurisdictions/management authorities

For the size of the fisheries resources available in the AFZ and from the perspective of efficient management there are too many fisheries management agencies and too many fishers in some jurisdictions or fisheries. This situation means that there are significant economic costs associated with the current management structures and losses associated with excess fishing capacity and overcapitalisation – “too many fishers chasing too few fish”.

The first issue (too many management agencies) is a function of our Federation and it would seem short of governments being prepared to totally cede jurisdiction to the Commonwealth or another State/NT there is likely to be little change in these arrangements.

The second issue (too many fishers) has, on the whole, been poorly dealt with by governments and their management agencies. This is referenced in the Issues Paper under the section “A productivity context” where the Commission states:

"A productivity increase might be observed in fewer resources being used to produce the same or a greater quantity of output, or using existing resources more creatively to produce higher quality or more valuable goods".

In fisheries where economic signals to operators are poor (traditionally input controlled fisheries) there is little or no incentive for resources to flow to those who value them the highest. Management arrangements have often "locked in" resources. The result is frequently excess fishing capacity, over capitalisation and poor or no profitability. In the past this has commonly been due to a management approach based primarily on the science of the resource, with little or no regard to the economic signals which management arrangements sent to fishers.

In some jurisdictions there have been structural adjustment schemes aimed at addressing excess effort and overcapitalisation, followed by the implementation of management measures that provide better economic signals to operators. As governments (and their agencies) have been largely responsible for this problem (issuing too many licenses, setting catch limits that are too high, not allocating quota) it has been generally considered that governments (taxpayers) should pay to correct the problem. However, where this has occurred there has often been a lack of defined targets (how much effort or capital was to be removed) and a lack of transparency as to how taxpayer's funds had been used.

As a general proposition we support the need for further targeted reductions in effort and improvements in the economic signals provide to commercial operators. This will not only hopefully improve the profitability of the remaining operators, but should also have beneficial environmental outcomes. However, where taxpayer's funds are used to achieve this outcome it is vital that clear targets are set and there is full transparency in the use of these funds.

Co-management

We are supportive of the concept of co-management but suspect in practice much more work is needed to advance beyond a very limited scope for its adoption. In theory it is very attractive as it promotes the "ownership and custodianship" of the resource and the ecosystem which supports them. The concern we have is that given the "market failure" outlined in our Introductory Observations, we wonder if it is realistic to think that a complete devolution of responsibility to the fisheries sector can work.

A key question is what do we mean by co-management? We believe there are a range of potential co-management models - ranging from ensuring all key stakeholders are involved in considering management issues and providing input to decisions, to devolving responsibility for the management of the resource and ecosystem against agreed targets and outcomes to a group or groups. In this latter form we believe there are very few fisheries or sectors where this could be applied. A key issue is that as the fishing sector is accessing a community owned resource, checks and balances are needed to ensure appropriate standards are set and that these are met. Therefore the system must still include significant independent scrutiny, reporting and auditing of the management arrangements and its success or otherwise.

International engagement

Australia is a party to numerous international agreements that have an impact on domestic and high seas fisheries as well as specific environmental goals. These agreements provide benefits as well as impose costs on the fishing sector. Among the direct benefits, which come from these agreements, is the 200nm EEZ that surrounds Australia and its territories as well as access to a range of high seas fisheries resources. Some of our high value domestic fisheries are directly dependent on highly migratory species, so it is vital that we are engaged in their management.

There are costs associated with these benefits, including the need to manage the use of our EEZ in line with international commitments and expectations and also to be an active participant in the management of high seas fisheries resources.

More broadly, as a wealthy developed nation Australia has a responsibility to work with other likeminded nations to protect and manage the high seas. We are also involved in working with our Pacific and South East Asian neighbours to achieve important regional outcomes, which are linked to the management of our marine resources. On balance, we believe Australia has an obligation to participate in these international agreements and that Australia benefits from being involved. It also enables the Government to provide leadership on a range of important environmental and fisheries issues globally.

Fish processing

Our comments in this section are related to traceability (labelling is covered above), both in the domestic supply chain, but also from a global perspective. While traceability will not be applicable to all seafood products, it is an important means of ensuring both sustainability and the legality of the product.

Increasingly catch documentation schemes (CDS) and broader certification schemes are important links to large established markets (the US, EU and to a lesser extent Japan). While these schemes impose costs they also provide benefits. The CDS implemented by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) has helped to provide a price premium for legal Patagonian toothfish and Australian operators in this fishery have recognised the important benefits it provides in access to premium markets. As such it is seen as a legitimate cost of doing business. Given the extensive trade of seafood products, both for processing and for final consumption we believe their needs to be greater attention to traceability to ensure Australian consumers have reliable information on both the sustainability and legality of the products they are purchasing.

Aquaculture

This submission focusses on wild caught fisheries in line with the inquiry's focus. AMCS asserts that aquaculture must be managed in line with EBM principles just like wild caught fisheries and that many of the recommendations provided in this submission should also apply to aquaculture. Sustainable aquaculture involves, amongst other things, the production of farmed seafood where there are no long-term adverse impacts on the marine environment. The farming operation does not depend upon unsustainable levels of wild capture fish for use in fish feed, does not harm the health and integrity of the surrounding environment, including vulnerable marine wildlife, and the management regime is transparent and precautionary, both in terms of site location and expansion.

To this end we recommend that all relevant recommendations in this submission be applied equally to aquaculture management including but not limited to the sourcing of feed from wild caught fisheries, seafood labelling and traceability, management across jurisdictions and consideration of EBM and OSY principles in regulation of variables such as location, type, impact (e.g. water quality, impacts on other species/ecosystems) regulation.

The Precautionary Principle

Below we highlight the importance of the Precautionary Principle and the need for it to be applied rigorously. In the absence of a much better understanding of ecosystems we maintain that more precaution is needed in the management of Australian fisheries.

Many jurisdictions have legislative objectives that mandate ecologically sustainable development. They are often poorly defined or qualified by economic or social objectives/goals or provisions that allow for varying the weighing of the principles in accordance with particular circumstances. In order to protect marine resources and the communities that depend on them, ecosystem based fisheries management objectives should be well articulated in all fisheries legislature, including that ecological sustainability objectives should be considered paramount over social and economic objectives; and that it is inappropriate for political and economic considerations to outweigh ecological requirements.

The precautionary principle is a fundamental tenant of contemporary environmental management. Most jurisdictions have a requirement or definition of the precautionary principle in their legislation, however there is a need for this to be applied consistently across jurisdictions. We believe this needs to be considered against the following three areas:

Definition:

The definitions in the various fisheries acts need to reflect contemporary understanding and be sufficiently articulated to provide guidance to management agencies.

We favour the use of the definition in Clause 3.5.1 of the Intergovernmental Agreement on the Environment (IGAE) as follows:

precautionary principle—

Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and

(ii) an assessment of the risk-weighted consequences of various options.

Application:

There are a number of factors that may impede the appropriate application of the precautionary principle by management agencies. These include:

1. concern at the political level as to the undesirable regional or economic consequences of rigorous application;

2. a lack of certainty about the government's and the community's expectations about the appropriate level of precaution that should be applied;

3. an unwillingness, on the part of management agencies (possibly due to 1 above and particularly where the Minister is the decision maker), to respond to uncertainty relating to the impacts of fishing in the way prescribed by the precautionary principle; and

4. a lack of effective oversight of management responses against key legislative objectives.

Appropriate level of precaution

We support the use of the Harvest Strategy Policy (HSP) to set standards and provide responses to our knowledge of stocks or to changes in the ecosystems supporting these stocks (note also the Harvest Strategy section above). An important element of this approach at the Commonwealth level has been the adoption of an Ecological Risk Assessment (ERA) approach to management. This has been a major step forward in ensuring that species at high risk from fishing are the focus of management. The ERA approach includes a precautionary approach to determining risk by ascribing high-risk profiles to species for which there is a lack of data or uncertainty in information.

We believe the development and use of ERAs across all jurisdictions will assist in the effective implementation of the precautionary principle.

We support the development and use of risk-based approaches where there is limited information and greater uncertainty, however the management responses applied need to be commensurate with the level of risk. Risk assessments, like HSP's themselves, must adequately cover all aspects of ecological sustainability, resource allocation and social license, not just target stocks sustainability. Greater levels of regulation will be required where there is greater risk and uncertainty.

Concluding remarks.

AMCS would like to commend this submission and the recommendations within it to the commission. First and foremost we seek to ensure real and transparent Ecosystem Based Management becomes the standard in all Australian fisheries management. We strongly believe that this will increase productivity in not only the fishing industry but across Australian society in the long term.

We look forward to further input in response to the Commission's draft report later in the year.

Further input / clarification in relation to this submission can be accessed in the first instance by contacting Josh Coates, AMCS Fisheries and Sustainable Seafood Campaigner