23 December 2016

Future of our Fisheries
fisheries.review@mpi.govt.nz

Submission on Future Of Our Fisheries

Te Huapae Mataora Mo Tangaroa

This submission is made on behalf of the membership of the New Zealand Marine Sciences Society (NZMSS). It is made in good faith in my role as President of the NZMSS and in accordance with the Code of Ethics and Rules of the Royal Society of New Zealand.

NZMSS commends the Ministry for Primary Industries for initiating this important review of fisheries management in New Zealand. We encourage government to broaden the scope of the review and provide suggestions on how to do this in our detailed submission, attached.

Please contact me at the email address provided below for any further information regarding this submission.

Dr Hilke Giles
President
New Zealand Marine Sciences Society

Address for service:
Email: hilke.giles@gmail.com

Submission on Future Of Our Fisheries

New Zealand Marine Sciences Society

The NZ Marine Sciences Society (NZMSS) is grateful for the opportunity to comment on this review on the future of fisheries management. Thirty years after the implementation of the QMS, this is an excellent opportunity to improve fisheries management after a thorough evaluation of the lessons learned. Giving away individual transferable quotas and allowing these to be traded freely has had some unfortunate consequences for the management of New Zealand's fisheries. Quotas were given to individual fishers in the hope that this would provide incentives for these fishers to protect their local fish stocks. The accumulation of most of New Zealand's quota in the hands of a small humber of fishing companies has had a number of negative consequences. For example, litigation and lobbying by these companies has resulted in decisions that are the opposite of precautionary.

A strategic approach is needed to avoid the risk of quota accumulation and speculation, and to provide incentives for sustainable management, long term economic benefits rather than short term thinking and to ensure robust, science-based decision making. This requires broadening the scope of the review well beyond that proposed by MPI. The discussion document invites comments on "other ideas or actions" that should be considered. The advice in this submission provides a wider range of idea, actions and suggestions to help broaden the scope of the review. Our comments are structured along the lines of the Discussion Document, addressing Strategic Proposals 1-3: Maximising value from our fisheries, better fisheries information and agile and responsive decision making. We also address the Regulatory change proposals 1 and 2: Integrated electronic monitoring and reporting system and enabling a discussion on the pros and cons of different fishing gears.

<u>Strategic Proposal 1: Maximising value from our fisheries</u>

NZMSS applauds the goals of adding value to New Zealand's fisheries by "getting the most value from every fish landed and to minimise waste" (MPI Discussion Document 2016/27, Future of our Fisheries, Volume 1, page 14).

The most effective way to maximise the quality and value of each fish caught is to ensure that the most selective, sustainable fishing method is used for each target fish species. For example, making much more use of hook and line methods and fish traps rather than bulk fishing methods like gillnets and trawling. This will also reduce waste and environmental impacts. This is a highly effective way to add economic value while at the same time minimising damage to fish stocks and the broader marine environment.

We recommend a thorough analysis (including bio-economic assessments) to determine the best way of achieving long term economic and environmental goals. New Zealand fisheries management should be aligned with international best practice, such as fisheries management in Iceland where all fish caught must be landed and used. This will lead to innovation and efficient use of New Zealand's marine resources.

Economic incentives should be used to encourage the fishing industry to make the transition to selective, sustainable fishing methods. This could include negative incentives such as a proportional reduction in ITQs for fishers using bulk fishing methods such as gillnets and trawling and/or positive incentives such as financial assistance for fishers transitioning to selective, sustainable fishing methods.

We strongly support the proposal to manage fish stocks at much higher levels than currently. As stated in the Discussion Document "As stocks become more abundant, catch rates for all fishers improve." Most of our fish stocks are currently at unknown size or at very low population sizes (e.g. 10-30% of pre-exploitation biomass). Managing fish stocks at levels above 50% of pre-exploitation biomass will provide more opportunities for recreational fishers, increase catch rates and therefore reduce fuel costs (and fuel use) and other running costs. NZMSS agrees with the statements in the Discussion Document that the benefits of managing stocks at higher levels include "reduced fishing costs relative to fishing revenues (maximising profits per fish); improving the functional role of fish stocks in marine ecosystems; bolstered resilience to environmental shocks such as climate change."

Fish stocks in New Zealand waters belong to all New Zealanders, not just those with an economic interest. A fair allocation of fishing opportunities to recreational fishers can be achieved by encouraging commercial fishers to use more selective, sustainable fishing gears and to fish further offshore. This is easily possible for commercial fishing vessels, but not for recreational fishers. A sensible offshore distance for a prohibition on bulk fishing methods such as gillnets and trawling would be 12 nautical miles.

Strategic Proposal 2: Better fisheries information

We endorse the goal of improving accessibility and breath of fisheries information. NZMSS has a wealth of experience with fisheries science, fisheries management and marine ecology and will be happy to provide scientific advice during the review process and beyond. Comments from Dr John McKoy (President of NZMSS from 1986 to 1987, past Director of Fisheries Research at NIWA, MAF and MPI) help to put the problems with our current fisheries science and fisheries management system into perspective. Dr McKoy questioned the effectiveness of the QMS, pointing out that effective use of management tools like the QMS requires a reasonable knowledge of the state of the resources being managed and of the ecological impacts of fishing activity (McKoy 2007). In his experience, New Zealand's success at fisheries management has been hampered by a lack of clearly defined fisheries management objectives, ineffective processes for determining key research questions and inadequate resources for research.

Better information on already developed fish stocks is urgently needed, in particular in inshore fisheries. It would be irresponsible to continue to search for and exploit new fish populations. Investment in better information about new fisheries would come at a further cost to information about already developed fish stocks. We strongly advise against this and urge government to boost science capacity to ensure scientifically robust data to support the management of species already being fished.

These problems have been well recognised by New Zealand marine scientists, in government departments and other organisations. In his keynote address to the 2010 NZMSS conference, another prominent member of NZMSS, Dr Don Robertson (president of NZMSS from 1978 to 1979, Chief Scientist Biodiversity and Biosecurity at NIWA 1995-2010) made very similar comments. He also identified that fisheries management goals are poorly defined in New Zealand. Needless to say, this makes it difficult to diagnose whether fisheries management is succeeding or failing. Dr Robertson pointed out that fisheries science is in crisis, with too much modelling and too little biological data and biological common sense. One of the most serious risk factors pointed out by Dr Robertson is that adverse changes in fish stocks and the broader marine environment are likely to be non-linear and abrupt (tipping points).

Over the last 20-30 years, scientific uncertainty has frequently been used to justify high risk decisions rather than precautionary management. As Dr Robertson pointed out in his keynote address, government officials often act as if they are working for the fishing industry rather than for the public of New Zealand. Dr Robertson recommended a science policy panel with input from independent scientists from New Zealand and overseas. NZMSS is pleased to see that the MPI review has also concluded that an independent science panel is needed.

MPI and its Minister have clearly recognised that there are problems with the research data needed to effectively manage New Zealand's fisheries. The discussion document states that the Minister has asked MPI to establish a Technical Advisory Group (TAG). While NZMSS applauds MPI seeking additional technical and scientific input, the proposed TAG is too narrow to solve the problems identified by Dr McKoy, Dr Robertson and others in NZMSS. What is needed is credible, independent science input to balance the vested interests of the fishing industry and other stakeholder groups. Many of the stakeholders are prioritising short-term profits over the interests of the public of New Zealand. Government agencies appear to have a slightly longer term vision, but are still mainly focused on achieving short to medium term management goals (within one or two electoral cycles). The sustainable management of fisheries requires a long term perspective that comes from a strong science base. Ecosystem management, often stated as a goal of fisheries management, requires a timeframe that matches ecological, not economic processes. Simply adding technical advice from stakeholder groups will not achieve this. It is imperative that government agencies obtain independent science advice to develop a truly sustainable long-term vision for New Zealand's fisheries.

An effective fisheries management system requires not only a mechanism for setting quotas but also gear controls. The government needs to take an active role in ensuring that the most selective, sustainable fishing method is used for each fish species targeted. It is essential for government to help the fishing industry make the transition to selective, sustainable fishing method that optimise the long-term economic performance and job opportunities in the fishing industry. Current fisheries management practices involve many negative incentives (e.g. for fish dumping and non-reporting of protected species bycatch) that lead to short term profits at the expense of long term economic performance and sustainability. Environmental impacts need to be front and centre in decisions on setting quotas, not a minor afterthought.

NZMSS supports MPI's proposal to improve independent science oversight in fisheries management by setting up a National Fisheries Advisory Council. This council should set up to determine research priorities and set standards for research quality. NZMSS will be happy to assist government in finding suitable independent scientists to sit on such a Fisheries Council.

Current fisheries information is inadequate for scientifically robust decision-making on all but a small number of high value fish stocks. Inshore fisheries are especially poorly known. This does not constitute a balanced fisheries management system. TACCs for inshore stocks tend to be a running average of past catches. Shifting baselines make it very difficult to properly evaluate these stocks.

Current, single species management is ineffective in ensuring a healthy marine ecosystem. NZMSS agrees with the statements in the Discussion Document that "consumers are interested in higher levels of habitat protection, ecosystem resilience and managing for higher fish abundance."

NZMSS agrees with the goal, outlined in the Discussion Document, of "moving towards EBFM by 2020 as one of its targets under the Convention on Biological Diversity" and agrees that this will "enable MPI to better meet the increasing global expectations around sustainability". The settings of the Fisheries Act will need to be changed rather than just "refined" to better "meet international best practices such as ecosystem-based fisheries management (EBFM)."

Independent research is essential and processes will need to be in place to ensure that externally commissioned research is credible and independent. The commercialisation of science in New Zealand has had some negative effects on the quality of science. This has also been demonstrated overseas, where research outcomes and management recommendations have been shown to depend on who funded the research. To mitigate these problems it is essential for government to set up an independent science body that determines research priorities and decides who receives the contracts for that research. A modified version of the National Fisheries Advisory Council should be able to achieve this. A direct link between research provider and research user increases the risk of putting pressure on the research provider to ask research questions and produce answers that suit the government or industry user of the information. It will also be important for sufficient science capacity to be retained within MPI (and other government agencies) to ensure that government is able to evaluate the quality of the science it commissions.

The current process of technical working groups and plenary reviews mentioned in the Discussion Document is not credible. Decisions by these working groups are essentially made by consensus, and the composition of the groups (e.g. AEWG) is heavily biased towards extractive users, with government officials the second largest number of participants. Obstacles to participation by independent scientists include a heavy cost in terms of time, travel expenses and other resources. These obstacles result in a very low level of participation by independent scientists and meetings dominated by industry and government representation. NZMSS is pleased to hear that MPI "welcomes" research from

external research providers. However, independent research tends to be ignored in research and management decisions. This is another obstacle for independent researchers who might otherwise play a more active role supporting New Zealand's fisheries management system. Altogether, this constitutes a wasted opportunity. Government can not afford to make such poor use of external researchers. NZMSS agrees with the suggestion in the Discussion Document that "research priorities could be identified jointly" by MPI and independent scientists.

NZMSS agrees with statements in the Discussion Document that decisions need to be "risk-based supported by evidence and robust processes" and that to achieve this outcome it is important for government to "support independent advice through a National Fisheries Advisory Council". The composition of this council is critical. It needs to be truly independent and committed to providing science-based advice. It therefore needs to be comprised of New Zealand and international scientists. NZMSS will be happy to provide advice on setting up a National Fisheries Advisory Council.

The purpose of a National Fisheries Advisory Council would be to provide independent, unbiased, science-based advice on fisheries research and management. Its members need to be experts in fisheries science and management from New Zealand and internationally. The Council would develop formal management objectives, clear accountabilities and performance measures, based on international best practice. As outlined in the Discussion Document, the council would provide "independent advice on a range of issues such as setting TACs and other sustainability measures, and setting priorities and standards for research".

Strategic Proposal 3: Agile and responsive decision making

The summary of the discussion document (page 8) states that "Our fisheries management system needs to balance the use of our kaimoana with the long-term viability of ecosystems". There are several problems with this statement. It implies that compromising the long-term viability of ecosystems is acceptable, and necessary, in order to utilise kaimoana. This is not the case. Long term sustainability of marine ecosystems is a requirement for long term profits from fisheries. To suggest that these two goals need to be "balanced" indicates a goal of maximising profits from fishing at the cost of a degraded marine ecosystem. This would in the long term degrade fisheries and therefore contradict the stated goal.

Regulatory change proposal 1: Integrated electronic monitoring and reporting system

The introduction of the QMS saw a substantial reduction in on-the-water policing and monitoring. NZMSS supports the proposal for Integrated Electronic Monitoring and Reporting System (IEMRS) which will help to address this problem. However, the proposed electronic monitoring programme is far too narrow in scope. In addition to placing video cameras on vessels, sufficient resources need to be allocated to viewing the video footage. All of the footage, not just a small sample of it. More importantly, the information gathered needs to be acted on. If fisheries offences are documented on video, these need to be followed by prosecutions as recommended in the Heron Report. Observers are needed in

addition to video cameras to estimate drop-out of dolphins and other protected species before they come in view of the video cameras.

The proposed implementation is too slow. For example, video camera monitoring is routine overseas and trials in New Zealand since 2003 have shown this is a practical option in our fisheries. It is not clear why MPI is proposing to wait until 2018 to implement this solution.

Regulatory change proposal 2: Enabling Innovative Trawl Technology

The substantial investment by fishing industry and government in the Enabling Innovative Trawl Technology (EITT) is misplaced. Modifying the cod end of a trawl net certainly shows promise in terms of reducing damage to the catch and therefore increasing the value of the fish landed. However, this is a minor aspect of the overall damage of trawling to fish stocks, protected species and the broader marine environment. This issue needs a much more comprehensive approach. A detailed analysis of the pros and cons of different fishing methods in terms of fish value, impacts on fish stocks and environmental impacts will help to determine which fishing methods should be encouraged for which target species. Fishing gear controls are seen by some as contradictory to a QMS. However, the serious problems caused by this "either or" approach (fish dumping, high grading, impacts on protected species) identified in the MPI discussion document show that gear controls are an integral part of any fisheries management system. The suggestion in the discussion document that EITT would allow "commercial fishers being able to land fish in better condition with less environmental impact than current trawl gear" is not supported by the evidence. While it is realistic to aim for landing fish in better condition, there is no evidence that EITT would reduce the environmental impact of trawling. Rather than focusing on "innovative" technologies it would be much more productive to make better use of already existing technologies by ensuring the right fishing gear is use in the right area, for the right target fish species. For example, the trawl fishery off the east coast of the South Island is currently called the "mixed trawl fishery" because it catches so many species at the same time that it is not clear what the "target" species is. It would be more effective to decide what target species to fish for and use the right technology to catch that species. For example, most groper fisheries in NZ waters use long-line methods. But the Kaikoura fishery uses gillnets. This is a wasteful way to fish groper and fishers should be encouraged to change (back) to long-lining for this species.

A healthy marine environment, with fish stocks and other species at much higher (close to pre-exploitation) levels would support better fishing opportunities for commercial and non-commercial fishers. It would also provide much better (commercial and non-commercial) tourism opportunities such as diving, sailing, whale and dolphin watching, kayaking and other recreational activities.