



Review of deemed value rates sea cucumber stock SCC 3 for 1 April 2014

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1 INTRODUCTION

The purpose of this paper is to outline proposed changes to deemed value rates for sea cucumber stock SCC 3 (located off the south east coast of the South Island) managed under the Quota Management System (QMS). The Ministry for Primary Industries (MPI) seeks your written feedback on these proposals and any additional information of relevance to the issue under consideration. After reviewing tangata whenua and stakeholders' submissions, MPI will compile a Final Advice Paper for the Minister for Primary Industries (the Minister), outlining recommendations and submitters' views on the issue under review. Any changes resulting from the Minister's decisions will apply from the start of the next fishing year for this stock, 1 April 2014.

2 CLOSING DATE FOR SUBMISSIONS

Closing date for Submissions is 4pm, Friday 14 February 2014
Written Submissions should be sent directly to:

Inshore fisheries Management
Ministry for Primary Industries
P O Box 2526
Wellington 2011

Or emailed to FMsubmissions@mpi.govt.nz

3 OFFICIAL INFORMATION ACT 1982

All submissions are subject to the Official Information Act 1982 and can be released (along with the personal details of the submitter) under the Act. If you have specific reasons for wanting to have (any part of) your submission or personal details withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment under the Act.

4 SUMMARY

This paper outlines MPI's initial proposals on a deemed value (DV) rate change for sea cucumber stock SCC 3, to apply from 1 April 2014. The review of SCC 3 deemed value rates has been prompted by significant over catches of the Total Allowable Commercial Catch (TACC) in recent years.

The summary of DV options being considered are shown in Table 1.

Table 1: Current and proposed deemed value rates/kg for SCC 3

	Option	Interim	Annual		Differential (standard schedule)			
		Over catch	0 - 20%	>20%	>40%	>60%	>80%	>100%
Current	1 (Status Quo)	\$ 1.50	\$ 2.00	\$ 2.40	\$ 2.80	\$ 3.20	\$ 3.60	\$ 4.00
	2	\$ 20.00	\$ 40.00	\$ 48.00	\$ 56.00	\$ 64.00	\$ 72.00	\$ 80.00
Proposed	3	\$ 3.60	\$ 4.00	\$ 4.80	\$ 5.60	\$ 6.40	\$ 7.20	\$ 8.00
	4	\$ 1.80	\$ 2.00	\$ 3.20	\$ 4.40	\$ 5.60	\$ 6.80	\$ 8.00

SCC fisheries need to be managed with care due to their high economic value, vulnerability to overfishing and limited stock information.

Tangata whenua and stakeholders are invited to provide their views on these proposals and any additional information that the Minister should consider concerning SCC 3. Updated and accurate information from industry on port price for SCC 3 would be particularly useful. Tangata whenua and stakeholder views and information will then be included in final advice to the Minister for Primary Industries.

The DV framework is set out in s 75 of the Fisheries Act 1996 (the Act). The purpose of the framework is to encourage commercial fishers to balance their catch with Annual Catch Entitlement (ACE), while not discouraging them from landing and accurately reporting catch. It is thus aimed at encouraging the commercial catch for each QMS stock not to exceed the total available ACE and thus the TACC. This helps achieve the purpose of the Act namely sustainable utilisation of fisheries resources. The application of this framework is explained in detail in [MPI's Deemed Value Guidelines](#) (the Guidelines).¹

5 CONTEXT

5.1 THE DEEMED VALUE FRAMEWORK

The purpose of the DV framework is to encourage commercial fishers to balance their catch with ACE while not discouraging them from landing and accurately reporting catch. It is thus aimed at encouraging the commercial catch for each QMS stock not to exceed the total available ACE and thus the TACC. This helps achieve the purpose of the Act namely sustainable utilisation of fisheries resources.

The effectiveness of the DV framework is dependent on individual fishers' compliance with landing and reporting requirements, their responses to the incentives provided and on the impact of other incentives such as those created by market conditions.

The catch balancing regime is a key fisheries management tool contributing 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

¹ A copy of the Guidelines is available at <http://www.mpi.govt.nz/news-resources/publications.aspx>

harvesting to remain within the TACC. Incorrectly set DV rates may lead to catches in excess of the TACC (i.e. if set too low), which may have negative implications for sustainability and the long-term value of the resource. Likewise, incorrectly set DV rates may also discourage landing and accurate reporting (i.e. if set too high). These types of behaviour undermine sustainability and utilisation objectives.

Under the deemed value framework, commercial fishers are charged for every kilogram of fish landed in excess of the ACE that they hold or can obtain by the end of the fishing year. In most stocks, deemed values follow a ramped differential deemed values schedule². Under this schedule, fishers face higher deemed value rates the further they exceed their ACE holdings. Utilisation objectives are achieved by providing flexibility for commercial operators to manage unexpected and small amounts of catch in excess of ACE through periodic catch balancing. In the long-term, the sustainability implications that may result from over catching could eventually result in TACC reductions, which may also impact on utilisation objectives, the long term value of the resource and kaitiakitanga.

A common criticism of the DV framework is that some TACCs are not set correctly (e.g. too low or mismatch between target and key bycatch species) and that for some species bycatch is unavoidable, and therefore that DVs mainly create incentives to illegally discard fish. Sustainability concerns and use opportunities or constraints, including issues with TACCs, are identified through MPI's annual fisheries planning process, in discussion with tangata whenua and stakeholders.

Nonetheless, setting of DV rates is a separate process from setting TACCs and the adequacy of the TACC is not a matter that the Minister should consider when setting DV rates.³ Every year MPI reviews TACCs, prioritising stocks based on available information and tangata whenua and stakeholder input. The DV rate changes proposed in this paper are aimed at protecting the TACC, regardless of the level at which it is set, by encouraging balancing of catch with ACE while avoiding creating incentives to dump and misreport. Furthermore, the proposed changes to DV rates are intended to provide stronger incentives for fishers to report catch correctly.

5.2 THE ACT AND THE DEEMED VALUE GUIDELINES

Section 75(1) of the Act requires the Minister to set DV rates for all stocks managed under the QMS. Section 75(2)(a) requires the Minister, when setting DV rates, to take into account the need to provide an incentive for every commercial fisher to acquire or maintain ACE that is not less than the fisher's total catch of each stock taken.

Section 75(2)(b) allows the Minister, when setting DV rates, to have regard to:

² Interim deemed value rates are charged each month to commercial fishers for every kilogram of fish landed in excess of ACE. If the fisher sources enough ACE to cover his or her catch, 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. Therefore, the annual rate applies at the end of the fishing year only.

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 of more than 20% in excess of ACE, when the standard differential deemed value rate schedule (standard schedule) applies. Differential rates reflect the increasingly detrimental impact of higher levels of over catch on sustainability and on the long term value of the resource, providing stronger incentives to avoid over catch. For vulnerable or rebuilding stocks, a more stringent differential deemed value schedule (e.g. applying from 5% or 10% over catch) may be more appropriate than the standard schedule.

³ *Pacific Trawling Limited & Independent Fisheries Limited v Minister of Fisheries*, High Court, Napier Registry, 29 August 2008, CIV 2007-441-1016, Priestley J.

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

The practical application of these statutory criteria is set out in the Guidelines, which are summarised below:

- deemed value rates must generally be set between the ACE price and the port 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,
- deemed value rates must generally be set at twice the port 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; and
- differential deemed value rates must generally be set.

5.3 SCC 3 FISHERY

Sea cucumber (SCC) in SCC 3 (located off the south east coast of the South Island) is primarily taken as a bycatch in the inshore tarakihi, red cod and stargazer bottom trawl fisheries.

Targeted fisheries for SCC are currently being developed in other stocks and show potential for become high value, economically important fisheries. Industry suggests SCC can fetch between \$40 and \$60 per kg wet and between \$300 and \$600 per kg dried. However, SCC fisheries need to be managed with care due to a vulnerability of SCC fisheries to collapse and limited stock information.

Sea cucumber fisheries worldwide have been shown to be highly susceptible to overfishing, with most sea cucumber fisheries in the Asia-Pacific region having been driven to commercial

extinction. To reduce the risk to New Zealand SCC fisheries, all harvest is currently managed under nominal TACC limits. This approach has so far been successful for most SCC stocks, with the exception of SCC 3.

The TACC limit of SCC 3 is currently set at 2000 kg. The reported landings in SCC 3 have exceeded this in recent years, with catch in the 2012-2013 fishing year reaching 427% TACC. This over-catch in SCC 3 needs to be addressed.

In 2009, DVs for all SCC stocks were reviewed and new DV rates applied across the board (see table 1 for current DVs). All stocks, except SCC 3, had annual DV rates increased to \$40 to reflect the high product value and incentivise fishers to balance catch with ACE.

Table 1: Current deemed value rates/kg for all SCC stocks

	Stock	Interim	Annual					
		Over catch	0 - 20%	>20%	>40%	>60%	>80%	>100%
Current	SCC 1A, 1B, 2A, 2B, 4, 5A, 5B, 6, 7A, 7B, 7D, 8, 9, 10	\$ 20.00	\$ 40.00	\$ 48.00	\$ 56.00	\$ 64.00	\$ 72.00	\$ 80.00
	SCC 3	\$ 1.50	\$ 2.00	\$ 2.40	\$ 2.80	\$ 3.20	\$ 3.60	\$ 4.00

A less dramatic increase in SCC 3 DV rates was put in place matching the port price to account for the bycatch nature of SCC 3, and incentivise accurate reporting and catch utilisation. The annual DV rate for SCC 3 was increased from \$0.25 to \$2.00 per kg, ramping up to \$4.00 per kg under the standard ramping schedule.

SCC is listed under Schedule 6 of the Act. This allows for the return of live sea cucumber to the water so long as it is likely to survive, is returned as soon as practicably possible, and is recorded in the Catch Effort Landing Return.

SCC are relatively hardy organisms and although MPI hold no data on the survivability of caught SCC, information from fishers and reports on other species ability to survive severe damage suggest survivability is likely high. However, despite the ability for fishers to return bycatch of SCC back to the sea, limited or no Schedule 6 releases are reported in SCC 3.

6 ISSUE

Large over-catch in SCC 3 suggests the current DV rate is doing little to minimise SCC bycatch or increase Schedule 6 releases. In the first half of the 2013/14 fishing year, 7870kg of catch was reported, representing 393% of the TAC and \$21,640 in annual deemed values. There is concern within the SCC industry that the comparatively low DV rate in SCC 3 may also be promoting misreporting of SCC catch area. This is of most concern for SCC caught in neighbouring SCC 7 (top of the South Island, Challenger area), where a large proportion of targeted SCC harvest occurs and where the TACC is fully utilised. However no evidence for such behaviour has been uncovered by MPI. MPI would appreciate any further information around this issue to help assess the validity of these concerns.

MPI also believe that the current catch effort (CE) information being received for SCC is only a proportion of actual catch of SCC 3. Currently, 95% of the reported SCC 3 catch comes from only four vessels and represents the catch only landed for sale and not SCC that is

discarded due to damage or returned to the sea under Schedule 6. This seems highly unlikely to be the limit of SCC bycatch as there are approximately 65 vessels that fish in the associated target fisheries.

It is likely that other vessels operating in the associated target fisheries (TAR, STA & RCO) catch SCC, at least to some extent. However, as no SCC catch is landed licensed fish receivers (LFRs) and any discards or release of SCC under Schedule 6 are unreported, there is no information for which to judge the level of catch.

MPI believes some of this misreporting may stem from lack of understanding around the QMS status of SCC and its listing under Schedule 6 of the Act.

7 MANAGEMENT ACTIONS

7.1 REVIEW OF DEEMED VALUE RATES

MPI proposes a DV change to help address the current over catch in SCC 3; proposed options are outlined in Table 3.

Table 3: Current and proposed deemed value rates/kg for SCC 3

	Option	Interim	Annual		Differential (standard schedule)			
		Over catch	0 - 20%	>20%	>40%	>60%	>80%	>100%
Current	1 (Status Quo)	\$ 1.50	\$ 2.00	\$ 2.40	\$ 2.80	\$ 3.20	\$ 3.60	\$ 4.00
Proposed	2	\$ 20.00	\$ 40.00	\$ 48.00	\$ 56.00	\$ 64.00	\$ 72.00	\$ 80.00
	3	\$ 3.60	\$ 4.00	\$ 4.80	\$ 5.60	\$ 6.40	\$ 7.20	\$ 8.00
	4	\$ 1.80	\$ 2.00	\$ 3.20	\$ 4.40	\$ 5.60	\$ 6.80	\$ 8.00

7.2 OPTION 1 - STATUS QUO

Under the status quo, current catch rates would likely continue unless effort in the associated targeted fisheries changes dramatically. Due to limited stock information MPI has no way knowing if current reported landed catch rates can be sustained without negatively impacting the stock. Fishers would see no impacts upon current operations.

However, in light of the suspected underreporting of SCC 3 catch in associated bottom trawl fisheries, MPI intends to work with industry to improve fishers' knowledge on SCC status as a QMS species, and reminding fishers of the need for accurate reporting of Schedule 6 releases and discards of SCC 3.

7.3 OPTION 2 - ADJUST DV RATES IN LINE WITH OTHER SCC STOCKS

Increasing DV rates in SCC 3 in line with other stocks would rectify the current disparity in DV rates and address any concerns around misreporting of catch area, but may have greater negative impacts.

Fishers would face large financial impact; at the current level of reported catch annual DV invoices would exceed \$430,000. Such severe financial penalties would likely result in any catch over the 2000 kg TACC being returned to the sea. If the Schedule 6 requirements were being complied with and reported accurately, this would not be of concern. However, given concerns around the current under reporting of Schedule 6 returns and discards, MPI believes that Option 2 may only further decrease catch reporting, resulting in a decrease in MPI's ability to assess the sustainability of the SCC 3 stock and a loss of utilisation opportunities.

7.4 OPTION 3 – ALTER ANNUAL DV RATES TO REFLECT CURRENT MARKET RATES IN SCC 3

Under this option the annual DV rate differential rates would be increased to reflect the current reported port price for SCC 3. Recent discussions with vessel operators and LFRs have indicated that since 2009 the port price has risen from between \$2.50 and \$3.00 to around \$8.00 per kg.

This option will impact fishers who take SCC 3 bycatch by doubling the amount paid for any catch over and above the 2000 kg TACC. At the current level of reported catch annual DV invoices for SCC 3 would exceed \$43,000.

As SCC bycatch is difficult to mitigate, increased DV rates may incentivise misreporting for SCC 3 catch. Under this option MPI would work with the industry to improve the reporting of Schedule 6 releases and promote the use of Schedule 6 as a tool to reduce the amount the over catch seen in the fishery.

However, Schedule 6 releases do not apply to SCC catch unlikely to survive being returned to the sea. Catch judged too damaged to survive must be either landed or recorded as discarded and met with ACE or charged against DV. In this case higher DV rates may still incentives misreporting and cause a loss of utilisation.

7.5 OPTION 4 – ALTER DV DEFERENTIAL RATE TO REFLECT CURRENT MARKET RATES

Under this option the annual DV rate for SCC 3 would remain the same while a steeper differential rate is put in place.

The main impact for fishers under this option would only occur when over catch reach exceeded the TACC by 200% or more. This would allow fishers to be able to make marginal profit on any landed SCC 3 at current port price up to the point at which 200% of the TACC has been caught, incentivising catch utilisation and accurate reporting.

MPI believes that this option takes into the account current large over catch of the TACC, and the bycatch nature of SCC 3, and works to reduce the incentives to misreport landings of SCC.

MPI recognises that under this option, there may still be an incentive for fishers to misreport any catch over and above 200% of the TACC. However, as with option 3, MPI would work with industry to improve the reporting of Schedule 6 releases and promote the use of Schedule 6 as a tool to reduce the amount of the over catch seen in the fishery.

8 CONCLUSIONS

MPI recognises that changes to the deemed value rate alone will have little impact on the amount of SCC that is being caught as bycatch in SCC 3, but is rather a tool to encourage commercial fishers to balance their catch with ACE while not discouraging them from landing and accurately reporting catch.

MPI acknowledges the reporting of SCC 3 captures and Schedule 6 releases and discards are likely underreported. Given the vulnerability to over-fishing observed in other commercial sea cucumber fisheries in the Asia-Pacific area, under reporting is an important sustainability issue. MPI intends to work towards achieving accurate reporting of catch of this potentially valuable species to inform future management decisions.

MPI considers there may be a lack of knowledge of SCC as a QMS species and/or its listing under Schedule 6, resulting in non-reporting of SCC landings. MPI would like to work with industry to educate fishers that operate in fisheries with SCC as a likely bycatch to increase reporting of SCC returned to the sea under Schedule 6.

However, it should be noted that dumping and misreporting are serious offences and MPI will continue to monitor fishing activities to detect and deter potential dumping wherever possible. MPI consider an increase in the knowledge around the ability to legally return SCC under Schedule 6 combined with DV rates that more accurately reflect the current port price for SCC 3 will better balance sustainability and resource utilisation goals. Additionally, increased reporting of SCC catch will provided better information to inform future management decisions for this fishery.