

# REVIEW OF THE DRAFT SOUTHERN SCALLOP STRATEGY: MARLBOROUGH SOUNDS

## SUBMITTER DETAILS

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## 1. Introduction

- 1.1. This is a submission on the Draft Southern Scallop Strategy: Marlborough Sounds (**Draft Strategy**) developed by the Southern Scallop Working Group and Fisheries NZ.
- 1.2. EDS is a not-for-profit, non-government national environmental organisation. It was established in 1971 with the objective of bringing together the disciplines of law, science, and planning in order to promote better environmental outcomes in resource management. EDS recently undertook an in-depth study into the operation of the fisheries management system, with a focus on inshore stocks. The study included 60 interviews with people directly involved with fisheries management in New Zealand and was published in 2018 under the title: "Voices from the Sea: Managing New Zealand's Fisheries".

## 2. Summary of submission

- 2.1. EDS seeks:
  - a) That the Southern Scallop Working Group be widened to include other stakeholder interests, including an environmental perspective
  - b) That if the Marlborough Sounds scallop fishery is reopened at any stage, that dredging be banned as method that can be used to harvest scallops
  - c) That the final strategy include the best available information on dredging and other effects on scallop habitat
  - d) That further research be undertaken to inform what the appropriate biomass threshold is prior to reopening the fishery

## 3. Draft Strategy

- 3.1. The Draft Strategy explores the issues that need to be addressed in the Strategy for reopening the Marlborough Sounds scallop fishery in Quota Management Area SCA 7. This fishery has been closed for a number of years, following a significant decline in scallop abundance.

- 3.2. The neighbouring Tasman and Golden Bays have historically supported scallop fisheries; however these stocks collapsed in the early 1980s and were eventually closed in 2011 and 2016. The decline in scallop abundance is largely due to a change in the benthic environment, from years of intensive dredging enabled by the enhancement of the wild fisheries, meaning that the area has gone over an ecological tipping point and is no longer able to support healthy scallop beds.
- 3.3. Following the closure of the Tasman Bay and Golden Bay fisheries, commercial catch in the Marlborough Sounds peaked. This resulted in the over-fishing of scallops in the Marlborough Sounds. This unsustainable harvest combined with the effects of fishing methods on habitats led to the closure of the fishery in 2016.
- 3.4. Recent recruitment of scallops in Tasman Bay and Golden Bay remains low (due to the large areas of degraded habitat). As a result, scallop abundance in Tasman Bay and Golden Bay is still negligible. However, recent surveys show a recovery in scallop biomass in the Marlborough Sounds, which has not been as impacted by dredging activity.
- 3.5. The Draft Strategy puts forward a proposal to reopen this fishery. In doing so it identifies a number of risks to the sustainability of scallops in the Marlborough Sounds that will be addressed in the final strategy.
- 3.6. A number of these issues relate to the appropriate level of harvest – the Draft Strategy seeks to set appropriate biomass thresholds (based on the Harvest Strategy Standards soft limit) and effective exploitation rates to ensure the species is maintained at a sustainable rate. Also up for discussion are the effects of management measures (including fishing methods) and non-fishing impacts on marine ecosystems.

#### *Preparation of the Draft Strategy*

- 3.7. Before diving into a discussion about the proposals, it is necessary to make a few comments about the preparation of the Draft Strategy. The Draft Strategy was prepared by the Southern Scallop Working Group, a group consisting of 13 members who are largely from the fishing industry.<sup>1</sup>
- 3.8. EDS considers that the membership of this group has resulted in fishing –centric view and it is imperative that the interests of wider stakeholders are included. This should include an environmental perspective. The final strategy will form the foundation for reopening the fishery, and without these views being represented important issues may be overlooked.

#### *Appropriate biomass threshold and harvest levels*

- 3.9. The Draft Strategy suggests that the proposed threshold for reopening will be based on a time period when scallop populations were healthy in the past. For the Marlborough Sounds this is between 2001 and 2008. Using the abundance rate from these years, a soft limit will be calculated using the Harvest Strategy Standard of 50% virgin biomass.

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<sup>1</sup> Finalised terms of reference, Southern Science Working Group (11 June 2018).

- 3.10. A soft limit of 50% virgin biomass is likely to be acceptable provided the other pressures on the fishery are also addressed. The risk assessment that accompanies the Draft Strategy indicates further research is required to better inform setting this limit.<sup>2</sup> EDS agrees with this statement and considers that before the fishery can be reopened there must be a sound scientific basis to ensure sustainability.
- 3.11. EDS also supports the proposal that once reopened, a cautious interim exploitation rate be set below the target exploitation rate. This will enable the stock to rebuild further and allow for monitoring of how the stock is responding to harvest.

*Impacts of fishing on the aquatic environment*

- 3.12. The Draft Strategy identifies that there are risks of fishing on the aquatic environment in the Marlborough Sounds. Commercial harvesting of scallops is exclusively done using dredging.
- 3.13. Dredging results in a number of negative impacts on scallop habitat, particularly in low-energy systems that have little natural disturbance (such as the Marlborough Sounds). These effects include:
- Removing or burying settlement surfaces for juveniles
  - Re-suspending sediment and disturbing the biological processes (diatoms) that bind sediment to the sea floor
  - Turning complex benthic habitat into soft mud.
- 3.14. Dredging destroys a habitat rich in filamentous threads, which scallop larvae attach onto, and replaces it with muddy sediment which is not appropriate for settlement. As a result, recruitment of scallops and other species is reduced.
- 3.15. The Draft Strategy proposes to address this issue by identifying those areas that are resilient to rotational harvesting, and enable dredging in these areas, and those that are not appropriate to continue dredging.
- 3.16. Given the significant change in benthic environments in the last 30 years<sup>3</sup>, EDS does not consider it is appropriate to continue dredging anywhere in the Marlborough Sounds. There is a wealth of international and national research on the negative effects of dredging to support this proposition, which is addressed further below in this submission. In our view, no healthy marine areas are 'resilient to rotational dredging' and continued dredging in areas that have already been impacted will prevent such areas recovering to a healthy state.
- 3.17. It is also noted that the Draft Strategy suggests the use of enhancement programmes to assist in rebuilding the habitat and abundance of scallops in the Marlborough Sounds. When used in the Tasman and Golden Bays in the mid-1980s this approach exacerbated

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<sup>2</sup> Southern Scallop Fishery; Marlborough Sounds: An initial assessment of the risks to sustainability (June 2019)

<sup>3</sup> Between late 1980s and 2010 1431 hectares of biogenic habitat disappeared from the Marlborough Sounds

scallop decline, resulted in stock collapse and helped push the benthic habitat over a tipping point. We are therefore surprised that this failed model is now being proposed to be repeated. The Strategy needs to address the reasons for the low scallop recruitment and abundance, not attempt to bypass them through artificially enhancing natural fisheries, particularly if dredging is being proposed as a method of harvest.

#### *Non-fishing impacts*

- 3.18. Sedimentation is identified as a risk to scallop abundance in the Marlborough Sounds. Sedimentation impacts scallops in a number of ways. It reduces feeding and oxygen uptake, particularly in juvenile scallops. Microalgae, a food source for scallops, are particularly affected by sedimentation as the constant resuspension of seabed sediment makes it difficult for these communities to establish on the seabed.<sup>4</sup>
- 3.19. In the Marlborough Sounds one of the main sources of sedimentation is forestry harvesting and associated earthworks. While this cannot be addressed under the Fisheries Act, the Draft Strategy proposes to identify pathways to mitigate this risk through a Fisheries Plan. Under the New Zealand Coastal Policy Statement 2010 it is required that the impacts of vegetation removal on sedimentation are controlled. The Fisheries Plan could be one way to help ensure this is given effect. Another way of addressing this problem is by amendments to the National Environmental Standard – Plantation Forestry (NES-PF), currently under review by MPI. EDS suggests this issue should be formally referred to the NES-PF Stakeholder Working Group for consideration.
- 3.20. EDS will be seeking that the Fisheries Plan adequately addresses the impacts of sedimentation and seeks to ensure that RMA planning processes on land are considering the marine effects of these actions (as part of their obligations under section 30).

#### **4. Obligations under the Fisheries Act**

- 4.1. When considering the setting of sustainability measures for a fish stock the Minister's decision-making power is subject to specific and directive statutory requirements under the Fisheries Act. EDS will be seeking that these requirements are given effect in the final strategy.

##### *Purpose: section 8A*

- 4.2. The Minister's decision must be consistent with achieving the Fisheries Act's purpose in section 8: *"to provide for the utilisation of fisheries resources while ensuring sustainability"*.
- 4.3. The definition of *"ensuring sustainability"* includes in ss8(2)(b) *"avoiding, remedying and mitigating any adverse effects of fishing on the aquatic environment"*. The *"aquatic environment"* is defined in s2 as *"the natural and biological resources comprising any aquatic ecosystem"* and to include *"all aquatic life"*. The term *"aquatic life"* captures *"any species of plant or animal life that, at any stage of its life history, must inhabit water, whether living or dead; and includes seabirds (whether or not in the aquatic environment)"*.

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<sup>4</sup> Peart, R, Voices from the sea: Managing New Zealand's fisheries (Environmental Defence Society, 2018)

- 4.4. The definition of “*ensuring sustainability*” therefore requires that the Draft Strategy include options that are consistent with avoiding, remedying, and mitigating any adverse effects of fishing on all marine species of plant and animal life as well as on the marine ecosystems which they comprise. In the absence of this information, a decision made by the Minister on the basis of the Strategy would be unlawful.

*Environmental Principles: section 9*

- 4.5. Section 9 of the Fisheries Act sets out the environmental principles which the Minister must “*take into account*” when making a decision on the setting of sustainability measures. The two most relevant to the SCA 7 stock are:

- a) “*biological diversity of the aquatic environment should be maintained*” (s9(b)).
- b) “*habitat of particular significance for fisheries management should be protected*” (s9(c)).

Section 9(c)

- 4.6. s9(c) states that “*habitat of particular significance for fisheries management should be protected*”. None of the terms in this subsection are defined by the Fisheries Act.
- 4.7. We have been unable to find any case law defining the word protect for the purposes of s9(c) of the Fisheries Act. Protect is defined by the Compact Oxford Dictionary<sup>5</sup> as “*keep safe from harm or injury*”. The Courts have confirmed the same definition applies in the context of the requirement to protect significant areas of indigenous vegetation and significant habitats of indigenous fauna under the RMA.<sup>6</sup>
- 4.8. Simply avoiding, remedying, or mitigating adverse effects generally is not sufficient – the actions undertaken must be adequate to achieve protection. Protection of scallops in the Marlborough Sounds will not be provided for under the current Draft Strategy.

*Information Principles: section 10*

- 4.9. When making a decision under the Fisheries Act, the Minister must take into account the information principles in s 10
- a) decisions should be based on the best available information
  - b) decision makers should consider any uncertainty in the information available in any case
  - c) decision makers should be cautious when information is uncertain, unreliable, or inadequate
  - d) the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of this Act

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<sup>5</sup> 3<sup>rd</sup> edition, pg 737.

<sup>6</sup> [2015] NZEnvC 219 at [63].

4.10. EDS will be seeking that the final strategy includes information on all important matters that the Minister is legally required to take into account. As scallops are primarily harvested through bottom trawl the final Strategy will need to include information of this fishing method on the relevant environmental principles, namely:

- a) “biological diversity of the aquatic environment should be maintained” (s9(b)).
- b) “habitat of particular significance for fisheries management should be protected” (s9(c)).

4.11. There is a wealth of information on this topic which must be considered by the Minister in order to meet his statutory obligations. The information is summarised in the publication “Ministry for Primary Industries (2017). Aquatic Environment and Biodiversity Annual Review 2017. Compiled by the Fisheries Management Science Team, Ministry for Primary Industries, Wellington, New Zealand” (**AEBAR**) which has a chapter on benthic impacts of fishing activity.

4.12. AEBAR summarises the international scientific findings of the benthic impacts of trawling including that:<sup>7</sup>

*the effects on habitats of mobile bottom fishing gears were that they can:*

- *Damage or reduce structural biota (all reviews, strong evidence or support).*
- *Damage or reduce habitat complexity (all reviews, variable evidence or support).*
- *Reduce or remove major habitat features such as boulders (some reviews, strong evidence or support).*
- *Alter seafloor structure (some reviews, conflicting evidence for benefits or harm).*

*Other emergent conclusions on habitat effects included:*

- *There is a gradient of effects, with greatest effects on hard, complex bottoms and least effect on sandy bottoms (all reviews, strong support, with qualifications).*
- *There is a gradient of effects, with greatest effects on low energy environments and least (often negligible) effect on high-energy environments (all reviews, strong support).*
- *Trawls and mobile dredges are the most damaging of the gears considered (three of the reviews considered other gears; all drew this conclusion, often with qualifications).*

4.13. AEBAR concludes at page 369 that “*The international literature is, therefore, clear that bottom(demersal) trawling and shellfish dredging are likely to have largely predictable and sometimes substantial effects on benthic community structure and function.*”

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<sup>7</sup> Page 368

4.14. The historic effects of dredging in this area are well documented and have resulted in the significant decline in scallop abundance. Due to the destruction of habitat through dredging, scallop abundance in the Tasman and Golden Bays remains negligible despite the closure of the fishery. This information is all relevant to the Minister in making his decision and is required to be included in the final Strategy

## **5. Conclusion**

- 5.1. The Marlborough Sounds scallop fishery should only be reopened if methods other than dredging are used for harvest. If other harvest methods are utilised EDS would support the reopening of the fishery, provided robust threshold and harvest allocation limits are set. These should be complemented by regular monitoring and enforcement. The preparation of a Fisheries Plan to address non-fishing impacts on the aquatic environment is also supported.
- 5.2. To ensure that all stakeholder interests are represented in the final strategy, EDS suggests that the Southern Scallop Working Group be extended to incorporate some of these interests and views.
- 5.3. In order to ensure the Minister is properly informed in making his decision EDS seeks that the best available information on the environmental effects of fishing activity be included in the final Strategy. This is required to give effect to the statutory obligations in the Fisheries Act.