



Review of sustainability measures for southern scallops (SCA 7)

MPI Discussion Paper No: 2014/07

Prepared for the Ministry for Primary Industries

ISBN No: 978-0-478-42347-1 (online)

ISSN No: 2253-3907(online)

January 2014

Disclaimer

While every effort has been made to ensure the information in this publication is accurate, the Ministry for Primary Industries does not accept any responsibility or liability for error or fact omission, interpretation or opinion which may be present, nor for the consequences of any decisions based on this information.

Requests for further copies should be directed to:

Publications Logistics Officer
Ministry for Primary Industries
PO Box 2526
WELLINGTON 6140

Email: brand@mpi.govt.nz

Telephone: 0800 00 83 33

Facsimile: 04-894 0300

This publication is also available on the Ministry for Primary Industries website at <http://www.mpi.govt.nz/news-resources/publications.aspx>

© Crown Copyright - Ministry for Primary Industries

Contents	Page
Introduction	1
Deadline for submissions	1
Official Information Act 1982	1
Summary	2
Context	3
Management Approach	4
Previous Review	4
Biological Characteristics of Scallop	4
Stock Status	5
SCA 7 Fishery	6
Other Considerations	8
Proposed Response	8
Option 1 (<i>Status Quo</i>)	9
Option 2	9
Other Management Measures	10
Future Considerations	10
Initial Consultation	11
Conclusion	11

Introduction

1. This Initial Position Paper (IPP) provides the Ministry for Primary Industries' (MPI's) initial proposals on sustainability controls for southern scallops (SCA 7) for the 1 April 2014/15 fishing year.
2. MPI has developed this IPP for the purpose of consultation as required under the Fisheries Act 1996. MPI emphasises the views and recommendations outlined in the paper are preliminary and are provided as a basis for consultation with stakeholders.
3. In February/March 2014, MPI will compile the Final Advice Paper (FAP) for the attached proposal. This document will summarise MPI's and stakeholder's views on the issues being reviewed, and provide final advice and recommendations to the Minister for Primary Industries. A copy of the FAP and the Minister's letter setting out his final decisions will be posted on the MPI website as soon as these become available. Hard copies will be available on request.

Deadline for submissions

4. MPI welcomes written submissions on the proposals contained in the IPP. All written submissions must be received no later than 5pm on Friday, 21 February 2014.
5. 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

Official Information Act 1982

6. All submissions are subject to the Official Information Act and can be released (along with the 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 under the Act

Review of sustainability controls for southern scallops (SCA 7)

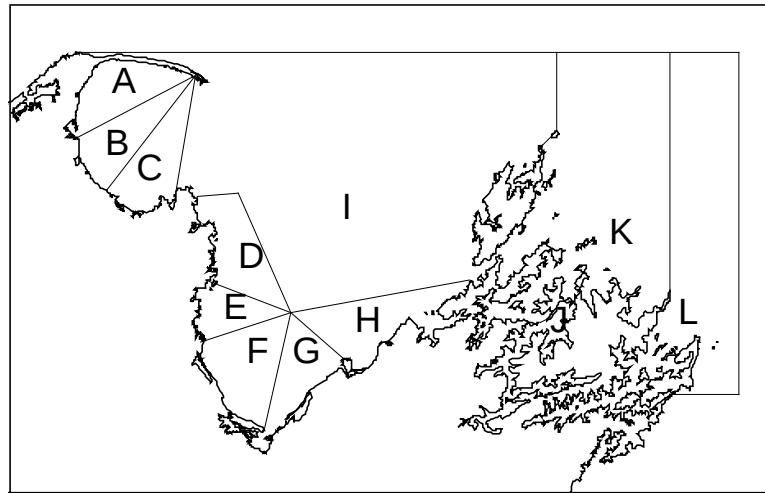


Figure 1: Quota Management Area (QMA) for SCA 7

Summary

7. MPI is seeking information and views from tangata whenua and stakeholders to inform a review of catch limits for southern scallops in the quota management area SCA 7 (Figure 1).
8. MPI proposes the following options for the total allowable catch (TAC), total allowable commercial catch (TACC) and associated estimates to allow for non commercial customary Māori and recreational harvest and other sources of fishing related mortality (Table 1).

Table 1: Proposed TAC, TACC and allowance options for SCA 7 (tonnes, meatweight)

Option	Allowances				Other sources of fishing-related mortality (t)
	TAC (t)	TACC (t)	Māori Customary (t)	Recreational (t)	
Option 1 (<i>Status Quo</i>)	827	747	40	40	0
Option 2	130	46	40	40	4

9. The current TAC was set in 2002 when the fishery was at an historic high, with commercial landings of 717 t meatweight (mwt). The abundance of scallops has declined since then with landings averaging less than 50 t over the last few years; less than 10% of the 747 t TACC. Almost all commercial catch now comes only from the Marlborough Sounds, with Golden Bay and Tasman Bay voluntarily closed by commercial fishers to protect the few residual scallop beds. The last fishing season was the first where

commercial and recreational fishers were unable to agree on a harvest strategy for the Marlborough Sounds.

10. Option 2 proposes to reduce the TAC in-line with recent performance of the fishery, and proposes a TAC based on the estimated sustainable yield of surveyed scallop beds within the Marlborough Sounds.
11. The management framework for the fishery allows the TAC to be rapidly increased within a fishing season should new surveys show the stock has rebuilt.
12. Option 1 retains the current TAC and sector allowances for the fishery.
13. Under both options, MPI will be working with stakeholders to manage the areas fished, ensure protection of the scallop spawning stock, facilitate fair use for all sectors and support efforts to enhance the fishery.
14. MPI notes the Minister has broad discretion and these options are not exhaustive. MPI invites feedback on any intermediate or additional options that stakeholders may have. MPI is aware that tangata whenua and stakeholders may have alternative strategies to support the rebuild of the SCA 7 fishery.
15. MPI will consider other measures such as voluntary measures or future regulatory changes that may encourage a rebuild of the fishery.

Context

16. Since the 1980s, the southern scallop fishery has been managed on an enhanced and rotational-fishing basis. Under s 310 and s 14 of the Fisheries Act 1996 (the Act), a rotational and enhancement harvest programme was approved by the Minister. The programme is controlled (via a series of civil contracts) by the Challenger Scallop Enhancement Company (CSEC), which is wholly owned by the SCA 7 quota owners. The rotational harvest programme involves specific areas being seeded with scallop spat and then closed to commercial fishing for two years on a rotational basis. Unfortunately, the success of the programme and extent of enhancement has greatly reduced in the last 8 years.
17. It appears that the benthic habitat in Golden and Tasman Bays is no longer suitable for scallops. Survival of spat released for enhancement has been poor which suggests that settlement success and /or inadequate habitat suitability may be more responsible for the fishery down turn than failure of larval supply.
18. CSEC has a memorandum of understanding (MoU) with MPI regarding the provision of information to enable MPI and the Minister to make decisions on sustainability and other management measures. This allows CSEC to exercise responsible self-management of the fishery. Under the MoU, CSEC undertakes a biomass survey each year according to specified standards. That survey provides information upon which annual management decisions, including estimates of available harvest are made.

MANAGEMENT APPROACH

19. Under MPI's draft National Fisheries Plan for Inshore Shellfish¹ the stocks are grouped according to management approaches and specific objectives.
20. SCA 7 is a 'Group 2' stock within the draft National Fisheries Plan for Inshore Shellfish. Stocks in this group are valuable commercial fisheries and are an important food source for Māori customary and amateur fishers. Group 2 stocks are fast-growing and have highly variable abundance. Objectives for Group 2 stocks include enabling annual yield from the fishery to be maximised, while maintaining the stock size at or above the level required to ensure sustainability and the spawning stock biomass.
21. Reviewing the SCA 7 TAC is consistent with this management approach as it seeks to ensure the SCA 7 spawning stock biomass is protected and maintained within sustainable limits and fishery targets.

PREVIOUS REVIEW

22. SCA 7 was most recently reviewed in 2002. At the time the fishery was operating as a successfully enhanced fishery with landings of 717 t mwt in the 2001-02 season. Since that time, fishery landings have collapsed to less than 10% of that quantity. The enhanced and rotationally fished sections of the fishery are both currently closed (voluntarily) to commercial harvest; however, limited enhancement is still being attempted in some parts of the fishery.
23. Recreational and Māori customary allowances were set at 40 tonnes mwt each, with a daily bag limit for recreational fishers (per person) of 50 scallops. In the absence of specific data, no allowance was provided for other sources of fisheries related mortality at that time.

BIOLOGICAL CHARACTERISTICS OF SCALLOP

24. Scallops (*Pecten novaezelandiae*) are highly productive, believed to be relatively short-lived (four to seven years of age) and able to move short distances. These characteristics, along with their clumped distribution, make identifying appropriate biomass targets or minimum reference biomass levels problematic for scallop fisheries.
25. The relatively high fecundity and likely variability in the mortality of larvae and pre-recruits, leads to high variability in natural annual recruitment. This variability is a characteristic of scallop populations worldwide.
26. Studies suggest that average natural mortality in the SCA 7 fishery is quite high. Incidences of large-scale die-off in localised areas have been observed (e.g. mortality associated with storms in 1998).

¹ Link Inshore Shellfish Fisheries Plan: <http://www.fish.govt.nz/en-nz/Fisheries+Planning>

STOCK STATUS

27. The best available current information that MPI has on such a variable fishery as SCA 7 is the 2013 annual biomass survey undertaken by CSEC to inform their harvest strategy and current annual yield (CAY) estimates for the Marlborough Sounds fishery.
28. The current status of the SCA 7 stock is the lowest since surveys began in 1998 (refer to Figure 2). In all three regions of SCA 7, recruited scallop biomass generally increased from the late 1990s to reach peak levels around 2001–02. Since then there has been a substantial biomass decline in both Golden Bay and Tasman Bay, and current biomass in both regions is at historically low levels. Biomass in the Marlborough Sounds has remained relatively stable over the same period, although there is some decline since 2009.

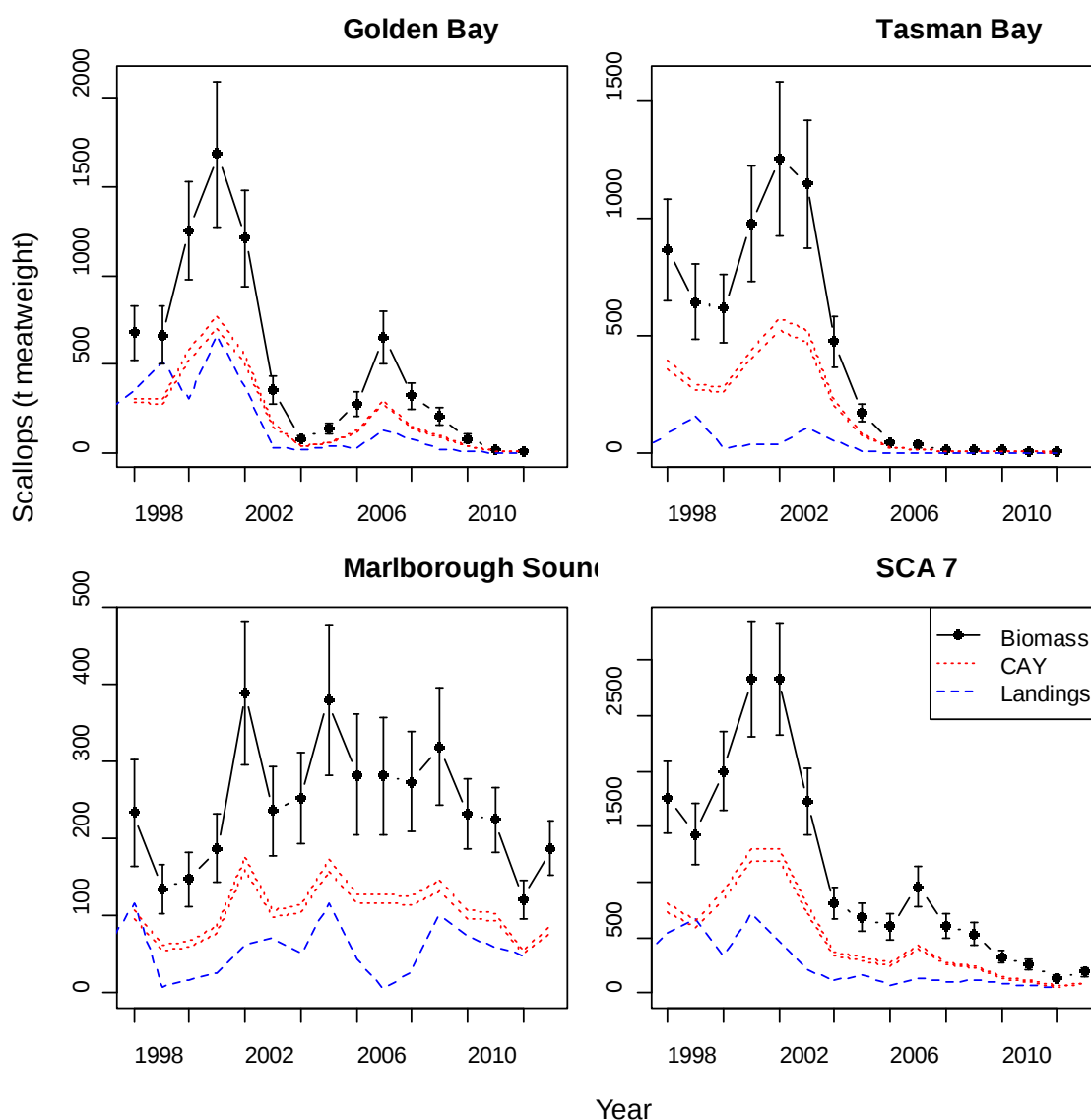


Figure 2: Trends in the SCA 7 stock since 1998–2013. Plots show start of season recruited scallop biomass, CAY (estimated retrospectively for GB and TB), and reported landings by region and for the overall SCA 7 stock. All values in t meatweight. Golden Bay and Tasman Bay were not surveyed in 2013. Scale differs between plots.

29. MPI's 2013 Plenary document² describes the relationship of the fishery to Sustainability limits and Fishery Targets (i.e. fishing mortality at or below $F_{0.1}$) separately for the enhanced fishery and the Marlborough Sounds.
30. For Marlborough Sounds, fishing mortality is likely ($> 60\%$) below F_{target} , but unlikely ($< 40\%$) to be below the soft and hard limits. For Golden Bay or Tasman Bay, fishing mortality is very unlikely ($< 10\%$) to be at or above the target, very likely ($> 90\%$) to be below the soft limit, and likely ($> 60\%$) to be below the hard limit.
31. Reasons for the decline in Golden and Tasman Bays are being investigated. Other shellfish stocks in this area have also declined and it appears that the suitability of benthic habitats for scallops might be lower now than in the past.

SCA 7 Fishery

32. The SCA 7 fishery commenced in 1959-60. By 1975 landings reached 1244 t with a fleet of 245 vessels, but by 1980 the fishery was closed. Using enhancement and later rotational fishing, the fishery rebuilt and landings through the 1990s up until 2002 ranged from 231 to 825 tonnes. In 1994 many management responsibilities, including the rotational harvest and enhancement programmes, were transferred from government to the CSEC. In 1998 an agreement in the form of a MoU was agreed setting out the responsibilities of both parties in the management of the fishery.

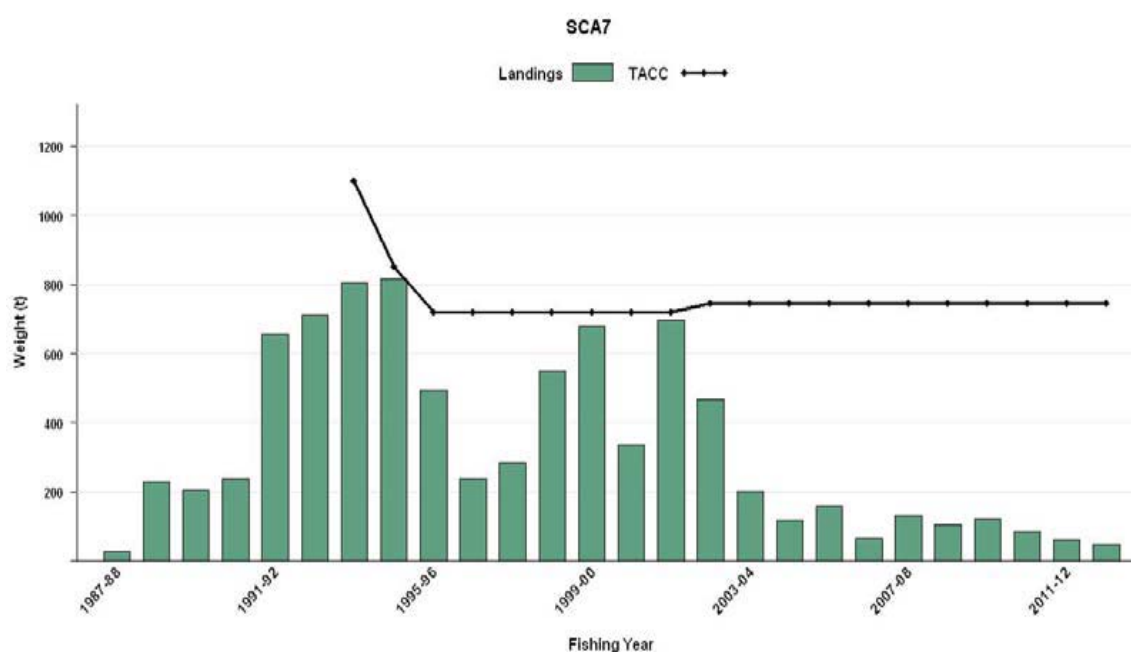


Figure 3: Historical landings and TACC for SCA7 from 1987-88 to 2012-13.

² SCA 7 Fisheries Assessment Plenary November 2013: http://fs.fish.govt.nz/Doc/23459/015_SCA7_November_2013.pdf.ashx

33. Last season, both Golden and Tasman Bays were closed. The wild fishery in the Marlborough Sounds landed 43 tonnes from eleven boats.
34. Under the enhancement programme the commercial fishery is controlled by a ‘harvest strategy’, determined by the results of the annual biomass survey, which includes a yield estimate for the Marlborough Sounds. The fishery also operates under regulatory constraints including a 90 mm minimum legal size, maximum dredge size and number, number of days fished, fishing only in day light hours and a commercial season from 15 July to 14 February.

Recreational

35. Scallops are a popular target species for recreational fishers, taken by dredge or diving. SCA 7 can only be taken recreationally above a minimum legal size of 90mm. There is a daily bag limit of 50 scallops per person per day.
36. There is spatial separation between the recreational and commercial fisheries. Some areas are closed to commercial fishing by regulation (Inner Queen Charlotte Sound, Abel Tasman National Park) other areas are not fished by commercial fishers through voluntary agreements (Croisilles Harbour). These agreements are negotiated between CSEC and recreational stakeholders prior to the season. The last fishing season was the first where CSEC and recreational fishers were unable to agree on a closure strategy for the Marlborough Sounds.
37. To improve information on recreational harvests, in 2011-12 MPI commissioned new recreational research (a large-scale, multi-species study, LSMS) to obtain better harvest estimates for a range of stocks. Interim estimates from the LSMS are available, indicating around 11 t (mwt) of scallops are taken recreationally, mostly from the Marlborough Sounds. About 60% of the SCA 7 recreational catch is reported as coming from the Cape Komaru to D’Urville Island area.
38. The LSMS estimates do not include amateur catch taken on charter vessels or by commercial fishers under s 111 approvals. The interim estimates have been released at this time only for use as background information and are not yet able to be used to set allowances.
39. A review of s 111 catch shows that in 2001-02 fishing years 6 t (mwt). However, recent catch is lower - less than 1 t.

Māori Customary

40. Scallops (tupa/tipa) are an important kaimoana species for tangata whenua. They are identified by Te Waka a Māui me Ōna Toka iwi forum³ as a taonga species in the Te

³ The Te Waka a Māui me ōna toka iwi forum represents the nine iwi of the South Island, each holding mana moana and significant interests (both commercial and non-commercial) in South Island fisheries.

Waipounamu Iwi Fisheries Plan. This plan includes objectives relating to supporting and providing for the customary and commercial interests of South Island iwi.

41. Information on Māori customary catch of SCA 7 is uncertain. For those tangata whenua groups operating under the customary fishing regulations,⁴ there is a requirement for Tangatatiaki/ Kaitiaki to provide MPI with information on Māori customary harvest of fish. However, for those tangata whenua groups still operating under regulations 50 and 52 of the Fisheries (Amateur Fishing) Regulations 2013, it is not mandatory to report permits that are issued.
42. There have been limited numbers of customary authorisations for SCA 7 reported to MPI at this time. This may be a reflection that tangata whenua in the Tasman/Golden Bay and Marlborough Sounds area are still operating under the Amateur Regulations and/or it may suggest that tangata whenua use of the customary fishing regulations to harvest SCA 7 is low at this time, given the current status of SCA 7.

Other Sources of Fishing-Related Mortality

43. There are various other sources of fishing-related mortality of SCA 7, but these are not able to be quantified precisely. These include direct and indirect mortality from dredge contact and illegal fishing.
44. MPI proposes setting an allowance for other sources of fishing-related mortality of 10% of the TACC rounded down.

Other Considerations

45. The high current TACC is distorting the annual Fisheries Services Levies paid by the quota holders in this fishery. Industry incurs levies (~\$200k per year) based on the TACC and port price, which is not commensurate with the value of recent landings. CSEC have stated, however, that they are willing to continue to pay levies at the current level.

Proposed Response

46. MPI is consulting on the following management options for the Minister to set the TAC, TACC and associated allowances for SCA 7 (Table 2).

Table 2: Proposed TAC, TACC and allowance options for SCA 7 (meatweight)

Option	Allowances				Other sources of fishing-related mortality (t)
	TAC (t)	TACC (t)	Māori Customary (t)	Recreational (t)	
Option 1 (Status Quo)	827	747	40	40	0
Option 2	130	46	40	40	4

⁴ Fisheries (Kaimoana Customary Fishing) Regulations 1998 and/or Fisheries (South Island Customary Fishing) Regulations 1999.

47. As a rotational and enhanced fishery, SCA 7 is listed on Schedule 3 of the Act and the TAC is set under s 14. Section 14 allows the Minister⁵ to set a TAC to better achieve the purpose of the Act rather than using s 13 where the TAC is based on maximum sustainable yield (MSY). The purpose of the Act is sustainable utilisation of fisheries resources.⁶ Under s 14, the TAC can also be increased in-season and additional allowances and Annual Catch Entitlement (ACE) specific to that year allocated.
48. When setting a TAC the Minister must take into account matters specified in s 11, the Environmental Principles (s 9) and the Information Principles (s 10). Any decision must be consistent with international obligations and the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

OPTION 1 (STATUS QUO)

49. Under Option 1, the existing TAC, TACC and customary and recreational allowances set in 2002, would be retained.
50. MPI's initial view is that this option does not address the requirement under s 14 of the Act to set a TAC that is sustainable as well as Option 2. The current TACC has not been caught for ten years, and is likely to be unobtainable given current biomass estimates. Similarly, it does not meet the objective within the draft National Fisheries Plan for Inshore Shellfish of protecting the spawning stock as well as Option 2 as it does not constrain catch appropriately.
51. This option also does not address distortions caused by the high TACC (eg in terms of levies). MPI notes, however, that CSEC considers this is not a reason to reduce the TAC in their view.

OPTION 2

52. Option 2 proposes:
- The TAC be decreased from 827 to 130 t (mwt).
 - The TACC be decreased from 747 to 46 t.
 - The allowance for other sources of fishing-related mortality (*OSFRM*) be set at 4 t (10% of the TACC rounded down).
 - Allowances for Māori customary and recreational remains at 40 t each.
53. Because Golden and Tasman Bays are not currently commercially fished, MPI proposes that within the TAC of 130 t a TACC of 46 t mwt be set. This figure is derived from the average survey biomass of the Marlborough Sounds over the last five years with a 20% exploitation rate applied. Analysis of the biomass against the back-calculated exploitation rate for the Marlborough Sounds suggests that recruitment and the fishery has been essentially stable over the period where exploitation has been 20% or less. MPI

⁵ The Minister for Primary Industries now exercises the powers and responsibilities of the Minister of Fisheries under the Fisheries Act 1996.

⁶ Section 8 Fisheries Act 1996

notes that using an exploitation rate approach to estimate yield has been approved by MPI Scientists, but has not yet been put before the Shellfish Working Group.

54. MPI's initial view is that Option 2 option better addresses the requirement under s 14 of the Act to set a TAC that is sustainable than Option 1. Option 2 reflects the recent poor performance of the fishery, and better meets the objective within the draft National Fisheries Plan for Inshore Shellfish of protecting the spawning stock by limiting catch to recent low levels, until the fishery rebuilds. Should surveys show a rapid rebuild in scallop biomass, there is provision under the Act for an in-season increase in the TAC.
55. MPI also notes that decreasing the TACC will reduce the cost recovery levies currently incurred by the commercial sector from approximately \$200K to less than \$15K.
56. Estimates of Māori customary harvest, based on records sent to MPI under the Fisheries (South island Customary Fishing) Regulations 1999, average less than 2 t mwt over the last 5 years. However, less than 30% of the area is managed under the South Island Customary Regulations. For the remainder there is no requirement to report.
57. Some new recreational fishing information has become available in the form of the LSMS, indicating that recreational scallop catch in SCA 7 is less than the existing allocation.
58. Based on there being a degree of spatial separation among sectors, and the assumption that recreational harvest has remained essentially consistent, it is not proposed to alter the allowance.
59. Given there is known post dredge mortality of undersize and impacted scallops as well as the potential for illegal fishing, MPI proposes that 10 % of the TACC is set as an allowance for *OSFRM*.
60. Option 2 is unlikely to have significant implications in terms of the effects of fishing given it limits future fishing activity to recent low levels.
61. MPI is not aware of any potential relevant impacts on protected species arising from reducing the TAC and TACC.

OTHER MANAGEMENT MEASURES

62. As noted, for the first time, CSEC and recreational fishers have been unable to achieve agreement on the harvest strategy for the current season. As such, the Minister may be required to be directly involved in determining which areas are open for fishing in future seasons.

Future Considerations

63. MPI considers this TAC review one step to the eventual rebuild of the stock. MPI is participating with stakeholders in various initiatives underway toward re-establishing the

fishery environment, continuing research on enhancement opportunities and developing effective management strategies in order to rebuild the fishery.

Initial Consultation

64. Between September and November 2013, MPI had preliminary discussions with some stakeholder representatives. MPI sought views on options to be included in this paper.
65. The possibility of a TAC review for SCA 7 was discussed with Te Waka a Māui me Ōna Toka iwi forum on 28 November and the FMA 7 Recreational Fishers' Forum on 27 November 2013.
66. The iwi forum expressed support for the CSEC and for the continuation of the commercial fishery, but had no specific view on the level of the TAC appropriate for this year's review.
67. The recreational forum also expressed support for the CSEC and its enhancement programme. The forum was concerned about the incremental decline in the fishery, and proposed there be no commercial scallop fishing in the Marlborough Sounds this coming season. The forum had no specific view on the appropriate level of the TAC.
68. The Directors of the CSEC have unanimously expressed the view that they do not support a change in the TAC.

Conclusion

69. Scallop biomass has declined in Golden and Tasman Bays to the extent that these areas are currently not being commercially fished. Therefore, MPI proposes to set a TAC and TACC based on sustainable yield estimates from biomass surveys within the Marlborough Sounds.
70. This option provides for the protection of the spawning biomass in SCA 7 and better meets the TAC-setting requirements than the current TAC and TACC. Should there be an increase in SCA 7 biomass, there is provision for future in-season reviews to amend the TAC.
71. MPI is seeking information and views from tangata whenua, fishery stakeholders and other interested parties to inform the review of catch limits of SCA 7.
72. It is important to note that the Minister has broad discretion in exercising his powers of decision-making. He will make his own independent assessment of the information presented to him by both MPI and stakeholders before making a final decision.