13 August 2019

Inshore Fisheries Management
Fisheries New Zealand
Ministry for Primary Industries
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Submission to Fisheries New Zealand
Draft Marlborough Sounds Scallop Strategy

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 generally supports the proposed draft Marlborough Sounds Scallop Strategy. Please see our response to each of the discussion questions below. The Society wishes to be heard in respect of this submission.

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

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Draft Marlborough Sounds Scallop Strategy

The New Zealand Marine Sciences Society

The New Zealand Marine Sciences Society (NZMSS) was formed in 1960 as a constituent of the Royal Society of New Zealand, to encourage and assist marine science and related research across a wide range of disciplines in New Zealand and to foster communication among those with an interest in marine science.

NZMSS is a professional science body and a non-profit organization that provides access to and within the marine science community. We identify emerging issues through annual conferences, annual reviews, a listserv and our website http://nzmss.org/. NZMSS membership covers all aspects of scientific interest in the marine environment and extends to the uptake of science in marine policy, resource management, conservation and the marine business sector. We speak for members of the Society on matters of interest on marine research in New Zealand and we engage with other scientific societies as appropriate. Our current membership comprises over 200 members.

Our submission is consistent with the Royal Society of New Zealand Code of Ethics and Rules, in particular principles 2.1 Integrity and professionalism, 4.1 Compliance with the law and relevant standards, and 10.1 Protection of the environment (www.royalsociety.org.nz/organisation/about/code).

Discussion questions.

Do you agree with the reasons that we have given above for why a strategy is needed. If not, why not?

The NZMSS agrees with the need for a strategy.

Are there other reasons that should be considered? If so what are they and why?

Yes. This strategy can be used as a basis for a management tool to manage scallop resources elsewhere in New Zealand. It is important to include all sectors in forming the strategy and it needs involvement of mana whenua in both the research and the decision-making process.

Do you agree with the overall aim? If not why not?

We agree that any future fishing should be sustainable, but question whether this is realistic during the recovery stage of the fishery. *P. novaezelandiae* is a short-lived species and short-term fluctuations will be expected. Recovery may be faster without added pressures of fishing.

Do you agree with the objectives?

Yes. In particular, NZMSS supports the use of closed areas and elimination of destructive fishing methods (i.e. dredging).

Are there other objectives that should be considered? And if so, what are they and why?

The objectives are already wide ranging. However, we recommend adding an overarching objective to increase the resilience of scallop populations in the future, in particular to the uncertain impacts of climate change.

Box 3 Discussion questions on recreational information

Do you support or oppose that we need better recreational fishing information in order to effectively manage the scallop fishery?

Yes. There is an absolute need to have better information on recreational catches and its impact to better manage the scallop fishery.

What are some options to improve our understanding of the recreational scallop catch?

To manage the fishery there needs to be information on the biomass, numbers, spatial distribution and population structure. To understand these, knowledge is needed on the reproduction, spat production and settlement. This information is likely to be site specific and so needs to be investigated over wide geographical areas. It needs to be undertaken using modern scientific methods of sampling and analyses.

If recreational fishing were to resume, then there needs to be better information gathered from recreational fishers. This could be aligned with the methods used in the scientific sampling. The location, numbers and size of any scallops caught should be recorded together with bycatch. Recreational divers might be encouraged to record the presence of scallop spat or immature scallops.

Recently there have been proposed changes to the regulations required of commercial charter boats carrying amateur recreational fishers. The skippers of these boats are not currently required to record all their catch, only the number of specified fish species. This list currently does not include scallops but changes to the regulations to include them would provide useful information about their recovery. Other information such as size or any damage would also be useful.

We also recommend areas that are closed to recreational fishing (and commercial) that can be used as a control to better understand the impacts of this sector.

NZMSS strongly opposes the use of dredges in the recreational fishery. The Draft Strategy provides an opportunity to set a precedent nationwide by acknowledging the impacts and prohibiting this destructive fishing method.

Do you agree with how we have framed the risk associated with a lack of recreational information? If not why not?

There is significant risk associated in allowing scallop fishing to resume. To mitigate this risk then there will need to be harvesting limits set for all fishers; commercial, recreational and cultural. There are well established techniques and methods which have been taken by commercial operators and mana whenua have their own procedures to protect mahinga kai. The impact of recreational fishers is unknown and may pose the greatest risk. Surveying every five or six years is unsuitable for a fishery of short-lived species which fluctuates over time. There needs to be more rapid assessment of the recreational fishery catch, especially in favourite tourist areas over summer, so that decisions are made quickly.

Discussion questions:

Do you agree with the mitigations that we have proposed for each risk? If not, why not?

Below are comments on the identified risks to the fishery as listed in the Strategy;

1. **Threshold for reopening is set too low.**
   The mitigation suggests reopening should occur at levels based on a time period when populations were healthy in the past. Given that environmental and climatic conditions may have changed this may not be realistic and a precautionary approach should be used. It would be better to base estimates on scientific studies of small areas where scallops are currently doing well. Modelling and other tools can be used to micro-manage areas and make decisions based on current population production.

2. **Target exploitation rate is too high.**
   This is a significant risk and any exploitation rate would need to be conservative. It would need to be monitored regularly and be able to respond rapidly to changes. Annual monitoring across the area should be continued. It will be useful to have diver surveys and limited assessments done by dredges. It will be necessary to collect information on the catch from commercial, recreational and cultural collectors.

3. **Fishing will exceed harvest allocations.**
   If harvest allocations are exceeded, then the fishery will need to be closed until the fishery is deemed sustainable.

4. **Management measures are not fit for purpose.**

Previous management of this fishery has depended mainly upon cooperation with commercial and fisheries management and less to do with cultural management or involvement of recreational fishers. The inclusion of others in the strategy team may result in changed management measures.

Regulations could include all the measures identified including daily bag limits, season length, size limits and catch reporting. While traditional fisheries regulations may take between nine months or a year to change, there would be more rapid cultural management practices or voluntary methods which could be more adaptive to sudden or dramatic changes.

One of the main management measures will be the fishing methods and gear to be used for scallop fishing. NZMSS supports restriction of fishing methods to those that do not impact on benthic habitats. Diving would be less destructive on the habitat than dredging and in turn would better protect spat settlement areas.

5. **The impact of fishing on the aquatic environment and scallop sustainability are too large.**
   The effects of dredging on benthic habitats are well documented and there are reports suggesting that scallops are now rare in areas where continued dredging has occurred. The designation of habitats into categories based on resilience needs to be scientific and based on previous and current research. Due to the protected nature of the Marlborough Sounds it is likely that all areas are predisposed to dredging impacts and management should consider eliminating dredging methods.

   The Strategy suggests that measures might be designed to increase the amount of scallop habitat available. If this is considered, then scallop habitat would need to be defined. The more appropriate measure might be to try to restore the benthic communities in the Marlborough Sounds to a level which supports thriving invertebrate communities of epibenthic and burrowing invertebrates, including polychaetes and bivalves. These are important habitat engineers promoting diversity. Such communities can be important in allowing spat settlement and protection against predatory fishes.

   While it is tempting to take other measures, for example modifying the environment by adding substrate including shells, such measures need to be done with care and with knowledge of the effects on the current communities. Also such methods pose the risk of spreading invasive species.

6. **Non-fishing impacts cause scallop abundance to decline**
   Due to the uncertainty around future climatic conditions and other non-fishing impacts a precautionary approach is needed to managing scallop populations and benthic habitats.

Are there specific rules and regulations that you think should be changed for the Marlborough Sounds? If so what are they and why?

NZMSS believe that recreational dredging should be permanently prohibited in the Marlborough Sounds and any continued commercial dredging restricted to clearly defined areas.

Recreational and commercial fishing should be spatially managed with large areas protected from both.

Is there other research that should be considered? If so, why?

Research is needed on the biology of scallop in the Marlborough Sounds, Golden and Tasman Bay. These areas have some similarities and will have common threats. More work could be done on spat collecting and determining the optimal habitat for growth and survival. If there is successful spawning and spat formation, then funding could be put into researching the feasibility of scallop enhancement as a way forward to potentially helping manage the fishery.

Are there other mitigations that should be considered?

The main mitigation methods should aim to eliminate damage caused to benthic habitats by dredging.