



Otago Harbour cockle fishery

Discussion Document

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OTAGO COCKLE FISHERY (COC3)

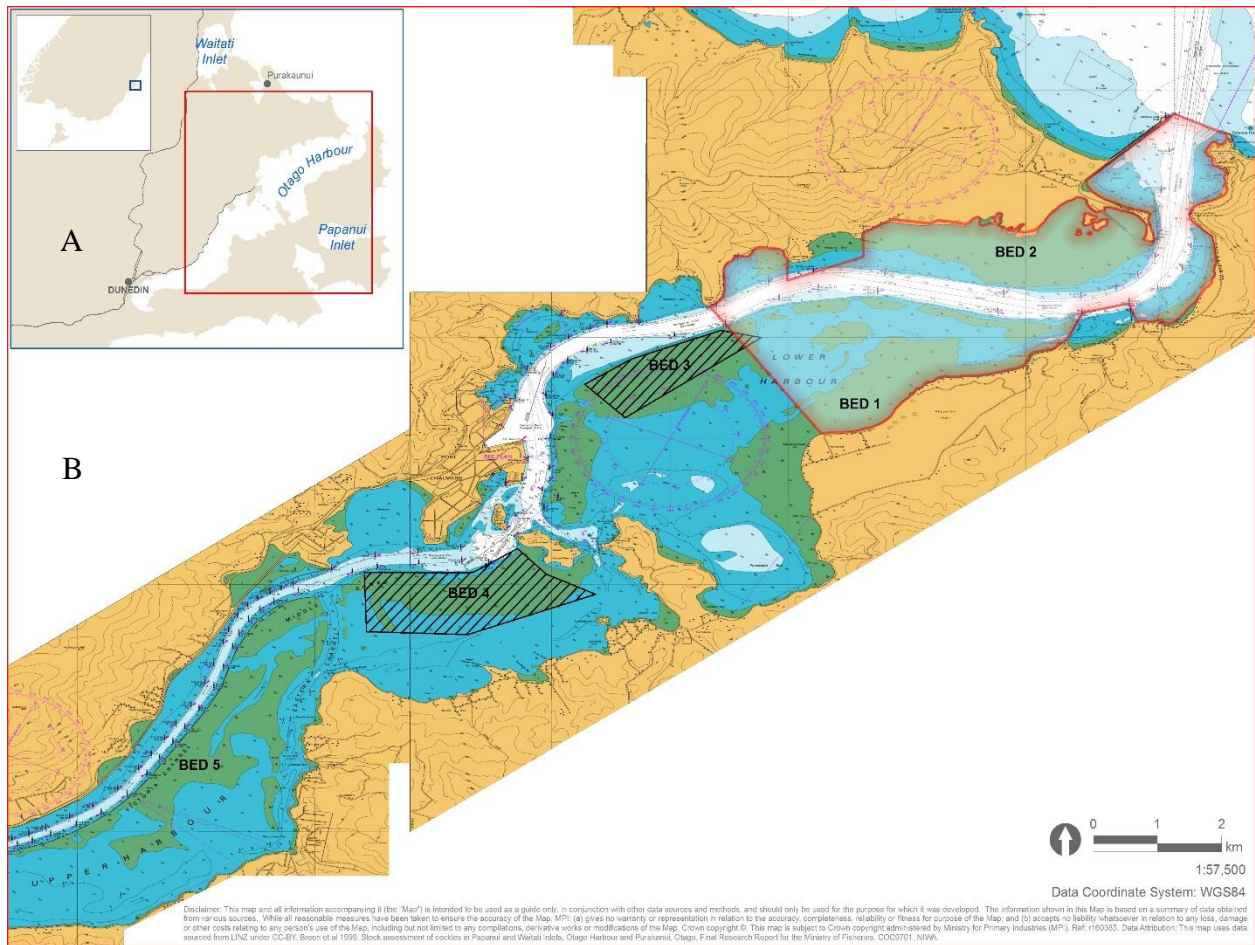


Figure 1. Major cockle beds in Otago Harbour. A: Key cockle beds within the Otago cockle fishery (COC3). B: Commercial cockle harvesting is allowed within Otago Harbour beds 3 and 4 under special permit. The red outline highlights the Ōtākou Mātaimai Reserve (effective from 13 October 2016)

1 EXECUTIVE SUMMARY

The Ministry for Primary Industries (MPI) is reviewing whether to amend a regulation to allow the commercial harvest of cockles to continue in two parts of Otago Harbour (Figure 1). The fishery has been operating in these two areas under special permit since 2009. The permit has provided for extensive research into the ecological effects of commercial scale harvesting which is information that will help support a significant and sustainable commercial fishery.

The special permit expires this month and commercial fishing of cockles in the harbour will cease to be authorised due to a generic fisheries regulation that prohibits the commercial harvest of some shellfish from the harbour. The original reasons for the regulation are related to food safety (water quality) issues that are no longer relevant and are dealt with by other legislation. Otago Harbour is believed to hold the largest biomass of cockles in New Zealand, with an estimate in excess of 30,000 t of cockles.

Commercial harvesting of cockles from the Otago cockle fishery (COC3) predominantly takes place in Waitati Inlet, however harvesting from this site is regularly interrupted due to poor water quality. COC3 quota holders have asked to have these two areas in Otago Harbour

available as alternative harvest areas to ensure they are able to maintain consistent supply to export markets.

The results of the investigative research carried out under the special permit confirm that the sustainability and environmental impacts of commercial harvesting are likely to be minor under these management settings. The two areas are not believed to be key areas for non-commercial harvesting, therefore the impact to non-commercial parties is expected to be negligible.

If the regulation is amended to allow commercial cockle harvesting to continue in these two areas within Otago Harbour, fishing would be subject to all the requirements in place for the COC3 fishery under the quota management system. These include total allowable catch (TAC), gear restrictions, reporting requirements and annual catch entitlement. Should the two areas be opened for commercial harvesting of cockles, MPI proposes no change to the TAC or any other management settings for COC3.

1.1 SUBMISSION INFORMATION

MPI welcomes written submissions to inform the review and the proposals contained in this Discussion Document. All written submissions must be received by MPI no later than 5pm on Wednesday (15 February 2017)

Written submissions should be sent directly to:

Inshore Fisheries Management
Ministry for Primary Industries
P O Box 2526
Wellington 6011

or emailed to FMsubmissions@mpi.govt.nz

All submissions are subject to the Official Information Act and can be released (along with personal details of the submitter) under the Act. If you have specific reasons for wanting to have your submission or personal details withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment for the release of submissions if requested under the Official Information Act.

2 PURPOSE

The purpose of this document is to initiate consultation on behalf of the Minister for Primary Industries (the Minister) on whether to amend a regulation that restricts commercial harvesting of some shellfish in Otago Harbour.¹ The amendment will allow the commercial harvest of cockles, which has been authorised since 2009 in two parts of the harbour under special permit, to continue.

MPI is consulting and seeking submissions on the following two options:

Option 1 (<i>Preferred</i>)	Amend the regulation to allow commercial cockle harvesting in the two areas currently subject to the special permit.
Option 2 (<i>Status quo</i>)	The regulation is not amended.

¹ The Fisheries (South-East Area Commercial Fishing) Regulations 1986.

Under Option 1 the regulation would be amended to enable commercial cockle harvesting to continue in the two parts of the harbour currently being commercially fished, subject to the restrictions in place for the COC3 fishery within the quota management system.

Under Option 2 (status quo), the regulation would not be amended and commercial fishing of cockles in these two areas will cease to be authorised once the special permit expires this month.

Tangata whenua, the recreational sector, and other stakeholders are encouraged to provide their views and any additional information relevant to the review. Submitters' views will be included in the final advice provided to the Minister.

3 PROBLEM DEFINITION

When the special permit expires, commercial fishing of cockles in the harbour will cease to be authorised due to the fisheries regulation that prohibits the commercial harvest of some, but not all shellfish from the harbour. The water quality in the two areas harvested under the special permit has proven to be high, with relatively few closures under shellfish quality assurance criteria. Therefore, the original reasons for the regulation are no longer relevant and/or are dealt with by other legislation. The research progress reports reviewed through MPI's science review process show there to be a large biomass of cockles and that the harvesting of these cockles is sustainable with any environmental impacts likely to be minor and manageable. The two areas are only accessible by boat and are not considered to be key areas usually harvested by non-commercial fishers.

On this basis, MPI considers there is an opportunity to amend the regulations so that commercial harvesting can continue at these two sites. This would provide a number of benefits, including allowing a more consistent supply to export and domestic markets, and promoting economic growth and stability for the approximately 24 people involved in the commercial fishery.

4 OBJECTIVE

The purpose of the Fisheries Act 1996 is to provide for utilisation while ensuring sustainability. MPI considers that both options considered in this review are consistent with the objective of providing for utilisation of the COC3 fishery while ensuring sustainability. Amending the regulation (Option 1) provides additional economic utilisation benefits, while still ensuring sustainability than the status quo (Option 2).

COC3 is a "Group 3" fishery under MPI's Draft Fisheries Plan for Shellfish Fisheries. Such fisheries are considered to be important to customary and recreational fishers with discrete areas also supporting important commercial fisheries. Stocks in this group are generally robust to fishing pressures, though localised pressures can require active management. MPI seeks to secure social, cultural and economic benefits from such stocks, and to maintain stock size at or above target reference level.

5 BACKGROUND INFORMATION

5.1 COC3 FISHERY

The COC3 fishery includes beds of cockles (tuaki) that are important to customary, commercial and recreational fishers. Most recreational and customary harvest is believed to occur at Ōtākou and Aramoana in Otago Harbour (Beds 1 and 2 respectively, refer Figure 1), at Waitati Inlet,

and to a lesser extent at Papanui and Purakaunui Inlets. The Ōtākou Mātaitai Reserve over the outer part of the harbour reflects the high customary interest in tuaki in the harbour.

Recreational catch of cockles is not well estimated, but a diary survey in 2000 suggests up to 36 t could be harvested annually from the wider Otago-Canterbury area (Fisheries Management Area 3). No customary harvest has been reported since 2006 in COC3, when 5,700 cockles were reported taken. Recreational and customary allowances were set at 10 t each when the fishery entered the QMS in 2002, and have remained unchanged.

Cockles have been commercially harvested since 1983 within COC3 from Waitati Inlet and Papanui Inlet (until its closure for water quality reasons in 2006). Regular surveys of Waitati Inlet show cockle biomass is now higher than when commercial fishing commenced, indicating COC3 cockle beds can be productive and robust to fishing pressure. The Total Allowable Commercial Catch (TACC) was set at 1470 t when the fishery entered the QMS in 2002, and has remained unchanged. The COC3 stock is considered to be likely at or above target reference levels.

COC3 commercial fishers sell most of their catch live to overseas markets, primarily in Europe and North America (where they are known as littleneck clams). This export fishery is currently worth around \$5 million per annum in overseas earnings. A smaller, but growing volume of COC3 catch is also sold domestically. Approximately 24 people are currently directly employed within the COC3 fishery in harvesting, processing and marketing the catch, with additional indirect downstream economic benefits.

The supply to export markets is regularly interrupted due to poor water quality at Waitati Inlet. Furthermore, commercial harvesting has not been able to occur at Papanui Inlet since 2006, because water quality in the inlet has not met the standard required under the mandatory shellfish quality assurance programme for bivalve shellfish². Therefore, COC3 quota holders wish to have an alternative harvest area available to ensure they are able to provide consistent supply to export markets, and to grow their business.

Otago Harbour is believed to hold the largest biomass of cockles in New Zealand, estimated to exceed 30,000 t of cockles (not including cockles less than 30mm shell length). The Fisheries (South-East Area Commercial Fishing) Regulations 1986, however, closed the harbour to the commercial harvest of most, but not all, shellfish species - rock lobster, oysters and crabs can be commercially taken. The original reasons for the closure are related to water quality / food safety issues which are no longer relevant and are dealt with by other legislation (such as the shellfish quality assurance programme referred to above).

5.2 OTAGO HARBOUR RESEARCH

COC3 quota holders registered their interest in fishing the harbour as an alternative harvest area in the late 1980s and requested the regulation closing the harbour be reviewed in the early 2000s. Following concerns from tangata whenua and stakeholders regarding the sustainability and impact of commercial-scale harvest of cockles in the harbour, quota holders applied for a special permit for investigative research into impacts of commercial cockle harvesting in two parts of the harbour in 2008 (beds 3 and 4, refer Figure 1). The two areas are only rarely utilised by recreational and customary fishers, as they are accessible only by boat and there are other, more accessible, cockle beds in other parts of the harbour.

² Administered by MPI in co-operation with District Health Boards and the shellfish industry.

The special permit was approved by the Ministry of Fisheries in 2009 on the basis that it would provide for extensive and detailed research into the ecological effects of commercial-scale fishing practices. It would allow a review of the regulatory closure to be based on an improved assessment of the sustainability and environmental impact of commercial cockle harvesting.

An average of approximately 450 t of the 1470 t TACC for COC3 has been taken annually from the two areas in the harbour over the course of the special permit. While low in comparison to the estimate of the overall quantity of cockles across the harbour (in excess of 30,000 t), this is considered a sufficient amount to monitor and assess the impact and sustainability of commercial scale harvesting in the two areas. All commercial catch from the harbour has been counted against annual catch entitlement and has been subject to normal management controls within the quota management system.

The reports from the research programme are available at <http://nzclams.com/resources>. The programme has proceeded in 3 phases examining the bathymetric, ornithological, biomass and ecosystem effects of harvesting at the two areas in the harbour. All reports have been assessed through MPI's science review process. MPI considers the results of the research programme confirm that, overall, the commercial scale harvesting of clams at the two areas thus far is sustainable, and that any impacts of fishing on the substrate, associated species (including birdlife) or the wider ecosystem, are likely to be minor and manageable.

In 2014, quota holders received permission to undertake a fourth phase extending the research a further two years. The report from this phase will be reviewed through MPI's science review process once the phase is completed in early 2017.

There are other cockle beds in the harbour, particularly within the Ōtākou Mātaitai Reserve (refer Figure 1). However, commercial harvesting is prohibited within mātaītai reserves. In relation to other beds in the harbour (e.g. bed 5 in Figure 1), there is no recent information available on their cockle biomass or the effects of commercial fishing on these beds. Therefore, MPI is not proposing to review whether the closure relating to commercial fishing of cockles in these parts of the harbour should be amended at this time.

Additional background information and the stock assessment for the COC3 fishery can be found in MPI's 2015 Plenary Report at www.mpi.govt.nz/document-vault/8307

6 PROPOSED OPTIONS

6.1 OPTION 1 – AMEND REGULATION TO ALLOW COMMERCIAL HARVEST

Under Option 1 the regulation would be amended to enable commercial cockle harvesting to continue in the two parts of the harbour currently being commercially fished under special permit. Regulation 10 of the Fisheries (South-East Area Commercial Fishing) Regulations 1986 states that:

Restrictions on taking shellfish from parts of Otago coast

No commercial fisher shall take from, or have in possession, any shellfish (except rock lobsters, oysters, or crabs) taken from the following waters:

(c) *Otago Harbour*—all the waters of Otago Harbour enclosed by a straight line drawn from Heywards Point (at 45°45.4'S and 170°41.4'E) to Taiaroa Head (at 45°46.5'S and 170°43.6'E):

This regulation would be amended to add cockles, in the two areas subject to the special permit, to the current exemptions for rock lobster, oysters and crabs. Cockles could then continue to be commercially harvested once the special permit expires, subject to the management requirements in place for the wider COC3 fishery under the quota management system.

While a wider amendment to allow commercial cockle harvesting in other parts of the harbour could be considered, the research that has been carried out under the special permit is specific to the two areas (although some aspects of the research have wider relevance). Therefore MPI considers additional research is required to support changing the status of other parts of the harbour. While considering this possibility, MPI will take into account the importance of these areas to non-commercial fishers.

Impacts

Under the special permit each area has approximately half of the beds open to harvest, in order to assess changes in biomass over time in harvested and non-harvested areas. Since the special permit began the biomass of cockles in the harvested sites within the two areas has decreased by 29% and 33% at the two sites. However, some of this decrease occurred before harvesting began. Furthermore, the abundance of cockles in control sites in the two areas has also changed significantly over this period. Biomass at the control sites in one of the areas increased by 22% over the course of the special permit, while at the other, biomass dropped by 11%. Biomass levels may stabilise at a lower level with continued harvesting, may decrease further, or may increase over time to a level higher than when commercial harvesting first began, as observed at Waitati Inlet. Overall, fishing is one of several factors that may influence the biomass of cockles, and the biomass will fluctuate naturally. Ongoing monitoring of the areas is needed, and will be a requirement in the future should these beds continue to be harvested. This will ensure fishing remains at sustainable levels over time, and that the COC3 stock size remains at or above the target reference level.

Cockles have a role as a food source for birds, fish and other invertebrates. Removal of cockles, and the activity associated with commercial harvesting could have an impact on the species associated with the two areas, or on sediment composition in the areas. However, the results of the avifaunal and ecosystem component of the research programme suggest that, given the low exploitation rate (less than 4% of the Otago Harbour biomass of cockles greater than 30 mm size has been harvested in any year) and the small spatial scale of harvesting relative to the harbour, any impacts are likely to be transitory and minor in nature.

Non-commercial fishing of cockles in the two areas could be impacted by the reduced biomass as a result of continued commercial harvest, although even at the reduced biomass the density of cockles remains high in the two areas. Non-commercial harvesters should have no difficulty finding cockles should they fish in these two areas. In addition, the two areas are not believed to be key areas for non-commercial fishing, primarily because they are only accessible by boat. MPI seeks information from submitters on the extent of recreational and customary harvest in these two areas.

Benefits

Allowing commercial harvesting of cockles to continue will provide COC3 quota holders with an ongoing alternative harvest area to maintain market supply during periods when Waitati Inlet is closed due to water quality. This should create economic benefits from increased access to cockles and allow quota holders to grow their business.

Taking into account the benefits from allowing cockle harvesting to continue in the two areas in the harbour, and the information from the research programme suggesting that the impacts of commercial harvesting are likely to be minor, Option 1 is MPI's initial preferred option.

6.2 OPTION 2 – STATUS QUO

Option 2 is the *status quo*. Option 2 would retain the current regulation that prohibits the commercial harvest of some shellfish (including cockles) from the harbour. When the special permit expires, commercial fishing of cockles in the harbour will not be authorised and will cease.

Benefits

Under this option the potential negative impacts in terms of reduced biomass, and impacts on associated species or non-commercial fishing would not arise.

Costs

The economic benefits and growth that are expected to occur from allowing commercial harvest to continue in the harbour would not be realised under this option. Quota holders advise they expect a reduction in export revenue and employment should commercial fishing in the harbour cease as they will lose market share and be unable to grow their business.

With no access to the harbour, all commercial harvest would be taken from Waitati Inlet. Based on the time series of surveys, harvesting at higher than current levels at Waitati Inlet is likely to be sustainable, but water quality issues may limit harvesting. However, Waitati Inlet is also more accessible to non-commercial harvesters than the two areas in the harbour, and higher levels of commercial harvest could impact on recreational and customary fishers in the inlet.

7 OTHER MATTERS

7.1 COC3 TOTAL ALLOWABLE CATCH (TAC), TACC AND ALLOWANCES

No changes are proposed to the existing TAC or to any other management measures for the COC3 fishery at this time. The current TACC of 1470 t has not been fully caught, largely due to difficulties maintaining market share, and unfavourable exchange rates for exporters. Quota holders advise these limitations have eased in the past few years due to better certainty of supply as a result of the special permit, and the recently improved exchange rate.

A decision to amend the regulation to allow commercial fishing to continue is not expected to impact on the amount taken by recreational or customary fishers, or the other sources of fishing related mortality that need to be taken into account when setting a TAC. Should the TACC, TAC or allowances need to be reviewed in the future this decision will be subject to a further consultation and decision-making process.

7.2 IMPLEMENTATION, MONITORING, AND REVIEW

Following consultation, MPI will develop a Decision Document for the Minister, who will make a decision on the review of the regulation. Changes to the regulation, if required, would come into effect in mid-2017.

MPI monitors and reviews the effectiveness of regulations through an annual fisheries planning process. This involves assessing performance measures across all stocks to ensure they are meeting objectives. The performance of the wider COC3 fishery, of which the two areas in Otago Harbour are a part, and the performance of the regulations applying to this fishery would

be discussed with stakeholders as part of the annual fisheries planning process. Based on the information that becomes available, MPI will consider whether a further review of the regulations is warranted in the future.

MPI requires regular (approximately three-yearly) biomass surveys of the commercially harvested areas in COC3 to ensure harvesting is sustainable. Regular surveys of the two areas in Otago Harbour will be required should the regulation be amended to allow commercial cockle harvesting to continue.

8 CONCLUSION

MPI is seeking stakeholder and public feedback on whether to amend a regulation so that the commercial harvest of cockles can continue in two parts of Otago Harbour that have been fished under special permit since 2009.

MPI's initial assessment is that there are economic benefits from amending the regulation that outweigh any negative impacts from continued commercial fishing in these two areas. The sustainability and environmental impacts of commercial harvesting are likely to be minor and can be managed through the requirements already in place under the quota management system for COC3. The two areas are not believed to be key areas for recreational or customary cockle harvest, and there is expected to be little impact on non-commercial harvesting. The water quality in the two areas over the course of the special permit has proven to be high, and the original reasons for the regulation appear to be no longer relevant and are dealt with by other legislation.

MPI's initial view is that the regulation be amended to enable commercial cockle harvest to continue in these two parts of the harbour.