Fisheries New Zealand
Tini a Tangaroa

Review of Sustainability Measures for selected stocks for 1 April 2020

Fisheries New Zealand Decision Paper

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Requests for further copies should be directed to:

Publications Logistics Officer
Fisheries New Zealand
PO Box 2526
WELLINGTON 6140

Email: brand@mpi.govt.nz
Telephone: 0800 00 83 33
Facsimile: 04-894 0300

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1 Introduction

1. This paper seeks your decisions in relation to the April 2020 Sustainability Review. You are asked to make decisions on catch settings and deemed value rates for a selected number of fishstocks for implementation for either the 1 April 2020 or 1 October 2020 fishing year.

2. The catch settings you are asked to consider are:

   a. setting or varying the Total Allowable Catch (TAC);

   b. setting or varying allowances for Māori customary catch and recreational catch, and allowances for other sources of mortality to stocks from fishing; and

   c. setting or varying the Total Allowable Commercial Catch (TACC).

3. You are also asked to decide whether to adjust the interim deemed value rates.

4. This Decision Document provides you with Fisheries New Zealand's final advice to you on these proposals. The fishstocks that have been reviewed and the proposed implementation dates for your decisions are given in the table below:

1 April 2020 fishing year	
Inshore stocks	**Deepwater stock**
Scallops: • SCA 1 (Northland)*	Southern blue whiting: • SBW 6B (Bounty Platform)
Rock lobster: • CRA 1 (Northland) • CRA 3 (Gisborne) • CRA 4 (Wellington/Hawke's Bay) • CRA 7 (Otago) • CRA 8 (Southland) *The final advice for the rock lobster stocks is presented to you in a separate paper from the National Rock Lobster Management Group.*	
1 October 2020 fishing year	
Inshore stocks	**Deepwater stocks**
Trumpeter: • TRU 6 (Sub-Antarctic) • TRU 9 (north west North Island)	Rubyfish: • RBY 5 (Southland) • RBY 6 (Sub-Antarctic)
Yellow-eyed mullet: • YEM 5 (Southland)*	White warehou: • WWA 9 (north west North Island)*
Deemed value rates	
The interim deemed value rates of a large number of stocks (454)*, managed under both April and October fishing years, were reviewed. The full list of the stocks reviewed and the options proposed is given in the Deemed Value Rates section of this document.	

* Both the interim deemed value rate and the TAC, TACC and allowances were reviewed for SCA 1, WWA 9, and YEM 5.

5. We have consulted these proposals with representatives of people who have an interest in the stocks or the effects of fishing on the aquatic environment in the areas concerned, including Māori, environmental, commercial, and recreational interests.

6. We have provided for input and participation of tangata whenua on these decisions, primarily through Iwi Fisheries Forums, which have been set up for this purpose. We have identified species and areas over which these groups have expressed kaitiakitanga, to which you must have particular regard when making these decisions.

7. Full submissions on all of the proposals are attached as appendices.

2 Overview of powers and obligations under the Fisheries Act 1996

2.1 Decisions Ministers may make in relation to sustainability reviews

8. There are three things you, as Minister of Fisheries, may do relating to sustainability under the Fisheries Act:

Part 3: Sustainability measures

- Set and vary sustainability measures such as the Total Allowable Catch (TAC).

Part 4: Quota Management System

- Set and vary the Total Allowable Commercial Catch (TACC) within the limits of the TAC and make allowances for Māori customary and recreational fishing and all other mortality to the stock caused by fishing.

- Set deemed value rates to provide an incentive for fishers not to exceed the available annual catch entitlement (ACE).

9. In making decisions on those things there are a number of things you are required to do and take account of.

2.2 Overarching requirements

10. Section 5: You must act in a manner consistent with New Zealand's International obligations relating to fishing, and the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

11. Section 9: you must take into account the following environmental principles:
    (a) associated or dependent species should be maintained above a level that ensures their long-term viability
    (b) biological diversity of the aquatic environment should be maintained
    (c) habitat of particular significance for fisheries management should be protected.

12. Section 10: you must take into account the following information principles:
    (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.

13. Sections 12, 21 and 75A require you to consult before making decisions on sustainability measures, TACC, and deemed values rates, respectively.

2.3 The Hauraki Gulf Marine Park Act 2000

14. Section 11 of the Fisheries Act (discussed below) requires you to have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 (HGMPA) when setting or varying a TAC that includes the area of the Hauraki Gulf as defined in that Act. Section 13 of the HGMPA requires that you have particular regard to sections 7 and 8 of the HGMPA when setting or varying TACCs and deemed values.

15. Section 7 of the HGMPA recognises the national significance of the Hauraki Gulf and section 8 sets out objectives for management of the Gulf.

2.4 Statutory Considerations

16. Table 1 provides an overview of your central statutory considerations for varying TACs and TACCs under the Fisheries Act 1996 (the Act). Where relevant, stock-specific details relating to these considerations are set out in sections of this paper where individual stocks are discussed.

Table 1: Information on your key requirements when making decisions under the Act.

Decisions you may make	Requirements – things you must do when making decisions
Part 3 Sustainability Measures	
Section 11 You may set or vary sustainability measures for any stock S11(3) Sustainability measures may relate to (but are not limited to): • Catch limits • Size, sex or biological state • Areas • Fishing methods • Fishing seasons	(1) after taking into account: (a) effects of fishing on any stock and aquatic environment; and (b) existing controls under this Act that apply to the stock or area concerned; and (c) the natural variability of the stock concerned. (2) before setting or varying any sustainability measure, have regard to: (a) any regional policy statement, regional plan or proposed regional plan under the Resource Management Act 1991; and (b) any management strategy or plan under the Conservation Act 1987; and (c) sections 7-8 of the Hauraki Gulf Marine Park Act 2000; and (ca) regulations made under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012; and (d) a planning document lodged with you by a customary marine title group under s 91 of the Marine and Coastal Area (Takutai Moana) Act 2011 – that apply to the coastal marine area and are considered by you to be relevant. (2A) before setting or varying any sustainability measure, take into account: (a) any conservation or fisheries services; and (b) any relevant fisheries plan approved under section 11A; and (c) any decisions not to require conservation or fisheries services.
Section 11A You may approve or revoke fisheries plans	Fisheries plans may include: (a-c) fisheries management objectives, strategies to achieve them, and performance criteria to measure achievement; (d) conservation or fisheries services; or (e) contingency strategies to deal with foreseeable variations in circumstances. To date national fisheries plans have been approved only for deepwater and highly migratory species, the Foveaux Strait oyster fishery and PAU 4 (Chatham Islands).
Section 13 You shall set (unless you do not intend to set an initial TACC under section 20), and may vary, a TAC for stocks in the Quota Management System (QMS)	(2) You shall set (and may vary – s(4)) a TAC that: (a) maintains the stock at or above a level that can produce the maximum sustainable yield (*MSY*), having regard to the interdependence of stocks; or (b) enables the level of any stock below a level that can produce *MSY* to be altered: (i) in a way and at a rate that will restore the stock to a level that can produce *MSY* having regard to the interdependence of stocks; and (ii) within a period appropriate to the stock, having regard to the biological characteristics of the stock and environmental conditions affecting it, or (c) enables the level of any stock above that which can produce *MSY* to be altered in a way and at a rate to move the stock toward or above that which can produce *MSY* having regard to the interdependence of stocks. (2A) If you consider that the stock level to produce *MSY* is not able to be estimated reliably using best available information, you must:

Decisions you may make	Requirements – things you must do when making decisions
	(a) not use this as a reason to postpone or fail to set a TAC; and (b) have regard to the interdependence of stocks, biological characteristics of the stock and any environmental conditions affecting the stock; and (c) set a TAC (i) using the best available information; and (ii) that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above a level that can produce *MSY.* (3) In considering the way and rate at which a stock is moved toward or above a level that can produce *MSY* you shall have regard to such social, cultural and economic factors as you consider relevant. (4) You may, by notice in the *Gazette*, vary any total allowable catch set for any quota management stock under this section. When considering any variation, you are to have regard to the matters specified in subsections (2), (2A) (if applicable), and (3).
Part 4 Quota Management System	
Section 20 You shall set and may vary TACC for quota management stocks, unless a TAC has not been set for the stock	**Section 21** You must take the following into account when setting or varying TACC: (1) In setting or varying TACC you shall have regard to the TAC and shall allow for (a)(i) Māori customary interests; and (a)(ii) Recreational interests; and (b) all other mortality to the stock caused by fishing. (2-3) Before setting or varying TACC you shall consult representatives of classes of people that have an interest and give reasons for his/her decision (4) When allowing for Māori customary interests you must take into account (a) any mātaitai reserve in the QMA declared under s186: (b) any area closure or method restrictions/prohibitions imposed under s186A. (5) When allowing for recreational interests you must take into account any regulations that prohibit or restrict fishing under s311.
Section 75 You must set and may vary interim and annual deemed value rates for each quota management stock	(2) In setting deemed values you: (a) must take into account the need to provide incentive for fishers to acquire or maintain sufficient ACE (b) may have regard to: (i) the desirability of fishers landing catch for which they do not have ACE (ii) the market value of the ACE for the stock (iii) the market value of the stock (iv) the economic benefits obtained by (parties involved in commercial fishing, processing, sale) (v) the extent to which catch has exceeded/is likely to exceed TACC for the stock in any year (vi) any other matters you consider relevant. (3) Annual deemed values must be greater than interim deemed values (4) Different deemed values may be set for different levels of excess catch (5) Different deemed values may be set for the Chatham Islands (6) When setting deemed value rates, you must not: (a) have regard to the personal circumstances of individuals or class of person (b) set separate deemed values in individual cases.

3 Relevant Standards and Guidelines

3.1 Overview of the Harvest Strategy Standard

17. The Harvest Strategy Standard (HSS) is a policy statement of best practice in relation to the setting of fishery and stock targets and limits for fish stocks in New Zealand's Quota Management System (QMS). It is intended to provide guidance as to how fisheries law will be applied in practice, by establishing a consistent and transparent framework for decision-making to achieve the objective of providing for utilisation of New Zealand's QMS species while ensuring sustainability.

18. The HSS outlines the Ministry's approach to relevant sections of the Fisheries Act 1996. It is therefore a core input to the Ministry's advice to you on the management of fisheries, particularly the setting of TACs under sections 13 and 14.

19. The HSS however is not legally binding and you are not obliged to choose options based upon it.

20. The HSS assists us to decide when a review of sustainability and related settings for a stock may be warranted, by establishing reference points and guidance for the fisheries management responses when stocks are at those reference points. The HSS establishes default targets and limits as a minimum standard:

Reference point	Default	Management response
Management target	40% unfished biomass (B_0)	Stock permitted to fluctuate around this management target. TAC/TACC changes will be employed to keep the stock around the target (with at least a 50% probability of being at the target).
Soft limit	20% B_0	A formal time constrained rebuilding plan will be implemented if this limit is reached.
Hard limit	10% B_0	The limit below which fisheries will be considered for closure.
Rebuild strategy		Stocks that have fallen below the soft limit should be rebuilt back to at least the target level in a time frame between T_{min} and 2 * T_{min} with an acceptable probability. T_{min} is the number of years to rebuild a stock to the target, in the absence of fishing.

3.2 Deemed Value Guidelines

21. The Deemed Values Guidelines set out operational policy, including a set of principles to be applied when setting deemed value rates.

4 Input and consultation

4.1 Input and participation of tangata whenua

22. Among other things, section 12 of the Act requires you to provide for the input and participation of tangata whenua who have a non-commercial interest in the stock concerned, or an interest in the effects of fishing on the aquatic environment in the area concerned. You must also have particular regard to kaitiakitanga.

23. Input and participation into the sustainability decision-making process is provided primarily through Iwi Fisheries Forums, which have been established for that purpose. Each Iwi Fisheries

Forum has developed an Iwi Fisheries Forum plan that describes how the iwi in the forum exercise kaitiakitanga over the fisheries of importance to them, and their objectives for the management of their interests in fisheries.

24. Iwi Fisheries Forums were invited to have input into the selection of stocks for review and to submit on proposals to set or vary sustainability measures.

25. The following chapters on individual fish stocks provide specific information about input and participation of tangata whenua and kaitiakitanga in relation to those stocks.

4.2 Consultation process

26. Consultation on the April 2020 Sustainability Round commenced on 13 December 2019 for most stocks (rock lobster, scallops, trumpeter, white warehou, rubyfish, yellow-eyed mullet, and deemed values). The southern blue whiting consultation commenced later on 8 January 2020, once updated information on this stock was received.

27. Fisheries New Zealand notified Treaty partners and stakeholders that the consultation documents were available, and directed them to consultation pages on the Fisheries New Zealand website. The consultation pages had links to each of the consultation papers, and an invitation to provide submissions on any or all of the papers. In addition to inviting written submissions, an online form was provided.

28. Submissions closed at 5.00 pm on 5 February 2020, providing a 14 working day consultation period for southern blue whiting and a 21 working day consultation period for all other stocks.[1] A shorter, more targeted consultation was considered appropriate for southern blue whiting given that these stocks are of predominately commercial interest.

29. We received 18 written submissions from 19 submitters. SCA 1 was the most commented-upon stock.

30. Two major iwi groups responded (Te Ohu Kaimoana and the Iwi Collective Partnership), as did a major eNGO (Environmental Defence Society). Quota owner representative groups including Deepwater Group, Fisheries Inshore New Zealand, Southern Inshore and the Northland Scallop Enhancement Company provided detailed submissions on stocks relevant to their respective stakeholders.

[1] This does not count the period 25 December to 15 January inclusive, as the Act stipulates these are not working days.

Northland Scallops (SCA 1)

Pecten novaezelandiae, scallop, tipa, tupa

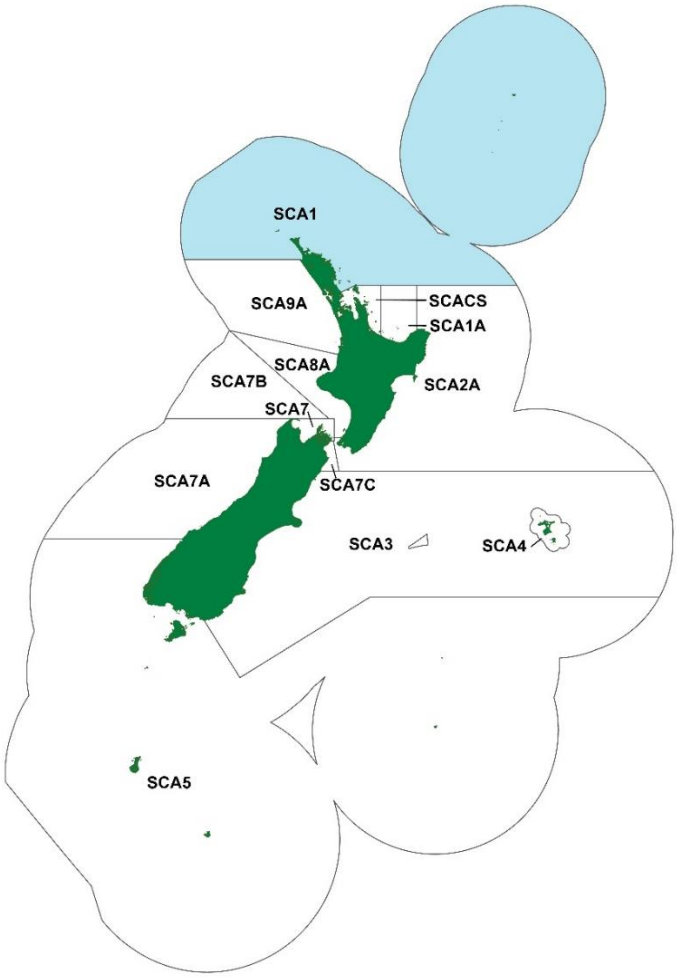

Figure 1: Quota management areas (QMAs) for scallops, with SCA 1 (Northland) highlighted in blue.

Table 1: Summary of options proposed for SCA 1 from 1 April 2020 (all values in tonnes). The recommended option is highlighted in blue.

Stock	Option	Total Allowable Catch	Total Allowable Commercial Catch	Allowances		
				Customary Māori	Recreational	All other mortality to the stock caused by fishing
SCA 1	Option 1 *(Status quo)*	75	40	7.5	7.5	20
	Option 2 **Recommended**	30 ↓ (60%)	10 ↓ (75%)	7.5	7.5	5 ↓ (75%)
Public consultation period		18 December 2019 to 5 February 2020				
New option incorporated following consultation		No				
Total submissions received		10				
Number of submissions received for each option		Option 1 (*Status quo*)		3		
		Option 2		7		

1 Why are we proposing that you review the TAC and TACC?

31. The best available information suggests that there has been a long-term decline in abundance of scallops in SCA 1, which would pose a sustainability risk should fishers attempt to fully catch the current TAC and TACC.

32. SCA 1 commercial catch limits have been under-caught since 2007, which was the last year that a comprehensive survey of the main beds was undertaken, and indicated a significant decline in abundance at that time. While the cause of the decline is unknown, customary and recreational fishers have also reported declines in a number of local areas.

33. Commercial effort has remained relatively low in the last twelve years, virtually ceasing between 2010 and 2014, and then resuming primarily in only one of the key beds (Bream Bay). A small-scale survey was initiated by the industry to help inform redevelopment of the fishery, but the programme has not been run in 2018 or 2019 and there is limited information on the current status of the stock.

1.1 About the stock

34. Scallop (*Pecten novaezelandiae)* is one of several species of "fan shell" bivalve molluscs found in New Zealand waters. *P. novaezelandiae* is endemic to New Zealand, but is very closely related to the Australian species *P. fumatus* and *P. modestus.*

35. Scallops are found in a variety of coastal habitats, but particularly in semi-enclosed areas where circulating currents are thought to retain larvae. After the planktonic larval phase and a relatively mobile phase as very small juveniles, scallops are largely sessile but can move actively, mainly in response to predators. Scallops can also be moved considerable distances by currents and storms, and are sometimes thrown up in large numbers on beaches.

36. Scallops become sexually mature at a size of about 70 mm shell length. They are extremely fecund and may spawn several times each year. The fecundity of this species, and likely variability in the mortality of larvae and pre-recruits, leads to great variability in annual recruitment.

37. The combination of variability in recruitment, mortality and growth rate of adults, leads to scallop populations being variable.

38. This variability is characteristic of scallop populations world-wide, and often occurs independently of fishing pressure.

39. Little detailed information is available on the growth and natural mortality of Northland scallops. Tag return data from Bream Bay indicate growth rates similar to the nearby Coromandel fishery. However, beds further north have large average sizes and a consistent lack of small animals suggesting growth rates may be high.

1.2 State of the stock

40. The current stock status of SCA 1 is unknown and there is no current biomass estimate. The last comprehensive biomass survey for the fishery was undertaken in 2007. Historical biomass estimates of the fishery are shown in Figure 2.

41. Assessments of SCA 1 occurred regularly between 1992 and 2007. Assessments were based on pre-season biomass surveys.

42. A substantial increase in biomass was observed between 2003 and 2006, which resulted in the 2006 biomass estimate being the highest recorded for Northland. In 2005 and 2006, estimates of biomass were considerably higher than those in 2003 for some beds (notably Bream Bay), but similar or lower in others.

43. The 2007 survey results suggested that the biomass in Bream Bay and Mangawhai/Pakiri had declined markedly between 2006 and 2007 and, consequently, the overall fishery biomass was far lower in 2007 than in the years immediately preceding it.

44. Industry-led surveys were conducted between 2012 and 2017. The industry-led surveys did not include the entire fishery, but focussed on commercial scallop beds, the most recent surveys focussing on Bream Bay and are therefore not included in Fig 2.

45. The Bream Bay surveys indicated an increasing trend in pre-recruit sized scallops (< 100mm) since 2013, but this has not resulted in substantive increases in recruited scallops (100mm or larger). Commercial landings from Bream Bay were relatively high in 2015 at 16 tonnes, which was approximately 36% of the estimated total recruited biomass

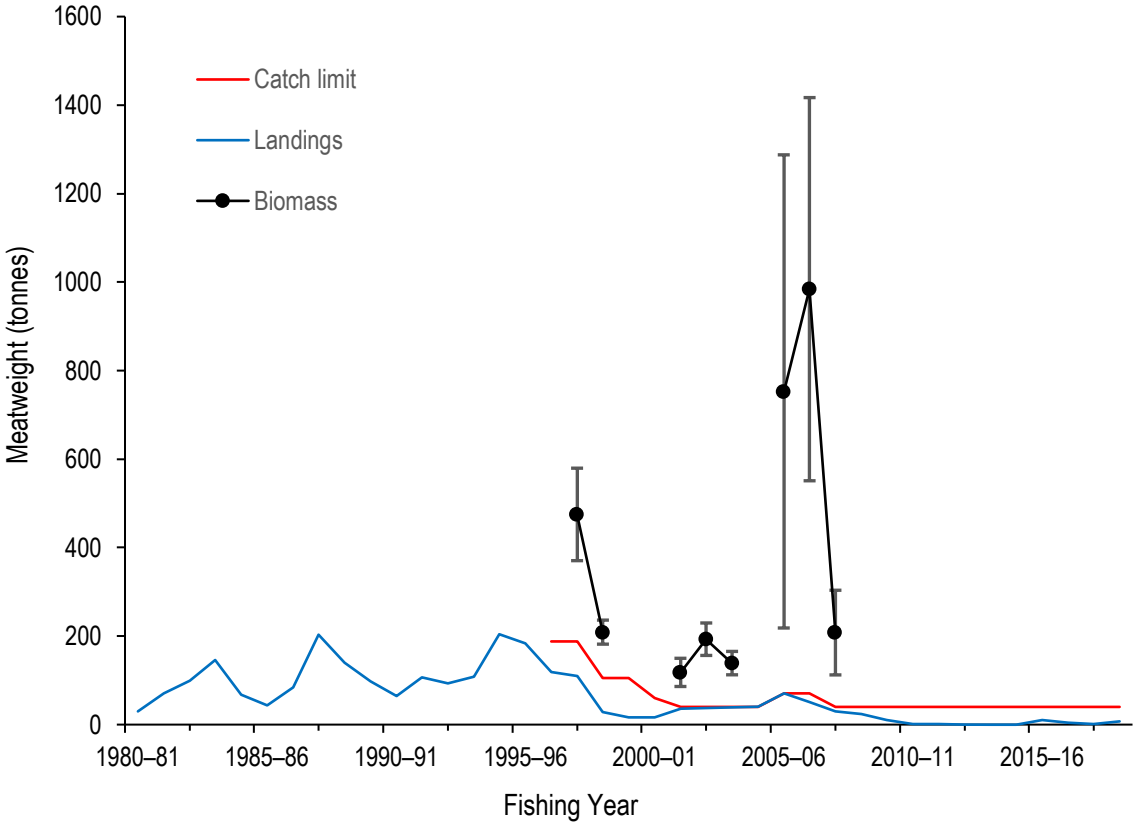

Figure 2: Estimated biomass (mean and CV), catch limits, and reported landings of recruited scallops (100 mm or larger shell length) in meatweight (in tonnes) for SCA 1 since 1980.

1.3 Best available information and associated uncertainty

Commercial reporting

46. The Northland fishery is divided into 20 scallop statistical reporting areas and most of the catch landed from SCA 1 since 1989–90 has been taken from the three most frequently fished beds: Rangaunu Bay, Bream Bay, and Spirits Bay (Figure 3).

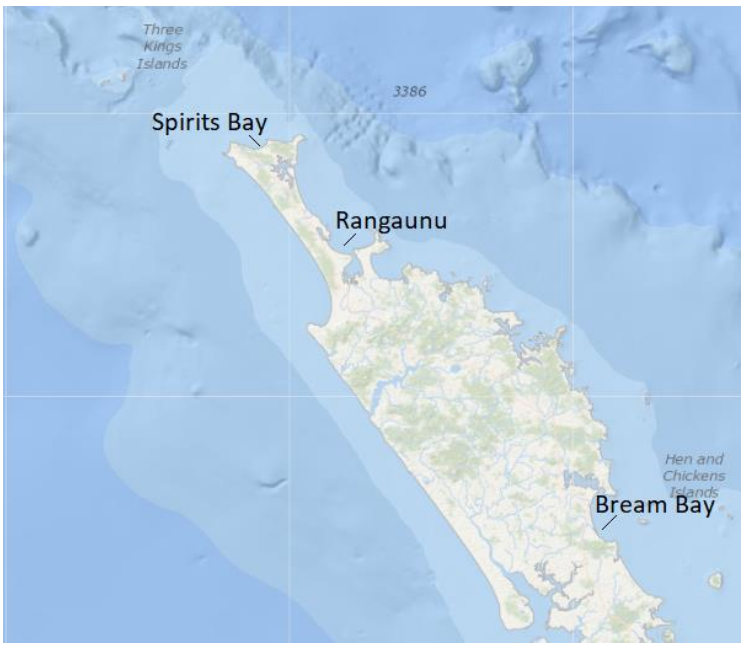

Figure 3: Key commercial scallop beds in SCA 1

47. Catch levels began a decline after a peak in the 2005-06 and 2006-07 fishing years, where 69 and 53 tonnes were caught respectively (enabled by in-season increases to the TAC and the generation of additional ACE) (Figure 4).

48. Catches declined to very low levels in 2010-11 and in 2012-13 ceased completely. In the 2013-14 and 2014-15 fishing years, low levels of exploratory fishing began again. In the 2016-17 fishing year 16 tonnes were caught, with large numbers of sub-100mm scallops noted in catches.

49. As the fishery has declined, effort has focused on a single scallop bed. Only Bream Bay has had significant catches since 2007. There is some concern that increased fishing pressure on scallop beds containing large numbers of small scallops could prevent recruitment into the fishery, due to dredge-related mortality.

50. Commercial fishers are excluded from many areas frequented by customary and recreational fishers, including the Bay of Islands and Whangarei Harbour.

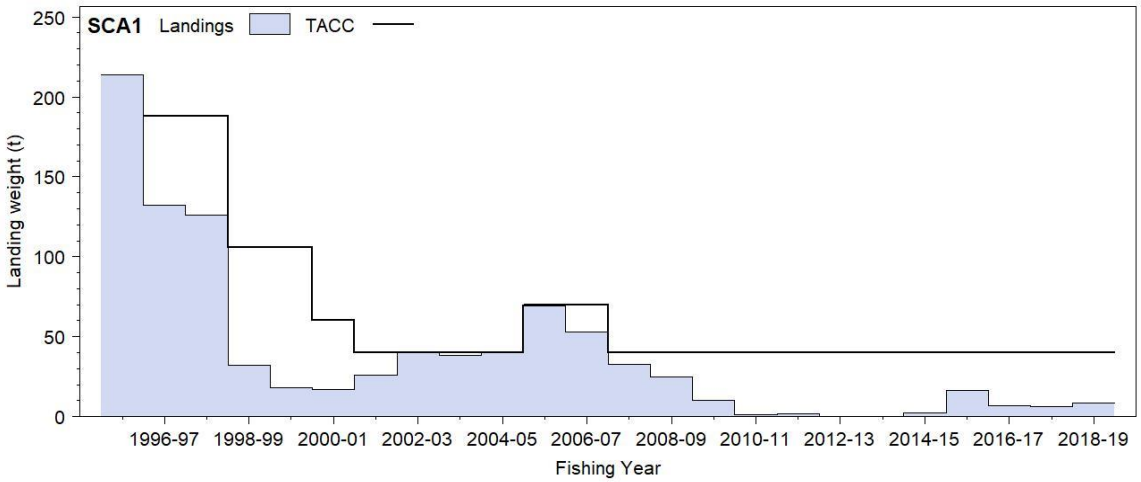

Figure 3: Landings and catch limits for SCA 1 (Northland) since 1995–96.

51. Projections of biomass are currently unknown, given the limited information available on stock status and highly variable recruitment.

Customary reporting

52. For those tangata whenua groups operating under the customary fishing regulations, there is a requirement for Tangata Kaitiaki/Tiaki to provide Fisheries New Zealand with information on Māori customary harvest of fish. However, some tangata whenua in SCA 1 are still operating under regulation 50-52 of the Fisheries (Amateur Fishing) Regulations 2013, and it is not mandatory to report permits that are issued.

53. Table 2 lists the customary fisheries areas that fall within the SCA 1 QMA.

Table 2: SCA 1 customary fisheries areas

	Management type
Te Puna mātaitai	Mātaitai Reserve
Waikare Inlet taiāpure	Taiāpure
Maunganui Bay	186A temporary closure
Marsden Bank and Mair Bank	186A temporary closure

54. Commercial fishing is not permitted within mātaitai reserves, but recreational and customary fishing is allowed. None of these customary management areas are known to contain scallops in abundance high enough to be targeted by fishers.

Recreational survey information

55. Recreational catch is estimated based on the National Panel Survey of Marine Recreational Fishers undertaken in 2011/12 and 2017/18. The 2017/18[2] survey estimates approximately 2.5 tonnes of recreational catch across SCA 1.

56. Reports from recreational fishers indicate that some recreational beds in the Far North have been impacted by a change in environment. High levels of silt and mud have been reported in areas that have traditionally supported healthy scallop beds such as Whangaroa and Te Puna. In the Bay of Islands, divers have reported the non-invasive seaweed *Chaetomorpha linum* occupying key scallop areas.

57. Recreational fishers have reported that the scallop beds within Whangarei harbour appear to be healthy, and have supported a high level of recreational fishing for a number of years.

Stock assessment

58. There is no current biomass survey to inform management of the fishery, or agreed upon alternative. At this time Fisheries New Zealand considers that biomass surveys are the preferred source of information to monitor scallop fisheries.

2 Allowances for setting the TACC

2.1 Māori customary interests

59. Scallops are an important traditional food for Māori and continue to be gathered under provisions for customary fishing.

60. There are several areas of the fishery (largely inshore embayments) that have been set aside by regulation exclusively for non-commercial fishing. The remaining areas of the fishery are not exclusive to commercial fishers, but are open to all sectors. Fisheries New Zealand recognises, however, that available information suggests that there is relatively little fishing by non-commercial fishers in the areas open to all, possibly because of easier access to scallops in the

[2] National Panel Survey of Marine Recreational Fishers 2017-18: https://www.mpi.govt.nz/dmsdocument/36792-far-201924-national-panel-survey-of-marine-recreational-fishers-201718

areas closed to commercial fishers. Fisheries New Zealand believes that a relevant consideration is that the fishing sectors are spatially separate to a relatively large extent.

61. At present, few fisheries have reliable records or estimates of Māori customary catch. The Northland scallop customary catch was estimated by equating customary allowance with the recreational allowance where the species concerned is of importance to Māori. Thus, the customary allowance in SCA 1 is set at the same level as the recreational allowance, 7.5 tonnes (meatweight).

62. Fisheries New Zealand is not proposing to alter this allowance.

2.2 Recreational interests

63. The allowance for recreational fishers provides for the cumulative catch taken by recreational fishers, over a fishing year. Regulations governing the recreational harvest of scallops from SCA 1 include a minimum legal size of 100 mm shell length and a restricted daily harvest (bag limit) of 20 per person.

64. A change to the recreational fishing regulations in 2005 allowed divers operating from a vessel to take scallops for up to two nominated safety people on board the vessel, in addition to catch limits for the divers.

65. Until 2006, the recreational scallop season ran from 15 July to 14 February. In 2007 the season was changed to run from 1 September to 31 March to enable recreational fishers to better access scallops in good condition.

66. As described in 2.1 Fisheries New Zealand considers the Recreational sector is spatially separate and the sustainability of the recreational areas is ensured by the absence of commercial fishing and application of the recreational rules.

67. Fisheries New Zealand is not proposing to alter this allowance.

2.3 All other mortality caused by fishing

68. Other sources of mortality caused by fishing is an allowance intended to provide for unrecorded mortality of fish associated with fishing activity, including incidental mortality from fishing methods, or illegal fishing.

69. Legal-sized scallops caught commercially in SCA 1 must be landed and must not be returned to the water. Incidental damage to uncaught or undersize scallops can occur during commercial dredging.

70. The box dredges used in the Northland commercial fishery have been found to be more efficient in the sandy conditions prevalent in the fishery than the ring-bag dredges used elsewhere in New Zealand. However, scallops encountered by box dredges have shown modest reductions in growth rate, compared with scallops collected by divers, and quite high mortality (about 20–30% mortality for scallops that are returned to the water. i.e. under the MLS of 100 mm). Field experiments and modelling suggest that dredging reduces habitat heterogeneity and increases juvenile mortality.

71. Other sources of fishing-related mortality are also likely to occur from recreational dredging and illegal take of scallops. Fisheries New Zealand does not have reliable estimates of these other sources of fishing related mortality.

72. It is proposed to reduce the allowance by 75% for all other mortality to the stock proportional to the reduction of the TACC, to reflect that less fishing effort will lead to reduced mortality.

3 Options, submissions, and analysis

3.1 Summary of options

73. The options consulted on are presented in Table 3 below.

Table 3: Proposed management settings (in tonnes) for SCA 1 from 1 April 2020, with the percentage change relative to the *status quo* in brackets.

Stock	Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
				Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
SCA 1	Option 1 *(Status quo)*	75	40	7.5	7.5	20
	Option 2	30 ↓ (60%)	10 ↓ (75%)	7.5	7.5	5 ↓ (75%)

3.2 Submissions

Table 4: Written submissions received on the SCA 1 options

Submitter	Option Support		
	1	2	Other
Environmental Defence Society Incorporated		✓	
Mike Currie		✓	
New Zealand Underwater Association		✓	
Northland Scallop Enhancement Company (NSEC)	✓		
NZ Sport Fishing Council (NZSFC), LegaSea, New Zealand Angling and Casting Association (NZACA)		✓	
Ocean Family Trust	✓		
Patuharakeke Te Iwi Trust Board (PTB)		✓	
Te Ohu Kaimoana		✓	
Thomas Hunt	✓		
Whangamata Seafoods & Quota resources		✓	

3.3 Analysis

Input and participation of tangata whenua

74. Input and participation into the sustainability decision-making process is provided through Iwi Fisheries Forums, which have been established for that purpose. Each Iwi Fisheries Forum has developed an Iwi Fisheries Forum Plan that describes how the iwi in the Forum exercise kaitiakitanga over the fisheries of importance to them, and their objectives for the management of their interests in fisheries. Particular regard should be given to kaitiakitanga when making sustainability decisions.

75. Iwi Fisheries Forums may also be used as entities to consult iwi with an interest in fisheries.

76. The proposal to review SCA 1 has been discussed with Te Hiku o Te Ika Fisheries Forum in the Far North and the Mid-North Island Fisheries Forum.

Kaitiakitanga

Te Hiku o Te Ika Iwi Fisheries Forum

77. Scallop is identified in the Te Hiku O Te Ika Iwi Fisheries Forum Fisheries Plan as a taonga species. Concerns have been raised by the forum for a number of years regarding low numbers of scallops at important local areas including Rangaunu Bay and Whangaroa.

78. In November 2019, the forum reiterated its concern for scallop numbers at Rangaunu Bay and Whangaroa. The forum was generally supportive of reduction of the TACC. Concern was expressed regarding time since the last review.

79. Concern was expressed regarding the volume of recreational take over the summer period in the Far North and the associated impact of recreational dredges on the scallop beds.

80. The forum recommended that any further assessment of SCA 1 include discussion with forum members to ascertain known current and historical locations of scallop beds and abundance.

81. Fisheries New Zealand considers that the management options presented in this consultation paper are in keeping with the objectives of the Te Hiku o Te Ika Fisheries Forum Fisheries Plan, which generally relate to the maintenance of healthy and sustainable fisheries.

Mid-North Fisheries Forum

82. In November 2019 the Mid-North Fisheries Forum members expressed concerns regarding the volume of recreational take in the Bay of Islands and concerns associated with the impact of recreational dredges on the scallop beds.

83. Forum members indicated that they consider the Bay of Islands scallop beds to be generally in bad shape.

84. As part of discussions leading up to consultation the Forum indicated general support for a reduction of the TACC.

85. Patuharakeke has representation at the Mid-North Fisheries Forum. Fisheries New Zealand received a submission from the Patuharakeke Te Iwi Trust Board (PTB). The submission supports Option 2. The submission requested further discussion and action should be taken to implement appropriate restrictions (fishing season and method) to achieve tighter sustainable regulation and support for this fishery.

Submissions

86. Ten submissions were received in response to the consultation document. There was general acknowledgement across the submissions that there is a reduced abundance of scallops in a number of areas within SCA1 that previously supported important fisheries. However, there are varying views about what management action should be undertaken.

Support for Option 1

87. Northland Scallop Enhancement Company (NSEC), Oceans Family Trust and Thomas Hunt proposed that the decline in the beds were likely driven by environmental causes, including siltation, and that the status quo settings (Option 1) should be retained to support commercial utilisation in the case that abundance returned in the future. NSEC and Oceans Family Trust emphasised the financial impact that reducing the TACC would have on the viability of the fishery and the funding available to monitor and manage the fishery. Thomas Hunt opposed any reduction without further scientific work to inform the new management settings.

88. The NSEC submit that the harvesting strategy should be based on that for flatfish in FLA1 where they assert that the TACC is set to provide headroom for taking advantage of good years of abundance.

Other Measures

89. NSEC and Oceans Family Trust noted that there are a range of voluntary controls in place that mitigate the risk that commercial fishing would cause sustainability issues (Table 5.).

90. However NSEC also proposed additional area-based limits of 10 tonne for four areas within the QMA. Oceans Family Trust proposed changes to the "open season", bringing forward the closed fishing season for commercial and recreational fishers to begin 1 January.

Table 5: Voluntary management measures raised by the Northland Scallop Enhancement Company in their submission

Measures
Recovery-rate > 10%.
Catch rate > 60 kg (1.5 bin) per hour.
Maximum 16 bins per day (or 32 bins for a trip of two or more days)
Reduced fishing season by > 3 months (stopping by Christmas and usually not starting until August)
ACE sharing/pooling options at times, per bed.
Also we note the requirement now for Biotoxin monitoring and the costs and administration of this further constrain effort to areas of higher catch rates/abundance.

Support for Option 2

91. The remaining six submissions supported Option 2, to decrease the TAC and TACC, but had varying recommendations on additional management controls.

92. Te Ohu Kaimoana did not propose any additional controls on the commercial fishery outside of the proposed TACC reduction, but raised questions about whether recreational controls should be reviewed. Both Te Ohu Kaimoana and Patuharakeke emphasised the importance of partnership in developing long-term management. Patuharakeke noted the importance of the fishery to them and their reliance on the recreational catches to feed whanau. They sought further discussion about fishing season and method.

Other Measures

93. Whangamata Seafoods supported the development of a catch-per-unit-effort based management approach for the commercial fishery, as is in place in the Coromandel Scallop fishery.

94. The Environment Defence Society and New Zealand Underwater Association both sought controls on fishing gear, specifically the prohibition of dredging or other bottom impacting methods.

95. NZ Sport Fishing/Legasea/NZACA sought a variety of input controls to closely manage the fishery including effort, area and catch limits.

96. Mike Currie commented on the management of the recreational fishery only, seeking decreases in recreational allowances.

Environmental principles (section 9 of the Act)

97. The key environmental interactions with the scallop fishery, which must be taken into account when considering sustainability measures are:

Marine mammals

98. There are no known captures of marine mammals in New Zealand scallop fisheries.

Fish bycatch

99. A range of non-target fish and invertebrate species are caught and discarded by dredge fisheries for scallops spp. No data are available on the level or effect of this incidental catch and discarding by the fisheries, however the SCA 1 fishery shares many characteristics of the adjacent Coromandel Scallop (SCA CS) fishery.

100. In SCA CS, a photographic survey approach was used in the 2006[3] to provisionally examine bycatch groups, and a more quantitative and comprehensive study was conducted using bycatch data collected in the 2009 dredge survey[4]. Survey catches were quantified by volume of different component categories. Over the whole 2009 survey, scallops formed the largest live component of the total catch volume (26%), followed by assorted seaweed (11%), starfish (4%), other live bivalves (4%), coralline turfing algae (1%) plus other live components not exceeding 0.5%. Dead shell (identifiable and hash) formed the largest overall component (45%), and rock, sand, and gravel formed 8%. Categories considered to be sensitive to dredging were caught relatively rarely.

Seabirds

101. There are no known captures of seabirds in New Zealand scallop fisheries.

Benthic impacts (or "Biological diversity")

102. Fishing with mobile bottom contact gear, such as dredges, has impacts on benthic populations, communities, and their habitats. The effects are not uniform, but depend on factors such as the specific features of the seafloor, the natural disturbance regime, the species present, the type of gear and the frequency it is used.

103. The effects of scallop dredging on the benthos are well-studied, with New Zealand studies (including in SCA 1) showing that with increasing fishing intensity there are decreases in the density and diversity of benthic communities and, especially, the density of emergent epifauna that provide structured habitat for other fauna. The results of these studies are summarised in the Aquatic Environment and Biodiversity Annual Review (Ministry for Primary Industries 2018)[5], and are consistent with the global literature.

104. This paper relates to the setting of a TAC and TACC, rather than gear or spatial regulations. Under Option 2, however, the intensity of fishing effort and any benthic impacts associated with dredging may be constrained, relative to Option 1. Once you have made decisions relating to the TAC, Fisheries New Zealand will debrief with stakeholders and tangata whenua on the process and outcomes of this TAC review and provide an opportunity for discussion of wider management measures.

[3] Tuck, I; Parkinson, D; Dey, K; Oldman, J; Wadhwa, S (2006). Information on benthic impacts in support of the Coromandel Scallops Fishery Plan. Final Research Report prepared by NIWA for Ministry of Fisheries Research Project ZBD2005-15 Objective 1-6. p. (Unpublished report held by Ministry for Primary Industries, Wellington.)

[4] Williams, J R; Parkinson, D M (2010) Biomass survey and stock assessment for the Coromandel scallop fishery, 2010. New Zealand Fisheries Assessment Report 2010/37.

[5] Aquatic Environment and Biodiversity Annual Review (Ministry for Primary Industries 2018) https://www.mpi.govt.nz/dmsdocument/34854-aquatic-environment-and-biodiversity-annual-review-aebar-2018-a-summary-of-environmental-interactions-between-the-seafood-sector-and-the-aquatic-environment

Habitats of significance

105. An area within Spirits Bay and Tom Bowling Bay was closed to commercial scallop fishing in 1999 under the Fisheries (Auckland and Kermadec Areas Commercial Fishing) Regulations 1986 due to the presence of sponge and bryozoan assemblages with unique levels of biological diversity.

106. The area was discovered during a scallop biomass survey in 1996 and, prior to the regulated closure, Industry maintained a voluntary closure.

Sustainability measures (section 11 of the Act)

107. Section 11 of the Act sets out various matters that you must take into account or have regard to when setting or varying any sustainability measures (such as a TAC). These include any effects of fishing on the stock and the aquatic environment, and any relevant fisheries plan.

108. Section 11(2)(c) of the Fisheries Act 1996 requires you to have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 (HGMPA) when varying the TAC relating to stocks with boundaries intersecting with the Park.

109. Fisheries New Zealand considers that Option 2 provides for the above outcomes and are consistent with sections 7 and 8 of the HGMPA. The Hauraki Gulf Forum has established guidelines for addressing concerns regarding the state of the Gulf's environment and resources. No specific comment has been provided from the Hauraki Gulf Forum in response to the proposals however the Forum has outlined concerns about the impacts of commercial dredging.

110. While the Forum may make recommendations for the integrated management of the Gulf, including fisheries, you must take a broad range of factors and interests into consideration when making your decisions. Any TAC decision you make in relation to SCA 1 will need to consider possible impacts on both commercial and non-commercial users of the resource within the Gulf, and the wellbeing of all sectors.

3.4 Option 1 – Status quo

111. Under Option 1, the existing TAC, TACC and allowances would be retained in line with the status quo.

112. Option 1 carries the greatest sustainability risk. This will provide the most opportunity for commercial fishers to take advantage of any future increase in abundance, and places weight on the characteristic that scallop populations can be highly variable and change year to year.

113. Industry has submitted a range of voluntary measures that propose to mitigate risk in the fishery. However there has been no formal arrangement provided to Fisheries New Zealand as was done by Industry for the Coromandel scallop fishery in SCA CS, where the voluntary CPUE Limit rule is used.

114. This option does not address the risk or respond to information indicating that the current TACC may no longer be sustainable.

3.5 Option 2 – Recommended

115. Option 2 reduces the TAC from 75 tonnes to 30 tonnes. Under Option 2 the TACC would decrease from 40 tonnes to 10 tonnes.

116. Under Option 2 the proposed reduction of the TACC is above the recent average catch of approximately 9 tonnes. However, Fisheries New Zealand notes that the highest catch in recent years occurred in 2015 where 16 tonnes of catch was reported.

117. Participation in the fishery has already been affected by the low availability of scallops in the fishery. The lowering of the TACC may further reduce the ability of commercial fishers to invest in research to support re-establishing the fishery.

118. The average catch in the last 4 years is approximately 9 tonnes, using the reported port price (which does not reflect the total economic value), this represents a revenue of approximately $142,100. If the total TACC was currently being caught, then this decrease could result in potential revenue losses of $477,000 per year from a potential revenue of $636,000.

119. In their submission, industry submits a much higher economic impact of $1.5 million. They state forgone revenue neglects the additional economic impacts of processing and retail. Fisheries New Zealand acknowledges there are alternative methods and points of reference to assess economic impact. A reduction to the SCA 1 TACC under Option 2 would result in a potential loss of economic revenue compared with the potential revenue under Option 1 only if catch rates recovered sufficiently for catches of 40 tonnes to be sustained. If the economic impact was to be assessed against recent average catches) then a 10 tonne TACC would have no economic impact.

120. Option 2 may constrain the commercial fishery if the biomass increases, or if a new area of unfished scallops is identified. The Act recognises stocks such as SCA 1 which have highly variable abundance. For stocks listed on Schedule Two of the Act, including SCA 1, the TAC and catch allowances for all sectors can be increased within a fishing year when there is evidence of greater abundance within that year. This provides for responsive management and an appropriate management approach, which enables greater harvest in times of high abundance. Fisheries New Zealand's proposal aims to reduce the sustainability risk while aligning the management approach for SCA 1 with the provisions under the Act.

3.6 Other considerations

121. A range of management matters outside of your immediate decisions on setting and allocating the TAC were raised in response to the review. These matters are discussed below. Overall Fisheries New Zealand considers that the matters raised indicated the need for further engagement with stakeholders and tangata whenua to establish a better understanding of ambitions for the fishery and potential management actions.

Dredging and Diving

122. Multiple submissions were received raising concerns about the method of dredging and its impacts on the environments. Industry has indicated to Fisheries New Zealand that at this time there is not a viable alternative method to dredging. A number of submissions suggested that diving should be permitted in the commercial scallop fishery. The method of underwater breathing apparatus (UBA), is currently prohibited in the commercial fishery. The restriction on the use of UBA in commercial fisheries pre-dates the Quota Management System and was put in place to reduce the risk of localised or serial depletion of shellfish stocks by commercial fishing. It was also a response to the complexity and cost of monitoring compliance associated with the method. In fisheries where measures have been taken to address risks, UBA has been permitted. A change to regulations would be required to allow UBA as a method in the scallop fishery.

Management approach

123. Te Hiku o Te Ika Fisheries Forum in the far North and the Mid-North Island Fisheries Forum, and Te Ohu Kaimoana requested greater collaboration with iwi in the future management of SCA 1.

Recreational limits and controls

124. Submissions were received from The Environment Defence Society and New Zealand Underwater Association expressing concern regarding the impact of recreational fishing on the

abundance of scallops in SCA 1. Te Hiku o Te Ika Fisheries Forum and the Mid-North Island Fisheries Forum also had concerns regarding the impact recreational dredges and recreational fishing have on the fishery.

4 Conclusion and recommendations

125. The best available information suggests that there has been a long-term decline in abundance of scallops in SCA 1, which would pose a sustainability risk should fishers attempt to fully catch the current TAC and TACC.

126. Fisheries New Zealand prefers Option 2 – decreasing the TAC of SCA 1 to 30 tonnes, the TACC to 10 tonnes, and other sources of mortality to 5 tonnes. Option 2 retains the current allowances for recreational and customary. Option 2 better aligns with recent performance of the fishery.

127. Fisheries New Zealand notes the number of alternative measures raised by submitters during the consultation process.

128. Fisheries New Zealand will work closely with all interested tangata whenua and stakeholders to achieve wider monitoring and management objectives for scallop fisheries nationally, including reviewing alternative management settings for SCA 1 in the future. This will include consideration of the measures proposed by submitters.

5 Decision

Option 1

Agree to retain the SCA 1 TAC at 75 tonnes and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing interests at 7.5 tonnes;

ii. Retain the allowance for recreational fishing interests at 7.5 tonnes;

iii. Retain the allowance for all other sources of mortality to the stock caused by fishing at 20 tonnes;

iv. Retain the SCA 1 TACC at 40 tonnes.

Agreed / Not Agreed

OR

Option 2

Agree to set the SCA 1 TAC at 30 tonnes and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing interests at 7.5 tonnes;

ii. Retain the allowance for recreational fishing interests at 7.5 tonnes;

iii. Reduce the allowance for all other sources of mortality to the stock caused by fishing from 20 to 5 tonnes;

iv. Reduce the SCA 1 TACC from 40 to 10 tonnes.

Agreed / Not Agreed

Hon Stuart Nash
Minister of Fisheries

17 / 03 / 2020

Southern blue whiting (SBW 6B)

Micromesistius australis

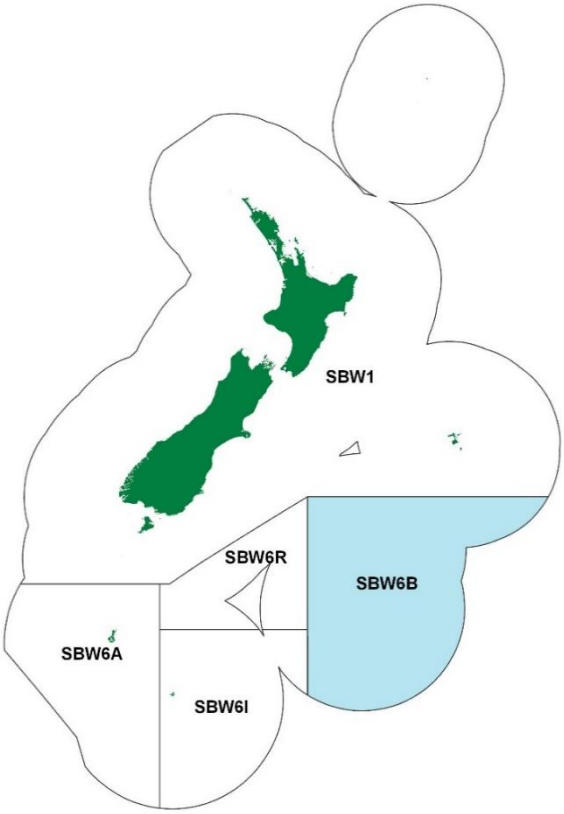

Figure 1: Quota management areas (QMAs) for southern blue whiting (SBW), with SBW 6B highlighted in blue.

Table 1: Summary of options proposed for SBW 6B from 1 April 2020 (all values in tonnes). The recommended option is highlighted in blue.

Stock	Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances (tonnes)		
				Customary Māori	Recreational	All other mortality to the stock caused by fishing
SBW 6B	Current Setting *(Status quo)*	3,209	3,145	0	0	64
	Option 1 **Recommended**	2,888 ↓ (10%)	2,830 ↓ (10%)	0	0	58 ↓
	Option 2	2,567 ↓ (20%)	2,516 ↓ (20%)	0	0	51 ↓
Public consultation period			8 January to 5 February 2020			
New option incorporated following consultation			No			
Total submissions received			2			
Number of submissions received for each option			Option 1	2		
			Option 2	0		

1 Why are we proposing that you review the TAC and TACC?

129. The best available information indicates that southern blue whiting in SBW 6B (Figure 1) has experienced low recruitment in recent years. On that basis, Fisheries New Zealand proposed reducing the Total Allowable Catch (TAC) and Total Allowable Commercial Catch (TACC), to ensure the fishery remains sustainable.

1.1 About the stock

130. Southern blue whiting grow quickly, especially during the juvenile life stage. The maximum age is considered to be around 25 years and the maximum recorded length is 58 cm.

131. Ageing studies and biomass surveys have shown that southern blue whiting has very high recruitment (or year class strength) variability. The year classes from large recruitment events can dominate the population and can cause significant variations in the fishable biomass over time.

1.2 State of the stock

132. The management approach for SBW 6B is supported by annual acoustic surveys to monitor spawning stock abundance. These surveys enable regular biomass monitoring and TAC and TACC reviews. A 'Harvest Control Rule' is applied, which estimates the annual sustainable yield based on the biomass estimate from the acoustic survey. From 2004 to 2017, acoustic surveys were carried out by an industry vessel fishing at the Bounty Platform in August/September.

133. Because of weather and other operational constraints, acoustic surveys were not completed successfully in the last two fishing years. Therefore, the Harvest Control Rule has not been applied in 2018 or 2019.

134. A review of fish length information from the SBW 6B fishery suggests that there has been low recruitment into the fishery recently. Fish lengths from 2017 to 2019 have a distribution centred around 40 cm for males and 45 cm for females. In the past, there has been a broader spread of year classes in the fishery with fish lengths ranging from around 30 cm to 58 cm. There has also been a distinct bimodal distribution showing two or more strong year classes.

135. Preliminary results from the age analysis[6] are presented in Figure 2. The majority of fish caught by the fishery in recent years have come from three strong year classes; 2002, 2007 and 2012. These year classes are the three rows of larger circles in the top half of Figure 2. The 2002 year class (fish that are over 17 years old) are expected to leave the fishery as they approach the maximum age limit for southern blue whiting.

136. There was an unusual mode of sampled fish from the commercial fishery in 2019 that were between 17 and 21 cm in length. These small fish have been aged at 2 years old. It is not known at this stage whether this is a strong year class that will recruit into the fishery in two or three years' time.

[6]Received on 16 December 2019

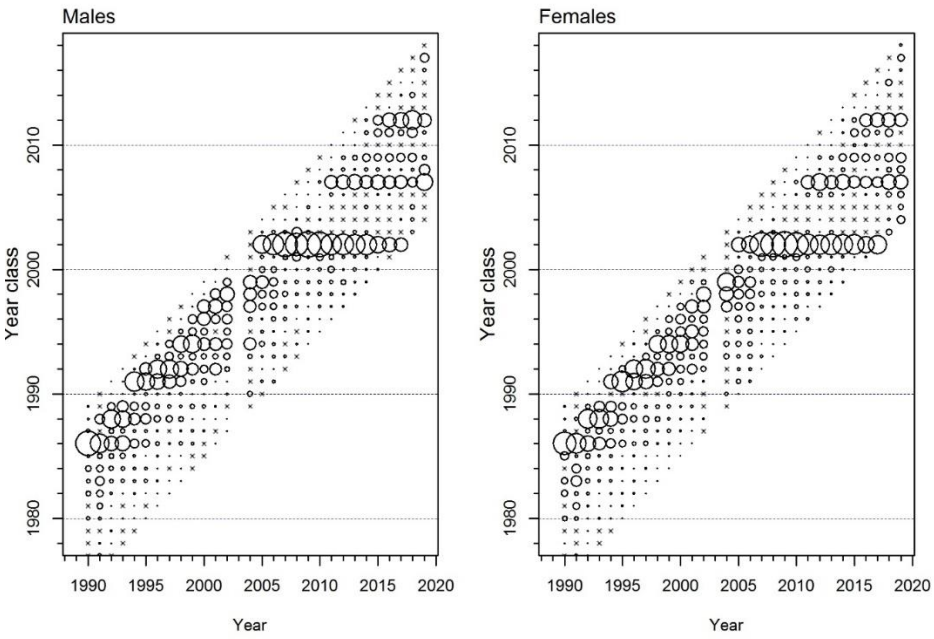

Figure 2: Commercial catch proportions-at-age for the Bounty Platform stock by sex and year class, 1990–2019. Symbol area is proportional to the proportions-at-age within the sampling event.

1.3 Best available information and associated uncertainty

Commercial reporting

137. The southern blue whiting fishery at the Bounty Platform began in earnest in the late 1980s, with reported commercial landings reaching a peak of nearly 59,000 tonnes in 1991/92 (Figure 3). Reported commercial landings in SBW 6B have been decreasing since 2016/17.

138. Since 2015/16, only one or two vessels have participated in the fishery. In 2019, the total reported commercial landing of 788 tonnes in SBW 6B was the lowest since 1988/89.

139. Only one vessel fished in SBW 6B in 2019 with inclement weather impacting its operation.

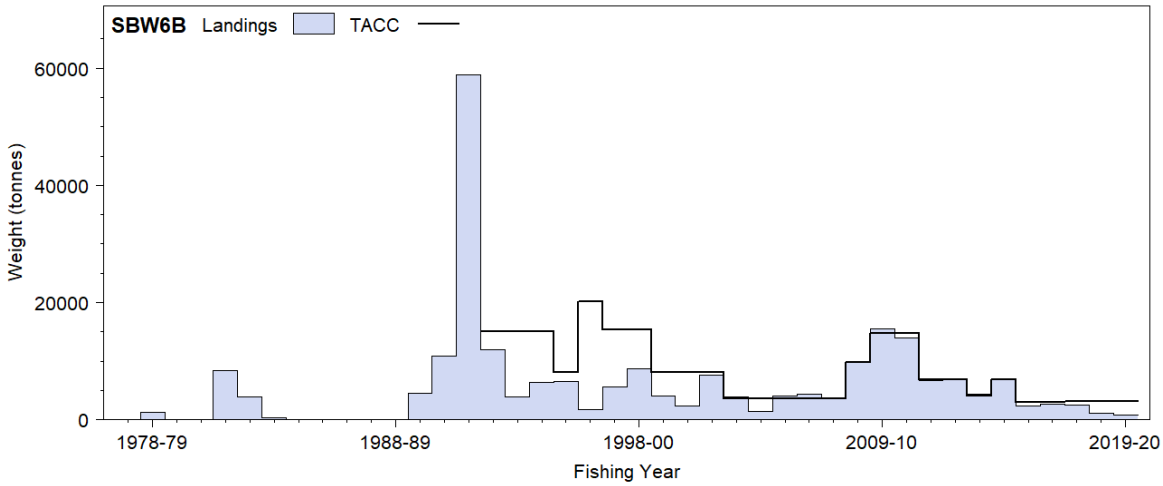

Figure 3: Reported commercial landings for SBW 6B from 1978/79 to 2019/20

Customary reporting

140. The best available information for Māori customary take is provided under the Fisheries (South Island Customary Fishing) Regulations 1999. No permits have been issued and southern blue whiting has not been reported under these regulations. There are no reported customary authorisations for SBW 6B at this time. There are also no mātaitai reserves or closures or restrictions under s186B of the Fisheries Act 1996 that impact southern blue whiting fishing in SBW 6B.

Recreational survey information

141. There has been no reported recreational take of southern blue whiting and we do not expect any in this fishery because it operates at depths of 250 to 600 metres in sub-Antarctic waters, 700 kilometres to the south east of Stewart Island.

Stock assessment

142. The management approach for SBW 6B is supported by annual acoustic surveys to monitor spawning stock abundance. These surveys enable regular biomass monitoring and TAC/TACC reviews. A Harvest Control Rule is applied, which provides an estimate of the annual sustainable yield based on the biomass estimate from the acoustic survey. Weather and other operational constraints have meant that acoustic surveys were not completed successfully in either of the last two fishing years. The Harvest Control Rule could therefore not be applied in 2018 or 2019.

2 Allowances for setting the TACC

2.1 Māori customary interests

143. No section 186/186B measures (mātaitai, taiāpure, other closures) apply to SBW 6B, and there is no recorded customary Māori take of southern blue whiting. Fisheries New Zealand proposes retaining a zero allowance for Māori customary take under both options.

2.2 Recreational interests

144. There has been no recorded recreational take of southern blue whiting in SBW 6B. Fisheries New Zealand proposes retaining a zero allowance for recreational take under both options.

2.3 All other mortality caused by fishing

145. Other sources of mortality caused by fishing is an allowance intended to provide for unrecorded mortality of fish associated with fishing activity, including incidental mortality from fishing methods, or illegal fishing.

146. Fisheries New Zealand proposes maintaining the allocation for other sources of fishing related mortality at 2% of the TACC. This equates to an allocation of 58 tonnes for other sources of fishing related mortality under Option 1, and 51 tonnes under Option 2.

3 Options, submissions, and analysis

3.1 Summary of options

147. The options consulted on are presented in Table 2 below.

Table 2: Proposed management settings in tonnes for SBW 6B from 1 April 2020, with the percentage change relative to the *status quo* in brackets.

Stock	Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
				Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
SBW 6B	Current Setting *(Status quo)*	3,209	3,145	0	0	64
	Option 1 **(Recommended)**	2,888 ↓ (10%)	2,830 ↓ (10%)	0	0	58 ↓
	Option 2	2,567 ↓ (20%)	2,516 ↓ (20%)	0	0	51 ↓

3.2 Submissions

Table 3: Written submissions received on the SBW 6B options

Name of Organisation	Option Supported		
	1	2	Other
Te Ohu Kai Moana Trustee Ltd (Te Ohu Kaimoana)	✓		
Deepwater Group Ltd	✓		

3.3 Analysis

Input and participation of tangata whenua

148. Input and participation into the sustainability decision-making process is provided through Iwi Fisheries Forums, which have been established for that purpose. Each Iwi Fisheries Forum has developed an Iwi Fisheries Forum Plan that describes how the iwi in the Forum exercise kaitiakitanga over the fisheries of importance to them, and their objectives for the management of their interests in fisheries. Particular regard should be given to kaitiakitanga when making sustainability decisions.

149. Iwi Fisheries Forums are the mechanism for engagement with iwi with an interest in fisheries. Not all Iwi Fisheries Forums have an interest in this southern deep water fish stock. The proposal to review southern blue whiting stocks was signalled at the November 2019 Iwi Fisheries Forum meetings. At the time of these meetings, however, the stocks for review had not been confirmed. Noting that the proposals were under development at the time of engaging with the forums, there was not an opportunity for input and participation before the options went out for consultation. No detailed concerns were raised or feedback provided by these forums. Further input from tangata whenua across the regions covered by the proposals was sought during consultation.

Kaitiakitanga

150. Southern blue whiting is identified as a taonga species in the Te Hiku O Te Ika Forum Fisheries Plan and the Mai i Nga Kuri a Wharei ki Tihirau Forum Fisheries Plan. The Te Waka a Māui me Ōna Toka Iwi Forum consider all fish species taonga.

151. The Te Waipounamu Iwi Forum Fisheries Plan contains objectives to support and provide for the interests of South Island iwi which includes SBW 6B. Two objectives are relevant to the management options proposed for SBW 6B:

- **Management Objective 3:** to develop environmentally responsible, productive, sustainable, and culturally appropriate commercial fisheries that create long-term commercial benefits and economic development opportunities for South Island iwi
- **Management Objective 5:** to restore, maintain and enhance the mauri and wairua of fisheries throughout the South Island

152. Fisheries New Zealand considers the proposals for SBW 6B meet those objectives.

Environmental principles (section 9 of the Act)

153. The key environmental interactions with the southern blue whiting fishery, which must be taken into account when considering sustainability measures are:

Marine mammals

154. The SBW 6B fishery overlaps with the foraging range of New Zealand fur seals which live on the Bounty Islands. The Department of Conservation classifies the New Zealand fur seal population as 'Not Threatened – least concern'. A survey undertaken in 2001 provided an estimate for New Zealand of over 200,000 fur seals[7]. No surveys have been conducted since that time but anecdotal reports suggest an increase in both the abundance and distribution of fur seals.

155. The Bounty Islands are one of the main colonies for the New Zealand fur seal in the Sub-Antarctic. A New Zealand fur seal population estimate for the Bounty Islands is being undertaken by the Department of Conservation in 2020.

156. Interactions occur between the SBW 6B fishery and fur seals. Almost all tows in SBW 6B were observed between 2013/14 and 2017/18. On average, 39 fur seals were caught annually over this period. The proposed TAC/TACC changes for SBW 6B will likely result in a decrease in the potential fishing effort in the fishery and therefore reduce the potential for interactions with fur seals.

Fish bycatch

157. Southern blue whiting fisheries are one of the lowest bycatch trawl fisheries in New Zealand, with very low levels (<1%) of bycatch of other fish species.[8] The target fishery focuses on highly aggregated schools of spawning southern blue whiting and as a result takes minimal fish bycatch. Non-target catch in the fishery will continue to be monitored but at current levels does not give rise for concern.

Seabirds

158. Seabird interactions with New Zealand fisheries are managed under the framework of the 'National Plan of Action to Reduce the Incidental Captures of Seabirds in New Zealand Fisheries' (NPOA-Seabirds 2013).[9]

[7] Accessible at: http://www.doc.govt.nz/nature/native-animals/marine-mammals/seals/nz-fur-seal/
[8] Anderson, O.F. (2017). Fish and invertebrate bycatch in New Zealand deepwater fisheries from 1990–91 until 2013–14. New Zealand Aquatic Environment and Biodiversity Report No. 181. 75 p.
[9] NPOA Seabirds (2019) consultation began on 19 November 2019 and closed on 27 January 2020.

159. Seabird interactions with vessels in the SBW 6B fishery generally occur at very low rates. From 2013/14 to 2017/18, a mean of 8 seabirds were caught annually (range from 6 to 16). The proposed TAC/TACC reduction is expected to reduce the potential for interactions between the fishery and seabirds.

Benthic impacts (or "Biological diversity")

160. Southern blue whiting are generally fished over a relatively restricted area in SBW 6B using mid-water trawl gear near or on the seabed. The incidental bycatch of benthic organisms and the trawl footprint of the southern blue whiting fleet, is analysed and reported annually. The fleet is closely monitored by observer coverage with an average of 99% of tows observed in the last five years (2013/14 to 2017/18).

161. There is little invertebrate bycatch in this fishery. Protected coral bycatch has been negligible. Where trawls are fished on the bottom, they are likely to have effects on benthic community structure and function. However, any consequences from fishing in SBW 6B are likely to be relatively minor due to the gear type and small scale of the fishery.

Habitats of significance

162. There are no habitats of particular significance for fisheries management identified in SBW 6B.

Sustainability measures (section 11 of the Act)

163. Section 11 of the Act sets out various matters that you must take into account or have regard to when setting or varying any sustainability measures (such as a TAC). These include any effects of fishing on the stock and the aquatic environment, and any relevant fisheries plan.

164. A fisheries-specific southern blue whiting fisheries chapter was completed in 2011 for the National Deepwater Plan. The chapter sets the operational objectives and performance criteria for all southern blue whiting fisheries. It also addresses the management of environmental effects caused by fishing for southern blue whiting.

165. The expected outcome is that impacts on the aquatic environment will decrease under either of the two options proposed to reduce the TAC/TACC for SBW 6B.

Economic analysis

166. Under Option 1, the Total Allowable Commercial Catch would decrease by 10% from 3,145 tonnes to 2,830 tonnes. Based on an estimated average southern blue whiting export price in 2018 of $879/tonne, this decrease would result in an approximate potential decrease in revenue of $277,000 per year if the entire current TACC was caught (Table 4). We note in 2019 only 25% of the TACC for SBW 6B was caught (788 tonnes). If this level of catch continued there would be no decline in revenue.

167. Under Option 2, the Total Allowable Commercial Catch would decrease by 20% from 3,145 tonnes to 2,516 tonnes. Based on the estimated average southern blue whiting export price, this decrease would result in an approximate potential decrease in revenue of $553,000 per year if the entire current TACC was caught (Table 4). As with Option 1 we note that in 2019 only 25% of the TACC for SBW 6B was caught (788 tonnes). If this level of catch continued there would be no decline in revenue.

Table 4: Predicted changes to commercial revenue for the proposed options, based on estimated average export price in 2018 of $879/tonne for SBW 6B.

Stock	Option	Change from current TACC (tonnes)	Predicted revenue changes ($p.a.)
SBW 6B	Option 1 **(Recommended)**	315 ↓	$277,000
	Option 2	629 ↓	$553,000

3.4 Option 1

168. Two submissions were received, both of which supported the proposal under Option 1 to reduce the SBW 6B TAC/TACC by 10%.

169. Deepwater Group Ltd submitted on behalf of 87.9% of SBW 6B quota holders. They unanimously supported Option 1.

170. A submission was received from Te Ohu Kai Moana Trustee Ltd (Te Ohu Kaimoana) who work on behalf of 58 mandated Iwi organisations. Te Ohu Kaimoana's purpose is to advance the interests of iwi in the development of fisheries, fishing and fisheries-related activities.

171. Te Ohu Kaimoana indicate a preference for Option 1. They consider that best fisheries management will come from increased industry engagement with the fishery. They note that ideally, quota holders would take more responsibility for managing the SBW 6B fishery collectively, but that this is not possible this year.

172. Te Ohu Kaimoana consider that the recent low catch rates in SBW 6B are likely to be influenced by timing and economics because the fishery overlaps with the more valuable west coast hoki fishery.

173. Te Ohu Kaimoana agree that there are signs that recruitment has been poor in the SBW 6B fishery in recent years. They consider that catch sampling by observers provides some information but it is not clear to them whether it is adequate given the limited number of tows in the fishery. For this reason, they note that catch sampling may not be representative of the fishery as a whole.

3.5 Option 2

174. The proposal to reduce the SBW 6B TAC/TACC by 20% is a more precautionary approach to the signal of recent low recruitment of age classes into the fishery. There was no support for this option.

175. A reduction in the TACC of 629 tonnes could result in no fishing in SBW 6B taking place in the near future as it may not be economically viable to do so.

176. Vessel managers may determine that if the SBW 6B TACC was reduced to 2,516 tonnes, it would be more profitable for vessels to remain longer in the west coast hoki fishery or alternatively target southern blue whiting on the Pukaki Rise (SBW 6R) or Campbell Rise (SBW 6I), which have higher TACCs and require less steaming time from ports on the South Island.

4 Conclusion and recommendations

177. Fisheries New Zealand recommends Option 1, which reduces the TAC/TACC for SBW 6B by 10%. This option is a cautious response to information collected which indicates that there has not been substantial recruitment into the SBW 6B fish stock since 2012.

178. Allowances under this option would remain at zero for customary Māori and recreational take. The allocation for other sources of fishing related mortality would continue to be 2% of the TACC.

179. Option 1 is supported by the majority of SBW 6B quota holders and Te Ohu Kaimoana.

180. There were no submissions that opposed a decrease in the SBW 6B TAC/TACC.

181. No submissions supported Option 2 which proposed a 20% decrease in TAC/TACC for SBW 6B; zero allowances for customary Māori and recreational take; and the allocation for other sources of fishing related mortality remaining at 2% of the TACC.

182. Fisheries New Zealand will annually review the fisheries data that is collected by observers to monitor the fishery. This data will be used to track fish year classes over time, and record recruitment pulses into the fishery.

183. Industry will be encouraged to continue to undertake acoustic surveys in SBW 6B. The successful completion of an acoustic survey will enable the use of the Harvest Control Rule to recommend the TAC/TACC for SBW 6B in future.

5 Decision

Option 1

Agree to set the SBW 6B TAC at 2,888 tonnes and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing interests at 0 tonnes;

ii. Retain the allowance for recreational fishing interests at 0 tonnes;

iii. Reduce the allowance for all other sources of mortality to the stock caused by fishing from 64 to 58 tonnes;

iv. Reduce the SBW 6B TACC from 3,145 to 2,830 tonnes.

Agreed / Not Agreed

OR

Option 2

Agree to set the SBW 6B TAC at 2,567 tonnes and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing interests at 0 tonnes;

ii. Retain the allowance for recreational fishing interests at 0 tonnes;

iii. Reduce the allowance for all other sources of mortality to the stock caused by fishing from 64 to 51 tonnes;

iv. Reduce the SBW 6B TACC from 3,145 to 2,516 tonnes.

Agreed / Not Agreed

Hon Stuart Nash
Minister of Fisheries

17 / 03 / 2020

Selected stocks with a Total Allowable Commercial Catch of zero tonnes

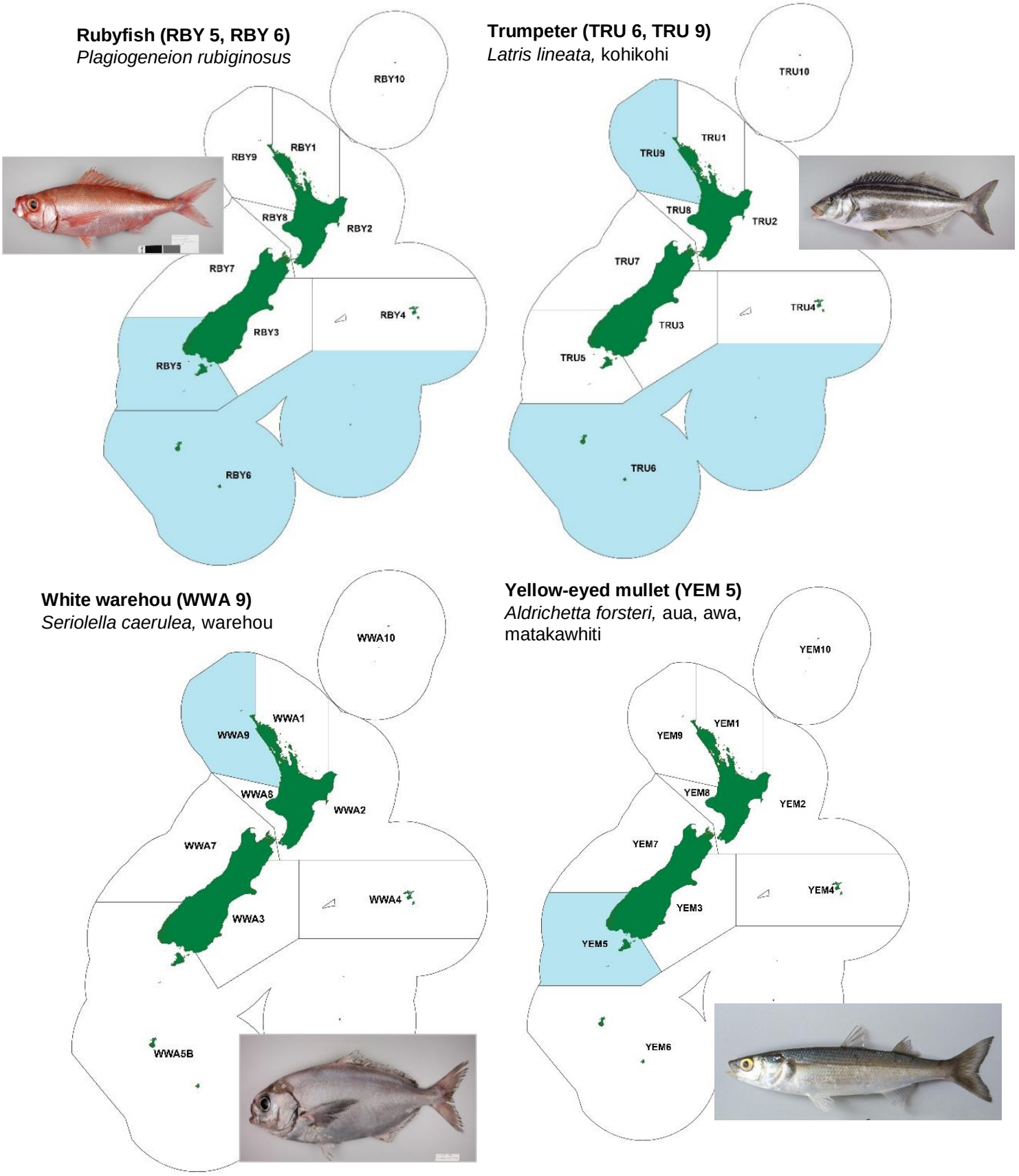

Figure 4: Quota management areas (QMAs) for rubyfish (RBY), trumpeter (TRU), white warehou (WWA) and yellow-eyed mullet (YEM) with RBY 5, RBY 6, TRU 6, TRU 9, WWA 9, and YEM 5 highlighted in blue.

Table 1: Summary of options proposed for the six stocks from 1 October 2020 (all values in tonnes). The recommended option is highlighted in blue.

Stock	Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
				Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
RBY 5	**Current settings**	**0**	**0**	**0**	**0**	**n/a**
	Option 1 **Recommended**	2 ↑	2 ↑	0	0	0
RBY 6	**Current settings**	**0**	**0**	**0**	**0**	**n/a**
	Option 1 **Recommended**	1 ↑	1 ↑	0	0	0
TRU 6	**Current settings**	**0**	**0**	**0**	**0**	**n/a**
	Option 1 **Recommended**	1 ↑	1 ↑	0	0	0
TRU 9	**Current settings**	**0**	**0**	**0**	**0**	**n/a**
	Option 1 **Recommended**	4 ↑	2 ↑	1 ↑	1 ↑	0
WWA9	**Current settings**	**0**	**0**	**0**	**0**	**n/a**
	Option 1 **Recommended**	1 ↑	1 ↑	0	0	0
YEM 5	**Current settings**	**2**	**0**	**1**	**1**	**n/a**
	Option 1 **Recommended**	3 ↑ (50%)	1 ↑	1	1	0

Public consultation period	18 December 2019 to 5 February 2020
New options incorporated following consultation	No
Total submissions received	4
Number of submissions received for each stock	Each submission commented on the stocks collectively. Two also provided stock-specific comments.

1 Why are we proposing that you review the TAC and TACC?

184. Fisheries New Zealand proposes that you increase the Total Allowable Catch (TAC) and Total Allowable Commercial Catch (TACC) for six stocks across four species that currently have a TACC of zero tonnes (refer Table 1). The TAC for five of the six stocks is also currently set at zero tonnes. The six stocks were identified on the basis of information provided by commercial fishers.

185. When these stocks were introduced into the Quota Management System (QMS) in 1998, the TACCs and the TACs (with the exception of YEM 5) were set at zero based on reported catch in previous years. In the period after QMS introduction, small catches of each of the six stocks have been reported. Possible reasons could include better reporting and/or species identification by fishers, changes in species distribution, and changes in fishing activity.

186. The rationale for proposing that you increase the TAC/TACCs is that although information is limited, the low levels of catch mean it is unlikely there are any sustainability concerns,

187. Increasing the TAC/TACCs will provide fishers the opportunity to balance catch with annual catch entitlement (ACE). A zero tonne TACC means that no ACE is generated. This means fishers who catch these stocks, must pay deemed values as there is no ability to balance catch with ACE.

188. We also recommend changes to allowances for customary and recreational interests and other sources of mortality for TRU 9.

189. The six stocks have a fishing year commencing on 1 October. The stocks have been included in the April 2020 sustainability round as an opportunity to progress early decisions on October stocks where available information allows us to, and to reduce the number of stocks that stakeholders may be asked to submit on during the October 2020 sustainability round.

1.1 About the stocks

Rubyfish (RBY 5, RBY 6)

190. Rubyfish are found between 50 and 800m water depth with most commercial catch taken between 200 and 400m. They grow to around 58cm in length and are also found in other parts of the world. There is no known recreational catch and no quantitative information on the level of customary non-commercial take.

191. Since QMS introduction, total annual nationwide catch has varied between around 200 and 750 tonnes with most catch taken in RBY 1 and RBY 2. During this 21-year period, catch in RBY 5 has been as high as 1,410 kg, while catch in RBY 6 has not exceeded 100 kg (refer Table 2).

Trumpeter (TRU 6, TRU 9)

192. Trumpeter are found in shallow water down to around 200m depths. The species can grow to around 120cm in length and weigh around 25kg. This species is also found in other parts of the southern hemisphere. It is known to be targeted by recreational fishers, particularly in the South Island. The customary non-commercial take has not been quantified.

193. Since QMS introduction, annual nationwide commercial catch has ranged between 25 and 110 tonnes with most catch taken around the lower South Island (FMA 5) and Chatham Islands (FMA 4). During this 21-year period, catch in TRU 6 has not exceeded 10 kg while catch in TRU 9 has not exceeded 100 kg (refer Table 2).

White warehou (WWA 9)

194. White warehou are found in deeper waters between 150 and 800m depths with most commercial catch taken between 300 and 700m. The species reaches a maximum length of 67cm and a maximum weight of around 5.7kg. Recreational catch is likely to be negligible due to their depth profile and there is no quantitative information on the level of customary non-commercial take.

195. Since QMS introduction, nationwide commercial catch has ranged between 820 and 3,350 tonnes with most catch taken outside of WWA 9 on the Stewart/Snares Shelf and on the Chatham Rise. During this 21-year period catch in WWA 9 has only exceeded 100 kg on one occasion (refer Table 2).

Yellow-eyed mullet (YEM 5)

196. Yellow-eyed mullet are found in shallow water nationwide, including harbours, rivers and estuaries. The species reaches a maximum size of around 40cm. It is a popular recreational species throughout New Zealand. No quantitative information is available on the current level of customary non-commercial take.

197. Since QMS introduction, nationwide catch has ranged between 13 and 45 tonnes, with most catch taken outside of YEM 5 in the upper North Island. Catch in YEM 5 has become more common since 2013/14 but has still not exceeded 250 kg (refer Table 2).

1.2 State of the stocks

198. All stocks are referred to by Fisheries New Zealand as nominal stocks. This means that they:
- Are in areas outside the main range of a species and generally set up for administrative purposes;
- Have insignificant catch or catch allowance; and
- Have little or no potential to develop as either recreational, commercial, or customary fisheries

199. In these circumstances, catch is the best indicator of abundance. As shown in Table 2 below, there has been consistent and, in some cases, fluctuating catch since 1998/99 that warrants revision of the current zero TACC.

200. Although there is uncertainty on whether the current catch is sustainable, advice from Fisheries New Zealand's Fisheries Science team indicates it is unlikely there are any sustainability concerns given the low level of catch.

1.3 Best available information and associated uncertainty

Commercial reporting

201. Reported catch since QMS introduction in 1998/99 is summarised in Table 2.

Table 2: Catch reported on Quota Monitoring Reports / Monthly Harvest Returns since introduction into the QMS in 1998/99 (kg)

Fishing year	RBY 5	RBY 6	TRU 6	TRU 9	WWA 9	YEM 5
2018/19	158	1	2	57	19	160
2017/18	697	-	2	17	-	195
2016/17	3	-	1	75	-	245
2015/16	2	-	-	58	61	24
2014/15	7	6	-	65	-	75
2013/14	89	-	-	29	1	39
2012/13	100	22	6	10	-	-
2011/12	2	-	4	25	1	-
2010/11	921	-	9	11	-	-
2009/10	70	-	-	-	-	-
2008/09	-	20	1	8	5	-
2007/08	60	27	3	21	35	-
2006/07	-	-	1	37	-	4
2005/06	-	3	3	-	-	13
2004/05	1,027	21	-	-	-	186
2003/04	10	24	-	25	-	-
2002/03	833	35	-	12	11	-
2001/02	1,410	-	-	-	156	-
2000/01	-	51	-	26	-	-
1999/00	1	-	-	-	-	-
1998/99	12	-	-	-	-	-
Total	**5,402**	**210**	**32**	**476**	**289**	**941**

202. As noted, the TACC for the six stocks was set at zero when they were introduced into the QMS on the basis of reported catch prior to QMS introduction. The view expressed at the time was that with entry into the QMS, the landing information from the new fishstocks would improve and would result in opportunities to review TACs/TACCs and other management controls. The TAC and TACC of the six stocks in this discussion document have not been reviewed since QMS introduction in 1998.

203. As shown in Table 2, modest catches have been reported in each of the six stocks in the 21 years since then.

Customary reporting

204. There are no records of customary catch for any of the six stocks. However, it is likely there is some customary catch of the species that are commonly distributed in inshore waters, in particular YEM 5 and TRU 9.

Recreational survey information

205. The only stock for which information is available is YEM 5. Yellow-eyed mullet was recorded as being taken by recreational fishers in FMA 5 during the 2017/18 National Panel Survey of Marine Recreational Fishers. Estimates for recreational catch of YEM 5 are however highly uncertain as only one recreational fisher on the panel recorded this species. YEM 5 is commonly targeted by recreational fishers in estuaries and the lower reaches of several rivers in Southland.

2 Allowances for setting the TACC

2.1 Māori customary interests

206. Fisheries New Zealand proposes the customary Māori allowance for TRU 9 is increased to 1 tonne, on the basis that TRU 9 is commonly distributed in inshore waters and there is likely to be small amounts of customary catch. We also propose you retain the existing customary Māori allowance of 1 tonne for YEM 5 and the existing allowance of zero tonnes for the other four stocks. These four stocks (RBY 5, RBY 6, TRU 6, and WWA 9) have not been reported in the customary database. While incomplete, the available information indicates that there is no customary catch. This is consistent with the stocks being distributed further offshore and taken infrequently.

2.2 Recreational interests

207. Fisheries New Zealand proposes you set the recreational allowance for TRU 9 at 1 tonne and retain the existing recreational allowance of 1 tonne for YEM 5 and zero tonnes for the four other stocks. The rationale for these settings is consistent with that applied to the recommended customary Māori allowances. There is no recreational daily limit for this species in FMA 5.

2.3 All other mortality caused by fishing

208. Other sources of mortality caused by fishing is an allowance intended to provide for unrecorded mortality of fish associated with fishing activity, including incidental mortality from fishing methods, or illegal fishing.

209. Although advice provided to the Minister in 1998 recommended that this allowance be set at zero, an allowance for other sources of mortality caused by fishing was not explicitly set for any of the six stocks. Fisheries New Zealand recommends that you set the allowance for other sources of mortality caused by fishing at zero tonnes for each of the six stocks. Given the nominal TACs proposed for the six stocks, any allowance other than zero would be negligible

3 Options, submissions, and analysis

3.1 Summary of options

210. The options consulted on were the same as those presented in Table 1. No additional options have been incorporated following consultation.

3.2 Submissions

211. Four written submissions were received from:
- Fisheries Inshore New Zealand
- Southern Inshore Fisheries Management Company Limited
- Te Ohu Kaimoana
- Mike Currie

212. Fisheries Inshore New Zealand agreed that TACCs for the six stocks should be set above zero. The Southern Inshore Fisheries Management Company Limited noted it was appropriate that all stocks should have a TACC set above zero, but expressed disappointment that the consultation document did not extend to other stocks requiring review.

213. Te Ohu Kaimoana supported assessing management settings for selected stocks that currently have a zero TACC. However, they did not support the option proposed and suggested an alternative approach (refer section 3.7). Mike Currie supported, at a minimum, retaining the status quo.

214. Additionally, a request was received from a fisher relating to yellow-eyed mullet in the YEM 3 stock. This stock does not have zero tonne TACC (the current TACC is 8 tonnes) and therefore is considered to be outside the scope of this review.

215. The stock-specific comments in the Fisheries Inshore New Zealand and Southern Inshore Fisheries Management Company Limited submissions are summarised in Table 3.

Table 3: Summary of stock-specific comments in Fisheries Inshore New Zealand and Southern Inshore Fisheries Management Company submissions

Stock	Fisheries Inshore New Zealand	Southern Inshore Fisheries Management Company
RBY 5	Endorses Southern Inshore submission	Propose alternative option to set TACC at 2.5 tonnes
RBY 6	Support Option 1 in principle, noting absence of mandate to represent this stock	Southern Inshore did not comment on these stocks
TRU 6		
TRU 9	Support Option 1 to increase TACC to 2 tonnes	
WWA 9	Support Option 1 in principle, noting absence of mandate to represent this stock	
YEM 5	Endorse Southern Inshore submission	Support Option 1 to increase TACC to 1 tonne

3.3 Analysis

Setting the TAC (section 13 of the Act)

216. In cases such as these six stocks, where the current level of the stock is not able to be reliably estimated, section 13(2A) of the Act provides for you to use the best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the maximum sustainable yield.

217. The best available information suggests that increases in catch limits would be unlikely to result in a biomass reduction. Consequently, there is an opportunity to increase the TAC of the six stocks, whilst ensuring sustainability, in a manner that is not inconsistent with the objectives of section 13.

Input and participation of tangata whenua

218. Input and participation into the sustainability decision-making process is provided through Iwi Fisheries Forums, which have been established for that purpose. Each Iwi Fisheries Forum has developed an Iwi Fisheries Forum Plan that describes how the iwi in the Forum exercise kaitiakitanga over the fisheries of importance to them, and their objectives for the management of their interests in fisheries. Particular regard should be given to kaitiakitanga when making sustainability decisions.

219. The relevant Iwi Fisheries Forums to which these stocks relate are Te Hiku o Te Ika (Far North), the Mid North Forum, Nga Hapu o Te Uru o Tainui (Waikato/West Coast North Island) and Te Waka a Māui me Ōna Toka (South Island). The proposal to review a small number of October fishing year stocks with a zero tonne TACC was signalled at the November 2019 Iwi Fisheries Forum meetings. At the time of these meetings, however, the stocks for review had not been confirmed although forums were notified of consultation on these stocks, and their response to the proposals invited, when formal consultation commenced in December

220. Te Waka a Māui advised that it supported the proposal but queried how the customary catch allowance would be addressed, noting that customary catch may not be nominal in some cases. There were no detailed concerns raised or feedback provided by other forums including those held after November 2019.

Kaitiakitanga

221. The relevant Iwi Forum Fisheries Plans regard all species as taonga. While all Plans identify some species or stocks to be of particular importance or significance to tangata whenua, the six stocks under review are not explicitly identified in the relevant Iwi Forum Fisheries Plans.

222. Fisheries New Zealand considers the proposals presented in this decision document to be consistent with the management objectives of the relevant Iwi Forum Fisheries Plans as they relate to balancing use objectives with sustainability.

Environmental principles (section 9 of the Act)

223. All six stocks are outside the core areas of each species' distribution and the species, to date, have not been targeted within the area encompassed by the stocks. The proposed nominal TACCs are unlikely to result in any change to fishing activity or environmental interactions in those areas.

Sustainability measures (section 11 of the Act)

224. Section 11 of the Act sets out various matters that you must take into account or have regard to when setting or varying any sustainability measures (such as a TAC). These include any effects of fishing on the stock and the aquatic environment, and any relevant fisheries plan.

225. There are no factors in either the National Fisheries Plan for Deepwater and Middle-depth Fisheries 2019 or the draft National Inshore Finfish Fisheries Plan that have specific relevance to the six stocks. As noted above, the proposed nominal TACCs are unlikely to result in any change to fishing activity or environmental interactions in those areas.

3.4 RBY 5

226. The submission from the Southern Inshore Fisheries Management Company Limited proposed an alternative option that the TACC for RBY 5 should be set at 2.5 tonnes. They note that with increasing water temperatures, catch of rubyfish in southern areas would be expected to increase.

227. Fisheries New Zealand notes that the highest reported catch of RBY 5 to date occurred nearly 20 years ago and was just over 1,400 kg. There is no apparent trend of increased catch in this stock or the neighbouring RBY 6 stock. On this basis we are satisfied that the TACC of 2 tonnes proposed under Option 1 will be sufficient to provide for likely future catches.

3.5 RBY 6, TRU 6 and WWA 9

228. The submission from Fisheries Inshore New Zealand noted that they had no mandate to represent these stocks. However, they expressed the view that they saw no reason why the stocks should not be treated consistently with other stocks having a zero TACC that are subject to this review.

3.6 TRU 9

229. The submission from Fisheries Inshore New Zealand supported Option 1, to provide a nominal TACC of two tonnes. The submission also supported the assessment that the proposed TACC was unlikely to cause any sustainability concerns.

3.7 YEM 5

230. The submission from the Southern Inshore Fisheries Management Company Limited supported Option 1, to set a TACC of one tonne. The submission also notes that the set net closures introduced in 2008 have limited any potential increase in targeting of this species.

3.8 Alternative Approach

231. Te Ohu Kaimoana supported assessing management settings for selected stocks with a zero TACC. However, they suggest an alternative approach of setting deemed value rates for the six stocks at zero in order to more accurately assess the commercial catch before varying the TAC.

232. Fisheries New Zealand considers that such an approach is inconsistent with the purpose of the deemed values regime, as set out in the Deemed Value Guidelines. The Guidelines were reviewed in 2019 by the Deemed Values Working Group. The Working Group agreed a revised purpose statement that:

"The primary purpose of the deemed values regime is to provide incentives for individual fishers to acquire or maintain sufficient ACE to cover catch taken in the course of the year, while:

- *Allowing flexibility in the timing of balancing;*
- *Promoting efficiency; and*
- *Encouraging accurate catch reporting*

233. Under Te Ohu Kaimoana's alternative approach, the current situation of no ACE being available for the six stocks would continue. In combination with zero deemed value rates, this approach would not provide incentives for individual fishers to acquire or maintain sufficient ACE to cover catch.

234. Additionally, Te Ohu Kaimoana does not outline what time frame would be necessary to accurately assess commercial catch. Fisheries New Zealand considers it is appropriate to use the 21-year time series of catch in Table 2 as the basis for the proposed TAC/TACCs for the six stocks.

3.9 Other considerations

235. Te Ohu Kaimoana considers that setting TACCs for the six stocks above zero will trigger the requirement to pay cost recovery levies, and that this may create a net cost for Iwi holding quota in these fisheries.

236. Fisheries New Zealand can confirm that the recommended TACCs will not result in cost recovery levies being generated for any of the six stocks. Levies would only be generated if specific research projects or observer services applied to these stocks; for all six stocks there are no specific research projects or observer services planned.

237. The submission from Mike Currie states a preference for decreasing all recreational allowances in the interests of wildlife conservation and biodiversity sustainability. Only one of the six stocks, YEM 5, currently has a recreational allowance. Fisheries New Zealand does not favour decreasing the allowance for this stock, noting that yellow-eyed mullet is a popular recreational species in Southland.

4 Conclusion and recommendations

238. Fisheries New Zealand recommends that you agree to Option 1 for all stocks and set nominal TACs. Within the TAC, TACCs of one or two tonnes are recommended, together with one tonne customary Māori and recreational allowances for TRU 9. Fisheries New Zealand recommends that you set the allowance for other sources of mortality caused by fishing at zero tonnes for all six stocks.

239. Should you decide to retain the *status quo* TAC/TACC for any stock, Fisheries New Zealand recommends that you agree to explicitly set the allowance for other sources of mortality caused by fishing for that stock at zero tonnes.

240. Fisheries New Zealand considers the nominal TAC and TACCs proposed for the six stocks to be a pragmatic change in management settings that will provide for commercial fishers to balance catch with ACE. This in turn, will increase the incentive for fishers to report catch.

241. Fisheries New Zealand considers the proposed nominal TACCs are unlikely to result in any change to fishing activity or environmental interactions.

5 Decisions

RBY 5

Option 1 (recommended)

Agree to set the RBY 5 TAC at 2 tonnes and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing interests at 0 tonnes;

ii. Retain the allowance for recreational fishing interests at 0 tonnes;

iii. Set the allowance for all other sources of mortality to the stock caused by fishing at 0 tonnes;

iv. Increase the RBY 5 TACC from 0 to 2 tonnes.

Agreed / Not Agreed

OR

Agree to retain current settings except for the allowance for all other sources of mortality to the stock caused by fishing, and set this allowance at zero tonnes.

Agreed / Not Agreed

RBY 6

Option 1 (recommended)

Agree to set the RBY 6 TAC at 1 tonne and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing at 0 tonnes;

ii. Retain the allowance for recreational fishing interests at 0 tonnes;

iii. Set the allowance for all other sources of mortality to the stock caused by fishing at 0 tonnes;

iv. Increase the RBY 6 TACC from 0 to 1 tonne.

Agreed / Not Agreed

OR

Agree to retain current settings except for the allowance for all other sources of mortality to the stock caused by fishing, and set this allowance at zero tonnes.

Agreed / Not Agreed

TRU 6

Option 1 (recommended)

Agree to set the TRU 6 TAC at 1 tonne and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing at 0 tonnes;

ii. Retain the allowance for recreational fishing interests at 0 tonnes;

iii. Set the allowance for all other sources of mortality to the stock caused by fishing at 0 tonnes;

iv. Increase the TRU 6 TACC from 0 to 1 tonne.

Agreed / Not Agreed

OR

Agree to retain current settings except for the allowance for all other sources of mortality to the stock caused by fishing, and set this allowance at zero tonnes.

Agreed / Not Agreed

TRU 9

Option 1 (recommended)

Agree to set the TRU 9 TAC at 4 tonnes and within the TAC:

i. Increase the allowance for Māori customary non-commercial fishing from 0 to 1 tonne;
ii. Increase the allowance for recreational fishing interests from 0 to 1 tonne;
iii. Set the allowance for all other sources of mortality to the stock caused by fishing at 0 tonnes;
iv. Increase the TRU 9 TACC from 0 to 2 tonnes.

Agreed / Not Agreed

OR

Agree to retain current settings except for the allowance for all other sources of mortality to the stock caused by fishing, and set this allowance at zero tonnes.

Agreed / Not Agreed

WWA 9

Option 1 (recommended)

Agree to set the WWA 9 TAC at 1 tonne and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing at 0 tonnes;
ii. Retain the allowance for recreational fishing interests at 0 tonnes;
iii. Set the allowance for all other sources of mortality to the stock caused by fishing at 0 tonnes;
iv. Increase the WWA 9 TACC from 0 to 1 tonne.

Agreed / Not Agreed

OR

Agree to retain current settings except for the allowance for all other sources of mortality to the stock caused by fishing, and set this allowance at zero tonnes.

Agreed / Not Agreed

YEM 5

Option 1 (recommended)

Agree to set the YEM 5 TAC at 3 tonnes and within the TAC:

i. Retain the allowance for Māori customary non-commercial fishing at 1 tonne;
ii. Retain the allowance for recreational fishing interests at 1 tonne;
iii. Set the allowance for all other sources of mortality to the stock caused by fishing at 0 tonnes;
iv. Increase the YEM 5 TACC from 0 to 1 tonne.

Agreed / Not Agreed

OR

Agree to retain current settings except for the allowance for all other sources of mortality to the stock caused by fishing, and set this allowance at zero tonnes.

Agreed / Not Agreed

Hon Stuart Nash
Minister of Fisheries

7 / 03 / 2020

Review of interim deemed value rates

1 The deemed values regime

242. The Quota Management System (QMS) is the backbone of the New Zealand fisheries management regime, and includes a total of 642 fish stocks representing 98 species or species groups. Balancing catch against catching rights is key to ensuring the integrity of the QMS.

243. On the first day of each fishing year, all quota owners are allocated annual catch entitlements (ACE), based on their share of quota and the current total allowable commercial catch (TACC). Under the catch balancing regime, deemed values are charges that commercial fishers must pay for every unprocessed kilogram of QMS fish landed in excess of their ACE holdings ($/kg).

244. The purpose of the deemed values regime is to provide incentives for individual fishers to acquire or maintain sufficient ACE to cover catch taken over the course of the year, while allowing flexibility in the timing of balancing, promoting efficiency, and encouraging accurate catch reporting. The intent is to protect the long-term value of stocks and to support kaitiakitanga by providing an incentive for the total commercial catch for each QMS stock to remain within the available ACE. The effectiveness of this incentive is dependent on individual fishers' compliance with landing and reporting requirements, their responses to the incentives provided, and on the impact of other incentives such as those created by market conditions.

245. The deemed value regime does not create a standard deemed value rate, but a set of rates that apply under different circumstances.

246. The base rate is the annual deemed value which is charged at the end of each fishing year on catch in excess of ACE. Interim deemed value rates are charged each month to commercial fishers for catch in excess of ACE. If the fisher sources enough ACE to cover his or her catch, the interim rates paid are remitted. If the fisher does not source enough ACE by the end of each fishing year, the difference between the interim and annual deemed value rates is charged for all catch in excess of ACE.

2 Legal context

247. Section 75(1) of the Act requires you to set deemed value rates for all stocks managed under the QMS.

248. When setting deemed value rates, Section 75(2)(a) requires you to take into account the need to provide an incentive for every commercial fisher to acquire or maintain ACE that is not less than the fisher's total catch of each stock taken.

249. Section 75(2)(b) allows you, when setting deemed values, to have regard to:
    - The desirability of commercial fishers to land catch for which they do not have ACE;
    - The market value of ACE;
    - The market value of the stock;
    - The economic benefits obtained by the most efficient fisher, licensed fish receiver, retailer or any other person from the taking, processing or sale of the fish or any other fish commonly taken in association with the fish;
    - The extent to which the catch of that stock has exceeded or is likely to exceed the TACC for the stock in any year; and
    - Any other matters you consider relevant.

250. Section 75(3) requires you to set an annual deemed value rate for each stock that is greater than the interim deemed value rate set for that stock.

251. Further, under section 75(6), when setting either interim or annual deemed value rates, you must not:
    - Have regard to the personal circumstances of any individual or class of person liable to pay the deemed value of any fish, aquatic life, or seaweed; or
    - Set separate deemed value rates in individual cases.

3 Setting the interim deemed value rate at 90% of the annual rate

3.1 Rationale

252. Previous reviews of the deemed values regime have recommended that the use of interim deemed values should be phased out for two major reasons:
    a. Setting an interim deemed value rate lower than the annual rate may increase the incentive for fishers to delay balancing. Delays in balancing may lead to a 'race for ACE' at the end of the fishing year, thereby increasing the risk that fishers are unable to balance catch with ACE; and
    b. Lower interim deemed value rates, relative to the annual rate, introduce the risk that an operator may fish excessively on interim deemed values before entering liquidation once annual rates are due.

253. From 2012, the operational policy statement used to guide the development of advice on the setting of deemed value rates (Deemed Value Guidelines 2012) has recommended that interim deemed value rates should be set at 90% of the annual rate. However, the interim deemed value rates of 92 stocks managed under an April fishing year, and 362 stocks managed under an October fishing year (including 11 stocks with different Chatham Island deemed value rates) are currently set below the recommended 90%.

3.2 Proposed options

254. Although work has begun to remove the provision requiring interim deemed value rates through the Primary Industries Regulatory Systems Amendment Bill, to address the issues outlined above Fisheries New Zealand proposed that the interim deemed value rate of these 454 stocks be increased to 90% of the annual rate.

255. This approach was supported by the Deemed Values Working Group, which conducted a review of the deemed values regime in 2019.

256. The current, and proposed, interim deemed value rates are provided within the Appendix. For stocks managed under an April fishing year, decisions to increase interim deemed value rates would come into effect from 1 April 2020. For stocks managed under an October fishing year, decisions to increase interim deemed value rates would come into effect from 1 October 2020.

257. No changes were proposed to the annual deemed value rate, or differential schedule of any stock.

4 Treaty of Waitangi obligations

258. Input and participation into the sustainability decision-making process is provided through Iwi Fisheries Forums, which have been established for that purpose. Each Iwi Fisheries Forum has developed an Iwi Fisheries Forum Plan that describes how the iwi in the Forum exercise kaitiakitanga over the fisheries of importance to them, and their objectives for the management of their interests in fisheries. Particular regard will be given to Iwi Fisheries Forum Plans and the concept of kaitiakitanga when making sustainability decisions.

259. Iwi Fisheries Forums may also be used as entities to consult iwi with an interest in fisheries.

260. The proposal to increase interim deemed value rates to 90% of the annual rate was discussed at the Mai i nga Kuri a Wharei ki Tihirau Iwi Fisheries Forum (Bay of Plenty), the Te Tau Hauāuru Iwi Forum (FMA 8) and the Te Waka a Māui me Ōna Toka Iwi Forum (South Island). No feedback specific to the proposed interim deemed value rate adjustments were received.

261. The proposal to increase the interim deemed value rates of all stocks to the recommended 90% of the annual rate was supported by the Deemed Values Working Group. Iwi were represented on the Working Group by Te Ohu Kaimoana and an independent iwi representative.

5 Submissions and analysis

262. Before setting any interim or annual deemed value rate, section 75(A) of the Act requires you to, if practicable, consult with tangata whenua and stakeholders. Fisheries New Zealand sought input on the proposed adjustments to interim deemed value rates during the formal consultation process between December 2019 and February 2020.

5.1 Summary of submissions

263. Six submissions were received relating to the proposed interim deemed value rate adjustments or the deemed values regime.

264. A member of the general public, Mike Currie, supported the proposed interim deemed value rate adjustments in the interests of wildlife conservation and biodiversity sustainability.

265. Commercial fisher Joseph Dragicevich commented that the market value of freshwater eel stocks LFE 20 and SFE 20 was below the proposed interim deemed value rate.

266. Fisheries Inshore New Zealand supported the proposed interim deemed value rate adjustments and welcomed the public release of the full recommendations of the Deemed Values Working Group in due course.

267. Whilst neither supporting nor opposing the proposed interim deemed value rate adjustments, commercial fisher Herb Sandy requested that the limit for the non-payment of deemed values at which an operator's fishing permit is suspended be increased from $1,000 to $5,000.

268. Whilst not opposing the proposed adjustments, the Southern Inshore Fisheries Management Company would have preferred Fisheries New Zealand to use available resources to review the TACCs of a number of inshore stocks. Southern Inshore also expressed concern at the punitive nature of the current deemed values regime and the need for deemed value rates to be considered alongside the other management settings of the stock (e.g. TACCs).

269. Te Ohu Kaimoana supported the proposed interim deemed value rate adjustments, noting that this is a first step in implementing the recommendations of the Deemed Values Working Group.

5.2 Fisheries New Zealand's response

270. Regarding the interim deemed value rates of LFE 20 and SFE 20, Fisheries New Zealand notes that the proposed interim deemed value rates are greater than the respective 2019/20 port prices of these stocks. However, setting the deemed value rates in excess of the landed price is appropriate for these stocks given the ability of fishers to control their catch[10] and the importance of the stocks to non-commercial users.

[10] Long-finned and short-finned eel are not taken as bycatch in any fishery and live eels can be returned to the water under the sixth schedule.

271. Proposals to increase the threshold for the non-payment of deemed values at which an operator's fishing permit is suspended are outside the scope of what was consulted on. Such an increase would incentivise fishers to delay the sourcing of ACE. As delays in balancing can result in sustainability concerns, Fisheries New Zealand does not consider it appropriate to increase the threshold for the non-payment of deemed values at which an operator's fishing permit is suspended.

272. The Deemed Values Working Group recommended the need for an integrated approach to reviewing deemed value rates that considers the other management settings of the stock. Fisheries New Zealand acknowledges that the proposed interim deemed value rate adjustments are a first step in implementing these recommendations, and has committed to implementing the other recommendations. Fisheries New Zealand intends to publicly release the recommendations of the Working Group in advance of the October 2020 sustainability round consultation period.

6 Conclusion and recommendations

273. Fisheries New Zealand recommends that you approve changes to the interim deemed value rates of 454 stocks as outlined in the Appendix. No input or feedback received during consultation suggests that Fisheries New Zealand's initial proposals should change, hence these recommendations are the same as those consulted on.

7 Decision

Agree to change the interim deemed value rates for 454 stocks as outlined in the Appendix.

Agreed / Not Agreed

Hon Stuart Nash
Minister of Fisheries

07 / 03 / 2020

Appendix 1 – Current, and recommended, interim deemed value rates

Table 1 provides the current, and recommended, interim deemed value rates for stocks managed under a fishing year beginning 1 April. Table 2 provides the current, and recommended, interim deemed values rates for stocks managed under a fishing year beginning 1 October. Table 3 sets out the current, and recommended, interim deemed value rates for stocks managed under a fishing year beginning 1 October for which different deemed value rates apply to fish landed to the Chatham Islands.

Table 1: Current, and recommended, interim deemed value rates ($/kg) for selected stocks from 1 April 2020

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
Frilled venus shell	BYA 1	0.21	0.38
	BYA 2	0.21	0.38
	BYA 3	0.21	0.38
	BYA 4	0.21	0.38
	BYA 5	0.21	0.38
	BYA 7	0.21	0.38
	BYA 8	0.21	0.38
	BYA 9	0.21	0.38
Spiny (red) rock lobster	CRA 10	40.00	72.00
Ringed dosinia	DAN 1	0.21	0.38
	DAN 2	0.21	0.38
	DAN 3	0.21	0.38
	DAN 4	0.21	0.38
	DAN 5	0.21	0.38
	DAN 7	0.21	0.38
	DAN 8	0.21	0.38
	DAN 9	0.21	0.38
Silky dosinia	DSU 1	0.21	0.38
	DSU 2	0.21	0.38
	DSU 3	0.21	0.38
	DSU 4	0.21	0.38
	DSU 5	0.21	0.38
	DSU 7	0.21	0.38
	DSU 8	0.21	0.38
	DSU 9	0.21	0.38
Horse mussel	HOR 1	0.06	0.11
	HOR 10	0.06	0.11
	HOR 2	0.06	0.11
	HOR 3	0.06	0.11
	HOR 4	0.06	0.11
	HOR 5	0.06	0.11
	HOR 6	0.06	0.11
	HOR 7	0.06	0.11
	HOR 8	0.06	0.11
	HOR 9	0.06	0.11
Trough shell	MDI 1	0.78	1.40
	MDI 2	0.78	1.40
	MDI 3	0.78	1.40
	MDI 4	0.78	1.40
	MDI 5	0.78	1.40
	MDI 7	0.78	1.40
	MDI 8	0.78	1.40
	MDI 9	0.78	1.40
Large trough shell	MMI 1	0.96	1.73

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
	MMI 2	0.96	1.73
	MMI 3	0.96	1.73
	MMI 4	0.96	1.73
	MMI 5	0.96	1.73
	MMI 7	0.96	1.73
	MMI 8	0.96	1.73
	MMI 9	0.96	1.73
Deepwater tuatua	PDO 1	0.72	1.30
	PDO 2	0.72	1.30
	PDO 3	0.72	1.30
	PDO 4	0.72	1.30
	PDO 5	0.72	1.30
	PDO 8	0.72	1.30
	PDO 9	0.72	1.30
Triangle shell	SAE 1	0.51	0.92
	SAE 2	0.51	0.92
	SAE 3	0.51	0.92
	SAE 4	0.51	0.92
	SAE 5	0.51	0.92
	SAE 8	0.51	0.92
	SAE 9	0.51	0.92
Scallop	SCA 1	14.00	25.20
	SCA 1A	3.50	6.30
	SCA 2A	3.50	6.30
	SCA 3	3.50	6.30
	SCA 4[11]	14.00	25.20
	SCA 5	3.50	6.30
	SCA 7	14.00	25.20
	SCA 7A	3.50	6.30
	SCA 7B	3.50	6.30
	SCA 7C	3.50	6.30
	SCA 8A	3.50	6.30
	SCA 9A	3.50	6.30
	SCA CS	18.50	33.30
Sea cucumber	SCC 10	20.00	36.00
	SCC 1A	20.00	36.00
	SCC 1B	20.00	36.00
	SCC 2A	20.00	36.00
	SCC 2B	20.00	36.00
	SCC 4	20.00	36.00
	SCC 5A	20.00	36.00
	SCC 5B	20.00	36.00
	SCC 6	20.00	36.00
	SCC 7A	20.00	36.00
	SCC 7B	20.00	36.00
	SCC 7D	20.00	36.00
	SCC 8	20.00	36.00
	SCC 9	20.00	36.00

[11] Deemed value rates only applicable to landings received by licenced fish receivers on the Chatham Islands

Table 2: Current, and recommended, interim deemed value rates ($/kg) for selected stocks from 1 October 2020

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
Anchovy	ANC1	0.03	0.05
	ANC10	0.03	0.05
	ANC2	0.03	0.05
	ANC3	0.03	0.05
	ANC4	0.03	0.05
	ANC7	0.03	0.05
	ANC8	0.03	0.05
Barracouta	BAR1	0.12	0.23
	BAR10	0.12	0.23
	BAR4	0.12	0.23
	BAR5	0.12	0.23
	BAR7	0.12	0.22
Blue cod	BCO1	0.67	1.21
	BCO10	0.90	1.61
	BCO2	0.90	1.61
	BCO4	2.50	3.38
	BCO5	1.88	3.38
	BCO7	0.67	1.21
	BCO8	0.96	1.72
Bigeye tuna	BIG1	7.57	13.63
Bluenose	BNS10	1.50	2.70
Butterfish	BUT1	1.15	2.06
	BUT10	1.15	2.06
	BUT2	1.15	2.06
	BUT3	1.15	2.06
	BUT4	1.15	2.06
	BUT5	1.15	2.06
	BUT6	1.15	2.06
	BUT7	1.15	2.06
Blue shark	BWS1	0.08	0.14
Black cardinal fish	CDL1	0.15	0.27
	CDL10	0.15	0.27
	CDL2	0.30	0.54
	CDL3	0.26	0.47
	CDL4	0.26	0.47
	CDL6	0.15	0.27
	CDL7	0.15	0.27
	CDL8	0.15	0.27
	CDL9	0.15	0.27
Cockle	COC1A	1.00	1.80
	COC1B	1.90	3.42
	COC1C	1.90	3.42
	COC2	1.90	3.42
	COC3	0.50	0.90
	COC3B	1.90	3.42
	COC4	1.90	3.42
	COC5	1.90	3.42
	COC7A	0.50	0.90
	COC7B	0.50	0.90
	COC7C	1.90	3.42
	COC8	1.90	3.42
	COC9	1.90	3.42
Elephant fish	ELE10	0.84	1.50

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
Blue (English) mackerel	EMA1	0.13	0.23
	EMA10	0.13	0.23
	EMA2	0.13	0.23
	EMA3	0.13	0.23
	EMA7	0.13	0.23
Flatfish	FLA10	0.75	1.35
	FLA2	0.68	1.22
	FLA3	1.50	2.70
	FLA7	1.03	1.85
Frostfish	FRO1	0.02	0.03
	FRO10	0.13	0.23
	FRO2	0.13	0.23
	FRO3	0.17	0.31
	FRO5	0.08	0.14
	FRO6	0.08	0.14
	FRO7	0.08	0.14
Garfish	GAR1	0.90	1.62
	GAR10	0.90	1.62
	GAR2	0.90	1.62
	GAR3	0.90	1.62
	GAR4	0.90	1.62
	GAR7	0.90	1.62
	GAR8	0.90	1.62
Green-lipped mussels	GLM1	0.06	0.11
	GLM10	0.06	0.11
	GLM2	0.06	0.11
	GLM3	0.06	0.11
	GLM7A	0.06	0.11
	GLM7B	0.06	0.11
	GLM8	0.06	0.11
Grey mullet	GMU10	0.61	1.09
	GMU2	0.61	1.09
	GMU3	0.61	1.09
	GMU7	0.61	1.09
Pale ghost shark	GSP1	0.08	0.14
	GSP5	0.08	0.14
	GSP7	0.17	0.31
Gurnard	GUR1	0.85	1.53
	GUR10	0.62	1.12
	GUR2	0.85	1.53
	GUR8	0.85	1.53
Hake	HAK1	0.80	1.44
	HAK10	0.59	1.05
	HAK4	0.80	1.44
	HAK7	0.80	1.44
Hoki	HOK1	0.45	0.81
	HOK10	0.45	0.81
Hapuku & Bass	HPB1	1.48	2.66
	HPB10	1.48	2.66
	HPB2	1.26	2.27
	HPB3	2.30	3.15
	HPB4	0.90	1.62
	HPB5	0.90	1.62
	HPB7	1.42	2.55

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
	HPB8	1.09	1.96
John dory	JDO10	2.62	4.73
	JDO2	2.62	4.73
	JDO3	0.47	0.85
Jack mackerel	JMA1	0.12	0.22
	JMA10	0.08	0.14
Kahawai	KAH1	0.33	0.59
	KAH10	0.33	0.59
	KAH2	0.31	0.55
	KAH3	0.31	0.55
	KAH4	0.31	0.55
Bladder kelp	KBB3G	2.00	3.60
	KBB4G	2.00	3.60
Kingfish	KIN10	4.45	8.00
Knobbed whelk	KWH1	0.30	0.54
	KWH2	0.30	0.54
	KWH3	0.30	0.54
	KWH4	0.30	0.54
	KWH5	0.30	0.54
	KWH6	0.30	0.54
	KWH7A	0.30	0.54
	KWH7B	0.30	0.54
	KWH8	0.30	0.54
	KWH9	0.30	0.54
Lookdown dory	LDO10	0.21	0.38
	LDO3	0.21	0.38
Leatherjacket	LEA10	0.12	0.21
Long-finned freshwater eel	LFE20	4.00	7.20
	LFE21	4.00	7.20
	LFE22	4.00	7.20
	LFE23	4.00	7.20
Ling	LIN1	1.20	2.14
	LIN10	0.85	1.52
	LIN2	1.20	2.14
	LIN3	1.20	2.14
	LIN4	1.20	2.14
	LIN5	1.20	2.14
	LIN6	1.20	2.14
Mako shark	MAK1	0.08	0.14
Moonfish	MOO1	0.25	0.45
Oreo	OEO1	0.39	0.70
	OEO10	0.39	0.70
	OEO3A	0.38	0.68
	OEO6	0.39	0.70
Orange roughy	ORH1	1.70	3.06
	ORH10	2.50	4.50
	ORH2A	2.50	4.50
	ORH2B	2.50	4.50
	ORH3A	2.50	4.50
	ORH3B	2.50	4.50
	ORH7A	2.50	4.50
	ORH7B	1.60	2.88
Dredge oysters	OYS1	4.00	7.20
	OYS2A	4.00	7.20

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
	OYS3	4.00	7.20
	OYS4	4.00	7.20
	OYS5A	4.00	7.20
	OYS7	4.00	7.20
	OYS7A	4.00	7.20
	OYS7B	4.00	7.20
	OYS7C	4.00	7.20
	OYS8A	4.00	7.20
	OYS9	4.00	7.20
	OYU5[12]	0.30	0.54
Paddle crab	PAD1	1.05	1.89
	PAD10	1.05	1.89
	PAD2	0.45	0.81
	PAD3	0.45	0.81
	PAD4	0.45	0.81
	PAD5	0.45	0.81
	PAD6	0.45	0.81
	PAD7	0.45	0.81
	PAD8	0.45	0.81
	PAD9	0.45	0.81
Parore	PAR1	0.17	0.31
	PAR10	0.17	0.31
	PAR2	0.17	0.31
	PAR9	0.17	0.31
Paua	PAU1	50.00	59.40
	PAU10	50.00	59.40
	PAU2	50.00	59.40
	PAU3	50.00	59.40
	PAU4	50.00	59.40
	PAU5A	50.00	59.40
	PAU5B	50.00	59.40
	PAU5D	50.00	59.40
	PAU6	50.00	59.40
	PAU6A	30.00	54.00
	PAU7	50.00	59.40
Pilchard	PIL1	0.30	0.54
	PIL10	0.30	0.54
	PIL2	0.30	0.54
	PIL3	0.30	0.54
	PIL4	0.30	0.54
	PIL7	0.30	0.41
	PIL8	0.30	0.41
Porbeagle shark	POS1	0.08	0.14
Pipi	PPI1A	1.10	1.98
	PPI1B	1.10	1.98
	PPI1C	1.10	1.98
	PPI2	1.10	1.98
	PPI3	1.10	1.98
	PPI4	1.10	1.98
	PPI5	1.10	1.98
	PPI7	1.10	1.98
	PPI8	1.10	1.98

[12] Deemed values for OYU 5 are invoiced per oyster rather than per kilo.

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
	PPI9	1.10	1.98
Prawn killer	PRK1	0.10	0.18
	PRK10	0.10	0.18
	PRK2	0.10	0.18
	PRK3	0.10	0.18
	PRK4A	0.10	0.18
	PRK5	0.10	0.18
	PRK6A	0.10	0.18
	PRK6B	0.10	0.18
	PRK7	0.10	0.18
	PRK8	0.10	0.18
	PRK9	0.10	0.18
Deepwater clam (geoduck)	PZL1	10.00	18.00
	PZL2	10.00	18.00
	PZL3	10.00	18.00
	PZL4	10.00	18.00
	PZL5	10.00	18.00
	PZL7	10.00	18.00
	PZL8	10.00	18.00
	PZL9	10.00	18.00
Queen scallop	QSC3	1.70	3.06
Ray's bream	RBM1	0.09	0.16
Redbait	RBT1	0.25	0.45
	RBT10	0.25	0.45
	RBT7	0.25	0.45
Rubyfish	RBY10	0.11	0.19
Red cod	RCO1	0.14	0.25
	RCO10	0.14	0.25
	RCO3	0.25	0.45
	RCO7	0.25	0.44
Ribaldo	RIB1	0.15	0.27
	RIB10	0.15	0.27
	RIB2	0.15	0.27
	RIB3	0.15	0.27
	RIB5	0.15	0.27
	RIB6	0.40	0.72
	RIB9	0.15	0.27
Rough skate	RSK10	0.15	0.27
Red snapper	RSN1	2.05	3.68
	RSN10	2.05	3.68
School shark	SCH1	0.99	1.78
	SCH10	0.99	1.78
	SCH2	0.88	1.58
	SCH4	0.53	0.95
	SCH5	0.63	1.13
	SCH7	0.87	1.56
	SCH8	0.88	1.58
Scampi	SCI1	25.65	46.17
	SCI10	25.65	46.17
	SCI2	25.65	46.17
	SCI3	25.65	46.17
	SCI4A	25.65	46.17
	SCI5	25.65	46.17
	SCI6A	25.65	46.17

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
	SCI6B	25.65	46.17
	SCI7	25.65	46.17
	SCI8	25.65	46.17
	SCI9	25.65	46.17
Short-finned freshwater eel	SFE20	4.00	7.20
	SFE21	4.00	7.20
	SFE22	4.00	7.20
	SFE23	4.00	7.20
Gemfish	SKI1	0.75	1.35
	SKI10	0.75	1.35
	SKI2	0.75	1.35
Spiny dogfish	SPD1	0.05	0.09
	SPD10	0.05	0.09
	SPD3	0.05	0.09
	SPD4	0.05	0.09
	SPD5	0.05	0.09
	SPD7	0.05	0.09
	SPD8	0.05	0.09
Sea perch	SPE10	0.23	0.41
Rig	SPO1	0.85	1.53
	SPO10	1.35	2.43
	SPO3	0.85	1.53
	SPO8	0.85	1.53
Sprat	SPR1	0.03	0.05
	SPR10	0.03	0.05
	SPR3	0.03	0.05
	SPR4	0.03	0.05
	SPR7	0.03	0.05
Squid	SQU10T	0.44	0.79
	SQU1J	0.44	0.79
	SQU1T	0.44	0.79
	SQU6T	0.44	0.79
Smooth skate	SSK10	0.15	0.27
Stargazer	STA10	0.34	0.61
Southern bluefin tuna	STN1	23.46	42.23
Kina	SUR10	0.85	1.53
	SUR1A	0.85	1.53
	SUR1B	0.85	1.53
	SUR2A	0.85	1.53
	SUR2B	0.85	1.53
	SUR3	0.97	1.75
	SUR4	0.97	1.75
	SUR5	0.97	1.75
	SUR7A	0.97	1.75
	SUR7B	0.97	1.75
	SUR8	0.85	1.53
	SUR9	0.85	1.53
Silver warehou	SWA1	0.50	1.10
	SWA10	0.50	1.10
Swordfish	SWO1	1.50	2.70
Tarakihi	TAR10	1.50	2.70
	TAR5	0.42	0.75
Pacific bluefin tuna	TOR1	13.88	24.98
Trevally	TRE10	0.55	0.99

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
	TRE3	0.29	0.51
	TRE7	0.39	0.69
	TUA1A	1.25	2.25
	TUA1B	1.25	2.25
	TUA2	1.25	2.25
	TUA3	1.25	2.25
Tuatua	TUA4	1.25	2.25
	TUA5	1.25	2.25
	TUA7	1.25	2.25
	TUA8	1.25	2.25
	TUA9	1.25	2.25
	WAR1	0.38	0.68
	WAR10	0.55	0.98
Blue warehou	WAR2	0.55	0.98
	WAR3	0.45	0.81
	WAR7	0.45	0.81
	WAR8	0.55	0.98
	WWA1	0.27	0.49
	WWA10	0.27	0.49
	WWA2	0.27	0.49
	WWA3	0.52	0.93
White warehou	WWA4	0.52	0.93
	WWA5B	0.52	0.93
	WWA7	0.52	0.93
	WWA8	0.27	0.49
	WWA9	0.27	0.49
	YEM1	0.17	0.30
	YEM10	0.17	0.30
	YEM2	0.17	0.30
	YEM3	0.17	0.30
Yellow-eyed mullet	YEM4	0.17	0.30
	YEM5	0.17	0.30
	YEM6	0.17	0.30
	YEM7	0.17	0.30
	YEM8	0.17	0.30
	YEM9	0.17	0.30
Yellowfin tuna	YFN1	3.37	6.07

Table 3: Current, and recommended, interim deemed value rates ($/kg) for selected stocks for which different deemed value rates apply to fish landed to licenced fish receivers based on the Chatham Islands (from 1 October 2020)

Species	Stock	Current interim deemed value rate	Recommended interim deemed value rate
Blue cod	BCO 4	1.50	2.70
Butterfish	BUT 4	0.66	1.18
Flatfish	FLA 3	0.38	0.68
Gurnard	GUR 3	0.30	0.54
Hapuka & bass	HPB 4	0.66	1.18
Long-finned freshwater eel	LFE 17	2.00	3.60
Ling	LIN 4	0.56	1.01
School shark	SCH 4	0.40	0.72
Short-finned freshwater eel	SFE 17	2.00	3.60
Kina	SUR 4	0.80	1.44
Tarakihi	TAR 4	0.53	0.75

Appendix 2 – Submissions received on the Discussion Document

See attached document.