



Review of Sustainability Controls for 1 April 2016

**Proposals to Alter Total Allowable Catch, Allowances,
Total Allowable Commercial Catch and Deemed Value
Rates for Selected Fishstocks**

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1 Introduction

The Ministry for Primary Industries (MPI) has consulted on proposals to amend the Total Allowable Catch (TAC), allowances and Total Allowable Commercial Catch (TACC) for five fish stocks, and amend the deemed value rates for an additional three fish stocks.

This Decision Document provides you with MPI's final advice on these proposals. It has been divided into two three parts:

- Part A provides advice relating to five inshore stocks (SCACS, surf clams – PDO7, SAE7, MMI7, DAN7); and
- Part B provides advice on the proposed amendments to deemed value rates.

Each Part comprises specific discussions of each stock including the relevant background information, specific legal considerations, a summary of submissions, and analysis of the proposed management options, including MPI's recommendations.

The full submissions that MPI received on the relevant proposals are contained within Appendix II.

2 Statutory Considerations

This section provides an overview of your legal obligations under the Fisheries Act 1996 (the Act) that relate to the decisions requested for the 1 April 2016 fishing year.

Stock specific details relating to these obligations are further provided within the relevant decision document.

2.1 SECTION 5(A) - INTERNATIONAL OBLIGATIONS

Section 5 says the Act is to be interpreted, and all persons exercising or performing functions, duties, or powers under it are required to act, in a manner consistent with:

- a) New Zealand's international obligations relating to fishing. As a general principle, where there is a choice in the interpretation of the Act or the exercise of discretion, the decision maker must choose the option that is consistent with New Zealand's international obligations relating to fishing.
- b) the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5(b)). This requirement furthers the agreements expressed in the Deed of Settlement referred to in the Preamble to the Settlement Act. In particular, Māori non-commercial fishing rights continue to give rise to Treaty obligations on the Crown.

2.2 SECTION 8 – PURPOSE OF THE FISHERIES ACT 1996

The purpose of the Act is to provide for the utilisation of fisheries resources while ensuring sustainability.

The purpose statement incorporates “the two competing social policies reflected in the Act”¹. “Ensuring sustainability” is defined as: “maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment”. “Utilisation” of fisheries resources is defined as “conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural wellbeing.”

¹ New Zealand Recreational Fishing Council Inc v Sanford Limited and Ors [2009] NZSC 54, at para 39.

The Supreme Court stated that “both policies are to be accommodated as far as is practicable in the administration of fisheries under the quota management system ... [I]n the attribution of due weight to each policy that given to utilisation must not be such as to jeopardise sustainability”.²

Utilisation may be provided for at different levels, and the extent of such use should be considered on a case-by-case basis. Where there is a significant threat to the sustainability of a fish stock, the measures adopted to achieve sustainability are likely to be more stringent than where there is a lesser threat.

2.3 SECTION 9 – ENVIRONMENTAL PRINCIPLES

The Act prescribes three environmental principles that you must take into account when exercising powers in relation to utilising fisheries resources and ensuring sustainability:

- 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.

2.4 SECTION 10 – INFORMATION PRINCIPLES

Section 10 of the Act requires that you take the following information principles into account:

- a) Decisions should be based on the best available information;
- b) Decision makers should take into account any uncertainty in the available information;
- c) Decision makers should be cautious when information is uncertain, unreliable, or inadequate; and
- 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 the Act.

Both scientific and anecdotal information need to be considered and weighed accordingly when making management decisions. The weighting assigned to particular information is subject to the certainty, reliability, and adequacy of that information.

As a general principle, information on stock status outlined in the MPI Fishery Assessment Plenary Report is considered the best available information and should be given significant weighting. The information presented in the Plenary Report is subject to a robust process of scientific peer review and is assessed against the Research and Science Information Standard for New Zealand Fisheries. Corroborated anecdotal information also has a useful role to play in the stock assessment process and in the management process.

2.5 SECTION 11 – SUSTAINABILITY MEASURES

Section 11 (1) requires that the following factors must be taken in account before setting or varying a TAC:

- a) Any effects of fishing on the stock and the aquatic environment
- b) Any existing controls that apply to the stock or area concerned
- c) The natural variability of the stock concerned.

Section 11 (2) requires you to have regards to the provision of:

- a) Any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991.

² Ibid.

- b) Any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and which the Minister considers to be relevant
- c) Sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000
 - (ca) regulations made under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012; and
- d) a planning document lodged with the Minister of Fisheries by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011.

Section 11 (2A) requires you to take into account:

- a) Any conservation services or fisheries services
- b) Any relevant fisheries plan approved under this Part
- c) Any decisions not to require conservation services or fisheries services.

Services of particular relevance to the decisions in this paper relate to programmed research used to monitor stock abundance.

2.6 SECTION 12 – CONSULTATION

Before setting or varying any sustainability measure under the Act you are required to consult with those classes of persons having an interest in the stock or the effects of fishing on the aquatic environment in the area concerned, including, but not limited to, Māori, environmental, commercial and recreational interest.

MPI consulted on your behalf on proposals to amend TACs, allowances and TACCs for a number of stocks for the 1 April 2016 fishing year. MPI followed its standard consultation process of posting Consultation Documents on the MPI website and alerting stakeholders to this and concurrent fisheries consultations through a letter sent to approximately 500 companies, organisations and individuals. The consultation period ran from 14 January to 11 February 2016.

You are also required to provide for the input and participation of tangata whenua having a non-commercial interest in the stock concerned or an interest in the effects of fishing on the aquatic environment in the area concerned; and have particular regard to kaitiakitanga. This requirement reflects the provisions of the Settlement Act, and the Crown’s commitment to its Treaty partner.

Various Fisheries Plans discussed below aid MPI in understanding the meaning of Kaitiakitanga in order to provide you with advice that is consistent with this obligation.

2.7 SECTION 13 – SETTING A TOTAL ALLOWABLE CATCH

The Act contains a number of specific provisions to ensure a stock is managed sustainably. A key measure is the setting of a TAC for a Quota Management System (QMS) stock.

The TAC is set and varied under section 13 for all stocks with amendments proposed for April 2016. Under s 13 there is a requirement to maintain the biomass of a fishstock at or above a level that can produce the maximum sustainable yield (MSY), having regard to the interdependence of stocks.

MSY is defined, in relation to any fish stock, as being the greatest yield that can be achieved over time while maintaining the stock’s productive capacity, having regard to the population dynamics of the stock and any environmental factors that influence the stock.

Where a stock is assessed to be above the target stock level, section 13(2)(a) of the Act requires a TAC to be set that maintains the stock at or above that level.

Section 13(2)(b) enables the level of any stock whose current level is below that which can produce MSY to be altered in a way and at a rate that will result in the stock being restored to or above a level that can produce MSY.

Section 13(2)(c) enables the level of any stock whose current level is above that which can produce MSY to be altered in a way and at a rate that will result in the stock moving towards or above that level.

If the current status of the stock or the level of a stock that can produce the MSY is not able to be estimated reliably using the best available information, section 13(2A) says the Minister must:

- Not use the absence of or uncertainty in information as a reason for postponing, or failing to set a TAC for the stock,
- Have regard to the interdependence of stocks and the biological characteristics of the stock and any environmental conditions affecting the stock; and
- Set a TAC using best available information that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level which can produce the MSY.

In considering the way in which and rate at which a stock is moved towards or above a level that can produce MSY, you shall have regard to such social, cultural and economic factors you consider relevant.

In considering the way in which and rate at which a stock is moved towards or above a level that can produce maximum sustainable yield you may have regard to such social, cultural, and economic factors as you consider relevant.

The obligation to have regard to the interdependence of stocks when setting a TAC requires consideration of the effects of fishing on associated stocks harvested with the target stock, and the role of the target stock in the food chain. In particular, interdependence could involve a direct trophic (i.e. one stock is likely to be directly affected through a predator or prey relationship by the abundance of another stock) or symbiotic (i.e. a close and often long-term interaction between two or more different biological species) relationship between stocks.

2.8 SECTIONS 20 & 21 – ALLOCATING THE TAC

After setting the TAC, a separate decision arises in respect of allocating the TAC. Section 21 of the Act states that in setting or varying the Total Allowable Commercial Catch, you must have regard to the TAC and allow for:

- a) Māori customary non-commercial fishing interests;
- b) Recreational interests; and
- c) All other mortality to that stock caused by fishing.

The customary fishing regulations (Fisheries (South Island Customary Fishing) Regulations 1999 and the Fisheries (Kaimoana Customary Fishing) Regulations 1998) do not provide for the Crown to place limitations on customary fishing, apart from ensuring the sustainability of a particular stock. Customary harvest is also managed under the Fisheries (Amateur Fishing) Regulations 2013.

When allowing for Māori customary non-commercial interests, you must take into account:

- a) Any mātaihai reserve in the relevant quota management area; and
- b) Any temporary area closure or temporary fishing method restriction or prohibition imposed in the area for the purposes of improving the availability of size of a species for customary fishing purposes or recognising a customary fishing practice in the area.

When allowing for recreational interests, you must take into account regulations that prohibit or restrict fishing in any area closed to commercial fishing to recognise recreational fishing interests. These recreational-only areas are able to be created under section 311 following the exercise of a formal dispute resolution process, which is set out in the Act, between recreational and commercial fishing interests. No recreational-only areas have been created under this process.

An allowance is to be made for all other mortality to a stock that results from fishing by all fishing interests. This includes illegal catch, discards, and incidental mortality from fishing gear.

In terms of the TACC, the Act states that it can be set at zero (section 20). This would occur in situations where the TAC was set at zero for sustainability reasons (i.e. the fishery was closed) or allocative reasons (i.e. the species was recognised as non-commercial only).

There is also a requirement to have particular regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act when making decisions under s 21 of the Fisheries Act. Section 7 of the Hauraki Gulf Marine Park Act requires recognition of the national significance of the Hauraki Gulf, and section 8 sets out objectives for the management of the Hauraki Gulf and its islands and catchments. This is relevant with respect to your decisions on Coromandel Scallops and is discussed in further detail in section 4.5 of that chapter below.

2.9 SECTION 75 – DEEMED VALUE RATES

Section 75 of the Act requires that you set deemed value rates for every stock in the QMS which will provide an incentive for every commercial fisher to acquire or maintain sufficient ACE throughout the fishing year. When setting deemed value rates you may have regard to a number of factors including:

- i) The desirability of commercial fishers' landing catch for which they do not have ACE; and
- ii) The market value of the annual catch entitlement for the stock; and
- iii) The market value of the stock; and
- iv) The economic benefits obtained by the most efficient fisher; and
- v) The extent to which catch of that stock has exceeded or is likely to exceed the TACC; and
- vi) Any other matters you consider relevant.

PART A: INSHORE FISHERIES

COROMANDEL SCALLOPS (SCACS)

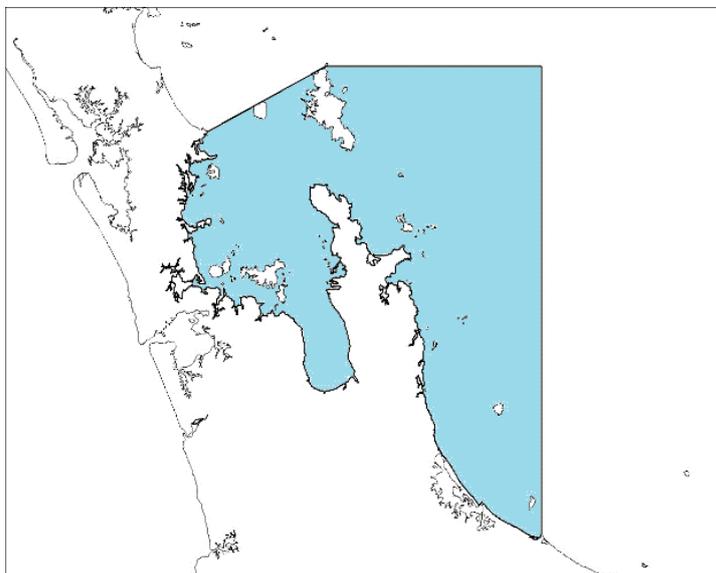


Figure 1: Quota Management Area (QMA) for the Coromandel Scallop Fishery (SCACS).

1 Executive Summary

The Ministry for Primary Industries (MPI) has consulted on your behalf on a review of catch limits for the SCACS fishstock (scallop in the SCACS quota management area, see Figure 1).

In 2013, the Total Allowable Catch (TAC) for SCACS was increased from 47 to 131 tonnes (meatweight) to provide for increased utilisation. The Total Allowable Commercial Catch (TACC) was increased from 22 to 100 tonnes and recreational and Māori customary allowances were increased from 7.5 to 10 tonnes each. Allowances for other sources of fishing related mortality was not changed and remained at 11 tonnes.

Information that formed the basis for the 2013 TAC decision included the discovery of a significant bed of scallops in 2011, which was surveyed as part of the SCACS biomass survey in 2012. Commercial fishers have not fished that scallop bed since 2013 and report that it is no longer there (supported by fine-scale fishing data). The risks associated with maintaining the current TAC, despite the likely change in fishery biomass, are partly mitigated by the operation of voluntary and other measures in the commercial fishery.

MPI considers it is necessary to review the TAC to consider whether the current TAC, TACC and allowances adequately ensure sustainability given best available information. An updated biomass survey has not been undertaken and is not available to inform this review. A new survey of the stock is being considered in MPI's 2016-17 research planning process. MPI consulted on the following options for the upcoming fishing year (Table 1):

Table 1: Proposed Management Settings³ for SCACS

Options	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Allowances		
			Māori Customary (t)	Recreational (t)	Other sources of fishing-related mortality (t)
Option 1 (<i>Status quo</i>)	131	100	10	10	11
Option 2	81	50	10	10	11

Sixteen submissions were received in response to the Discussion Document on the Review of Sustainability Controls for the Coromandel Scallop Fishery SCACS.

No submissions supported Option 1, maintaining the status quo. Ten submissions, including five that identified themselves as recreational divers, supported Option 2.

Two submissions from industry and submissions from the Iwi Collective Partnership and Te Ohu Kaimoana proposed an alternative option of a TAC of 101 tonnes with a TACC of 70 tonnes accompanied by a formalised industry-led management programme.

The New Zealand Sport Fishing Council did not specify a preference for TAC or TACC but requested more information and involvement in the development of a management plan for SCACS.

MPI agrees that developing and formalising a research and management plan for this shared fishery is important to guide future management and respond to fluctuations in abundance. A key step for progressing this work is a scallop science workshop occurring in early March 2016, which includes opportunities for stakeholder participation. In line with the Shared Fishery approach, MPI will then engage with stakeholders and tangata whenua to debrief on the process and outcomes of this TAC review, and provide an opportunity for discussion of the wider management proposals put forward during consultation.

In the interim, MPI recommends Option 2; to decrease the current TAC from 131 to 81 tonnes and decrease the TACC from 100 to 50 tonnes from 1 April 2016. This option recognises that the previous increase was a response to the discovery of a large commercial scallop bed and that this bed has now died off and is no longer fished. MPI acknowledges that industry-led controls are currently operating in the fishery to support management of the commercial SCACS fishery on a fine scale. However, aligning the TAC and TACC with recent performance in the fishery (Option 2) better meets your obligations under the Act and takes into account the absence of updated biomass information or a formalised management plan.

No changes are recommended for the allowances. The Customary Māori allowance and Recreational allowance would both remain at 10 tonnes each. Other sources of fishing related mortality would remain at 11 tonnes.

³ The TAC, TACC and allowances are measured in meatweight (adductor muscle with roe attached)

2 Purpose

2.1 BACKGROUND

Following on from the Introductory and Statutory Considerations at the beginning of this Decision Document, the purpose of this section is to provide the detailed information, assessment of statutory obligations and recommendations relevant to proposals for SCACS.

2.1.1 Biology

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*.

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.

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 major settlement of spat in northern fisheries usually takes place in early January.

The very high fecundity of this species, and likely variability in the mortality of larvae and pre-recruits, leads to great variability in annual recruitment. This, combined with variable mortality and growth rate of adults, leads to scallop populations being variable, especially in areas of rapid growth where the fishery may be supported by only one or two year classes. This variability is characteristic of scallop populations world-wide, and often occurs independently of fishing pressure.

The growth of scallops within the SCACS fishery is variable among areas, years, seasons and depths, and probably among substrates. In the Hauraki Gulf scallops have been estimated to grow to 100 mm shell length in 18 months or less, whereas this can take three or more years elsewhere. In some years, growth is very slow, whereas in others it is very rapid. Scallops in shallow water also tend to grow much faster than those in deeper water.

A variety of studies suggest that average natural mortality in the SCACS fishery is quite high, and maximum age in these unexploited populations is thought to be about 6 or 7 years.

2.1.2 SCACS Fishery

2.1.2.1 Commercial Fishery

The greatest quantities of scallops taken in SCACS are caught in the commercial fishery. Commercial fishing is currently conducted by a fleet of around seven vessels within a number of discrete beds around Little Barrier Island, east of Waiheke Island, at Colville, north of Whitianga (to the west and south of the Mercury Islands), and in the Bay of Plenty (principally off Waihi, and around Motiti and Slipper Islands).

There are significant areas of commercial restrictions, and minimum legal size limits and fishing seasons for the commercial fishery. The fishing year operates from 1 April to 31 March, but the commercial fishing season only runs from 15 July to 21 December each year.

Commercial fishers operate five days a week during the season and have voluntary daily catch limits.

In 2011, commercial fishers discovered a new bed within the Hauraki Gulf containing high densities of large scallops. This new, deeper (45–50 m water depth) region of the fishery was utilised between 2011 and 2013, but fishers report the bed has since died off. This is supported by fine-scale catch-per-unit-effort (CPUE) information collected by the fleet and used to guide the voluntary CPUE- limit rule management approach.

The CPUE limit rule is a non-regulated management program run by the commercial fishers. The rule responds to changes in each vessel’s CPUE and the ratio of scallops less than the minimum legal size (MLS). If catch per hour falls below the industry’s previously-agreed limit and/or the ratio of scallops less than the MLS per catch exceeds the previously-agreed limit, then statistical reporting areas, or smaller sub-statistical areas can be voluntarily closed for the remainder of the season.

Commercial catches have averaged approximately 60 tonnes (meatweight – adductor muscle with roe attached) per year since introduction to the QMS. The TACC was adjusted in-season annually up until 2013 and has since been set at 100 tonnes (Figure 2).

All commercial fishing is by dredge, with fishers preferring self-tipping “box” dredges (1.5 to 2.4 m wide, fitted with a rigid tooth bar on the leading bottom edge) to the “ring bag” designs used elsewhere in New Zealand.

Catch and catch rates for SCACS are variable both within and among years, a characteristic typical of scallop fisheries worldwide. The provisional total commercial landings for the 2015/16 fishing year is 27.3 tonnes. The target fishery finished operating in October 2015 so the total is unlikely to change substantially in the remainder of the fishing year.

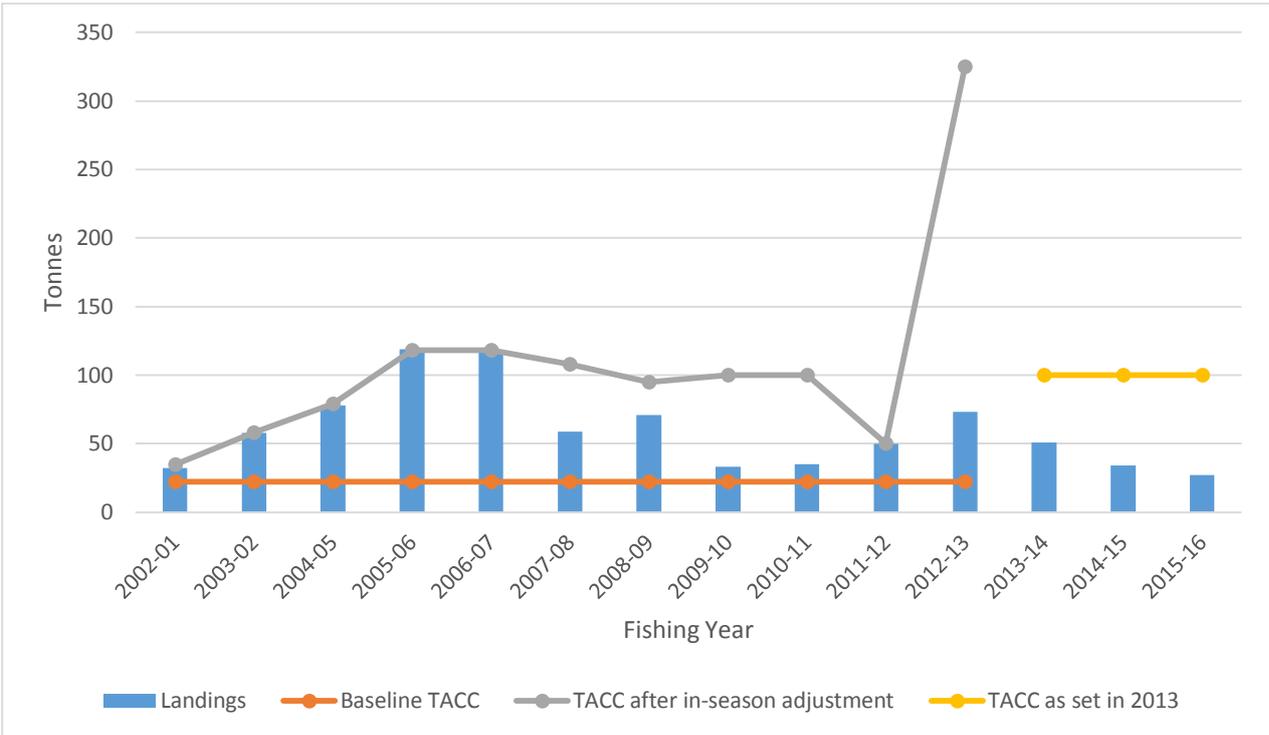


Figure 2: Landings and catch limits for SCACS from 2002–03 to 2015–16. TACC is the total allowable commercial catch, and all weight is meatweight.

2.1.2.2 *Recreational Fishery*

There is a significant recreational interest in scallops in suitable areas throughout SCACS, mostly in enclosed bays and harbours. Many of these areas are set aside as non-commercial areas. Scallops are taken by diving using snorkel or scuba, and considerable amounts are also taken using small dredges.

Regulations⁴ governing the recreational harvest of scallops from SCACS include a minimum legal size of 100 mm shell length and a restricted daily harvest (bag limit) of 20 per person. 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 the catch limits for the divers. Until 2006, the recreational scallop season ran from 15 July to 14 February, but in 2007 the season was changed to run from 1 September to 31 March.

A pilot survey was conducted in 2007–08 to assess the feasibility of estimating the recreational catch from Cape Colville to Hot Water Beach. The study was based on a boat ramp survey using interviewers to collect catch and effort information from returning fishers, and was conducted from 1 December 2007 to 28 February 2008 during the peak of the scallop season. The total estimated harvest during the survey period was 205,400 scallops, with an estimated 23.9 tonnes greenweight harvested (about 3 tonnes meatweight). The estimate of 67 tonnes greenweight (about 8 t meatweight) from the National Panel Survey in 2011–12⁵ equates to about 16% of the commercial harvest in the area surveyed in that year. The annual recreational harvest level is likely to vary substantially through time, and be a function of available scallop abundance.

Recreational catch abiding by daily limits is allowed under certain circumstances on commercial vessels. Over the past five fishing years an average of approximately 80kg (meatweight) of recreational scallop was taken by the commercial fleet per year.

2.1.2.3 *Māori Customary Fishery*

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

For those tangata whenua groups operating under the customary fishing regulations⁶, there is a requirement for Tangata Kaitiaki/Tiaki to provide MPI with information on Māori customary harvest of fish. However, some tangata whenua in SCACS 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. A summary of the information that has been supplied to MPI is provided in Table 2.

⁴ Fisheries (Amateur Fishing) Regulations 2013

⁵ Available at: http://fs.fish.govt.nz/Doc/23718/FAR_2014_67_2847_MAF2010-01.pdf.ashx

⁶ Fisheries (Kaimoana Customary Fishing) Regulations 1998

Table 2: Summary of customary authorisation information for SCACS

SCACS	Quantity approved, by unit type					Actual quantity harvested, by unit type					
	Fishing year	Bag	BIN	Weight (kg)	Number	Unspecified	Bag	BIN	Weight (kg)	Number	Unspecified
2003-04	-	-	600	200	-	-	-	600	200	-	-
2004-05	-	-	360	50	150	-	-	360	-	-	-
2005-06	-	-	3	700	50	-	-	0	-	-	-
2006-07	-	-	-	290	-	-	-	-	180	-	-
2007-08	-	-	330	630	-	-	-	285	280	-	-
2008-09	1	10	370	2390	13550	-	4	82	2090	4476	-
2009-10	-	1	150	1260	15510	-	202	65	1000	4500	-
2010-11	-	-	675	1800	19700	-	-	190	1400	6785	-
2011-12	-	-	310	640	25590	-	-	310	0	10270	-
2012-13	-	3	250	80	29800	-	200	200	80	14904	-
2013-14	-	-	-	2390	16830	-	-	-	2090	7055	-

2.1.2.4 Other Sources of Fishing Related Mortality

An allowance is made within the TAC to cover the mortality of fish that results from various factors associated with fishing, but not reported as catch. This can include scallops that escape the gear, but die later. In addition, this allowance covers any component of catch that is unlawfully discarded. Legal-sized scallops caught commercially in SCACS must be landed and must not be returned to the water.

Incidental damage to uncaught or undersize scallops can occur during commercial dredging. The box dredges in use in the Coromandel commercial fishery have been found to be more efficient in the generally 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 for scallops that are returned to the water (i.e. just under the MLS of 90 mm). Field experiments and modelling suggest that dredging reduces habitat heterogeneity and increases juvenile mortality.

Other sources of fishing-related mortality are likely to occur from recreational dredging and illegal take of scallops.

MPI does not have reliable estimates of any of these sources of fishing-related mortality and a constant allowance of 11 tonnes (meatweight) has been maintained since 2002 and is proposed under both Options 1 and 2.

2.1.3 Management Approach

SCACS is a Group 2 stock within the draft National Fisheries Plan for Inshore Shellfish. Objectives for Group 2 stocks include enabling annual yield from the fishery to be maximised, while maintaining the stock size at or above the level required to ensure sustainability and the spawning stock biomass.

Since current biomass and B_{MSY} are not known for SCACS, 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, the B_{MSY} level.

In this fishery there is also the ability to adjust the TAC within a fishing year. SCACS is included on Schedule 2 of the Act which lists stocks whose abundance is variable, and allows for an in-season management adjustment approach. Such increases apply only for that year. This paper considers the 'baseline' TAC and does not relate to an in-season increase.

Between 2002 and 2012 SCACS was managed using a low baseline TAC and an annual in-season increase informed by annual survey information. Over the past four years a more cost-effective management approach has been sought, taking into account that significant fluctuations in the stock size occur over timescales that may be longer than a single year.

As described in the commercial fishery section above, an industry initiated programme using fine-scale reporting and frequent CPUE analysis has been developed to support management of the fishery. A workshop convened in early March 2016 involving an expert panel of scientists is discussing this approach alongside a broader assessment of how effectively New Zealand is monitoring and assessing the status of scallop stocks. The outcomes of this workshop will inform future management discussions.

In the interim, this management review recognises the initiatives underway but notes the uncertainties in terms of current status of the stock due to no biomass surveys being undertaken since 2012 and information that the large commercial scallop bed in the Hauraki Gulf is no longer available. In these circumstances it is appropriate to review the TAC under section 13(2A) of the Act.

2.2 RATIONALE FOR MANAGEMENT INTERVENTION

2.2.1 Previous Review

The TAC for SCACS was last reviewed in 2013. The review resulted in a TAC increase to take advantage of the large scallop bed discovered in 2011.

The TAC was increased to 131 tonnes, from 48 tonnes. The TACC was increased from 22 tonnes, to 100 tonnes. Māori customary fishing and recreational allowances were increased to 10 tonnes, from 7.5 tonnes each. The allowance for other sources of fishing-related mortality remained at 11 tonnes.

2.2.2 Current Status

Biomass surveys were conducted for SCACS annually from 1998 until 2012, with the exception of 2011 (Figure 3). Estimated recruited biomass (tonnes of meatweight of scallops greater or equal to the commercial MLS of 90 mm) in the core areas of the fishery during 1999-2003 was consistently at or near the lowest on record (78 tonnes in 2001). The estimated recruited biomass then increased to record highs in 2005 (1795 tonnes) and 2006 (1531 tonnes) before decreasing.

The comprehensive 2012 survey coverage included a new, large area of the fishery in Hauraki Gulf and showed that it held considerable biomass. Recruited biomass has not been estimated in SCACS since 2012 and commercial fishers report that the beds in the new area of the Hauraki Gulf have since gone (supported by fine-scale fishing data).

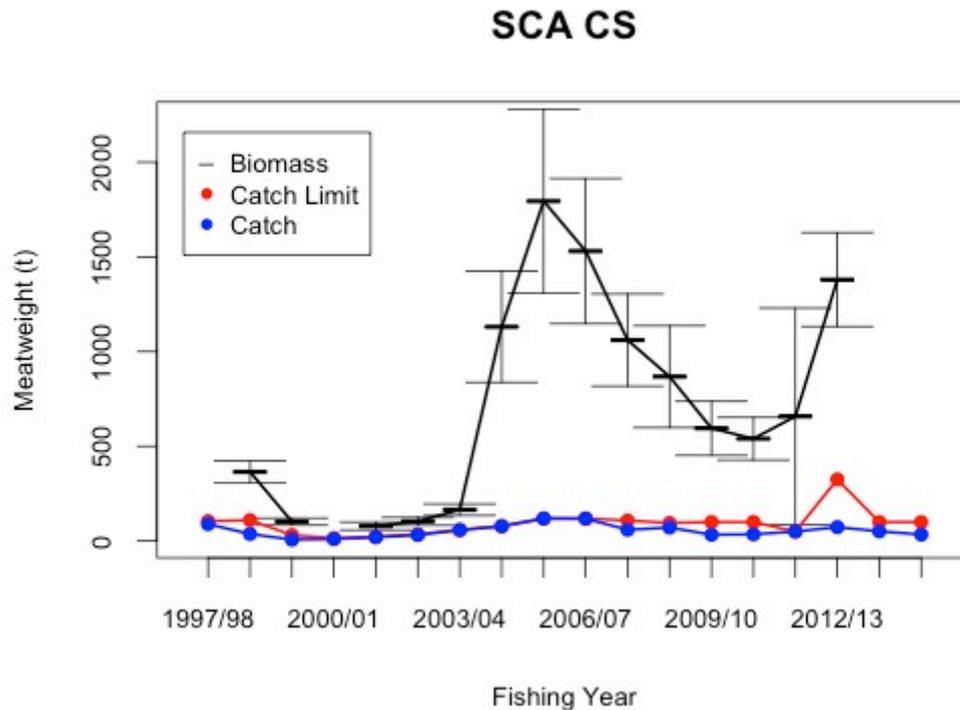


Figure 3: Estimated recruited biomass (scallops 90 mm or more shell length), catch limits, and landings in tonnes meatweight for the SCACS fishery since 1998. In 2011, no survey was conducted; instead, biomass was estimated by projecting forward from the 2010 survey. No surveys have been carried out since 2012.

3 Consultation

3.1 SUBMISSIONS RECEIVED

Submissions on the Review of Sustainability Controls for the Coromandel Scallop Fishery SCACS were received from the following:

- Chris Johnston
- Coromandel Scallop Fishermen’s Association (developed with Fisheries Inshore New Zealand)
- Gerri McFadden
- Jess Battaerd
- Iwi Collective Partnership
- Flynn Battaerd
- Mark Bellamy
- Mark Elliott
- Max Ross
- New Zealand Sport Fishing Council
- Ngati Whatua Fishing Co. Ltd.
- Pieta Begley
- Richard Charles
- Stuart Bay
- Te Ohu Kai Moana

- Whangamata Seafoods

A brief summary of the submissions is outlined below.⁷ MPI's response to issues raised in the submission can be found within the relevant sections of this Decision Document.

3.2 SUMMARY OF SUBMISSIONS

3.2.1 Option 1

No submissions were received in support of Option 1 (to retain the status quo).

3.2.2 Option 2

Chris Johnston, Flynn Battaerd, Jess Battaerd, Max Ross and Pieta Begley (recreational divers) provided aligned submissions in support of Option 2. In addition these submitters requested that commercial fishing be restricted to water of 20 metres depth or greater and that the ability for commercial scallop fishers to retain catch for recreational use be reviewed. Concerns about the impacts of commercial dredging on scallop populations were also raised.

Gerri McFadden supported Option 2 as the best way forward for the future of the industry.

Ngati Whatua Fishing Co Ltd supported Option 2 and considers that this option will align the TAC and TACC with the current performance of the fishery. The submission notes that this setting would take into account that updated biomass information is not available and that the biomass may have declined.

Richard Charles supported Option 2 and considers that there is a need for careful management now, with the option to increase catch if abundance improves. In particular he noted that in his local area (Opito Bay) where historically up to 6 commercial fishers were operating a day, recreational fishing appears to have decreased this summer and it is the first time that he has noticed recreational fishers complaining about the beds. He also noted a disease event that occurred at Mercury Bay.

Stuart Bay supported Option 2 and considers that a cautious approach is needed where information is lacking. He also requested a review of the minimum legal size controls and stated that the 10mm difference between commercial and recreational fishers was illogical.

Mark Elliot also supported Option 2.

3.2.3 Alternative Option

The Coromandel Scallop Fisherman's Association (supported by Fisheries Inshore New Zealand), the Iwi Collective Partnership, Te Ohu Kaimoana and Whangamata Seafoods did not support either option and put forward an alternative TAC and TACC that are lower than Option 1 but higher than Option 2. The key rationale is to have a TACC with "headroom" to allow for utilisation if abundance increased. Associated risks would be mitigated by the industry's management programme, which they consider to be the primary management tool currently operating. Formal recognition of this management approach was requested.

3.2.4 Other matters

The New Zealand Sport Fishing Council did not support any specific options for TAC setting but requested that Victorian box dredges be prohibited in the Coromandel scallop fishery due to effects on scallops, benthic communities and habitats that sustain other species. The New

⁷ Copies of the submissions are available in Appendix II.

Zealand Sport Fishing Council also requested further information and involvement in the development of a management plan for the fishery.

4 Legal Considerations

Relevant legal considerations in the Act are discussed in the following paragraphs.

4.1 SECTION 8 – PURPOSE OF THE ACT

MPI considers both options presented in this paper satisfy your obligations under section 8 of the Act. Option 2 is more cautious and reflects the die off of the large scallop bed discovered in the Hauraki Gulf in 2011. Option 1 provides for greater utilisation should abundance increase but at a greater risk to sustainability. While the risk would be somewhat mitigated by the industry CPUE limit management rule and future reviews no submitters were in favour of this option. Four submissions sought a “mid-way” option.

4.2 GENERAL OBLIGATIONS

MPI considers that the management options for the SCACS fishery are consistent with the wide range of international obligations related to fishing, including the use and sustainability of fish stocks, and maintaining biodiversity. Both options propose catch limits alongside a broader discussion of the monitoring approach to ensure sustainability.

MPI also considers the proposed management options to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. Ongoing work is being done within the area covered by the Coromandel scallop fishery to promote policies that help to recognise customary use and management practices including, but not limited to, maintaining iwi forums and developing Iwi Fisheries Plans.

4.3 SECTION 9 – ENVIRONMENTAL PRINCIPLES

MPI considers that all options presented in this paper satisfy your obligations under section 9 of the Act. Detailed information on each of these principles is provided below.

4.3.1 Associated or dependent species – protected species interactions (section 9(a))

4.3.1.1 *Seabirds*

Management of seabird interactions with New Zealand’s commercial fisheries is driven through the 2013 National Plan of Action to Reduce the Incidental Captures of Seabirds in New Zealand fisheries (NPOA-Seabirds). The NPOA-Seabirds has established a risk-based approach to managing fishing interactions with seabirds, targeting management actions at the species most at risk as a priority but also aiming to minimise captures of all species to the extent practicable.

There is no information to suggest the scallop fishery results in adverse interactions with seabirds. MPI does not anticipate any significant change to this assessment based on the proposed TAC adjustments.

4.3.1.2 *Marine mammals*

There is no information to suggest that the scallop fishery interacts with these mammals or has any adverse effect on the population.

4.3.2 Biological diversity (section 9(b))

A range of non-target fish and invertebrate species are caught and discarded by dredge fisheries for scallops.

In SCACS, a photographic survey approach was used in the 2006⁸ to provisionally examine bycatch groups, and a more quantitative and comprehensive study was conducted using bycatch data collected in the 2009 dredge survey⁹.

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.

MPI considers either proposed TAC adjustments will maintain biological diversity in the area. Option 2 should lead to a reduction in potential effort and therefore capture of non-target species.

4.3.3 Habitat of significance to fisheries management (section 9(c))

4.3.3.1 Benthic impacts

It is well known that fishing with mobile bottom contact gears such as dredges have impacts on benthic populations, communities, and their habitats. The effects are not uniform, but depend on at least the specific features of the seafloor, the natural disturbance regime, the species present, the type of gear and the frequency it is used. The effects of scallop dredging on the benthos are well-studied, with New Zealand studies (including in SCACS) 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.

Six submissions (New Zealand Sport Fishing Council and five recreational divers) outlined concerns about the impacts of commercial dredges. NZSFC raised concerns about impacts on the benthic environment while all six raised concerns about impacts on scallop populations. NZSFC recommended that the Victorian box dredge be prohibited as a method for fishing SCACS. The recreational divers submitted that commercial fishing should be restricted to 20 metres depth or greater.

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, MPI 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.

⁸ 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.)

⁹ 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*.

4.4 SECTION 10 – INFORMATION PRINCIPLES

MPI considers that the best available information has been used as the basis for the recommendations for the SCACS stock. All science information upon which the management Options are based has been peer reviewed by one of MPI's Fisheries Assessment Working Groups and meets the Research and Science Information Standard for New Zealand Fisheries.

4.5 SECTION 11 – SUSTAINABILITY MEASURES

Under section 11 of the Act, before setting or varying any sustainability measure for any stock, you must:

- a) Section 11(1)(a): take into account any effects of fishing on any stock and the aquatic environment. All information relevant to your decision is discussed above under 'Section 9 - Environmental Principles'.
- b) Section 11(1)(b): take into account any existing controls under the Act that apply to the stock or area concerned. For this stock a range of measures apply as outlined in the background section of this paper.
- c) Section 11(1)(c): take into account the natural variability of the stock. Variability is discussed under section 2.1.1 above.
- d) Sections 11(2)(a) and (b): have regard to any provisions of any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991 and any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and that you consider relevant. MPI is not aware of any other policy statements, plans or strategies that should be taken into account for the SCACS fishery.
- e) Section 11(2)(c): have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 (HGMPA) that apply to the coastal marine area and that you consider relevant. When setting or varying the TAC relating to stocks with boundaries intersecting with the Park, you must have regard to sections 7 and 8 of the HGMPA, which are discussed in the Statutory Considerations in the introductory section of this Discussion Document.

MPI considers that both of the proposed TAC options provide 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 in the past. 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 SCACS 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.

- f) Section 11(2)(d): have regard to any planning document lodged by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011. No planning documents applicable to the SCACS fishery have been lodged.

- g) Section 11(2A)(b): take into account any relevant fisheries plan approved under section 11A. No plans have been approved under section 11A that you need to take into account.
- h) Sections 11(2A)(a) and (c): take into account any conservation or fisheries services, or any decision not to require such services. The management approach section of this paper explains that work is underway to determine a management plan for this fishery. In the interim your decisions should take into account that no research services are confirmed in this fishery for the upcoming fishing year.

4.6 SECTION 12 – CONSULTATION

In addition to the consultation considerations discussed elsewhere, Section 12(1)(b) requires that you provide for the input and participation of tangata whenua and have particular regard to kaitiakitanga before setting or varying a TAC.

The Mai I Nga Kuri a Wharei ki Tihirau Fisheries Forum and Mandated Iwi Organisations within the Coromandel scallop fishery quota management area were contacted prior to the release of the Discussion Document. No specific views were provided directly to MPI outside of the submissions discussed in this Decision Document.

4.7 SECTION 13 – SETTING THE TAC

Section 13(2A) of the Act provides for a TAC to be set 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. The reference points that have historically guided these decisions for SCACS have been based on the fishing mortality target or reference point ($F_{0.1}$). However the MPI Shellfish Working Group (SFWG) has advised that $F_{0.1}$ is not a good reference point because of the unreliability of our estimates of natural mortality. The SFWG have advised moving to some value of exploitation rate. The appropriate exploitation rate has not yet been determined for SCACS.

In addition, no up-to-date estimate of biomass is available. Consequently, MPI has limited information to assess the TAC. MPI proposes a status quo option and a recommended alternative based on recent catch limits and patterns in the fishery over a number of years. Within the constraints of the available information, all options satisfy the purpose of the Act and the requirements of section 13(2A). They also take into account that the voluntary “CPUE-limit rule” programme mitigates some of the risks, allowing any significant reductions in abundance to be identified and addressed

4.8 SECTIONS 20 & 21 – ALLOCATING THE TAC

The TAC must be apportioned among the relevant sectors and interests as required under sections 20 and 21 of the Act. Section 21 prescribes that you shall make allowances for Māori customary non-commercial interests, recreational fishing interests, and for any other sources of fishing-related mortality, before setting the TACC.

4.8.1 Recreational allowance

No changes are proposed under either option to the recreational allowance as the key change in the stock has been to the Hauraki Gulf bed that is generally inaccessible to non-commercial fishers. The Coromandel Scallop Fisherman’s Association submitted that because these allowances were increased in 2013 they should also be reconsidered in this review. No specific recommendations were made however.

4.8.2 Māori Customary allowance

No changes are proposed under either option to the Māori customary allowance for the same reason given above for recreational allowance, the key change in the stock has been to the Hauraki Gulf bed that is generally inaccessible to non-commercial fishers. As with the recreational allowance, the Coromandel Scallop Fisherman's Association submitted that the Māori customary allowance should be reviewed, but made no specific recommendations

4.8.3 Other sources of fishing-related mortality

Information to set the allowance for other sources of mortality for SCACS is uncertain. In the absence of additional information MPI proposes that the allowance be retained at the current setting. The allowance of 11 tonnes has not been changed since 2002 (except for in-season increases).

4.8.4 TACC

Option 2 aligns the TACC with recent performance of the fishery. When SCACS was introduced into the QMS in 2002 the TACC was set at 22 tonnes based on average annual commercial landing. Since then the performance of the commercial fishery has improved. Even excluding the years when the Hauraki Gulf bed was being fished (2011 and 2012), and landings were particularly high, commercial landings over the last 9 years have averaged 44 tonnes.

Option 1 provides the greatest flexibility for commercial fishers to increase their catch should abundance increase or a new scallop bed be discovered. However, catch has been below the level of the current TACC for all but two of the fishing years since SCACS was introduced to the QMS. Catches are likely to remain below the level of the current TACC in the short term, unless new areas of unfished scallops are identified. Therefore, this flexibility is unlikely to be required.

Four submitters proposed a mid-way TACC of 70 tonnes. This option has not been included in the paper, and the rationale for this discussed below.

4.9 SECTION 75 – DEEMED VALUE RATES

MPI has consulted on changes to the SCACS deemed values. A discussion of the deemed value rates consulted on and subsequent recommendation is included in Part B of this Decision Document.

5 Management Options

The options presented in this Decision Document are consistent with those consulted on. Both options have been put forward with the understanding that the industry-led voluntary "CPUE limit rule" would also continue until a more formal management plan for the fishery has been adopted. The Coromandel Scallop Fisherman's Association has submitted that the CPUE limit rule has triggered "block" areas to be voluntarily closed 15 times since 2010. On 13 of these occasions the closure was actioned because the CPUE had gone below the "soft limit", a reference point that they consider to be set conservatively and well above the point that would still be economic to fish.

An alternative "mid-way" option for the TAC and TACC settings was put forward in four of the submissions (Coromandel Scallop Fisherman's Association, Iwi Collective Partnership, Te Ohu Kaimoana and Whangamata Seafoods). The key rationale for setting the TAC and TACC higher than MPI's Option 2 recommendation is to allow for "headroom" and flexibility should abundance increase in the future. A perceived slow management response to

the discovery of the new bed in 2011 was put forward as an example of how headroom would better provide for benefits from the fishery.

MPI considers that there is no current signal from the fishery or from surveys to indicate increasing abundance, and that the responsiveness of the management approach is better considered in the development of a management plan. In addition catch for the past two seasons has been below the 50 tonne TACC proposed under Option 2, suggesting there is some flexibility available under that option. MPI notes the proposed 'mid-way' option relies on greater weight being placed on industry's voluntary CPUE limit rule approach, MPI considers Option 2 already places an appropriate weighting on the continued operation of the CPU limit rule. Therefore, the option of a 101 tonne TAC and 70 tonne TACC has not been specifically included in this paper (however final decisions are at your discretion).

MPI has discussed with industry stakeholders the scientific, legal and operational requirements that would allow more reliance on the CPUE limit rule. The expert panel workshop in early March, and development of a research and management plan are the key next steps.

5.1 ANALYSIS OF OPTIONS

5.1.1 Option 1

Under Option 1, the existing TAC would be retained. The TACC and allowances would be retained in line with the *status quo*. Option 1 relies on the voluntary CPUE limit rule that operates within the commercial fishery, alongside other elements of the management framework including area, season and size restrictions, to mitigate risks associated with the current TAC. This option does not respond to the information suggesting that the large biomass of scallops in the Hauraki Gulf may no longer exist.

No submissions were received in support of Option 1. MPI considers it appropriate to review the TAC to ensure that, based on best available information, it is set at a level that is not inconsistent with the objective of maintaining or moving the stock biomass towards or above B_{MSY} . Overall, Option 1 is less consistent with this objective than Option 2.

Impact

Option 1 provides the greatest flexibility for commercial fishers to increase their catch should abundance increase or a new scallop bed be discovered. However, catch has been below the level of the current TAC for all but two of the fishing years since SCACS was introduced to the QMS. Catches are likely to remain below the level of the current TAC in the short term, unless new areas of unfished scallops are identified. Therefore, this flexibility is unlikely to be required. Industry submissions do not support Option 1 but, as discussed earlier, did support more headroom and flexibility than Option 2 proposing a 'mid-way' approach between Options 1 and 2.

In terms of the environmental and other considerations you must have regard to (refer section 4.2), this option has the potential to increase the intensity of fishing effort and the environmental impacts of dredging, if fishing to the level of TACC occurs. In practise this may not occur due to operation of the CPUE-limit rule.

5.1.2 Option 2 (MPI Preferred)

Support for Option 2 was put forward in 10 submissions. These submissions include Ngati Whatua Fishing Co Ltd, five submitters who identified themselves as recreational divers and four other individuals.

Option 2 proposes:

- The TAC be reduced from 131 tonnes to 81 tonnes
- The TACC be reduced from 100 tonnes to 50 tonnes
- The Māori customary allowance would remain at 10 tonnes
- The recreational allowance would remain at 10 tonnes
- The allowance for other sources of fishing-related mortality would remain at 11 tonnes.

Option 2 reduces the TAC to respond to information that the current TAC may not be sustainable. It takes a cautious approach to a high value shared fishery considering:

- information from commercial fishers (supported by fine-scale fishing data) that the overall biomass may have declined as the Hauraki Gulf bed is no longer there;
- the requirement that the TAC, TACC and allowances adequately ensure sustainability based on best available information; and
- an updated biomass survey of the fishery has not been undertaken.

Option 2 aligns the TAC and TACC with recent performance of the fishery. When SCACS was introduced into the QMS in 2002 the TAC was set at 48 tonnes, based on an average annual commercial landing calculation of 22 tonnes. Since then the performance of the commercial fishery has improved. Even excluding the years when the Hauraki Gulf bed was being fished (2011 and 2012), and landings were particularly high, commercial landings over the last 9 years have averaged 44 tonnes.

No changes are proposed under this option to the Māori customary allowance or recreational allowance as the key change in the stock has been to the Hauraki Gulf bed that is generally inaccessible to non-commercial fishers.

Information to set the allowance for other sources of mortality for SCACS is uncertain. In the absence of additional information MPI proposes that the allowance be retained at the current setting.

Impact

Option 2 may constrain the commercial fishery if biomass increases, or if a new area of unfished scallops is identified. Under these circumstances a further adjustment of the TAC and TACC may be considered in a subsequent year, or there is the ability (through SCACS's listing on Schedule 2 on the Act) to increase available ACE within the fishing year.

The four submissions that put forward the alternative TAC and TACC consider that Option 2 creates unnecessary costs by requiring a further review (and some assumed a biomass survey) to make increases for utilisation. These submitters thought this cost was unnecessary due to the industry CPUE-limit rule programme, which they consider more relevant and effective for managing the fishery than the TACC. MPI considers that this point should be discussed further in the development of a research and management plan for SCACS.

6 Other Matters

A range of management matters outside of your immediate decisions on setting and allocating the TAC were raised in response to the review. The matters are discussed below. Overall MPI considers that the matters raised indicate the need for a debrief with stakeholders and tangata whenua on the process and outcomes of this TAC review to provide an opportunity for discussion of wider management proposals put forward during consultation.

6.1 DREDGING

As discussed under section 4.3, both the New Zealand Sport Fishing Council and submissions from five recreational divers raised concerns and recommendations about the impacts of commercial dredging on the aquatic environment and scallop populations.

6.2 MINIMUM LEGAL SIZE

Stuart Bay submitted that the different minimum legal size limits between commercial (90mm) and recreational fishers (100mm) was illogical and needs to be brought in line with each other at a length informed by good science.

6.3 RECREATIONAL HARVEST BY COMMERCIAL FISHERS

MPI notes that the recreational harvest taken by commercial fishers under certain circumstances (which include abiding by bag limits and reporting catch) was not specifically mentioned in the Discussion Document. The five divers' submissions raised their opposition to this activity as a "blatant misuse of the recreational TAC".

MPI has included information in this Decision Document, as requested by New Zealand Sport Fishing Council, on the level of reported catch under this provision. Only 80 kg (meatweight) has been reported per annum fishing year in the last five fishing years.

6.4 MANAGEMENT APPROACH

A number of submissions responded to the "management approach" section of the Discussion Document. Coromandel Scallop Fisherman's Association, Te Ohu Kaimoana and Whangamata Seafoods provided additional information and supporting rationale for the CPUE-limit rule programme.

New Zealand Sport Fishing Council submitted that detailed information about the CPUE limit rule programme has been refused to them in 2012 and 2013, and that the regime is not transparent. New Zealand Sport Fishing Council put forward a further request for this information.

New Zealand Sport Fishing Council requested that MPI work with stakeholders to develop an agreed management plan incorporating in-season controls and an annual public report outlining harvest strategies and commercial operations.

6.5 EXPERT SCIENCE WORKSHOP

The Discussion Document noted that a workshop involving an expert panel of scientists was to be held in early March 2016. The role of the expert panel is to review how effectively New Zealand is assessing the status of its scallop stocks and, as required, make recommendations for improvements to data collection, stock assessment modelling methods and development of target and limit reference points.

Te Ohu Kaimoana and Whangamata Seafoods requested that representatives from industry and Te Ohu should be invited to attend the above workshop and that the agenda should be amended to put the Industry Management Program up for discussion first. New Zealand Sport Fishing Council requested they be invited to send representatives to the workshop. MPI has since provided more information on the workshop to these submitters.

6.6 OTHER INFORMATION

Port price survey information was also requested by the New Zealand Sport Fishing Council (the 2015 port price is \$15.90 kg and was provided in the Discussion Document reviewing Deemed Values). Export value was requested but is not available as the scallops are sold domestically.

7 Conclusion

MPI's preferred option is Option 2 – decreasing the TAC of SCACS to 81 tonnes and the TACC to 50 tonnes, while maintaining the current allowances for recreational, Māori customary, and other sources of fishing-related mortality. Option 2 better aligns the TAC and TACC with recent performance of the fishery and takes into account information that the large bed in the Hauraki Gulf is no longer there.

MPI notes that no submitters supported Option 1 (status quo), but that some submitters proposed a 'mid-way' reduction to provide more flexibility in the case that biomass increases. Option 2, which was supported by ten submissions, provides a TAC and TACC with some flexibility while aligning catch limits with recent average levels of catch.

Under both Option 1 and Option 2 MPI expects the industry voluntary CPUE limit rule programme to continue, at least until a more formal management plan has been agreed. MPI considers that, in line with the Shared Fishery approach, input from tangata whenua and stakeholders with interests in this fishery will be valuable for determining a future research and management plan.

SURF CLAMS (QMA 7)

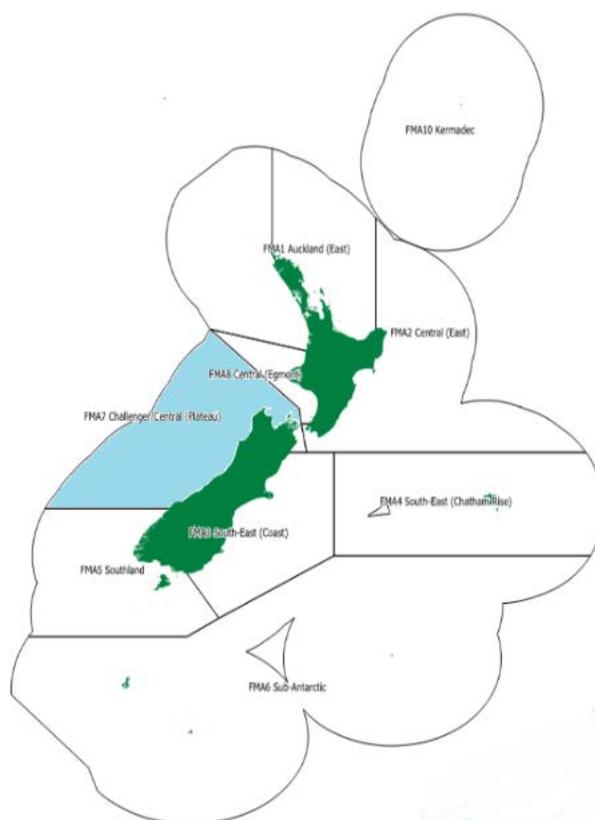


Figure 1: The Quota Management Area 7 (QMA 7) for each of four surf clam stocks under review (PDO 7, SAE 7, MMI 7 and DAN 7).

1 Executive Summary

The Ministry for Primary Industries (MPI) has consulted on your behalf on a review of catch limits for four surf clam stocks in QMA 7 (see Figure 1).

There are seven main species of subtidal surf clams in New Zealand: *Paphies donacina* (PDO), *Crassula*¹⁰ *aequilatera* (SAE), *Mactra discors* (MDI), *Mactra purchisoni* (MMI), *Dosinia anus* (DAN), *Dosinia subrosea* (DSU), and *Bassina yatei* (BYA).

New abundance survey information indicates the level of biomass for four of the species of surf clams in QMA 7 are capable of supporting higher catches, while ensuring sustainability. In this paper, the Total Allowable Catches (TACs) for PDO, SAE, MMI and DAN in QMA 7, are being reviewed.

Accordingly, MPI consulted on two options – one that retains the *status quo* and one that increases the TAC of the four surf clam species.

¹⁰ This species was previously known as *Spisula aequilatera* but is now known as *Crassula aequilatera* as a correction to the classification. Powell, A.W.B. 1979: New Zealand Mollusca: Marine, Land and Freshwater Shells. Collins, Auckland 500p (p.414)

Nine submissions were received on the surf clam proposals; five from the recreational sector and local community, all in support of Option 1. One submission from commercial supports Option 2. The remaining three submissions from Māori customary support a modified Option 2 (“Option 2a” refer to Table 1) that provides for a greater customary allowance.

After considering the submissions received, MPI recommends Option 2a that provides for an increase in the TACs, TACCs and allowances for PDO 7, SAE 7, MMI 7 and DAN 7. Based on new information from submissions, Option 2a provides for an increase to the Māori customary allowance to 5 tonnes for each of the four species. Further, records of section 111 recreational landings (taken on board a commercial vessel) exist and, therefore, to allow for this take MPI proposes to allow a nominal 1 tonne recreational catch for SAE 7, DAN 7 and MMI 7. This redistribution in allowances result in a 6 tonne decrease in the proposed TACCs for each species compared with the original proposal. Note, as PDO 7 already has an allowance of 1 tonne for Māori customary and 1 tonne for recreational, the reduction for the PDO 7 TACC is only 4 tonnes.

MPI recommends that you also set an allowance to account for other sources of fishing-related mortality to 5% of the TAC for each species. Both Option 2 and Option 2a provide for an increase in utilisation, and it is estimated that the associated TACC increases could result in approximately \$3 million increase in annual commercial revenue.

Table 1. Proposed options consulted on and management settings for four surf clam stocks in QMA 7.

Stock Options	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Allowances		
			Māori Customary (t)	Recreational (t)	Other sources of fishing – related mortality (t)
PDO 7					
Option 1 (<i>status quo</i>)	52	50	1	1	0
Option 2	200	188	1	1	10
Option 2a	200	184	5	1	10
SAE 7					
Option 1 (<i>status quo</i>)	112	112	-	-	0
Option 2	235	223	-	-	12
Option 2a	235	217	5	1	12
MMI 7					
Option 1 (<i>status quo</i>)	61	61	-	-	0
Option 2	144	137	-	-	7
Option 2a	144	131	5	1	7
DAN 7					
Option 1 (<i>status quo</i>)	15	15	-	-	0
Option 2	133	126	-	-	7
Option 2a	133	120	5	1	7

2 Purpose

2.1 BACKGROUND

Following on from the Introductory and Statutory Considerations at the beginning of this Discussion Document, the purpose of this section is to provide the detailed information, assessment of statutory obligations and recommendations relevant to proposals for surf clams in QMA 7.

2.1.1 Biology

Surf clams is a collective term for seven species of bivalve clams. The four surf clam species under review represent the three families of subtidal surf clams that occur in New Zealand: Veneridae, (DAN); Mactridae, (MMI & SAE); and Mesodesmatidae, (PDO).

These species occupy what is commonly referred to as the ‘surf zone’. This zone is a high energy habitat, which is also highly productive, with regular wave action that results in a mobile sandy seafloor and the frequent resuspension of sediment. High reproduction rates and rapid growth can establish substantial populations. On the other hand, surf clam populations can be subject to localised catastrophic mortality from erosion during storms, high temperatures and low oxygen levels during calm summer periods, blooms of toxic algae and excessive freshwater outflow.

Surf clams are found in and immediately beyond the surf zone of exposed sandy beaches. They are distributed sub-tidally to depths of 10 m, and each species generally has a distinct depth zone. The various surf clam species follow the same order of depth succession throughout New Zealand, but the depth distribution of each species may vary between locations.

Maximum age has been estimated from shell sections and from the numbers of age classes and this estimate used to infer the probable rate of natural mortality (M), however, it is difficult to get reliable estimates of M for the species in this fishery.

2.1.2 QMA7 Surf Clam Fishery

2.1.2.1 Commercial

Although surf clam stocks overseas support major fisheries, New Zealand’s surf clam fisheries are still developing. Prior to being put in the Quota Management System (QMS), only a few commercial fishers held permits to target surf clams and there were also difficulties in adapting overseas dredge designs to suit the New Zealand fishery.

In addition, the cost of entry to surf clam fisheries is relatively high because of the required shellfish sanitary surveys¹¹. Before harvesting can begin, each harvest area must meet specific shellfish sanitation requirements overseen by MPI Verification Services. Maintaining shellfish sanitation certification requires ongoing monthly and annual testing, and annual reporting.

The QMA 7 surf clam fishery is a dredge fishery operating in the inshore zone in the upper South Island (refer Figure 1). The dredge includes a hydraulic clam pump and scoop harvester, and is considered to have minimal environmental impact due to the liquefaction of the dredge contents by the pump and the energetic surf zone environment.

¹¹ New Zealand Legislation: Animal Products (Regulated Control Scheme - Bivalve Molluscan Shellfish) Regulations 2006

The various species of surf clam tend to inhabit separate depths and, therefore, represent zonation by species allowing a good degree of targeting. Surf clams are also on Schedule 6 of the Act, which allows for return to the water from which they were caught if likely to survive on return.

Fishing in QMA 7 has been concentrated on a localised area of Cloudy Bay. The area was fished at low levels between the 1980s and the late 1990s. Little fishing occurred until 2002, but since that time landings have steadily increased, driven by increased landings of SAE over time (see Table 2). Surf clams entered the QMS on 1 April 2004.

Surf clams have the potential to be a substantial export fishery. The QMA 7 fishery predominantly targets SAE and PDO. Smaller quantities of MMI and DAN are also taken.

Table 2. Reported catch landings (tonnes) for surf clams in QMA 7 by species and year.

Fishing year		2010/11	2011/12	2012/13	2013/14	2014/15
Species	PDO	39	17	30	39	54
	SAE	17	83	161	192	240
	MMI	17	47	33	5	9
	MDI	0	0	0	0	0
	DAN	2	5	4	1	0.3
	DSU	0	0	0	0	0
	BYA	0	0	1	1	1

Currently, the harvest of SAE and, to a lesser extent, PDO is significantly exceeding their respective TACCs (see Table 1). In the 2014-15 fishing year, SAE 7 TACC was 228% caught, generating a deemed values bill of over \$155 500. MPI has consulted on a review of the Deemed Values Rates for both SAE and PDO and advice on those proposals has been provided to you (refer to Part B of this paper).

2.1.2.2 *Recreational*

Surf clam stocks, with the possible exception of PDO, are generally inaccessible to recreational fishing methods because of their sub-tidal location. On occasions, it may be possible to hand gather PDO (deep water tuatua) in shallow water at low spring tides, while other surf clams can sometimes be gathered after strandings following storm events. This is considered to be part of natural mortality cycle as the majority of stranded shellfish die, regardless of whether they have been collected or not.

Examination of commercial catch effort landing returns has revealed modest section 111¹² recreational landing for all four species.

There are no specific controls regarding recreational fishing for surf clams. Fishers can take a combined daily bag limit of 50 shellfish per person per day for shellfish species that do not have a specific limit. There are no estimates of recreational take for QMA 7 surf clams, however, MPI considers harvest to be minimal.

2.1.2.3 *Māori Customary*

Information currently held by MPI on the volume of Māori customary catch of surf clams within QMA 7 is uncertain. Tangata whenua in the Tasman/Golden Bay and Marlborough Sounds area are still operating under regulations 51 and 52 of the Fisheries (Amateur Fishing)

¹² Under Section 111 of the Fisheries Act 1996, commercial fishers can obtain approval to land a portion of their commercial catch under their recreational entitlement.

Regulations 2013 (the Amateur Regulations), which does not require the reporting of customary permits or catches.

2.1.2.4 Other Sources of Fishing-Related Mortality

No allowance to account for other sources of fishing-related mortality is currently set for surf clam stocks in QMA 7. Other sources of fishing-related mortality includes any mortality of surf clams that results from various factors associated with fishing, but not reported as catch. This can include incidental damage to surf clams, and also covers any component of catch that is unlawfully taken.

When the original TACs were set, MPI did not make an allowance for other sources of fishing-related mortality for surf clam stocks. The level of mortality from this source was estimated to be low given the size of the TACs set at that time.

The quantity of surf clam mortality as a result of interaction with commercial dredges (but not being caught) as a proportion of damaged surf clams in earlier gear trials prior to 1990 ranged between 0 – 21%. Currently, incidental mortality is considered likely to be low, due to advances in technology and hydraulics that have likely reduced the level of fishing-related mortality¹³. However, MPI acknowledges uncertainty remains on the likely level of incidental mortality in the fishery.

2.1.3 Management Approach

The draft National Fisheries Plan for Inshore Shellfish¹⁴ categorises surf clams as “Group 4” fisheries. Stocks in Group 4 are sought after by some sectors, but fishing pressure is relatively low. Biological vulnerability of stocks in this Group is variable. The management approach for these stocks provides for development opportunities, while minimising management costs and monitoring catch to ensure sustainability of the stocks.

The key indicators used to set and vary management settings for surf clam fisheries include biomass survey information. The previous biomass survey for QMA 7 surf clam stocks was conducted in 1994¹⁵, which were used to set the TAC when they entered the Quota Management System (QMS).

2.2 RATIONALE FOR MANAGEMENT INTERVENTION

2.2.1 Previous Review

The most recent review of the management settings for surf clams in QMA 7 occurred when surf clams were put into the QMS in 2004¹⁶. Maximum Constant Yield¹⁷ (*MCY*) estimates were calculated from abundance estimates from a randomised dredge biomass survey conducted in 1994 in three different areas of QMA 7. The TACs for surf clam stocks in this area have not been revisited since they were set 2004.

¹³ Beentjes, M.P., and S.J. Baird. 2004. Review of dredge fishing technologies and practice for application in New Zealand. New Zealand Fisheries Assessment Report 2004/37.

¹⁴ The Draft National Fisheries Plan for Inshore Shellfish is a working document being used to guide management of shellfish stocks by the Ministry for Primary Industries. The plan will be refined further before being submitted for the Minister’s approval under s11A of the Fisheries Act 1996.

¹⁵ Cranfield, H. J., Doonan, I. J. and Michael, K. P. (1994) Dredge surveys in Cloudy Bay, Marlborough. New Zealand Fisheries Technical Report No. 39.

¹⁶ Cranfield, H.J., and K.P. Michael (2002): Potential area boundaries and indicative TACs for the seven species of surf clam. NIWA Unpublished report to the Ministry of Fisheries, 14p.

¹⁷ $MCY = 0.25 * F_{0.1} * B_0$. $F_{0.1}$ is the fishing mortality rate at which the increase in equilibrium yield per recruit in weight per unit of effort is 10% of the yield per recruit produced by the first unit of effort on the unexploited stock. B_0 is an estimate of the virgin recruited biomass.

2.2.2 Current Status

A biomass survey was conducted in November 2015 in QMA 7 in Cloudy Bay, excluding 500 m either side of the diversion and 1km north of the mouth of the Waiau River. The survey extended from 0 to 8 m water depth (from Chart Datum).

The survey has been reviewed by the SWG and biomass estimates and *MCY* estimates have been determined. All biomass estimates were calculated with a precision greater than the MPI target coefficient of variation of 20%. *MCY* estimates have been calculated for each of the four main species (Table 3) under varying estimates of fishing mortality ($F_{0.1}$).

MCY is considered the maximum constant catch that can be caught each year that is estimated to be sustainable at all probable future levels of species biomass. For all species, $F_{0.1}$ was calculated using growth data from Cloudy Bay in the South Island.

Table 3. Mean values and 95% confidence intervals of *MCY* (t) of four surf clam species in QMA 7 based on variable estimates of $F_{0.1}$ ¹⁸

Species	Biomass (t)	Value of $F_{0.1}$	Mean <i>MCY</i>	95% Confidence Intervals	
				Lower	Higher
PDO	1541	0.36	138.7	95.2	182.2
		0.52	200.3	137.5	263.2
SAE	887	1.06	235.0	168.3	301.8
		1.37	303.8	217.5	390.1
MMI	1009	0.43	108.4	84.9	132.0
		0.57	143.7	112.5	175.0
DAN	1270	0.25	79.4	60.2	98.6
		0.42	133.4	101.2	165.6

Caveats

Due to the uncertainty in $F_{0.1}$ values, the choice of which *MCY* estimates to use from Table 3 should be guided by the review of surf clam catch limits that was undertaken in QMA 8 in 2013. In that instance, for all species other than SAE, MPI considered a less conservative approach was reasonable to estimate a suitable *MCY*. Sustainable catch limits were based on $F_{0.1}$ values towards the higher end of the $F_{0.1}$ value range. Due to high uncertainty in the $F_{0.1}$ values for SAE, however, the SWG has advised using the lower $F_{0.1}$ values when estimating a sustainable *MCY* for this species.

The SWG considers it is also appropriate to account for catch that has already come out of Cloudy Bay when estimating *MCY*, but more work needs to be done on how best to do this.

If the higher *MCY* estimates for each species (other than SAE) are used, then the equivalent exploitation rates, using the biomass estimates in Table 3, range from 10.5% for DAN to 14% for MMI. The exploitation rate for SAE ranges from 26.5% using the lower *MCY* estimate to 34% using the higher *MCY* estimate. The SWG considers that, due to our current limited knowledge of the dynamics of surf clam species, an exploitation rate of 34% carries a higher level of risk.

The SWG also notes that, overall, the estimates of biomass and subsequent estimates of yield are likely to be cautious because:

¹⁸ Estimates of $F_{0.1}$ were calculated based on natural mortality rates from the Wellington west coast and Cloudy Bay. Cranfield, H.J., Michael, K.P., and D.R. Stotter. 1993. Estimates of growth, mortality, and yield per recruit for New Zealand surf clams. New Zealand Fisheries Assessment Research Document 93/20.

- Surf clams are known to exist in the rest of QMA 7 outside the surveyed sites (e.g. Clifford Bay and Rabbit Island) and;
- The analysis was undertaken assuming a survey dredge efficiency of 100%, which is likely to be an over estimate. As a result the survey may underestimate biomass.

MPI notes that the Cloudy Bay survey information has not been extrapolated across the entire QMA 7 surf clam fishery. The *MCY* estimates are based on Cloudy Bay abundance estimates alone. MPI acknowledges that there are other surf clam populations in QMA 7, but without recent survey information there is insufficient information to estimate their potential contribution to overall biomass.

3 Consultation

3.1 SUBMISSIONS RECEIVED

Submissions on the Review of Sustainability Controls for Surf Clam Stocks in QMA 7 Consultation Document were received from the following:

- Pete Watson
- Ngati Whatua Fishing Co. Ltd
- Rarangi District Residents Association
- New Zealand Sport Fishing Council
- Marlborough Recreational Fishers Association
- Mark Bellamy
- Te Ohu Kaimoana
- Cloudy Bay Clams Ltd
- Te Waka a Maui me Ona Toka Forum (verbal)

3.2 SUMMARY OF SUBMISSIONS

A brief summary of the submissions is outlined below.¹⁹ MPI's response to issues raised in the submission can be found within the relevant sections of this Decision Document.

The Marlborough Recreational Fishers Association (MRFA), the Rarangi District Ratepayers Association (RDRA) and the New Zealand Sport Fishing Council (NZSFC) highlighted concerns about the consultation process itself. Specifically, they considered that the four week submission period does not allow for adequate consultation, particularly when they need to consult with a range of interests, members and volunteers. RDRA contacted MPI highlighting that they had not been notified as an affected party to allow for a fair submission period. RDRA also requested further information on the review, which MPI provided.

3.2.1 Option 1

NZSFC, MRFA and RDRA and two other submitters oppose any increase to the TACs and support Option 1, the *status quo*.

These three Groups all submit that as a consequence of commercial harvesting, which necessarily is close to shore, there is a loss of recreational shore fishing (surf casting and kontiki) ability, and an amenity loss from the noise and visual disturbance of the fishery.

These groups are also concerned that the science is insufficient (citing a lack of recent scientific studies) to properly assess the potential effects of surf clam dredging on the

¹⁹ Copies of the submissions are available in Appendix II

environment. These groups consider that a management and research plan should be put in place and a thorough scientific understanding be available prior to any changes to the TAC.

Mark Bellamy supports the New Zealand Sport Fishing Council submission.

Pete Watson submits that increasing tow times and decreasing catch rate are a concern. He is also concerned at the benthic impacts of dredging. No corroborating information was supplied.

3.2.2 Option 2

Te Ohu Kaimoana (Te Ohu) submit that, having consulted Iwi with customary interests in QMA 7, they support an amended variation of Option 2 where a 10 tonne allowance is made for each of the stocks under review. Their submission is supported by the Te Waka a Māui me Ona Toka Forum (TWAM), while Ngati Whatua Fishing Co. Ltd noted their support for the local Tangata whenua in what they decide is the best option for this fishery. TWAM did not furnish a view on quantities to allow for Māori customary harvest.

Cloudy Bay Clams Ltd (CBC) submit that they support Option 2, however, they consider the option to be conservative.

4 Legal Considerations

Relevant legal considerations in the Act are discussed in the following paragraphs.

4.1 SECTION 8 – PURPOSE OF THE ACT

MPI considers that both options presented in this paper satisfy the purpose of the Act in that they provide for utilisation in the QMA 7 surf clam fishery while ensuring sustainability.

Available information suggests both management options will ensure the long term sustainability of the stock. Option 1 is more cautious and reflects the uncertainty in information (see “Information Principles” below) about stock status relative to default target levels and the level of increase in biomass. In contrast, increasing the TACs under Option 2 will allow for increased utilisation of the stocks, at a conservative level which is considered low risk for the short to medium term. This risk would be mitigated by continued monitoring of the fishery and development and implementation of a research programme.

4.2 GENERAL OBLIGATIONS

MPI considers that the management options for the QMA 7 surf clam fishery are consistent with the wide range of international obligations related to fishing, including the use and sustainability of fish stocks, and maintaining biodiversity. All options propose catch limits alongside a broader discussion of the monitoring approach to ensure sustainability.

MPI also considers the proposed management options to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. Ongoing work is being done within the area covered by the QMA 7 surf clam fishery to promote policies that help to recognise customary use and management practices including, but not limited to, maintaining iwi forums and developing Iwi Fisheries Plans.

4.3 SECTION 9 – ENVIRONMENTAL PRINCIPLES

MPI considers that all options presented in this paper satisfy your obligations under section 9 of the Act. A summary of the interactions between the QMA 7 surf clam fishery and the aquatic

environment, and how these are likely to be affected by the proposals in this paper, is provided below.

4.3.1 Associated or dependent species – protected species interactions (section 9(a))

4.3.1.1 Seabirds

Management of seabird interactions with New Zealand's commercial fisheries is driven through the 2013 National Plan of Action to Reduce the Incidental Captures of Seabirds in New Zealand fisheries (NPOA-Seabirds).

There is no information to suggest the surf clam fishery results in adverse interactions with seabirds. MPI does not anticipate any significant change to this assessment based on the proposed TAC adjustments.

4.3.1.2 Marine mammals

While dolphins, including Hector's dolphins, and New Zealand fur seals occur in the general region of Cloudy Bay²⁰, there is no information to suggest that the surf clam fishery interacts with these mammals or has any adverse effects on the populations.

4.3.2 Biological diversity (section 9(b))

Given the specialist fishing method and the slow speed with which dredging is undertaken, bycatch is limited to low numbers of other species of molluscs and some echinoderms (e.g. sand dollars). Limited numbers of flatfish and paddle crab can, on occasion, be captured in the dredge.

While an increase in the TAC is likely to result in increased dredging effort, this effort is localised in sanitation areas and any increase in bycatch is likely to be modest. RDRA submit that there appears to be no recent studies on bycatch. MPI notes there is limited reporting information on bycatch from the QMA 7 surf clam fishery. However, previous survey work in both QMA 2 and QMA 3 considered that most bycaught species are likely to pass through the commercial dredge (because of larger mesh sizes used) with little effect. By-catch rates of different species will also vary depending on the type and depth of the seabed. MPI considers that biological diversity of the area will be maintained under both proposed options given the low numbers and limited range of species bycaught.

MPI notes that further assessment of bycatch composition would be one stream of work that should be included in the research plan for surf clams that will be developed in 2016.

4.3.3 Habitats of significance to fisheries management – (section 9(c))

4.3.3.1 Benthic impacts

Previous research²¹ has concluded that use of hydraulic dredges in the surf clam fishery has little adverse effect on the surf zone substrate where surf clams are found. There is little evidence of dredge tracks on the substrate within 20 minutes of use and no evidence within 24 hours. These shallow water environments are subject to frequent natural disturbance and tend to recover faster from the effects of mobile fishing compared to those in deeper water. Similarly, the species that live in these systems must adapt to turbulence and shifting sand.

²⁰ Cloudy Bay is within the Clifford and Cloudy Bay Marine Mammal Sanctuary which was established in 2008.

²¹ Beentjes, M.P., and S.J. Baird. 2004. Review of dredge fishing technologies and practice for application in New Zealand. *New Zealand Fisheries Assessment Report 2004/37*.

Pete Watson and RDRA submit there is insufficient information to corroborate that hydraulic dredging has minimal environmental impact. MPI consider the information above is sufficiently reliable to make decisions in the short-medium term. MPI considers that further work to assess the ecological consequences of widespread and intensive use of hydraulic dredges should be required as part of the research plan.

RDRA submits concern about the effects of the fishery on the food web. MPI notes that surf clams will play a role in the coastal marine food webs, however, there is very limited information on this matter. Internationally there are no keystone species in this environment and predation is not important in structuring the community.

4.4 SECTION 10 – INFORMATION PRINCIPLES

MPI considers that the best available information has been used as the basis for the recommendations herein. All science information upon which the management options are based has been peer reviewed by MPI's Fisheries Assessment Working Groups and meets the Research and Science Information Standard for New Zealand Fisheries.

4.5 SECTION 11 – SUSTAINABILITY MEASURES

Under section 11 of the Act, before setting or varying any sustainability measure for any stock, you must:

- a) Section 11(1)(a): take into account any effects of fishing on any stock and the aquatic environment. All information relevant to your decision is discussed above under 'Section 9 - Environmental Principles'.
- b) Section 11(1)(b): take into account any existing controls under the Act that apply to the stock or area concerned. For this stock the measures that apply currently are a TAC, TACC, and allowances for customary take, recreational take, and incidental fishing-related mortality. Other standard management controls apply to the QMA 7 surf clam fishery, for example deemed values, amateur bag limits, and fishing method constraints. The proposed changes to the TAC do not affect these measures.
- c) Section 11(1)(c): take into account the natural variability of the stock. The management approach used for the QMA 7 surf clam fishery accounts for the biological characteristics of surf clams and takes into account the factors that are thought to drive the natural variability of the stock.
- d) Sections 11(2)(a) and (b): have regard to any provisions of any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991 and any management strategy or management plan under the Conservation Act 1987 that apply to the coastal marine area and that you consider relevant. MPI considers that both options proposed are consistent with the Hector's Dolphin Threat Management Plan. MPI is not aware of any other policy statements, plans or strategies that should be taken into account for the QMA 7 surf clam fishery.
- e) Section 11(2)(c): have regard to sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and that you consider relevant. The boundaries of the quota management area for this stock do not intersect with the Hauraki Gulf Marine Park boundaries.
- f) Section 11(2)(d): have regard to any planning document lodged by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011. No planning documents applicable to the QMA 7 surf clam fishery have been lodged.

- g) Section 11(2A)(b): take into account any relevant fisheries plan approved under section 11A. No plans have been approved under section 11A that you need to take into account.
- h) Sections 11(2A)(a) and (c): take into account any conservation or fisheries services, or any decision not to require such services. MPI does not consider that existing or proposed services materially affect the proposals for the QMA 7 surf clam fishery. No decision has been made to not require a service in this fishery at this time.

4.6 SECTION 12- CONSULTATION

In addition to the consultation considerations discussed elsewhere, Section 12(1)(b) requires that you provide for the input and participation of tangata whenua and have particular regard to kaitiakitanga before setting or varying a TAC. Te Waka a Māui me Ōna Toka iwi forum was approached for their collective view on surf clams in QMA 7 prior to consultation. No collective views were provided by Te Waka a Māui me Ōna Toka.

4.7 SECTION 13(2A) – SETTING THE TAC

The best available information that MPI currently has on the QMA 7 surf clam fishery is insufficient to enable reliable estimates of B_{MSY} for the four surf clam stocks being reviewed.

Where reliable estimates of stock status in relation to B_{MSY} are not available, s 13(2A) of the Act requires the Minister to use 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. The options proposed provide you with a choice on how to fulfil your obligations under section 13(2A).

The best available information shows that the biomass of PDO, SAE, DAN and MMI stocks in Cloudy Bay are larger than the 1992 biomass survey results. While increasing the TAC under Option 2 and Option 2a would slow the rate at which biomass is increasing toward or above B_{MSY} . MPI considers that all the options considered enable you to set a TAC that is not inconsistent with the objective of maintaining the stock at or above B_{MSY} , or moving the stock towards or above, B_{MSY} .

Under section 13(3) of the Act, you must consider the relevant social, cultural and economic considerations in determining an appropriate way and rate to move the stock towards or above a level that can produce the maximum sustainable yield. There is no statutory guidance on what an appropriate ‘way and rate’ might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in this document.

As discussed above, the TAC options presented in this Decision Document take into account the requirements listed in s 13(2A) and 13(3) of the Act, and offer differing approaches to managing the sustainability of the fishery given the available information.

4.8 SECTIONS 20 & 21 – ALLOCATING THE TAC

The TAC must be apportioned among the relevant sectors and interests as required under sections 20 and 21 of the Act. Section 21 prescribes that you shall allow for Māori customary non-commercial interests, recreational fishing interests, and for any other sources of fishing-related mortality, before setting the TACC.

The Act does not prescribe how catch between sector groups is to be apportioned either in terms of a quantitative measure or prioritisation of allocation. Accordingly, you have the discretion to make allowances for various sectors based on the best available information. In the event of imperfect information, you are entitled to be cautious.

4.8.1 Recreational allowance

As discussed above (see Section 2.1.2.2), because of difficult access, there is very limited recreational harvest of surf clams with the possible exception of PDO. Consultation explicitly sought any further information on recreational take. Examination of commercial catch effort landing returns has revealed modest section 111 recreational landings for all four species.

While the information on recreational catch is uncertain, all options presented allow for some recreational take of PDO, while Option 2a allows a nominal 1 tonne for all four species.

As there are no areas closed to commercial fishing methods made under section 311 of the Act in place in QMA 7, section 21(5) is not relevant to your assessment when allowing for recreational interests in this case.

4.8.2 Māori Customary allowance

For the reasons set out in section 2.1.2.3, MPI did not consult on an increase in the allowances for customary fishing for the QMA 7 surf clam fishery but explicitly sought information from submitters on customary take. Documented information on the level of customary catch is uncertain and MPI had no new information, since the TAC was set in 2004 upon which to alter allowances for customary take. Subsequently, submissions have provided new information. TWAM has verbally submitted that iwi access customary take of surf clams from strandings after storms, and that catch is taken on behalf of customary (under customary permit) by commercial vessels.

Te Ohu has submitted that an allowance of 10 tonne for each of the four species should be made for Māori customary harvest. Te Ohu consider that “Iwi access the full range of surf clam species to support hui and tangi functions, and have been doing so for some time. We see no good reason why a 10 tonne customary allowance shouldn’t be made for each of the stocks under review. The nine Iwi having interests in these QMA7 stocks support a network of marae throughout Te Tau Ihu and the broader South Island, and there is a strong population base. A 10 tonne allowance for each stock is appropriate.”

MPI notes that the allowance for customary use is not set to constrain customary take, but to reflect actual levels of current utilisation. MPI also notes that 40 tonnes of surf clams is a large volume. There is also an argument that collection of surf clams after storms via strandings are part of the natural mortality of the species and should not be counted against an allowance. Overall, given the new information on customary take, MPI proposes to increase the amount allowed for Māori customary harvest to 5 tonne for each of the four surf clam species and to continue to monitor customary harvest with a view to alter the allowance settings, if required, in the future.

The Whakapuaka (Delaware Bay) Taiāpure, and the Te Tai Tapu (Kaihoka and Anatori), Manakiaiaua/Hunts Beach, Mahitahi/Bruce Bay, Tauperikaka, Okarito Lagoon and Okura/Mussel Point mātaihai reserves are all within QMA 7. MPI notes that the proposals in this paper will not impact on, or be impacted by, these taiāpure and mātaihai reserves. The QMA 7 surf clam fishery does not overlap with the fisheries waters covered by section 186A of the Act; therefore, this criterion is not relevant to your assessment.

4.8.3 Other sources of fishing-related mortality

Information to inform the setting of an allowance for other sources of fishing-related mortality is uncertain. In the absence of information specific to the QMA 7 fishery, MPI is proposing an allowance for other sources of fishing-related mortality be set that is equivalent to approximately 5% of the proposed TAC for each surf clam stock (Options 2 and 2a). This proportion is based on the lower end range of previously estimated incidental mortality on earlier gear configurations.

If you consider this value should be greater, you are free to set an allowance accounting for other sources of fishing-related mortality that is larger. However, MPI considers this proportion would take account of the various sources of incidental fishing-related mortality and be consistent with the approach taken to-date in other surf clam stocks.

4.8.4 TACC

Options 2 and 2a propose TACC increases for PDO 7, SAE 7, DAN 7 and MMI 7. These TACCs are supported by the 2015 biomass survey estimates and would reflect recent commercial catch levels for some species.

Retaining the current TACC under Option 1 would result in opportunity loss for the commercial sector. This is because the *status quo* does not enable the commercial sector to fish at a level that reflects the greater available abundance in the fishery since the previous TACCs were set. Options 2 and 2a would benefit commercial fishers by enabling increased catch rate efficiencies and the potential for greater future yields.

4.9 SECTION 75 – DEEMED VALUE RATES

MPI has consulted on changes to the SAE7 and PDO7 deemed values. A discussion of the deemed value rates consulted on and subsequent recommendations are included in Part B of this document.

5 Management Options

5.1 ANALYSIS OF OPTIONS

MPI consulted on two options for setting the TAC, TACC, and allowances for four species of surf clams in QMA 7. The final options differ from those consulted on, by including an Amended Option 2 (“Option 2a”) to provide for greater customary allowances and reduced TACCs (refer Table 1). Option 1 retains the *status quo*, while Options 2 and 2a increase the TACs, TACCs, and allowances for other sources of fishing-related mortality for all four stocks. MPI notes that ongoing monitoring of the QMA 7 surf clam fishery will occur to enable catch levels to be adjusted in response to any future biomass changes.

5.1.1 Option 1

Under Option 1, the existing TAC would be retained. The TACC or allowances for Māori customary, recreational or other sources of fishing related mortality would be retained in line with the *status quo*.

Five submitters support Option 1. They base their submissions on concerns over the impact of greater extraction on the environment and the functioning of the ecosystem. They submit that there is insufficient recent scientific information available upon which to justify an increase in harvest levels. They are also concerned about the effects on benthic habitat from hydraulic dredging.

MPI agrees that there is scope for improved information, but considers that the quality and quantity of available information is sufficient to inform good decision making.

The five submitters are also concerned at the loss of amenity values given the close proximity of the fishing to the shore, and that, increased fishing activity will exacerbate an already unsatisfactory situation. Recreational and local area residents have raised concerns about the noise and visual impacts of fishing. These issues are beyond the scope of your considerations. However, they also report loss of recreational fishing access because of commercial dredging in shallow waters (as low as three metres depth), which cuts across areas where they surf cast and use kontiki. They submit the activity is intimidating and potentially dangerous.

MPI sought comment from the commercial fisher (CBC) who submitted they had fished the area for over 20 years, before the development of much of the settlement. CBC also note that they have recently developed a surf clam fishery in QMA 8 and as a consequence will not be fishing at the same intensity in Cloudy Bay. CBC estimate they will fish less than 100 days a year. CBC has also invited a RDRA member to be involved in the development of the commercial fishery management programme. In the first instance, MPI favours discussions between CBC and RDRA to find local solutions to this fishery overlap and whether voluntary agreements can be reached on fishing times and frequencies.

The current TACs were established in 2004 when surf clams were first put into the QMS. While TACCs were based on *MCY* estimates from 1994 and historic commercial landings, the SWG considers these estimates should be treated with caution. The surf clam fishery is a developing fishery and these settings may no longer be appropriate and are not consistent with the recent biomass survey information for Cloudy Bay in particular.

This option takes a cautious approach to change, and places little weight on the new biomass information. MPI considers it appropriate to review the TAC to ensure that, based on best available information, it is set at a level that is not inconsistent with the objective of maintaining or moving the stock biomass towards or above B_{MSY} as well as providing for development opportunities and enabling utilisation.

Overall, Option 1 is less consistent with this objective than Options 2 and 2a because it unnecessarily limits development and utilisation opportunities.

Impact

The available information suggests there is potential for increased economic benefits that would not be realised under Option 1. The most recent biomass estimates indicate the fishery for some surf clam stocks could support further fishing.

MPI considers that retaining the TACC for PDO 7 DAN 7, MMI 7 and SAE 7 will constrain development of the fishery, where species abundance has been shown to be much greater than the current management settings. Retaining the current TACs and TACCs will result in opportunity loss through unnecessarily constrained catch.

Similarly, Option 1 does not adjust the allowances for Māori customary harvest and MPI has new information from submissions that the allowances do not adequately provide for customary harvest. Nor does Option 1 allow for new information on recreational harvest

5.1.2 Option 2

Option 2 proposes an increase to the TAC for four surf clam stocks to enable greater sustainable utilisation (refer to Table 1).

Option 2 is based on the *MCY* estimates from the November 2015 biomass survey and takes into account the uncertainties associated with the survey. The surf clam TACs proposed reflect the lower mean *MCY* (Table 3) for PDO 7, SAE 7, MMI 7, and DAN 7, and for SAE 7 reflect the *MCY* estimate at the lower $F_{0.1}$ value.

MPI notes that the TACs would apply to the whole of QMA 7 but represent only a small portion (the biomass survey area) of the potential fishery. That is, MPI has not extrapolated the biomass survey area estimates to the wider QMA. MPI also notes that the fishery is constrained to those parts where approved sanitation areas are established, and that the fishing mortality estimates assumes 100% dredge efficiency, which make the proposed catch limits more cautious.

While Option 2 poses a greater sustainability risk to the surf clam stocks than Option 1, this risk is considered to be low. MPI considers that Option 2 is consistent with maintaining or moving the stock to a level at or above B_{MSY} . Under Option 2 there will be greater fishing impacts on the benthic environments (see Environment Impacts section) that have been given sanitation clearance, however, these areas are naturally subject to regular and high levels of disturbance through wave action and storm events.

Option 2 does not take account of new information about Māori customary use, nor does it take account of section 111 recreational access. Therefore, these allowances are unchanged and do not provide for the relevant harvest.

Impact

Increasing the TAC will provide an opportunity to allow for greater utilisation and economic benefits obtained from the fishery. The proposed catch limits for these selected stocks will enable industry to develop the surf clam fishery and increase the potential economic value derived from these stocks.

Based on an export price of \$8.00 per kilogram provided by industry, a 436 tonne increase in commercial catch (across all four surf clam stocks) is potentially worth approximately \$3.48 million annually.

5.1.3 Option 2a

Option 2a proposes the same TAC, supporting rationale and risks as described in Option 2 above. However, Option 2a redistributes the TAC differently across sector groups compared to Option 2. New information from submissions on the Māori customary allowance suggests that current settings do not provide for current levels of catch. While allowances for customary use do not constrain catch, but reflect levels of current utilisation, MPI considers it appropriate to increase the quantities that allow for Māori customary harvest be increased to five tonnes for each of the four surf clam species being reviewed (see Section 4.8.2).

The limiting factor for recreational harvest is physical access to surf clam populations. This restricted accessibility has not changed, however, new information shows recreational harvest has been taken under section 111 approvals. Therefore, nominal one tonne increases to the allowances for recreational fishing for SAE 7, MMI 7 and DAN 7 are proposed (see Section 4.8.1)

Information to determine the setting of the allowance for other sources of mortality for surf clams is uncertain. In the absence of area-specific information, MPI proposes that an allowance be set that equates approximately to 5% of the TAC (rounded up to the nearest whole number) to account for other sources of fishing-related mortality in each of the surf clam stocks.

Impact

Based on an export price of \$8.00 per kilogram provided by industry, a 414 tonne increase in commercial catch (across all four surf clam stocks) is potentially worth approximately \$3.3 million annually.

6 Other Matters

6.1 DEEMED VALUES

Deemed values are an economic tool that incentivises commercial fishers not to catch in excess of their individual annual catch entitlements. An analysis and recommendation of the deemed value rates for SAE 7 and PDO 7 are discussed in Part B of this paper.

6.2 RECREATIONAL CONTROLS

There is no information to suggest a change to recreational regulations would be needed to implement your decisions and no changes to the relevant recreational daily bag limit are proposed.

6.3 FUTURE MANAGEMENT CONSIDERATIONS

The proposed catch limits of these surf clam stocks, using the current *MCY* estimates, are considered to have a low sustainability risk in the short-medium term. MPI considers further monitoring of the fishery will be needed to maintain confidence in the on-going sustainability of the fishery.

MPI's Shellfish Working Group has recommended moving the QMA 7 surf clam fishery away from an *MCY* management strategy towards an exploitation rate management strategy, and that a new management and research plan be developed for surf clams in 2016 to support this shift. MPI will work with CBC to develop a new management and research plan, using the Shared Fisheries approach as a model for building community and stakeholder support.

Submissions that assert the fishery is being developed in the absence of a management and research plan are inaccurate. Rather, MPI is taking the opportunity to support development of this fishery by revisiting the science and management approach used to date. This will ensure that future work is fit-for-purpose and provides the level of information required to assess more intensive fishing activity should the fishery develop.

6.4 OTHER MATTERS RAISED IN SUBMISSIONS

RDRA and MRFA both submit that the presence of surf clam fishing affects amenity values of the Rarangi community, including noise and visual impacts. MPI considers that these issues are not relevant to your functions under the Fisheries Act and are more appropriately dealt with under the Resource Management Act 1991.

7 Conclusion

MPI's preferred option is Option 2a (see Table 1) – increasing the TAC of four surf clam stocks in QMA 7 by a combined 472 tonnes, increasing the combined TACC by 414 tonnes, increasing the allowance for recreational interests, increasing the allowance for Māori customary, and setting an allowance for other sources of fishing-related mortality at 5% of the proposed TACC for each stock.

The 2015 biomass survey of surf clams in Cloudy Bay (within QMA 7) has provided the most up-to-date information to estimate sustainable yield of four surf clam species. This information suggests there is an opportunity for increased benefits to be derived from the fishery through setting higher catch limits.

Both Options 2 and 2a recognise that available biomass in the fishery would allow for the opportunity to increase sustainable utilisation, but still proposes harvest levels that are considered conservative compared to available biomass as they only reflect abundance estimates for Cloudy Bay and do not account for likely biomass in other areas of QMA 7 (e.g. Clifford Bay and Rabbit Island). The proposed increase to the TACs will enable greater economic benefits, and make more ACE available for the commercial fishery.

MPI considers the proposed commercial catch level under these options will not have an adverse impact on the sustainability of the surf clam stocks in QMA 7 in the short to medium-term, nor on Māori customary or recreational use opportunities. The proposed TACs will allow greater economic return, and reflect the developing nature of the fishery. Option 2a better takes into account new information and information received from submissions on Māori customary harvest and recreational take than Option 2.

Retaining the *status quo* (Option 1) is a most cautious approach to managing the fishery, which is likely to unnecessarily constrain the fishery, and does not reflect the best available information from the 2015 biomass survey. However, MPI considers all options are consistent with your statutory obligations.

MPI notes that you have broad discretion in exercising your powers of decision making, and may make your own independent assessment of the information presented to you in making your decision. You are not bound to choose the option recommended by MPI.

MPI notes that regardless of your decision, work will continue in 2016 on the development of a management and research plan for the national surf clam fishery. Given the visible nature of the fishery in the nearshore environment, MPI will use the Shared Fisheries approach as a model to encourage engagement with industry and local communities as these fisheries develop.

PART B: DEEMED VALUE RATES

1 Executive Summary

The Ministry for Primary Industries (MPI) recommends that you consider the deemed value rates for the fish stocks identified below. Your decisions will be effective from 1 April 2016.

MPI has identified six stocks for deemed value review. Proposals for adjustments to these deemed value rates were developed based on statutory requirements, the Guidelines²², and key information. These reviews have been undertaken because the TAC for the relevant stock is also being reviewed in 2016, which has consequential implications for deemed value rates, or the TACC has been over-caught for a period.

Three of the stocks; triangle shell clam (SAE7), deep water tuatua (PDO7) and sea cucumber (SCC3), have recommendations to increase deemed value rates across the board and to increase interim deemed value rates from 50% to 90% of the annual deemed value rate to encourage more regular balancing throughout the year with Annual Catch Entitlement (ACE). If fishers do not regularly balance catch with ACE during the year, then there is a risk of insufficient ACE being available to cover catch at the end of the year and overcatch of the TACC.

MPI has also analysed relevant information for Coromandel scallops (SCACS), giant spider crab (GSC5) and southern blue whiting (SBW1) and is not recommending any changes to the deemed value rates for these stocks.

The proposals have been assessed in terms of the relevant statutory requirements, the best available information, and tangata whenua and stakeholder input.

2 Purpose

Deemed value rates are prescribed by Gazette Notice under section 75 of the Fisheries Act 1996. Commercial fishers who do not balance catch with ACE monthly must make deemed value payments. The deemed value regime is intended to constrain commercial catch to respective catch limits by encouraging fishers to balance their catch with ACE, while not discouraging them from landing and accurately reporting catch.

3 The Deemed Value Framework

The QMS is the backbone of the New Zealand fisheries management regime which covers 100 species managed within 638 fish stocks. The framework that encourages balancing catch against catching rights (ACE) is known as the catch balancing regime and is fundamental to ensuring integrity of the overall system.

On the first day of the fishing year, all quota owners for a given stock are provided with ACE based on their quota share and the current TACC. Under the catch balancing regime, fishers are required to balance their catch with ACE or pay a deemed value on catch in excess of the ACE they hold.

²² The Guidelines are explained in Section 5.2 'Deemed Value Guidelines' of this document (see Appendix 1 for the full Guidelines)

Effective deemed value rates contribute to both sustainability and utilisation objectives. Sustainability objectives are achieved as deemed value rates encourage fishers to balance catch with ACE and, in doing so, encourage harvesting to remain within the TACC. Utilisation objectives are achieved by maintaining the long term value of the stock by ensuring sustainable harvesting but also providing limited flexibility to allow fishers to manage occasional, small amounts of over-catch in multi-species fisheries.

There are two different deemed values used as part of the balancing regime. The annual deemed value is charged at the end of the fishing year on catch in excess of ACE held at the time. Interim deemed value rates are charged each month to commercial fishers for every kilogram of fish landed in excess of the ACE they hold. Interim deemed value rates are intended to provide an incentive for fishers to source ACE during the year instead of leaving catch balancing until the end of the year, while not unduly penalising them. Typically, the interim deemed value rates are set less than the annual rates. 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 the fishing year, the difference between the interim and annual deemed value rates is charged for all catch in excess of ACE.

Differential deemed value rates, if applicable, are also charged at the end of the fishing year if the fisher harvested well in excess of his or her ACE holdings. Differential rates reflect the increasingly detrimental impact of higher levels of over-catch on sustainability and on the long-term value of the resource. They are intended to provide increasingly stronger incentives to avoid excessive over-catch. This results in an escalated schedule of rates as the percentage by which catch exceeds ACE increases. The standard differential rate increases in 20% increments up to a maximum of 200% of the annual deemed value rate. However, for stocks that are more biologically vulnerable or for rebuilding stocks, a more stringent non-standard differential or variable deemed value schedule (e.g. applying from 5% or 10% over-catch) may be more appropriate than the standard schedule.

3.1 IDENTIFYING STOCKS FOR DEEMED VALUE REVIEW

Before determining which stocks' deemed value rates are to be reviewed, MPI:

- invited stakeholders to nominate stocks for deemed value rate reviews, in the context of discussions as part of the annual fisheries planning process;
- considered stocks where total allowable catch reviews were being undertaken for 1 April 2016;
- assessed April stocks against the Performance Measures outlined in the Guidelines for the deemed value framework.
 - Catch in excess of the TACC.
 - The percentage of catch for each stock for which catch is not balanced with ACE.
 - The ratio of the total deemed value payments to the value of quota (at a general and stock level) – the target in relation to this indicator is less than 0.1% of the value of quota in any fishing year, and;
- for stocks identified above considered whether interim deemed value rates were consistent with the Guidelines (90% of annual deemed value rate and how deemed value rates relate to ACE and Landing Price).

Table 1 sets out the prioritised stocks and their assessment against the Performance Measures listed above.

Table 1: Assessment of fish stocks prioritised for review (DV = deemed value)

Stock	Rationale for review
SCACS	<ul style="list-style-type: none"> - Subject to a sustainability review in 2016 - 34% of TACC caught in 2014/15 - 34% of available ACE caught in 2014/15 - Unable to derive a ratio of DV to QV
SAE7	<ul style="list-style-type: none"> - Subject to sustainability review in 2016 - 215% of TACC caught in 2014/15 - 213% of available ACE caught in 2014/15 - Unable to derive a ratio of DV to QV
PDO7	<ul style="list-style-type: none"> - Subject to sustainability review in 2016 - 108% of TACC caught in 2013/14 - 102% of available ACE caught in 2014/15 - Unable to derive a ratio of DV to QV
GSC5	<ul style="list-style-type: none"> - 422% of TACC caught in 2014/15 - 422% of available ACE caught in 2014/15 - Unable to derive a ratio of DV to QV
SBW1	<ul style="list-style-type: none"> - 364% of TACC caught in 2014/15 - 361% of available ACE caught in 2014/15 - Unable to derive a ratio of DV to QV
SCC3	<ul style="list-style-type: none"> - 109% of TACC caught in 2014/15 - 100% of available ACE caught in 2014/15 - 219% already caught in 2015/16 - Unable to derive a ratio of DV to QV

4 Consultation

MPI consulted on the proposed changes, following its standard consultation process. Initial proposals are outlined in Table 2 below.

Table 2: Current and proposed deemed value rates for April stocks

Species	Stock	Current				Proposed			
		Interim \$	Annual \$	Annual 200% \$	Differential	Interim	Annual \$	Annual 200% \$	Differential
Coromandel scallops	SCA CS	18.50	37.00	74.00	Standard				No change
Giant spider crab	GSC5	0.09	0.10	0.20	Standard				No change
Southern blue whiting	SBW1	0.41	0.46	0.92	Standard				No change
Triangle shell clam	SAE7	0.51	1.02	2.04	Standard	4.50	5.00	10.00	Standard
Deepwater tuatua	PDO7	0.72	1.44	2.88	Standard	4.50	5.00	10.00	Standard
Sea cucumber	SCC3	1.80	2.00	8.00	Variable	13.50	15.00	30.00	Standard

4.1 SUBMISSIONS RECEIVED

MPI received seven submissions relating to the recommended changes. Submissions were received from:

- Cloudy Bay Clams Limited (Cloudy Bay)
- New Zealand Wild Catch Limited (NZWC)
- Rarangi District Residents Association (RDRA)
- The New Zealand Sport Fishing Council, LegaSea, and the New Zealand Angling and Casting Association (Joint Recreational Submission)
- Te Ohu Kaimoana (TOKM)
- Ngati Whatua Rūnanga
- South Island Iwi Forum (Te Waka a Maui)

4.2 SUMMARY OF SUBMISSIONS

Submitters' comments on rate changes for specific stocks are addressed in the analysis of each species below. Full copies of submissions are available in Appendix II.

Other issues raised in the submissions centre around the deemed value framework itself. Though not within the scope of this deemed value review for individual stocks, these views are summarised below for your information, and brief MPI responses are provided.

A recurrent issue raised by Cloudy Bay is that TACCs for surf clams are; set too low, do not reflect the abundance of the stocks, are an unnecessary constraint on commercial catch and that the deemed value proposals will impact profitability in rapidly developing fisheries. The Joint Recreational Submission and the RDRA submit that increased deemed value rates as proposed will be offset by rewarding surf clam fishers with additional quota (refer Part A of this paper).

The setting of deemed value rates is a separate process from setting TACCs and MPI rejects assertions that proposals for increased deemed value rates and increased TACC are linked. Your decision to set deemed value rates should not be influenced by whether or not submitters consider the TACC for a stock is set correctly. Likewise the profitability of fishing beyond the TACC is not a relevant consideration. This is reinforced by case law, which indicates that the appropriateness of the TACC is not a relevant consideration, when setting deemed value rates.

Every year MPI reviews TACCs, prioritising stocks based on available information and stakeholder input. These views were taken into account with the identification of SAE7 and PDO7 in 2015 as candidate stocks for catch limit reviews in 2016. Regardless, the deemed value rates recommended in this paper are aimed at encouraging fishers to cover all catch with ACE and at maintaining the integrity of either the current or recommended TACCs to ensure sustainability.

The Joint Recreational Submission is also concerned about the deemed value framework itself and the application of relevant policy.

MPI notes that careful consideration of the relevant policy from 2007-11 resulted in the adoption of the current Guidelines which clarify the reasons given for advice on deemed value rate adjustments. The level at which annual deemed value rates are set is directly related to an array of complex variables such as operating costs, ACE prices, transaction costs

of acquiring ACE, and landed fish prices. When any factor changes, so do the incentives created by the deemed value rates. Accordingly, deemed value rates are reviewed annually and assessed to ensure incentives remain effective. MPI has designed an administrative system to support deemed value rate settings that is proactive and anticipates, and addresses problems. MPI favours making frequent, small changes to deemed value rates, rather than waiting for major problems to arise and then make very large changes which can have significant impacts on industry. We consider this approach best incentivises fishers to make changes to their fishing behaviour.

5 Legal Considerations

5.1 FISHERIES ACT

Section 75 of the Act provides the statutory framework for setting deemed value rates. Section 75(1) requires you to set annual and interim deemed value rates for all stocks managed under the QMS.

When setting these rates, you are required under section 75(2)(a) to take into account the need to provide an incentive for every commercial fisher to acquire or maintain sufficient ACE each fishing year that is not less than the total catch of the stock taken by that commercial fisher.

Section 75(2)(b) specifies the matters that you may have regard to when setting deemed value rates for a stock. These are:

- the desirability of commercial fishers' landing catch for which they do not have ACE;
- the market value of ACE for the stock;
- the market value of the stock;
- the economic benefits obtained by the most efficient commercial fisher, licensed fish receiver, retailer, or any other person from the taking, processing, or sale of fish, aquatic life or seaweed;
- the extent to which catch of that stock has exceeded or is likely to exceed the TACC for the stock in any year; and
- any other matters that you consider relevant.

Section 75(3) specifies that the annual deemed value rate must be greater than the interim deemed value rate. Furthermore, you may choose to set, under section 75(4), differential deemed value rates for specific stocks. Section 75(5) allows you to set different deemed value rates for fish landed in the Chatham Islands, reflecting the unique marketing conditions of those landings. Section 75(6) requires that you should not have regard to personal circumstances or set separate deemed value rates in individual cases. Under section 75(7) you may vary deemed value rates to take effect at the start of the next fishing year. Before setting deemed value rates, you must consult with stakeholders and tangata whenua that have an interest in the stock, as required by section 75A.

5.2 DEEMED VALUE GUIDELINES

Within the statutory framework, you have considerable discretion when setting deemed value rates. In developing advice to you, MPI recommends deemed value settings that are consistent with section 75 and other relevant provisions of the Act. In doing so, Guidelines have been developed after consulting with stakeholders.

However, the Guidelines do not bind you. They serve only as a guide and do not preclude you from taking into account relevant information on a case by case basis. When making decisions on deemed value rates, you use the statutory criteria in making decisions and can act within the bounds of the statute, notwithstanding the Guidelines.

The practical application of the statutory criteria is expressed in the Guidelines, as summarised below (see Appendix 1 for the full Guidelines):

- deemed value rates must generally be set between the ACE price and the landed price;
- deemed value rates must generally exceed the ACE price by transaction costs;
- deemed value rates must avoid creating incentives to misreport;
- deemed value rates for constraining bycatch species may be higher than for target species;
- deemed value rates must generally be set at twice the landed price for high value single species fisheries and species subject to international catch limits;
- deemed value rates for Chatham Island landings may be lower;
- interim deemed value rates must generally be set at 90% of the annual deemed value rate;
- differential deemed value rates must generally be set.

6 Management Options

6.1 ANALYSIS OF OPTIONS

MPI recommends that you approve changes to deemed value rates for selected stocks as outlined in Table 2. These options are the same as those consulted on.

Relevant fishery information is also discussed alongside the proposals in this section.

6.2 STOCKS TO BE CONSIDERED IN CONJUNCTION WITH CURRENT TACC DECISIONS

6.2.1 Coromandel scallops (SCACS)

A review of the deemed value rates has been put forward to accompany your review of the TACC for Coromandel scallops (SCACS). Fishery information and TACC recommendations for this stock are outlined in Part A of this paper.

In the SCACS quota management area scallops are taken as a target species of dredging. The deemed value rates for SCACS remain unchanged from 2002 when the stock was introduced into the QMS. No changes were proposed for the 1 April 2016 fishing year since in terms of the current deemed value rates the fishery is performing within the Performance Measures.

6.2.1.1 Submissions

TOKM and the Ngati Whatua Runanga agree with the MPI proposal to retain current deemed values for SCACS.

The Joint Recreational Submission notes that since recent catches are unconstrained by the TACC the deemed value rates holds no relevance.

6.2.1.2 MPI Response

In response to the Joint Recreational Submission MPI draws your attention to the recommendation in Part B of this paper to decrease the TACC for SCACS. If approved, the deemed value regime will be more important as a measure to constrain fishers to the smaller amount of available ACE.

6.2.2 Recommendation

No change is recommended for the 1 April 2016 fishing year since in terms of the current deemed value rates the fishery is performing within the Performance Measures.

6.3 STOCKS TO BE CONSIDERED DUE TO OVER-CATCH AND IN CONJUNCTION WITH CURRENT TACC DECISIONS

A review of the deemed value rates has been put forward to accompany your review of the TACC for surf clam stocks in Quota Management Area 7 (PDO and SAE). However, the key rationale for reviewing the deemed value rates for these stocks is that the performance criteria of over-catch and high deemed value payments compared to quota value have been triggered. These stocks have had TACCs over-caught in the 2014/15 fishing year (and for SAE7 in the four previous years as well). In addition, the interim deemed value rates are set at 50% of the annual rate meaning there are weak incentives for fishers to balance catch with ACE before the end of the fishing year and there is no differential rate for increasing levels of over-catch. These issues increase the risk of over-catch of the TACCs.

6.3.1 Triangle shell clam (SAE7) and deepwater tuatua (PDO7)

SAE7 and PDO7 are surf clam species caught by dredge and mainly as a target species. SAE7 catch has exceeded the TACC in the five most recent fishing years since the stock was introduced into the QMS in 2004 (by a maximum of 215% in 2014/15 – refer Table 1). PDO7 catch has exceeded the TACC only in the most recent fishing year since the stock was introduced into the QMS in 2004. Table 3 sets out relevant information on the stocks.

Table 3: Information to support review of deemed value rates of surf clams

Stock	Quota Value (QV) \$/kg	ACE \$/kg	Interim Deemed Value (DV)\$/Kg	Annual DV \$/kg	Port Price \$/kg	Ratio of total DV paid to total QV
SAE7	n/a	0.54	0.51	1.02	5.00*	n/a
PDO7	n/a	0.46	0.72	1.44	5.00*	n/a

Discussions with vessel operators and quota owners prior to consultation had indicated the port price of both species is greater than surveyed by the most recent port price index. These stakeholders assert port prices paid have risen to \$5.00 / kg for target-caught fish and is the best available information to review the deemed value rates for SAE7 and PDO7 since both species share the same market.

Table 4: Current and recommended deemed value rates \$/kg for SAE 7

Stock	Option	Interim	Annual 100-120%	Annual 120-140%	Annual 140-160%	Annual 160-180%	Annual 180-200%	Annual 200%+
SAE7	Current	0.51	1.02	1.02	1.02	1.02	1.02	2.04
SAE7	Recommended	4.50	5.00	6.00	7.00	8.00	9.00	10.00
PDO7	Current	0.72	1.44	1.44	1.44	1.44	1.44	2.88
PDO7	Recommended	4.50	5.00	6.00	7.00	8.00	9.00	10.00

Consistent with the Guidelines, MPI proposed in its consultation document to increase the proportion of the annual deemed value rate at which interim deemed value rates are set from 50% to 90% and to raise deemed value rates across the board in accordance with deemed value guidelines.

6.3.1.1 Submissions

Cloudy Bay submits that there is no need to amend the deemed value rates for surf clams since:

- proposals are significantly out of step with the ACE prices; and
- will impact negatively on Māori access to the fisheries.

The RDRA supports an increase in deemed value rates for surf clams (as proposed) but suggests as a true disincentive, deemed values rates should be based on double the export value of the species.

The Joint Recreational Submission notes that the current deemed value rates have failed to constrain catches to the TACCs and submits the proposed increased deemed value rates are unlikely to discourage overcatch given the export price is conservatively estimated at \$8.00/kg.

Te Waka a Maui strongly support the setting of deemed values for these stocks that create a strong disincentive to catch in excess of ACE.

6.3.1.2 MPI Response

MPI does not believe proposals are out of step with ACE prices. In general, deemed value rates should be set above the ACE price to provide an incentive to balance catch with ACE.

MPI does not consider that changes to deemed value rates impact negatively on Māori access to the fisheries. Māori aspirations were addressed in the Deed by providing 20% of quota for Māori for all species such as surf clams introduced to the QMS after 1992. Te Waka a Maui submit strong support for the setting of deemed values for these stocks that create a strong disincentive to catch in excess of ACE.

In general, MPI does not support the use of export price to set deemed value rates. This is because the incompatibility between export information and location of catches means that it is too difficult to accurately acquire export information at the stock level. However, for surf clams MPI accepts pertinent export information is available. Under such circumstances MPI sometimes uses the export value of the greatest volume product state to inform the maximum deemed value rate. We note the compatibility between the conservative estimated export price of \$8 / kg with the recommended maximum deemed value rate of \$10 / kg.

The Act (section 75(3)) requires you to set annual deemed value rate that is greater than the corresponding interim deemed value rate. Interim deemed value rates are intended to provide

an incentive for fishers to source ACE during the year instead of leaving catch balancing until the end of the year, while not unduly penalising them. Under the previous Standard, interim deemed value rates have been set at 50% of the annual rates for surf clam stocks, but the Guidelines suggest that higher interim deemed value rates may be appropriate.

MPI proposes to increase the proportion of the annual deemed value rate at which interim deemed value rates are generally set from 50% to 90%. This increase addresses the risk that if the interim deemed value rate is below the ACE price, then fishers have an incentive to delay acquiring ACE. The result can be to delay the balancing of catch until the end of the fishing year. Permit holders may arrive at the end of the year expecting to buy ACE, only to find that all ACE has been used. Therefore low interim deemed values interfere with the signalling functions of ACE markets.

6.3.2 Recommendation

MPI proposes that deemed value rates for SAE7 and PDO7 be adjusted as recommended in Table 4. The appropriate incentive for high value single species fisheries (that is, with no or minimal bycatch) is to provide a very strong incentive to catch only the amount for which fishers have ACE. For such stocks this may be accomplished by setting the annual deemed value rate at approximately twice the landed price. The proposed annual deemed value rate for SAE7 and PDO7 is based on this principle and would provide a stronger incentive for fishers to balance their catch with ACE. The proposed changes to the interim and differential rates will support better balancing of catch with ACE.

6.4 STOCKS WITH OVER-CATCH IN 2014-15

Three stocks, SCC3, GSC5 and SBW1 were identified for review given over-catch in 2014/15 and high deemed value payments compared to quota value. The fisheries that the three stocks are taken in vary, and are described further below.

6.4.1 Sea Cucumber (SCC3)

Sea cucumber in SCC3 (located off the south-east coast of the South Island) has historically been taken as a bycatch in the inshore tarakihi and red cod bottom trawl fisheries. SCC3 catch has exceeded the TACC by 109% only in the most recent fishing year since the stock was introduced into the QMS in 2004. However, the TACC has already been exceeded by 219% in the current fishing year (refer Table 1). Targeted fisheries for SCC are currently being developed that show potential to become economically important if sustained. Unwanted live catches can be released under the provision of Schedule 6 of the Act.

Table 5: Information to support review of deemed value rates of SCC3

Stock	Quota Value (QV) \$/kg	ACE \$/kg	Interim Deemed Value (DV)\$/Kg	Annual DV \$/kg	Port Price \$/kg	Ratio of total DV paid to total QV
SCC3	n/a	2.05 ¹	1.80	2.00	15.00*	n/a

Discussions with vessel operators and quota owners prior to consultation had indicated the port price of this species is greater than surveyed by the most recent port price index. These stakeholders assert port prices paid have risen to \$15.00/kg for target caught fish and is the best available information to review the deemed value rates for SCC3. MPI requested submissions to clarify the port price of SCC3.

Table 6: Current and recommended deemed value rates \$/kg for SCC3

Stock	Option	Interim	Annual 100-120%	Annual 120-140%	Annual 140-160%	Annual 160-180%	Annual 180-200%	Annual 200%+
SCC3	Current	1.50	2.00	3.20	4.40	5.60	6.80	8.00
SCC3	Recommended	13.50	15.00	18.00	21.00	24.00	27.00	30.00

Consistent with the Guidelines, MPI proposed in the consultation document to increase the proportion of the annual deemed value rate at which interim deemed value rates are set from 50% to 90% and to raise deemed value rates across the board in accordance with deemed value guidelines.

6.4.1.1 Submissions

NZWC submits that the current deemed value rates are providing insufficient incentives for fishers to remain within ACE. This is resulting in deliberate landings of SCC3 in contravention of the Deemed Value framework and is undermining development of quality product and markets. Further, the increase in deemed value rates (as proposed by MPI in the IPP) is inadequate since with better quality product and emerging markets for derived pharmaceuticals and health supplements the price for SCC3 could reach as high as \$30-40/kg.

The Ngati Whatua Rūnanga agree with the MPI proposal.

6.4.1.2 MPI Response

The SCC3 port price will vary depending on the quality of processing, market conditions and the derivation of new high value products. MPI accepts submissions that the port prices range within \$15-\$30 but notes from submissions that the higher range of value is not achieved consistently. In the particular circumstances of SCC3 the need to better understand fluctuations in catch through accurate reporting is an important consideration. This will be achieved by basing deemed value rates on a port price of \$15/kg with the effect of deemed value rates set between \$15/kg (the annual deemed value rate) and \$30/kg (the annual 200% rate).

6.4.2 Recommendation

Assuming a landing price of \$15/kg, the interim and differential rates for SCC3 are not consistent with the Guidelines. MPI proposes that deemed value rates for SCC3 be adjusted as recommended in Table 6. The appropriate incentive for high value single species fisheries (that is, with no or minimal bycatch) is to provide a very strong incentive to catch only the amount for which fishers have ACE. For such stocks this may be accomplished by setting the annual deemed value rate at approximately twice the landed price. The recommended annual deemed value rate for SCC3 is based on this principle and would provide a stronger incentive for fishers to balance their catch with ACE. The recommended changes to the interim and differential rates will support better balancing of catch with ACE. MPI also recommends this fish stock reverts to standard differential rates as the added incentive to balance as proposed no longer requires variable deemed value rates to be set.

6.4.3 Giant Spider Crab (GSC5)

All giant spider crab is currently taken as bycatch in trawl fisheries. In comparison to the high value product that could be supplied from a target fishery (and would be reflected in the landed price and ACE price), trawl-caught GSC that is taken as bycatch has little or no value. Despite the intermittent interest from quota owners in the development of a target fishery, none currently exist for GSC. Unwanted live catches not taken by trawl can be released under the provision of

Schedule 6 of the Act. However, all catch is currently taken as bycatch in trawl fisheries targeting other species.

Although this review was triggered by overcatch of 422% of the TACC in 2014/15 no change in deemed value rates for GSC5 was proposed for the 1 April 2016 fishing year. This was because the effectiveness of management changes in 2013/14 have not had time for fishers to adjust to and be evaluated.

6.4.3.1 Submissions

The Joint Recreational submission notes that the deemed value regime has been ineffective in protecting GSC5 from overfishing in the past and is unlikely to change fishers' behaviour in the future. Without effective controls the cost is borne by the environment and the species that depend and are associated with GSC.

Ngati Whatua Rūnanga support increased deemed value rates for GSC5 since the species could develop into a highly valuable fishery.

6.4.3.2 MPI Response

MPI notes the small magnitude of the fishery (TACC of 19 tonnes) mitigates impacts on dependant species.

In the particular circumstances of GSC5 the primary need is to better understand fluctuations in catch through accurate reporting. This is achieved by the current deemed value rates and might be undermined by the higher rate suggested by Ngati Whatua Rūnanga since there is greater incentive to discard catches illegally.

6.4.4 Recommendation

The deemed value rates were last adjusted for GSC5 for the 2013/14 fishing year. The interim deemed value rate was set at 90% of the annual deemed value rate at this time. Although this review has been triggered by overcatch in 2014/15, gauging the effectiveness of the deemed value rate change in 2015/16, together with industry initiatives to avoid catching this species, requires more time. No change in deemed value rates for GSC5 is proposed for the 1 April 2016 fishing year and the fishery will continue to be monitored.

6.4.5 Southern blue whiting (SBW1)

Southern blue whiting is primarily taken as a bycatch species of trawl fishing in this stock area. This review was triggered by overcatch of 364% (in terms of the nominal 8 t) TACC in 2014/15. The availability and biomass of SBW1 appears to fluctuate from year to year (with 2014 a year of relatively high availability) and variable catch levels are not unexpected for a stock taken as bycatch of fishing effort directed at hoki, white warehou and ling. These fluctuations may also be due also to variable recruitment since SBW1 is at the northern edge of its natural range. For this fishery, fluctuating availability can have substantial consequences in terms of the amount of catch from year to year.

Ngati Whatua Rūnanga expressed support for the MPI proposal. No other submission were received on SBW1.

6.4.6 Recommendation

The current annual deemed value rates are set between the ACE price and reported landing price. The interim deemed value rate for SBW1 is currently set at 90% the annual rate. These are appropriate settings for deemed value rates in terms of the Guidelines.

The SBW1 stock comprises less than 0.1% of the combined southern blue whiting TACCs. Nevertheless, MPI has concerns about the level of catch in excess of the TACC for this stock. MPI intends to analyse information on SBW1 catch, and work with the Deepwater Group Ltd, to determine the factors that influence catch. Pending this analysis, MPI recommends retaining the current deemed value rates for SBW1 for the 1 April 2016 fishing year. The fishery will continue to be monitored.

Appendix I: Deemed Value Guidelines

SUMMARY

Goal

To set deemed value rates that create an effective incentive for individual commercial fishers to balance catch with Annual Catch Entitlement and for the overall catch to remain at or below the total available Annual Catch Entitlement in any one year.

Performance Measures

- The number of stocks over-caught and the level of over-catch per stock per fishing year.
- The percentage of catch for each stock for which catch is not balanced with Annual Catch Entitlement (ACE).
- The ratio of the total deemed value payments to the value of quota (at a general and stock level) – the target in relation to this indicator is less than 0.1% of the value of quota in any fishing year.

Principle 1

Deemed value rates must generally be set between the ACE price and the landed price:

- when deemed value rates are below the ACE price: increase deemed value rates to a level above the ACE price and below landed price to provide an incentive to balance catch with ACE; and
- when deemed value rates are above the landed price: decrease deemed value rates to a level between ACE price and landed price to provide an incentive not to discard illegally.

Principle 2

Deemed value rates must generally exceed the ACE price by transactions costs. Deemed value rates must be generally set at least at the greater of:

- 20% above the 90th percentile ACE price; or
- \$0.10 per kg above the 90th percentile ACE price.

Principle 3

Deemed value rates must avoid creating incentives to misreport.

Principle 4

Deemed value rates for constraining bycatch species may be higher.

Principle 5

Deemed value rates must generally be set at twice the landed price for high value single species fisheries and species subject to international catch limits.

Principle 6

Deemed value rates for Chatham Island landings may be lower.

Principle 7

Interim deemed value rates must generally be set at 90% of the annual deemed value rate.

Principle 8

Differential deemed value rates must generally be set:

- Standard differential deemed value rate schedule for most stocks

Catch in excess of ACE holdings	Differential deemed value rate as a percentage of the annual deemed value rate
0–20%	100%
> 20%	120%
> 40%	140%
> 60%	160%
> 80%	180%
> 100%	200%

- Differential deemed value rate schedule for low value, low TACC stocks

Catch in excess of ACE holdings	Differential deemed value rate as a percentage of the annual deemed value rate
0–100%	100%
>100%	150%
>200%	200%

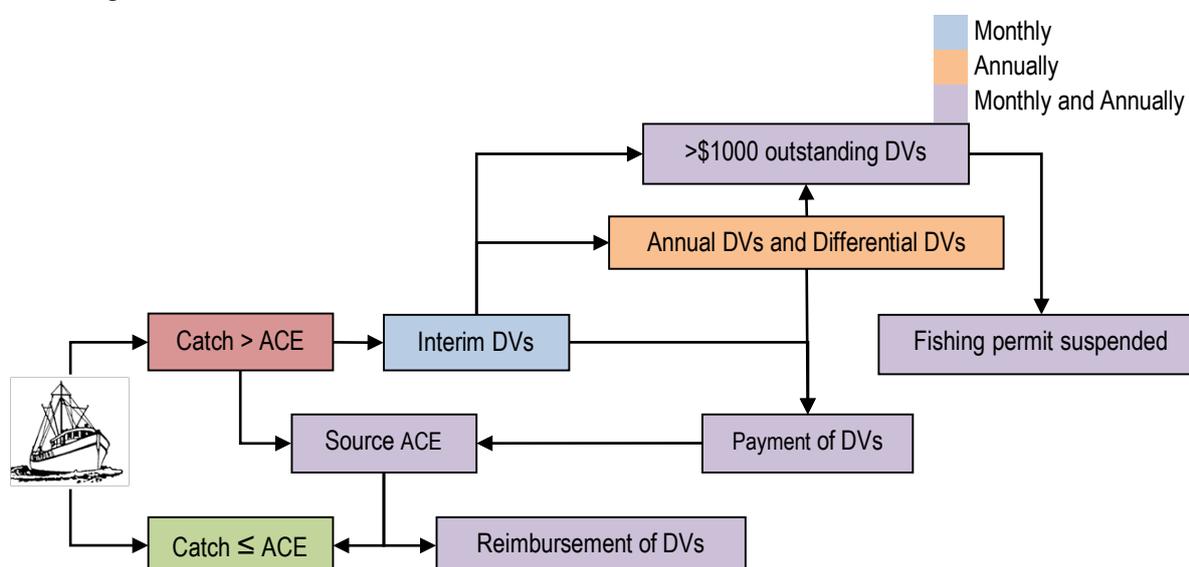
- Stringent differential deemed value rate schedules for highly vulnerable stocks or rebuilding stocks.

INTRODUCTION

THE DEEMED VALUE FRAMEWORK AND THE ROLE OF THESE *GUIDELINES*

The catch-balancing regime and deemed value framework are key fisheries management tools contributing to both sustainability and utilisation objectives, for stocks managed under the Quota Management System (QMS). The deemed value framework is a key mechanism to protect the integrity of the QMS, providing incentives for commercial catch to not exceed catch limits. Deemed values are supposed to encourage commercial fishers to balance their catch with Annual Catch Entitlement (ACE), while not discouraging them from landing and accurately reporting catch.

Sustainability objectives are achieved when deemed value rates encourage fishers to balance catch with available ACE and in doing so, seek to constrain harvesting to the Total Allowable Commercial Catch (TACC), or, where applicable, the total available ACE. Catches in excess of TACCs/total available ACE may affect the sustainability of stocks and may undermine the long-term value of the resource and kaitiakitanga. The deemed value framework is illustrated in the figure below.²³



Utilisation objectives are achieved by providing flexibility for commercial operators to manage unexpected and small overruns in ACE holdings by allowing periodic catch-balancing. In the long-term, over-catching of a TACC could result in TACC reductions, if it leads to a reduction in stock size, and to impacts on resource use by others sectors. This undermines utilisation objectives.

²³ Interim deemed value rates are charged each month to fishers for every kilogram of fish landed in excess of their ACE holdings. If the fisher sources enough ACE to cover his or her catch by the end of the fishing year, the interim rates paid are reimbursed. If the fisher does not source enough ACE by the end of the fishing year, the difference between the interim and annual deemed value rates is charged for all catch in excess of ACE; the annual rate applies at the end of the fishing year. Differential deemed value rates, if applicable, are also charged at the end of the fishing year if the fisher harvested well in excess of his or her ACE holdings. For example, differential deemed value rates are charged for catch more than 20% in excess of ACE, when the standard differential deemed value rate schedule applies. Differential rates reflect the increasingly detrimental impact of higher levels of over-catch on sustainability and utilisation objectives.

The *Deemed Value Guidelines* set out an operational policy to inform the advice that the Ministry for Primary Industries (MPI) provides to the Minister for Primary Industries (the Minister) on setting deemed value rates.

THE LEGAL CONTEXT

Section 75 of the Fisheries Act 1996 (the Act), provides the statutory framework for setting deemed values. That section requires the Minister to set deemed value rates for QMS stocks and sets out the matters the Minister must consider when doing so.

Within the statutory framework, the Minister has considerable discretion when setting deemed value rates. The *Guidelines* are a statement of how MPI will use the criteria in the statute to develop its advice to the Minister on deemed value rates. The *Guidelines* do not bind the Minister. When making decisions on deemed value rates, the Minister uses the statutory criteria in making decisions and can act within the bounds of the statute, notwithstanding the *Guidelines*.

Under section 75(2)(a), the Minister must consider whether deemed value rates are set at levels that provide an incentive to balance catch with ACE. Once the Minister has considered the issues that arise as mandatory considerations, she/he may also consider the discretionary criteria under section 75(2)(b):

- a) the desirability of commercial fishers landing catch for which they do not have ACE;
- b) the market value of ACE for the stock;
- c) the market value of the stock;
- d) the economic benefits obtained by the most efficient commercial fisher, licensed fish receiver, retailer, or any other person from the taking, processing, or sale of fish, aquatic life or seaweed;
- e) the extent to which catch of that stock has exceeded or is likely to exceed the TACC for the stock in any year; and
- f) any other matters that the Minister considers relevant.

GOAL AND MEASURES OF PERFORMANCE

GOAL

The goal of the *Guidelines* is to outline principles to *set deemed value rates that create an effective incentive for individual fishers to balance catch with Annual Catch Entitlement and for the overall catch to remain at or below the total Annual Catch Entitlement available in any one year.*²⁴

MEASURING PERFORMANCE

In light of this goal, the performance of the deemed value framework will be measured using the following indicators:

- the number of stocks over-caught and the level of over-catch per stock per fishing year;
- the percentage of catch for each stock for which catch is not balanced with ACE; and

²⁴ For the majority of stocks, the total available Annual Catch Entitlement (ACE) may exceed the Total Allowable Commercial Catch (TACC) in any one year due to under-fishing entitlements, where 10% of the un-fished ACE from one year is carried forward to the following year. Furthermore, for some stocks, in-season increases to the catch limit generate additional ACE in a particular year while the TACC remains unchanged. This is why the goal is for landed catch to remain within the total available ACE rather than within the TACC.

- the ratio of the total deemed value payments to the value of quota (at a general and stock level) – the target in relation to this indicator is less than 0.1% of the value of quota in any fishing year.

MPI will also use these performance indicators where applicable, in addition to other relevant information such as landed price changes, to identify stocks for which a deemed value rate review may be necessary. Which stocks to review deemed value rates for will be determined in discussion with tangata whenua, industry representatives and other stakeholders within the fisheries planning processes for inshore, deepwater and highly migratory species fisheries.

PRINCIPLES FOR SETTING DEEMED VALUE RATES

Deemed values are economic tools; they provide economic incentives and disincentives which are directly related to other economic variables such as operating costs, ACE prices, transaction costs of acquiring ACE, and landed fish prices. When any of these factors change the incentives created by deemed values also change. Accordingly, deemed value rate changes will generally be small, relatively frequent adjustments consistent with economic changes rather than significant occasional changes. The effectiveness of deemed values is dependent on individual commercial 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.

MPI will use the following principles to assess stocks for which to review deemed value rates and to guide the development of its advice to the Minister on deemed value rates. These principles recognise the various economic incentives that commercial fishers face and give effect to the Minister's obligations under section 75 of the Act.

Principle 1: Deemed value rates must generally be set between the ACE price and the landed price

A deemed value rate above the ACE price and below landed price generally provides the correct incentives. The following actions will create the correct incentives for commercial fishers to acquire ACE to cover their catch:

- when deemed value rates are below the ACE price: increase deemed value rates to a level above the ACE price and below landed price to provide an incentive to balance catch with ACE; and
- when deemed value rates are above the landed price: decrease deemed value rates to a level between ACE price and landed price to provide an incentive not to discard illegally.

Because ACE for some stocks is traded infrequently, the available information on ACE price may be inadequate. When there is evidence of intentional fishing on deemed values, MPI will assume that the fisher could not acquire ACE at less than the deemed value rate and that the price of ACE should be assumed to be above the deemed value rate. MPI will generally recommend increases in the deemed value rate in this circumstance.

In certain circumstances (including some described below) it may be appropriate to depart from this principle. MPI will outline this to the Minister on a case-by-case basis.

Principle 2: Deemed value rates must generally exceed the ACE price by transaction costs

If ACE price is close to the deemed value rate there may be an incentive for fishers to pay the deemed value instead of acquiring ACE to balance their catch to avoid the transaction costs

involved in making an ACE trade (for example, transfer registration fee, time, brokerage fees).

ACE prices vary as other economic factors, such as the price of fish, exchange rates, and fuel prices, vary. Deemed value rates should generally be set at least 20 percent above the 90th percentile ACE price. This is to ensure that the ACE price used is representative of the majority of market trades and that the difference between the deemed value rate and the ACE price is sufficient to create an effective incentive. This reference point should be used for setting deemed value rates for most stocks.

However, for relatively low value species (for example, where the ACE price is less than \$0.15 per kilogram) 20 percent above the ACE price will not cover transaction costs for most trades. A second reference point that is a minimum amount per kilogram above the ACE price should be used. It is assumed that total transaction costs are approximately \$100.00 per ACE transaction and that fishers would source ACE instead of paying deemed values for landings greater than 1 tonne. Therefore, the transaction cost would be \$0.10 per kg, if the \$100.00 transaction costs are spread over 1 tonne.

Therefore, deemed value rates should be generally set at least at the greater of:

- 20 percent above the 90th percentile ACE price; or
- \$0.10 per kg above the 90th percentile ACE price.

In certain circumstances it may be appropriate to depart from this principle. MPI will outline this to the Minister on a case-by-case basis.

Principle 3: Deemed value rates must avoid creating incentives to misreport

When two adjacent Quota Management Areas (QMAs) for the same species have substantially different deemed value rates, there may be an incentive to misreport the QMA in which the fish was taken in order to benefit from a lower deemed value rate. The impact of differences in deemed value rates across QMAs are important considerations. For most species, prices across adjacent QMAs are likely to be similar, because arbitrage in markets will result in movements of fish to equalise prices. Because the upper bound on deemed value rates in most circumstances is landed price, the upper bound for adjacent QMAs will often be similar. Thus, setting the same or very similar deemed value rates across different QMAs is often likely to be feasible.

There are reasons to consider more uniform deemed value rates across QMAs, but these reasons must be weighed against other considerations on a case-by-case basis. There are regional differences in the prices of some species and these differences must also be considered when setting deemed value rates.

For the avoidance of doubt, in the case of the Kermadec Fishery Management Area (FMA10), deemed value rates should be set at the highest annual deemed value rate applicable in the Auckland and Central Fishery Management Areas (FMA1 or FMA2) for the relevant species.

Likewise, for very similar yet different species, it may be appropriate to consider setting the same or very similar deemed value rates to avoid creating any incentives for species misreporting.

Principle 4: Deemed value rates for constraining bycatch species may be higher

An important exception to Principle 1 occurs in some cases when a relatively low value species is taken as bycatch in a multi-species fishery. In such cases, the catch of that bycatch species may constrain the ability to catch the target species.

In this case, the bycatch species is said to have a “shadow value” greater than landed price, reflecting its value in allowing greater catches of target species in the overall fisheries complex. When the shadow value is high, the deemed value rate that will encourage catch to remain within the total available ACE/TACC may exceed the landed price.

When the ACE price and the deemed value rate are above the landed price, incentives to illegally discard are created. This may be an inevitable result of providing appropriate incentives under section 75(2)(a) for fishers to acquire ACE to cover their catches. It may be necessary to rely on compliance and enforcement tools to prevent illegal discarding when this occurs. The application of this principle will be considered on a case-by-case basis.

Principle 5: Deemed value rates must generally be set at twice the landed price for high value single species fisheries and for species subject to international catch limits

The appropriate incentive for high value single species fisheries (that is, with no or minimal bycatch) is to provide a very strong incentive to catch only the amount for which fishers have ACE. This has been accomplished by setting the annual deemed value rate at approximately twice the landed price. This principle has also been applied to southern bluefin tuna, which is subject to an international catch allocation.

Under such a deemed value rate, a fisher would suffer a large loss on any catches in excess of ACE. By setting the deemed value rate at twice the landed price, it is very unlikely that any incentive would arise to land catch in excess of ACE, even if landed prices increase significantly during a fishing year. This is consistent with section 75(2)(a) as it provides a strong disincentive against catches in excess of ACE. In addition to southern bluefin tuna, this setting has been applied to all rock lobster stocks, to all paua stocks and to all deepwater clam stocks. The application of this principle to other stocks needs to be considered on a case-by-case basis.

Principle 6: Deemed value rates for Chatham Island landings may be lower

Under section 75(5), the Minister may set deemed value rates for Chatham Islands-based commercial fishers for fish landed to a licensed fish receiver in the Chatham Islands that are different from deemed value rates applicable to fish from the same stock landed elsewhere. The price for fish landed in the Chatham Islands is generally lower than the price for the same species landed elsewhere because of the higher cost of transporting fish to markets. Therefore, there may be reasons to set different deemed value rates for the Chatham Islands.

For many stocks, the deemed value rates for the Chatham Islands has been set at about 50 percent of the deemed value rate applicable elsewhere in the same QMA. No strict procedures are appropriate. Instead deemed value rates applicable to Chatham Islands-based fishers need to be considered on a case by case basis, in light of the relevant economic conditions of each fishery.

Principle 7: Interim deemed value rates must generally be set at 90% of the annual deemed value rate

Interim deemed value rates should usually be set at 90 percent of the annual rate. If the interim deemed value is below the ACE price, fishers have an incentive to delay acquiring ACE. The result can be to delay the balancing of catch until the end of the fishing year. This may lead to a race for ACE and insufficient ACE to cover all catch and thereby potentially contribute to the TACC/total available ACE being exceeded.

There may be stock-specific reasons to set interim deemed value rates at some percentage other than 90 percent of the annual rate in some cases. These will be considered when appropriate.

Principle 8: Differential deemed value rates must generally be set

Differential deemed value rates reflect the increasingly detrimental impact of higher levels of over-catch on sustainability and utilisation objectives. Therefore, differential deemed value rates should generally apply to all stocks, although exceptions to this principle will be considered on a case by case basis. In developing its advice, MPI will propose to use differential deemed value rates flexibly to achieve the management goals for different fisheries.

Different differential deemed value rate settings are appropriate for different fisheries. This will be considered on a case by case basis, but for most stocks MPI will advise the Minister to set differential deemed value rates according to the following schedules:

Standard differential deemed value rate schedule for most stocks

For most stocks, MPI will recommend the use of a standard differential deemed value rate schedule (standard schedule), as set out in Table 1.

Table 1: Standard differential deemed value rate schedule

Catch in excess of ACE holdings	Differential deemed value rate as a percentage of the annual deemed value rate
0 - 20 %	100 %
> 20 %	120 %
> 40 %	140 %
> 60 %	160 %
> 80 %	180 %
> 100 %	200 %

Differential deemed value rates for low value, low TACC stocks

The QMS provides for a number of stocks for which targeted fishing does not occur and low TACCs are set to account for occasional, small unintended bycatch. The standard differential deemed value schedule is not appropriate for these stocks. However, deliberate over-catching of these stocks on deemed values is not appropriate either.

The general principle for these stocks is unchanged: differential deemed values should reflect a qualitative assessment of the sustainability risk of over-catching. Higher levels of over-

catch may be less of a concern for these stocks than similar levels of over-catch for larger and more valuable stocks. The low TACC and relatively high variability mean that high levels of over-catch will frequently occur as a matter of chance. As a starting point, MPI will consider recommending the following differential deemed value structure for these stocks:

Table 2: Differential deemed value rate schedule for low value, low TACC stocks

Catch in excess of ACE holdings	Differential deemed value rate as a percentage of the annual deemed value rate
0-100%	100%
>100%	150%
>200%	200%

MPI may recommend alternative schedules for low value, low TACC stocks in some circumstances.

Stringent differential deemed value rate schedules for highly vulnerable or rebuilding stocks

Stringent differential deemed value rate schedules are applied to some stocks where utilisation and sustainability objectives are best met by providing very strong incentives for catch to not exceed ACE. This may be the case when the TACC is set very close to the sustainable limit or for highly vulnerable or rebuilding stocks. The exact structure of the schedule will be tailored to the stock in question. For example, the first differential step may reflect an assessment of how much a fisher acting with ordinary care might exceed his or her ACE holdings in their last tow of the season.

Appendix II: Submissions

12 February 2015

Ministry for Primary Industries
PO Box 2526
WELLINGTON 6011

Email: FMsubmissions@mpi.govt.nz

Tena koe,

2016 REVIEW OF SUSTAINABILITY CONTROLS FOR THE COROMANDEL SCALLOP FISHERY

Introduction

This submission is from Te Ohu Kai Moana Trustee Ltd in its role as corporate trustee of Te Ohu Kai Moana Trust (Te Ohu Kaimoana). Te Ohu Kai Moana was established under s.31 of the Maori Fisheries Act 2004. The purpose of Te Ohu Kai Moana is to advance the interests of Iwi individually and collectively, primarily in the development of fisheries, fishing, and fisheries-related activities.

This submission responds to the Ministry for Primary Industries (MPI) consultation document dated 14th January 2016 and entitled "*Review of sustainability controls for the Coromandel Scallop fishery*".

We have consulted Iwi in the development of our submission and we have included the feedback we have received in this final submission. However, we do not intend for this submission to override any submissions Iwi may decide to make in their own right.

Overview of MPI Initial Position Paper

According to MPIs, Initial Position Paper (IPP), they have decided to review management settings for the SCACS fishery. The fishery is managed with a baseline TAC and an ability to approve in-season increases, and a range of other regulations. The baseline TACC for the Coromandel Scallops fish stock was increased in 2013 from 22t to 100t. The main driver of this increase can be attributed to the discovery of the Hauraki bed in 2011. However, with the die-off of this bed in recent times, MPI considers the current TACC may no longer be supported by up-to-date information.

No new survey data has been considered by MPI in this review. Instead MPI has proposed options that are based on catch limits and patterns in the fishery over a number of years. MPI says that within the constraints of the available information, these two options satisfy the purpose of the Fisheries Act and the requirements of section 13(2A).

MPI Proposals

MPI is proposing two options. Option 1 retains the status quo - the TAC remains at 131t, the TACC 100t, customary 10t, recreation 10t, and other mortality 11t. Under this option Industry continues to operate the voluntary CPUE limit rule alongside the MPI management framework. .

Option 2 proposes to decrease the TAC from 131t to 81t, and to reduce the TACC from 100t to 50t. The allowances for customary, recreation and other sources of mortality are retained at current levels. Under this option there is no requirement to operate the CPUE limit rule alongside the MPI management framework. Options 1 ad 2 are shown in Table 1 below.

Table 1. Proposed Management Settings for SCACS

Options	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Customary Maori (t)	Rec Allowance (t)	Other sources of mortality (t)
Option 1	131	100	10	10	11
Option 2	81	50	10	10	11

Te Ohu Kaimoana response to MPI Proposals

After considering the information contained in MPIs consultation document, and taking into account other factors, Te Ohu Kaimoana makes the following recommendations:

1. MPI formally acknowledges the Industry Management Program as the primary strategy supporting sustainability of the SCACS fishery
2. MPI approves Option 3: set the TAC at 101t, the TACC at 70t, and retain the non-commercial allowances and other mortality settings (See Table 2)
3. MPI retains the deemed values for 2016
4. MPI includes the Industry Management Program on the agenda of the Shellfish Working Group, March, Technical Workshop on scallops, and discuss the merits and utility of real time CPUE catch data, and the overall Industry Management Program.
5. Representatives from Industry and Te Ohu should be invited to attend the above workshop as part of MPI supporting a collaborative approach to managing fisheries. The agenda for the proposed workshop should be amended to put the Industry Management Program up for discussion first.

Table 2: Proposed Option 3

Options	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Customary Maori (t)	Rec Allowance (t)	Other sources of mortality (t)
Option 3	101	70	10	10	11

Supporting Arguments

There are 4 supporting arguments behind Te Ohu Kaimoana's recommendations:

- I. The Industry Management Program will run alongside the MPI management framework, and therefore sustainability of the fishery is protected (see commentary).
- II. The proposal set out in Option 3, combined with the Industry Management Program, better satisfies the purpose of the Fisheries Act by avoiding, remedying, and mitigating adverse effects of fishing on the aquatic environment, and doing this in a way that is a significant improvement on the MPI management framework. The proposal is also within the constraints of the available information in terms of section 13(2A).
- III. The recommendations are consistent with the National Plan for Inshore Stocks. The draft National Plan for Inshore shellfish stocks aims to maximise the annual yield from the SCACS fishery, while maintaining the stock size at or above the level required to ensure sustainability and spawning stock biomass. The proposed Option 3, combined with the Industry Management Program, better satisfies the aims of the draft National Plan for Inshore shellfish stocks.
- IV. There is support from Tangata-whenua for the recommendations set out in this submission.

Options 1 and 2

In relation to MPIs Options 1 and 2, we reject these on the basis Industry no longer wishes to operate the TACC at 100t, or alternatively operate a TACC of 50t.

COMMENTARY

The Industry Management Program

The Industry Management Program is run by the SCACS Fishermen's Association and mitigates much of the risk associated with commercial fishing. The basis of the program is an alternative management regime that was developed in 2008 by Industry with the support and guidance of Dr Vivian Haist and Dr David Middleton. A Management Strategy Evaluation was undertaken of both the existing survey-based in-season framework and use of operational catch-per-unit-effort (CPUE) limits on catching. The evaluation indicated the CPUE based management regime contained less risk than the survey based approach, was

consistent with the Harvest Strategy Standards and the Fisheries Act requirements and was significantly cheaper than the survey approach.

In our view the Industry Management Program contributes the most to managing risks associated with commercial fishing and sustainability. It does this through six key strategies:

- ⚡ Collaboration and formal structure
- ⚡ CPUE limit rules
- ⚡ Managing pre-recruits
- ⚡ Recovery thresholds
- ⚡ Best available information
- ⚡ Operating with headroom

Without the Industry Management Program the SCACS fishery would be exposed to significantly high risk. In the absence of the Industry program, MPIs management framework would rely on biomass surveys (until recently they have been annually), a Total Allowable Catch (TAC)/Total Allowable Commercial Catch (TACC), Minimum Legal Size (MLS), seasons, and fishing times, to ensure sustainability. But the reality is these tools on their own don't ensure sustainability at all.

In the following text we have attempted to describe how the Industry manages their activities associated with commercial fishing. It's a proactive approach to managing the SCACS fishery. Our intention is to highlight the role that each of these 6 strategies play in ensuring sustainability of the SCACS fishery.

(1) Collaboration and formal structure

In the first instance the SCACS Fishermen's Association provides the formal structure for quota owners and Iwi Asset Holding Companies to work collaboratively, and to put in place initiatives that provide the best long-term outcomes for the fishery and all stakeholders. The SCACS Fishermen's Association facilitates dialogue amongst quota owners, commercial fishers, and MPI, and implements the decisions and policies that are agreed.

At the start of each season quota owners place their ACE into the SCACS Fishermen's Association who then administer the ACE throughout the season. The ACE is held by the association as a kind of bond to ensure quota owners and fishers comply with the association's rules. The penalty for not complying with catching rules is the fisher does not receive any ACE and is therefore liable for any deemed values associated with fish caught up to that time, and beyond if they continue to fish. Since the program started Industry has achieved 100% compliance with the implementation of agreed management decisions.

MPI refers to the Industry program as voluntary. This is misleading and incorrect. The SCACS Fishermen's Association is a legal entity, with a formal governance structure, rules, policies, and an ability to raise funds from its members.

(2) CPUE limit rule

Secondly, the SCACS Fishermen's Association runs CPUE limit rules that comprise hard and soft thresholds.

The CPUE limit rules are an important part of the Industry Management Program and responds to changes in CPUE. If catch per hour falls below the 50 kg/hr hard limit, then statistical reporting areas, or smaller sub-statistical areas can be closed for the remainder of the season. This 50 kg/hr hard limit prevents serial depletion which might otherwise occur in the absence of the CPUE limit rule. We are aware of commercial scallop boats outside of the SCACS fishery that have operated as low as 20kg hr.

In terms of the soft limit, the CPUE limit rule requires Industry to proactively manage areas where the CPUE is at or below 75 kg/hr. Besides recruitment and natural mortality, CPUE can be influenced by catchability which is affected by wind and tides, and the extent to which the seafloor is corrugated. These factors are therefore considered when deciding an appropriate response to both soft and hard limit thresholds.

By contrast the MPI management framework has no catch thresholds other than a TAC and minimum legal size (MLS). More importantly, the MPI framework lacks any mechanism to prevent serial depletion as where the Industry approach is designed to prevent this from occurring.

(3) Managing pre-recruits

Thirdly, pre recruit populations are managed in each bed to ensure they are not commercially fished unless roughly 70% of the stock is above the 90mm MLS. This fishing strategy is aimed at optimising the number of scallops that can be harvested from a bed, whilst minimising the damage to pre recruits. The MPI management framework lacks a strategy or rules to manage this situation.

(4) Recovery threshold

Our fourth argument for the Industry program is the commercial boats do not harvest scallops below a 10% recovery threshold. The objective is to get the best yields from the fishery. Taking them when they are in good condition reduces the number of scallops needed to make up a kilo of processed scallops. More fish are therefore left in the water and continue to contribute to the sustainability of the fishery.

(5) Best available information

Our fifth argument in support of the Industry Management Program relates to the weekly management reports that are generated by Industry during the season. These management reports comprise a summary of the CPUE data referred to above in (2). The reports provide real time catch/survey information that enables Industry to respond to changes in stocks far more quickly (immediately if necessary) than is possible under the MPI management framework. This information is used by Industry to inform weekly management decisions. The Industry information should be considered to be best available information. See Appendix 1 for a copy of weekly reports.

The MPI framework captures standard daily catch landing information but does nothing with it between one review and the next. In any case the value of the information is limited

(6) Operating with headroom

Our sixth argument in support of the Industry Management Program is the TACC is set at a level that provides Industry with headroom to operate at lower and upper ends. The original driver of this "headroom" approach (which is still relevant) is to overcome delays and uncertainties with obtaining annual in-season increases, and to lower the costs associated with management. Prior to Industry implementing the management program they were on the verge of having to pay deemed values as a result of delays in the MPI processes to achieve in-season adjustments. Because of these delays Industry missed the opportunity to take advantage of the very high populations that were located in 2011. These inefficiencies meant Industry missed the opportunity to catch hundreds of tons of scallops and by the time MPI approved an increase in the TACC in 2013 the larger Hauraki bed had already started to die from old age.

Currently the TACC is set at 100t and provides Industry the opportunity to increase catches at times when the fishery is abundant and decrease it when it isn't, all within sustainable limits. As noted above the SCACS Fishermen's Association have advocated their preference to reset the TACC at 70t. The decision takes into account historical catches, and the annual MPI levies associated with TACCs.

In concluding we note that Industry is not averse to coupling their program with the MPI framework but if MPI insists on Industry re-starting the traditional annual surveys that NIWA has conducted in past years then it may result in the cessation of the Industry program. The Industry have repeatedly said they cannot afford to run both programs and in any case the value obtained from the traditional surveys is questionable.

We would prefer MPI to consider how the CPUE data that is collected daily by commercial fishers can be used to inform management decisions, or how MPI can better align with the Industry Management Program that effectively uses the data. These would be useful questions to pose at MPI's Shellfish Working Group meeting in March to discuss scallop management.

If you would like to discuss this submission please contact the writer on 0212275289.

Noho ora mai

A large, stylized handwritten signature in black ink, appearing to be 'Alan T Riwaka', written over a horizontal line.

Alan T Riwaka
Senior Fisheries Management Advisor



12 February 2016

Ministry for Primary Industries
PO Box 2526
WELLINGTON 6011

Email: FMSubmissions@mpi.govt.nz

Tena koe,

REVIEW OF SUSTAINABILITY CONTROLS FOR SURF CLAM STOCKS IN QMA7

Introduction

This submission is from Te Ohu Kai Moana Trustee Ltd in its role as corporate trustee of Te Ohu Kai Moana Trust (Te Ohu Kaimoana). Te Ohu Kai Moana Trust was established under s.31 of the Maori Fisheries Act 2004. The purpose of Te Ohu Kai Moana Trust is to advance the interests of Iwi individually and collectively, primarily in the development of fisheries, fishing, and fisheries-related activities. This submission responds to the Ministry for Primary Industries (MPI) consultation document dated 14th January 2016 and entitled "*Review of Sustainability Controls for Surf Clam Stocks in QMA7*".

In developing this submission we have consulted Iwi having customary interests in the QMA7 fisheries management area. We have included the feedback we have received in this final submission. However, we do not intend for this submission to override any submissions Iwi may decide to make in their own right.

Background

MPI is currently consulting tangata whenua and stakeholders on proposals to adjust TACs for surf clam stocks in QMA7. The last time there was a review of QMA7 was in 2004 when surf clam stocks were placed in the QMS. At this time Maximum Constant Yield (MCY) estimates were calculated from a randomised dredge biomass survey that had been conducted 10 years earlier in 1994.

New abundance survey information from November 2015 indicates the level of biomass for 4 species of surf clams are capable of supporting higher catches, while ensuring sustainability. There are seven main species of subtidal surf clams in New Zealand: *Paphies domain* (PDO), *Crussula aeuilatera* (SAE), *Mactr discors* (MDI), *Mactra murchisoni* (MMI), *Dosinia anus* (DAN), *Dosinia surosea* (DSU), and *Bassina yatei* (BYA). Those that are proposed to be increased include PDO, SAE, MMI, and DAN.

MPI Proposed Options

MPI proposes two options for each of the 4 stocks. The first option for each stock maintains the status quo, as where the second option for each stock advocates an increase to the TAC and TACC. The combined TACs for QMA7 is currently 240t. If they are all adjusted to the recommended levels the combined TACs will increase to 713t.

MPI state that no changes are proposed to the Maori customary allowance as best available information suggests that current settings provide for current levels of catch. Accordingly, MPI has only made a 1t customary allowance for PDO, as where the other 3 options make no allowances for customary. The two MPI proposals are shown in Table 1 below.

Table 1 Proposed Options

Stock Options	Total Allowable Catch	Total Allowable Commercial Catch	Customary Allowance	Recreation allowance	Other sources of mortality
PDO7					
Option 1 (Status quo)	52	50	1	1	0
Option 2	200	188	1	1	10
SAE7					
Option 1 (Status quo)	112	112	-	-	0
Option 2	235	223	-	-	12
MMI7					
Option 1 (Status quo)	61	61	-	-	0
Option 2	144	137	-	-	7
DAN7					
Option 1 (Status quo)	15	15	-	-	0
Option 2	133	126	-	-	7

Te Ohu Kaimoana recommendations

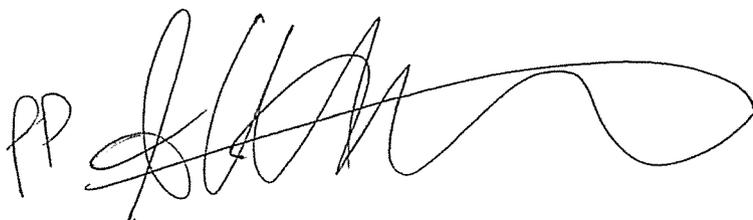
After considering the information and proposals contained in MPIs consultation document, and taking into account other factors including feedback from Iwi, Te Ohu Kaimoana makes the following recommendations:

1. **MPI approve Option 2 for each of the 4 surf clam stocks.** We understand the MPI Shellfish Working Group and the MPI Plenary process have reviewed the 2015 survey results and are supportive of the data driving a 297% increase in the TACC, from 240t to 713t. It will increase Iwi commercial interests in the fishery and at the same time allows issues relating to deemed values to be addressed.
2. **MPI adjust the TACC for each stock to provide for a 10t customary allowance.** MPIs best available information on customary fisheries is significantly flawed – it assumes a 1t customary allowance for PDO and nothing for the other 3 stocks. The reality is Iwi access the full range of surf clam species to support hui and tangi functions, and have been doing so for some time. We see no good reason why a 10t customary allowance shouldn't be made for each of the stocks under review. The 9 Iwi having interests in these QMA7 stocks support a network of marae throughout Te Tau Ihu and the broader South Island, and there is a strong population base. A 10t allowance for each stock is appropriate.
3. **MPI retains the deemed values for all surf clam species.** We see no need to change the deemed values for surf clams.
4. **MPI Options 1 and 2 are rejected.** We have considered MPIs Option 1 for all 4 species under review but dismiss them because they ignore the latest survey results and unnecessarily limit commercial development.

Iwi have suggested the prospect of developing a protocol for the operation of surf clam vessels in areas close to residents along the Wairau coast. Te Ohu Kaimoana is supportive of there being open discussions on this subject and encourage MPI and Cloudy Bay Clams to do the same.

If you would like to discuss this submission please contact the writer on 0212275289

Noho ora mai

A handwritten signature in black ink, appearing to be 'Alan T Riwaka', with a large, sweeping flourish extending to the right. To the left of the signature are the initials 'PP'.

Alan T Riwaka
Senior Fisheries management Advisor



11 February 2016

Mr M Dunne
Ministry for Primary Industries
PO Box 5620
Wellington

Dear Martyn

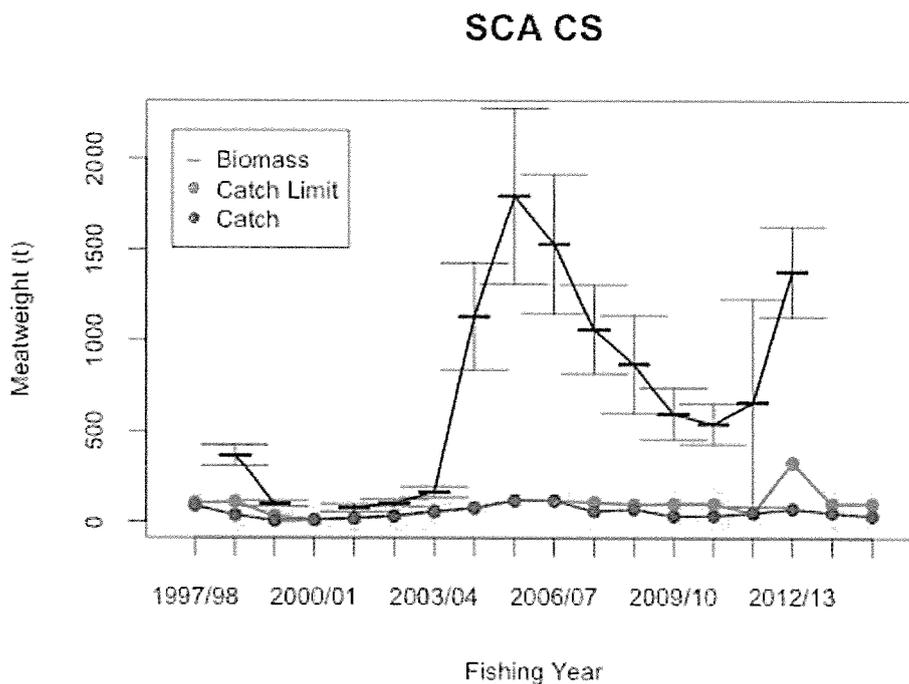
**REVIEW OF SUSTAINABILITY CONTROLS FOR COROMANDEL SCALLOPS
MPI Discussion Document No: 2016/04**

Introductory Comments

1. You have asked for comments on the review of sustainability controls for Coromandel Scallops (SCACS). This submission reflects the view of SCACS quota-holders and has been prepared for them by Tom Clark, Policy Manager, Fisheries Inshore NZ Limited (FINZ), (Tel 04 802-1514). If you have queries in respect of this submission, please contact Tom or Peter Sopp, Coromandel Scallop Fishermen's Association (CSFA) chair, (027 490 8562).
2. FINZ is the representative entity for inshore finfish, pelagic and tuna fisheries in New Zealand. Its role is to deal with national issues on behalf of the sector and to work directly with, and behalf of, its quota owners and fishers. FINZ works closely with other commercial stakeholder organisations that focus on regional and operational issues; including the adjustment of specific TACs. Coromandel Scallops have recently become affiliated with FINZ.
3. In summary, the Coromandel Scallop Fishermen's Association does not support either option presented by MPI. However, they do support a TAC reduction and propose an alternative TACC of 70 tonnes which they consider will meet MPI's requirements under the Fisheries Act and allow for a sustainable and profitable scallop fishery. Perhaps more important is retaining the integrity of the current management and monitoring process and providing certainty to the industry about future monitoring costs and management processes. Their basic concerns are that:
 - a. the proposal does not give due weight to the effectiveness of the current operational management processes for SCACS undertaken by the Coromandel Scallop Fishermen's Association;
 - b. the proposed Option 2 level will impose unnecessary costs on the sector; and
 - c. any change to the management of SCACS in advance of the expert review of scallop fisheries management is premature and unwarranted.
4. To understand the CSFA views and the impact of the MPI proposals, it is necessary to understand the existing management framework.

Background

5. Scallops are a short-lived bivalve, known internationally for their high fecundity levels and high variability in annual abundance levels. This variability often occurs independently of fishing pressure.
6. Like other scallop populations, Coromandel scallop abundance levels are highly variable. This is shown in the figure below contained in the consultation document. While the survey series does not provide a consistent index of scallop abundance over the SCA CS quota management area, it nevertheless captures the general trend in biomass in areas that have been a consistent part of the commercial fishery. Biomass was low through the early 2000s, peaking in 2005 before declining until 2010/11. The 2012 survey covered a wider spatial area than previous surveys, and included a new bed in the Hauraki Gulf. The new bed consisted of scallops largely of the same age and is likely to have resulted from a single settlement event. Such beds are expected to make sporadic contributions to the productivity of the fishery rather than being a core part of the fishery on an ongoing basis.



7. Survey and commercial fishing in 2014 confirmed that scallops in the Hauraki Gulf beds had experienced the expected natural mortality. The 2015 fishery, together with some associated surveying, indicates that abundance in the core areas of the commercial fishery is currently at generally low levels. That reflects the natural variability of scallop populations (although no information on scallop abundance in areas open only to non-commercial harvesting is available).

Coromandel Scallops in the QMS

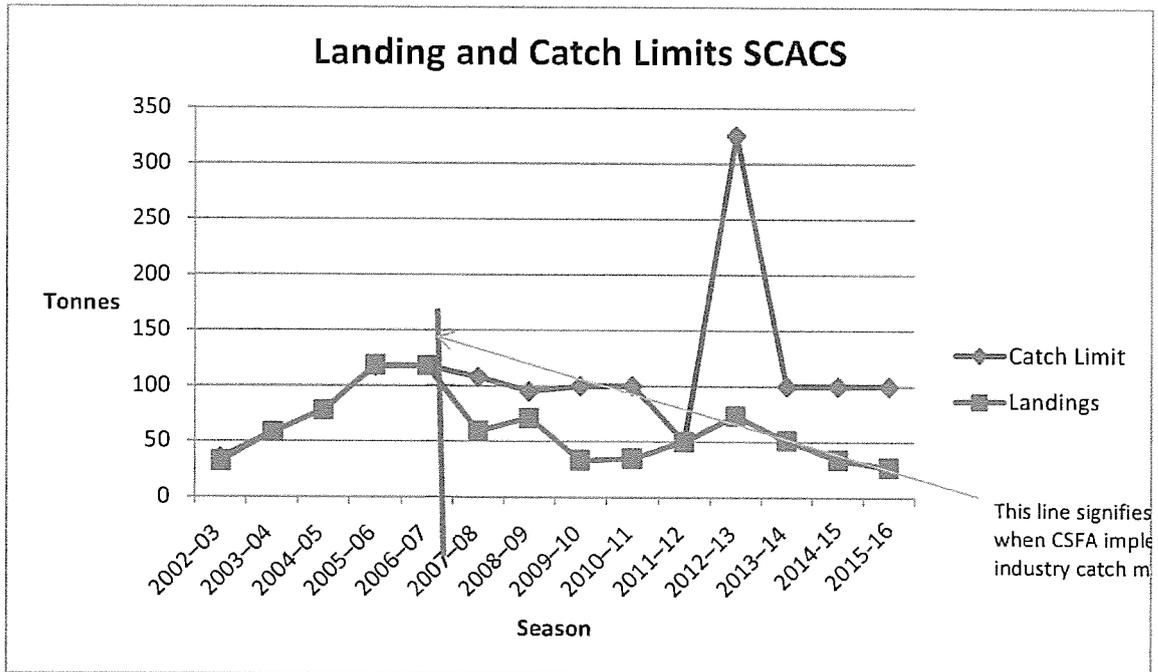
8. From 1978, Coromandel scallops were managed by explicit seasonal catch limits based on pre-season surveys. Current Annual Yield (CAY) estimates were derived from the surveys.

9. SCACS are now managed under section 13 of the Fisheries Act 1996 and are included in the Second Schedule to the Act which allows for an in-season increase to the TAC. Since the legislation provides only for an in-season increase and not a decrease, routine use of the Second Schedule provisions typically requires a low baseline TAC to provide scope for an increase in most years and to protect the sustainability of the stock in low abundance years. At the close of the fishing year, the TAC reverts to the TAC that applied at the start of the fishing year. Any additional TAC resulting from the use of the Second Schedule provisions is made available to the commercial sector through the provision of additional ACE. Any additional ACE provided under the in-season increase decision cannot be carried forward into the next fishing year.
10. While SCACS has a fishing year from 1 April to 31 March, additional regulations restrict the commercial fishery for Coromandel scallops to the period between 15 July and 21 December each year with catching limited to five days a week. These additional controls on the commercial fishery were implemented prior to the introduction of SCACS to the QMS.

Catch Management for SCACS

11. On entering the QMS, the TAC and TACC were set at low levels, 48 tonnes and 22 tonnes respectively with the expectation annual catch limits would continue to be set using the Second Schedule provisions.
12. Abundance surveys for the areas commercially fished were undertaken in April/May each year and CAY yield estimates calculated. Recent surveys cost on average \$85,000 each year. While the surveys were undertaken in May, consultation on the increase was typically not commenced until July and decisions on the in-season increase were not available until August/September, by which time up to 40% of the commercial fishing season was completed.
13. In 2007, the CSFA chose to close the fishery early as a consequence of the high proportion of small scallops found in dredges. In 2008, the CSFA chose to reduce fishing activity as a result of lower meatweights. That was consistent with the provision in the draft Fisheries Plan for Coromandel Scallops to manage the fishery in a cautious manner.
14. In 2008, the industry commissioned a report on an alternative management regime. A Management Strategy Evaluation was undertaken of both the existing survey-based in-season framework and use of operational catch-per-unit-effort (CPUE) limits on catching. In the CPUE limits model, the fishing grounds were divided into smaller areas and CPUE limits set for the areas. When the CPUE fell to the pre-set level, the area was shut and fishers needed to move to other areas. The evaluation indicated the CPUE based management regime contained less risk than the survey based approach, was consistent with the Harvest Strategy Standards and the Fisheries Act requirements and was significantly cheaper than the survey approach.
15. While the CSFA had begun to informally manage the fishery on scientific grounds since 2007, in 2010, CSFA adopted a formal CPUE management process based on the alternative management regime report. Fine scale reporting of catch was implemented and area specific CPUEs calculated on a weekly basis. In setting the CPUE limit for the implementation of the approach, industry adopted a conservative harvest setting, setting a hard limit at 50kg/hr, consistent with the HSS requirements, and a precautionary soft limit at 75kg/hour. Although the fishery was previously fished to lower levels of CPUE prior to 2007, a CPUE of 50kg/hour was considered to be the economic breakpoint for the fishery.
16. Abundance surveys continued until 2010 and in-season increases were approved as appropriate until 2013. Notwithstanding the catch limits being set by those in-season reviews, actual catch levels were in fact controlled by the industry's CPUE limit management regime and were lower than the approved limits (see following graph).

17. In 2013, the TAC was increased to 131t. MPI recognised that the industry CPUE limit regime was limiting catch below the new TACC of 100t and cancelled pre-season surveys and the setting of annual catch limits by the Minister. For the period since 2013, the fishery has been managed by the industry CPUE limit process within a TACC that had significant headroom. To that extent, the TAC and TACC were largely irrelevant in managing catch levels and served only to cap the maximum catch. The effective driver of annual catch levels was the CPUE limit mechanism.



Landings and Catch Limits SCACS

18. The following table provides information on the operational performance of the CSFA CPUE limit process since 2010. Similar information is not available for the period prior to 2010. Catching was transferred to the new bed in the Hauraki Gulf in mid September 2011 and traditional beds were left unfished for most of 2011, all of 2012 and most of 2013. The Hauraki bed fished poorly in early 2014 and fishers reverted to their traditional beds. As can be seen from the table, blocks were closed as hard limits were reached. CSFA also moved to close blocks when soft limits were reached, notwithstanding continued profitable fishing being possible. These voluntary decisions to close blocks at higher CPUE levels than necessary demonstrates the commitment of the CSFA to fish responsibly and sustainably and not pressure the beds.

COROMANDEL SCALLOPS CATCH MANAGEMENT			
Season	Blocks Fished	Blocks Closed – Hard Limit (1)	Blocks Closed - Soft Limit (2)
2010-11	7	1	3
2011-12	8	1	3
2012-13	2	0	0
2013-14	3	0	1
2014-15	12	0	3
2015-16	11	0	3

Notes (1):Hard Limit 50kgs/hour
(2) Soft Limit 75kgs/hour

19. The use of finer scale management and CPUE limits in each area preserves a baseline biomass in all areas. This prevents serial depletion of scallop beds which should be a management outcome supported by MPI. We note that using a relatively simplistic management tool (in isolation) such as a TACC, does not inhibit depletion of scallop beds.
20. In addition to the CPUE limit, the fishers operate other processes to protect the sustainability of the fishery, including, for example, a “move on” process when excessive numbers of small scallops are caught or meat quality is below expectations. The December closure of the season is to avoid disruption of the beds during the spatfall period.
21. While there is a TACC of 100t, the fishery is today effectively managed at the soft limit of 75kg/hour. As shown above, using 75kg/hour as the trigger to voluntarily close an area means an area is closed well before any sustainability threshold is approached and the fishery is managed at conservative levels.
22. The operational management is possible in the fishery owing to the high level of collaboration of the CSFA, its fishers and quota-holders in managing the fishery.

Management in Transition

23. MPI has indicated that the current management approach is still being refined.
24. In a letter of 9 October 2015, MPI stated it would review the TAC and allocations for 1 April 2016 and that it had no intention to return to the situation where the operation of the in-season increase facility was required to manage the fishery. We support that position. However, MPI has not formally agreed to industry’s CPUE limit management model for the fishery. Given that the CSFA management regime has operated successfully for eight years, demonstrably maintained catches at sustainable levels, provided fine-scale catch data, weekly CPUE and prevented serial depletion of individual scallop beds, formal adoption of this management approach is overdue.
25. The consultation document states that “*CPUE is often not a reliable estimate of abundance for scallop fisheries.*” (The same can be said for any fishery, yet it remains a valuable monitoring tool). In the absence of any references in the document, I take it this comment refers to the findings of the 2001 Cryer paper entitled “*An appraisal of an in-season depletion method of estimating biomass and yield in the Coromandel scallop fishery*”. That report sought to evaluate the use of CPUE obtained from an analysis of the opening months of the season to estimate total biomass to generate a catch level for the season. While that analysis may have concluded that early season CPUE was not a reliable indicator of biomass, the process bears no relationship to that being used by CSFA. The CSFA analyses CPUE on a fine scale during the fishing year and areas are closed if the HSS trigger of 75kg/hour is reached. The consultation document comment is misleading when used with reference to the industry CPUE limit process.
26. MPI has established a workshop of expert fisheries scientists for March 2016 to review the scientific underpinning of management of New Zealand scallop stocks. SCACS will be reviewed at that workshop.

MPI Proposal

27. The consultation document provides two options:
 - a. retain the status quo or;
 - b. reduce the TAC from 131t to 81t, the TACC from 100t to 50t but leaving the recreational and customary allowances at 10t each.

28. The need to review the TAC is said to be the new information as to the biomass and a desire to maintain the responsiveness of the QMS to changes in biomass information.

General Comment

29. While quota-holders support the need for a reduction of the TAC/TACC, they do not support the proposed TAC and TACC proposed in Option 2. Rationale is provided as follows.

Option 1:

30. CSFA recognises that the TAC and TACC were increased in 2013 as a direct consequence of the identification of the new Hauraki Gulf Bed. To the extent that the bed was not found to be a permanent fishing ground, CSFA acknowledges that a reduction in the TAC/TACC is reasonable. As such, Option 1 is not supported.
31. However, CSFA notes that the CPUE limit currently acts as the primary management control. A high TACC therefore does not put the sustainability of the fishery at risk.

Option 2:

32. While CSFA supports a TAC/TACC reduction in the current circumstances, CSFA considers that the proposed Option 2 TAC/TACC setting is too low.
33. While setting a TAC/TACC is required by the Fisheries Act and industry agrees that the absence of the new bed makes a TAC/TACC reduction appropriate, the issue is where that baseline should be placed for SCACS, taking into account the variability of the stock and the operational CPUE limit process.
34. Setting a TACC at the long term average catch level would mean that on average the TACC would constrain the catch level for about 50% of the time. Accepting that historically higher catches have only occurred during periods of higher abundance implies that setting too low a TACC risks forcing management of the fishery to revert to the earlier, expensive, regime of in-season surveys and adjustments during periods of increased abundance with the CPUE limit remaining the main constraint during periods of lower abundance. Such a hybrid management regime serves only to decrease the value that can be sustainably extracted from the fishery and negates the work undertaken by industry to manage its catch by the CPUE rule. A TAC/TACC set with a low probability of catches exceeding the TACC is more appropriate for fisheries with additional constraints on catch, and for SCACS in particular where the CPUE limit approach is the actual mechanism that limits catches in given year.
35. For Option2, MPI has proposed a TACC of 50t being the average of the last eight years. That calculation omits the period of high abundance from 2004 to 2007 and is significantly more conservative than the catch levels it approved over the period from 2008. There is no justification provided for choosing the period and omitting a period of higher scallop abundance. If the period from 1986 was used, the long term catch average, which would reflect two periods of high abundance and two periods of lower abundance, would be approximately 85t per year.
36. Since the introduction of SCACS to the QMS in 2002, commercial catches have averaged around 60t per year and approved catch limits averaged 106t. We note, however, that catch limits were not adjusted in the 2003-2007 period to levels consistent with the lift in abundance and catch limits during that period were constrained more than necessary. Industry accepted lower catch limits in this period because it did not anticipate fully utilising the increased abundances

available. To that extent, the average catch of 60t per year under-estimates the fishing levels that could reasonably have applied over the period since 2002.

37. MPI has indicated it will hold a workshop in March 2016 to review the scientific approaches used in the management of scallop fisheries in New Zealand. At present, the three scallop fisheries are differently managed:
 - i. the SCA1 fishery is managed with a TAC/TACC with significant headroom over recent catch levels, a pre-season survey and in-season TAC increase when required but lacks the tight operational management of CSFA;
 - ii. SCACS has been described above; and
 - iii. SCA7 has a TAC/TACC that provided headroom for an enhancement programme, a pre-season survey to inform catch limits and an annual catch limit regime where the Challenger Scallop Enhancement Company proposes catch limits for Ministerial approval.
38. That workshop may support the current SCACS management regime or may provide reasons to refine, amend or replace the SCACS regime. A decision to replace or structurally amend the SCACS catch management regime at this point in time is premature and might signal a belief that the current SCACS management regime is considered inappropriate.

CSFA Alternative Proposal

39. While SCACS has an allocated TAC, commercial catch is managed by the CPUE limit rule. Industry monitors its catch rates and manages its catch to those limits and has done so without exception since formally adopting that model in 2010. Since its introduction, the CPUE limit process has constrained catch to levels lower than the MPI approved catch levels in all years. Industry contends that it is managing its catch on a basis that is:
 - i. consistent with the movements in the biomass; and
 - ii. is conservative relative to the MPI-approved catch limits and to the evaluated CPUE limits.
40. On that basis and in the absence of any change to industry's management process the TAC/TACC is a second-order sustainability measure for the fishery. MPI has signalled it has made no decision to change the management of SCACS from the regime introduced in 2011.
41. Accordingly, there is no need to adjust the TAC on the basis that the biomass may have reduced. The industry CPUE limit management protects the sustainability of the stock at both high and low levels of abundance.
42. The fishstock is currently considered to be at low levels but the nature of the stock implies that abundance increases are expected in the future.
43. The variability in abundance of SCACS can be managed in one of two ways. The first is by low TACC and a pre-season survey with an accompanying in-season review. We do not support this approach as a) it requires expensive annual surveys to assess biomass, b) it is administratively burdensome to review survey data and TACCs on a regular basis, and c) the in-season review process is often not completed until late in the fishing season which unnecessarily constrains the economic advantage that the TACC increase seeks to provide, and d) a better option is available. The second management mechanism is a higher TACC, with commercial extraction managed through application of the CPUE limit rules.
44. We see no reason to revert to the previous framework of a low baseline TAC and an in-season TAC review to manage the fishery at this time. Such a move will serve only to impose additional costs on the fishery and remove any flexibility and accountability from quota-holders in the management of their fishery. The existing CPUE limit management regime is demonstrably

effective and efficient in managing the fishery and there are no valid reasons for its replacement or having additional controls placed on its operation. A TACC of 50 tonnes is seen as creating a hybrid management framework where the ability of industry to realise opportunities to access increased abundance is compromised by the need to undertake pre-season surveys and the industry already sets conservative catch limits in times of low abundance. We consider such a management framework does not fairly address utilisation and sustainability risks and benefits. A 50 tonne TACC is perceived to be too low.

45. Notwithstanding the effectiveness of the industry management regime, a reduction in the TACC would be seen as appropriate in the absence of the new Hauraki Gulf bed and to demonstrate the responsiveness of the QMS to new information.
46. CSFA considers that a TACC of 70 tonnes would be more appropriate than the Option 2 proposal of 50 tonnes on the basis that:
 - i. The use of a higher TACC and the industry CPUE limit provides an effective, cost efficient management option for SCACS in the current circumstances;
 - ii. A 70 tonne TACC is more consistent with the long term average catch level; and
 - iii. A 70 tonne TACC evidences a strong MPI commitment to the CSFA's management processes.

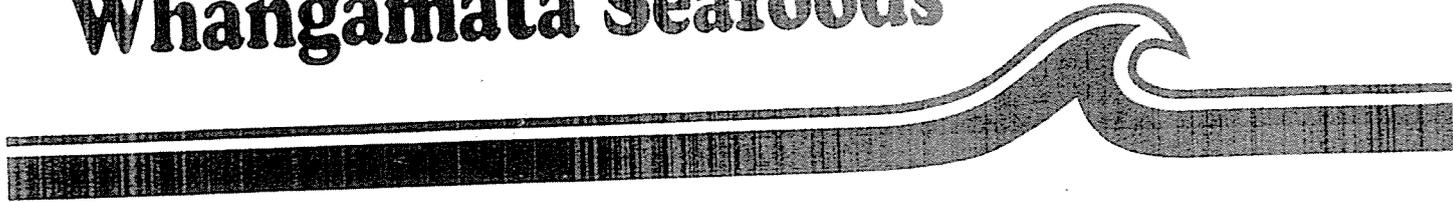
Review of Recreational and Customary Allocations

47. A decrease in allocation is proposed for only the commercial sector, no reductions to the recreational and customary allocations are proposed. The rationale for this is the decreased biomass in the Hauraki bed that is generally inaccessible to recreational fishers. We note that when the TAC was increased in 2013, due to increased biomass in the very same Hauraki bed, that all sectors benefitted through increased allowances.
48. We submit that the allowances for the recreational and customary sectors should be reviewed. We simply note this inconsistency in approach and the general lack of policy guidance or rationale regarding allocation of the TAC.

Deemed Values

49. We agree with the MPI proposal not to adjust the deemed values for SCACS at this time. It would need a substantial reduction in the deemed value for SCACS to allow deemed values to be a fisheries management tool that might allow fishers to take advantage of an increased abundance in advance of any TACC shift. We see no prospect of such a shift being approved and consequently support the retention of the current deemed value regime.

Whangamata Seafoods



12 February 2015

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Tena koe,

2016 REVIEW OF SUSTAINABILITY CONTROLS FOR THE COROMANDEL SCALLOP FISHERY

Introduction

This submission is from Quota Resources /WhangamataSeafoods

This submission responds to the Ministry for Primary Industries (MPI) consultation document dated 14th January 2016 and entitled "Review of sustainability controls for the Coromandel Scallop fishery".

We have consulted our members in the development of our submission

Overview of MPI Initial Position Paper

According to MPI's Initial Position Paper (IPP), they have decided to review management settings for the SCACS fishery. The fishery is managed with a baseline TAC and an ability to approve in-season increases, and a range of other regulations. The baseline TACC for the Coromandel Scallops fish stock was increased in 2013 from 22t to 100t. The main driver of this increase can be attributed to the discovery of the Hauraki bed in 2011. However, with the die-off of this bed in recent times, MPI considers the current TACC may no longer be supported by up-to-date information.

No new survey data has been considered by MPI in this review. Instead MPI has proposed options that are based on catch limits and patterns in the fishery over a number of years. MPI says that within the constraints of the available information, these two options satisfy the purpose of the Fisheries Act and the requirements of section 13(2A).

MPI Proposals

MPI is proposing two options. Option 1 retains the status quo - the TAC remains at 131t, the TACC 100t, customary 10t, recreation 10t, and other mortality 11t. Under this option Industry continues to operate the voluntary CPUE limit rule alongside the MPI management framework.

Option 2 proposes to decrease the TAC from 131t to 81t, and to reduce the TACC from 100t to 50t. The allowances for customary, recreation and other sources of mortality are retained at current levels. Under this option there is no requirement to operate the

CPUE limit rule alongside the MPI management framework. Options 1 and 2 are shown in Table 1 below.

Table 1. Proposed Management Settings for SCACS

Options	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Customary Maori (t)	Rec Allowance (t)	Other sources of mortality (t)
Option 1	131	100	10	10	11
Option 2	81	50	10	10	11

SCACS Fishermen's Association

After considering the information contained in MPI's consultation document, and taking into account other factors, SCACS Fishermen's Association makes the following recommendations:

1. MPI formally acknowledges the Industry Management Program as the primary strategy supporting sustainability of the SCACS fishery
2. MPI approves Option 3: set the TAC at 101t, the TACC at 70t, and retain the non-commercial allowances and other mortality settings (See Table 2)
3. MPI retains the deemed values for 2016
4. MPI includes the Industry Management Program on the agenda of the Shellfish Working Group, March, Technical Workshop on scallops, and discuss the merits and utility of real time CPUE catch data, and the overall Industry Management Program. Representatives from Industry and Te Ohu should be invited to attend this workshop.

Table 2: Proposed Option 3

Options	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Customary Maori (t)	Rec Allowance (t)	Other sources of mortality (t)
Option 3	101	70	10	10	11

Supporting Arguments

There are 4 supporting arguments behind SCACS Fishermen's Associations recommendations:

- I. The Industry Management Program will run alongside the MPI management framework, and therefore sustainability of the fishery is protected (see commentary).
- II. The proposal set out in Option 3, combined with the Industry Management Program, better satisfies the purpose of the Fisheries Act by avoiding, remedying, and mitigating adverse effects of fishing on the aquatic environment, and doing this in a way that is a significant improvement on the MPI management framework. The proposal is also within the constraints of the available information in terms of section 13(2A).
- III. The recommendations are consistent with the National Plan for Inshore Stocks. The draft National Plan for Inshore shellfish stocks aims to maximise the annual yield from the SCACS fishery, while maintaining the stock size at or above the level required to ensure sustainability and spawning stock biomass. The proposed Option 3, combined with the Industry Management Program, better satisfies the aims of the draft National Plan for Inshore shellfish stocks.
- IV. There is support from Industry for the recommendations set out in this submission.

Options 1 and 2

In relation to MPIs Options 1 and 2, we reject these on the basis Industry no longer wishes to operate the TACC at 100t, or alternatively operate a TACC of 50t.

COMMENTARY

The Industry Management Program

The Industry Management Program is run by the SCACS Fishermen's Association and mitigates much of the risk associated with commercial fishing. The basis of the program was an alternative management regime that was developed in 2008 by industry with the support and guidance of Dr Vivian Haist and Dr David Middleton. A Management Strategy Evaluation was undertaken of both the existing survey-based in-season framework and use of operational catch-per-unit-effort (CPUE) limits on catching. The evaluation indicated the CPUE based management regime contained less risk than the survey based approach, was consistent with the Harvest Strategy Standards and the Fisheries Act requirements and was significantly cheaper than the survey approach.

In our view the Industry Management Program contributes the most to managing risks associated with commercial fishing and sustainability. It does this through six key strategies:

- ↓ Collaboration and formal structure
- ↓ CPUE limit rules
- ↓ Managing pre-recruits
- ↓ Recovery thresholds
- ↓ Best available information

↓ Operating with headroom

Without the Industry Management Program the SCACS fishery would be exposed to significantly high risk. In the absence of the Industry program, MPI's management framework would rely on biomass surveys (until recently they have been annually), a Total Allowable Catch (TAC)/Total Allowable Commercial Catch (TACC), Minimum Legal Size (MLS), seasons, and fishing times, to ensure sustainability. But the reality is these tools on their own don't ensure sustainability at all.

In the following text we have attempted to describe how the Industry manages their activities associated with commercial fishing. It's a proactive approach to managing the SCACS fishery. Our intention is to highlight the role that each of these 6 strategies play in ensuring sustainability of the SCACS fishery.

(1) Collaboration and formal structure

In the first instance the SCACS Fishermen's Association provides the formal structure for quota owners and Iwi Asset Holding Companies to work collaboratively, and to put in place initiatives that provide the best long-term outcomes for the fishery and all stakeholders. The SCACS Fishermen's Association facilitates dialogue amongst quota owners, commercial fishers, and MPI, and implements the decisions and policies that are agreed.

At the start of each season quota owners place their ACE into the SCACS Fishermen's Association who then administer the ACE throughout the season. The ACE is held by the association as a kind of bond to ensure quota owners and fishers comply with the association's rules. The penalty for not complying with catching rules is the fisher does not receive any ACE and is therefore liable for any deemed values associated with fish caught up to that time, and beyond if they continue to fish. Since the program started Industry has achieved 100% compliance with the implementation of agreed management decisions.

MPI refers to the Industry program as voluntary. This is misleading and incorrect. The SCACS Fishermen's Association is a legal entity, with a formal governance structure, rules, policies, and an ability to raise funds from its members.

(2) CPUE limit rule

Secondly, the SCACS Fishermen's Association runs CPUE limit rules that comprise hard and soft thresholds.

The CPUE limit rules are an important part of the Industry Management Program and responds to changes in CPUE. If catch per hour falls below the 50 kg/hr hard limit, then statistical reporting areas, or smaller sub-statistical areas can be closed for the remainder of the season. This 50 kg/hr hard limit prevents serial depletion which might otherwise occur in the absence of the CPUE limit rule. We are aware of commercial scallop boats outside of the SCACS fishery that have operated as low as 20kg hr.

In terms of the soft limit, the CPUE limit rule requires Industry to proactively manage areas where the CPUE is at or below 75 kg/hr. Besides recruitment and natural

mortality, CPUE can be influenced by catchability which is affected by wind and tides, and the extent to which the seafloor is corrugated. These factors are therefore considered when deciding an appropriate response to both soft and hard limit thresholds.

By contrast the MPI management framework has no catch thresholds other than a TAC and minimum legal size (MLS). More importantly, the MPI framework lacks any mechanism to prevent serial depletion as where the Industry approach is designed to prevent this from occurring.

(3) Managing pre-recruits

Thirdly, pre recruit populations are managed in each bed to ensure they are not commercially fished unless roughly 70% of the stock is above the 90mm MLS. This fishing strategy is aimed at optimising the number of scallops that can be harvested from a bed, whilst minimising the damage to pre recruits. The MPI management framework lacks a strategy or rules to manage this situation.

(4) Recovery threshold

Our fourth argument for the Industry program is the commercial boats do not harvest scallops below a 10% recovery threshold. The objective is to get the best yields from the fishery. Taking them when they are in good condition reduces the number of scallops needed to make up a kilo of processed scallops. More fish are therefore left in the water and continue to contribute to the sustainability of the fishery.

(5) Best available information

Our fifth argument in support of the Industry Management Program relates to the weekly management reports that are generated by Industry during the season. These management reports comprise a summary of the CPUE data referred to above in (2). The reports provide real time catch/survey information that enables Industry to respond to changes in stocks far more quickly (immediately if necessary) than is possible under the MPI management framework. This information is used by Industry to inform weekly management decisions. The Industry information should be considered to be best available information. See Appendix 1 for a copy of weekly reports.

The MPI framework captures standard daily catch landing information but does nothing with it between one review and the next. In any case the value of the information is limited

(6) Operating with headroom

Our sixth argument in support of the Industry Management Program is the TACC is set at a level that provides Industry with headroom to operate at lower and upper ends. The original driver of this "headroom" approach, and it still is, is to overcome delays and uncertainties with obtaining annual in-season increases, and to lower the costs associated with management. Prior to Industry implementing the management program they were on the verge of having to pay deemed values as a result of delays in the MPI

processes to achieve in-season adjustments. Because of these delays Industry missed the opportunity to take advantage of the very high populations that were located in 2011. These inefficiencies meant Industry missed the opportunity to catch hundreds of tons of scallops and by the time MPI approved an increase in the TACC in 2013 the larger Hauraki bed had already started to die from old age.

Currently the TACC is set at 100t and provides Industry the opportunity to increase catches at times when the fishery is abundant and decrease it when it isn't, all within sustainable limits. As noted above the SCACS Fishermen's Association have advocated their preference to reset the TACC at 70t. The decision takes into account historical catches, and the annual MPI levies associated with TACCs.

In concluding we note that Industry is not averse to coupling their program with the MPI framework but if MPI insists on Industry re-starting the traditional annual surveys that NIWA has conducted in past years then it may result in the cessation of the Industry program. The Industry have repeatedly said they cannot afford to run both programs and in any case the value obtained from the traditional surveys is questionable.

We would prefer MPI to consider how the CPUE data that is collected daily by commercial fishers can be used to inform management decisions, or how MPI can better align with the Industry Management Program that effectively uses the data.. These would be useful questions to pose at MPI's Shellfish Working Group meeting in March to discuss scallop management.

If you would like to discuss this submission please contact Peter Sopp.

Peter Sopp

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

10th February 2016

To whom this may concern,

This submission is written by James Parfitt, CEO, Director and Co-Founder of New Zealand Wild Catch Limited, P O Box 378, Christchurch.

Regarding Review of Deemed Value Rates for Selected Stocks: 5.5 Sea Cucumber (SCC 3)

NZWC Company Background:

New Zealand Wild Catch Limited is the majority quota share owner in SCC3 and owns approximately 80% of the total quota shares in SCC3. We are a fisher, processor, exporter, wholesaler and retailer. One of our key purposes is to develop the export sea cucumber fishery in SCC3 where there is currently a commercially significant population of Sea Cucumber. We have invested significant sea cucumber expertise, time and capital to develop the fishery from deep water harvest, stock research and development, through to marketing and distribution in Asia.

As a result of market dilution and damage to the international species reputation caused by the continued overfishing in SCC3 the fishery and market for New Zealand Sea Cucumber is at severe risk of irreversible damage. In the end this will not only disadvantage quota owners and kaitiakitanga but also disadvantage the lobby organisations, fishermen and 'big fish' which champion the retention of the Deemed Value (DV) status quo by focusing on short term gain, at the expense of long term growth and sustainability.

Already I am seeing Dried New Zealand Sea Cucumber from SCC3 for sale in both legitimate markets and grey markets in Asia that is substandard in quality, which in turn is destroying the species reputation.

Little is known, even by consumers in traditional markets in Asia, regarding the importance of harvesting and processing best practices and how it drastically affects product quality for this unique organism. If a customer sees a New Zealand Sea Cucumber for sale that is poorly processed and/or presented they assume it is a low value species. As a consequence, New Zealand sea cucumber (*S. mollis*) has started to develop a reputation as a low-medium value species by virtue of being harvested, processed and marketed from a commodity mentality where volume is number one and quality is second. The market entry phase of a new species is the most critical point in determining long term future value – a key tenet of the Deemed Value framework - and continued bycatch overfishing caused by artificially low DV will only exacerbate this problem. An example of this can be seen in the *Cucumaria frondosa* species in Iceland and the North Atlantic where laissez-faire regulations have brought about a collapse in prices through oversupply of poorly handled and poorly processed product.

Up until now aside from a few in the NZ sea cucumber industry, and the opportunists which characterise the sea cucumber industry in NZ and worldwide there has been a steady progression to develop the fishery; and quota owners, stakeholders, Government and NGO's have largely worked together. This balance has been upset by the emergent overfishing, and pressure indirectly placed on fishermen in SCC3 to land sea cucumber - even though SCC is part of the Sixth Schedule (Sc 6) of the Fisheries Act 1996 -

whom in doing so are directly disregarding the intent, purpose and spirit of the QMA, disregarding the Deemed Value framework and disregarding the Sixth Schedule framework.

My Background

As Co-Founder & CEO of NZ Wild Catch Limited (Specialist in fisheries, wild harvest, processing, marketing, distribution and mariculture of sea cucumber species) I first became involved in sea cucumber whilst working in pharmaceutical development where it was recognised as a novel therapeutic element and I have been directly involved in the industry since the mid 2000's in multiple areas. As a fluent Mandarin speaker, with close to a decade of management experience living and working in the sea cucumber industry in Asia. I have been able to bridge distrust and misinformation between key stakeholders in the industry here and overseas I consider myself as having unique, hands-on, experience in the global sea cucumber industry from managing fishing, processing, culturing, marketing and distribution activities. I was recently invited to the Pacific Beche-de-Mer and Future of Coastal Fisheries Meeting in Nadi. Developing New Zealand's Sea Cucumber fishery is my full time occupation and passion.

I have a large network of sea cucumber industry professionals and academics in Asia, South Pacific, Europe, the Russian Far East and The Americas. I have close ties with leading sea cucumber experts in Asia, from The Chinese Academy of Sciences, Mariculture Institutes and other public and private institutions concerned with wild harvest, processing and aquaculture. I have been working on building harvest/product/processing intellectual property of *S mollis* since 2008.

NZWC Ltd scope of expertise with regard to SCC:

- Sea Cucumber Deep Water Harvest Technologies and associated IP
- Sea Cucumber Aquaculture, Sea Ranching & Stock Enhancement.
- Added-Value Sea Cucumber Deep Processing
- Sea Cucumber Nutraceuticals & Novel Therapeutics
- Sea Cucumber Branding, Marketing & Distribution in Asia
- Sea Cucumber Capital Projects Management

Our submissions:

We believe it is important the DV in SCC3 is A) increased and B) increased above the proposed values, for the following reasons:

1. The intent of the deemed value framework is *to protect the long term value of stocks...by providing incentives for the overall commercial catch for each QMS stock to remain within the total available ACE and/or the TACC*. The long term value of SCC stocks is at grave risk if the TACC continues to be over-caught. The market is being flooded with inferior product, harvested and handled incorrectly, sold through multiple local middlemen adding little if any value, other than landing and/or freezing, to certain smaller processors whom largely sell to private individuals whom themselves sell through grey market, or black market channels on Asian social media. An increase in DV sufficient to ensure overall commercial catch remains within the total available ACE and/or TACC is critical in allowing us to further invest in the SCC3 fishery, further develop deep water harvest and dive best practices, further engage with fishermen. After spending the last 8 years in R&D, product development, and fisheries to develop the NZ species, in the later half of 2015 NZWC was forced to purchase sub-standard product to stem the flow of over-caught bycatch product in our market. In one recent

instance over 4 tonnes of SCC had been landed into a large processor in direct contravention to the intent of the QMA and DV framework.

2. Our company has invested large amounts in developing technology for deep water harvest and handling. If the DV is not raised to a suitably high level, there will be no incentive for us to fully commercialise and optimise the technology we have developed.
3. The 'elephant in the room' of the argument for DV status quo being retained is that the fish stock is a Sixth Schedule fish stock which can and should be returned to the ocean where it will survive. The fact that post-harvest sea cucumber handling requires a great deal of labour to stabilise them on-board vessels yet there is still enough margin for considerable profit for non ACE holders is evidence that the spirit of the DV and Sc6 frameworks are being disregarded.
4. The price for sea cucumber in SCC3 is now regularly around 30-40NZD/kg; with minimal value addition (freezing). Thus there would still be a significant incentive to fish through ACE if the newly proposed rates were enacted.
5. There is a newly developing, specialist dive fishery in SCC3 where beach landing prices could reach as high as 30NZD/kg and frozen prices >40NZD/kg. Any review of the DV must take the dive fishery into account or risk severe localised depletion of the resource. If the DV is set at a rate based purely on a trawl fishery then it is only a matter of time before the dive fishery is over-caught before it has a chance to develop. This would not only destroy the shallow water fishery but potentially destroy juvenile populations which in turn populate deeper water habitats.
6. There is a large emerging market for sea cucumber derived pharmaceuticals and health supplements which NZWC has begun processing and marketing. Peer-reviewed studies have shown the efficacy of bio-active sea cucumber elements in vitro and in vivo and its uses as a chemotoxic and chemopreventative compound are widely known. If SCC are over-caught on a consistent basis due to low DV, thereby undercutting our market, our ability to develop these new added value products will be severely diminished.
7. If DV is not set at a realistically high level to deter over-fishing then even small quantities over-caught (and paid at interim rates) will disrupt export markets by setting artificial price benchmarks easily available online to legitimate export customers. Even a few kilograms harvested, and deemed at interim rates, processed and marketed online would be enough to destroy established price structures and further destabilise markets.
8. Future TACC review, population surveys and fisheries development is largely a waste of public and private resources, time and money if reasonable action is not taken to ensure the overall commercial catch remains within the total available ACE because any population sustainability measures will be offset by overfishing at current and proposed DV rates.
9. Whereas in the past SCC3 quota/ACE was not previously utilised. Our company have successfully landed the majority of our available ACE in Area 3 and intend to fish up until our ACE limit this fishery year.

10. The proposed annual rate of 30.00 is not double the landed price. In certain situations this rate will likely be close to the landed price in the 2015/2016 fishery year which means a DV set at this value would not offer a sufficient incentive to balance ACE.

Conclusion:

1. SCC3 is the most important SCC FMA nationally because it has the ability to destabilise the entire development of the national sea cucumber fishery. A situation which we are already seeing given the overfishing in the current fishery year. Ultimately retention of the status quo, or even an increase to the levels proposed will cause further damage to the fishery and ironically will not serve in the best interests of status-quo proponents or fishing industry in the long term.
2. If the DV is set at the proposed rate, especially at the Interim rate of 13.50 there will still be large incentives for bycatch and for continued activity in direct contravention of the purpose and intent of the DV framework and QMA. The proposed annual rate of 30.00 is also insufficient to deter bycatch, and is certainly not double the landed price – 30.00 will likely be close to, or under, the landed price in certain situations as outlined above. Based on commonly used methodology of double the landed price an annual rate of 60.00-80.00 would be more appropriate with an interim rate of 27.00 – 36.00.
3. The continued lack of appropriate DV disincentives will in turn stymie the legitimate development and investment efforts which are occurring in the SCC3 deep water and dive fisheries by destabilising markets with continued oversupply of poor quality product.

I encourage the Ministry to request any further evidence on a confidential basis that would support the submissions made above.

I would be delighted to come and speak to this submission in person.

Yours Faithfully,

James Parfitt

CEO, NZ Wild Catch Ltd

From: Richard Charles
Sent: Friday, 12 February 2016 7:44 a.m.
To: FMSubmissions
Subject: Coromandel Scallop Fishery

Having read your review of sustainability of the Coromandel Scallop Fishery I wish to add my backing to Option 2.

I own a property at _____, Opito Bay NW of Whitianga and this would be the first year that I recall recreational divers complaining about the availability of scallops.

Normally there are large numbers of recreational boats anchored in the bay attempting to harvest their quota, but this year there would have only been maybe 5 to 10 vessels on a daily bases.

Historically Commercial Dredging is relentless within the Bay as was the case this season prior to Christmas. Local fulltime residents reported up to 6 commercial craft dredging on a daily bases.

Interesting reading your report where the new Scallop Bed was discovered inside the Gulf in 40 to 50 metres and harvested 2011 to 2013, which gave the Opito Bay a chance to rejuvenate!!

I certainly don't claim to be an authority on this subject but appears to be blatantly obvious that the Scallop Fishery from Whangapoua through to Opito Bay cannot withstand the present

allowable catch as set out in Option 1. I believe there was a high mortality rate around Mercury Island due to some disease but as to whether this has had an effect on numbers within the area

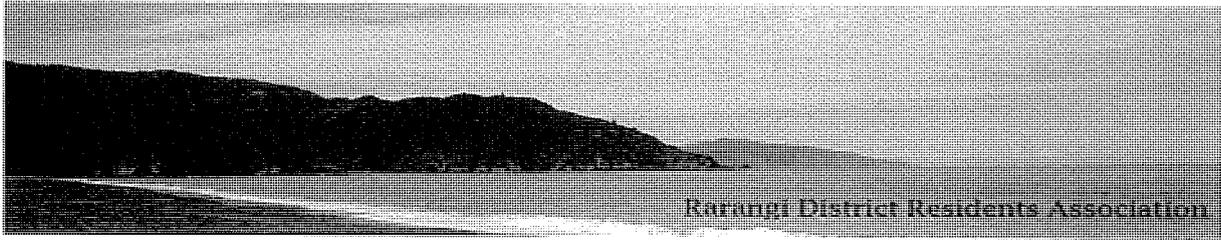
I'm referring to, so no doubt you have taken that into consideration

As a further matter of interest, snapper and fishing generally has been extremely disappointing throughout this area also. Recreational cray potting appears to have been decimated by Commercial plundering over recent years also!!. How many Cray boats operate out of Whitianga /Mercury Island?

It would be my wish that this Scallop Fishery be given serious thought so as to provide for future generations rather than short term gains acknowledging the fact that you have the powers to change quota allocation should the situation improve.

Regards,

Richard Charles



Review of Sustainability Controls for Surf Clam Stocks in QMA7

Rarangi District Residents Association (RDRA) submission February 2016

Executive Summary

The RDRA strongly **opposes** the proposal by MPI to increase Surf Clam TAC's in QMA7.

The RDRA **supports** an increase in Deemed Value but suggests as a true disincentive, it should be equivalent to double the export market value of the species.

- MPI and the Minister failed to notify or seek feedback from Rarangi Beach residents regarding the proposed increases. The Minister failed in his obligation under the Fisheries Act 1996, to notify all affected parties and to allow for a fair submission period.
- Significant current and potential local amenity loss to Rarangi Beach residents including effects from noise, visual disturbance, and loss of recreational fishing ability due to commercial harvesting vessels operating close inshore within the surf zone adjacent to residential housing.
- MPI and the SWG flawed fishery management approach - primarily utilising the commercial operator' Biomass data only, is needlessly reckless and without sound ecological and sustainability basis.
- Insufficient scientific studies and/or limited data on the various commercial surf-clam species biological life-cycles, including mortality rates and effects of external influences such as storm and el Niño cycles, flood events, and dredging.
- Insufficient recent supporting scientific studies and data to corroborate MPI and commercial operator claims that hydraulic dredging has 'minimal environmental impact' on the seabed and benthic zone, in the 'surf zone environment'.
- 'Deemed value' proposed changes will have little effect on the commercial operators who appear to have been offered TAC increases as a 'pacifier'.

Main Issues:

1. MPI has failed a statutory requirement to engage and consult with local community as 'affected parties'. Few local people outside the commercial operator and quota holders will be aware of the process, and there has been no local consultation apart from Iwi (who are quota holders), therefore the process has not complied with the Ministerial obligations under the Fisheries Act 1996.

In regards to the proposed increases in TACC; a strategically short submission period, and the excuse that 'legislative process deadlines' are required to be met, points a finger squarely at systemic failure within MPI. This review appears to have been hastily cobbled together in an attempt to appease the commercial operator and offset an increase in 'Deemed Value' by rewarding them with additional quota. The 'Take with one hand, give with the other' concept is completely unacceptable.

In real terms, MPI' and the commercial operator's failure to engage with locals (approx. 170 dwellings and 500 people) – and especially Rarangi Beach foreshore residents who are affected on a daily basis by substantial, noisy, jet-propulsion vessels - operating pumps close-inshore within the surf zone. These vessels have been observed harvesting from 0600 and 7 days when conditions allow, and are noisy, intimidating and discourage local amenity use i.e. Locals have stated they feel they are unable to surf cast or set kontiki long-lines off the beach safely. There is also potential for loss of recreational fishing equipment by commercial harvesting vessels transiting across kontiki long-lines, with dangerous and/or expensive consequences.

There has been no attempt by the commercial operator at interacting with the local community apart from the meeting in September 2015, which was called by locals to discuss over-fishing. The operator's entire motivation appears to be commercial gain - not sustainability, future-proofing and interacting as a considerate neighbour. An increase in TACC benefits one company (and a variety of Iwi quota holders) and disadvantages many (residents and other interested parties). Additional surf-zone traffic and in particular - the potential for multi harvest vessels working the surf-zone (to harvest the additional proposed quota) is disrupting local 'amenity value'.

2. Research for the review has been based on MPI's flawed model of 'Biomass' vs 'Biological' assessment. This is clearly not based on a long-term sustainability model. The new research has been paid for by commercial operator– therefore is regarded as non-independent and possibly 'loaded' in their favour. In addition, surf-clam harvesting is performed over a very small concentrated area of QMA7 and it's scientifically reckless to extrapolate and average this across the entire QMA7.

3. It is also noted that the 'new research' (White et al 2015) that forms the bulk of the reasoning behind the Review document, is based solely on an extensive **Biomass** study which incorporates little reference to surf-clam biology.
4. Research data has been gathered by the commercial operator whilst significantly over-harvesting for the past four (4) Plenary years, and MPI appears to have effectively condoned this behaviour, which although not technically illegal, makes a huge mockery of TACC's and opens up potential exploitation of other species and other fisheries due to pressure by commercial operators. It is highly unethical and unscientific to be gathering data in this fashion especially when it is acknowledged that strong export markets currently exist.
5. MCY or (MSY) (Maximum Sustainable Yield) is an outdated economic concept which is focused solely on economic gain without long-term sustainability vision. This concept has been widely criticised globally as ignoring several key factors involved in fisheries management and has led to the devastating collapse of many fisheries. 'As a simple calculation, it ignores the size and age of the animal being taken, its reproductive status, and it focuses solely on the species in question, ignoring the damage to the ecosystem caused by the designated level of exploitation and the issue of bycatch. '

A more sensible approach being adopted by responsible Fishery Managers is OSY (Optimum Sustainable Yield) which is the largest economical yield of a renewable resource achievable over a long time period, without decreasing the ability of the population or its environment to support the continuation of this level of yield.

6. Little recent research has been done on the Biological cycle of the commercial surf-clam species, and it is readily admitted by MPI and NIWA that little is known regarding the life-cycles – especially the larval stages (MPI fishery Plenary 2015).

Section 4.1 of the review document is contradictory and appears to acknowledge that the fishery can change quickly due to external factors; therefore it appears to be extremely reckless and unbalanced science to proceed on the basis of Biomass data only.

What recent studies have been carried out to support MPI' statements that NZ surf-clam species are prolific breeders?

The commercial operator appears to be currently harvesting year-round (i.e. through spawning). Where is the Management plan from the commercial operator that proposes 'resting the fishery' for self-imposed periods to allow for spawning and give the fishery an opportunity to recover?

7. Whilst this is a fisheries review process, we believe it also has relevance to the RMA because of the close proximity of commercial harvesting and the undue impact on residents and the inshore zone. The relevant section of the RMA; Part 3 Sec 12 (1 e); 'No person may, in the coastal marine area,—destroy, damage, or disturb any foreshore or seabed (other than for the purpose of lawfully harvesting any plant or animal) in a manner that has or is likely to have an adverse effect on plants or animals or their habitat.'
8. MPI appears to support the viewpoint that the seabed is undamaged and quickly 'repairs' post dredging. (Beentjes and Baird2004) however this research predated the current hydraulic dredging system. Hydraulic dredging is almost certain to be affecting the benthic habitat balance and there appear to be no recent studies to support MPI' assertions which imply that little of importance to the food-web lives below the surface.

MPI has made the following statement: 'The various species of surf clam tend to inhabit separate depths, and therefore represent zonation by species allowing a good degree of targeting.'

Can MPI or the commercial operator's support this statement when Hydraulic dredging - which causes liquefaction of the seabed, is indiscriminate in its ability to target a certain depth or species and causes suspension of benthic biota in the water column?

9. As part of this analysis, there appears to be few studies or consideration given to implications or effects from hydraulic dredging to benthic habitat. Such items which appear to have been overlooked are:
 - Composition of seabed
 - Biological composition of seabed
 - Shellfish population dynamics
 - Food Web analysis
 - Effects on the water column

These comparisons should be carried out in dredged areas versus non-dredged zones. This is about the sustainability of not only surf-clams, but many other species.

10. There appear to be no recent studies done on bycatch.
11. There is anecdotal and photographic evidence from locals that surf-clams are sometimes damaged by dredging and end up on the beach as a food source for birds.

Conclusion

It is the sincere request from the RDRA, that MPI consider all the above issues and in the face of a substantially incomplete and unbalanced scientific data picture, to maintain the **status quo (Option 1)** until further scientific studies are completed.

It is also the request of the RDRA that **Deemed Values** for the commercial surf-clam species be raised to a true **disincentive** level.

The long-term approach should be cautious and truly transparent, with a thorough scientific understanding of the items listed above in Item 9 before an increase in TAC's should be considered.

It would also be appropriate at this time, to urge MPI and the commercial operators, to consider engaging in open and frank consultation with all 'directly affected parties' **prior** to implementing a change procedure, so that all socio-economic perspectives are acknowledged and considered.

Addendum

The final word goes to the authors of the report below describing the failure of the Chilean surf-clam fishery – which collapsed despite intense efforts on the part of all stakeholders to avoid issues, after three years of management area policy:

<http://www.ecologyandsociety.org/vol19/iss1/art2/>

'Ecosystem governance is intrinsically difficult because both human societies and the natural environment are characterized by complex dynamics, including natural variations, scale dependencies, and associated uncertainties (Bodin and Crona 2009, Ostrom 2009). Dietz et al (2003). A descriptive account of a surf clam (*Mesodesma donacium*) fishery documented by Aburto and Stotz (2013) in which a well-managed, enforced, and regulated fishery under a co-management regime failed.

Even in seemingly ideal cases, fisheries governance has often been unsuccessful (Beddington et al. 2007).

Fisheries are highly complex socio-economic systems, characterized by high levels of uncertainty about the size and dynamics of fish populations and the natural variability of resources (de la Torre-Castro and Lindström 2010). These ecological characteristics contribute to the crisis in fisheries as much as the previously cited reasons for governance failure.

In benthic marine invertebrates, the high stock variability stems from recruitment, which is highly variable at different spatial and temporal scales (Lima et al. 2000, Aburto and Stotz 2013), and which depends on connectivity among meta-populations (Olivares 2005, Crowder and Norse 2008).'

Maru Samuels
General Manager
Iwi Collective Partnership
Auckland



11 February 2016

Deepwater Fisheries Management
Ministry for Primary Industries
P O Box 2526
Wellington 6011 Email: FMsubmissions@mpi.govt.nz

Tēnā koe,

REVIEW OF FISHERIES SUSTAINABILITY MEASURES FOR 1 APRIL 2016

1. INTRODUCTION

The Ministry for Primary Industries (MPI) is seeking feedback on proposals to review sustainability measures for various stocks for the 2016-17 fishing year, beginning 1 April 2016. Three of those stocks are quota that is owned by Iwi Members of the Iwi Collective Partnership (ICP): Rock lobster (CRA 4 and CRA 9) and Coromandel Scallops (SCA CS). This submissions relates solely to the three aforementioned stocks. Submissions close 11 February 2016.

The ICP is a collective of 14 individual Iwi from locations throughout the North Island. It was established in 2010 to, amongst other things, improve the sustainable management of New Zealand's fisheries and the participation of Iwi within that process. This stems from our responsibilities as kaitiaki ensuring that the present day utilisation of resources is managed in such a way that they will continue to support future generations. Table 1 lists our 14 Iwi Members and respective quota ownership relative to this Review.

Iwi	Region	Quota Owned
Te Arawa	Bay of Plenty	CRA4, SCA CS
Ngati Tuwharetoa	Bay of Plenty	CRA4, SCA CS
Ngai Te Rangi	Bay of Plenty	CRA4, SCA CS
Whakatohea	Bay of Plenty	CRA4, SCA CS
Ngati Awa	Bay of Plenty	CRA4, SCA CS
Ngai Tai	Bay of Plenty	CRA4
Ngati Manawa	Bay of Plenty	n/a
Ngati Ruanui	Taranaki	CRA4, CRA9
Nga Ruru Kaitahi	Whanganui	CRA4, CRA9
Taranaki Iwi	Taranaki	CRA4, CRA9
Te Rarawa	Northland	n/a
Ngati Porou	Gisborne	CRA4
Te Aitanga a Mahaki	Gisborne	CRA4
Rongowhakaata	Gisborne	CRA4

Table 1: ICP Membership

2. CRA 4

The Review paper advises that the National Rock Lobster Management Group is seeking views on a reduction in the TAC and TACC for CRA 4. The review is driven largely by a declining CPUE since 2012. The options are to maintain the TACC status quo of 467 mt, reduce it to 446 mt or reduce it to 420 mt.

The ICP supports a 15% reduction (70.05 mt) in the TACC to a new level of 396.95 mt. Such a recommendation is dependent on the outcome of the CRAMAC 4 Ballot which also closes today. Should the Ballot fail to meet the voting threshold, the ICP would support Option 2 ie. a 10% TACC reduction to 420 mt.

While our preferred 15% TACC reduction is well beyond any of the options proposed in the Review paper, a significant cut of this volume should at least arrest the decline and should place the fishery in a very positive position moving into the 2016/2017 season. CRA 4 industry sector group, CRAMAC 4, proposes a stock assessment in July 2016 as well as the development of a new Management Procedure. The new Management Procedure will then guide the TACC setting from 1 April 2017 onward. Our CRA 4 quota owners support these additional plans.

3. CRA 9

The CRA 9 review is driven largely by a declining CPUE since 2013. The CRA 9 review options are to retain the TACC status quo of 60.8 mt or reduce it to 46 mt. Discussions with our fishermen suggest that the CPUE issues are a reflection of the CPUE model as opposed to sustainability issues. Therefore our view is to support retention of the status quo with an added commitment to assess the state of the CRA9 stocks. The assessment should be undertaken in the 2016-2017 season the results of which could be used to inform the TACC setting for the 1 April 2017 season.

4. SCA CS

The TACC for the Coromandel scallop (SCACS) fishstock was increased in 2013 from 22 mt to 100 mt to enable utilisation opportunities. These increased catch limits may no longer be supported by up-to-date information. In a fishery highly valued and utilised by customary, recreational and commercial fishers it is important that management settings be reviewed and updated to reflect the current situation. Option 1 is to support the Status Quo ie. 100 mt TACC. Option 2 is a 50% reduction down to 50 mt.

The ICP supports a different option which is that proposed in the submission of Te Ohu Kaimoana that is that:

1. MPI formally acknowledges the Industry Management Program as the primary strategy supporting sustainability of the SCACS fishery.
2. MPI approves Option 3: set the TAC at 101t, the TACC at 70t, and retain the non-commercial allowances and other mortality settings.
3. MPI retains the deemed values for 2016.
4. MPI includes the Industry Management Program on the agenda of the Shellfish Working Group, March, Technical Workshop on scallops, and discuss the merits and utility of real time CPUE catch data, and the overall Industry Management Program.

Ngā mihi,



Maru Samuels

General Manager

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It is not with surprise that the Coromandel Scallop Fishery is again under review. As a recreational diver I have seen first-hand the impact of commercial scallop dredging on scallop beds.

Consultation document

The statement *"In 2011, commercial fishers discovered a new bed within the Hauraki Gulf containing high densities of large scallops. This new, deeper (45–50 m water depth) region of the fishery was utilised between 2011 and 2013, but fishers report the bed has since died off"* indicates that MPI also know the long lasting damage that commercial dredges do to scallop beds. As this bed is clearly outside the reach of any recreational diver the only logical conclusion is that the bed was over fished and the damage done by the dredges has killed the bed. This likely to have an impact on neighbouring beds as this would have been a seed bed for other areas.

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Many thanks for the opportunity to voice my opinion

Flynn Battaerd (Recreational Diver)
6 Rabbit Way
Whitianga 3510

Loren Ebbett

From: Jess Battaerd <jessbat@gmail.com>
Sent: Thursday, 11 February 2016 3:19 p.m.
To: FMSubmissions
Subject: Fwd: Submission to Coromandel Scallop Fishery (SCA CS)

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Jess Battaerd (Recreational Diver)

From: Pieta Begley
Sent: Thursday, 11 February 2016 3:18 p.m.
To: FMSubmissions
Subject: Scallop submission

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The statement “recreational and commercial fisheries are, largely, spatially separate with much of the near shore area closed to commercial scallop fishing”. This is irrelevant as I have see commercial scallop boats in close to shore in 10 metres or less. I have also seen video footage of commercial boats operation within the out of limits zone at Opito. This was forwarded to MPI who, I believe, had a work with the commercial operator. I therefore disagree with the statement that we are largely, spatially separate. What would serve recreational and customary sector is that commercial vessels dredge in depths of 20m or more (often too deep for recreational interests) ensuring that we are separated and that both our interests are maintained.

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Pieta Begley

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Pieta Begley

Peter Watson
President
Marlborough Recreational Fishers Assn.
PO Box 384 Blenheim 7240
vortexmarine@xtra.co.nz

Inshore Fisheries Management
Ministry for Primary Industries
PO Box 2526
Wellington 6011
Fmsubmissions@mpi.govt.nz

11th February 2016

Submission of Marlborough Recreational Fishers Association on review of sustainability controls for Surf Clam stocks in QMA7 for April 2016.

The Marlborough Recreational Fishers Association (MRFA) represents recreational fishers in the Marlborough region. The Association is an advocacy group and one aim is to encourage the intelligent and sustainable use of the fisheries resource and protection of the marine environment, recognising its importance both socially and economically to the District.

MRFA welcomes the opportunity to submit on the review of sustainability controls for Surf Clam stocks in QMA 7.

The Marlborough Recreational Fishers Association (MRFA) is totally opposed to any increase in the total allowable catch (TAC) for Surf Clam in quota management area 7.

1. As with so many fisheries, knowledge of the population dynamics, a pre-requisite to good management is lacking in this application.
2. MRFA has constantly made this point over the blue cod mismanagement and it is noted in several years, since the closure to recreational fishing in 2007, little or no research has been done. It is particularly relevant to this application that research be done and the data is made available for public review.
3. How can management be accurate, if no population data and or trends have been ascertained
It is unrealistic to survey clam numbers in a small area of Cloudy Bay and extrapolate that data to apply across the area from the Sounds to Fiordland.
4. There has been a lack of public consultation. The very tight timetable does not allow adequate consultation amongst our members and associated organizations.
5. Last year, concerned local recreational fishers and residents held a public meeting to discuss commercial dredging practices of the main contractor Cloudy Bay Clams and the lack of management action by MPI. Despite this MPI has allowed excessive catch to continue and locals

continue to be intimidated by the frequent dredging and noise associated with towing lines and dredging up and down the surf zone preventing amateur fishers from setting lines from the beach.

6. The local community, recreational, customary and commercial must be **fully** consulted.

7. It is essential that management protect beds from over-exploitation. Increased commercial catch limits are proposed based on a TAC and TACC being exceeded for the past few years. Granting TACC increases on the basis of ongoing excessive catch sets a dangerous precedent, encouraging excessive fishing in these and other vulnerable stocks.

8 The Minister is statutorily obliged to give consideration to non-commercial fishing interests. Surf clams are a cog in the food chain and there are numerous examples of Ministers/ Ministry looking at a species resource in isolation without considering effects on associated and dependent species from over-exploitation.

9. It is not a matter of satisfying quota holder demands or wishes, it is a matter of ensuring sustainability by applying precautionary management compatible with the ecosystem and wider public interest.

10. The MRFA endorse the New Zealand Sports Fishing Councils very well researched submission in response to the proposal to increase the TAC and TACC for Surf clams in QMA7.

11. MRFA submits there should be no increase to the TAC or TACC for Surf Clam stocks in Quota management area 7.

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Chris Johnston (Recreational Diver)

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Max Ross (Recreational Diver)

From: Hemihutt <
Sent: Thursday, 11 February 2016 3:05 p.m.
To: FMSubmissions
Subject: Submission to Coromandel Scallop Fishery (SCA CS)

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Jamie Hutt (Recreational Diver)

Phil Appleyard
President
NZ Sport Fishing Council
PO Box 93
Whangarei
secretary@nzsportfishing.org.nz



Inshore Fisheries Management
Ministry for Primary Industries
PO Box 2526
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FMSubmissions@mpi.govt.nz

11 February 2016

NZ Sport Fishing Council submission on the review of sustainability controls for Surf Clam stocks in QMA7 for 1 April 2016

Recommendations

- No increase to the Total Allowable Catch (TAC) or Total Allowable Commercial Catch (TACC) for Surf Clam stocks in QMA7, for 1 April 2016.
- A management and research plan is developed prior to any changes to the TAC and TACC, and to guide future management of the Surf Clam 7 stocks.
- The management and research plan incorporates the views of the local community and tangata whenua, and enables the Minister to act in a precautionary manner until more information is available on stock levels, fishing impacts, biodiversity and ecosystem function.
- A more effective system is developed to constrain commercial harvest to the TACC and protect the TAC from regular and cynical excessive exploitation.
- No TACC increase is granted on the basis of ongoing, deliberate excessive commercial harvest for target species such as Surf Clams that are on Schedule 6 of Fisheries Act 1996 and able to be returned to the sea if likely to survive.

NZ Sport Fishing Council - LEGASEA

1. The New Zealand Sport Fishing Council and our outreach LegaSea (the submitters) appreciate the opportunity to submit on the review of sustainability controls for Surf Clam 7 stocks. The Ministry for Primary Industries (MPI) released their Discussion Paper on 14 January 2016 with submissions due by 11 February. Any changes will apply from 1 April 2016.
2. The NZ Sport Fishing Council is a national sports organisation with over 32,000 affiliated members from 57 clubs nationwide. The Council has initiated LegaSea to generate widespread awareness and support for the need to restore abundance in our inshore marine environment. Also, to broaden NZSFC involvement in marine management advocacy, research, education and alignment on behalf of our members and LegaSea supporters. www.legasea.co.nz
3. We are committed to ensuring that sustainability measures and environmental management controls are designed and implemented to achieve the Purpose and Principles of the Fisheries Act 1996, including “maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations...” [s8(2)(a) Fisheries Act 1996]

4. The submitters continue to object to the Ministry's tight consultation timetable, it seems 18 working days has become the norm. In our view this timeframe does not allow for adequate consultation, it is particularly offensive for non-commercial organisations such as ours that need to consult with a range of interests and volunteers. This is unacceptable consultation and, in our opinion most likely unlawful as per ss 12 and 13 of the Fisheries Act and as judged by the Court of Appeal¹.
5. Few people outside the commercial operator and quota holders are aware of this review process. In an effort to alert people to this review process and better inform our members and supporters, the Council developed a document summarising the proposed commercial catch increases. That summary was distributed to clubs, other groups, and organisations aligned with LegaSea's Principles, encouraging feedback prior to development of this submission.
6. NZSFC representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from this review and would like to be kept informed of future developments. Our contact is Dave Lockwood, secretary@nzsportfishing.org.nz.

Surf Clams

7. Surf Clam is a collective term for a group of bivalve clams that are found in or immediately beyond the surf zone of sandy beaches down to 10m depth. The surf zone is a high energy zone that allows for rapid growth and reproduction. Surf Clam populations can be subject to localised catastrophic mortality from erosion during storms, high temperatures and low oxygen levels during calm summer periods, blooms of toxic algae and excessive freshwater outflow.

Surf Clam management

8. MPI is reviewing the TAC and TACC for four species of Surf Clam: Deepwater Tuatua (PDO), Large Trough Shell (MMI), Ringed Dosinia (DAN), and Triangle Shell (SAE). Substantial TAC and TACC increases have been proposed for all species, with the alternative being the status quo.
9. The proposed options for the future management of four Surf Clam stocks follows -

Table 1. Proposed management settings for four surf clam stocks in QMA 7.

Stock Options	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Allowances		
			Māori Customary (t)	Recreational (t)	Other sources of fishing – related mortality (t)
PDO 7					
Option 1 (<i>status quo</i>)	52	50	1	1	0
Option 2	200	188	1	1	10
SAE 7					
Option 1 (<i>status quo</i>)	112	112	-	-	0
Option 2	235	223	-	-	12
MMI 7					
Option 1 (<i>status quo</i>)	61	61	-	-	0
Option 2	144	137	-	-	7
DAN 7					
Option 1 (<i>status quo</i>)	15	15	-	-	0
Option 2	133	126	-	-	7

10. Surf Clams became a QMS species in 2004 with no changes to the TACs since then. The original

¹ International Airport Ltd and Air New Zealand (CA 23/92, 73/92[1993] 1 NZLR 671).

TACs were set based on Maximum Constant Yield (MCY) estimates using a 1994 biomass survey. The Shellfish Working Group has agreed that these estimates are outdated and inaccurate. Deepwater Tuatua (PDO) and Triangle Shell (SAE) are the main species of commercial interest, considered a potential, substantial export fishery.

11. The commercial catch of Deepwater Tuatua (PDO) and Triangle Shell (SAE) has been increasing in recent years. The TACC of PDO was exceeded in 2014/15. The TACC for SAE has also been exceeded, by 44% in 2012/13 and 70% in 2013/14. This excess has prompted a review of the deemed value for these species.
12. SAE and PDO are a target species and listed on Schedule 6 of the Fisheries Act so they may be returned to the sea if likely to survive.
13. In November 2015 quota holders conducted a biomass survey in the Cloudy Bay area. For the survey a 100% survey dredge efficiency was used, which would assume that 100% of the clams that interact with the dredge are then landed. This was then used to calculate biomass; biomass is assumed to be underestimated. The results of this survey have been extrapolated and used to form a new biomass estimate and subsequent higher MCY for the whole of QMA 7.
14. More information needs to be supplied on the survey design and implementation. Were independent researchers used? Was the survey design approved by the Shellfish Working Group before it was undertaken, as required by the Working Group terms of reference? While it is important to collect new information and develop appropriate survey methods MPI need to ensure that there is quality assurance and good documentation of the survey methods and analysis.
15. There are currently no estimates of recreational or customary take, it has been assumed that, due to inaccessibility, these will be low. The non-commercial allowances will be retained at current levels.

Submission

16. The submitters are concerned that once again, increased commercial catch limits are proposed based on the TAC and TACC being exceeded for that past few years. Granting TACC increases on the basis of ongoing excessive catch sets a dangerous precedent, encouraging excessive fishing in these and other vulnerable stocks.
17. The Ministry for Primary Industries (MPI) note the Minister has broad discretion when making decisions and we agree. However, there is no discretion when it comes to sustainability. The Minister has a statutory duty to ensure sustainability. (Supreme Court, 2009). The TAC and TACC represent the sustainable limit of extraction for these low information stocks. The ongoing excessive harvest means this obligation cannot be met.
18. There is no excuse for this excessive harvest, Surf Clams are target species, they are lifted onboard the vessel and sorted. These species are listed on Schedule 6 of the Fisheries Act so can be returned to the sea if likely to survive.
19. The only explanation for this excessive catch is the development of a lucrative export market. The current deemed value penalties are low, at \$1.02 for SAE7 and \$1.44 for PDO7, but even at the new proposed level of \$5.00 per kilo taking excessive shellfish is still a worthwhile, profitable exercise. The submitters want the utilisation of fisheries to be profitable, but not at the expense of the fishery and the environment.
20. The Shellfish Working Group (SWG) has agreed that the proposed TACs would be low risk for the short/medium term. However, lack of data is a problem and the SWG has recommended that a new management and research plan be developed in 2016.
21. The submitters support the development of a management and research plan incorporating the views of the local community. This plan must be developed and implemented before any TACC increase.

22. The community is seriously concerned that so little consideration is being given to importance of Surf Clams to sustaining biodiversity and ecosystem function, and impacts on other species.
23. Rarangi Beach foreshore residents are affected on a daily basis by large noisy vessels operating within the surf zone. Local landbased fishers often have difficulty fishing due to the frequent dredging in the 3-10m depth zone. This dredging, with tow wires and hoses, is intimidating and potentially dangerous for amateur longline fishers.
24. In 2015 local recreational fishers called a public meeting to discuss their concerns about commercial dredging practices and the main operator Cloudy Bay Clams, and the lack of management action by MPI. They are concerned MPI has allowed excessive catch to continue under the guise of “research”, and that harvesting is permitted year-round giving no relief to shellfish beds that need to regenerate.
25. The SWG notes that limits have been proposed at or above their own estimates of Maximum Constant Yield (MCY), with little knowledge of other mortality. The submitters are concerned there is inadequate biomass and biological information on which to base any TACC increase.
26. Data used to estimate existing biomass was only collected from a single, small area and extrapolated out and applied to the entire QMA7 area. This assumes that abundance is the relatively equal across the whole management area, that there are just as many Surf Clams off Hokitika when compared to Cloudy Bay. There is a serious risk that this calculation could be wildly optimistic and there is increased risk because commercial harvest is only concentrated on Cloudy Bay.
27. The Minister also has a statutory duty to ‘allow for’ non-commercial fishing interests, these extend beyond just catch. While recreational catch is considered to be minimal the community appreciates that having Surf Clams in their natural habitat contributes to peoples’ wellbeings.
28. Ultimately, Surf Clams are a national resource and neither the fishery nor the locals ought to be held to ransom merely to appease quota holders’ interests.
29. Given all the available information we submit there is no increase to the TAC or TACC for Surf Clam stocks in QMA7, for 1 April 2016.

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11 February 2016

NZ Sport Fishing Council submission on the review of controls for the Coromandel scallop fishery, for 1 April 2016

Recommendations

- The Minister exercise his statutory powers and obligations to prohibit the use of Victorian box dredges in the Coromandel scallop fishery due to their damaging effects on scallops, benthic communities and habitats that sustain other species.
- MPI provide information requested by the Council in 2012 and 2013, for electronic and hard copies of the data collected during the 2012 biomass survey, and copies of the CPUE-limit rule programme including details of the data collection, analysis and operation in the Coromandel Scallop fishery.
- That MPI work with stakeholders to develop an agreed management plan incorporating in-season controls and an annual public report outlining harvest strategies and commercial operations.
- MPI provide information on port price and export returns for Coromandel scallops.
- MPI invite New Zealand Sport Fishing Council representatives to the March 2016 workshop to discuss current assessment procedures and potential improvements.

NZ Sport Fishing Council - LEGASEA

1. The New Zealand Sport Fishing Council and our outreach LegaSea (the submitters) appreciate the opportunity to submit on the review of controls for the Coromandel scallop fishery. The Ministry for Primary Industries (MPI) released their Discussion Paper on 14 January 2016 with submissions due by 11 February. Any changes will apply from 1 April 2016.
2. The New Zealand Sport Fishing Council (NZSFC) is a national sports organisation with over 32,000 affiliated members from 57 clubs nationwide. The Council has initiated LegaSea to generate widespread awareness and support for the need to restore abundance in our inshore marine environment. Also, to broaden NZSFC involvement in marine management advocacy, research, education and alignment on behalf of our members and LegaSea supporters. www.legasea.co.nz
3. We are committed to ensuring that sustainability measures and environmental management controls are designed and implemented to achieve the Purpose and Principles of the Fisheries Act 1996, including “maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations...” [s8(2)(a) Fisheries Act 1996]

4. The submitters continue to object to the Ministry's tight consultation timetable, it seems 18 working days has become the norm. In our view this timeframe does not allow for adequate consultation, it is particularly offensive for non-commercial organisations such as ours that need to consult with a range of interests and volunteers. This is unacceptable consultation and, in our opinion most likely unlawful as per ss 12 and 13 of the Fisheries Act and as judged by the Court of Appeal¹.
5. In an effort to alert people to this review process and better inform our members and supporters, the Council developed a document summarising the proposed change to the commercial catch limit in the Coromandel scallop fishery. That summary was distributed to clubs, other groups, and organisations aligned with LegaSea's Principles, encouraging feedback prior to development of this submission.
6. NZSFC representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from this review and would like to be kept informed of future developments. Our contact is Dave Lockwood, secretary@nzsportfishing.org.nz.

Coromandel scallops

7. Scallops mature at about 70mm shell length. In the Hauraki Gulf scallops can grow to 100mm in 18 months or less, elsewhere this can take 3 years or more. Scallops are very fertile and may spawn several times each year. Scallop populations can be highly variable from one year to the next; these variations can occur independent of fishing. The growth of scallops within the Coromandel fishery is variable among areas, years, seasons and depths. The maximum age for a scallop is thought to be about 6 or 7 years.

Background

8. The New Zealand Sport Fishing Council has made earlier submissions on the mismanagement of the Coromandel scallop fishery. These are online at <http://goo.gl/AfKNKD>. The 2013 submission details our concerns. The current review demonstrates those concerns are still valid today.
9. In 2013 the Minister for Primary Industries increased the Total Allowable Catch (TAC) for Coromandel scallops from 47 to 131 tonnes (t). The Total Allowable Commercial Catch (TACC) was increased from 22 to 100 t meatweight. Commercial landings over the last 8 years have averaged 47 tonnes. Commercial landings in 2014/15 was 34 t.
10. Application of the Deemed Value Guidelines identified Coromandel scallops requiring a review this year. MPI has recommended no change to deemed value rate of \$37.00 per kilo of meatweight.

Proposals

11. MPI consider the increased catch limit set in 2013 may not be supported by current information. The 2013 increase was based on the discovery of a large bed in the Hauraki Gulf, 2W. This bed was fished between 2011 and 2013, but has not been fished since 2013. Commercial fishers report the 2W bed no longer exists, repeating a pattern of discovery and destruction documented in historic reports. These accounts are supported by CPUE information collected by the fleet.
12. MPI proposals for Coromandel scallops -

Table 1: Proposed Management Settings for SCACS

Option	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Allowances		
			Customary Māori (t)	Recreational	Other sources of fishing-related mortality
Option 1 (Status Quo)	131	100	10	10	11
Option 2	81	50	10	10	11

¹ International Airport Ltd and Air New Zealand (CA 23/92, 73/92[1993] 1 NZLR 671).

13. A biomass survey has not been undertaken since 2012 so it is not available to inform this review. MPI suggest the Minister use section 13(2A) of the Fisheries Act 1996 to set the TAC and TACC in the absence of biomass information.

Submission

14. Current management is based on un-validated, industry-only supplied data that is kept from public view. The poor quality MPI proposal paper omits vital information, including a table of landings and details of all landings, where commercial fishers take scallops for recreational use.
15. Little consideration is given to importance of scallops in sustaining biodiversity and ecosystem function, and the impacts of exploitation on other species.
16. Poor regard is also given to the concerns of the Hauraki Gulf community and the issues raised in previous, comprehensive NZSFC submissions since 2007. <http://goo.gl/X8iZpW>
17. The NZSFC objects to the ongoing use of the Victorian box dredge that plows the seabed to the cost of benthic life. The results are the continued destruction of once-healthy scallop beds. A more environmentally responsible and modern response is to insist that scallops are selected on the seafloor in such a manner that enables sub-legal fish to escape without injury.
18. Continued destruction of scallop beds is a serious concern. The Hauraki Gulf Forum's *State of the Gulf* reports and other historic research identifies a time series of fished out and abandoned beds throughout the management area.
19. We submit the loss of the highly abundant 2W Hauraki Gulf bed in two seasons, between 2011 and 2013, signals serious benthic damage. The current Total Allowable Commercial Catch (TACC) was set on the assumption that this bed would be fished.
20. The last biomass survey was conducted in 2012. Questions have been raised about the utility of a stock assessment that applies across the Quota Management Area, from Leigh in the north to Motiti in the Bay of Plenty, with the added pressures of funding annual surveys for a short lived species.
21. There is a decision rule being used by the fishermen in Coromandel scallop fishery, referred to as the CPUE-limit rule. Since 2013 the Council has requested information about this rule, the Catch Per Unit of Effort (CPUE) scheme and data collected during the last abundance survey conducted in 2012. MPI has withheld this information.
22. The decision rule uses CPUE, the proportion of undersize scallops in the catch, and meatweight to greenweight recovery rates. Reporting is daily, and whenever one or more of these triggers are hit the bed is closed for the season.
23. We submit that there is merit in having the ability to monitor and react in-season. However, the decision rules and data trends need to be more transparent. We see considerable merit in providing real time public access to the data supported by an agreed stakeholder management plan. That plan would outline harvest strategies, target and reference levels applying in the fishery.
24. An annual public report would be a good start. To have credibility it would need to include details about the commercial operation and harvesting for that year, and the rules that apply during that season so there are no secrets as to where commercial catch is being harvested, and where stocks are low.
25. There is increasing public interest in the marine environment and growing concerns around the impacts of bulk harvesting methods such as dredging so New Zealanders must be given the opportunity to scrutinise how their natural, marine resources are being exploited.

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11 February 2016

Joint recreational submission on the review of deemed value rates for selected stocks, for 1 April 2016

Recommendations

- The deemed value regime is acknowledged as a failure to constrain commercial catch to the statutory catch limits in Triangle Shell 7 (SAE7) and Deepwater Tuatua 7 (PDO7).
- That a more flexible mechanism is developed that will remove the incentive to overcatch the TACC and receive increased ACE in the future.
- Future Discussion Papers include more detailed information such as realistic port and export prices to assist submitters in understanding deemed value rates for stocks under review.

NZ Sport Fishing Council - LEGASEA

1. The New Zealand Sport Fishing Council, our outreach LegaSea, and the New Zealand Angling and Casting Association (the submitters) appreciate the opportunity to submit on the review of deemed value rates for selected stocks. The Ministry for Primary Industries (MPI) released their Discussion Paper on 14 January 2016 with submissions due by 11 February. Any changes will apply from 1 April 2016.
2. The NZ Sport Fishing Council is a national sports organisation with over 32,000 affiliated members from 57 clubs nationwide. The Council has initiated LegaSea to generate widespread awareness and support for the need to restore abundance in our inshore marine environment. Also, to broaden NZSFC involvement in marine management advocacy, research, education and alignment on behalf of our members and LegaSea supporters. www.legasea.co.nz.
3. The New Zealand Angling and Casting Association (NZACA) is the representative body for its 35 member clubs throughout the North Island. The Association promotes recreational fishing and the camaraderie of enjoying the activity with fellow fishers. The NZACA is committed to protecting fish stocks and representing its members' right to fish.
4. Together we are committed to ensuring that sustainability measures and environmental management controls are designed and implemented to achieve the Purpose and Principles of the Fisheries Act 1996, including "maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations..." [s8(2)(a) Fisheries Act 1996]
5. The submitters continue to object to the Ministry's tight consultation timetable, it seems 18 working

days has become the norm. In our view this timeframe does not allow for adequate consultation, it is particularly offensive for non-commercial organisations such as ours that need to consult with a range of interests and volunteers. This is unacceptable consultation and, in our opinion most likely unlawful as per ss 12 and 13 of the Fisheries Act and as judged by the Court of Appeal¹.

6. In an effort to alert people to this review process and better inform our members and supporters, the Council developed a document summarising the proposed changes to deemed value rates. That summary was distributed to clubs, other groups, and organisations aligned with LegaSea's Principles, encouraging feedback prior to development of this submission.
7. The submitters' representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from this review and would like to be kept informed of future developments. Our contact is Dave Lockwood, secretary@nzsportfishing.org.nz.

Deemed values

8. Commercial fishers who do not balance catch with Annual Catch Entitlement (ACE) must pay a financial penalty, a deemed value payment. Deemed values are charged for each kilo of overcatch not covered by ACE. The per kilo cost may ramp up, on a sliding scale, depending on the species.

Background

9. The New Zealand Sport Fishing Council (NZSFC) has made substantive submissions on the deemed value regime for a decade. The 2012 submission details our concerns. <http://goo.gl/jHUzlf> The current review demonstrates those concerns are still valid today.
10. The deemed value system continues to incentivise either overfishing or dumping, depending on the landed and export price of that species. Historically, ongoing excess catch has resulted in recommendations from the Ministry for Primary Industries (MPI), and subsequent agreement from the Minister, to increase the TACC in some stocks.

MPI Proposals

11. Application of the Ministry for Primary Industries' Deemed Value Guidelines has identified six stocks for review. The Ministry recommends no change to deemed value rates for three of the 6 stocks: Giant spider crab 5 (GSC5), Southern blue whiting 1 (SBW1) and Coromandel Scallops (SCA CS).
12. Of particular interest are the deemed value rates for Triangle Shell 7 (SAE7), Deepwater Tuatua 7 (PDO7) and Coromandel Scallops (SCA CS), because the TACs and TACCs are also being reviewed and each stock has special characteristics.
13. The current deemed value rate for Triangle Shell 7 (SAE7) is \$1.02. The port price for landed Triangle shell is \$5 per kilo, and the export price is conservative at \$8.00 per kilo.
14. For Deepwater Tuatua 7 (PDO7) the deemed value rate is proposed to increase from \$1.44 per kilo to \$5/kg. The port price is conservative at \$5/kg, as is the export price at \$8.00 per kilo.
15. Triangle Shell 7 (SAE7), Deepwater Tuatua 7 (PDO7) and Coromandel Scallops (SCA CS) are all target species. All are on Schedule 6 of the Fisheries Act, enabling commercial fishers to return unwanted catch to the water from where it was taken if it is likely to survive, or, in the case of scallops, out of season.

¹ International Airport Ltd and Air New Zealand (CA 23/92, 73/92[1993] 1 NZLR 671).

² Food and Agriculture Organization of the United Nations. <http://www.fao.org/home/en/> Deemed value rates review. Joint recreational submission. 11 February 2016.

16. **MPI proposals.** Fish stocks prioritised for review in 2016 -

Stock	Rationale for review	Proposed action	Basis for proposed action
GSC5 Giant spider crab 5	422% of TACC caught in 2014/15	No change to deemed value rates.	Non-target species. Trawl caught GSC worthless. More time required to monitor effectiveness of previous decisions.
SBW1 Southern blue whiting 1	364% of TACC caught in 2014/15	No change to deemed value rates.	Non-target species in mixed fishery with variable abundance.
SAE7 Triangle Shell 7	215% of TACC caught in 2014/15	Increase deemed value rates	MPI Guidelines for target species. Set annual deemed value rate at twice the port price.
PDO7 Deepwater Tuatua 7	108% of TACC caught in 2013/14;102% of available ACE caught in 2014/15	Increase deemed value rates	MPI Guidelines for target species. Set annual deemed value rate at twice the port price.
SSC3 Sea cucumber 3	109% of TACC caught in 2014/15	Increase deemed value rates	Moving from non-target to target species. Set annual deemed value rate at twice the port price.
SCA CS Coromandel Scallops	34% of TACC caught in 2015	No change to deemed value rates	Fishery is performing within Guidelines.

Submission

Giant Crab 5 (GSC5)

17. We do not agree with the Ministry's assessment that Giant Crab 5 (GSC5) is worthless when caught by trawl, and that they need more time to assess changes to the deemed value rate and industry-led avoidance measures. GSC is caught while trawling for orange roughy. There is no market for trawl caught GSC. An historic attempt to establish a target fishery was not successful.
18. While we do not understand the role this species occupies in the ecosystem and before implying GSC is a pest we have to grant this species value, even if it is only as an ecosystem component. Measuring value by only considering the port price is yesterday's metric. Now we are directed by the FAO² to act in a precautionary manner so as not to unintentionally disrupt the ecosystem in potentially very damaging ways.
19. In 2004 the Minister introduced GSC to the QMS and set the Total Allowable Commercial Catch (TACC) at 19 tonnes to ensure sustainability using a precautionary approach. The TACC has never constrained commercial catch and the GSC TACC was overcaught by 422% in 2014/15. There is no real penalty for this overcatch because the annual deemed value rate for GSC5 is set at \$0.10 per kilo and the ACE price at \$1.11 per kilo. Meaning, there is no incentive to buy ACE even though GSC is an inevitable catch while trawling, and there is no incentive to develop innovations to avoid their capture.
20. The Ministry notes that they need more time to gauge the effectiveness of industry-led measures to avoid GSC. Exploratory fishing for GSC started in the late 1960s and resumed in earnest in 1999/2000, giving plenty of time to innovate and develop effective avoidance measures.
21. Without any effective controls fishers can continue to catch GSC at virtually no cost to them, the cost is borne by the environment and the species that depend and are associated with GSC. A poor outcome for a fish stock that we know very little about; yet has existed for longer than most of can imagine. The deemed value regime has not been effective in protecting GSC5 from overfishing in the past and is unlikely to change fishers' behaviour in the future.

² Food and Agriculture Organization of the United Nations. <http://www.fao.org/home/en/>

Coromandel scallops (SCA CS)

22. No change is proposed to the annual deemed value rate of \$37.00 per kilo of meatweight for Coromandel scallops (SCA CS). This rate was set in 2002 when SCA CS was introduced to the Quota Management System. In 2012/13 an in-season review resulted in a TACC increase from 22 to 315 tonnes, meatweight. Commercial fishers landed 73 tonnes that year. Due to management changes, in-season reviews were replaced by a TACC increase in 2013/14, increasing from 22 to 100 tonnes. That year 51 tonnes of scallops were landed and 34 tonnes were landed in 2014/15, at these catch rates the deemed value rate of \$37/kg has no relevance.

Surf clams in QMA 7

23. The failure to control excess catch and the profitable rewards from landing overcatch are likely contributing factors to the (concurrent) proposals to increase the Total Allowable Commercial Catch (TACC) for Triangle shell 7 (SAE7) and Deepwater Tuatua 7 (PDO7), by 110% and 385% respectively.
24. The commercial catch of Deepwater Tuatua 7 (PDO7) and Triangle Shell 7 (SAE7) stocks has been increasing in recent years and deemed value rates have failed to constrain commercial harvesting to the TACC levels set by the Minister to ensure sustainability using a precautionary approach.
25. The PDO7 TACC was exceeded in 2014/15. The 112 tonne TACC for SAE7 has also been exceeded, by 44% in 2012/13 and 70% in 2013/14. The company responsible for this excess, Cloudy Bay Clams, conceded at a 2015 public meeting that their catch was for scientific, research purposes. This excessive catch has prompted a review of the deemed value.
26. The proposed new deemed value rates of \$5.00 per kilo for SAE7 and PDO7 are unlikely to discourage overcatch beyond the existing TACC given that the conservative export price is \$8.00.
27. Given the high market value of these species it is hard to believe the \$5.00 per kg port price and \$8.00 per kg export price are realistic. If MPI expects submitters to believe these returns are real more information ought to be provided to support these numbers.
28. Low deemed values, even at the proposed new rates, would make it extremely profitable to continue over harvesting in SAE7 and PDO7. Those profits are more attractive if the fishers, Licenced Fish Receiver and exporter are the same entity.
29. The relationship between the entities involved in harvesting these Surf clams ought to be made clear in the Initial Position Paper because it has a bearing on who profits most from the over exploitation of a public resource.
30. It is clearly time to develop and implement a more flexible mechanism to remove the incentive to overcatch the TACC and receive increased ACE in the future.

10 February 2016

Mr M Dunne
Ministry for Primary Industries
PO Box 5620
Wellington

Dear Martyn

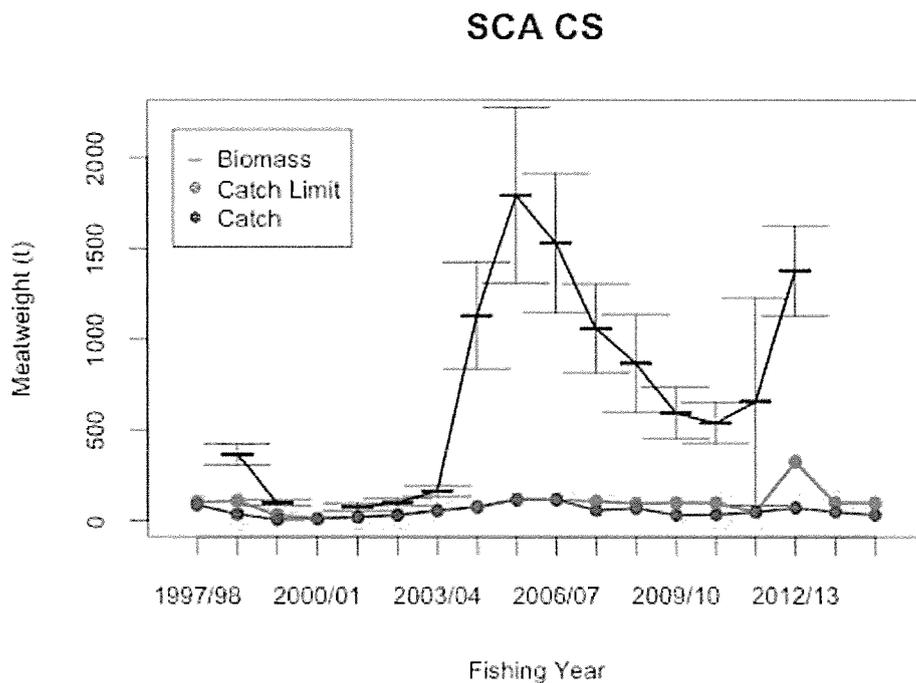
REVIEW OF SUSTAINABILITY CONTROLS FOR COROMANDEL SCALLOPS
MPI Discussion Document No: 2016/04

Introductory Comments

1. You have asked for comments on the review of sustainability controls for Coromandel Scallops (SCACS). This submission reflects the view of SCACS quota-holders and has been prepared for them by Tom Clark, Policy Manager, Fisheries Inshore NZ Limited (FINZ), (Tel 04 802-1514). If you have queries in respect of this submission, please contact Tom or Peter Sopp, Coromandel Scallop Fishermen's Association (CSFA) chair, (027 490 8562).
2. FINZ is the representative entity for inshore finfish, pelagic and tuna fisheries in New Zealand. Its role is to deal with national issues on behalf of the sector and to work directly with, and behalf of, its quota owners and fishers. FINZ works closely with other commercial stakeholder organisations that focus on regional and operational issues; including the adjustment of specific TACs. Coromandel Scallops have recently become affiliated with FINZ.
3. In summary, the Coromandel Scallop Fishermen's Association does not support either option presented by MPI. However, they do support a TAC reduction and propose an alternative TACC of 70 tonnes which they consider will meet MPI's requirements under the Fisheries Act and allow for a sustainable and profitable scallop fishery. Perhaps more important is retaining the integrity of the current management and monitoring process and providing certainty to the industry about future monitoring costs and management processes. Their basic concerns are that:
 - a. the proposal does not give due weight to the effectiveness of the current operational management processes for SCACS undertaken by the Coromandel Scallop Fishermen's Association;
 - b. the proposed Option 2 level will impose unnecessary costs on the sector; and
 - c. any change to the management of SCACS in advance of the expert review of scallop fisheries management is premature and unwarranted.
4. To understand the CSFA views and the impact of the MPI proposals, it is necessary to understand the existing management framework.

Background

5. Scallops are a short-lived bivalve, known internationally for their high fecundity levels and high variability in annual abundance levels. This variability often occurs independently of fishing pressure.
6. Like other scallop populations, Coromandel scallop abundance levels are highly variable. This is shown in the figure below contained in the consultation document. While the survey series does not provide a consistent index of scallop abundance over the SCA CS quota management area, it nevertheless captures the general trend in biomass in areas that have been a consistent part of the commercial fishery. Biomass was low through the early 2000s, peaking in 2005 before declining until 2010/11. The 2012 survey covered a wider spatial area than previous surveys, and included a new bed in the Hauraki Gulf. The new bed consisted of scallops largely of the same age and is likely to have resulted from a single settlement event. Such beds are expected to make sporadic contributions to the productivity of the fishery rather than being a core part of the fishery on an ongoing basis.



7. Survey and commercial fishing in 2014 confirmed that scallops in the Hauraki Gulf beds had experienced the expected natural mortality. The 2015 fishery, together with some associated surveying, indicates that abundance in the core areas of the commercial fishery is currently at generally low levels. That reflects the natural variability of scallop populations (although no information on scallop abundance in areas open only to non-commercial harvesting is available).

Coromandel Scallops in the QMS

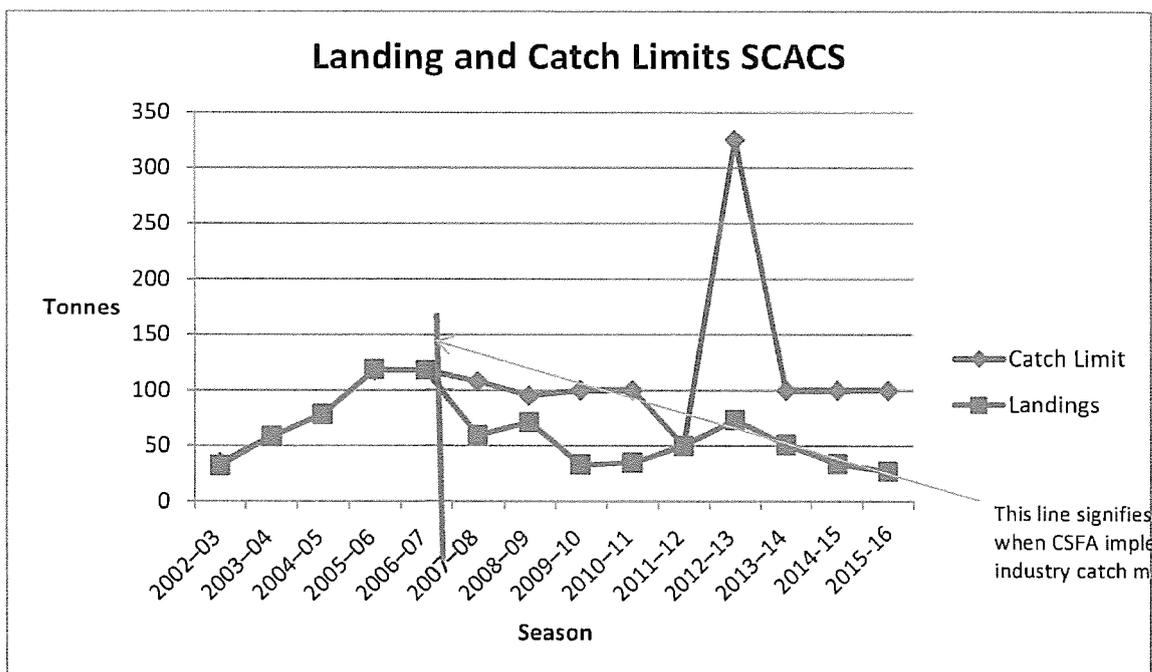
8. From 1978, Coromandel scallops were managed by explicit seasonal catch limits based on pre-season surveys. Current Annual Yield (CAY) estimates were derived from the surveys.

9. SCACS are now managed under section 13 of the Fisheries Act 1996 and are included in the Second Schedule to the Act which allows for an in-season increase to the TAC. Since the legislation provides only for an in-season increase and not a decrease, routine use of the Second Schedule provisions typically requires a low baseline TAC to provide scope for an increase in most years and to protect the sustainability of the stock in low abundance years. At the close of the fishing year, the TAC reverts to the TAC that applied at the start of the fishing year. Any additional TAC resulting from the use of the Second Schedule provisions is made available to the commercial sector through the provision of additional ACE. Any additional ACE provided under the in-season increase decision cannot be carried forward into the next fishing year.
10. While SCACS has a fishing year from 1 April to 31 March, additional regulations restrict the commercial fishery for Coromandel scallops to the period between 15 July and 21 December each year with catching limited to five days a week. These additional controls on the commercial fishery were implemented prior to the introduction of SCACS to the QMS.

Catch Management for SCACS

11. On entering the QMS, the TAC and TACC were set at low levels, 48 tonnes and 22 tonnes respectively with the expectation annual catch limits would continue to be set using the Second Schedule provisions.
12. Abundance surveys for the areas commercially fished were undertaken in April/May each year and CAY yield estimates calculated. Recent surveys cost on average \$85,000 each year. While the surveys were undertaken in May, consultation on the increase was typically not commenced until July and decisions on the in-season increase were not available until August/September, by which time up to 40% of the commercial fishing season was completed.
13. In 2007, the CSFA chose to close the fishery early as a consequence of the high proportion of small scallops found in dredges. In 2008, the CSFA chose to reduce fishing activity as a result of lower meatweights. That was consistent with the provision in the draft Fisheries Plan for Coromandel Scallops to manage the fishery in a cautious manner.
14. In 2008, the industry commissioned a report on an alternative management regime. A Management Strategy Evaluation was undertaken of both the existing survey-based in-season framework and use of operational catch-per-unit-effort (CPUE) limits on catching. In the CPUE limits model, the fishing grounds were divided into smaller areas and CPUE limits set for the areas. When the CPUE fell to the pre-set level, the area was shut and fishers needed to move to other areas. The evaluation indicated the CPUE based management regime contained less risk than the survey based approach, was consistent with the Harvest Strategy Standards and the Fisheries Act requirements and was significantly cheaper than the survey approach.
15. While the CSFA had begun to informally manage the fishery on scientific grounds since 2007, in 2010, CSFA adopted a formal CPUE management process based on the alternative management regime report. Fine scale reporting of catch was implemented and area specific CPUEs calculated on a weekly basis. In setting the CPUE limit for the implementation of the approach, industry adopted a conservative harvest setting, setting a hard limit at 50kg/hr, consistent with the HSS requirements, and a precautionary soft limit at 75kg/hour. Although the fishery was previously fished to lower levels of CPUE prior to 2007, a CPUE of 50kg/hour was considered to be the economic breakpoint for the fishery.
16. Abundance surveys continued until 2010 and in-season increases were approved as appropriate until 2013. Notwithstanding the catch limits being set by those in-season reviews, actual catch levels were in fact controlled by the industry's CPUE limit management regime and were lower than the approved limits (see following graph).

17. In 2013, the TAC was increased to 131t. MPI recognised that the industry CPUE limit regime was limiting catch below the new TACC of 100t and cancelled pre-season surveys and the setting of annual catch limits by the Minister. For the period since 2013, the fishery has been managed by the industry CPUE limit process within a TACC that had significant headroom. To that extent, the TAC and TACC were largely irrelevant in managing catch levels and served only to cap the maximum catch. The effective driver of annual catch levels was the CPUE limit mechanism.



Landings and Catch Limits SCACS

18. The following table provides information on the operational performance of the CSFA CPUE limit process since 2010. Similar information is not available for the period prior to 2010. Catching was transferred to the new bed in the Hauraki Gulf in mid September 2011 and traditional beds were left unfished for most of 2011, all of 2012 and most of 2013. The Hauraki bed fished poorly in early 2014 and fishers reverted to their traditional beds. As can be seen from the table, blocks were closed as hard limits were reached. CSFA also moved to close blocks when soft limits were reached, notwithstanding continued profitable fishing being possible. These voluntary decisions to close blocks at higher CPUE levels than necessary demonstrates the commitment of the CSFA to fish responsibly and sustainably and not pressure the beds.

COROMANDEL SCALLOPS CATCH MANAGEMENT			
Season	Blocks Fished	Blocks Closed – Hard Limit (1)	Blocks Closed - Soft Limit (2)
2010-11	7	1	3
2011-12	8	1	3
2012-13	2	0	0
2013-14	3	0	1
2014-15	12	0	3
2015-16	11	0	3

Notes (1):Hard Limit 50kgs/hour
(2) Soft Limit 75kgs/hour

19. The use of finer scale management and CPUE limits in each area preserves a baseline biomass in all areas. This prevents serial depletion of scallop beds which should be a management outcome supported by MPI. We note that using a relatively simplistic management tool (in isolation) such as a TACC, does not inhibit depletion of scallop beds.
20. In addition to the CPUE limit, the fishers operate other processes to protect the sustainability of the fishery, including, for example, a “move on” process when excessive numbers of small scallops are caught or meat quality is below expectations. The December closure of the season is to avoid disruption of the beds during the spatfall period.
21. While there is a TACC of 100t, the fishery is today effectively managed at the soft limit of 75kg/hour. As shown above, using 75kg/hour as the trigger to voluntarily close an area means an area is closed well before any sustainability threshold is approached and the fishery is managed at conservative levels.
22. The operational management is possible in the fishery owing to the high level of collaboration of the CSFA, its fishers and quota-holders in managing the fishery.

Management in Transition

23. MPI has indicated that the current management approach is still being refined.
24. In a letter of 9 October 2015, MPI stated it would review the TAC and allocations for 1 April 2016 and that it had no intention to return to the situation where the operation of the in-season increase facility was required to manage the fishery. We support that position. However, MPI has not formally agreed to industry’s CPUE limit management model for the fishery. Given that the CSFA management regime has operated successfully for eight years, demonstrably maintained catches at sustainable levels, provided fine-scale catch data, weekly CPUE and prevented serial depletion of individual scallop beds, formal adoption of this management approach is overdue.
25. The consultation document states that “*CPUE is often not a reliable estimate of abundance for scallop fisheries.*” (The same can be said for any fishery, yet it remains a valuable monitoring tool). In the absence of any references in the document, I take it this comment refers to the findings of the 2001 Cryer paper entitled “*An appraisal of an in-season depletion method of estimating biomass and yield in the Coromandel scallop fishery*”. That report sought to evaluate the use of CPUE obtained from an analysis of the opening months of the season to estimate total biomass to generate a catch level for the season. While that analysis may have concluded that early season CPUE was not a reliable indicator of biomass, the process bears no relationship to that being used by CSFA. The CSFA analyses CPUE on a fine scale during the fishing year and areas are closed if the HSS trigger of 75kg/hour is reached. The consultation document comment is misleading when used with reference to the industry CPUE limit process.
26. MPI has established a workshop of expert fisheries scientists for March 2016 to review the scientific underpinning of management of New Zealand scallop stocks. SCACS will be reviewed at that workshop.

MPI Proposal

27. The consultation document provides two options:
 - a. retain the status quo or;
 - b. reduce the TAC from 131t to 81t, the TACC from 100t to 50t but leaving the recreational and customary allowances at 10t each.

28. The need to review the TAC is said to be the new information as to the biomass and a desire to maintain the responsiveness of the QMS to changes in biomass information.

General Comment

29. While quota-holders support the need for a reduction of the TAC/TACC, they do not support the proposed TAC and TACC proposed in Option 2. Rationale is provided as follows.

Option 1:

30. CSFA recognises that the TAC and TACC were increased in 2013 as a direct consequence of the identification of the new Hauraki Gulf Bed. To the extent that the bed was not found to be a permanent fishing ground, CSFA acknowledges that a reduction in the TAC/TACC is reasonable. As such, Option 1 is not supported.
31. However, CSFA notes that the CPUE limit currently acts as the primary management control. A high TACC therefore does not put the sustainability of the fishery at risk.

Option 2:

32. While CSFA supports a TAC/TACC reduction in the current circumstances, CSFA considers that the proposed Option 2 TAC/TACC setting is too low.
33. While setting a TAC/TACC is required by the Fisheries Act and industry agrees that the absence of the new bed makes a TAC/TACC reduction appropriate, the issue is where that baseline should be placed for SCACS, taking into account the variability of the stock and the operational CPUE limit process.
34. Setting a TACC at the long term average catch level would mean that on average the TACC would constrain the catch level for about 50% of the time. Accepting that historically higher catches have only occurred during periods of higher abundance implies that setting too low a TACC risks forcing management of the fishery to revert to the earlier, expensive, regime of in-season surveys and adjustments during periods of increased abundance with the CPUE limit remaining the main constraint during periods of lower abundance. Such a hybrid management regime serves only to decrease the value that can be sustainably extracted from the fishery and negates the work undertaken by industry to manage its catch by the CPUE rule. A TAC/TACC set with a low probability of catches exceeding the TACC is more appropriate for fisheries with additional constraints on catch, and for SCACS in particular where the CPUE limit approach is the actual mechanism that limits catches in given year.
35. For Option2, MPI has proposed a TACC of 50t being the average of the last eight years. That calculation omits the period of high abundance from 2004 to 2007 and is significantly more conservative than the catch levels it approved over the period from 2008. There is no justification provided for choosing the period and omitting a period of higher scallop abundance. If the period from 1986 was used, the long term catch average, which would reflect two periods of high abundance and two periods of lower abundance, would be approximately 85t per year.
36. Since the introduction of SCACS to the QMS in 2002, commercial catches have averaged around 60t per year and approved catch limits averaged 106t. We note, however, that catch limits were not adjusted in the 2003-2007 period to levels consistent with the lift in abundance and catch limits during that period were constrained more than necessary. Industry accepted lower catch limits in this period because it did not anticipate fully utilising the increased abundances

available. To that extent, the average catch of 60t per year under-estimates the fishing levels that could reasonably have applied over the period since 2002.

37. MPI has indicated it will hold a workshop in March 2016 to review the scientific approaches used in the management of scallop fisheries in New Zealand. At present, the three scallop fisheries are differently managed:
- i. the SCA1 fishery is managed with a TAC/TACC with significant headroom over recent catch levels, a pre-season survey and in-season TAC increase when required but lacks the tight operational management of CSFA;
 - ii. SCACS has been described above; and
 - iii. SCA7 has a TAC/TACC that provided headroom for an enhancement programme, a pre-season survey to inform catch limits and an annual catch limit regime where the Challenger Scallop Enhancement Company proposes catch limits for Ministerial approval.
38. That workshop may support the current SCACS management regime or may provide reasons to refine, amend or replace the SCACS regime. A decision to replace or structurally amend the SCACS catch management regime at this point in time is premature and might signal a belief that the current SCACS management regime is considered inappropriate.

CSFA Alternative Proposal

39. While SCACS has an allocated TAC, commercial catch is managed by the CPUE limit rule. Industry monitors its catch rates and manages its catch to those limits and has done so without exception since formally adopting that model in 2010. Since its introduction, the CPUE limit process has constrained catch to levels lower than the MPI approved catch levels in all years. Industry contends that it is managing its catch on a basis that is:
- i. consistent with the movements in the biomass; and
 - ii. is conservative relative to the MPI-approved catch limits and to the evaluated CPUE limits.
40. On that basis and in the absence of any change to industry's management process the TAC/TACC is a second-order sustainability measure for the fishery. MPI has signalled it has made no decision to change the management of SCACS from the regime introduced in 2011.
41. Accordingly, there is no need to adjust the TAC on the basis that the biomass may have reduced. The industry CPUE limit management protects the sustainability of the stock at both high and low levels of abundance.
42. The fishstock is currently considered to be at low levels but the nature of the stock implies that abundance increases are expected in the future.
43. The variability in abundance of SCACS can be managed in one of two ways. The first is by low TACC and a pre-season survey with an accompanying in-season review. We do not support this approach as a) it requires expensive annual surveys to assess biomass, b) it is administratively burdensome to review survey data and TACCs on a regular basis, and c) the in-season review process is often not completed until late in the fishing season which unnecessarily constrains the economic advantage that the TACC increase seeks to provide, and d) a better option is available. The second management mechanism is a higher TACC, with commercial extraction managed through application of the CPUE limit rules.
44. We see no reason to revert to the previous framework of a low baseline TAC and an in-season TAC review to manage the fishery at this time. Such a move will serve only to impose additional costs on the fishery and remove any flexibility and accountability from quota-holders in the management of their fishery. The existing CPUE limit management regime is demonstrably

effective and efficient in managing the fishery and there are no valid reasons for its replacement or having additional controls placed on its operation. A TACC of 50 tonnes is seen as creating a hybrid management framework where the ability of industry to realise opportunities to access increased abundance is compromised by the need to undertake pre-season surveys and the industry already sets conservative catch limits in times of low abundance. We consider such a management framework does not fairly address utilisation and sustainability risks and benefits. A 50 tonne TACC is perceived to be too low.

45. Notwithstanding the effectiveness of the industry management regime, a reduction in the TACC would be seen as appropriate in the absence of the new Hauraki Gulf bed and to demonstrate the responsiveness of the QMS to new information.
46. CSFA considers that a TACC of 70 tonnes would be more appropriate than the Option 2 proposal of 50 tonnes on the basis that:
 - i. The use of a higher TACC and the industry CPUE limit provides an effective, cost efficient management option for SCACS in the current circumstances;
 - ii. A 70 tonne TACC is more consistent with the long term average catch level; and
 - iii. A 70 tonne TACC evidences a strong MPI commitment to the CSFA's management processes.

Review of Recreational and Customary Allocations

47. A decrease in allocation is proposed for only the commercial sector, no reductions to the recreational and customary allocations are proposed. The rationale for this is the decreased biomass in the Hauraki bed that is generally inaccessible to recreational fishers. We note that when the TAC was increased in 2013, due to increased biomass in the very same Hauraki bed, that all sectors benefitted through increased allowances.
48. We submit that the allowances for the recreational or customary sectors should be reduced. We simply note this inconsistency in approach and the general lack of policy guidance or rationale regarding allocation of the TAC.

Deemed Values

49. We agree with the MPI proposal not to adjust the deemed values for SCACS at this time. It would need a substantial reduction in the deemed value for SCACS to allow deemed values to be a fisheries management tool that might allow fishers to take advantage of an increased abundance in advance of any TACC shift. We see no prospect of such a shift being approved and consequently support the retention of the current deemed value regime.

From: Stuart (gmail)
Sent: Friday, 5 February 2016 9:40 p.m.
To: FMSubmissions
Subject: Review of sustainability controls for Coromandel scallops

Submission to MPI

To the Fisheries management team:

Thank you for the opportunity to review the paper on the Coromandel scallop fishery.

Option 1 presents no logical conclusion to be retained.

I submit that option 2 is the only reasonable outcome of this review by reducing the commercial catch to protect the fishery for the future. Where the good research and science is lacking, erring on the side of caution is the appropriate course of action.

In addition I would like to submit that to have different legal minimum shell size limits between commercial (90mm) and recreational fishers (100mm) is illogical and needs to be brought in line with each other based on good science.

Thank you again for reading this.

Yours sincerely

Stuart Bay

From: Gerri Mc Fadden ·
Sent: Friday, 5 February 2016 11:46 a.m.
To: FMSubmissions
Subject: Review of sustainability controls for Coromandel Scallop Fishery.

To Inshore Fisheries Management,

After reviewing a number of reports on the sustainability controls for the Coromandel scallop fisheries I would like to submit that "**Option 2**" would be the best way forward for the future of this industry."

Regards

Gerri McFadden

From:
Sent: Friday, 5 February 2016 8:56 a.m.
To: FMSubmissions
Subject: Sustainable controls for Coromandel Scallop Fishery.....eliott

Dear MPI

Sustainable controls for Coromandel Scallop Fishery -

After reading expert opinions and debating the above topic I would like to see - option 2 - the reduction to 81 tonnes total of scallop meat be introduced and enforced for the next foreseeable time.

Mark Eliott

~
PS. confirmation of this email please.

From: Eddie Watts
Sent: Tuesday, 2 February 2016 1:43 p.m.
To: FMSubmissions
Subject: Submission, Controls for the Coromandel Scallop Fishery

Ngati Whatua Runanga Fishing Co. Ltd Would like to support option 2 for reasons clearly stated, that it aligns the Tac and Tacc with performance of the fishery and information from commercial fishers (supported by fine scale fishing data) that the overall biomass may have declined, as the Hauraki bed is no longer there, and that a updated biomass survey has not been undertaken clearly points us to option 2. This option would enable juvenile recruitment and sustain spawning stock biomass

Regards Eddie Watts

Ngati Whatua Fishing Co Ltd

From: Eddie Watts
Sent: Tuesday, 2 February 2016 1:26 p.m.
To: FMSubmissions
Subject: Submission, Control for surf clam stocks in QMA7

Ngati Whatua Fishing Co. Ltd to support the local Tangata Whenua in what they decide is the best option for Surf Clams QMA7

Regards, Eddie Watts
Ngati Whatua Runanga Fishing

From: Eddie Watts
Sent: Tuesday, 2 February 2016 2:03 p.m.
To: FMSubmissions
Subject: Submission, (GSC5) (SBW1) (SAE7) (PDO7) (SCC3) (SCACS)

Ngati Whatua Runanga Would like to ask for a review of the deemed value rates for (GSC5) we believe deemed value rates should be increased to discourage fishing in those areas where there is a high catch of (GSC5) on the grounds that it could be a new and developing fishery, With a over catch of 20 tonnes 2014-2015 and the Tacc set at 19 tonnes it points to a deficit in sustainable management of a highly valuable species. Ngati Whatua supports deemed values proposed for the other species up for review

Regards Eddie Watts

Ngati Whatua Fishing .Co Ltd

From: Peter / Diana
Sent: Thursday, 14 January 2016 5:56 p.m.
To: FMSubmissions

Hi guys,

My submission on clams 7. The tow times increase and catch rate decrease should set alarm bells ringing The steady decline will be the same as the scollops in 7. Furthering the damage to the bottom being done will be incalculable

Cheers
President Marl Rec Fishing assoc.

Pete Watson
Vortex Marine & Outdoors
6 Dodson st
Blenheim
03 5785720
vortexmarine@xtra.co.nz